





limited to; significant decrease in the market price of the asset; significant adverse changes in the business climate or legal factors; current period cash flow or operating losses combined with a history of losses or a forecast of continuing losses associated with the use of the asset; and current expectation that the asset will more likely than not be sold or disposed of significantly before the end of its estimated useful life. A The recoverability of assets to be held and used is measured by a comparison of the carrying amount of an asset to estimated undiscounted future cash flows expected to be generated by the asset. If the carrying amount of an asset exceeds its estimated undiscounted future cash flows, an impairment charge is recognized by the amount by which the carrying amount of the asset exceeds the fair value of the asset. Assets to be disposed of would be separately presented in the balance sheet and reported at the lower of the carrying amount of fair value less costs to sell and would no longer be depreciated. The depreciable basis of assets that are impaired and continue in use is their respective fair values. During the six months ended June 30, 2024 and the year ended December 31, 2023, there were no impairments of long-lived assets. A Goodwill and Indefinite-Lived Intangible Assets A We follow the acquisition method of accounting to record the assets and liabilities of acquired businesses at their estimated fair value at the date of acquisition. We initially record goodwill for the amount the consideration transferred exceeds the acquisition-date fair value of net tangible and identifiable intangible assets acquired. A Goodwill and intangible assets deemed to have indefinite lives are not amortized, but are tested for impairment annually on December 31, or more frequently when events or circumstances indicate an impairment may have occurred. When assessing the recoverability of goodwill and indefinite-lived intangible assets, the Company may first assess qualitative factors in determining whether it is more likely than not that the fair value of a reporting unit, including goodwill, or an indefinite-lived intangible asset is less than its carrying amount. The qualitative assessment is based on several factors, including the current operating environment, industry and market conditions, and overall financial performance. The Company may elect to bypass this qualitative assessment for some or all of its reporting units or other indefinite-lived intangible assets and perform a quantitative assessment, based on management's judgment. A If we quantitatively test goodwill and indefinite-lived intangible assets for possible impairment, we calculate the fair value for the reporting unit and indefinite-lived assets and compare the amount to their carrying amount. If the fair value of a reporting unit and indefinite-lived asset exceeds their carrying amount, the reporting unit and indefinite-lived assets are not considered impaired. If the carrying amount of the reporting unit and indefinite-lived assets exceed their fair value, the reporting unit and indefinite-lived assets are considered to be impaired, and an impairment charge is recognized for the difference. A 12 A A AmpliTech Group, Inc. Notes To Condensed Consolidated Financial Statements For the Six Months Ended June 30, 2024 and 2023 A We estimate the fair value of our reporting units and indefinite-lived intangible assets based on the present value of estimated future cash flows. Considerable management judgment is necessary to evaluate the impact of operating and macroeconomic changes and to estimate the future cash flows used to measure fair value. Our estimates of future cash flows consider past performance, current and anticipated market conditions and internal projections and operating plans. Additional assumptions include forecasted growth rates, estimated discount rates, and estimated royalty rates for our indefinite-lived intangible assets. A During the six months ended June 30, 2024 and the year ended December 31, 2023, there were no impairments of indefinite-lived intangible assets. A Investment Policy-Cost Method A Investments consist of non-controlling equity investments in privately held companies. The Company elected the measurement alternative for these investments without readily determinable fair values and for which the Company does not control or have the ability to exercise considerable influence over operating and financial policies. These investments are accounted for under the cost method of accounting. Under the cost method of accounting, the non-marketable equity securities are carried at cost less any impairment, adjusted for observable price changes of similar investments of the same issuer. Fair value is not estimated for these investments if there are no identified events or changes in circumstances that may influence the fair value of the investment. Under this method, the Company's share of the earnings or losses of such investee companies is not included in the consolidated balance sheet or consolidated statements of operations. The Company held \$348,250 of investments without readily determinable fair values at June 30, 2024 and December 31, 2023, respectively. (see Note 9). These investments are included in other assets on the consolidated balance sheets. There were no indicators of impairment during the three months ended June 30, 2024 and the year ended December 31, 2023. A Investment in Digital Assets A We account for all digital assets as indefinite-lived intangible assets in accordance with ASC 350, Intangibles—Goodwill and Other. The Company presents digital assets separately from other intangible assets, recorded as digital assets on the condensed consolidated balance sheets. The digital assets are initially recorded at cost and are subsequently remeasured at cost, net of any impairment losses incurred since acquisition. A 13 A A AmpliTech Group, Inc. Notes To Condensed Consolidated Financial Statements For the Six Months Ended June 30, 2024 and 2023 A We performed an analysis this quarter to identify whether events or changes in circumstances, principally decreases in the quoted prices on active exchanges, indicate that it is more likely than not that our digital assets are impaired. In determining if an impairment has occurred, we consider the lowest market price of one unit of digital asset quoted on the active exchange since acquiring the digital asset. When the then current carrying value of a digital asset exceeds the fair value determined each quarter, an impairment loss has occurred with respect to those digital assets in the amount equal to the difference between their carrying values and the prices determined. Gains are not recorded until realized upon sale(s), at which point they are presented net of any impairment losses for the same digital assets. In determining the gain to be recognized upon sale, we calculate the difference between the sales price and carrying value of the digital assets sold immediately prior to sale. A Leases A We lease property and equipment under finance and operating leases. For leases with terms greater than 12 months, we record the related asset and obligation at the present value of lease payments over the lease term. The Company has elected not to separate lease and non-lease components for all property leases for the purpose of calculating ROU assets and lease liabilities. Many of our leases include rental escalation clauses, renewal options and/or termination options that are factored into our determination of lease payments when appropriate. When available, we use the rate implicit in the lease to discount lease payments to present value; however, most of our leases do not provide a readily determinable implicit rate. Therefore, we must estimate our incremental borrowing rate to discount the lease payments based on information available at lease commencement. The incremental borrowing rate is the rate of interest that a lessee would have to pay to borrow on a collateralized basis considering such factors as lease term and economic environment risks. A Revenue Recognition A We sell our products through a combination of a direct sales force in the United States and independent sales representatives in international markets. Revenue is recognized when a customer obtains control of promised goods based on the consideration we expect to receive in exchange for these goods. This core principle is achieved through the following steps: A Identify the contract with the customer. A contract with a customer exists when (i) we enter into an enforceable contract with a customer that defines each party's rights regarding the goods to be transferred and identifies the payment terms related to these goods, (ii) the contract has commercial substance and, (iii) we determine that collection of substantially all consideration for services that are transferred is probable based on the customer's intent and ability to pay the promised consideration. We do not have significant costs to obtain contracts with customers. For commissions on product sales, we have elected the practical expedient to expense the costs as incurred. A Identify the performance obligations in the contract. Our contracts with customers do not include multiple performance obligations to be completed over a period. A Our performance obligations relate to delivering single-use products to a customer, subject to the shipping terms of the contract. Limited warranties are provided, under which we typically accept returns and provide either replacement parts or refunds. A We do not have significant returns. We do not typically offer extended warranty or service plans. A 14 A A AmpliTech Group, Inc. Notes To Condensed Consolidated Financial Statements For the Six Months Ended June 30, 2024 and 2023 A Determine the transaction price. Payment by the customer is due under customary fixed payment terms, and we evaluate if collectability is reasonably assured. None of our contracts as of June 30, 2024 contained a significant financing component. Revenue is recorded at the net sales price, which includes estimates of variable consideration such as product returns, rebates, discounts, and other adjustments. The estimates of variable consideration are based on historical payment experience, historical and projected sales data, and current contract terms. Variable consideration is included in revenue only to the extent that it is probable that a significant reversal of the revenue recognized will not occur when the uncertainty associated with the variable consideration is subsequently resolved. Taxes collected from customers relating to product sales and remitted to governmental authorities are excluded from revenues. A Allocate the transaction price to performance obligations in the contract. We typically do not have multiple performance obligations in our contracts with customers. We recognize revenue upon transfer of the product to the customer's control at contractually stated pricing. A Recognize revenue when or as we satisfy a performance obligation. We generally satisfy performance obligations at a point in time upon either shipment or delivery of goods, in accordance with the terms of each contract with the customer. We do not have significant service revenue. A Cost of Sales A We include product costs such as material, direct labor, overhead costs, production-related depreciation expense, outside labor and production supplies in cost of sales. A Shipping and Handling A Shipping and handling charges are generally incurred at the customer's expense. However, when billed to our customers, shipping and handling charges are included in net sales for the applicable period, and the corresponding shipping and handling expense is reported in cost of sales. A Research and Development A Research and development expenditures are charged to operations as incurred. The major components of research and development costs include payroll, consultants, outside service, and supplies. A Research and development costs for the six months ended June 30, 2024 and 2023 were \$736,877 and \$1,217,885, respectively. A 15 A A AmpliTech Group, Inc. Notes To Condensed Consolidated Financial Statements For the Six Months Ended June 30, 2024 and 2023 A Income Taxes A The Company's deferred tax assets and liabilities for the expected future tax consequences of events have been included in the financial statements or tax returns. Under this method, deferred tax assets and liabilities are determined based on the differences between the financial statement carrying amounts and tax bases of certain assets and liabilities using enacted tax rates in effect in the years in which the differences are expected to reverse. The deferred tax assets and liabilities are classified according to the financial statement classification of the assets and liabilities generating the differences. Valuation allowances are established when necessary to reduce deferred tax assets to the amount expected to be realized. The ASC prescribes a recognition threshold and measurement attribute for the financial statement recognition and measurement of a tax position taken or expected to be taken in a tax return. The ASC provides guidance on de-recognition, classification, interest and penalties, accounting in interim periods, disclosure and transition. At June 30, 2024 and December 31, 2023, the Company had no material unrecognized tax benefits. A Earnings Per Share A Basic earnings (loss) per share is calculated by dividing net income (loss) by the weighted average number of shares of common stock outstanding during each period. Diluted earnings (loss) per share is calculated by adjusting the weighted average number of shares of common stock outstanding for the dilutive effect, if any, of common stock equivalents. Common stock equivalents whose effect would be anti-dilutive are not included in diluted earnings (loss) per share. The Company uses the treasury stock method to determine the dilutive effect, which assumes that all common stock equivalents have been exercised at the beginning of the period and that the funds obtained from those exercises were used to repurchase shares of common stock of the Company at the average closing market price during the period. As of June 30, 2024 and 2023, there were 4,597,942 and 4,242,442, respectively, potential common share equivalents from stock options excluded from the diluted loss per share calculations as their effect is anti-dilutive. A Fair Value Measurements A The fair value of a financial instrument is the amount that could be received upon the sale of an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. Financial assets are marked to bid prices and financial liabilities are marked to offer prices. Fair value measurements do not include transaction costs. A fair value hierarchy is used to prioritize the quality and reliability of the information used to determine fair values. Categorization within the fair value hierarchy is based on the lowest level of input that is significant to the fair value measurement. The fair value hierarchy is defined in the following three categories: A Level 1: Unadjusted quoted prices that are available in active markets for identical assets or liabilities at the measurement date. A Level 2: Significant other observable inputs available at the measurement date, other than quoted prices included in Level 1, either directly or indirectly. A Level 3: Significant unobservable inputs that cannot be corroborated by observable market data and reflect the use of significant management judgment. A Cash and cash equivalents, receivables, inventories, prepaid expenses, accounts payable, accrued expenses, and customer deposits approximate fair value, due to their short-term nature. The carrying value of notes payable and short and long-term debt also approximates fair value since these instruments bear market rates of interest. A 16 A A AmpliTech Group, Inc. Notes To Condensed Consolidated Financial Statements For the Six Months Ended June 30, 2024 and 2023 A Assets and liabilities that are measured at fair value on a nonrecurring basis relate primarily to long-lived assets, intangible assets, and goodwill, which are remeasured when the derived fair value is below carrying value in the consolidated balance sheets. A Stock-Based Compensation A The Company records stock-based compensation in accordance with ASC 718, Compensation-Stock Compensation. All transactions in which goods or services are the consideration received for the issuance of equity instruments are accounted for based on the fair value of the consideration received or the fair value of the equity instrument issued, whichever is more reliably measurable. Equity instruments issued to employees and the cost of the services received as consideration are measured and recognized based on the fair value of the equity instruments issued and are recognized over the employees required service period, which is generally the vesting period. A Concentration of Credit Risk A Financial instruments that potentially subject the Company to concentration of credit risk consist primarily of cash and cash equivalents, marketable securities and accounts receivable. A The Company places its cash and cash equivalents and marketable securities with high-quality, major financial and investment institutions in order to limit the amount of credit exposure. For accounts receivable, the Company performs ongoing credit evaluations of its customers and maintains allowances for potential credit losses. A Recent Accounting Pronouncements A In December 2023, the FASB issued ASU 2023-09, Income Taxes (Topic 740): Improvements to Income Tax Disclosures, which enhances the transparency and decision usefulness of income tax disclosures by requiring: (1) consistent categories and greater disaggregation of information in the rate reconciliation and (2) income taxes paid disaggregated by jurisdiction. It also includes certain other amendments to improve the effectiveness of income tax disclosures. ASU 2023-09 is effective for fiscal years beginning after December 15, 2025, with early adoption permitted. These amendments are to be applied prospectively, with retrospective application permitted. We are currently evaluating the impact this standard will have on our consolidated financial statement disclosures. A 17 A A AmpliTech Group, Inc. Notes To Condensed Consolidated Financial Statements For the Six Months Ended June 30, 2024 and 2023 A In November 2023, the FASB issued ASU 2023-07, Segment Reporting (Topic 280): Improvements to Reportable Segment Disclosures, which requires a public entity to disclose significant segment expenses and other segment items on an annual and interim basis and to provide in interim periods all disclosures about reportable segment's profit or loss and assets that are currently required annually. ASU 2023-07 is effective for fiscal years beginning after December 15, 2023, and interim periods within fiscal years beginning after December 15, 2024, with early adoption permitted. The Company has adopted this pronouncement and does not expect the adoption to have a material impact on our results of operation, financial position or cash flow. A In August 2023, the FASB issued ASU 2023-05, Business Combinations—Joint Venture Formations (Subtopic 805-60): Recognition and Initial Measurement, which requires a newly-formed joint venture to apply a new basis of accounting to its contributed net assets, resulting in the joint venture initially measuring its contributed net assets at fair value on the formation date. ASU 2023-05 is effective for all joint venture formations with a formation date on or after January 1, 2025, with early adoption permitted. These amendments are to be applied prospectively, with retrospective application permitted for joint ventures formed before the effective date. We are currently evaluating the impact this standard will have on our consolidated financial statement disclosures. A (4) Revenues A The following table presents sales disaggregated based on geographic regions and for the three and six months ended: A Schedule of disaggregated revenue A A June 30, 2024 A June 30, 2023 A A Three months ended A A June 30, 2024 A June 30, 2023 A AmpliTech Inc. and Specialty Microwave A A A A A Domestic sales A \$705,794 A \$1,445,063 A International sales A \$6,470 A A \$17,514 A Total sales A \$762,264 A \$1,762,577 A A A A A A A A A Spectrum A A A A A A Domestic sales A \$1,359,811 A \$1,497,917 A International sales A \$405,367 A A \$12,737 A Total sales A \$1,765,178 A \$2,310,654 A A A A A A A A Total sales A \$2,527,442 A \$4,073,231 A A 18 A A AmpliTech Group, Inc. Notes To Condensed Consolidated Financial Statements For the Six Months Ended June 30, 2024 and 2023 A A June 30, 2024 A June 30, 2023 A A A Six months ended A A June 30, 2024 A June 30, 2023 A AmpliTech Inc. and Specialty Microwave A A A A A Domestic sales A \$1,383,976 A \$2,468,059 A International sales A \$419,155 A A \$16,717 A Total sales A \$1,803,131 A \$2,984,776 A A A A A A A A Spectrum A A A A A A Domestic sales A \$2,141,925 A \$3,373,860 A International sales A \$875,717 A A \$1,826,894 A Total sales A \$3,017,642 A \$5,200,754 A A A A A A A Total sales A \$4,820,773 A \$8,185,530 A A (5) Segment Reporting A ASC 280, "Segment Reporting," establishes standards for reporting information about operating segments on a basis consistent with the Company's internal organizational structure as well as information about geographical areas, business segments and major customers in financial statements for details on the Company's business segments. The Company has two reportable segments, the manufacturing and engineering segment, which is operated by AmpliTech Inc. and Specialty Microwave; and the distribution segment, which is operated by Spectrum. The manufacturing and engineering segment assembles microwave components, and the distribution segment is a global distributor of integrated circuits packages and lids. The Company provides general corporate services to its segments; however, these services are not considered when making operating decisions and assessing segment performance. These services are reported under "Corporate Services".

below and include costs associated with executive management, financing activities and public company compliance. 19 AmpliTech Group, Inc. Notes To Condensed Consolidated Financial Statements For the Six Months Ended June 30, 2024 and 2023 The following table presents summary information by segment for the three months ended June 30, 2024: A Schedule of Segment Reporting A Manufacturing and Engineering A Distribution A Corporate A Total Revenue \$762,264A \$1,765,178A A \$2,527,442A Cost of Goods Sold A 623,830A A 846,525A A 1,470,355A Net Income (Loss) A (1,314,836)A A 253,081A A (514,519)A A (1,576,274) Total Assets A 10,532,203A A 14,758,006A A 122,031A A 25,412,240A Depreciation and Amortization A 100,400A A 28,922A A 2A A 129,322A Interest Expense, net A 5,847A A 2,337A A 8,184A A The following table presents summary information by segment for the six months ended June 30, 2024: A Manufacturing and Engineering A Distribution A Corporate A Total Revenue \$1,803,131A \$3,017,642A A \$4,820,773A Cost of Goods Sold A 1,399,301A A 1,481,755A A 2,881,056A Net Income (Loss) A (2,319,810)A A 204,134A A (4,115,759)A A (6,231,435) Total Assets A 10,532,203A A 14,758,006A A 122,031A A 25,412,240A Depreciation and Amortization A 200,601A A 57,844A A 258,445A Interest Expense, net A 7,527A A 5,000A A 12,527A A 20 AmpliTech Group, Inc. Notes To Condensed Consolidated Financial Statements For the Six Months Ended June 30, 2024 and 2023 (6) Inventories The inventory consists of the following at June 30, 2024 and December 31, 2023: A Schedule of Inventory A June 30, 2024 A December 31, 2023 A Raw Materials \$1,364,072A \$959,645A Work-in Progress A 120,119A A 51,140A Finished Goods A 7,212,446A A 6,672,793A Subtotal \$8,696,637A \$7,683,578A Less: Reserve for Obsolescence A (1,163,000)A A (1,146,000)A A Total \$7,533,637A \$6,537,578A (7) Property and Equipment A Property and Equipment consisted of the following at June 30, 2024 and December 31, 2023: A Schedule of Property and Equipment A June 30, 2024 A December 31, 2023 A Lab Equipment \$3,400,207A \$3,400,207A Manufacturing Equipment A 129,745A A 129,745A Automobiles A 7,335A A 7,335A Computer Equipment and Software A 146,785A A 194,238A Leasehold Improvements A 84,172A A 84,172A Furniture and Fixtures A 170,643A A 170,643A A A A Subtotal A 3,938,887A A 3,986,340A Property plant and equipment, gross A 3,938,887A A 3,986,340A Less: Accumulated Depreciation A (1,509,274)A A (1,386,892)A A A A Total A 2,429,613A A 2,599,448A Property plant and equipment, net A 2,429,613A \$2,599,448A Depreciation expense for the three months ended June 30, 2024 and 2023 was \$91,857 and \$78,212 respectively, of which \$71,123 and \$58,526, respectively were included in cost of goods sold. A 21 AmpliTech Group, Inc. Notes To Condensed Consolidated Financial Statements For the Six Months Ended June 30, 2024 and 2023 A Depreciation expense for the six months ended June 30, 2024 and 2023 was \$183,515 and \$155,304 respectively, of which \$142,247 and \$116,420, respectively were included in cost of goods sold. A Property and equipment purchased in the amount of \$234,036 under financing leases is included in the totals above. As of June 30, 2024 and 2023, the outstanding balance of the financing leases were \$41,037 and \$57,438, respectively. A Disposal of property and equipment as of June 30, 2024 was \$61,133. A (8) Goodwill and Intangible Assets A Goodwill A Goodwill is related to the acquisition of Spectrum Semiconductor Materials Inc. on December 15, 2021. Goodwill is primarily related to expected improvements and technology performance and functionality, as well as sales growth from future product and service offerings and new customers, together with certain intangible assets that do not qualify for separate recognition. Goodwill is generally not amortizable for tax and financial statement purposes. As of June 30, 2024 and December 31, 2023, goodwill was \$4,696,883, respectively. A Other Intangible Assets A Intangible assets with an estimated useful life of fifteen and twenty years consisted of the following at June 30, 2024: A Schedule of Intangible Assets A Gross Carrying Amount A Accumulated Amortization A Net A Weighted Average Life A Trade name A \$584,517A \$-A \$584,517A A Indefinite A Customer relationships A 2,591,491A A 404,521A A 2,186,970A A 16.31A Intellectual Property A 202,771A A 65,055A A 137,716A A 10.21A A A A A A A A Total A 3,378,779A A \$469,576A A \$2,909,203A A A A Amortization expense for the three months ended June 30, 2024 and 2023 was \$37,465 and \$37,466, respectively. A Amortization expense for the six months ended June 30, 2024 and 2023 was \$74,930 and \$74,819, respectively. A 22 AmpliTech Group, Inc. Notes To Condensed Consolidated Financial Statements For the Six Months Ended June 30, 2024 and 2023 A Annual amortization of intangible assets are as follows: A Schedule of Amortization of Assets A A 2024-remaining A 75,043A 2025A 149,974A 2026A 149,974A 2027A 149,974A 2028A 149,974A Thereafter A 1,649,747A Total A \$2,324,686A (9) Cost Method Investment A On June 10, 2021, the Company entered into a membership interest purchase agreement with SN2N, LLC for an aggregate purchase price of \$350,000, to be paid in four tranches. Each tranche represented a 5% membership interest, and in aggregate a 20% membership interest. On June 15, 2022, an amendment to the membership interest purchase agreement was made to reflect a 19.9% membership interest. In light of this amendment, the Company overpaid \$1,750 for the membership interest and was subsequently reimbursed. As of June 30, 2024, the Company has made an investment of \$348,250 for a 19.9% membership interest. A (10) Leases A The following was included in our balance sheet as of June 30, 2024: A Schedule of Lease Assets and Liabilities A June 30, 2024 A Operating leases A A Assets A A ROU operating lease assets \$3,268,136A A A Liabilities A A Current portion of operating lease \$421,803A Operating lease, net of current portion \$3,025,741A Total operating lease liabilities \$3,447,544A A A Financing leases A A Assets A A Property and equipment, gross \$234,036A A Accumulated depreciation A (171,068)A Property and equipment, net \$62,968A A A Liabilities A A Current portion of financing lease \$17,208A Financing lease, net of current portion \$23,829A Total financing lease liabilities \$41,037A A 23 AmpliTech Group, Inc. Notes To Condensed Consolidated Financial Statements For the Six Months Ended June 30, 2024 and 2023 A The weighted average remaining lease term and weighted average discount rate at June 30, 2024 are as follows: A Schedule of Weighted Average Remaining Lease Term and Weighted Average Discount Rate A Weighted average remaining lease term (years) A June 30, 2024 A Operating leases A 9.22A Financing leases A 2.51A Weighted average discount rate A A Operating leases A 4.47% Financing leases A 4.70% A Financing Lease A The Company entered into several 60-month lease agreements to finance certain laboratory and office equipment. As such, the Company has accounted for these transactions as a financing lease. A The following table reconciles future minimum financing lease payments to the discounted lease liability as of June 30, 2024: A Schedule Of Future Minimum Lease Payments For Finance Lease A A A 2024-remaining A 9,384A 2025A 18,195A 2026A 11,982A 2027A 3,994A Total lease payments A 43,555A Less imputed interest A (2,518) Total lease obligations A 41,037A Less current obligations A (17,208) Long-term lease obligations A 23,829A A 24 AmpliTech Group, Inc. Notes To Condensed Consolidated Financial Statements For the Six Months Ended June 30, 2024 and 2023 A Operating Leases A On September 12, 2019, the Company entered into a new operating lease agreement to rent office space in Ronkonkoma, NY. This five-year agreement commenced on September 12, 2019 with an annual rent of \$90,000 and 3% increase in each successive lease year beginning in 2021. The Company has an option to buy the property during the first two years of the lease for \$1,200,000 and then at fair market value for the remainder of the lease term. This option has expired and was not exercised as of December 31, 2022. On April 13, 2023, this lease was terminated subject to the terms of a Surrender Agreement between the Company and landlord. As a result, a gain on termination of right-of-use operating lease was recognized of \$8,461. A On November 27, 2019, the Company entered a 39-month agreement to lease an automobile with a monthly payment of \$420. This lease was paid in full as of March 31, 2023. A On December 15, 2021, the Company assumed the SSM lease agreement for office and warehouse space in San Jose, CA, with the same terms and conditions. Effective February 1, 2020, the lease term will expire on January 31, 2025, with a base rent of \$24,234 for the first 12 months and increase by approximately 3% every year. A On October 15, 2021, the Company entered a new lease for a 20,000 square foot facility at 155 Plant Avenue, Hauppauge, New York, for a term of seven years and two months. The yearly base rent of \$346,242 shall increase at a rate of 2.75% per year to begin on the first anniversary lease commencement date and each year thereafter. The first two months of basic rent shall be abated following the commencement lease date. In the event the landlord decides to sell the property, the Company shall have the right of first offer to purchase subject property. Upon lease execution, the Company paid two months of base rent as a security deposit and one month's rent totaling \$86,560. The Company moved into the new manufacturing and headquarters facility April 1, 2022. A On August 9, 2023, the Company entered a 39-month agreement for \$20,880 to lease an automobile with a monthly payment of \$605. A On January 15, 2024, the Company entered a triple net lease agreement for a 1,900 square foot facility in Allen, Texas for a term of five years and one month. The yearly base rent of \$53,675 shall increase at a rate of 2.5% per year to begin on the first anniversary lease commencement date and each year thereafter. The first month's rent shall be abated following the commencement lease date. Upon lease execution, the Company paid two months of rent as a security deposit and one month's rent totaling \$17,999. As of June 30, 2024, the new MMIC division facility lease had not yet commenced, as the Company did not have the right to obtain substantially all the economic benefits from the use of the asset or the right to direct the use of the asset. The Company moved into the new facility on August 1, 2024. A 25 AmpliTech Group, Inc. Notes To Condensed Consolidated Financial Statements For the Six Months Ended June 30, 2024 and 2023 A The following table reconciles future minimum operating lease payments to the discounted lease liability as of June 30, 2024: A Schedule of Future Minimum Operating Lease Payments A A A 2024 remaining A 349,808A 2025A 407,581A 2026A 389,397A 2027A 393,899A 2028A 404,721A Thereafter A 2,313,460A Total lease payments A 4,258,866A Less imputed interest A (811,322) Total lease obligations A 3,447,544A Less current obligations A (421,803) Long-term lease obligations A \$3,025,741A (11) Notes Payable A Promissory Note: A On September 12, 2019, AmpliTech Group, Inc. acquired Specialty, a privately held company based in Ronkonkoma, NY. The purchase included all inventory, orders, customers, property and equipment, and all intellectual property. The assets also included all eight team members of Specialty. The total consideration paid was \$1,143,633, consisting of \$668,633 in cash and a \$475,000 promissory note with an interest rate of 6%. Beginning November 1, 2019, payment of principal and interest shall be due payable in fifty-nine (59) monthly payments of \$9,213 with a final payment due October 1, 2024 of \$9,203. As of June 30, 2024, the balance of this promissory note was \$36,388. Principal payments of \$44,453 along with interest expense of \$1,615 were paid during the six months ended June 30, 2024. A 26 AmpliTech Group, Inc. Notes To Condensed Consolidated Financial Statements For the Six Months Ended June 30, 2024 and 2023 A Loan Payable: A On September 12, 2019, the Company was approved for a \$250,000 equipment leasing facility which was subsequently increased to \$500,000. The Company has borrowed against the leasing facility as follows: A -On May 14, 2020, the Company borrowed \$27,494 to be paid over a three-year term with monthly payments of \$815 at an interest rate of 4.27%. The balance as of June 30, 2024 and 2023 was \$0. Principal payments of \$0 and \$3,230, were paid for the six months ended June 30, 2024 and 2023, respectively. Total interest expense paid for the six months ended June 30, 2024 and 2023 was \$0 and \$30, respectively. This loan was paid in full in April 2023. A -On June 10, 2020, the Company borrowed \$41,015 to be paid over a three-year term with monthly payments of \$1,216 at an interest rate of 4.28%. The balance as of June 30, 2024 and 2023 was \$0. Principal payments of \$0 and \$6,012 were made for the six months ended June 30, 2024 and 2023, respectively. Total interest expense paid for the six months ended June 30, 2024 and 2023 was \$0 and \$68, respectively. This loan was paid in full in May 2023. A As of March 14, 2023, the Company closed the equipment line of credit of \$500,000, which had a balance. All UCC filings on the Company assets have been released as well as the President's personal guarantee. A In January 2022, the Company purchased machinery for \$91,795, applying a deposit of \$9,180 and financing the balance of \$82,616 over 24 payments at an interest rate of 1.90%. The balance as of June 30, 2024 and 2023 was \$0 and \$20,949, respectively. Principal payments of \$0 and \$20,751 and interest expense of \$0 and \$314 were paid for the six months ended June 30, 2024 and 2023, respectively. A Future principal payments over the term of the loans as of June 30, 2024 are as follows: A Schedule of Future Principal and Interest Payments A A Payments A 2024 remaining A \$36,388A Total remaining payments A \$36,388A A 27 AmpliTech Group, Inc. Notes To Condensed Consolidated Financial Statements For the Six Months Ended June 30, 2024 and 2023 (12) Stockholders' Equity A The total number of shares of stock this Corporation is authorized to issue shall be five hundred one million (501,000,000) shares, par value \$0.001 per share. Our authorized capital stock consists of 500,000,000 shares of common stock and 1,000,000 shares of blank check preferred stock. A Preferred Stock A On July 10, 2013, the Board of Directors of the Company approved a certificate of amendment to the articles of incorporation and changed the authorized capital stock of the Company to include and authorize 500,000 shares of Preferred Stock, par value \$0.001 per share. On October 7, 2020, the Board of Directors of the Company approved a certificate of amendment to the articles of incorporation and changed the total number of authorized shares of Preferred Stock to 1,000,000 shares, \$0.001 per share. A On October 7, 2020, our Board of Directors and our stockholders approved a resolution to amend and restate the certificate of designation of preferences, rights and limitations of Series A Convertible Preferred Stock to restate that there are 401,000 shares of the Company's blank check Preferred Stock designated as Series A Convertible Preferred Stock. The amended and restated certificate clarifies that the Series A Convertible Preferred Stock convert at a rate of five shares of the Company's common stock for every share of Series A Convertible Preferred Stock, and also restates that the Series A Convertible Preferred Stock shall be entitled to vote on all matters submitted to shareholders of the Company for each share of Series A Convertible Preferred Stock owned on the record date for the determination of shareholders entitled to vote on such matter or, if no such record date is established, on the date such vote is taken, or any written consent of shareholders is solicited. The number of votes entitled to be cast by the holders of the Series A Convertible Preferred Stock equals that number of votes that, together with votes otherwise entitled to be cast by the holders of the Series A Convertible Preferred Stock at a meeting, whether by virtue of stock ownership, proxies, voting trust agreements or otherwise, entitle the holders to exercise 51% of all votes entitled to be cast to approve any action which Nevada law provides may or must be approved by vote or consent of the holders of common stock entitled to vote. A 28 AmpliTech Group, Inc. Notes To Condensed Consolidated Financial Statements For the Six Months Ended June 30, 2024 and 2023 A Common Stock: A The Company originally authorized 50,000,000 shares of common stock with a par value of \$0.001. Effective May 20, 2014, the Company increased its authorized shares of common stock from 50,000,000 to 500,000,000. A On February 17, 2021, AmpliTech Group Inc., common stock and warrants under the symbols AMPG and AMPG, respectively, commenced trading on NASDAQ. A 2020 Equity Incentive Plan: A In October 2020, the Board of Directors and shareholders adopted the Company's 2020 Equity Incentive Plan (the "2020 Plan"), effective as of December 14, 2020. Under the 2020 Plan, the Company reserved 1,250,000 shares of common stock to grant shares of the Company's common stock to employees and individuals who perform services for the Company. The purpose of the 2020 Plan is to attract and retain the best available personnel for positions of substantial responsibility, to provide incentives to individuals who perform services for the Company, and to promote the success of the Company's business. The 2020 Plan permits the grant of Incentive Stock Options, Nonstatutory Stock Options, Stock Appreciation Rights, Restricted Stock, Restricted Stock Units, Performance Units, Performance Shares, and other stock or cash awards as the Board of Directors may determine. A In 2023, the Board and the shareholders adopted the Company's Amended and Restated 2020 Equity Incentive Plan (the "Amended and Restated Plan"), effective as of December 11, 2023. The Amended and Restated Plan is substantially similar to the 2020 Plan except that it increases the shares of our common stock available for issuance thereunder to 2,250,000 shares of common stock. A As of June 30, 2024, all outstanding stock options were issued according to the Company's 2020 Plan, and there remains 811,500 shares of common stock available for future issuance under the 2020 Plan A Stock Options: A On January 9, 2024, the Company granted a consultant, ten-year stock options to purchase 2,500 shares of common stock according to the Company's 2020 Plan. The stock options vested immediately, with an exercise price of \$1.86 per share. The Company has calculated these options estimated fair market value at \$3,800 using the Black-Scholes model, with the following assumptions: expected term of 5.00 years, stock price of \$1.86, exercise price of \$1.86, volatility of 116.1%, risk-free rate of 3.97%, and no forfeiture rate. A On January 16, 2024, the Company granted an employee ten-year stock options to purchase 5,000 shares of common stock according to the Company's 2020 Plan. The stock options vest in equal quarterly installments over five years commencing on April 16, 2024, with an exercise price of \$1.93 per share. The Company has calculated these options estimated fair market value at \$8,800 using the Black-Scholes model, with the following assumptions: expected term of 7.51 years, stock price of \$1.93, exercise price of \$1.93, volatility of 120.1%, risk-free rate of 4.01%, and no forfeiture rate. A 29 AmpliTech Group, Inc. Notes To Condensed Consolidated Financial Statements For the Six Months Ended June 30, 2024 and 2023 A On January 16, 2024, the Company granted an independent contractor ten-year stock options to purchase 50,000 shares of common stock according to the Company's 2020 Plan. 20,000 stock options vested immediately and the balance of 30,000 shall vest in equal quarterly installments over three years commencing on June 30, 2024, with an exercise price of \$2.19 per share. The Company has calculated these options estimated fair market value at \$98,600 using the Black-Scholes model, with the following assumptions: expected term of 10.00 years, stock price of \$2.19, exercise price of \$2.19, volatility of 123.0%, risk-free rate of 4.07%, and no forfeiture rate. A Below is a table summarizing the changes in stock options outstanding for the six months ended June 30, 2024: A Schedule of Stock Options Outstanding A A Number of A Weighted Average A A Options A Exercise Price (\$/A Outstanding at December 31, 2023 A 1,236,000A A 2.30A Granted A 57,500A A 2.15A Exercised A A A Expired A A A Outstanding at June 30, 2024 A 1,293,500A A 2.30A Exercisable at June 30, 2024 A 604,810A A 2.76A A Stock-based compensation expense related to stock options of \$91,901 and \$225,687 was recorded for the three and six months ended June 30, 2024. As of June 30, 2024, the remaining unrecognized compensation cost related to non-vested stock options is \$1,140,807 and is

expected to be recognized over 4.55 years. The outstanding stock options have a weighted average remaining contractual life of 4.97 years and a total intrinsic value of \$0. A 30 A A AmpliTech Group, Inc. Notes To Condensed Consolidated Financial Statements For the Six Months Ended June 30, 2024 and 2023 A Warrants: A Below is a table summarizing the changes in warrants outstanding for the six months ended June 30, 2024: A Schedule of Warrants Outstanding A A Number of A Weighted Average A A Warrants A Exercise Price (\$A) Outstanding at December 31, 2023A A 3,296,942A A \$7.83A A GrantedA A A A ExercisedA A A A A ExpiredA A A A A Outstanding at June 30, 2024A A 3,296,942A A \$7.83A A Exercisable at June 30, 2024A A 3,296,942A A \$7.83A A Stock-based compensation expense related to warrants of \$0 was recorded for the three and six months ended June 30, 2024. As of June 30, 2024, the remaining unrecognized compensation cost related to non-vested warrants is \$0. The outstanding warrants have a weighted average remaining contractual life of 1.73 years and a total intrinsic value of \$0. A 31 A A AmpliTech Group, Inc. Notes To Condensed Consolidated Financial Statements For the Six Months Ended June 30, 2024 and 2023 A Restricted Stock Units: A On May 20, 2022, 30,000 restricted stock units at an exercise price of \$1.96 were issued to a board advisor. Vesting will occur in equal quarterly installments of 2,500 shares beginning on May 20, 2022. As of June 30, 2024, 15,000 shares of common stock were issued. A Below is a table summarizing the changes in restricted stock units outstanding for the six months ended June 30, 2024: A Schedule of Changes in Restricted Stock Units Outstanding A A Number of A Weighted Average A A RSU A Exercise Price (\$A) Outstanding at December 31, 2023A A 12,500A A 1.96A A GrantedA A A A ExercisedA A (5,000)A A 1.96A A ExpiredA A A A A Outstanding at June 30, 2024A A 7,500A A 1.96A A Exercisable at June 30, 2024A A A A A Stock-based compensation expense related to restricted stock units of \$4,871 and \$9,742 was recorded for the three and six months ended June 30, 2024. As of June 30, 2024, the remaining unrecognized compensation cost related to non-vested restricted stock units is \$17,503. The outstanding restricted stock units have a weighted average remaining contractual life of .64 years and a total intrinsic value of \$0. A (13) Subsequent events A On July 23, 2024, the Company entered into a business loan and security agreement with Albanq Lending II LLC in the amount of \$1,300,000, with an origination fee of \$26,000. The loan is payable within 76 weeks through 38 bi-weekly payments of \$44,816 and bears an annual interest rate of 21.2%. The loan is secured by the Company's assets through a UCC filing. Proceeds from the business loan will be used for working capital and 5G licensing and certification fees. A On July 26, 2024, the Company's AGTSS division entered into a licensing product agreement with a leading radio contract manufacturing company. Under the terms of the agreement, the licensor agreed to an exclusive United States distribution and global licensing rights for certain 5G telecom equipment for 18 months for the purpose of marketing, selling, renting, deployment and maintenance of the licensed products with the Company. A For these services, the Company will pay the Licensor certain software IP license fees in the amount of \$1,250,000. In addition, the licensor may provide certain product certification support for certain fees. A 32 A A Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations A The following discussion provides information which management believes is relevant to an assessment and understanding of our results of operations and financial condition. The discussion should be read along with our financial statements and notes thereto contained elsewhere in this Quarterly Report on Form 10-Q. The following discussion and analysis contain forward-looking statements, which involve risks and uncertainties. Our actual results may differ significantly from the results, expectations and plans discussed in these forward-looking statements. A Business Overview A AmpliTech Group Inc. (the "Company," the "AmpliTech Group," the "Company," incorporated in 2010 in the state of Nevada, is the parent company of its subsidiary, AmpliTech, Inc., and the Company's divisions Specialty Microwave, Spectrum Semiconductor Materials, AmpliTech Group MMIC Design Center (the "AGMDC") and AmpliTech Group True G Speed Services (the "AGTSS"). A AmpliTech, Inc. designs, engineers, and assembles microwave component-based low noise amplifiers (the "LNA") that meet individual customer specifications. Application of the Company's proprietary technology results in maximum frequency gain with minimal background noise distortion as required by each customer. The Company has both domestic and international customers in such industries as aerospace, governmental, defense, and commercial satellite. A Specialty designs and manufactures passive microwave components and related subsystems that meet individual customer specifications for both domestic and international customers for use in satellite communication ground networks. A AGMDC designs, develops and manufactures state-of-the-art signal processing components for satellite and 5G communications networks, defense, space and other commercial applications, allowing the Company to market its products to wider base of customers requiring high technology in smaller packages. A Spectrum Semiconductor Materials (the "SSM"), located in Silicon Valley (San Jose, CA), is a global authorized distributor of integrated circuit (the "IC") packaging and lids for semiconductor device assembly, prototyping, testing, and production requirements. A In August 2022, we formed our AGTSS division to enable true G speeds to the industry. AGTSS's main function will be to plan and configure 5G radio systems and make them O-RAN compliant. AGTSS will implement AmpliTech's low noise amplifier devices in these systems to promote greater coverage, longer range and faster speeds. A Our mission is to patent our proprietary IP and trade secrets that were used in small volume niche markets and expand our capabilities through strategic partnerships, joint ventures, mergers/acquisitions with key industry leaders in the 5G/6G, quantum computing, and cybersecurity markets. We believe this will enable us to scale up our products and revenue by developing full systems and subsystems with our unique technology as a core component, which we expect will position us as a global leader in these rapidly emerging technology sectors and addresses large volume markets as well, such as cellphone handsets, laptops, server networks, and many other applications that improve everyday quality of life. A The Company's research and development initiative to expand its product line of low noise amplifiers to include its new 5G and wireless infrastructure products and MMIC designs is progressing significantly. Our combined engineering and manufacturing resources are expected to complement the development of new subsystems for satellite, wireless, and 5G infrastructure, as well as advanced military and commercial markets. A 33 A A Loss on Investment of Digital Assets A During the three months ended March 31, 2024, the Company made several transactions in digital currency in the total amount of approximately \$3.25 million. The Company believes that it was fraudulently induced to hold its digital currency with a custodian whom the Company believed to be valid, but no longer exists. The Company is taking steps in an attempt to seek recovery of the funds including discussions with local, federal, and international law enforcement agencies and private consultants and is currently conducting a review of its processes and procedures related to this investment. At the present time, the Company is not aware of, and does not expect any additional losses arising out or relating to the above described investment. In addition, the Company does not believe that the Company's systems, records, or other assets were otherwise affected or compromised in connection with these investments. A As a result of the fraudulent digital currency transactions noted above, the Company was a victim of a cyber phishing scam that defrauded the Company. During the six months ended June 30, 2024, the Company recorded a complete loss from the investment in digital assets of \$3,248,911. As of June 30, 2024, the remaining balance of digital assets was \$0. A Corporate Information A Our principal executive offices are located at 155 Plant Avenue, Hauppauge, NY 11788. Our telephone number is (631) 521-7831. Our corporate website is www.amplitechinc.com. The information on our website is not a part of, or incorporated in, this prospectus. A Results of Operations A For the Three Months Ended June 30, 2024 and June 30, 2023 A Revenues A Sales decreased from \$4,073,231 for the three months ended June 30, 2023, to \$2,527,442 for the three months ended June 30, 2024, a decrease of \$1,545,789 or approximately 37.95%. Sales in the amplifier and related passive microwave components and subsystems division decreased by \$1,003,313, or 56.75%, while Spectrum sales decreased by \$545,476, or 23.61%. This decline is attributable to a decrease in sales from both domestic and international customers because of global economic uncertainty. The global recession and adverse market conditions are affecting our business in terms of lost revenue. A Cost of Goods Sold and Gross Profit A Cost of goods sold decreased from \$2,152,022 for the three months ended June 30, 2023, to \$1,470,355 for the three months ended June 30, 2024, a decrease of \$681,667 or 31.68%. Overall, this decrease is directly related to the decline in sales. As a result, gross profit was \$1,057,087 for the three months ended June 30, 2024, compared to \$1,921,209 for the three months ended June 30, 2023, a decrease of \$864,122, or 44.98%. Overall, gross profit as a percentage of sales decreased to 41.82% from 47.17%, because of decreased sales and fulfilling sales orders with lower gross margins. A 34 A A Selling, General and Administrative Expenses A Selling, general and administrative expenses increased to \$2,165,055 for the three months ended June 30, 2024, from \$1,731,414 for the three months ended June 30, 2023, an increase of \$433,641 or approximately 25.05%. This increase represents primarily an increase in legal, consulting and accounting fees, primarily related to the fraudulent digital currency transaction. A Research and Development Expenses A Research and development expenditures are charged to operations as incurred. The major components of research and development costs include salaries and benefits, consultants, outside service, and supplies. A Research and development costs for the three months ended June 30, 2024, and 2023, were \$460,122 and \$697,905, respectively, a decrease of \$237,783, or 34.07%, resulting from a decrease in consulting expenses as the major MMIC development efforts have been completed. A Loss From Operations A As a result of the above, the Company reported a loss from operations of \$1,568,090 and \$508,110 for the three months ended June 30, 2024, and 2023, respectively. A Other Income (Expenses) A The Company recorded interest expense, net of \$8,184 and interest income, net of \$7,314 for the three months ended June 30, 2024, and 2023. A Due to market fluctuations, the Company recorded an unrealized gain on investments of \$19,056 and a realized gain on investments of \$8,979 for the three months ended June 30, 2023. A Net Loss A The Company reported a net loss of \$1,576,274 and \$472,761 for the three months ended June 30, 2024 and 2023. A For the Six Months Ended June 30, 2024 and June 30, 2023 A Revenues A Sales decreased from \$8,185,530 for the six months ended June 30, 2023, to \$4,820,773 for the six months ended June 30, 2024, a decrease of \$3,364,757 or approximately 41.11%. Sales in the amplifier and related passive microwave components and subsystems division decreased by \$1,181,645, or 39.59%. Spectrum sales decreased by \$2,183,112, or 41.98%. This decline is attributable to a decrease in sales from both domestic and international customers because of global economic uncertainty. The global recession and adverse market conditions are affecting our business in terms of lost revenue. A Cost of Goods Sold and Gross Profit A Cost of Goods Sold decreased from \$4,401,540 for the six months ended June 30, 2023, to \$2,881,056 for the six months ended June 30, 2024, a decrease of \$1,520,484 or 34.54%. Overall, this decrease is directly related to the decline in sales. As a result, gross profit was \$1,939,717 for the six months ended June 30, 2024, compared to \$3,783,990 for the six months ended June 30, 2023, a decrease of \$1,844,273, or 48.74%. Overall, gross profit as a percentage of sales decreased from 46.23% to 40.24%. A 35 A A Selling, General and Administrative Expenses A Selling, general and administrative expenses increased to \$4,198,802 for the six months ended June 30, 2024, from \$3,693,326 for the six months ended June 30, 2023, an increase of \$505,476 or approximately 13.69%. This increase represents primarily an increase in legal, consulting and accounting fees, primarily related to the fraudulent digital currency transactions. A Research and Development Expenses A Research and development expenditures are charged to operations as incurred. The major components of research and development costs include consultants, outside service, and supplies. A Research and development costs for the six months ended June 30, 2024, and 2023, were \$736,877 and \$1,217,885, respectively, a decrease of \$481,008 or 39.50%, resulting from a decrease in consulting expenses as the major MMIC development efforts have been completed. A Loss From Operations A As a result of the above, the Company reported a loss from operations of \$2,995,962 and \$1,127,221 for the six months ended June 30, 2024 and 2023, respectively. A Other Income (Expenses) A The Company recorded net interest expense of \$12,527 and net interest income of \$21,085 for the six months ended June 30, 2024 and 2023. A Due to market fluctuations, the Company recorded an unrealized gain on investments of \$37,602 for the six months ended June 30, 2023. In addition, the Company recorded a realized gain on investments of \$25,965 and \$13,807, respectively for the six months ended June 30, 2024 and 2023. A As a result of the fraudulent digital currency transactions noted above, during the six months ended June 30, 2024, the Company recorded an impairment loss of \$3,248,911 related to digital assets. A Net Loss A The Company reported a net loss of \$6,231,435 and \$1,054,727 for the six months ended June 30, 2024 and 2023, respectively. A Liquidity and Capital Resources A Operating Activities A The net cash used in operating activities for the six months ended June 30, 2024, was \$2,396,466 resulting primarily from the net loss and operating changes in accounts receivable, inventories, prepaid expenses, accounts payable and accrued expenses, customer deposits and operating lease obligations. A The net cash used in operating activities for the six months ended June 30, 2023, was \$1,256,886 resulting primarily from the net loss and operating changes in accounts receivable, inventories, prepaid expenses, accounts payable and accrued expenses and operating lease obligations. A 36 A A Investing Activities A The net cash used in investing activities for the six months ended June 30, 2024, was \$3,262,591 for the purchase of equipment and investment in digital assets. A The net cash used in investing activities for the six months ended June 30, 2023, was \$3,547,692 of which \$776,507 related to the purchase of equipment and \$2,771,185 for the net purchases of marketable securities. A Financing Activities A The net cash used in financing activities for the six months ended June 30, 2024, was \$52,752, resulting primarily from the repayments of notes payable and financing lease liabilities. A The net cash used in financing activities for the six months ended June 30, 2023, was \$2,286,500, resulting primarily from the repayments of notes payable, financing lease liabilities, and the revenue earned. A As of June 30, 2024, we had cash and cash equivalents of \$1,014,204, working capital of \$9,995,731, and an accumulated deficit of \$16,001,158. A As of December 31, 2023, we had cash and cash equivalents of \$6,726,013, working capital of \$15,649,254, and an accumulated deficit of \$9,769,723. A We intend to continue to finance our internal growth with cash on hand, cash provided from operations, borrowings, debt or equity offerings, or some combination thereof. We believe that our cash to be provided from operations, cash on hand and current working capital, will be sufficient to fund our operations for the next twelve months. A On July 23, 2024, the Company entered into a business loan and security agreement with Albanq Lending II LLC in the amount of \$1,300,000, with an origination fee of \$26,000. The loan is payable within 76 weeks through 38 bi-weekly payments of \$44,816 and bears an annual interest rate of 21.2%. The loan is secured by the Company's assets through a UCC filing. Proceeds from the business loan will be used for working capital and 5G licensing and certification fees. A Critical Accounting Policies, Estimates and Assumptions A The SEC defines critical accounting policies as those that are, in management's view, most important to the portrayal of our financial condition and results of operations and those that require significant judgment and estimates. A The discussion and analysis of our financial condition and results of operations is based upon financial statements which have been prepared in accordance with accounting principles generally accepted in the United States. The preparation of these financial statements requires us to make estimates and judgments that affect the reported amounts of assets and liabilities. On an on-going basis, we evaluate our estimates, including the allowance for doubtful accounts, the salability and recoverability of inventory, income taxes and contingencies. We base our estimates on historical experience and on other assumptions that we believe to be reasonable under the circumstances, the results of which form our basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates under different assumptions or conditions. The Company believes there have been no significant changes during the six-month period ended June 30, 2024, to the items disclosed as critical accounting policies in management's discussion and analysis in the Company's Annual Report on Form 10-K for the year ended December 31, 2023. A We cannot predict what future laws and regulations might be passed that could have a material effect on our results of operations. We assess the impact of significant changes in laws and regulations on a regular basis and update the assumptions and estimates used to prepare our financial statements when we deem it necessary. A 37 A A Off Balance Sheet Transactions A None. A Item 3. Quantitative and Qualitative Disclosures About Market Risk A Smaller reporting companies are not required to provide the information required by this item. A Item 4. Controls and Procedures. A Evaluation of Disclosure Controls and Procedures A Our management, including our chief executive officer and chief financial officer, evaluated the effectiveness of our disclosure controls and procedures (as defined in Rules 13a-15(e) or 15d-15(e) under the Exchange Act as of the end of the period covered by this report. Our management does not expect that our disclosure controls and procedures will prevent all error and all fraud. In designing and evaluating the disclosure controls and procedures, management recognized that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving the desired control objectives. A Based on that evaluation, as of June 30, 2024, our chief executive officer and chief financial officer concluded that our disclosure controls and procedures were not effective to provide reasonable assurance that information we are required to disclose in reports that we file or submit under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms, and that such information is accumulated and communicated to our management, including our chief executive officer and chief financial officer, as appropriate, to allow timely decisions regarding required disclosure. A Changes in Internal Control over Financial Reporting A There were changes that have affected, or are reasonably likely to materially affect, our internal control over financial reporting (as defined in Rules 13a-15(f) or 15d-15(f) under the Exchange Act) during the period covered by this report. Please refer to the March 31, 2024 10Q filed on May 28, 2024. A 38 A A PART II A OTHER INFORMATION A Item 1. Legal Proceedings. A To the best of our knowledge, there are no pending legal proceedings to which we are a party or of which any of our property is the subject. A Item 1A. Risk Factors. A Smaller reporting companies are not required to provide the information required by this item. A Item 2. Unregistered Sales of Equity Securities and Use of Proceeds. A None. A Item 3. Defaults Upon Senior Securities. A None. A Item 4. Mine Safety Disclosures. A Not applicable. A Item 5. Other Information. A None. A Item 6. Exhibits. A (a) Exhibits A Exhibit No. A Description 31.1 A Rule 13a-14(a)/ 15d-14(a) Certification of Principal Executive Officer 31.2 A Rule 13a-14(a)/ 15d-14(a) Certification of Principal Financial Officer 32.1 A Section 1350 Certification of Principal Executive Officer 32.2 A Section 1350 Certification of Principal Financial Officer 11. (NS) A Inline XBRL Instance Document 101. SCH A Inline

XBRL Taxonomy Extension Schema Document 101. CAL  Inline XBRL Taxonomy Extension Calculation Link base Document 101. DEF  Inline XBRL Taxonomy Extension Definition Link base Document 101. LAB  Inline XBRL Taxonomy Extension Label Link base Document 101. PRE  Inline XBRL Taxonomy Extension Presentation Link base Document 104  Cover Page Interactive Data File (formatted as inline XBRL and contained in Exhibit 101).  39  A  SIGNATURES  Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned thereunto duly authorized.   AmpliTech Group, Inc.   Date: August 14, 2024 By: /s/ Fawad Maqbool   Fawad Maqbool   President and Chief Executive Officer   (Principal Executive Officer)   Date: August 14, 2024 By: /s/ Louisa Sanfratello   Louisa Sanfratello   Chief Financial Officer   (Principal Financial and Accounting Officer)   40  EX-31.1.2 ex31-1.htm  EXHIBIT 31.1  CERTIFICATION OF PRINCIPAL EXECUTIVE OFFICER PURSUANT TO SECTION 302(a) OF THE SARBANES-OXLEY ACT OF 2002  I, Fawad Maqbool, certify that:  1. I have reviewed the quarterly report on Form 10-Q of AmpliTech Group, Inc.(the registrant) for the quarter ended June 30, 2024;  2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;  3. Based on my knowledge, the financial statements, and other financial information included in this report, present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;  4. The registrants other certifying officer(s), and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:  a. Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;  b. Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;  c. Evaluated the effectiveness of the registrants disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and  d. Disclosed in this report any change in the registrants internal control over financial reporting that occurred during the registrants most recent fiscal quarter (the registrants fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrants internal control over financial reporting; and  5. The registrants other certifying officer(s), and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrants auditors and the audit committee of the registrants board of directors (or persons performing the equivalent functions):  a. All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrants ability to record, process, summarize and report financial information; and  b. Any fraud, whether material, that involves management or other employees who have a significant role in the registrants internal control over financial reporting.  Dated: August 14, 2024 By: /s/ Fawad Maqbool   Fawad Maqbool   President and Chief Executive Officer   (Principal Executive Officer)   EX-31.2.3 ex31-2.htm  EXHIBIT 31.2  CERTIFICATION OF PRINCIPAL FINANCIAL OFFICER PURSUANT TO SECTION 302(a) OF THE SARBANES-OXLEY ACT OF 2002  I, Louisa Sanfratello, certify that:  1. I have reviewed the quarterly report on Form 10-Q of AmpliTech Group, Inc. (the registrant) for the quarter ended June 30, 2024;  2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;  3. Based on my knowledge, the financial statements, and other financial information included in this report, present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;  4. The registrants other certifying officer(s), and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:  a. Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;  b. Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;  c. Evaluated the effectiveness of the registrants disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and  d. Disclosed in this report any change in the registrants internal control over financial reporting that occurred during the registrants most recent fiscal quarter (the registrants fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrants internal control over financial reporting; and  5. The registrants other certifying officer, and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrants auditors and the audit committee of the registrants board of directors (or persons performing the equivalent functions):  a. All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrants ability to record, process, summarize and report financial information; and  b. Any fraud, whether material, that involves management or other employees who have a significant role in the registrants internal control over financial reporting.  Dated: August 14, 2024 By: /s/ Louisa Sanfratello   Louisa Sanfratello   Chief Financial Officer   (Principal Financial and Accounting Officer)   EX-32.1.4 ex32-1.htm  EXHIBIT 32.1  CERTIFICATION PURSUANT TO 18 U.S.C. SECTION 1350 AS ADOPTED PURSUANT TO SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002  Fawad Maqbool, the President and Chief Executive Officer of AmpliTech Group, Inc. (the Registrant), certifies, under the standards set forth and solely for the purposes of 18 U.S.C. 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that, to his knowledge, the Quarterly Report on Form 10-Q of the Registrant for the quarter ended June 30, 2024 fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934 and information contained in that Form 10-Q fairly presents, in all material respects, the financial condition and results of operations of the Registrant.  Date: August 14, 2024 By: /s/ Fawad Maqbool   Fawad Maqbool   President and Chief Executive Officer   (Principal Executive Officer)   EX-32.2.5 ex32-2.htm  EXHIBIT 32.2  CERTIFICATION PURSUANT TO 18 U.S.C. SECTION 1350 AS ADOPTED PURSUANT TO SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002  Louisa Sanfratello, Chief Financial Officer of AmpliTech Group, Inc. (the Registrant), certifies, under the standards set forth and solely for the purposes of 18 U.S.C. 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that, to her knowledge, the Quarterly Report on Form 10-Q of the Registrant for the quarter ended June 30, 2024 fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934 and information contained in that Form 10-Q fairly presents, in all material respects, the financial condition and results of operations of the Registrant.  Dated: August 14, 2024 By: /s/ Louisa Sanfratello   Louisa Sanfratello   Chief Financial Officer   (Principal Financial and Accounting Officer)   EX-101.SCH 6 amp-20240630.xsd XBRL SCHEMA FILE 00000001 - Document - Cover link:presentationLink link:calculationLink link:definitionLink 00000002 - Statement - Condensed Consolidated Balance Sheets link:presentationLink link:calculationLink link:definitionLink 00000003 - Statement - Condensed Consolidated Balance Sheets (Parenthetical) link:presentationLink link:calculationLink link:definitionLink 00000004 - Statement - Condensed Consolidated Statements of Operations (Unaudited) link:presentationLink link:calculationLink link:definitionLink 00000005 - Statement - Condensed Consolidated Statements of Stockholders' Equity (Unaudited) link:presentationLink link:calculationLink link:definitionLink 00000006 - Statement - Condensed Consolidated Statements of Cash Flows (Unaudited) link:presentationLink link:calculationLink link:definitionLink 00000007 - Disclosure - Organization and Business Description link:presentationLink link:calculationLink link:definitionLink 00000008 - Disclosure - Loss on Investment of Digital Assets link:presentationLink link:calculationLink link:definitionLink 00000009 - Disclosure - Summary of Significant Accounting Policies link:presentationLink link:calculationLink link:definitionLink 00000010 - Disclosure - Revenues link:presentationLink link:calculationLink link:definitionLink 00000011 - Disclosure - Segment Reporting link:presentationLink link:calculationLink link:definitionLink 00000012 - Disclosure - Inventories link:presentationLink link:calculationLink link:definitionLink 00000013 - Disclosure - Property and Equipment link:presentationLink link:calculationLink link:definitionLink 00000014 - Disclosure - Goodwill and Intangible Assets link:presentationLink link:calculationLink link:definitionLink 00000015 - Disclosure - Cost Method Investment link:presentationLink link:calculationLink link:definitionLink 00000016 - Disclosure - Leases link:presentationLink link:calculationLink link:definitionLink 00000017 - Disclosure - Notes Payable link:presentationLink link:calculationLink link:definitionLink 00000018 - Disclosure - Stockholders Equity link:presentationLink link:calculationLink link:definitionLink 00000019 - Disclosure - Subsequent events link:presentationLink link:calculationLink link:definitionLink 00000020 - Disclosure - Summary of Significant Accounting Policies (Policies) link:presentationLink link:calculationLink link:definitionLink 00000021 - Disclosure - Summary of Significant Accounting Policies (Tables) link:presentationLink link:calculationLink link:definitionLink 00000022 - Disclosure - Revenues (Tables) link:presentationLink link:calculationLink link:definitionLink 00000023 - Disclosure - Segment Reporting (Tables) link:presentationLink link:calculationLink link:definitionLink 00000024 - Disclosure - Inventories (Tables) link:presentationLink link:calculationLink link:definitionLink 00000025 - Disclosure - Property and Equipment (Tables) link:presentationLink link:calculationLink link:definitionLink 00000026 - Disclosure - Goodwill and Intangible Assets (Tables) link:presentationLink link:calculationLink link:definitionLink 00000027 - Disclosure - Leases (Tables) link:presentationLink link:calculationLink link:definitionLink 00000028 - Disclosure - Notes Payable (Tables) link:presentationLink link:calculationLink link:definitionLink 00000029 - Disclosure - Stockholders Equity (Tables) link:presentationLink link:calculationLink link:definitionLink 00000030 - Disclosure - Organization and Business Description (Details Narrative) link:presentationLink link:calculationLink link:definitionLink 00000031 - Disclosure - Loss on Investment of Digital Assets (Details Narrative) link:presentationLink link:calculationLink link:definitionLink 00000032 - Disclosure - Schedule of property and equipment depreciated (Details) link:presentationLink link:calculationLink link:definitionLink 00000033 - Disclosure - Schedule of Intangible Assets (Details) link:presentationLink link:calculationLink link:definitionLink 00000034 - Disclosure - Summary of Significant Accounting Policies (Details Narrative) link:presentationLink link:calculationLink link:definitionLink 00000035 - Disclosure - Schedule of disaggregated revenue (Details) link:presentationLink link:calculationLink link:definitionLink 00000036 - Disclosure - Schedule of Segment Reporting (Details) link:presentationLink link:calculationLink link:definitionLink 00000037 - Disclosure - Schedule of Inventory (Details) link:presentationLink link:calculationLink link:definitionLink 00000038 - Disclosure - Schedule of Property and Equipment (Details) link:presentationLink link:calculationLink link:definitionLink 00000039 - Disclosure - Property and Equipment (Details Narrative) link:presentationLink link:calculationLink link:definitionLink 00000040 - Disclosure - Schedule of Amortization of Assets (Details) link:presentationLink link:calculationLink link:definitionLink 00000041 - Disclosure - Goodwill and Intangible Assets (Details Narrative) link:presentationLink link:calculationLink link:definitionLink 00000042 - Disclosure - Cost Method Investment (Details Narrative) link:presentationLink link:calculationLink link:definitionLink 00000043 - Disclosure - Schedule of Lease Assets and Liabilities (Details) link:presentationLink link:calculationLink link:definitionLink 00000044 - Disclosure - Schedule of Weighted Average Remaining Lease Term and Weighted Average Discount Rate (Details) link:presentationLink link:calculationLink link:definitionLink 00000045 - Disclosure - Schedule of Future Minimum Lease Payments For Finance Lease (Details) link:presentationLink link:calculationLink link:definitionLink 00000046 - Disclosure - Schedule of Future Minimum Operating Lease Payments (Details) link:presentationLink link:calculationLink link:definitionLink 00000047 - Disclosure - Leases (Details Narrative) link:presentationLink link:calculationLink link:definitionLink 00000048 - Disclosure - Schedule of Future Principal and Interest Payments (Details) link:presentationLink link:calculationLink link:definitionLink 00000049 - Disclosure - Notes Payable (Details Narrative) link:presentationLink link:calculationLink link:definitionLink 00000050 - Disclosure - Schedule of Stock Options Outstanding (Details) link:presentationLink link:calculationLink link:definitionLink 00000051 - Disclosure - Schedule of Warrants Outstanding (Details) link:presentationLink link:calculationLink link:definitionLink 00000052 - Disclosure - Schedule of Changes in Restricted Stock Units Outstanding (Details) link:presentationLink link:calculationLink link:definitionLink 00000053 - Disclosure - Stockholders Equity (Details Narrative) link:presentationLink link:calculationLink link:definitionLink 00000054 - Disclosure - Subsequent events (Details Narrative) link:presentationLink link:calculationLink link:definitionLink EX-101.CAL 7 amp-20240630 cal.xml XBRL CALCULATION FILE EX-101.DEF 8 amp-20240630 def.xml XBRL DEFINITION FILE EX-101.LAB 9 amp-20240630 lab.xml XBRL LABEL FILE Class of Stock [Axis] Common Stock, par value \$0.01 per share Warrants to Purchase Common Stock Equity Components [Axis] Common Stock [Member] Additional Paid-in Capital [Member] Retained Earnings [Member] Business Acquisition [Axis] AmpliTech Inc [Member] Sale of Stock [Axis] IPO [Member] Statistical Measurement [Axis] Maximum [Member] Long-Lived Tangible Asset [Axis] Office Equipment [Member] Minimum [Member] Machinery and Equipment [Member] Computer Equipment Software [Member] Vehicles [Member] Leasehold Improvements [Member] Finite-Lived Intangible Assets by Major Class [Axis] Customer Relationships [Member] Intellectual Property [Member] Trade Names [Member] Legal Entity [Axis] AmpliTech Inc and Specialty Microwave [Member] Geographical [Axis] Domestic Sales [Member] International Sales [Member] Spectrum [Member] Segments [Axis] Manufacturing And Engineering [Member] Distribution [Member] Corporate [Member] Lab Equipment [Member] Manufacturing Equipment [Member] Automobiles [Member] Computer Equipment [Member] Furniture and Fixtures [Member] Related and Nonrelated Parties [Axis] SN2NLLC [Member] Collaborative Arrangement and Arrangement Other than Collaborative [Axis] Spectrum Semiconductor Materials Lease Agreement [Member] Deb Instrument [Axis] Promissory Note [Member] Award Date [Axis] May 14, 2020 [Member] Long-Term Debt, Type [Axis] Loans Payable [Member] June 10, 2020 [Member] January 2022 [Member] Series A Convertible Preferred Stock [Member] Plan Name [Axis] 2020 Equity Incentive Plan [Member] Award Type [Axis] Stock Options [Member] Title and Position [Axis] Consultant [Member] Share-Based Payment Arrangement, Option [Member] Contractor [Member] Warrant [Member] Restricted Stock Units (RSUs) [Member] Business Loan and Security Agreement [Member] Subsequent Event Type [Axis] Subsequent Event [Member] Product and Service [Axis] License and Service [Member] Statement [Table] Statement [Line Items] Document Type Amendment Flag Amendment Description Document Registration Statement Document Annual Report Document Quarterly Report Document Transition Report Document Shell Company Report Document Shell Company Event Date Document Period Start Date Document Period End Date Document Fiscal Period Focus Document Fiscal Year Focus Current Fiscal Year End Date Entity File Number Entity Registrant Name Entity Central Index Key Entity Primary SIC Number Entity Tax Identification Number Entity Incorporation, State or Country Code Entity Address, Address Line One Entity Address, Address Line Two Entity Address, Address Line Three Entity Address, City or Town Entity Address, State or Province Entity Address, Country Entity Address, Postal Zip Code Country Region City Area Code Local Phone Number Extension Written Communications Soliciting Material Pre-commencement Tender Offer Pre-commencement Issuer Tender Offer Title of 12(b) Security No Trading Symbol Flag Trading Symbol Security Exchange Name Title of 12(g) Security Security Reporting Obligation Annual Information Form Audited Annual Financial Statements Entity Well-known Seasoned Issuer Entity Voluntary Filers Entity Current Reporting Status Entity Interactive Data Current Entity Filer Category Entity Small Business Entity Emerging Growth Company Elected Not To Use the Extended Transition Period Document Accounting Standard Other Reporting Standard Item Number Entity Shell Company Entity Public Float Entity Bankruptcy Proceedings, Reporting Current Entity Common Stock, Shares Outstanding Documents Incorporated by Reference [Text Block] Entity Listing, Par Value Per Share Statement of Financial Position [Abstract] Assets Current Assets Cash and cash equivalents Accounts receivable Inventories, net Prepaid expenses Total Current Assets Property and equipment, net Operating lease right of use assets Intangible assets, net Goodwill Cost method investment Security deposits Total Assets Liabilities and Stockholders Equity Current Liabilities Accounts payable and accrued expenses Customer deposits Current portion of financing lease obligations Current portion of operating lease obligations Current portion of notes payable Total Current Liabilities Long-term Liabilities Financing lease obligations, net of current portion Operating lease obligations, net of current portion Deferred tax liability Total Liabilities Commitments and Contingencies Stockholders Equity Common stock, par value \$0.01, 500,000,000 shares authorized, 9,719,613 and 9,714,613 shares issued and outstanding, respectively Additional paid-in capital Accumulated deficit Total Stockholders Equity Total Liabilities and Stockholders Equity Total Common stock, shares par value Common stock, shares authorized Common stock, shares issued Common stock, shares outstanding Income Statement [Abstract] Revenues Cost of Goods Sold Gross Profit Operating Expenses Selling, general and administrative Research and development Total Operating Expenses Loss From Operations Other Income (Expenses) Loss on investment in digital assets Unrealized gain on investments Realized gain on investments

Interest Income (expense), net Total Other Income (Expenses) Net Loss Before Income Taxes Provision For Income Taxes Net Loss Net Loss Per Share - Basic Net Loss Per Share - Diluted Weighted Average Common Shares Outstanding - Basic Weighted Average Common Shares Outstanding - Diluted Balance Balance, shares Stock based compensation Common stock issued for vesting of RSU's Common stock issued for vesting of RSU's, shares Net loss Balance Balance, shares Statement of Cash Flows [Abstract] Cash Flows from Operating Activities: Adjustments to reconcile net loss to net cash used in operating activities: Depreciation and amortization Operating lease costs Stock based compensation Gain on termination of right-of-use operating lease Inventory reserve Change in fair value of marketable securities Loss on investment of digital assets Changes in Operating Assets and Liabilities: Accounts receivable Inventories Prepaid expenses Security deposits Accounts payable and accrued expenses Operating lease obligations Customer deposits Net cash used in operating activities Cash Flows from Investing Activities: Purchase of property and equipment Net investment in marketable securities Purchase of investment in digital assets Net cash used in investing activities Cash Flows from Financing Activities: Repayment on financing lease liabilities Repayment of notes payable Payment of revenue earned Net cash used in financing activities Net change in cash and cash equivalents Cash and Cash Equivalents, Beginning of the Period Cash and Cash Equivalents, End of the Period A Supplemental disclosures: Cash paid for interest expense Cash paid for income taxes Non-Cash Investing and Financing Activities: Common Stock issued on vesting of RSU's Gain on termination of right-of-use operating lease Disposal of property and equipment Accounting Policies [Abstract] Organization and Business Description Loss On Investment Of Digital Assets Loss on Investment of Digital Assets Summary of Significant Accounting Policies Revenue from Contract with Customer [Abstract] Revenues Segment Reporting [Abstract] Segment Reporting Inventory Disclosure [Abstract] Inventories Property, Plant and Equipment [Abstract] Property and Equipment Goodwill and Intangible Assets Disclosure [Abstract] Goodwill and Intangible Assets Investments, All Other Investments [Abstract] Cost Method Investment Leases [Abstract] Leases Debt Disclosure [Abstract] Notes Payable Equity [Abstract] Stockholders' Equity Subsequent Events [Abstract] Subsequent events Basis of Accounting Principles of Consolidation Use of Estimates Cash and Cash Equivalents Accounts Receivable Inventories Property and Equipment Intangible Assets Long-Lived Assets Goodwill and Indefinite-Lived Intangible Assets Investment Policy-Cost Method Investment in Digital Assets Leases Revenue Recognition Cost of Sales Shipping and Handling Research and Development Income Taxes Earnings Per Share Fair Value Measurements Stock-Based Compensation Concentration of Credit Risk Recent Accounting Pronouncements Schedule of property and equipment depreciated Schedule of Intangible Assets Schedule of disaggregated revenue Schedule of Segment Reporting Schedule of Inventory Schedule of Property and Equipment Schedule of Intangible Assets Schedule of Amortization of Assets Schedule of Lease Assets and Liabilities Schedule of Weighted Average Remaining Lease Term and Weighted Average Discount Rate Schedule Of Future Minimum Lease Payments For Finance Lease Schedule of Future Minimum Operating Lease Payments Schedule of Future Principal and Interest Payments Schedule of Stock Options Outstanding Schedule of Warrants Outstanding Schedule of Changes in Restricted Stock Units Outstanding Restructuring Cost [Table] Restructuring Cost and Reserve [Line Items] Acquisition of entity by issuing of common stock Percentage of voting interest acquired Equity interests owned by selling share holders Common stock, outstanding Reverse stock split Public offering shares Public offering per share Transactions in digital currency Loss from the investment in digital assets Remaining balance on investment of digital assets Property, Plant and Equipment [Table] Property, Plant and Equipment [Line Items] Estimated useful life Depreciation Method Useful Life Depreciation Method Gross Carrying Amount Accumulated Amortization Net Net Weighted Average Life Gross Carrying Amount Net FDIC maximum amount Allowance for doubtful accounts receivable Inventory obsolescence reserve Goodwill impairment Cost method investment Potentially dilutive shares Disaggregation of Revenue [Table] Disaggregation of Revenue [Line Items] Total sales Schedule of Segment Reporting Information, by Segment [Table] Segment Reporting Information [Line Items] Revenue Net Income (Loss) Total Assets Depreciation and Amortization Interest Income, net Raw Materials Work-in Progress Finished Goods Subtotal Less: Reserve for Obsolescence Total Property plant and equipment, gross Less: Accumulated Depreciation Property plant and equipment, net Depreciation expense Cost of goods sold Amount paid to purchase Property and equipment under finance lease Financing leases outstanding balance 2024-remaining 2025 2026 2027 2028 Thereafter Amortization expenses Defined Benefit Plan [Table] Defined Benefit Plan Disclosure [Line Items] Aggregate purchase price for membership interest Equity method investment additional information Cost method investment membership interest percentage Overpaid for the membership interest Investments Cost method investment membership interest percentage ROU operating lease assets Current portion of operating lease Operating lease, net of current portion Total operating lease liabilities Property and equipment, gross Accumulated depreciation Property and equipment, net Current portion of financing lease Financing lease, net of current portion Total financing lease liabilities Weighted average remaining lease term (years) operating leases Weighted average remaining lease term (years) financing leases Weighted average discount rate operating leases Weighted average discount rate financing leases 2024-remaining 2025 2026 2027 2028 Total lease payments Less imputed interest Total lease obligations Less current obligations Long-term lease obligations 2024 remaining 2025 2026 2027 2028 Thereafter Total lease payments Less imputed interest Less current obligations Long-term lease obligations Collaborative Arrangement and Arrangement Other than Collaborative [Table] Collaborative Arrangement and Arrangement Other than Collaborative [Line Items] Finance lease agreement description Operating lease agreement description Annual rent Operating lease payments increase percentage Purchase option description Gain loss on termination of lease right of use operating Payments for rent Base rent New lease for facility Lessee operating lease term of contract Security deposit Lessee operating lease description Triple lease for facility 2024 remaining Total remaining payments Short-Term Debt [Table] Short-Term Debt [Line Items] Total consideration paid Cash paid in acquisition, net of cash acquired Consideration paid in promissory note Interest rate percentage Debt instrument, description Notes payable Principal payment Interest expense Line of credit facility, periodic payment Line of credit facility, maximum borrowing capacity Proceeds from loans Debt instrument periodic payments interest repayments of debt Line of credit, closure of equipment Line of credit equipments Payments of stock issuance costs Payments for deposits Machinery financed, balance Number of payments Schedule of Share-Based Compensation Arrangements by Share-Based Payment Award [Table] Share-Based Compensation Arrangement by Share-Based Payment Award [Line Items] Number of Options, Outstanding Weighted Average Exercise Price, Outstanding Number of Options, Granted Weighted Average Exercise Price, Granted Number of Options, Exercised Weighted Average Exercise Price, Exercised Number of Options, Expired Weighted Average Exercise Price, Expired Number of Options, Outstanding Weighted Average Exercise Price, Outstanding Number of Options, Exercisable Weighted Average Exercise Price, Exercisable Number of Warrants, Outstanding shares Weighted Average Exercise Price, Outstanding shares Number of Warrants, Granted shares Weighted Average Exercise Price Outstanding, Granted shares Number of Warrants, Exercised shares Number of Warrants, Expired shares Number of Warrants, Outstanding shares Weighted Average Exercise Price, Outstanding shares Number of Warrants, Exercisable shares Weighted Average Exercise Price, Exercisable shares Number of RSU's, Outstanding Weighted Average Exercise Price, Outstanding Number of RSU's, Granted Weighted Average Exercise Price, Granted Number of RSU's, Exercised Weighted Average Exercise Price, Exercised Number of RSU's, Expired Weighted Average Exercise Price, Expired Number of RSU's, Outstanding Weighted Average Exercise Price, Outstanding Number of RSU's, Exercisable Weighted Average Exercise Price, Exercisable Accumulated Other Comprehensive Income (Loss) [Table] Accumulated Other Comprehensive Income (Loss) [Line Items] Corporation authorised shares Common stock, par value Common stock shares, authorized Preferred stock, shares authorized Preferred stock, shares par value Preferred stock designated as convertible preferred stock, shares Common stock shares, authorized Equity incentive plan, description Issuance of common stock shares Common stock shares issuable upon exercise of warrants Purchase shares of common stock Exercise price per share Estimated fair value market Share based compensation, expected term Share based compensation, stock price Share based compensation, exercise price Share based compensation, volatility Share based compensation, risk-free rate Stock option vested Stock-based compensation expense Unrecognized compensation cost Weighted average remaining contractual life Weighted average remaining contractual life Total intrinsic value Unrecognized compensation cost Weighted average remaining contractual life Number of options, granted Exercise Price Equal quarterly installments, shares Subsequent Event [Table] Subsequent Event [Line Items] Business loan Origination fee Payments of loan Annual interest rate Software ip license fee Warrants To Purchase Common Stock [Member]. Common Stock Par Value 0.001 Per Share [Member] Amplitech Inc [Member] Business acquisition equity interests owned by selling share holders. Loss On Investment [Text Block] Loss on investment in digital assets. Deferred tax liability. Property Plant and Equipment Depreciated [Table Text Block] Property plant and equipments depreciation methods. Computer Equipment Software [Member] Realized gain on investment. Investment in digital assets [Policy] Shipping And Handling [Policy Text Block] Amplitech Inc And Specialty [Member] Spectrum [Member] Corporates [Member] Increase decrease in customer deposit. Payments for proceeds from marketable securities. Payment of revenue earned. Finite lived intangible assets amortization expense after year four. Aggregate purchase price for membership interest SN2NLLC [Member] Aggregate purchase price for membership interest percentage. Overpaid for the membership interest Cost method investment membership interest percentage. Schedule Of Weighted Average Remaining Lease Term And Weighted Average Discount Rate [Table Text Block] Finance lease agreement description. Finance lease obligations financing. Long term lease obligations. Operating lease agreement description Operating lease payments increase percentage. Purchase option description. Gain loss on termination of lease right of use operating. New lease for facility Triple lease for facility. Lessee operating lease liability payments due after year four. Promissory Note [Member] May Fourteen Two Thousand And Twenty [Member] June Ten Twenty Twenty [Member] Line of credit closure of equipment. Line of credit equipments. January Two Thousand Twenty Two [Member] Number of payments. Schedule Of Future Principal And Interest Payments [Table Text Block] Corporation authorised shares issued. Preferred stock designated as convertible preferred stock shares. Series A Convertible Preferred Stock [Member] Originally common stock shares authorized. Description equity incentive plan. Two Thousand And Twenty Equity Incentive Plan [Member] Consultant [Member] Contractor [Member] Estimated fair market value Share based compensation arrangement by share based payment award non option equity instruments exercisable number. Share based compensation arrangement by share based payment award non option outstanding weighted average exercise price. Share based compensation arrangements by share based payment award non option grants in period weighted average exercise price. Share based compensation arrangement by share based payment award non option exercisable weighted average exercise price. Share based compensation arrangement by share based payment award non options outstanding weighted average remaining contractual term2. Equal quarterly installments. Share based compensation arrangement by share based payment award equity instruments other than options exercised in period. Share based compensation arrangement by share based payment award equity instruments other than options exercisable number. Share based compensation arrangement by share based payment award equity instruments other than options vested in period weighted average exercise price fair value. Share based compensation arrangement by share based payment award equity instruments other than options exercisable weighted average grant date fair value. Amplitech Inc and Specialty Microwave [Member] Spectrum Semiconductor Materials Lease Agreement [Member] Definitive Agreements [Member] Product Development Agreement [Member] Business Loan And Security Agreement [Member] Domestic Sales [Member] International Sales [Member] Lab Equipment [Member] Manufacturing Equipment [Member] Manufacturing And Engineering [Member] Distribution [Member] Stock Options [Member] Assets, Current Liabilities, Current Liabilities Equity, Attributable to Parent Liabilities and Equity Gross Profit Operating Expenses [Default Label] Operating Income (Loss) Other Noncash Income (Expense) Shares, Outstanding Share-Based Payment Arrangement, Noncash Expense Gain (Loss) on Termination of Lease Marketable Security, Unrealized Gain (Loss) Increase (Decrease) in Accounts Receivable Increase (Decrease) in Inventories Increase (Decrease) in Prepaid Expense Increase (Decrease) in Security Deposits Increase (Decrease) in Accounts Payable and Accrued Liabilities Increase/Decrease/In/Customer/Deposit Net Cash Provided by (Used in) Operating Activities Payments to Acquire Property, Plant, and Equipment Payments/For/Proceeds/From/Marketable/Securities Payments to Acquire Investments Net Cash Provided by (Used in) Investing Activities Finance Lease, Principal Payments Repayments of Notes Payable Payment/Of/Revenue/Earnout Net Cash Provided by (Used in) Financing Activities Cash, Cash Equivalents, Restricted Cash, and Restricted Cash Equivalents, Period Increase (Decrease), Excluding Exchange Rate Effect Cash, Cash Equivalents, Restricted Cash, and Restricted Cash Equivalents Revenue from Contract with Customer [Text Block] Inventory, Policy [Policy Text Block] Property, Plant and Equipment, Policy [Policy Text Block] Lessee, Leases [Policy Text Block] Schedule of Finite-Lived Intangible Assets [Table Text Block] Gain (Loss) on Investments Finite-Lived Intangible Assets, Amortization Method Indefinite-Lived Intangible Assets (Excluding Goodwill) Finite-Lived Intangible Assets, Net Intangible Assets, Gross (Excluding Goodwill) Equity Securities without Readily Determinable Fair Value, Amount Inventory Adjustments Accumulated Depreciation, Depletion and Amortization, Property, Plant, and Equipment Cost/Method/Investment/Membership/Interest/Percentage Operating Lease, Liability Property, Plant, and Equipment and Finance Lease Right-of-Use Asset, Accumulated Depreciation and Amortization Property, Plant, and Equipment and Finance Lease Right-of-Use Asset, after Accumulated Depreciation and Amortization Finance Lease, Liability, to be Paid, Remainder of Fiscal Year Finance Lease, Liability, to be Paid, Year One Finance Lease, Liability, to be Paid, Year Two Finance Lease, Liability, to be Paid, Year Three Finance Lease, Liability, to be Paid Finance Lease, Liability, Undiscounted Excess Amount Lessee, Operating Lease, Liability, to be Paid, Year One Lessee, Operating Lease, Liability, to be Paid, Year Two Lessee, Operating Lease, Liability, to be Paid, Year Three Lessee, Operating Lease, Liability, to be Paid, Year Four Lessee/Operating/Lease/Liability/Payments/Due/After/Year/Four Lessee, Operating Lease, Liability, to be Paid Lessee, Operating Lease, Liability, Undiscounted Excess Amount Long-Term Debt, Maturity, Year One Share-Based Compensation Arrangement by Share-Based Payment Award, Options, Outstanding, Number Share-Based Compensation Arrangement by Share-Based Payment Award, Options, Outstanding, Weighted Average Exercise Price Share-Based Compensation Arrangement by Share-Based Payment Award, Options, Exercisable, Number Share-Based Compensation Arrangement by Share-Based Payment Award, Options, Exercisable, Weighted Average Exercise Price Share-Based Compensation Arrangement by Share-Based Payment Award, Non-Option Equity Instruments, Outstanding, Number Share-Based Compensation Arrangement By Share-Based Payment Award Non Option Outstanding Weighted Average Exercise Price Share-Based Compensation Arrangement By Share-Based Payment Award Non Option Equity Instruments Exercisable Number Share-Based Compensation Arrangement By Share-Based Payment Award Non Option Exercisable Weighted Average Exercise Price Share-Based Compensation Arrangement by Share-Based Payment Award, Equity Instruments Other than Options, Nonvested, Weighted Average Grant Date Fair Value Share-Based Compensation Arrangement by Share-Based Payment Award, Equity Instruments Other than Options, Grants in Period, Weighted Average Grant Date Fair Value Share-Based Compensation Arrangement by Share-Based Payment Award Equity Instruments Other Than Options Exercised In Period Share-Based Compensation Arrangement By Share-Based Payment Award Equity Instruments Other Than Options Vested In Period Weighted Average Exercise Price Share-Based Compensation Arrangement by Share-Based Payment Award, Equity Instruments Other than Options, Forfeitures, Weighted Average Grant Date Fair Value Share-Based Compensation Arrangement By Share-Based Payment Award Equity Instruments Other Than Options Exercisable Number Share-Based Compensation Arrangement By Share-Based Payment Award Equity Instruments Other Than Options Exercisable Weighted Average Grant Date Fair Value Share-Based Compensation Arrangement by Share-Based Payment Award, Options, Outstanding, Weighted Average Remaining Contractual Term Share-Based Payment Arrangement, Nonvested Award, Excluding Option, Cost Not yet Recognized, Amount Share based Compensation Arrangement By Share based Payment Award Non Options Outstanding Weighted Average Remaining Contractual Term2 EX-101.PRE 10 ampg-20240630\_pre.xml XBRL PRESENTATION FILE XML 12 R1.htm IDEA: XBRL DOCUMENT v3.24.2.1 Cover - / shares 6 Months Ended Jun. 30, 2024 Aug. 09, 2024 Document Type 10-Q A Amendment Flag false A Document Quarterly Report true A Document Transition Report false A Document Period End Date Jun. 30, 2024 A Document Fiscal Period Focus Q2 A Document Fiscal Year Focus 2024 A Current Fiscal Year End Date -12-31 A Entity File Number 001-40069 A Entity Registrant Name AmpliTech Group, Inc. A Entity Central Index Key 0001518461 A Entity Tax Identification Number 27-4566352 A Incorporation, State or Country Code NV A Entity Address, Address Line One 155 Plant Avenue A Entity Address, City or Town Hauppauge A Entity Address, State or Province NY A Entity Address, Postal Zip Code 11788 A City Area Code (631) A Local Phone Number 521-7831 A Entity Current Reporting Status Yes A Entity Interactive Data Current Yes A Entity Filer Category Non-accelerated Filer A Entity Small Business true A Entity Emerging Growth Company false A Entity Shell Company false A Entity Common Stock, Shares Outstanding A 9,719,613 Entity Listing, Par Value Per Share \$ 0.001 A Common Stock, par value \$0.001 per share A Title of 12(b) Security Common Stock, par value \$0.001 per share A Trading Symbol AMPG A Security Exchange Name NASDAQ A Warrants to Purchase Common Stock A Title of 12(b) Security Warrants to Purchase Common Stock A Trading Symbol AMPGW A Security Exchange Name NASDAQ A X - Definition Boolean flag that is true when the XBRL content amends previously-filed or accepted submission. + References No definition available. + Details Name: dei Amendment Flag NameSpace Prefix: dei Data Type: xbrli:booleanItemType Balance Type: na Period Type: duration X - Definition Area code of city + References No definition available. + Details Name: dei\_CityAreaCode NameSpace Prefix: dei Data Type: xbrli:normalizedStringItemType Balance Type: na Period Type: duration

X - DefinitionEnd date of current fiscal year in the format --MM-DD. + ReferencesNo definition available. + Details Name: dei\_CurrentFiscalYearEndDate Namespace Prefix: dei\_Data Type: xbrli:MonthDayItem Type Balance Type: na Period Type: duration X - DefinitionFiscal period values are FY, Q1, Q2, and Q3. 1st, 2nd and 3rd quarter 10-Q or 10-QT statements have value Q1, Q2, and Q3 respectively, with 10-K, 10-KT or other fiscal year statements having FY. + ReferencesNo definition available. + Details Name: dei\_DocumentFiscalPeriodFocus Namespace Prefix: dei\_Data Type: dei:fiscalPeriodItem Type Balance Type: na Period Type: duration X - DefinitionThis is focus fiscal year of the document report in YYYY format. For a 2006 annual report, which may also provide financial information from prior periods, fiscal 2006 should be given as the fiscal year focus. Example: 2006. + ReferencesNo definition available. + Details Name: dei\_DocumentFiscalYearFocus Namespace Prefix: dei\_Data Type: xbrli:YearItem Type Balance Type: na Period Type: duration X - DefinitionFor the EDGAR submission types of Form 8-K: the date of the report, the date of the earliest event reported; for the EDGAR submission types of Form N-1A: the filing date; for all other submission types: the end of the reporting or transition period. The format of the date is YYYY-MM-DD. + ReferencesNo definition available. + Details Name: dei\_DocumentPeriodEndDate Namespace Prefix: dei\_Data Type: xbrli:dateItem Type Balance Type: na Period Type: duration X - DefinitionBoolean flag that is true only for a form used as an quarterly report. + ReferencesReference 1: <http://www.xbrl.org/2003/role/presentationRef-Publisher SEC-Name Form 10-Q-Number 240-Section 308-Subsection a> + Details Name: dei\_DocumentQuarterlyReport Namespace Prefix: dei\_Data Type: xbrli:booleanItem Type Balance Type: na Period Type: duration X - DefinitionBoolean flag that is true only for a form used as a transition report. + ReferencesReference 1: <http://www.xbrl.org/2003/role/presentationRef-Publisher SEC-Name Forms 10-K, 10-Q, 20-F-Number 240-Section 13-Subsection a-1> + Details Name: dei\_DocumentTransitionReport Namespace Prefix: dei\_Data Type: xbrli:booleanItem Type Balance Type: na Period Type: duration X - DefinitionThe type of document being provided (such as 10-K, 10-Q, 485BPOS, etc). The document type is limited to the same value as the supporting SEC submission type, or the word 'Other'. + ReferencesNo definition available. + Details Name: dei\_DocumentType Namespace Prefix: dei\_Data Type: dei:submissionItem Type Balance Type: na Period Type: duration X - DefinitionAddress Line 1 such as Attn, Building Name, Street Name + ReferencesNo definition available. + Details Name: dei\_EntityAddressLine1 Namespace Prefix: dei\_Data Type: xbrli:normalizedStringItem Type Balance Type: na Period Type: duration X - DefinitionName of the City or Town + ReferencesNo definition available. + Details Name: dei\_EntityAddressCityOrTown Namespace Prefix: dei\_Data Type: xbrli:normalizedStringItem Type Balance Type: na Period Type: duration X - DefinitionCode for the postal or zip code + ReferencesNo definition available. + Details Name: dei\_EntityAddressPostalZipCode Namespace Prefix: dei\_Data Type: xbrli:normalizedStringItem Type Balance Type: na Period Type: duration X - DefinitionName of the state or province. + ReferencesNo definition available. + Details Name: dei\_EntityAddressStateOrProvince Namespace Prefix: dei\_Data Type: dei:stateOrProvinceItem Type Balance Type: na Period Type: duration X - DefinitionA unique 10-digit SEC-issued value to identify entities that have filed disclosures with the SEC. It is commonly abbreviated as CIK. + ReferencesReference 1: <http://www.xbrl.org/2003/role/presentationRef-Publisher SEC-Name Exchange Act-Number 240-Section 12-Subsection b-2> + Details Name: dei\_EntityCentralIndexKey Namespace Prefix: dei\_Data Type: dei:centralIndexKeyItem Type Balance Type: na Period Type: duration X - DefinitionIndicate number of shares or other units outstanding of each of registrant's classes of capital or common stock or other ownership interests, if and as stated on cover of related periodic report. Where multiple classes or units exist define each class/interest by adding class of stock items such as Common Class A [Member], Common Class B [Member] or Partnership Interest [Member] onto the Instrument [Domain] of the Entity Listings, Instrument. + ReferencesNo definition available. + Details Name: dei\_EntityCommonStockSharesOutstanding Namespace Prefix: dei\_Data Type: xbrli:sharesItem Type Balance Type: na Period Type: instant X - DefinitionIndicate 'Yes' or 'No' whether registrants (1) have filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that registrants were required to file such reports), and (2) have been subject to such filing requirements for the past 90 days. This information should be based on the registrant's current or most recent filing containing the related disclosure. + ReferencesNo definition available. + Details Name: dei\_EntityCurrentReportingStatus Namespace Prefix: dei\_Data Type: dei:yesNoItem Type Balance Type: na Period Type: duration X - DefinitionIndicate if registrant meets the emerging growth company criteria. + ReferencesReference 1: <http://www.xbrl.org/2003/role/presentationRef-Publisher SEC-Name Exchange Act-Number 240-Section 12-Subsection b-2> + Details Name: dei\_EntityEmergingGrowthCompany Namespace Prefix: dei\_Data Type: xbrli:booleanItem Type Balance Type: na Period Type: duration X - DefinitionCommission file number. The field allows up to 17 characters. The prefix may contain 1-3 digits, the sequence number may contain 1-8 digits, the optional suffix may contain 1-4 characters, and the fields are separated with a hyphen. + ReferencesNo definition available. + Details Name: dei\_EntityFileNumber Namespace Prefix: dei\_Data Type: dei:fileNumberItem Type Balance Type: na Period Type: duration X - DefinitionIndicate whether the registrant is one of the following: Large Accelerated Filer, Accelerated Filer, Non-accelerated Filer. Definitions of these categories are stated in Rule 12b-2 of the Exchange Act. This information should be based on the registrant's current or most recent filing containing the related disclosure. + ReferencesReference 1: <http://www.xbrl.org/2003/role/presentationRef-Publisher SEC-Name Exchange Act-Number 240-Section 12-Subsection b-2> + Details Name: dei\_EntityFilerCategory Namespace Prefix: dei\_Data Type: dei:filerCategoryItem Type Balance Type: na Period Type: duration X - DefinitionTwo-character EDGAR code representing the state or country of incorporation. + ReferencesNo definition available. + Details Name: dei\_EntityIncorporationStateCountryCode Namespace Prefix: dei\_Data Type: dei:edgarStateCountryItem Type Balance Type: na Period Type: duration X - DefinitionBoolean flag that is true when the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). + ReferencesReference 1: <http://www.xbrl.org/2003/role/presentationRef-Publisher SEC-Name Regulation S-T-Number 232-Section 405> + Details Name: dei\_EntityInteractiveDataCurrent Namespace Prefix: dei\_Data Type: dei:yesNoItem Type Balance Type: na Period Type: duration X - DefinitionThe par value per share of security quoted in same currency as Trading currency. Example: '0.01'. + ReferencesNo definition available. + Details Name: dei\_EntityListingParValuePerShare Namespace Prefix: dei\_Data Type: dtr:types:perShareItem Type Balance Type: na Period Type: duration X - DefinitionThe exact name of the entity filing the report as specified in its charter, which is required by forms filed with the SEC. + ReferencesReference 1: <http://www.xbrl.org/2003/role/presentationRef-Publisher SEC-Name Exchange Act-Number 240-Section 12-Subsection b-2> + Details Name: dei\_EntityRegistrantName Namespace Prefix: dei\_Data Type: xbrli:normalizedStringItem Type Balance Type: na Period Type: duration X - DefinitionBoolean flag that is true when the registrant is a shell company as defined in Rule 12b-2 of the Exchange Act. + ReferencesReference 1: <http://www.xbrl.org/2003/role/presentationRef-Publisher SEC-Name Exchange Act-Number 240-Section 12-Subsection b-2> + Details Name: dei\_EntityShellCompany Namespace Prefix: dei\_Data Type: xbrli:booleanItem Type Balance Type: na Period Type: duration X - DefinitionIndicates that the company is a Smaller Reporting Company (SRC). + ReferencesReference 1: <http://www.xbrl.org/2003/role/presentationRef-Publisher SEC-Name Exchange Act-Number 240-Section 12-Subsection b-2> + Details Name: dei\_EntitySmallBusiness Namespace Prefix: dei\_Data Type: xbrli:booleanItem Type Balance Type: na Period Type: duration X - DefinitionThe Tax Identification Number (TIN), also known as an Employer Identification Number (EIN), is a unique 9-digit value assigned by the IRS. + ReferencesReference 1: <http://www.xbrl.org/2003/role/presentationRef-Publisher SEC-Name Exchange Act-Number 240-Section 12-Subsection b-2> + Details Name: dei\_EntityTaxIdentificationNumber Namespace Prefix: dei\_Data Type: dei:employerIdItem Type Balance Type: na Period Type: duration X - DefinitionLocal phone number for entity. + ReferencesNo definition available. + Details Name: dei\_LocalPhoneNumber Namespace Prefix: dei\_Data Type: xbrli:normalizedStringItem Type Balance Type: na Period Type: duration X - DefinitionTitle of a 12(b) registered security. + ReferencesReference 1: <http://www.xbrl.org/2003/role/presentationRef-Publisher SEC-Name Exchange Act-Number 240-Section 12-Subsection b-2> + Details Name: dei\_SecurityTitle Namespace Prefix: dei\_Data Type: dei:securityTitleItem Type Balance Type: na Period Type: duration X - DefinitionName of the Exchange on which a security is registered. + ReferencesReference 1: <http://www.xbrl.org/2003/role/presentationRef-Publisher SEC-Name Exchange Act-Number 240-Section 12-Subsection d1-1> + Details Name: dei\_SecurityExchangeName Namespace Prefix: dei\_Data Type: dei:edgarExchangeCodeItem Type Balance Type: na Period Type: duration X - DefinitionTrading symbol of an instrument as listed on an exchange. + ReferencesNo definition available. + Details Name: dei\_TradingSymbol Namespace Prefix: dei\_Data Type: dei:tradingSymbolItem Type Balance Type: na Period Type: duration X - Details Name: us-gaap\_StatementClassOfStockAxis=AMPG\_CommonStockParValue0.001PerShareMember Namespace Prefix: Data Type: na Balance Type: Period Type: X - Details Name: us-gaap\_StatementClassOfStockAxis=AMPG\_WarrantsToPurchaseCommonStockMember Namespace Prefix: Data Type: na Balance Type: Period Type: XML 13 R2.htm IDEA: XBRL DOCUMENT v3.24.2.u1 Condensed Consolidated Balance Sheets - USD (\$) Jun, 2024 Dec. 31, 2023 Current Assets A Cash and cash equivalents \$ 1,014,204 \$ 6,726,013 Accounts receivable 1,139,052 2,542,710 Inventories, net 7,533,637 6,537,578 Prepaid expenses 1,963,782 1,342,335 Total Current Assets 11,650,675 17,448,636 Property and equipment, net 2,429,613 2,599,448 Operating lease right of use assets 3,268,136 3,538,798 Intangible assets, net 2,909,203 2,984,133 Goodwill 4,696,883 4,696,883 Cost method investment 348,250 348,250 Security deposits 109,480 91,481 Total Assets 25,412,240 31,407,629 Current Liabilities A Accounts payable and accrued expenses 1,164,201 846,179 Customer deposits 15,344 14,239 Current portion of financing lease obligations 17,208 16,799 Current portion of operating lease obligations 421,803 541,324 Current portion of notes payable 36,388 80,841 Total Current Liabilities 1,654,944 1,499,382 Long-term Liabilities A Financing lease obligations, net of current portion 23,829 32,537 Operating lease obligations, net of current portion 3,025,741 3,171,979 Deferred tax liability 24,000 24,000 Total Liabilities 4,728,514 4,727,898 Commitments and Contingencies Stockholders' Equity A Common stock, par value \$0.001, 500,000,000 shares authorized, 9,719,613 and 9,714,613 shares issued and outstanding, respectively 9,720 9,715 Additional paid-in capital 36,675 164 36,439 739 Accumulated deficit (16,001,158) (9,769,723) Total Stockholders' Equity 20,683,726 26,679,731 Total Liabilities and Stockholders' Equity \$ 25,412,240 \$ 31,407,629 X - DefinitionDeferred tax liability. + ReferencesNo definition available. + Details Name: AMPG\_DeferredTaxLiabilityNoncurrent Namespace Prefix: AMPG\_Data Type: xbrli:monetaryItem Type Balance Type: credit Period Type: instant X - DefinitionSum of the carrying values as of the balance sheet date of obligations incurred through that date and due within one year (or the operating cycle, if longer), including liabilities incurred (and for which invoices have typically been received) and payable to vendors for goods and services received, taxes, interest, rent and utilities, accrued salaries and bonuses, payroll taxes and fringe benefits. + ReferencesReference 1: [http://fasb.org/us-gaap/role/ref/legacyRef-Topic 210-SubTopic 10-Name Accounting Standards Codification-Section S99-Paragraph 1-Subparagraph \(SX 210.5-02\)\(20\)-Publisher FASB-URI https://asc.fasb.org/1943274/2147480566/210-10-S99-1Reference 2: http://fasb.org/us-gaap/role/ref/legacyRef-Topic 210-SubTopic 10-Name Accounting Standards Codification-Section S99-Paragraph 1-Subparagraph \(SX 210.5-02\)\(19\)-Publisher FASB-URI https://asc.fasb.org/1943274/2147480566/210-10-S99-1](http://fasb.org/us-gaap/role/ref/legacyRef-Topic 210-SubTopic 10-Name Accounting Standards Codification-Section S99-Paragraph 1-Subparagraph (SX 210.5-02)(20)-Publisher FASB-URI https://asc.fasb.org/1943274/2147480566/210-10-S99-1Reference 2: http://fasb.org/us-gaap/role/ref/legacyRef-Topic 210-SubTopic 10-Name Accounting Standards Codification-Section S99-Paragraph 1-Subparagraph (SX 210.5-02)(19)-Publisher FASB-URI https://asc.fasb.org/1943274/2147480566/210-10-S99-1) + Details Name: us-gaap\_AccountsPayableAndAccruedLiabilitiesCurrent Namespace Prefix: us-gaap\_Data Type: xbrli:monetaryItem Type Balance Type: credit Period Type: instant X - DefinitionAmount, after allowance for credit loss, of right to consideration from customer for product sold and service rendered in normal course of business, classified as current. + ReferencesReference 1: <http://www.xbrl.org/2009/role/commonPracticeRef-Topic 310-SubTopic 10-Name Accounting Standards Codification-Section 45-Paragraph 2-Publisher FASB-URI https://asc.fasb.org/1943274/2147481990/310-10-45-2> + Details Name: us-gaap\_AccountsReceivableNetCurrent Namespace Prefix: us-gaap\_Data Type: xbrli:monetaryItem Type Balance Type: debit Period Type: instant X - DefinitionAmount of excess of issue price over par or stated value of stock and from other transaction involving stock or stockholder. Includes, but is not limited to, additional paid-in capital (APIC) for common and preferred stock. + ReferencesReference 1: [http://www.xbrl.org/2003/role/exampleRef-Topic 852-SubTopic 10-Name Accounting Standards Codification-Section 55-Paragraph 10-Publisher FASB-URI https://asc.fasb.org/1943274/2147481372/852-10-55-10Reference 2: http://www.xbrl.org/2009/role/commonPracticeRef-Topic 946-SubTopic 210-Name Accounting Standards Codification-Section S99-Paragraph 1-Subparagraph \(SX 210.6-04\)\(18\)-Publisher FASB-URI https://asc.fasb.org/1943274/2147479170/946-210-S99-1Reference 3: http://fasb.org/us-gaap/role/ref/legacyRef-Topic 210-SubTopic 10-Name Accounting Standards Codification-Section S99-Paragraph 1-Subparagraph \(SX 210.5-02\)\(30\)\(a\)\(1\)-Publisher FASB-URI https://asc.fasb.org/1943274/2147480566/210-10-S99-1](http://www.xbrl.org/2003/role/exampleRef-Topic 852-SubTopic 10-Name Accounting Standards Codification-Section 55-Paragraph 10-Publisher FASB-URI https://asc.fasb.org/1943274/2147481372/852-10-55-10Reference 2: http://www.xbrl.org/2009/role/commonPracticeRef-Topic 946-SubTopic 210-Name Accounting Standards Codification-Section S99-Paragraph 1-Subparagraph (SX 210.6-04)(18)-Publisher FASB-URI https://asc.fasb.org/1943274/2147479170/946-210-S99-1Reference 3: http://fasb.org/us-gaap/role/ref/legacyRef-Topic 210-SubTopic 10-Name Accounting Standards Codification-Section S99-Paragraph 1-Subparagraph (SX 210.5-02)(30)(a)(1)-Publisher FASB-URI https://asc.fasb.org/1943274/2147480566/210-10-S99-1) + Details Name: us-gaap\_AdditionalPaidInCapital Namespace Prefix: us-gaap\_Data Type: xbrli:monetaryItem Type Balance Type: credit Period Type: instant X - DefinitionAmount of asset recognized for present right to economic benefit. + ReferencesReference 1:

Codification -Section S99 -Paragraph 1B -Subparagraph (SX 210.13-02(a)(4)(iii)(A)) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480097/470-10-S99-1BReference 25: http://www.xbrl.org/2003/role/disclosureRef -Topic 470 -SubTopic 10 -Name Accounting Standards Codification -Section S99 -Paragraph 1B -Subparagraph (SX 210.13-02(a)(4)(iii)(B)) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480097/470-10-S99-1BReference 26: http://www.xbrl.org/2003/role/disclosureRef -Topic 470 -SubTopic 10 -Name Accounting Standards Codification -Section S99 -Paragraph 1B -Subparagraph (SX 210.13-02(a)(4)(iv)) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480097/470-10-S99-1BReference 27: http://www.xbrl.org/2003/role/disclosureRef -Topic 470 -SubTopic 10 -Name Accounting Standards Codification -Section S99 -Paragraph 1B -Subparagraph (SX 210.13-02(a)(5)) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480097/470-10-S99-1BReference 28: http://www.xbrl.org/2009/role/commonPracticeRef -Topic 852 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 7 -Subparagraph (a) -Publisher FASB -URI https://asc.fasb.org/1943274/2147481404/852-10-50-7Reference 29: http://www.xbrl.org/2003/role/disclosureRef -Topic 280 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 30 -Subparagraph (c) -Publisher FASB -URI https://asc.fasb.org/1943274/2147482810/280-10-50-30Reference 30: http://fasb.org/us-gaap/role/ref/legacyRef -Topic 942 -SubTopic 210 -Name Accounting Standards Codification -Section S99 -Paragraph 1 -Subparagraph (SX 210.9-03(11)) -Publisher FASB -URI https://asc.fasb.org/1943274/214748546/942-210-S99-1 + Details Name: us-gaap\_Assets Namespace Prefix: us-gaap\_Data Type: xbrli:monetaryItemType Balance Type: debit Period Type: instant X - DefinitionAmount of asset recognized for present right to economic benefit, classified as current. + ReferencesReference 1: http://www.xbrl.org/2003/role/disclosureRef -Topic 810 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 3 -Subparagraph (bb) -Publisher FASB -URI https://asc.fasb.org/1943274/2147481203/810-10-50-3Reference 2: http://www.xbrl.org/2003/role/disclosureRef -Topic 810 -SubTopic 10 -Name Accounting Standards Codification -Section 45 -Paragraph 25 -Subparagraph (a) -Publisher FASB -URI https://asc.fasb.org/1943274/2147481231/810-10-45-25Reference 3: http://www.xbrl.org/2003/role/disclosureRef -Topic 235 -SubTopic 10 -Name Accounting Standards Codification -Section S99 -Paragraph 1 -Subparagraph (SX 210.4-08(g)(1)(ii)) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480678/235-10-S99-1Reference 4: http://www.xbrl.org/2003/role/disclosureRef -Topic 323 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 3 -Subparagraph (c) -Publisher FASB -URI https://asc.fasb.org/1943274/2147481687/323-10-50-3Reference 5: http://www.xbrl.org/2003/role/disclosureRef -Topic 825 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 28 -Subparagraph (f) -Publisher FASB -URI https://asc.fasb.org/1943274/2147482907/825-10-50-28Reference 6: http://www.xbrl.org/2003/role/exampleRef -Topic 852 -SubTopic 10 -Name Accounting Standards Codification -Section 55 -Paragraph 10 -Publisher FASB -URI https://asc.fasb.org/1943274/2147481372/852-10-55-10Reference 7: http://www.xbrl.org/2003/role/disclosureRef -Topic 210 -SubTopic 10 -Name Accounting Standards Codification -Section 45 -Paragraph 1 -Publisher FASB -URI https://asc.fasb.org/1943274/2147483467/210-10-45-1Reference 8: http://www.xbrl.org/2003/role/disclosureRef -Topic 210 -SubTopic 10 -Name Accounting Standards Codification -Section S99 -Paragraph 1 -Subparagraph (SX 210.5-02(9)) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480566/210-10-S99-1Reference 9: http://www.xbrl.org/2003/role/disclosureRef -Topic 470 -SubTopic 10 -Name Accounting Standards Codification -Section S99 -Paragraph 1A -Subparagraph (SX 210.13-01(a)(4)(i)) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480097/470-10-S99-1AReference 10: http://www.xbrl.org/2009/role/commonPracticeRef -Topic 470 -SubTopic 10 -Name Accounting Standards Codification -Section S99 -Paragraph 1A -Subparagraph (SX 210.13-01(a)(4)(ii)) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480097/470-10-S99-1AReference 11: http://www.xbrl.org/2009/role/commonPracticeRef -Topic 470 -SubTopic 10 -Name Accounting Standards Codification -Section S99 -Paragraph 1A -Subparagraph (SX 210.13-01(a)(4)(iii)) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480097/470-10-S99-1AReference 12: http://www.xbrl.org/2003/role/disclosureRef -Topic 470 -SubTopic 10 -Name Accounting Standards Codification -Section S99 -Paragraph 1A -Subparagraph (SX 210.13-01(a)(4)(iii)(A)) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480097/470-10-S99-1AReference 13: http://www.xbrl.org/2003/role/disclosureRef -Topic 470 -SubTopic 10 -Name Accounting Standards Codification -Section S99 -Paragraph 1A -Subparagraph (SX 210.13-01(a)(4)(iv)) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480097/470-10-S99-1AReference 14: http://www.xbrl.org/2003/role/disclosureRef -Topic 470 -SubTopic 10 -Name Accounting Standards Codification -Section S99 -Paragraph 1A -Subparagraph (SX 210.13-01(a)(5)) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480097/470-10-S99-1AReference 15: http://www.xbrl.org/2003/role/disclosureRef -Topic 470 -SubTopic 10 -Name Accounting Standards Codification -Section S99 -Paragraph 1B -Subparagraph (SX 210.13-02(a)(4)(i)) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480097/470-10-S99-1BReference 16: http://www.xbrl.org/2003/role/disclosureRef -Topic 470 -SubTopic 10 -Name Accounting Standards Codification -Section S99 -Paragraph 1B -Subparagraph (SX 210.13-02(a)(4)(iii)(A)) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480097/470-10-S99-1BReference 17: http://www.xbrl.org/2003/role/disclosureRef -Topic 470 -SubTopic 10 -Name Accounting Standards Codification -Section S99 -Paragraph 1B -Subparagraph (SX 210.13-02(a)(4)(iv)) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480097/470-10-S99-1BReference 18: http://www.xbrl.org/2003/role/disclosureRef -Topic 470 -SubTopic 10 -Name Accounting Standards Codification -Section S99 -Paragraph 1B -Subparagraph (SX 210.13-02(a)(4)(iv)) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480097/470-10-S99-1BReference 19: http://www.xbrl.org/2003/role/disclosureRef -Topic 470 -SubTopic 10 -Name Accounting Standards Codification -Section S99 -Paragraph 1B -Subparagraph (SX 210.13-02(a)(5)) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480097/470-10-S99-1BReference 20: http://www.xbrl.org/2009/role/commonPracticeRef -Topic 852 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 7 -Subparagraph (a) -Publisher FASB -URI https://asc.fasb.org/1943274/2147481404/852-10-50-7 + Details Name: us-gaap\_AssetsCurrent Namespace Prefix: us-gaap\_Data Type: xbrli:monetaryItemType Balance Type: debit Period Type: instant X - ReferencesNo definition available. + Details Name: us-gaap\_AssetsCurrentAbstract Namespace Prefix: us-gaap\_Data Type: xbrli:stringItemType Balance Type: na Period Type: duration X - DefinitionAmount of currency on hand as well as demand deposits with banks or financial institutions. Includes other kinds of accounts that have the general characteristics of demand deposits. Also includes short-term, highly liquid investments that are both readily convertible to known amounts of cash and so near their maturity that they present insignificant risk of changes in value because of changes in interest rates. Excludes cash and cash equivalents within disposal group and discontinued operation. + ReferencesReference 1: http://www.xbrl.org/2003/role/disclosureRef -Topic 210 -SubTopic 10 -Name Accounting Standards Codification -Section S99 -Paragraph 1 -Subparagraph (SX 210.5-02(1)) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480566/210-10-S99-1Reference 2: http://www.xbrl.org/2003/role/exampleRef -Topic 210 -SubTopic 10 -Name Accounting Standards Codification -Section 45 -Paragraph 1 -Subparagraph (a) -Publisher FASB -URI https://asc.fasb.org/1943274/2147483467/210-10-45-1Reference 3: http://fasb.org/us-gaap/role/ref/legacyRef -Name Accounting Standards Codification -Section 230 -SubTopic 10 -Section 45 -Paragraph 4 -Publisher FASB -URI https://asc.fasb.org/1943274/2147482740/230-10-45-4 + Details Name: us-gaap\_CashAndCashEquivalentsAtCarryingValue Namespace Prefix: us-gaap\_Data Type: xbrli:monetaryItemType Balance Type: debit Period Type: instant X - DefinitionRepresents the caption on the face of the balance sheet to indicate that the entity has entered into (1) purchase or supply arrangements that will require expending a portion of its resources to meet the terms thereof, and (2) is exposed to potential losses or, less frequently, gains, arising from (a) possible claims against a company's resources due to future performance under contract terms, and (b) possible losses or likely gains from uncertainties that will ultimately be resolved when one or more future events that are deemed likely to occur do occur or fail to occur. + ReferencesReference 1: http://fasb.org/us-gaap/role/ref/legacyRef -Topic 942 -SubTopic 210 -Name Accounting Standards Codification -Section S99 -Paragraph 1 -Subparagraph (SX 210.9-03(17)) -Publisher FASB -URI https://asc.fasb.org/1943274/2147478546/942-210-S99-1Reference 2: http://fasb.org/us-gaap/role/ref/legacyRef -Topic 210 -SubTopic 10 -Name Accounting Standards Codification -Section S99 -Paragraph 1 -Subparagraph (SX 210.5-02(25)) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480566/210-10-S99-1Reference 3: http://www.xbrl.org/2003/role/disclosureRef -Topic 944 -SubTopic 210 -Name Accounting Standards Codification -Section S99 -Paragraph 1 -Subparagraph (SX 210.6-04(15)) -Publisher FASB -URI https://asc.fasb.org/1943274/2147479170/944-210-S99-1 + Details Name: us-gaap\_CommitmentsAndContingencies Namespace Prefix: us-gaap\_Data Type: xbrli:monetaryItemType Balance Type: credit Period Type: instant X - DefinitionAggregate par or stated value of issued nonredeemable common stock (or common stock redeemable solely at the option of the issuer). This item includes treasury stock repurchased by the entity. Note: elements for number of nonredeemable common shares, par value and other disclosure concepts are in another section within stockholders' equity. + ReferencesReference 1: http://fasb.org/us-gaap/role/ref/legacyRef -Topic 210 -SubTopic 10 -Name Accounting Standards Codification -Section S99 -Paragraph 1 -Subparagraph (SX 210.5-02(29)) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480566/210-10-S99-1Reference 2: http://www.xbrl.org/2003/role/exampleRef -Topic 852 -SubTopic 10 -Name Accounting Standards Codification -Section 55 -Paragraph 10 -Publisher FASB -URI https://asc.fasb.org/1943274/2147481372/852-10-55-10Reference 3: http://www.xbrl.org/2003/role/disclosureRef -Topic 944 -SubTopic 210 -Name Accounting Standards Codification -Section S99 -Paragraph 1 -Subparagraph (SX 210.7-03(a)(22)) -Publisher FASB -URI https://asc.fasb.org/1943274/2147478777/944-210-S99-1 + Details Name: us-gaap\_CommonStockValue Namespace Prefix: us-gaap\_Data Type: xbrli:monetaryItemType Balance Type: credit Period Type: instant X - DefinitionThe current portion, due within one year or one operating cycle, if longer, of deposits held other than customer deposits. + ReferencesReference 1: http://fasb.org/us-gaap/role/ref/legacyRef -Topic 210 -SubTopic 10 -Name Accounting Standards Codification -Section S99 -Paragraph 1 -Subparagraph (SX 210.5-02(20)) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480566/210-10-S99-1 + Details Name: us-gaap\_DepositLiabilityCurrent Namespace Prefix: us-gaap\_Data Type: xbrli:monetaryItemType Balance Type: credit Period Type: instant X - DefinitionPresent value of lessee's discounted obligation for lease payments from finance lease, classified as current. + ReferencesReference 1: http://www.xbrl.org/2003/role/disclosureRef -Topic 842 -SubTopic 20 -Name Accounting Standards Codification -Section 45 -Paragraph 1 -Subparagraph (b) -Publisher FASB -URI https://asc.fasb.org/1943274/2147479041/842-20-45-1 + Details Name: us-gaap\_FinanceLeaseLiabilityCurrent Namespace Prefix: us-gaap\_Data Type: xbrli:monetaryItemType Balance Type: credit Period Type: instant X - DefinitionPresent value of lessee's discounted obligation for lease payments from finance lease, classified as noncurrent. + ReferencesReference 1: http://www.xbrl.org/2003/role/disclosureRef -Topic 842 -SubTopic 20 -Name Accounting Standards Codification -Section 45 -Paragraph 1 -Subparagraph (b) -Publisher FASB -URI https://asc.fasb.org/1943274/2147479041/842-20-45-1 + Details Name: us-gaap\_FinanceLeaseLiabilityNoncurrent Namespace Prefix: us-gaap\_Data Type: xbrli:monetaryItemType Balance Type: credit Period Type: instant X - DefinitionAmount, after accumulated impairment loss, of asset representing future economic benefit arising from other asset acquired in business combination or from joint venture formation or both, that is not individually identified and separately recognized. + ReferencesReference 1: http://www.xbrl.org/2003/role/exampleRef -Topic 280 -SubTopic 10 -Name Accounting Standards Codification -Section 55 -Paragraph 49 -Publisher FASB -URI https://asc.fasb.org/1943274/2147482785/280-10-55-49Reference 2: http://www.xbrl.org/2003/role/exampleRef -Topic 350 -SubTopic 20 -Name Accounting Standards Codification -Section 55 -Paragraph 24 -Publisher FASB -URI https://asc.fasb.org/1943274/2147482548/350-20-55-24Reference 3: http://www.xbrl.org/2003/role/exampleRef -Topic 820 -SubTopic 10 -Name Accounting Standards Codification -Section 55 -Paragraph 100 -Subparagraph (d) -Publisher FASB -URI https://asc.fasb.org/1943274/2147482078/820-10-55-100Reference 4: http://www.xbrl.org/2003/role/exampleRef -Topic 852 -SubTopic 10 -Name Accounting Standards Codification -Section 55 -Paragraph 10 -Publisher FASB -URI https://asc.fasb.org/1943274/2147481372/852-10-55-10Reference 5: http://www.xbrl.org/2003/role/disclosureRef -Topic 210 -SubTopic 10 -Name Accounting Standards Codification -Section S99 -Paragraph 1 -Subparagraph (SX 210.5-02(15)) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480566/210-10-S99-1Reference 6: http://www.xbrl.org/2003/role/disclosureRef -Topic 350 -SubTopic 20 -Name Accounting Standards Codification -Section 45 -Paragraph 1 -Publisher FASB -URI https://asc.fasb.org/1943274/2147482598/350-20-45-1Reference 7: http://www.xbrl.org/2009/role/commonPracticeRef -Topic 350 -SubTopic 20 -Name Accounting Standards Codification -Section 50 -Paragraph 1 -Subparagraph (a) -Publisher FASB -URI https://asc.fasb.org/1943274/2147482573/350-20-50-1Reference 8: http://www.xbrl.org/2009/role/commonPracticeRef -Topic 350 -SubTopic 20 -Name Accounting Standards Codification -Section 50 -Paragraph 1 -Subparagraph (h) -Publisher FASB -URI https://asc.fasb.org/1943274/2147482573/350-20-50-1Reference 9: http://www.xbrl.org/2003/role/disclosureRef -Topic 942 -SubTopic 210 -Name Accounting Standards Codification -Section S99 -Paragraph 1 -Subparagraph (SX 210.9-03(10)(1)) -Publisher FASB -URI https://asc.fasb.org/1943274/2147478546/942-210-S99-1 + Details Name: us-gaap\_Goodwill Namespace Prefix: us-gaap\_Data Type: xbrli:monetaryItemType Balance Type: debit Period Type: instant X - DefinitionSum of the carrying amounts of all intangible assets, excluding goodwill, as of the balance sheet date, net of accumulated amortization and impairment charges. + ReferencesReference 1: http://www.xbrl.org/2009/role/commonPracticeRef -Topic 350 -SubTopic 30 -Name Accounting Standards Codification -Section 50 -Paragraph 2 -Subparagraph (a)(1) -Publisher FASB -URI https://asc.fasb.org/1943274/2147482665/350-30-50-2Reference 2: http://www.xbrl.org/2009/role/commonPracticeRef -Topic 350 -SubTopic 30 -Name Accounting Standards Codification -Section 50 -Paragraph 2 -Subparagraph (b) -Publisher FASB -URI https://asc.fasb.org/1943274/2147482665/350-30-50-2Reference 3: http://www.xbrl.org/2003/role/disclosureRef -Topic 350 -SubTopic 30 -Name Accounting Standards Codification -Section 45 -Paragraph 1 -Publisher FASB -URI https://asc.fasb.org/1943274/2147482686/350-30-45-1 + Details Name: us-gaap\_IntangibleAssetsNetExcludingGoodwill Namespace Prefix: us-gaap\_Data Type: xbrli:monetaryItemType Balance Type: debit Period Type: instant X - DefinitionAmount after valuation and LIFO reserves of inventory expected to be sold, or consumed within one year or operating cycle, if longer. + ReferencesReference 1: http://www.xbrl.org/2003/role/exampleRef -Topic 852 -SubTopic 10 -Name Accounting Standards Codification -Section 55 -Paragraph 10 -Publisher FASB -URI https://asc.fasb.org/1943274/2147481372/852-10-55-10Reference 2: http://www.xbrl.org/2003/role/exampleRef -Topic 210 -SubTopic 10 -Name Accounting Standards Codification -Section 45 -Paragraph 1 -Subparagraph (b) -Publisher FASB -URI https://asc.fasb.org/1943274/2147483467/210-10-45-1Reference 3: http://www.xbrl.org/2003/role/disclosureRef -Topic 210 -SubTopic 10 -Name Accounting Standards Codification -Section S99 -Paragraph 1 -Subparagraph (SX 210.5-02(6)) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480566/210-10-S99-1 + Details Name: us-gaap\_InventoryNet Namespace Prefix: us-gaap\_Data Type: xbrli:monetaryItemType Balance Type: debit Period Type: instant X - DefinitionAmount of liability recognized for present obligation requiring transfer or otherwise providing economic benefit to others. + ReferencesReference 1: http://fasb.org/us-gaap/role/ref/legacyRef -Name Accounting Standards Codification -Section S99 -Paragraph 1 -Subparagraph (SX 210.5-02(22)) -SubTopic 10 -Topic 210 -Publisher FASB -URI https://asc.fasb.org/1943274/2147480566/210-10-S99-1Reference 2: http://fasb.org/us-gaap/role/ref/legacyRef -Topic 210 -SubTopic 10 -Name Accounting Standards Codification -Section S99 -Paragraph 1 -Subparagraph (SX 210.5-02(20)) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480566/210-10-S99-1Reference 3: http://fasb.org/us-gaap/role/ref/legacyRef -Topic 210 -SubTopic 10 -Name Accounting Standards Codification -Section S99 -Paragraph 1 -Subparagraph (SX 210.5-02(24)) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480566/210-10-S99-1Reference 4: http://fasb.org/us-gaap/role/ref/legacyRef -Topic 210 -SubTopic 10 -Name Accounting Standards Codification -Section S99 -Paragraph 1 -Subparagraph (SX 210.5-02(19)) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480566/210-10-S99-1Reference 5: http://fasb.org/us-gaap/role/ref/legacyRef -Topic 210 -SubTopic 10 -Name Accounting Standards Codification -Section S99 -Paragraph 1 -Subparagraph (SX 210.5-02(25)) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480566/210-10-S99-1Reference 6: http://fasb.org/us-gaap/role/ref/legacyRef -Topic 210 -SubTopic 10 -Name Accounting Standards Codification -Section S99 -Paragraph 1 -Subparagraph (SX 210.5-02(26)) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480566/210-10-S99-1Reference 7: http://fasb.org/us-gaap/role/ref/legacyRef -Topic 210 -SubTopic 10 -Name Accounting Standards Codification -Section S99 -Paragraph 1 -Subparagraph (SX 210.5-02(23)) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480566/210-10-S99-1Reference 8: http://fasb.org/us-gaap/role/ref/legacyRef -Topic 210 -SubTopic 10 -Name Accounting Standards Codification -Section S99 -Paragraph 1 -Subparagraph (SX 210.5-02(21)) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480566/210-10-S99-1Reference 9: http://www.xbrl.org/2003/role/disclosureRef -Topic 810 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 3 -Subparagraph (a) -Publisher FASB -URI https://asc.fasb.org/1943274/2147481203/810-10-50-3Reference 10: http://www.xbrl.org/2003/role/disclosureRef -Topic 810 -SubTopic 10 -Name Accounting Standards Codification -Section 45 -Paragraph 25 -Subparagraph (b) -Publisher FASB -URI https://asc.fasb.org/1943274/2147481231/810-10-45-25Reference 11: http://www.xbrl.org/2003/role/disclosureRef -Topic 810 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 3 -Subparagraph (bb) -Publisher FASB -URI https://asc.fasb.org/1943274/2147481203/810-10-50-3Reference 12: http://www.xbrl.org/2003/role/disclosureRef -Topic 235 -SubTopic 10 -Name Accounting Standards Codification -Section S99 -Paragraph 1 -Subparagraph (SX 210.4-08(g)(1)(ii)) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480678/235-10-S99-1Reference 13: http://www.xbrl.org/2003/role/disclosureRef -Topic 323 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 3 -Subparagraph (c) -Publisher FASB -URI https://asc.fasb.org/1943274/2147481687/323-10-50-3Reference 14: http://www.xbrl.org/2003/role/disclosureRef -Topic 825 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 28 -Subparagraph (f) -Publisher FASB -URI https://asc.fasb.org/1943274/2147482907/825-10-50-28Reference 15:







Section S99 - Paragraph 1A - Subparagraph (SX 210.13-01(a)(4)(i)) - Publisher FASB - URI https://asc.fasb.org/1943274/2147480097/470-10-S99-1AReference 23:  
http://www.xbrl.org/2009/role/commonPracticeRef -Topic 470 -SubTopic 10 -Name Accounting Standards Codification -Section S99 -Paragraph 1A -Subparagraph (SX 210.13-01(a)(4)(ii)) - Publisher FASB - URI https://asc.fasb.org/1943274/2147480097/470-10-S99-1AReference 24: http://www.xbrl.org/2003/role/disclosureRef -Topic 470 -SubTopic 10 -Name Accounting Standards Codification -Section S99 -Paragraph 1A -Subparagraph (SX 210.13-01(a)(4)(iii)(A)) - Publisher FASB - URI https://asc.fasb.org/1943274/2147480097/470-10-S99-1AReference 25:  
http://www.xbrl.org/2003/role/disclosureRef -Topic 470 -SubTopic 10 -Name Accounting Standards Codification -Section S99 -Paragraph 1A -Subparagraph (SX 210.13-01(a)(4)(iv)) - Publisher FASB - URI https://asc.fasb.org/1943274/2147480097/470-10-S99-1AReference 26: http://www.xbrl.org/2003/role/disclosureRef -Topic 470 -SubTopic 10 -Name Accounting Standards Codification -Section S99 -Paragraph 1A -Subparagraph (SX 210.13-01(a)(5)) - Publisher FASB - URI https://asc.fasb.org/1943274/2147480097/470-10-S99-1AReference 27:  
http://www.xbrl.org/2003/role/disclosureRef -Topic 470 -SubTopic 10 -Name Accounting Standards Codification -Section S99 -Paragraph 1B -Subparagraph (SX 210.13-02(a)(4)(i)) - Publisher FASB - URI https://asc.fasb.org/1943274/2147480097/470-10-S99-1BReference 28: http://www.xbrl.org/2003/role/disclosureRef -Topic 470 -SubTopic 10 -Name Accounting Standards Codification -Section S99 -Paragraph 1B -Subparagraph (SX 210.13-02(a)(4)(iii)(A)) - Publisher FASB - URI https://asc.fasb.org/1943274/2147480097/470-10-S99-1BReference 29:  
http://www.xbrl.org/2003/role/disclosureRef -Topic 470 -SubTopic 10 -Name Accounting Standards Codification -Section S99 -Paragraph 1B -Subparagraph (SX 210.13-02(a)(4)(iii)(B)) - Publisher FASB - URI https://asc.fasb.org/1943274/2147480097/470-10-S99-1BReference 30: http://www.xbrl.org/2003/role/disclosureRef -Topic 470 -SubTopic 10 -Name Accounting Standards Codification -Section S99 -Paragraph 1B -Subparagraph (SX 210.13-02(a)(4)(iv)) - Publisher FASB - URI https://asc.fasb.org/1943274/2147480097/470-10-S99-1BReference 31:  
http://www.xbrl.org/2003/role/disclosureRef -Topic 470 -SubTopic 10 -Name Accounting Standards Codification -Section S99 -Paragraph 1B -Subparagraph (SX 210.13-02(a)(5)) - Publisher FASB - URI https://asc.fasb.org/1943274/2147480097/470-10-S99-1BReference 32: http://www.xbrl.org/2003/role/disclosureRef -Topic 260 -SubTopic 10 -Name Accounting Standards Codification -Section 45 -Paragraph 60B -Subparagraph (a) - Publisher FASB - URI https://asc.fasb.org/1943274/2147482689/260-10-45-60BReference 33: http://www.xbrl.org/2003/role/disclosureRef -Topic 205 -SubTopic 20 -Name Accounting Standards Codification -Section 50 -Paragraph 7 -Publisher FASB - URI https://asc.fasb.org/1943274/2147483499/205-20-50-7Reference 34:  
http://fasb.org/us-gaap/role/ref/legacyRef -Topic 230 -SubTopic 10 -Name Accounting Standards Codification -Section 45 -Paragraph 28 -Publisher FASB - URI https://asc.fasb.org/1943274/2147482740/230-10-45-28Reference 35: http://www.xbrl.org/2003/role/disclosureRef -Topic 220 -SubTopic 10 -Name Accounting Standards Codification -Section 45 -Paragraph 1A -Subparagraph (a) - Publisher FASB - URI https://asc.fasb.org/1943274/2147482790/220-10-45-1AReference 36: http://www.xbrl.org/2003/role/disclosureRef -Topic 220 -SubTopic 10 -Name Accounting Standards Codification -Section 45 -Paragraph 1B -Subparagraph (a) - Publisher FASB - URI https://asc.fasb.org/1943274/2147482790/220-10-45-1BReference 37:  
http://fasb.org/us-gaap/role/ref/legacyRef -Topic 942 -SubTopic 220 -Name Accounting Standards Codification -Section S99 -Paragraph 1 -Subparagraph (SX 210.9-04(22)) - Publisher FASB - URI https://asc.fasb.org/1943274/2147478524/942-220-S99-1 + Details Name: us-gaap NetIncomeLoss Namespace Prefix: us-gaap Data Type: xbrli:monetaryItemType Balance Type: credit Period Type: duration X - Definition Generally recurring costs associated with normal operations except for the portion of these expenses which can be clearly related to production and included in cost of sales or services. Includes selling, general and administrative expense. + ReferencesNo definition available. + Details Name: us-gaap OperatingExpenses Namespace Prefix: us-gaap Data Type: xbrli:monetaryItemType Balance Type: debit Period Type: duration X - ReferencesNo definition available. + Details Name: us-gaap OperatingExpensesAbstract Namespace Prefix: us-gaap Data Type: xbrli:stringItemType Balance Type: na Period Type: duration X - DefinitionThe net result for the period of deducting operating expenses from operating revenues. + ReferencesReference 1: http://www.xbrl.org/2009/role/commonPracticeRef -Topic 280 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 22 -Publisher FASB - URI https://asc.fasb.org/1943274/2147482810/280-10-50-22Reference 2: http://www.xbrl.org/2009/role/commonPracticeRef -Topic 280 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 32 -Subparagraph (f) -Publisher FASB - URI https://asc.fasb.org/1943274/2147482810/280-10-50-32Reference 3: http://www.xbrl.org/2009/role/commonPracticeRef -Topic 280 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 30 -Subparagraph (b) -Publisher FASB - URI https://asc.fasb.org/1943274/2147482810/280-10-50-30Reference 4: http://www.xbrl.org/2009/role/commonPracticeRef -Topic 270 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 1 -Subparagraph (i) -Publisher FASB - URI https://asc.fasb.org/1943274/2147482964/270-10-50-1Reference 5: http://www.xbrl.org/2009/role/commonPracticeRef -Topic 280 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 32 -Subparagraph (ee) -Publisher FASB - URI https://asc.fasb.org/1943274/2147482810/280-10-50-32Reference 6: http://fasb.org/us-gaap/role/ref/otherTransitionRef -Topic 280 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 32 -Subparagraph (c) -Publisher FASB - URI https://asc.fasb.org/1943274/2147482810/280-10-50-32Reference 7: http://www.xbrl.org/2003/role/exampleRef -Topic 280 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 31 -Publisher FASB - URI https://asc.fasb.org/1943274/2147482810/280-10-50-31 + Details Name: us-gaap OperatingIncomeLoss Namespace Prefix: us-gaap Data Type: xbrli:monetaryItemType Balance Type: credit Period Type: duration X - ReferencesNo definition available. + Details Name: us-gaap OtherIncomeAndExpensesAbstract Namespace Prefix: us-gaap Data Type: xbrli:stringItemType Balance Type: na Period Type: duration X - DefinitionAmount of income (expense) included in net income that results in no cash inflow (outflow), classified as other. + ReferencesReference 1: http://fasb.org/us-gaap/role/ref/legacyRef -Topic 230 -SubTopic 10 -Name Accounting Standards Codification -Section 45 -Paragraph 28 -Publisher FASB - URI https://asc.fasb.org/1943274/2147482740/230-10-45-28 + Details Name: us-gaap OtherNoncashIncomeExpense Namespace Prefix: us-gaap Data Type: xbrli:monetaryItemType Balance Type: credit Period Type: duration X - DefinitionAmount of expense for research and development. Includes, but is not limited to, cost for computer software product to be sold, leased, or otherwise marketed and writeoff of research and development assets acquired in transaction other than business combination or joint venture formation or both. Excludes write-down of intangible asset acquired in business combination or from joint venture formation or both, used in research and development activity. + ReferencesReference 1: http://www.xbrl.org/2003/role/exampleRef -Topic 280 -SubTopic 10 -Name Accounting Standards Codification -Section 55 -Paragraph 48 -Publisher FASB - URI https://asc.fasb.org/1943274/2147482785/280-10-55-48Reference 2: http://www.xbrl.org/2003/role/disclosureRef -Topic 985 -SubTopic 20 -Name Accounting Standards Codification -Section 50 -Paragraph 2 -Publisher FASB - URI https://asc.fasb.org/1943274/2147481283/985-20-50-2Reference 3: http://www.xbrl.org/2003/role/disclosureRef -Topic 730 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 1 -Publisher FASB - URI https://asc.fasb.org/1943274/2147482916/730-10-50-1Reference 4: http://www.xbrl.org/2009/role/commonPracticeRef -Topic 912 -SubTopic 730 -Name Accounting Standards Codification -Section 25 -Paragraph 1 -Publisher FASB - URI https://asc.fasb.org/1943274/2147479532/912-730-25-1 + Details Name: us-gaap ResearchAndDevelopmentExpense Namespace Prefix: us-gaap Data Type: xbrli:monetaryItemType Balance Type: debit Period Type: duration X - DefinitionAmount of revenue recognized from goods sold, services rendered, insurance premiums, or other activities that constitute an earning process. Includes, but is not limited to, investment and interest income before deduction of interest expense when recognized as a component of revenue, and sales and trading gain (loss). + ReferencesReference 1: http://www.xbrl.org/2003/role/exampleRef -Topic 280 -SubTopic 10 -Name Accounting Standards Codification -Section 55 -Paragraph 48 -Publisher FASB - URI https://asc.fasb.org/1943274/2147482785/280-10-55-48Reference 2: http://www.xbrl.org/2003/role/disclosureRef -Topic 280 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 41 -Subparagraph (a) -Publisher FASB - URI https://asc.fasb.org/1943274/2147482810/280-10-50-41Reference 3: http://www.xbrl.org/2003/role/disclosureRef -Topic 270 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 1 -Subparagraph (i) -Publisher FASB - URI https://asc.fasb.org/1943274/2147482964/270-10-50-1Reference 4: http://www.xbrl.org/2003/role/disclosureRef -Topic 280 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 32 -Subparagraph (ee) -Publisher FASB - URI https://asc.fasb.org/1943274/2147482810/280-10-50-32Reference 5: http://fasb.org/us-gaap/role/ref/otherTransitionRef -Topic 280 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 32 -Subparagraph (b) -Publisher FASB - URI https://asc.fasb.org/1943274/2147482810/280-10-50-32Reference 6: http://fasb.org/us-gaap/role/ref/otherTransitionRef -Topic 280 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 32 -Subparagraph (c) -Publisher FASB - URI https://asc.fasb.org/1943274/2147482810/280-10-50-32Reference 7: http://www.xbrl.org/2003/role/disclosureRef -Topic 235 -SubTopic 10 -Name Accounting Standards Codification -Section S99 -Paragraph 1 -Subparagraph (SX 210.4-08(g)(1)(ii)) - Publisher FASB - URI https://asc.fasb.org/1943274/2147480678/235-10-S99-1Reference 8: http://www.xbrl.org/2003/role/disclosureRef -Topic 323 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 3 -Subparagraph (c) -Publisher FASB - URI https://asc.fasb.org/1943274/2147481687/323-10-50-3Reference 9: http://www.xbrl.org/2003/role/disclosureRef -Topic 825 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 28 -Subparagraph (f) -Publisher FASB - 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Publisher FASB - URI https://asc.fasb.org/1943274/2147480097/470-10-S99-1AReference 14: http://www.xbrl.org/2003/role/disclosureRef -Topic 470 -SubTopic 10 -Name Accounting Standards Codification -Section S99 -Paragraph 1A -Subparagraph (SX 210.13-01(a)(5)) - Publisher FASB - URI https://asc.fasb.org/1943274/2147480097/470-10-S99-1AReference 15: http://www.xbrl.org/2003/role/disclosureRef -Topic 470 -SubTopic 10 -Name Accounting Standards Codification -Section S99 -Paragraph 1B -Subparagraph (SX 210.13-02(a)(4)(i)) - Publisher FASB - URI https://asc.fasb.org/1943274/2147480097/470-10-S99-1BReference 16: http://www.xbrl.org/2003/role/disclosureRef -Topic 470 -SubTopic 10 -Name Accounting Standards Codification -Section S99 -Paragraph 1B -Subparagraph (SX 210.13-02(a)(4)(iii)(A)) - Publisher FASB - URI https://asc.fasb.org/1943274/2147480097/470-10-S99-1BReference 17: http://www.xbrl.org/2003/role/disclosureRef -Topic 470 -SubTopic 10 -Name Accounting Standards Codification -Section S99 -Paragraph 1B -Subparagraph (SX 210.13-02(a)(4)(iii)(B)) - 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URI https://asc.fasb.org/1943274/2147482810/280-10-50-22Reference 22: http://www.xbrl.org/2003/role/disclosureRef -Topic 280 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 22 -Subparagraph (b) -Publisher FASB - URI https://asc.fasb.org/1943274/2147482810/280-10-50-22Reference 23: http://www.xbrl.org/2003/role/disclosureRef -Topic 280 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 40 -Publisher FASB - URI https://asc.fasb.org/1943274/2147482810/280-10-50-40Reference 24: http://www.xbrl.org/2003/role/disclosureRef -Topic 280 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 22 -Subparagraph (a) -Publisher FASB - URI https://asc.fasb.org/1943274/2147482810/280-10-50-22Reference 25: http://www.xbrl.org/2003/role/disclosureRef -Topic 942 -SubTopic 235 -Name Accounting Standards Codification -Section S99 -Paragraph 1 -Subparagraph (SX 210.9-05(b)(2)) - Publisher FASB - URI https://asc.fasb.org/1943274/2147477314/942-235-S99-1Reference 26: http://www.xbrl.org/2003/role/disclosureRef -Topic 220 -SubTopic 10 -Name Accounting Standards Codification -Section S99 -Paragraph 2 -Subparagraph (SX 210.5-03(1)) - Publisher FASB - URI https://asc.fasb.org/1943274/2147483621/220-10-S99-2 + Details Name: us-gaap Revenues Namespace Prefix: us-gaap Data Type: xbrli:monetaryItemType Balance Type: credit Period Type: duration X - DefinitionThe aggregate total costs related to selling a firm's product and services, as well as all other general and administrative expenses. Direct selling expenses (for example, credit, warranty, and advertising) are expenses that can be directly linked to the sale of specific products. Indirect selling expenses are expenses that cannot be directly linked to the sale of specific products, for example telephone expenses, Internet, and postal charges. General and administrative expenses include salaries of non-sales personnel, rent, utilities, communication, etc. + ReferencesReference 1: http://fasb.org/us-gaap/role/ref/legacyRef -Topic 220 -SubTopic 10 -Name Accounting Standards Codification -Section S99 -Paragraph 2 -Subparagraph (SX 210.5-03(4)) - Publisher FASB - URI https://asc.fasb.org/1943274/2147483621/220-10-S99-2 + Details Name: us-gaap SellingGeneralAndAdministrativeExpense Namespace Prefix: us-gaap Data Type: xbrli:monetaryItemType Balance Type: debit Period Type: duration X - DefinitionAmount of unrealized gain (loss) on investment. + ReferencesReference 1: http://fasb.org/us-gaap/role/ref/legacyRef -Name Accounting Standards Codification -Section 45 -Paragraph 28 -Subparagraph (b) -SubTopic 10 -Topic 230 -Publisher FASB - URI https://asc.fasb.org/1943274/2147482740/230-10-45-28 + Details Name: us-gaap UnrealizedGainLossOnInvestments Namespace Prefix: us-gaap Data Type: xbrli:monetaryItemType Balance Type: credit Period Type: duration X - DefinitionThe average number of shares or units issued and outstanding that are used in calculating diluted EPS or earnings per unit (EPU), determined based on the timing of issuance of shares or units in the period. + ReferencesReference 1: http://www.xbrl.org/2003/role/disclosureRef -Topic 260 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 1 -Subparagraph (a) -Publisher FASB - URI https://asc.fasb.org/1943274/2147482662/260-10-50-1Reference 2: http://www.xbrl.org/2003/role/disclosureRef -Topic 260 -SubTopic 10 -Name Accounting Standards Codification -Section 45 -Paragraph 16 -Publisher FASB - URI https://asc.fasb.org/1943274/2147482689/260-10-45-16 + Details Name: us-gaap WeightedAverageNumberOfDilutedSharesOutstanding Namespace Prefix: us-gaap Data Type: xbrli:sharesItemType Balance Type: na Period Type: duration X - DefinitionNumber of [basic] shares or units, after adjustment for contingently issuable shares or units and other shares or units not deemed outstanding, determined by relating the portion of time within a reporting period that common shares or units have been outstanding to the total time in that period. + ReferencesReference 1: http://www.xbrl.org/2003/role/disclosureRef -Topic 260 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 1 -Subparagraph (a) -Publisher FASB - URI https://asc.fasb.org/1943274/2147482662/260-10-50-1Reference 2: http://www.xbrl.org/2003/role/disclosureRef -Topic 260 -SubTopic 10 -Name Accounting Standards Codification -Section 45 -Paragraph 10 -Publisher FASB - URI https://asc.fasb.org/1943274/2147482689/260-10-45-10 + Details Name: us-gaap WeightedAverageNumberOfSharesOutstandingBasic Namespace Prefix: us-gaap Data Type: xbrli:sharesItemType Balance Type: na Period Type: duration XML 16 Ret. Earnings XBRL DOCUMENT v3.24.2.u1 Condensed Consolidated Statements of Stockholders' Equity (Unaudited) - USD (\$) Common Stock [Member] Additional Paid-in Capital [Member] Retained Earnings [Member] Total Balance at Dec. 31, 2022 9,635,936,365,050,161 \$ (7,304,284) \$ 28,755,512 Balance, shares at Dec. 31, 2022 9,634,613 A A Stock based compensation 130,975 130,975 Common stock issued for vesting of RSU's \$ 5 (5) A Common stock issued for vesting of RSU's, shares 5,000 A A Net loss (1,054,727) (1,054,727) Balance at Jun. 30, 2023 9,640,361,181,131 (8,359,011) 27,831,760 Balance, shares at Jun. 30, 2023 9,639,613 A A Balance at Mar. 31, 2023 9,637,361,116,200 (7,886,250) 28,239,587 Balance, shares at Mar. 31, 2023 9,637,113 A A Stock based compensation 64,934 64,934 Common stock issued for vesting of RSU's \$ 3 (3) Common stock issued for vesting of RSU's, shares 2,500 A A Net loss (472,761) (472,761) Balance at Jun. 30, 2023 9,640,361,181,131 (8,359,011) 27,831,760 Balance, shares at Jun. 30, 2023 9,639,613 A A Balance at Dec. 31, 2023 9,715,364,439,739 (9,769,723) 26,679,731 Balance, shares at Dec. 31, 2023 9,714,613 A A Stock based compensation 235,430 A 235,430 Common stock issued for vesting of RSU's \$ 5 (5) Common stock issued for vesting of RSU's, shares 5,000 A A Net loss (6,231,435) (6,231,435) Balance at Jun. 30, 2024 9,720,367,675,164 (16,001,158) 20,683,726 Balance, shares at Jun. 30, 2024 9,719,613 A A Balance at Mar. 31, 2024 9,717,367,394 (14,424,884) 22,163,227 Balance, shares at Mar. 31, 2024 9,717,113 A A Stock based compensation 96,773 96,773 Common stock issued for vesting of RSU's \$ 3 (3) Common stock issued for vesting of RSU's, shares 2,500 A A Net loss (1,576,274) (1,576,274) Balance at Jun. 30, 2024 9,720,367,675,164 (16,001,158) 20,683,726 Balance, shares at Jun. 30, 2024 9,719,613 A A X - DefinitionAmount of increase to additional paid-in capital (APIC) for recognition of cost for award under share-based payment arrangement. + ReferencesReference 1: http://www.xbrl.org/2003/role/disclosureRef -Topic 718 -SubTopic 10 -Name Accounting Standards Codification -Section 35 -Paragraph 2 -Publisher FASB - URI https://asc.fasb.org/1943274/2147480483/718-10-35-2Reference 2: http://fasb.org/us-gaap/role/ref/legacyRef -Name Accounting Standards Codification -Topic 718 -SubTopic 20 -Section 55 -

Paragraph 13 - Publisher FASB -URI https://asc.fasb.org/1943274/2147481089/718-20-55-13Reference 3: http://fasb.org/us-gaap/role/ref/legacyRef -Name Accounting Standards Codification -Topic 718 -SubTopic 20 -Section 55 -Paragraph 12 -Publisher FASB -URI https://asc.fasb.org/1943274/2147481089/718-20-55-12 + Details Name: us-gaap AdjustmentsToAdditionalPaidInCapitalSharebasedCompensationRequisiteServicePeriodRecognitionValue Namespace Prefix: us-gaap Data Type: xbrli:monetaryItemType Balance Type: credit Period Type: duration X - DefinitionThe portion of profit or loss for the period, net of income taxes, which is attributable to the parent. + ReferencesReference 1: http://www.xbrl.org/2003/role/disclosureRef -Topic 250 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 6 -Publisher FASB -URI https://asc.fasb.org/1943274/2147483443/250-10-50-6Reference 2: http://www.xbrl.org/2003/role/disclosureRef -Topic 250 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 9 -Publisher FASB -URI https://asc.fasb.org/1943274/2147483443/250-10-50-9Reference 3: http://www.xbrl.org/2003/role/disclosureRef -Topic 805 -SubTopic 60 -Name Accounting Standards Codification -Section 65 -Paragraph 1 -Subparagraph (g) -Publisher FASB -URI https://asc.fasb.org/1943274/2147476176/805-60-65-1Reference 4: http://www.xbrl.org/2003/role/disclosureRef -Topic 740 -SubTopic 323 -Name Accounting Standards Codification -Section 65 -Paragraph 2 -Subparagraph (g)(3) -Publisher FASB -URI https://asc.fasb.org/1943274/2147476666/740-323-65-2Reference 5: http://fasb.org/us-gaap/role/ref/legacyRef -Topic 220 -SubTopic 10 -Name Accounting Standards Codification -Section S99 -Paragraph 2 -Subparagraph (SX 210.5-03(20)) -Publisher FASB -URI https://asc.fasb.org/1943274/2147483621/220-10-S99-2Reference 6: http://www.xbrl.org/2003/role/disclosureRef -Topic 235 -SubTopic 10 -Name Accounting Standards Codification -Section S99 -Paragraph 1 -Subparagraph (SX 210.4-08(g)(1)(ii)) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480678/235-10-S99-1Reference 7: http://www.xbrl.org/2003/role/disclosureRef -Topic 323 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 3 -Subparagraph (c) -Publisher FASB -URI https://asc.fasb.org/1943274/2147481687/323-10-50-3Reference 8: http://www.xbrl.org/2003/role/disclosureRef -Topic 825 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 28 -Subparagraph (f) -Publisher FASB -URI https://asc.fasb.org/1943274/2147482907/825-10-50-28Reference 9: http://www.xbrl.org/2003/role/disclosureRef -Topic 220 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 6 -Publisher FASB -URI https://asc.fasb.org/1943274/2147482765/220-10-50-6Reference 10: http://www.xbrl.org/2003/role/disclosureRef -Topic 250 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 3 -Publisher FASB -URI 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Codification -Section S99 -Paragraph 1 -Subparagraph (SX 210.7-04(18)) -Publisher FASB -URI https://asc.fasb.org/1943274/2147477250/944-220-S99-1Reference 20: http://www.xbrl.org/2003/role/disclosureRef -Topic 946 -SubTopic 220 -Name Accounting Standards Codification -Section S99 -Paragraph 1 -Subparagraph (SX 210.6-07(9)) -Publisher FASB -URI https://asc.fasb.org/1943274/2147479134/946-220-S99-1Reference 21: http://www.xbrl.org/2003/role/disclosureRef -Topic 946 -SubTopic 220 -Name Accounting Standards Codification -Section S99 -Paragraph 3 -Subparagraph (SX 210.6-09(1)(d)) -Publisher FASB -URI https://asc.fasb.org/1943274/2147479134/946-220-S99-3Reference 22: http://www.xbrl.org/2003/role/disclosureRef -Topic 470 -SubTopic 10 -Name Accounting Standards Codification -Section S99 -Paragraph 1A -Subparagraph (SX 210.13-01(a)(4)(i)) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480097/470-10-S99-1AReference 23: http://www.xbrl.org/2009/role/commonPracticeRef -Topic 470 -SubTopic 10 -Name Accounting Standards Codification -Section S99 -Paragraph 1A -Subparagraph (SX 210.13-01(a)(4)(ii)) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480097/470-10-S99-1AReference 24: http://www.xbrl.org/2003/role/disclosureRef -Topic 470 -SubTopic 10 -Name Accounting Standards Codification -Section S99 -Paragraph 1A -Subparagraph (SX 210.13-01(a)(4)(iii)(A)) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480097/470-10-S99-1AReference 25: http://www.xbrl.org/2003/role/disclosureRef -Topic 470 -SubTopic 10 -Name Accounting Standards Codification -Section S99 -Paragraph 1A -Subparagraph (SX 210.13-01(a)(4)(iv)) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480097/470-10-S99-1AReference 26: http://www.xbrl.org/2003/role/disclosureRef -Topic 470 -SubTopic 10 -Name Accounting Standards Codification -Section S99 -Paragraph 1A -Subparagraph (SX 210.13-01(a)(5)) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480097/470-10-S99-1AReference 27: http://www.xbrl.org/2003/role/disclosureRef -Topic 470 -SubTopic 10 -Name Accounting Standards Codification -Section S99 -Paragraph 1B -Subparagraph (SX 210.13-02(a)(4)(i)) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480097/470-10-S99-1BReference 28: http://www.xbrl.org/2003/role/disclosureRef -Topic 470 -SubTopic 10 -Name Accounting Standards Codification -Section S99 -Paragraph 1B -Subparagraph (SX 210.13-02(a)(4)(iii)(A)) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480097/470-10-S99-1BReference 29: http://www.xbrl.org/2003/role/disclosureRef -Topic 470 -SubTopic 10 -Name Accounting Standards Codification -Section S99 -Paragraph 1B -Subparagraph (SX 210.13-02(a)(4)(iii)(B)) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480097/470-10-S99-1BReference 30: http://www.xbrl.org/2003/role/disclosureRef -Topic 470 -SubTopic 10 -Name Accounting Standards Codification -Section S99 -Paragraph 1B -Subparagraph (SX 210.13-02(a)(4)(iv)) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480097/470-10-S99-1BReference 31: http://www.xbrl.org/2003/role/disclosureRef -Topic 470 -SubTopic 10 -Name Accounting Standards Codification -Section S99 -Paragraph 1B -Subparagraph (SX 210.13-02(a)(5)) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480097/470-10-S99-1BReference 32: http://www.xbrl.org/2003/role/disclosureRef -Topic 260 -SubTopic 10 -Name Accounting Standards Codification -Section 45 -Paragraph 60B -Subparagraph (a) -Publisher FASB -URI https://asc.fasb.org/1943274/2147482689/260-10-45-60BReference 33: http://www.xbrl.org/2003/role/disclosureRef -Topic 205 -SubTopic 20 -Name Accounting Standards Codification -Section 50 -Paragraph 7 -Publisher FASB -URI https://asc.fasb.org/1943274/2147483499/205-20-50-7Reference 34: http://fasb.org/us-gaap/role/ref/legacyRef -Topic 230 -SubTopic 10 -Name Accounting Standards Codification -Section 45 -Paragraph 28 -Publisher FASB -URI https://asc.fasb.org/1943274/2147482740/230-10-45-28Reference 35: http://www.xbrl.org/2003/role/disclosureRef -Topic 220 -SubTopic 10 -Name Accounting Standards Codification -Section 45 -Paragraph 1A -Subparagraph (a) -Publisher FASB -URI https://asc.fasb.org/1943274/2147482790/220-10-45-1AReference 36: http://www.xbrl.org/2003/role/disclosureRef -Topic 220 -SubTopic 10 -Name Accounting Standards Codification -Section 45 -Paragraph 1B -Subparagraph (a) -Publisher FASB -URI https://asc.fasb.org/1943274/2147482790/220-10-45-1BReference 37: http://fasb.org/us-gaap/role/ref/legacyRef -Topic 942 -SubTopic 220 -Name Accounting Standards Codification -Section S99 -Paragraph 1 -Subparagraph 1 -Subparagraph (SX 210.9-04(22)) -Publisher FASB -URI https://asc.fasb.org/1943274/2147478524/942-220-S99-1 + Details Name: us-gaap NetIncomeLoss Namespace Prefix: us-gaap Data Type: xbrli:monetaryItemType Balance Type: credit Period Type: duration X - DefinitionNumber of shares issued which are neither cancelled nor held in the treasury. + ReferencesReference 1: http://fasb.org/us-gaap/role/ref/legacyRef -Name Accounting Standards Codification -Section 50 -Paragraph 2 -SubTopic 10 -Topic 505 -Publisher FASB -URI https://asc.fasb.org/1943274/2147481112/505-10-50-2Reference 2: http://fasb.org/us-gaap/role/ref/legacyRef -Topic 210 -SubTopic 10 -Name Accounting Standards Codification -Section S99 -Paragraph 1 -Subparagraph (SX 210.5-02(28)) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480566/210-10-S99-1Reference 3: http://fasb.org/us-gaap/role/ref/legacyRef -Topic 210 -SubTopic 10 -Name Accounting Standards Codification -Section S99 -Paragraph 1 -Subparagraph (SX 210.5-02(29)) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480566/210-10-S99-1Reference 4: http://fasb.org/us-gaap/role/ref/legacyRef -Topic 505 -SubTopic 10 -Name Accounting Standards Codification -Section S99 -Paragraph 1 -Subparagraph (SX 210.3-04) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480008/505-10-S99-1 + Details Name: us-gaap StockIssuedDuringPeriodSharesRestrictedStockAwardNetOffForfeitures Namespace Prefix: us-gaap Data Type: xbrli:monetaryItemType Balance Type: credit Period Type: duration X - DefinitionValue of stock related to Restricted Stock Awards issued during the period, net of the stock value of such awards forfeited. + ReferencesReference 1: http://fasb.org/us-gaap/role/ref/legacyRef -Name Accounting Standards Codification -Section 50 -Paragraph 2 -SubTopic 10 -Topic 505 -Publisher FASB -URI https://asc.fasb.org/1943274/2147481112/505-10-50-2Reference 2: http://fasb.org/us-gaap/role/ref/legacyRef -Topic 505 -SubTopic 10 -Name Accounting Standards Codification -Section S99 -Paragraph 1 -Subparagraph (SX 210.3-04) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480008/505-10-S99-1 + Details Name: us-gaap StockIssuedDuringPeriodValueRestrictedStockAwardNetOffForfeitures Namespace Prefix: us-gaap Data Type: xbrli:monetaryItemType Balance Type: credit Period Type: duration X - DefinitionAmount of equity (deficit) attributable to parent. Excludes temporary equity and equity attributable to noncontrolling interest. + ReferencesReference 1: http://fasb.org/us-gaap/role/ref/legacyRef -Topic 210 -SubTopic 10 -Name Accounting Standards Codification -Section S99 -Paragraph 1 -Subparagraph (SX 210.5-02(29)) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480566/210-10-S99-1Reference 2: http://fasb.org/us-gaap/role/ref/legacyRef -Topic 210 -SubTopic 10 -Name Accounting Standards Codification -Section S99 -Paragraph 1 -Subparagraph (SX 210.5-02(30)) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480566/210-10-S99-1Reference 3: http://fasb.org/us-gaap/role/ref/legacyRef -Topic 210 -SubTopic 10 -Name Accounting Standards Codification -Section S99 -Paragraph 1 -Subparagraph (SX 210.5-02(31)) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480566/210-10-S99-1Reference 4: http://www.xbrl.org/2003/role/exampleRef -Topic 852 -SubTopic 10 -Name Accounting Standards Codification -Section 55 -Paragraph 10 -Publisher FASB -URI https://asc.fasb.org/1943274/2147481372/852-10-55-10Reference 5: http://www.xbrl.org/2003/role/exampleRef -Topic 946 -SubTopic 830 -Name Accounting Standards Codification -Section 55 -Paragraph 12 -Publisher FASB -URI https://asc.fasb.org/1943274/2147479168/946-830-55-12Reference 6: http://www.xbrl.org/2003/role/disclosureRef -Topic 946 -SubTopic 210 -Name Accounting Standards Codification -Section S99 -Paragraph 1 -Subparagraph (SX 210.6-04(19)) -Publisher FASB -URI https://asc.fasb.org/1943274/2147479170/946-210-S99-1Reference 7: http://www.xbrl.org/2003/role/disclosureRef -Topic 946 -SubTopic 210 -Name Accounting Standards Codification -Section S99 -Paragraph 2 -Subparagraph (SX 210.6-05(4)) -Publisher FASB -URI https://asc.fasb.org/1943274/2147479170/946-210-S99-2Reference 8: http://www.xbrl.org/2009/role/commonPracticeRef -Topic 946 -SubTopic 220 -Name Accounting Standards Codification -Section S99 -Paragraph 3 -Subparagraph (SX 210.6-09(4)(b)) -Publisher FASB -URI https://asc.fasb.org/1943274/2147479134/946-220-S99-3Reference 9: http://www.xbrl.org/2003/role/disclosureRef -Topic 946 -SubTopic 220 -Name Accounting Standards Codification -Section S99 -Paragraph 3 -Subparagraph (SX 210.6-09(6)) -Publisher FASB -URI https://asc.fasb.org/1943274/2147479134/946-220-S99-3Reference 10: http://www.xbrl.org/2003/role/disclosureRef -Topic 946 -SubTopic 220 -Name Accounting Standards Codification -Section S99 -Paragraph 3 -Subparagraph (SX 210.6-09(7)) -Publisher FASB -URI https://asc.fasb.org/1943274/2147479134/946-220-S99-3Reference 11: http://www.xbrl.org/2009/role/commonPracticeRef -Topic 235 -SubTopic 10 -Name Accounting Standards Codification -Section S99 -Paragraph 1 -Subparagraph (SX 210.4-08(g)(1)(iii)) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480678/235-10-S99-1Reference 12: http://www.xbrl.org/2009/role/commonPracticeRef -Topic 323 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 3 -Subparagraph (c) -Publisher FASB -URI https://asc.fasb.org/1943274/2147481687/323-10-50-3Reference 13: http://www.xbrl.org/2009/role/commonPracticeRef -Topic 825 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 28 -Subparagraph (f) -Publisher FASB -URI https://asc.fasb.org/1943274/2147482907/825-10-50-28Reference 14: http://fasb.org/us-gaap/role/ref/legacyRef -Topic 310 -SubTopic 10 -Name Accounting Standards Codification -Section S99 -Paragraph 2 -Subparagraph (SAB Topic 4.E) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480418/310-10-S99-2 + Details Name: us-gaap StockholdersEquity Namespace Prefix: us-gaap Data Type: xbrli:monetaryItemType Balance Type: credit Period Type: instant XML 17 R6.htm IDEA: XBRL DOCUMENT 3.24.2.2.1 Condensed Consolidated Statements of Cash Flows (Unaudited) - USD (\$) 6 Months Ended Jun. 30, 2024 Jun. 30, 2023 Cash Flows from Operating Activities: A Net loss \$ (6,231,435) + (1,054,727) Adjustments to reconcile net loss to net cash used in operating activities: A Depreciation and amortization 258,445 230,123 Operating lease costs 270,662 279,655 Stock based compensation 235,430 130,975 Gain on termination of right-of-use operating lease (8,461) Inventory reserve 17,000 Change in fair value of marketable securities (37,602) Loss on investment of digital assets 3,248,911 Changes in Operating Assets and Liabilities: A Accounts receivable 1,403,658 (690,186) Inventories (1,013,059) (269,460) Prepaid expenses (621,447) (829,565) Security deposits (17,999) 21,704 Accounts payable and accrued expenses 318,022 1,199,611 Operating lease obligations (265,759) (266,060) Customer deposits 1,105 37,107 Net cash used in operating activities (2,396,466) (1,256,886) Cash Flows from Investing Activities: A Purchase of property and equipment (13,680) (776,507) Net investment in marketable securities (2,771,185) Purchase of investment in digital assets (3,248,911) Net cash used in investing activities (3,262,591) (3,847,692) Cash Flows from Financing Activities: A Repayment on financing lease liabilities (8,299) (25,378) Repayment of notes payable (44,453) (80,296) Payment of revenue earmout (2,150,826) Net cash used in financing activities (52,752) (2,286,500) Net change in cash and cash equivalents (5,711,809) (7,091,078) Cash and Cash Equivalents, Beginning of the Period 6,726,013 13,290,222 Cash and Cash Equivalents, End of the Period 1,014,204 6,199,144 Supplemental disclosures: A Cash paid for interest expense 14,595 14,432 Cash paid for income taxes 50 Non-Cash Investing and Financing Activities: A Common Stock issued on vesting of RSUs 5 Gain on termination of right-of-use operating lease 8,461 Disposal of property and equipment \$ 61,133 X - DefinitionIncrease decrease in customer deposit. + ReferencesNo definition available. + Details Name: AMPG IncreaseDecreaseInCustomerDeposit Namespace Prefix: AMPG Data Type: xbrli:monetaryItemType Balance Type: debit Period Type: duration X - DefinitionLoss on investment in digital assets. + ReferencesNo definition available. + Details Name: AMPG LossOnInvestmentInDigitalAssets Namespace Prefix: AMPG Data Type: xbrli:monetaryItemType Balance Type: debit Period Type: duration X - DefinitionPayment of revenue earmout. + ReferencesNo definition available. + Details Name: AMPG PaymentOfRevenueEarmout Namespace Prefix: AMPG Data Type: xbrli:monetaryItemType Balance Type: credit Period Type: duration X - DefinitionPayments for proceeds from marketable securities. + ReferencesNo definition available. + Details Name: AMPG PaymentsForProceedsFromMarketableSecurities Namespace Prefix: AMPG Data Type: xbrli:monetaryItemType Balance Type: credit Period Type: duration X - ReferencesNo definition available. + Details Name: us-gaap AdjustmentsToReconcileNetIncomeLossToCashProvidedByUsedInOperatingActivitiesAbstract Namespace Prefix: us-gaap Data Type: xbrli:stringItemType Balance Type: na Period Type: duration X - DefinitionAmount of cash and cash equivalents, and cash and cash equivalents restricted to withdrawal or usage. Excludes amount for disposal group and discontinued operations. Cash includes, but is not limited to, currency on hand, demand deposits with banks or financial institutions, and other accounts with general characteristics of demand deposits. Cash equivalents include, but are not limited to, short-term, highly liquid investments that are both readily convertible to known amounts of cash and so near their maturity that they present insignificant risk of changes in value because of changes in interest rates. + ReferencesReference 1: http://www.xbrl.org/2003/role/disclosureRef -Topic 230 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 8 -Publisher FASB -URI https://asc.fasb.org/1943274/2147482913/230-10-50-8Reference 2: http://fasb.org/us-gaap/role/ref/legacyRef -Topic 230 -SubTopic 10 -Name Accounting Standards Codification -Section 45 -Paragraph 24 -Publisher FASB -URI https://asc.fasb.org/1943274/2147482740/230-10-45-24Reference 3: http://fasb.org/us-gaap/role/ref/legacyRef -Name Accounting Standards Codification -Topic 230 -SubTopic 10 -Section 45 -Paragraph 4 -Publisher FASB -URI https://asc.fasb.org/1943274/2147482740/230-10-45-4 + Details Name: us-gaap CashCashEquivalentsRestrictedCashAndRestrictedCashEquivalents Namespace Prefix: us-gaap Data Type: xbrli:monetaryItemType Balance Type: debit Period Type: instant X - DefinitionAmount of increase (decrease) in cash and cash equivalents, and cash and cash equivalents restricted to withdrawal or usage; excluding effect from exchange rate change. Cash includes, but is not limited to, currency on hand, demand deposits with banks or financial institutions, and other accounts with general characteristics of demand deposits. Cash equivalents include, but are not limited to, short-term, highly liquid investments that are both readily convertible to known amounts of cash and so near their maturity that they present insignificant risk of changes in value because of changes in interest rates. + ReferencesReference 1: http://fasb.org/us-

gaap/role/ref/legacyRef -Topic 230 -SubTopic 10 -Name Accounting Standards Codification -Section 45 -Paragraph 24 -Publisher FASB -URI https://asc.fasb.org/1943274/2147482740/230-10-45-24Reference 2: http://fasb.org/us-gaap/role/ref/legacyRef -Name Accounting Standards Codification -Section 45 -Paragraph 1 -SubTopic 230 -Topic 830 -Publisher FASB -URI https://asc.fasb.org/1943274/2147477401/830-230-45-1 + Details Name: us-gaap\_CashCashEquivalentsRestrictedCashAndRestrictedCashEquivalentsPeriodIncreaseDecreaseExcludingExchangeRateEffect Namespace Prefix: us-gaap\_Data Type: xbrli:monetaryItemType Balance Type: debit Period Type: duration X - ReferencesNo definition available. + Details Name: us-gaap\_CashFlowOperatingActivitiesLesseeAbstract Namespace Prefix: us-gaap\_Data Type: xbrli:stringItemType Balance Type: na Period Type: duration X - DefinitionThe current period expense charged against earnings on long-lived, physical assets not used in production, and which are not intended for resale, to allocate or recognize the cost of such assets over their useful lives; or to record the reduction in book value of an intangible asset over the benefit period of such asset; or to reflect consumption during the period of an asset that is not used in production. + ReferencesReference 1: http://fasb.org/us-gaap/role/ref/legacyRef -Name Accounting Standards Codification -Section 45 -Paragraph 28 -Subparagraph (b) -SubTopic 10 -Topic 230 -Publisher FASB -URI https://asc.fasb.org/1943274/2147482740/230-10-45-28Reference 2: http://fasb.org/us-gaap/role/ref/legacyRef -Name Accounting Standards Codification -Topic 360 -SubTopic 10 -Section 50 -Paragraph 1 -Subparagraph (a) -Publisher FASB -URI https://asc.fasb.org/1943274/2147482099/360-10-50-1 + Details Name: us-gaap\_DepreciationAndAmortization Namespace Prefix: us-gaap\_Data Type: xbrli:monetaryItemType Balance Type: debit Period Type: duration X - DefinitionAmount of cash outflow for principal payment on finance lease. + ReferencesReference 1: http://www.xbrl.org/2003/role/disclosureRef -Topic 842 -SubTopic 20 -Name Accounting Standards Codification -Section 50 -Paragraph 4 -Subparagraph (g)(1) -Publisher FASB -URI https://asc.fasb.org/1943274/2147478964/842-20-50-4Reference 2: http://www.xbrl.org/2003/role/disclosureRef -Topic 842 -SubTopic 20 -Name Accounting Standards Codification -Section 45 -Paragraph 5 -Subparagraph (a) -Publisher FASB -URI https://asc.fasb.org/1943274/2147479041/842-20-45-5 + Details Name: us-gaap\_FinancialLeasePrincipalPayments Namespace Prefix: us-gaap\_Data Type: xbrli:monetaryItemType Balance Type: credit Period Type: duration X - DefinitionAmount of gain (loss) on termination of lease before expiration of lease term. + ReferencesReference 1: http://www.xbrl.org/2003/role/disclosureRef -Topic 842 -SubTopic 20 -Name Accounting Standards Codification -Section 40 -Paragraph 1 -Publisher FASB -URI https://asc.fasb.org/1943274/2147479092/842-20-40-1 + Details Name: us-gaap\_GainLossOnTerminationOfLease Namespace Prefix: us-gaap\_Data Type: xbrli:monetaryItemType Balance Type: credit Period Type: duration X - DefinitionAmount, after refund, of cash paid to foreign, federal, state, and local jurisdictions as income tax. + ReferencesReference 1: http://www.xbrl.org/2003/role/disclosureRef -Topic 230 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 2A -Publisher FASB -URI https://asc.fasb.org/1943274/2147482913/230-10-50-2AReference 2: http://www.xbrl.org/2003/role/disclosureRef -Topic 740 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 23 -Publisher FASB -URI https://asc.fasb.org/1943274/2147482685/740-10-50-23Reference 3: http://www.xbrl.org/2003/role/disclosureRef -Topic 740 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 22 -Publisher FASB -URI https://asc.fasb.org/1943274/2147482685/740-10-50-22Reference 4: http://fasb.org/us-gaap/role/ref/legacyRef -Name Accounting Standards Codification -Topic 230 -SubTopic 10 -Section 50 -Paragraph 2 -Publisher FASB -URI https://asc.fasb.org/1943274/2147482913/230-10-50-2 + Details Name: us-gaap\_IncomeTaxesPaidNet Namespace Prefix: us-gaap\_Data Type: xbrli:monetaryItemType Balance Type: credit Period Type: duration X - DefinitionThe increase (decrease) during the reporting period in the amounts payable to vendors for goods and services received and the amount of obligations and expenses incurred but not paid. + ReferencesReference 1: http://fasb.org/us-gaap/role/ref/legacyRef -Name Accounting Standards Codification -Section 45 -Paragraph 28 -Subparagraph (a) -SubTopic 10 -Topic 230 -Publisher FASB -URI https://asc.fasb.org/1943274/2147482740/230-10-45-28 + Details Name: us-gaap\_IncreaseDecreaseInAccountsPayableAndAccruedLiabilities Namespace Prefix: us-gaap\_Data Type: xbrli:monetaryItemType Balance Type: debit Period Type: duration X - DefinitionThe increase (decrease) during the reporting period in amount due within one year (or one business cycle) from customers for the credit sale of goods and services. + ReferencesReference 1: http://fasb.org/us-gaap/role/ref/legacyRef -Name Accounting Standards Codification -Section 45 -Paragraph 28 -Subparagraph (a) -SubTopic 10 -Topic 230 -Publisher FASB -URI https://asc.fasb.org/1943274/2147482740/230-10-45-28 + Details Name: us-gaap\_IncreaseDecreaseInAccountsReceivable Namespace Prefix: us-gaap\_Data Type: xbrli:monetaryItemType Balance Type: credit Period Type: duration X - DefinitionThe increase (decrease) during the reporting period in the aggregate value of all inventory held by the reporting entity, associated with underlying transactions that are classified as operating activities. + ReferencesReference 1: http://fasb.org/us-gaap/role/ref/legacyRef -Name Accounting Standards Codification -Section 45 -Paragraph 28 -Subparagraph (a) -SubTopic 10 -Topic 230 -Publisher FASB -URI https://asc.fasb.org/1943274/2147482740/230-10-45-28 + Details Name: us-gaap\_IncreaseDecreaseInInventories Namespace Prefix: us-gaap\_Data Type: xbrli:monetaryItemType Balance Type: credit Period Type: duration X - ReferencesNo definition available. + Details Name: us-gaap\_IncreaseDecreaseInOperatingCapitalAbstract Namespace Prefix: us-gaap\_Data Type: xbrli:stringItemType Balance Type: na Period Type: duration X - DefinitionAmount of increase (decrease) in obligation for operating lease. + ReferencesReference 1: http://www.xbrl.org/2009/role/commonPracticeRef -Topic 230 -SubTopic 10 -Name Accounting Standards Codification -Section 45 -Paragraph 28 -Subparagraph (a) -Publisher FASB -URI https://asc.fasb.org/1943274/2147482740/230-10-45-28Reference 2: http://www.xbrl.org/2009/role/commonPracticeRef -Name Accounting Standards Codification -Section 50 -Paragraph 4 -Subparagraph (g)(1) -SubTopic 20 -Topic 842 -Publisher FASB -URI https://asc.fasb.org/1943274/2147482913/230-10-50-4 + Details Name: us-gaap\_IncreaseDecreaseInOperatingLeaseLiability Namespace Prefix: us-gaap\_Data Type: xbrli:monetaryItemType Balance Type: debit Period Type: duration X - DefinitionThe increase (decrease) during the reporting period in the amount of outstanding money paid in advance for goods or services that bring economic benefits for future periods. + ReferencesReference 1: http://fasb.org/us-gaap/role/ref/legacyRef -Name Accounting Standards Codification -Section 45 -Paragraph 28 -Subparagraph (a) -SubTopic 10 -Topic 230 -Publisher FASB -URI https://asc.fasb.org/1943274/2147482740/230-10-45-28 + Details Name: us-gaap\_IncreaseDecreaseInPrepaidExpense Namespace Prefix: us-gaap\_Data Type: xbrli:monetaryItemType Balance Type: credit Period Type: duration X - DefinitionThe increase (decrease) during the reporting period in security deposits. + ReferencesReference 1: http://fasb.org/us-gaap/role/ref/legacyRef -Name Accounting Standards Codification -Section 45 -Paragraph 28 -Subparagraph (a) -SubTopic 10 -Topic 230 -Publisher FASB -URI https://asc.fasb.org/1943274/2147482740/230-10-45-28 + Details Name: us-gaap\_IncreaseDecreaseInSecurityDeposits Namespace Prefix: us-gaap\_Data Type: xbrli:monetaryItemType Balance Type: debit Period Type: duration X - DefinitionAmount of cash paid for interest, excluding capitalized interest, classified as operating activity. Includes, but is not limited to, payment to settle zero-coupon bond for accreted interest of debt discount and debt instrument with insignificant coupon interest rate in relation to effective interest rate of borrowing attributable to accreted interest of debt discount. + ReferencesReference 1: http://www.xbrl.org/2003/role/disclosureRef -Topic 230 -SubTopic 10 -Name Accounting Standards Codification -Section 45 -Paragraph 17 -Subparagraph (d) -Publisher FASB -URI https://asc.fasb.org/1943274/2147482740/230-10-45-17Reference 2: http://www.xbrl.org/2003/role/disclosureRef -Topic 230 -SubTopic 10 -Name Accounting Standards Codification -Section 45 -Paragraph 25 -Subparagraph (e) -Publisher FASB -URI https://asc.fasb.org/1943274/2147482740/230-10-45-25Reference 3: http://www.xbrl.org/2003/role/disclosureRef -Topic 230 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 2 -Publisher FASB -URI https://asc.fasb.org/1943274/2147482913/230-10-50-2 + Details Name: us-gaap\_InterestPaidNet Namespace Prefix: us-gaap\_Data Type: xbrli:monetaryItemType Balance Type: credit Period Type: duration X - DefinitionThe difference between the change in the inventory reserve representing the cumulative difference in cost between the first in, first out and the last in, first out inventory valuation methods and any LIFO decrement which have been reflected in the statement of income during the period. + ReferencesNo definition available. + Details Name: us-gaap\_InventoriesLIFOreserveEffectOnIncomeNet Namespace Prefix: us-gaap\_Data Type: xbrli:monetaryItemType Balance Type: debit Period Type: duration X - DefinitionAmount of unrealized gain (loss) on investment in marketable security. + ReferencesReference 1: http://fasb.org/us-gaap/role/ref/legacyRef -Topic 220 -SubTopic 10 -Name Accounting Standards Codification -Section S99 -Paragraph 2 -Subparagraph (SX 210.5-03(7)(c)) -Publisher FASB -URI https://asc.fasb.org/1943274/2147483621/220-10-S99-2 + Details Name: us-gaap\_MarketableSecuritiesUnrealizedGainLoss Namespace Prefix: us-gaap\_Data Type: xbrli:monetaryItemType Balance Type: credit Period Type: duration X - DefinitionAmount of cash inflow (outflow) from financing activities, including discontinued operations. Financing activity cash flows include obtaining resources from owners and providing them with a return on, and a return of, their investment; borrowing money and repaying amounts borrowed, or settling the obligation; and obtaining and paying for other resources obtained from creditors on long-term credit. + ReferencesReference 1: http://www.xbrl.org/2003/role/disclosureRef -Topic 230 -SubTopic 10 -Name Accounting Standards Codification -Section 45 -Paragraph 24 -Publisher FASB -URI https://asc.fasb.org/1943274/2147482740/230-10-45-24 + Details Name: us-gaap\_NetCashProvidedByUsedInFinancingActivities Namespace Prefix: us-gaap\_Data Type: xbrli:monetaryItemType Balance Type: debit Period Type: duration X - ReferencesNo definition available. + Details Name: us-gaap\_NetCashProvidedByUsedInFinancingActivitiesAbstract Namespace Prefix: us-gaap\_Data Type: xbrli:stringItemType Balance Type: na Period Type: duration X - DefinitionAmount of cash inflow (outflow) from investing activities, including discontinued operations. Investing activity cash flows include making and collecting loans and acquiring and disposing of debt or equity instruments and property, plant, and equipment and other productive assets. + ReferencesReference 1: http://www.xbrl.org/2003/role/disclosureRef -Topic 230 -SubTopic 10 -Name Accounting Standards Codification -Section 45 -Paragraph 24 -Publisher FASB -URI https://asc.fasb.org/1943274/2147482740/230-10-45-24 + Details Name: us-gaap\_NetCashProvidedByUsedInInvestingActivities Namespace Prefix: us-gaap\_Data Type: xbrli:monetaryItemType Balance Type: debit Period Type: duration X - ReferencesNo definition available. + Details Name: us-gaap\_NetCashProvidedByUsedInInvestingActivitiesAbstract Namespace Prefix: us-gaap\_Data Type: xbrli:stringItemType Balance Type: na Period Type: duration X - DefinitionAmount of cash inflow (outflow) from operating activities, including discontinued operations. Operating activity cash flows include transactions, adjustments, and changes in value not defined as investing or financing activities. + ReferencesReference 1: http://fasb.org/us-gaap/role/ref/legacyRef -Topic 230 -SubTopic 10 -Name Accounting Standards Codification -Section 45 -Paragraph 28 -Publisher FASB -URI https://asc.fasb.org/1943274/2147482740/230-10-45-28Reference 2: http://fasb.org/us-gaap/role/ref/legacyRef -Topic 230 -SubTopic 10 -Name Accounting Standards Codification -Section 45 -Paragraph 24 -Publisher FASB -URI https://asc.fasb.org/1943274/2147482740/230-10-45-24Reference 3: http://fasb.org/us-gaap/role/ref/legacyRef -Topic 230 -SubTopic 10 -Name Accounting Standards Codification -Section 45 -Paragraph 25 -Subparagraph (a) -Publisher FASB -URI https://asc.fasb.org/1943274/2147482740/230-10-45-25 + Details Name: us-gaap\_NetCashProvidedByUsedInOperatingActivities Namespace Prefix: us-gaap\_Data Type: xbrli:monetaryItemType Balance Type: na Period Type: duration X - DefinitionThe portion of profit or loss for the period, net of income taxes, which is attributable to the parent. + ReferencesReference 1: http://www.xbrl.org/2003/role/disclosureRef -Topic 250 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 6 -Publisher FASB -URI https://asc.fasb.org/1943274/2147483443/250-10-50-6Reference 2: http://www.xbrl.org/2003/role/disclosureRef -Topic 250 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 9 -Publisher FASB -URI https://asc.fasb.org/1943274/2147483443/250-10-50-9Reference 3: http://www.xbrl.org/2003/role/disclosureRef -Topic 805 -SubTopic 60 -Name Accounting Standards Codification -Section 65 -Paragraph 1 -Subparagraph (g) -Publisher FASB -URI https://asc.fasb.org/1943274/2147476176/805-60-65-1Reference 4: http://www.xbrl.org/2003/role/disclosureRef -Topic 740 -SubTopic 323 -Name Accounting Standards Codification -Section 65 -Paragraph 2 -Subparagraph (g)(3) -Publisher FASB -URI https://asc.fasb.org/1943274/2147478666/740-323-65-2Reference 5: http://fasb.org/us-gaap/role/ref/legacyRef -Topic 220 -SubTopic 10 -Name Accounting Standards Codification -Section S99 -Paragraph 2 -Subparagraph (SX 210.5-03(20)) -Publisher FASB -URI https://asc.fasb.org/1943274/2147483621/220-10-S99-2Reference 6: http://www.xbrl.org/2003/role/disclosureRef -Topic 235 -SubTopic 10 -Name Accounting Standards Codification -Section S99 -Paragraph 1 -Subparagraph (SX 210.4-08(g)(1)(ii)) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480678/235-10-S99-1Reference 7: http://www.xbrl.org/2003/role/disclosureRef -Topic 323 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 3 -Subparagraph (c) -Publisher FASB -URI https://asc.fasb.org/1943274/2147481687/323-10-50-3Reference 8: http://www.xbrl.org/2003/role/disclosureRef -Topic 825 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 28 -Subparagraph (f) -Publisher FASB -URI https://asc.fasb.org/1943274/2147482907/825-10-50-28Reference 9: http://www.xbrl.org/2003/role/disclosureRef -Topic 220 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 6 -Publisher FASB -URI https://asc.fasb.org/1943274/2147482765/220-10-50-6Reference 10: http://www.xbrl.org/2003/role/disclosureRef -Topic 250 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 3 -Publisher FASB -URI https://asc.fasb.org/1943274/2147483443/250-10-50-3Reference 11: http://www.xbrl.org/2003/role/disclosureRef -Topic 250 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 1 -Subparagraph (b)(2) -Publisher FASB -URI https://asc.fasb.org/1943274/2147483443/250-10-50-1Reference 12: http://www.xbrl.org/2003/role/disclosureRef -Topic 815 -SubTopic 40 -Name Accounting Standards Codification -Section 65 -Paragraph 1 -Subparagraph (f) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480175/815-40-65-1Reference 13: http://www.xbrl.org/2003/role/disclosureRef -Topic 250 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 8 -Publisher FASB -URI https://asc.fasb.org/1943274/2147483443/250-10-50-8Reference 14: http://www.xbrl.org/2003/role/disclosureRef -Topic 250 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 11 -Subparagraph (a) -Publisher FASB -URI https://asc.fasb.org/1943274/2147483443/250-10-50-11Reference 15: http://www.xbrl.org/2003/role/disclosureRef -Topic 250 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 11 -Subparagraph (b) -Publisher FASB -URI https://asc.fasb.org/1943274/2147483443/250-10-50-11Reference 16: http://www.xbrl.org/2003/role/disclosureRef -Topic 250 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 4 -Publisher FASB -URI https://asc.fasb.org/1943274/2147483443/250-10-50-4Reference 17: http://www.xbrl.org/2003/role/exampleRef -Topic 946 -SubTopic 830 -Name Accounting Standards Codification -Section 55 -Paragraph 10 -Publisher FASB -URI https://asc.fasb.org/1943274/2147479168/946-830-55-10Reference 18: http://www.xbrl.org/2003/role/disclosureRef -Topic 946 -SubTopic 220 -Name Accounting Standards Codification -Section 45 -Paragraph 7 -Publisher FASB -URI https://asc.fasb.org/1943274/2147479105/946-220-45-7Reference 19: http://www.xbrl.org/2003/role/disclosureRef -Topic 944 -SubTopic 220 -Name Accounting Standards Codification -Section S99 -Paragraph 1 -Subparagraph (SX 210.7-04(18)) -Publisher FASB -URI https://asc.fasb.org/1943274/2147477250/944-220-S99-1Reference 20: http://www.xbrl.org/2003/role/disclosureRef -Topic 946 -SubTopic 220 -Name Accounting Standards Codification -Section S99 -Paragraph 1 -Subparagraph (SX 210.6-07(9)) -Publisher FASB -URI https://asc.fasb.org/1943274/2147479134/946-220-S99-1Reference 21: http://www.xbrl.org/2003/role/disclosureRef -Topic 946 -SubTopic 220 -Name Accounting Standards Codification -Section S99 -Paragraph 3 -Subparagraph (SX 210.6-09(1)(d)) -Publisher FASB -URI https://asc.fasb.org/1943274/2147479134/946-220-S99-3Reference 22: http://www.xbrl.org/2003/role/disclosureRef -Topic 470 -SubTopic 10 -Name Accounting Standards Codification -Section S99 -Paragraph 1A -Subparagraph (SX 210.13-01(a)(4)(i)) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480097/470-10-S99-1AReference 23: http://www.xbrl.org/2009/role/commonPracticeRef -Topic 470 -SubTopic 10 -Name Accounting Standards Codification -Section S99 -Paragraph 1A -Subparagraph (SX 210.13-01(a)(4)(ii)) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480097/470-10-S99-1AReference 24: http://www.xbrl.org/2003/role/disclosureRef -Topic 470 -SubTopic 10 -Name Accounting Standards Codification -Section S99 -Paragraph 1A -Subparagraph (SX 210.13-01(a)(4)(iii)(A)) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480097/470-10-S99-1AReference 25: http://www.xbrl.org/2003/role/disclosureRef -Topic 470 -SubTopic 10 -Name Accounting Standards Codification -Section S99 -Paragraph 1A -Subparagraph (SX 210.13-01(a)(4)(iv)) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480097/470-10-S99-1AReference 26: http://www.xbrl.org/2003/role/disclosureRef -Topic 470 -SubTopic 10 -Name Accounting Standards Codification -Section S99 -Paragraph 1A -Subparagraph (SX 210.13-01(a)(5)) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480097/470-10-S99-1AReference 27: http://www.xbrl.org/2003/role/disclosureRef -Topic 470 -SubTopic 10 -Name Accounting Standards Codification -Section S99 -Paragraph 1B -Subparagraph (SX 210.13-02(a)(4)(i)) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480097/470-10-S99-1BReference 28: http://www.xbrl.org/2003/role/disclosureRef -Topic 470 -SubTopic 10 -Name Accounting Standards Codification -Section S99 -Paragraph 1B -Subparagraph (SX 210.13-02(a)(4)(iii)(A)) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480097/470-10-S99-1BReference 29: http://www.xbrl.org/2003/role/disclosureRef -Topic 470 -SubTopic 10 -Name Accounting Standards Codification -Section S99 -Paragraph 1B -Subparagraph (SX 210.13-02(a)(4)(iii)(B)) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480097/470-10-S99-1BReference 30: http://www.xbrl.org/2003/role/disclosureRef -Topic 470 -SubTopic 10 -Name Accounting Standards Codification -Section S99 -Paragraph 1B -Subparagraph (SX 210.13-02(a)(4)(iv)) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480097/470-10-S99-1BReference 31: http://www.xbrl.org/2003/role/disclosureRef -Topic 470 -SubTopic 10 -Name Accounting Standards Codification -Section S99 -Paragraph 1B -Subparagraph (SX 210.13-02(a)(5)) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480097/470-10-S99-1BReference 32: http://www.xbrl.org/2003/role/disclosureRef -Topic 260 -SubTopic 10 -Name Accounting Standards Codification -

Section 45 - Paragraph 60B - Subparagraph (a) - Publisher FASB - URI https://asc.fasb.org/1943274/2147482689/260-10-45-60BReference 33: http://www.xbrl.org/2003/role/disclosureRef - Topic 205 - SubTopic 20 - Name Accounting Standards Codification - Section 50 - Paragraph 7 - Publisher FASB - URI https://asc.fasb.org/1943274/2147483499/205-20-50-7Reference 34: https://fasb.org/us-gaap/role/ref/legacyRef - Topic 230 - SubTopic 10 - Name Accounting Standards Codification - Section 45 - Paragraph 28 - Publisher FASB - URI https://asc.fasb.org/1943274/2147482740/230-10-45-28Reference 35: http://www.xbrl.org/2003/role/disclosureRef - Topic 220 - SubTopic 10 - Name Accounting Standards Codification - Section 45 - Paragraph 1A - Subparagraph (a) - Publisher FASB - URI https://asc.fasb.org/1943274/2147482790/220-10-45-1AReference 36: http://www.xbrl.org/2003/role/disclosureRef - Topic 220 - SubTopic 10 - Name Accounting Standards Codification - Section 45 - Paragraph 1B - Subparagraph (a) - Publisher FASB - URI https://asc.fasb.org/1943274/2147482790/220-10-45-1BReference 37: http://fasb.org/us-gaap/role/ref/legacyRef - Topic 942 - SubTopic 220 - Name Accounting Standards Codification - Section S99 - Paragraph 1 - Subparagraph (SX 210.9-04(22)) - Publisher FASB - URI https://asc.fasb.org/1943274/2147478524/942-220-S99-1 + Details Name: us-gaap NetIncomeLoss Namespace Prefix: us-gaap Data Type: xbrl:monetaryItem Type Balance Type: credit Period Type: duration X - ReferencesNo definition available. + Details Name: us-gaap NoncashInvestingAndFinancingItemsAbstract Namespace Prefix: us-gaap Data Type: xbrl:stringItem Type Balance Type: na Period Type: duration X - DefinitionAmount of loss from impairment of right-of-use asset from operating lease. + ReferencesReference 1: http://www.xbrl.org/2009/role/commonPracticeRef - Topic 842 - SubTopic 20 - Name Accounting Standards Codification - Section 25 - Paragraph 6 - Subparagraph (c) - Publisher FASB - URI https://asc.fasb.org/1943274/2147479365/842-20-25-6 + Details Name: us-gaap OperatingLeaseImpairmentLoss Namespace Prefix: us-gaap Data Type: xbrl:monetaryItem Type Balance Type: debit Period Type: duration X - DefinitionAmount of periodic reduction over lease term of carrying amount of right-of-use asset from operating lease. + ReferencesReference 1: http://www.xbrl.org/2009/role/commonPracticeRef - Topic 230 - SubTopic 10 - Name Accounting Standards Codification - Section 45 - Paragraph 28 - Subparagraph (b) - Publisher FASB - URI https://asc.fasb.org/1943274/2147482740/230-10-45-28 + Details Name: us-gaap OperatingLeaseRightOfUseAssetAmortizationExpense Namespace Prefix: us-gaap Data Type: xbrl:monetaryItem Type Balance Type: debit Period Type: duration X - DefinitionThe cash outflow associated with the purchase of all investments (debt, security, other) during the period. + ReferencesReference 1: http://fasb.org/us-gaap/role/ref/legacyRef - Topic 230 - SubTopic 10 - Name Accounting Standards Codification - Section 45 - Paragraph 13 - Publisher FASB - URI https://asc.fasb.org/1943274/2147482740/230-10-45-13 + Details Name: us-gaap PaymentsToAcquireInvestments Namespace Prefix: us-gaap Data Type: xbrl:monetaryItem Type Balance Type: credit Period Type: duration X - DefinitionThe cash outflow associated with the acquisition of long-lived, physical assets that are used in the normal conduct of business to produce goods and services and not intended for resale; includes cash outflows to pay for construction of self-constructed assets. + ReferencesReference 1: http://fasb.org/us-gaap/role/ref/legacyRef - Topic 230 - SubTopic 10 - Name Accounting Standards Codification - Section 45 - Paragraph 13 - Subparagraph (c) - Publisher FASB - URI https://asc.fasb.org/1943274/2147482740/230-10-45-13 + Details Name: us-gaap PaymentsToAcquirePropertyPlantAndEquipment Namespace Prefix: us-gaap Data Type: xbrl:monetaryItem Type Balance Type: credit Period Type: duration X - DefinitionAmount of divestiture of long-lived, physical assets used in the normal conduct of business and not intended for resale. Examples include, but are not limited to, land, buildings, machinery and equipment, office equipment, furniture and fixtures, and computer equipment. + ReferencesNo definition available. + Details Name: us-gaap PropertyPlantAndEquipmentDisposals Namespace Prefix: us-gaap Data Type: xbrl:monetaryItem Type Balance Type: credit Period Type: duration X - DefinitionThe cash outflow for a borrowing supported by a written promise to pay an obligation. + ReferencesReference 1: http://fasb.org/us-gaap/role/ref/legacyRef - Topic 230 - SubTopic 10 - Name Accounting Standards Codification - Section 45 - Paragraph 15 - Subparagraph (b) - Publisher FASB - URI https://asc.fasb.org/1943274/2147482740/230-10-45-15 + Details Name: us-gaap RepaymentsOfNotesPayable Namespace Prefix: us-gaap Data Type: xbrl:monetaryItem Type Balance Type: credit Period Type: duration X - DefinitionAmount of noncash expense for share-based payment arrangement. + ReferencesReference 1: http://fasb.org/us-gaap/role/ref/legacyRef - Name Accounting Standards Codification - Section 45 - Paragraph 28 - Subparagraph (a) - SubTopic 10 - Topic 230 - Publisher FASB - URI https://asc.fasb.org/1943274/2147482740/230-10-45-28 + Details Name: us-gaap ShareBasedCompensation Namespace Prefix: us-gaap Data Type: xbrl:monetaryItem Type Balance Type: debit Period Type: duration X - DefinitionThe fair value of stock issued in noncash financing activities. + ReferencesReference 1: http://fasb.org/us-gaap/role/ref/legacyRef - Name Accounting Standards Codification - Topic 230 - SubTopic 10 - Section 50 - Paragraph 4 - Publisher FASB - URI https://asc.fasb.org/1943274/2147482913/230-10-50-4Reference 2: http://fasb.org/us-gaap/role/ref/legacyRef - Name Accounting Standards Codification - Topic 230 - SubTopic 10 - Section 50 - Paragraph 3 - Publisher FASB - URI https://asc.fasb.org/1943274/2147482913/230-10-50-3Reference 3: http://fasb.org/us-gaap/role/ref/legacyRef - Name Accounting Standards Codification - Topic 230 - SubTopic 10 - Section 50 - Paragraph 5 - Publisher FASB - URI https://asc.fasb.org/1943274/2147482913/230-10-50-5 + Details Name: us-gaap StockIssued1 Namespace Prefix: us-gaap Data Type: xbrl:monetaryItem Type Balance Type: credit Period Type: duration X - ReferencesNo definition available. + Details Name: us-gaap SupplementalCashFlowInformationAbstract Namespace Prefix: us-gaap Data Type: xbrl:stringItem Type Balance Type: na Period Type: duration XML 18 R7.htm IDEA: XBRL DOCUMENT v3.24.2.u1 Organization and Business Description 6 Months Ended Jun. 30, 2024 Accounting Policies [Abstract] A Organization and Business Description (1) Organization and Business Description A AmpliTech Group, Inc. (the "Company") was incorporated under the laws of the State of Nevada on December 30, 2010. On August 13, 2012, the Company acquired AmpliTech, Inc., by issuing 833,750 shares of the Company's common stock to the shareholders of AmpliTech, Inc. in exchange for 100% of the outstanding shares of AmpliTech, Inc. (the "Share Exchange"). After the Share Exchange, the selling shareholders owned 60,000 shares of the outstanding 893,750 shares of Company common stock, resulting in a change in control. Accordingly, the transaction was accounted for as a reverse acquisition in which AmpliTech, Inc. was deemed to be the accounting acquirer, and the operations of the Company were consolidated for accounting purposes. The capital balances have been retroactively adjusted to reflect the reverse acquisition. A AmpliTech designs, engineers and assembles microwave component based low noise amplifiers ("LNAs") that meet individual customer specifications. Application of the Company's proprietary technology results in maximum frequency gain with minimal background noise distortion as required by each customer. The Company has both domestic and international customers in such industries as aerospace, governmental, defense and commercial satellite. A On September 12, 2019, AmpliTech Group, Inc. acquired the assets of Specialty Microwave Corporation ("Specialty"), a privately held company based in Ronkonkoma, NY. The purchase included all inventory, orders, customers, property and equipment, and all intellectual property. The assets also included all eight team members of Specialty. A Specialty designs and manufactures passive microwave components and related subsystems that meet individual customer specifications for both domestic and international customers for use in satellite communication ground networks. A On February 17, 2021, AmpliTech Group, Inc., common stock and warrants under the symbols "AMP" and "AMPW", respectively, commenced trading on NASDAQ. A reverse split of the outstanding common stock at a 1-for-20 ratio became effective February 17, 2021 as of 12:01 a.m., Eastern Time. In connection with the public offering, 1,371,428 units at an offering price of \$7.00 per unit were sold. Each unit issued in the offering consisted of one share of common stock and one warrant. A In 2021, the Company opened AGMDC, a monolithic microwave integrated circuits ("MMIC") chip design center in Texas and has started to implement several of its proprietary amplifier designs into MMIC components. MMICs are semiconductor chips used in high-frequency communications applications. MMICs are widely desired for power amplification solutions to service emerging technologies, such as phased array antennas and quantum computing. MMICs carry a smaller footprint enabling them to be incorporated into a broader array of systems while reducing costs. AGMDC designs, develops and manufactures state-of-the-art signal processing components for satellite and 5G communications networks, defense, space and other commercial applications, allowing the Company to market its products to a wider base of customers requiring high technology in smaller packages. A AmpliTech Group, Inc. Notes To Condensed Consolidated Financial Statements For the Six Months Ended June 30, 2024 and 2023 A On November 19, 2021, AmpliTech Group, Inc. entered into an Asset Purchase Agreement (the "Purchase Agreement") with Spectrum Semiconductor Materials Inc. (the "Seller" or "SSM"), pursuant to which AmpliTech would acquire substantially all the assets of the Company (the "Acquisition"). The Acquisition was completed on December 15, 2021. A Spectrum Semiconductor Materials ("SSM"), located in Silicon Valley (San Jose, CA), is a global authorized distributor of integrated circuit ("IC") packaging and lids for semiconductor device assembly, prototyping, testing, and production requirements. A In August 2022, AmpliTech Group's True G Speed Services ("AGTSS") division was founded to serve and provide complete system integration and ORAN compliant O-RU ("Radio Units") for telcos, enabling the industry to access 5G "True G Speeds". AGTSS provides Managed Services, Cyber Security, Cloud Services, Data Services and Telco Cloud Services. AGTSS will also be providing full installation of Private 5G Networks ("P5G") which includes the deployment of AmpliTech Group's developed radio units. AGTSS will implement AmpliTech's low noise amplifier devices in these systems to promote greater coverage, longer range and faster speeds. A X - ReferencesNo definition available. + Details Name: us-gaap AccountingPoliciesAbstract Namespace Prefix: us-gaap Data Type: xbrl:stringItem Type Balance Type: na Period Type: duration X - DefinitionThe entire disclosure for the business description and basis of presentation concepts. Business description describes the nature and type of organization including but not limited to organizational structure as may be applicable to holding companies, parent and subsidiary relationships, business divisions, business units, business segments, affiliates and information about significant ownership of the reporting entity. Basis of presentation describes the underlying basis used to prepare the financial statements (for example, US Generally Accepted Accounting Principles, Other Comprehensive Basis of Accounting, IFRS). + ReferencesReference 1: http://fasb.org/us-gaap/role/ref/legacyRef - Topic 235 - Name Accounting Standards Codification - Publisher FASB - URI https://asc.fasb.org/235/tableOfContentReference 2: http://fasb.org/us-gaap/role/ref/legacyRef - Topic 275 - Name Accounting Standards Codification - Publisher FASB - URI https://asc.fasb.org/275/tableOfContentReference 3: http://fasb.org/us-gaap/role/ref/legacyRef - Topic 205 - Name Accounting Standards Codification - Publisher FASB - URI https://asc.fasb.org/205/tableOfContent + Details Name: us-gaap BusinessDescriptionAndBasisOfPresentationTextBlock Namespace Prefix: us-gaap Data Type: dtr-types:textBlockItem Type Balance Type: na Period Type: duration XML 19 R8.htm IDEA: XBRL DOCUMENT v3.24.2.u1 Loss on Investment of Digital Assets 6 Months Ended Jun. 30, 2024 Loss On Investment Of Digital Assets A Loss on Investment of Digital Assets (2) Loss on Investment of Digital Assets A During the three months ended March 31, 2024, the Company made several transactions in digital currency in the total amount of approximately \$3.25 million. The Company believes that it was fraudulently induced to hold its digital currency with a custodian whom the Company believed to be valid, but no longer exists. The Company is taking steps in an attempt to seek recovery of the funds including discussions with local, federal, and international law enforcement agencies and private consultants and is currently conducting a review of its processes and procedures related to this investment. At the present time, the Company is not aware of, and does not expect any additional losses arising out of or relating to the above-described investment. In addition, the Company does not believe that the Company's systems, records, or other assets were otherwise affected or compromised in connection with these investments. A As a result of the fraudulent digital currency transactions noted above, the Company was a victim of a cyber phishing scam that defrauded the Company. During the six months ended June 30, 2024, the Company recorded a complete loss from the investment in digital assets of \$3,248,911. As of June 30, 2024, the remaining balance of digital assets was \$0. A AmpliTech Group, Inc. Notes To Condensed Consolidated Financial Statements For the Six Months Ended June 30, 2024 and 2023 A X - ReferencesNo definition available. + Details Name: AMPG\_DisclosureLossOnInvestmentOfDigitalAssetsAbstract Namespace Prefix: AMPG Data Type: xbrl:stringItem Type Balance Type: na Period Type: duration X - DefinitionLoss On Investment [Text Block] + ReferencesNo definition available. + Details Name: AMPG\_LossOnInvestmentTextBlock Namespace Prefix: AMPG Data Type: dtr-types:textBlockItem Type Balance Type: na Period Type: duration XML 20 R9.htm IDEA: XBRL DOCUMENT v3.24.2.u1 Summary of Significant Accounting Policies 6 Months Ended Jun. 30, 2024 Accounting Policies [Abstract] A Summary of Significant Accounting Policies (3) Summary of Significant Accounting Policies A Basis of Accounting A The accompanying condensed consolidated financial statements have been prepared using the accrual basis of accounting. A Principles of Consolidation A The accompanying condensed consolidated financial statements include the accounts of the Company and its subsidiaries. All intercompany accounts and transactions have been eliminated in consolidation. A Use of Estimates A The preparation of financial statements in conformity with generally accepted accounting principles requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and the disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses for the periods presented. Actual results could differ from those estimates. A Cash and Cash Equivalents A The Company considers deposits that can be redeemed on demand and investments and marketable securities that have original maturities of less than three months, when purchased, to be cash equivalents. As of June 30, 2024 the Company's cash and cash equivalents were deposited in four financial institutions. A The Company's policy is to place its cash and cash equivalents with high-quality, major financial and investment institutions to limit the amount of credit exposure. Accounts at each financial institution are insured by the Federal Deposit Insurance Corporation ("FDIC") up to \$250,000. At June 30, 2024 and December 31, 2023, the Company had \$434,792 and \$3,170,500 in excess of FDIC insured limits, respectively. The Company has not experienced any losses in such accounts. A Accounts Receivable A Accounts receivable consist of trade receivables arising from credit sales to customers in the normal course of business. These receivables are recorded at the time of sale, net of an allowance for current expected credit losses. In accordance with ASC Topic 326, "Financial Instruments - Credit Losses," the Company estimates expected credit losses based on historical bad debt experience, the aging of accounts receivable, the current creditworthiness of our customers, prevailing economic conditions, and reasonable and supportable forward-looking information. A An allowance of \$0 has been recorded at June 30, 2024 and December 31, 2023, respectively. A AmpliTech Group, Inc. Notes To Condensed Consolidated Financial Statements For the Six Months Ended June 30, 2024 and 2023 A Inventories A Inventories, which consist primarily of raw materials, work in progress and finished goods, are stated at the lower of cost (first-in, first-out basis) or market (net realizable value). A Inventory quantities and related values are analyzed at the end of each fiscal quarter to determine those items that are slow moving and obsolete. An inventory reserve is recorded for those items determined to be slow moving with a corresponding charge to cost of goods sold. Inventory items that are determined obsolete are written off currently with a corresponding charge to cost of goods sold. A As of June 30, 2024 and December 31, 2023 the reserve for inventory obsolescence was \$1,163,000 and \$1,146,000, respectively. A Property and Equipment A Property and equipment are recorded at cost. Depreciation is provided over the estimated useful lives of the related assets using the straight-line method for financial statement purposes. Amortization of leasehold improvements is computed using the straight-line method over the shorter of the remaining lease term or the estimated useful lives of the improvements. A Property and equipment are depreciated as follows: A Schedule of property and equipment depreciated A Description A Useful Life A Method Office equipment A 3 to 7 years A Straight-line Machinery/shop equipment A 7 to 15 years A Straight-line Computer equipment/software A 1 to 7 years A Straight-line Vehicles A 5 years A Straight-line Leasehold improvements A 7 years A Straight-line A Intangible Assets A Definite-lived intangible assets including customer relationships and intellectual property are subject to amortization. Intangible assets are amortized over their estimated useful life on a straight-line basis. Estimated useful lives are determined considering the period the assets are expected to contribute to future cash flows. Indefinite-lived intangible assets are not subject to amortization. A Intangible assets are amortized as follows: A Schedule of Intangible Assets A Description A Useful Life A Method Trade names A Indefinite A N/A Customer relationships A 15 to 20 years A Straight-line Intellectual property A 15 years A Straight-line A AmpliTech Group, Inc. Notes To Condensed Consolidated Financial Statements For the Six Months Ended June 30, 2024 and 2023 A Long-Lived Assets A The Company reviews the carrying value of long-lived assets such property and equipment, right-of-use ("ROU") assets, and definite-lived intangible assets for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. Circumstances which could trigger a review include, but are not limited to; significant decrease in the market price of the asset; significant adverse changes in the business climate or legal factors; current period cash flow or operating losses combined with a history of losses or a forecast of continuing losses associated with the use of the asset; and current expectation that the asset will more likely than not be sold or disposed of significantly before the end of its estimated useful life. A The recoverability of assets to be held and used is measured by a comparison of the carrying amount of an asset to estimated undiscounted future cash flows expected to be generated by the asset. If the carrying amount of an asset exceeds its estimated undiscounted future cash flows, an impairment charge is recognized by the amount by which the carrying amount of the asset exceeds the fair value of the asset. Assets to be disposed of would be separately presented in the balance sheet and reported at the lower of the carrying amount or fair value less costs to sell and would no longer be depreciated. The depreciable basis of assets that are impaired and continue in use is their respective fair values. During the six months ended June 30, 2024 and the year ended December 31, 2023, there were no impairments of long-lived assets. A Goodwill and Indefinite-Lived Intangible Assets A We follow the acquisition method of accounting to record the assets and liabilities of acquired businesses at their estimated fair value at the date of acquisition. We initially record goodwill for the amount the consideration transferred exceeds the acquisition-date fair value of net tangible and identifiable intangible assets



https://asc.fasb.org/1943274/2147479806/606-10-50-12Reference 5: http://www.xbrl.org/2003/role/disclosureRef -Topic 606 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 12 -Subparagraph (b) -Publisher FASB -URI https://asc.fasb.org/1943274/2147479806/606-10-50-12Reference 6: http://www.xbrl.org/2003/role/disclosureRef -Topic 606 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 12 -Subparagraph (c) -Publisher FASB -URI https://asc.fasb.org/1943274/2147479806/606-10-50-12Reference 7: http://www.xbrl.org/2003/role/disclosureRef -Topic 606 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 12 -Subparagraph (d) -Publisher FASB -URI https://asc.fasb.org/1943274/2147479806/606-10-50-12Reference 8: http://www.xbrl.org/2003/role/disclosureRef -Topic 606 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 12 -Subparagraph (e) -Publisher FASB -URI https://asc.fasb.org/1943274/2147479806/606-10-50-12Reference 9: http://www.xbrl.org/2003/role/disclosureRef -Topic 606 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 12 -Subparagraph (f) -Publisher FASB -URI https://asc.fasb.org/1943274/2147479806/606-10-50-12Reference 10: http://www.xbrl.org/2003/role/disclosureRef -Name Accounting Standards Codification -Topic 606 -Publisher FASB -URI https://asc.fasb.org/606/tableOfContent + Details Name: us-gaap RevenueFromContractWithCustomerTextBlock Namespace Prefix: us-gaap Data Type: dtr-types:textBlockItemType Balance Type: na Period Type: duration XML 22 R11.htm IDEA: XBRL DOCUMENT v3.24.2.u1 Segment Reporting 6 Months Ended Jun. 30, 2024 Segment Reporting [Abstract] X Segment Reporting (5) Segment Reporting ASC 280, àèèSegment Reporting, establishes standards for reporting information about operating segments on a basis consistent with the Company's internal organizational structure as well as information about geographical areas, business segments and major customers in financial statements for details on the Company's business segments. The Company has two reportable segments, the manufacturing and engineering segment, which is operated by AmpliTech Inc. and Specialty Microwave; and the distribution segment, which is operated by Spectrum. The manufacturing and engineering segment assembles microwave components, and the distribution segment is a global distributor of integrated circuits packages and lids. The Company provides general corporate services to its segments; however, these services are not considered when making operating decisions and assessing segment performance. These services are reported under àèèCorporate and below and include costs associated with executive management, financing activities and public company compliance. A AmpliTech Group, Inc. Notes To Condensed Consolidated Financial Statements For The Six Months Ended June 30, 2024 and 2023 A The following table presents summary information by segment for the three months ended June 30, 2024: A Schedule of Segment Reporting A A Manufacturing and Engineering A Distribution A Corporate A Total Revenue \$ 762,264 A \$ 1,765,178 A A A \$ 2,527,442 A Cost of Goods Sold A 623,830 A A 846,525 A A A A 1,470,355 A Net Income (Loss) A (1,314,836) A A 253,081 A A (514,519) A A (1,576,274) Total Assets A 10,532,203 A A 14,758,006 A A 122,031 A A 245,412,240 A Depreciation and Amortization A 100,400 A A 28,922 A A A A 129,322 A Interest Expense, net A 5,847 A A A A 2,337 A A A 8,184 A The following table presents summary information by segment for the six months ended June 30, 2024: A A Manufacturing and Engineering A Distribution A Corporate A Total Revenue \$ 1,803,131 A \$ 3,017,642 A A A \$ 4,820,773 A Cost of Goods Sold A 1,399,301 A A 1,481,755 A A A A 2,881,056 A Net Income (Loss) A (2,319,810) A A 204,134 A A (4,115,759) A A (6,231,435) Total Assets A 10,532,203 A A 14,758,006 A A 122,031 A A 25,412,240 A Depreciation and Amortization A 200,601 A A 57,844 A A A A 258,445 A Interest Expense, net A 7,527 A A A A 5,000 A A A A 12,527 A A AmpliTech Group, Inc. Notes To Condensed Consolidated Financial Statements For The Six Months Ended June 30, 2024 and 2023 X - References No definition available. + Details Name: us-gaap SegmentReportingAbstract Namespace Prefix: us-gaap Data Type: xbrli:stringItem Type Balance Type: na Period Type: duration X - Definition The entire disclosure for reporting segments including data and tables. Reportable segments include those that meet any of the following quantitative thresholds a) its reported revenue, including sales to external customers and intersegment sales or transfers is 10 percent or more of the combined revenue, internal and external, of all operating segments b) the absolute amount of its reported profit or loss is 10 percent or more of the greater, in absolute amount of 1) the combined reported profit of all operating segments that did not report a loss or 2) the combined reported loss of all operating segments that did report a loss c) its assets are 10 percent or more of the combined assets of all operating segments. + References Reference 1: http://www.xbrl.org/2003/role/exampleRef -Topic 280 -SubTopic 10 -Name Accounting Standards Codification -Section 55 -Paragraph 48 -Publisher FASB -URI https://asc.fasb.org/1943274/2147482785/280-10-55-48Reference 2: http://www.xbrl.org/2003/role/disclosureRef -Topic 280 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 32 -Subparagraph (f) -Publisher FASB -URI https://asc.fasb.org/1943274/2147482810/280-10-50-32Reference 3: http://www.xbrl.org/2003/role/disclosureRef -Topic 270 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 1 -Subparagraph (i) -Publisher FASB -URI https://asc.fasb.org/1943274/2147482964/270-10-50-1Reference 4: http://www.xbrl.org/2003/role/disclosureRef -Topic 280 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 32 -Subparagraph (ee) -Publisher FASB -URI https://asc.fasb.org/1943274/2147482810/280-10-50-32Reference 5: http://asc.fasb.org/us-gaap/role/ref/otherTransitionRef -Topic 280 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 32 -Subparagraph (d) -Publisher FASB -URI https://asc.fasb.org/1943274/2147482810/280-10-50-32Reference 6: http://www.xbrl.org/2003/role/exampleRef -Topic 280 -SubTopic 10 -Name Accounting Standards Codification -Section 55 -Paragraph 54 -Subparagraph (d) -Publisher FASB -URI https://asc.fasb.org/1943274/2147482785/280-10-55-54Reference 7: http://www.xbrl.org/2003/role/exampleRef -Topic 280 -SubTopic 10 -Name Accounting Standards Codification -Section 55 -Paragraph 47 -Subparagraph (c) -Publisher FASB -URI https://asc.fasb.org/1943274/2147482785/280-10-55-47Reference 8: http://www.xbrl.org/2003/role/exampleRef -Topic 280 -SubTopic 10 -Name Accounting Standards Codification -Section 55 -Paragraph 54 -Subparagraph (a) -Publisher FASB -URI https://asc.fasb.org/1943274/2147482785/280-10-55-54Reference 9: http://www.xbrl.org/2003/role/exampleRef -Topic 280 -SubTopic 10 -Name Accounting Standards Codification -Section 55 -Paragraph 47 -Subparagraph (f) -Publisher FASB -URI https://asc.fasb.org/1943274/2147482785/280-10-55-47Reference 10: http://www.xbrl.org/2003/role/exampleRef -Topic 280 -SubTopic 10 -Name Accounting Standards Codification -Section 55 -Paragraph 54 -Subparagraph (e) -Publisher FASB -URI https://asc.fasb.org/1943274/2147482785/280-10-55-54Reference 11: http://www.xbrl.org/2003/role/exampleRef -Topic 280 -SubTopic 10 -Name Accounting Standards Codification -Section 55 -Paragraph 47 -Subparagraph (d) -Publisher FASB -URI https://asc.fasb.org/1943274/2147482785/280-10-55-47Reference 12: http://www.xbrl.org/2003/role/disclosureRef -Topic 280 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 22 -Publisher FASB -URI https://asc.fasb.org/1943274/2147482810/280-10-50-22Reference 13: http://www.xbrl.org/2003/role/disclosureRef -Topic 280 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 31 -Publisher FASB -URI https://asc.fasb.org/1943274/2147482810/280-10-50-31Reference 14: http://www.xbrl.org/2003/role/disclosureRef -Topic 280 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 34 -Publisher FASB -URI https://asc.fasb.org/1943274/2147482810/280-10-50-34Reference 15: http://www.xbrl.org/2003/role/disclosureRef -Topic 280 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 26C -Publisher FASB -URI https://asc.fasb.org/1943274/2147482810/280-10-50-26CReference 16: http://www.xbrl.org/2003/role/disclosureRef -Topic 280 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 26B -Publisher FASB -URI https://asc.fasb.org/1943274/2147482810/280-10-50-26BReference 17: http://www.xbrl.org/2003/role/disclosureRef -Topic 280 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 15 -Publisher FASB -URI https://asc.fasb.org/1943274/2147482810/280-10-50-15Reference 18: http://www.xbrl.org/2003/role/disclosureRef -Topic 280 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 42 -Publisher FASB -URI https://asc.fasb.org/1943274/2147482810/280-10-50-42Reference 19: http://www.xbrl.org/2003/role/disclosureRef -Topic 280 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 40 -Publisher FASB -URI https://asc.fasb.org/1943274/2147482810/280-10-50-40Reference 20: http://www.xbrl.org/2003/role/disclosureRef -Topic 280 -Name Accounting Standards Codification -Publisher FASB -URI https://asc.fasb.org/280/tableOfContentReference 21: http://www.xbrl.org/2003/role/disclosureRef -Topic 280 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 26 -Publisher FASB -URI https://asc.fasb.org/1943274/2147482810/280-10-50-26Reference 22: http://www.xbrl.org/2003/role/disclosureRef -Topic 280 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 41 -Publisher FASB -URI https://asc.fasb.org/1943274/2147482810/280-10-50-41Reference 23: http://www.xbrl.org/2003/role/disclosureRef -Topic 280 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 21 -Subparagraph (a) -Publisher FASB -URI https://asc.fasb.org/1943274/2147482810/280-10-50-21Reference 24: http://www.xbrl.org/2003/role/disclosureRef -Topic 280 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 21 -Subparagraph (b) -Publisher FASB -URI https://asc.fasb.org/1943274/2147482810/280-10-50-21Reference 25: http://www.xbrl.org/2003/role/disclosureRef -Topic 280 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 32 -Subparagraph (e) -Publisher FASB -URI https://asc.fasb.org/1943274/2147482810/280-10-50-32 + Details Name: us-gaap SegmentReportingDisclosureTextBlock Namespace Prefix: us-gaap Data Type: dtr-types:textBlockItem Type Balance Type: na Period Type: duration XML 23 R12.htm IDEA: XBRL DOCUMENT v3.24.2.u1 Inventories 6 Months Ended Jun. 30, 2024 Inventory Disclosure [Abstract] A Inventories (6) Inventories A The inventory consists of the following at June 30, 2024 and December 31, 2023: A Schedule of Inventory A A June 30, 2024 A December 31, 2023 A A A A A Raw Materials \$ 1,364,072 A \$ 959,645 A Work-in Progress A 120,119 A A 51,140 A Finished Goods A 7,212,446 A A 6,672,793 A Subtotal \$ 8,696,637 A \$ 7,683,578 A Less: Reserve for Obsolescence A (1,146,000) A A A A A Total \$ 7,533,637 A \$ 6,537,578 A X - References No definition available. + Details Name: us-gaap InventoryDisclosureAbstract Namespace Prefix: us-gaap Data Type: xbrli:stringItem Type Balance Type: na Period Type: duration X - Definition The entire disclosure for inventory. Includes, but is not limited to, the basis of stating inventory, the method of determining inventory cost, the classes of inventory, and the nature of the cost elements included in inventory. + References Reference 1: http://www.xbrl.org/2003/role/disclosureRef -Topic 330 -Name Accounting Standards Codification -Publisher FASB -URI https://asc.fasb.org/330/tableOfContent + Details Name: us-gaap InventoryDisclosureTextBlock Namespace Prefix: us-gaap Data Type: dtr-types:textBlockItem Type Balance Type: na Period Type: duration XML 24 R13.htm IDEA: XBRL DOCUMENT v3.24.2.u1 Property and Equipment 6 Months Ended Jun. 30, 2024 Property, Plant and Equipment [Abstract] A Property and Equipment (7) Property and Equipment A Property and Equipment consisted of the following at June 30, 2024 and December 31, 2023: A Schedule of Property and Equipment A A June 30, 2024 A December 31, 2023 A A A A A Lab Equipment \$ 3,400,207 A \$ 3,400,207 A Manufacturing Equipment A 129,745 A A 129,745 A Automobiles A 7,335 A A 7,335 A Computer Equipment and Software A 146,785 A A 194,238 A Leasehold Improvements A 84,172 A A 84,172 A Furniture and Fixtures A 170,643 A A 170,643 A A A A A Subtotal A 3,938,887 A A 3,986,340 A Property plant and equipment, gross A 3,938,887 A A 3,986,340 A Less: Accumulated Depreciation A (1,509,274) A A (1,386,892) A A A A A Total A \$ 2,429,613 A \$ 2,599,448 A Property plant and equipment, net A \$ 2,429,613 A \$ 2,599,448 A Depreciation expense for the three months ended June 30, 2024 and 2023 was \$91,857 and \$78,212 respectively, of which \$71,123 and \$58,526, respectively were included in cost of goods sold. A AmpliTech Group, Inc. Notes To Condensed Consolidated Financial Statements For The Six Months Ended June 30, 2024 and 2023 A Depreciation expense for the six months ended June 30, 2024 and 2023 was \$183,515 and \$155,304 respectively, of which \$142,247 and \$116,420, respectively were included in cost of goods sold. A Property and equipment purchased in the amount of \$234,036 under financing leases is included in the totals above. As of June 30, 2024 and 2023, the outstanding balance of the financing leases were \$41,037 and \$57,438, respectively. A Disposal of property and equipment as of June 30, 2024 was \$61,133. A X - References No definition available. + Details Name: us-gaap PropertyPlantAndEquipmentAbstract Namespace Prefix: us-gaap Data Type: xbrli:stringItem Type Balance Type: na Period Type: duration X - Definition The entire disclosure for long-lived, physical asset used in normal conduct of business and not intended for resale. Includes, but is not limited to, work of art, historical treasure, and similar asset classified as collections. + References Reference 1: http://asc.fasb.org/us-gaap/role/ref/legacyRef -Topic 360 -Name Accounting Standards Codification -Publisher FASB -URI https://asc.fasb.org/360/tableOfContentReference 2: http://www.xbrl.org/2003/role/disclosureRef -Name Accounting Standards Codification -Section 50 -Paragraph 6 -SubTopic 360 -Publisher FASB -URI https://asc.fasb.org/1943274/2147477998/958-360-50-6Reference 3: http://www.xbrl.org/2003/role/disclosureRef -Name Accounting Standards Codification -Section 50 -Paragraph 1 -Subparagraph (d) -SubTopic 360 -Topic 958 -Publisher FASB -URI https://asc.fasb.org/1943274/2147477998/958-360-50-1Reference 4: http://www.xbrl.org/2003/role/disclosureRef -Name Accounting Standards Codification -Section 50 -Paragraph 7 -SubTopic 360 -Topic 958 -Publisher FASB -URI https://asc.fasb.org/1943274/2147477998/958-360-50-7 + Details Name: us-gaap PropertyPlantAndEquipmentDisclosureTextBlock Namespace Prefix: us-gaap Data Type: dtr-types:textBlockItem Type Balance Type: na Period Type: duration XML 25 R14.htm IDEA: XBRL DOCUMENT v3.24.2.u1 Goodwill and Intangible Assets 6 Months Ended Jun. 30, 2024 Goodwill and Intangible Assets Disclosure [Abstract] A Goodwill and Intangible Assets (8) Goodwill and Intangible Assets A Goodwill A Goodwill is related to the acquisition of Spectrum Semiconductor Materials Inc. on December 15, 2021. Goodwill is primarily related to expected improvements and technology performance and functionality, as well as sales growth from future product and service offerings and new customers, together with certain intangible assets that do not qualify for separate recognition. Goodwill is generally not amortizable for tax and financial statement purposes. As of June 30, 2024 and December 31, 2023, goodwill was \$4,696,883, respectively. A Other Intangible Assets A Intangible assets with an estimated useful life of fifteen and twenty years consisted of the following at June 30, 2024: A Schedule of Intangible Assets A A Gross Carrying Amount A Accumulated Amortization A Net A Weighted Average Life A Trade name A \$584,517 A A \$584,517 A A Indefinite A Customer relationships A 2,591,491 A A 404,521 A A 2,186,970 A A 16.31 A Intellectual Property A 202,771 A A 65,055 A A 137,716 A A 10.21 A A A A A A Total A \$3,378,779 A \$469,576 A \$2,909,203 A A A A Amortization expense for the three months ended June 30, 2024 and 2023 was \$37,465 and \$37,466, respectively. A Amortization expense for the six months ended June 30, 2024 and 2023 was \$74,930 and \$74,819, respectively. A AmpliTech Group, Inc. Notes To Condensed Consolidated Financial Statements For The Six Months Ended June 30, 2024 and 2023 A Annual amortization of intangible assets are as follows: A Schedule of Amortization of Assets A A A 2024-remaining A 75,043 A 2025 A 149,974 A 2026 A 149,974 A 2027 A 149,974 A 2028 A 149,974 A Thereafter A 1,649,747 A Total A \$2,324,686 A X - References No definition available. + Details Name: us-gaap GoodwillAndIntangibleAssetsDisclosureAbstract Namespace Prefix: us-gaap Data Type: xbrli:stringItem Type Balance Type: na Period Type: duration X - Definition The entire disclosure for goodwill and intangible assets. + References Reference 1: http://www.xbrl.org/2009/role/commonPracticeRef -Topic 350 -SubTopic 30 -Name Accounting Standards Codification -Publisher FASB -URI https://asc.fasb.org/350-30/tableOfContentReference 2: http://www.xbrl.org/2009/role/commonPracticeRef -Topic 350 -SubTopic 20 -Name Accounting Standards Codification -Publisher FASB -URI https://asc.fasb.org/350-20/tableOfContent + Details Name: us-gaap GoodwillAndIntangibleAssetsDisclosureTextBlock Namespace Prefix: us-gaap Data Type: dtr-types:textBlockItem Type Balance Type: na Period Type: duration XML 26 R15.htm IDEA: XBRL DOCUMENT v3.24.2.u1 Cost Method Investment 6 Months Ended Jun. 30, 2024 Investments, All Other Investments [Abstract] A Cost Method Investment (9) Cost Method Investment A On June 10, 2021, the Company entered into a membership interest purchase agreement with SN2N, LLC for an aggregate purchase price of \$350,000, to be paid in four tranches. Each tranche represented a 5% membership interest, and in aggregate a 20% membership interest. On June 15, 2022, an amendment to the membership interest purchase agreement was made to reflect a 19.9% membership interest. In light of this amendment, the Company overpaid \$1,750 for the membership interest and was subsequently reimbursed. As of June 30, 2024, the Company has made an investment of \$348,250 for a 19.9% membership interest. A X - Definition The entire disclosure for investment. + References Reference 1: http://www.xbrl.org/2009/role/commonPracticeRef -Topic 320 -Name Accounting Standards Codification -Publisher FASB -URI https://asc.fasb.org/320/tableOfContentReference 2: http://www.xbrl.org/2009/role/commonPracticeRef -Name Accounting Standards Codification -Topic 321 -Publisher FASB -URI https://asc.fasb.org/321/tableOfContentReference 3: http://www.xbrl.org/2009/role/commonPracticeRef -Name Accounting Standards Codification -Topic 325 -Publisher FASB -URI https://asc.fasb.org/325/tableOfContent + Details Name: us-gaap InvestmentTextBlock Namespace Prefix: us-gaap Data Type: dtr-types:textBlockItem Type Balance Type: na Period Type: duration X - References No definition available. + Details Name: us-gaap InvestmentsAllOtherInvestmentsAbstract Namespace Prefix: us-gaap Data Type: xbrli:stringItem Type Balance Type: na Period Type: duration XML 27 R16.htm IDEA: XBRL DOCUMENT v3.24.2.u1 Leases 6 Months Ended Jun. 30, 2024 Leases [Abstract] A Leases (10) Leases A The following was included in our balance sheet as of June 30, 2024: A Schedule of Lease Assets and Liabilities A A June 30, 2024 A Operating leases A A A Assets A A A ROU operating lease assets A \$3,268,136 A A A A Liabilities A A A Current portion of operating lease A \$421,803 A Operating lease, net of current portion A \$3,025,741 A Total operating lease liabilities A \$3,447,544 A A A A Financing leases A A A Assets A A A Property and equipment, gross A \$234,036 A A Accumulated depreciation A (171,068) A Total operating lease assets, net A \$62,968 A A A A Liabilities A A A Current portion of financing lease A \$17,208 A Financing lease, net of current portion A \$23,829 A Total financing lease liabilities A \$41,037 A A AmpliTech Group, Inc. Notes To Condensed Consolidated Financial Statements For The Six Months Ended June 30, 2024 and 2023 A The weighted average remaining lease term and weighted average discount rate at June 30, 2024 are as follows: A Schedule of

Weighted Average Remaining Lease Term and Weighted Average Discount Rate Weighted average remaining lease term (years) June 30, 2024 Operating leases 9.224 Financing leases 2.514 Weighted average discount rate 4.477 Operating leases 4.477 Financing leases 4.700 Financing Lease A The Company entered into several 60-month lease agreements to finance certain laboratory and office equipment. As such, the Company has accounted for these transactions as a financing lease. A The following table reconciles future minimum financing lease payments to the discounted lease liability as of June 30, 2024: A Schedule Of Future Minimum Lease Payments For Finance Lease A A A A 2024 remaining 9,384 2025 18,195 2026 11,982 2027 4,399 2028 1,555 Total lease payments 43,525 Less imputed interest (2,518) Total lease obligations 41,007 Less current obligations (17,208) Long-term lease obligations 23,829 A A AmpliTech Group, Inc. Notes To Condensed Consolidated Financial Statements For the Six Months Ended June 30, 2024 and 2023 A Operating Leases A On September 12, 2019, the Company entered into a new operating lease agreement to rent office space in Ronkonkoma, NY. This five-year agreement commenced on September 12, 2019 with an annual rent of \$90,000 and 3% increase in each successive lease year beginning in 2021. The Company has an option to buy the property during the first two years of the lease for \$1,200,000 and then at fair market value for the remainder of the lease term. This option has expired and was not exercised as of December 31, 2022. On April 13, 2023, this lease was terminated subject to the terms of a Surrender Agreement between the Company and landlord. As a result, a gain on termination of right-of-use operating lease was recognized of \$4,461. A On November 27, 2019, the Company entered a 39-month agreement to lease an automobile with a monthly payment of \$420. This lease was paid in full as of March 31, 2023. A On December 15, 2021, the Company assumed the SSM lease agreement for office and warehouse space in San Jose, CA, with the same terms and conditions. Effective February 1, 2020, the lease term will expire on January 31, 2025, with a base rent of \$24,234 for the first 12 months and increase by approximately 3% every year. A On October 15, 2021, the Company entered a new lease for a 20,000 square foot facility at 155 Plant Avenue, Hauppauge, New York, for a term of seven years and two months. The yearly base rent of \$346,242 shall increase at a rate of 2.75% per year to begin on the first anniversary lease commencement date and each year thereafter. The first two months of basic rent shall be abated following the commencement lease date. In the event the landlord decides to sell the property, the Company shall have the right of first offer to purchase subject property. Upon lease execution, the Company paid two months of base rent as a security deposit and one month's rent totaling \$86,560. The Company moved into the new manufacturing and headquarters facility April 1, 2022. A On August 9, 2023, the Company entered a 39-month agreement for \$20,880 to lease an automobile with a monthly payment of \$605. A On January 15, 2024, the Company entered a triple net lease agreement for a 1,900 square foot facility in Allen, Texas for a term of five years and one month. The yearly base rent of \$53,675 shall increase at a rate of 2.5% per year to begin on the first anniversary lease commencement date and each year thereafter. The first month's rent shall be abated following the commencement lease date. Upon lease execution, the Company paid two months of rent as a security deposit and one month's rent totaling \$17,999. As of June 30, 2024, the new MMIC division facility lease had not yet commenced, as the Company did not have the right to obtain substantially all the economic benefits from the use of the asset or the right to direct the use of the asset. The Company moved into the new facility on August 1, 2024. A AmpliTech Group, Inc. Notes To Condensed Consolidated Financial Statements For the Six Months Ended June 30, 2024 and 2023 A The following table reconciles future minimum operating lease payments to the discounted lease liability as of June 30, 2024: A Schedule Of Future Minimum Operating Lease Payments A A A A 2024 remaining A 349,808 2025 A 407,581 2026 A 389,397 2027 A 393,899 2028 A 404,721 Thereafter A 2,313,460 Total lease payments A 4,258,866 A Less imputed interest A (811,322) Total lease obligations A 3,447,544 Less current obligations A (421,803) Long-term lease obligations A \$3,025,741 A X - References No definition available. + Details Name: us-gaap LeasesAbstract Namespace Prefix: us-gaap Data Type: xbrl:stringItem Type: na:Period Type: duration X - Definition The entire disclosure for operating leases of lessee. Includes, but is not limited to, description of operating lease and maturity analysis of operating lease liability. + References Reference 1: http://www.xbrl.org/2003/role/disclosureRef -Topic 842 -SubTopic 20 -Name Accounting Standards Codification -Publisher FASB -URI https://asc.fasb.org/842-20/tableOfContent + Details Name: us-gaap LesseeOperatingLeasesTextBlock Namespace Prefix: us-gaap Data Type: dtr-types:textBlockItem Type: na:Period Type: duration XML 28 R17.htm IDEA: XBRL DOCUMENT v3.24.2.u1 Notes Payable 6 Months Ended Jun. 30, 2024 Debt Disclosure [Abstract] A Notes Payable (11) Notes Payable A Promissory Note: A On September 12, 2019, AmpliTech Group, Inc. acquired Specialty, a privately held company based in Ronkonkoma, NY. The purchase included all inventory, orders, customers, property and equipment, and all intellectual property. The assets also included all eight team members of Specialty. The total consideration paid was \$1,143,633, consisting of \$668,633 in cash and a \$475,000 promissory note with an interest rate of 6%. Beginning November 1, 2019, payment of principal and interest shall be due payable in fifty-nine (59) monthly payments of \$9,213 with a final payment due October 1, 2024 of \$9,203. As of June 30, 2024, the balance of this promissory note was \$36,388. Principal payments of \$44,453 along with interest expense of \$1,615 were paid during the six months ended June 30, 2024. A AmpliTech Group, Inc. Notes To Condensed Consolidated Financial Statements For the Six Months Ended June 30, 2024 and 2023 A Loan Payable: A On September 12, 2019, the Company was approved for a \$250,000 equipment leasing facility which was subsequently increased to \$500,000. The Company has borrowed against the leasing facility as follows: A -On May 14, 2020, the Company borrowed \$27,494 to be paid over a three-year term with monthly payments of \$815 at an interest rate of 4.27%. The balance as of June 30, 2024 and 2023 was \$0. Principal payments of \$0 and \$3,230, were paid for the six months ended June 30, 2024 and 2023, respectively. Total interest expense paid for the six months ended June 30, 2024 and 2023 was \$0 and \$30, respectively. This loan was paid in full in April 2023. A -On June 10, 2020, the Company borrowed \$41,015 to be paid over a three-year term with monthly payments of \$1,216 at an interest rate of 4.28%. The balance as of June 30, 2024 and 2023 was \$0. Principal payments of \$0 and \$6,012 were made for the six months ended June 30, 2024 and 2023, respectively. Total interest expense paid for the six months ended June 30, 2024 and 2023 was \$0 and \$68, respectively. This loan was paid in full in May 2023. A As of March 14, 2023, the Company closed the equipment line of credit of \$500,000, which had \$0 balance. All UCC filings on the Company assets have been released as well as the President's personal guarantee. A In January 2022, the Company purchased machinery for \$91,795, applying a deposit of \$9,180 and financing the balance of \$82,616 over 24 payments at an interest rate of 1.90%. The balance as of June 30, 2024 and 2023 was \$0 and \$20,949, respectively. Principal payments of \$0 and \$20,751 and interest expense of \$0 and \$314 were paid for the six months ended June 30, 2024 and 2023, respectively. A Future principal payments over the term of the loans as of June 30, 2024 are as follows: A Schedule of Future Principal and Interest Payments A A Payments A 2024 remaining A \$36,388 A Total remaining payments A \$36,388 A AmpliTech Group, Inc. Notes To Condensed Consolidated Financial Statements For the Six Months Ended June 30, 2024 and 2023 A X - References No definition available. + Details Name: us-gaap DebtDisclosureAbstract Namespace Prefix: us-gaap Data Type: xbrl:stringItem Type: na:Period Type: duration X - Definition The entire disclosure for information about short-term and long-term debt arrangements, which includes amounts of borrowings under each line of credit, note payable, commercial paper issue, bonds indenture, debenture issue, own-share lending arrangements and any other contractual agreement to repay funds, and about the underlying arrangements, rationale for a classification as long-term, including repayment terms, interest rates, collateral provided, restrictions on use of assets and activities, whether or not in compliance with debt covenants, and other matters important to users of the financial statements, such as the effects of refinancing and noncompliance with debt covenants. + References Reference 1: http://www.xbrl.org/2003/role/disclosureRef -Topic 470 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 6 -Subparagraph (b) -Publisher FASB -URI https://asc.fasb.org/1943274/2147481544/470-10-50-6Reference 2: http://www.xbrl.org/2003/role/disclosureRef -Topic 470 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 6 -Subparagraph (a) -Publisher FASB -URI https://asc.fasb.org/1943274/2147481544/470-10-50-6Reference 3: http://www.xbrl.org/2003/role/disclosureRef -Topic 405 -SubTopic 40 -Name Accounting Standards Codification -Section 50 -Paragraph 1 -Subparagraph (d) -Publisher FASB -URI https://asc.fasb.org/1943274/2147477092/405-40-50-1Reference 4: http://www.xbrl.org/2003/role/disclosureRef -Topic 405 -SubTopic 40 -Name Accounting Standards Codification -Section 50 -Paragraph 1 -Subparagraph (a)(3) -Publisher FASB -URI https://asc.fasb.org/1943274/2147477092/405-40-50-1Reference 5: http://www.xbrl.org/2003/role/disclosureRef -Topic 405 -SubTopic 40 -Name Accounting Standards Codification -Section 50 -Paragraph 1 -Subparagraph (a)(2) -Publisher FASB -URI https://asc.fasb.org/1943274/2147477092/405-40-50-1Reference 6: http://www.xbrl.org/2003/role/disclosureRef -Topic 405 -SubTopic 40 -Name Accounting Standards Codification -Section 50 -Paragraph 1 -Subparagraph (a)(1) -Publisher FASB -URI https://asc.fasb.org/1943274/2147477092/405-40-50-1Reference 7: http://www.xbrl.org/2003/role/disclosureRef -Topic 405 -SubTopic 40 -Name Accounting Standards Codification -Section 50 -Paragraph 1 -Subparagraph (a) -Publisher FASB -URI https://asc.fasb.org/1943274/2147477092/405-40-50-1Reference 8: http://www.xbrl.org/2003/role/disclosureRef -Topic 470 -SubTopic 20 -Name Accounting Standards Codification -Section 50 -Paragraph 1B -Subparagraph (h) -Publisher FASB -URI https://asc.fasb.org/1943274/2147481139/470-20-50-1BReference 9: http://www.xbrl.org/2003/role/disclosureRef -Topic 235 -SubTopic 10 -Name Accounting Standards Codification -Section S99 -Paragraph 1 -Subparagraph (SX 210.4-08(c)) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480678/235-10-S99-1Reference 10: http://fasb.org/us-gaap/role/ref/legacyRef -Topic 470 -Name Accounting Standards Codification -Publisher FASB -URI https://asc.fasb.org/470/tableOfContentReference 11: http://www.xbrl.org/2003/role/disclosureRef -Topic 835 -SubTopic 30 -Name Accounting Standards Codification -Section 45 -Paragraph 2 -Publisher FASB -URI https://asc.fasb.org/1943274/2147482925/835-30-45-2Reference 12: http://www.xbrl.org/2003/role/disclosureRef -Topic 470 -SubTopic 20 -Name Accounting Standards Codification -Section 50 -Paragraph 1B -Publisher FASB -URI https://asc.fasb.org/1943274/2147481139/470-20-50-1BReference 13: http://www.xbrl.org/2003/role/disclosureRef -Topic 470 -SubTopic 20 -Name Accounting Standards Codification -Section 50 -Paragraph 1B -Subparagraph (g) -Publisher FASB -URI https://asc.fasb.org/1943274/2147481139/470-20-50-1BReference 14: http://www.xbrl.org/2003/role/disclosureRef -Topic 470 -SubTopic 20 -Name Accounting Standards Codification -Section 50 -Paragraph 1B -Subparagraph (i) -Publisher FASB -URI https://asc.fasb.org/1943274/2147481139/470-20-50-1BReference 15: http://www.xbrl.org/2003/role/disclosureRef -Topic 470 -SubTopic 20 -Name Accounting Standards Codification -Section 50 -Paragraph 1C -Subparagraph (a) -Publisher FASB -URI https://asc.fasb.org/1943274/2147481139/470-20-50-1CReference 16: http://www.xbrl.org/2003/role/disclosureRef -Topic 470 -SubTopic 20 -Name Accounting Standards Codification -Section 50 -Paragraph 1C -Subparagraph (b) -Publisher FASB -URI https://asc.fasb.org/1943274/2147481139/470-20-50-1CReference 17: http://www.xbrl.org/2003/role/disclosureRef -Topic 470 -SubTopic 20 -Name Accounting Standards Codification -Section 50 -Paragraph 1C -Subparagraph (c) -Publisher FASB -URI https://asc.fasb.org/1943274/2147481139/470-20-50-1CReference 18: http://www.xbrl.org/2003/role/disclosureRef -Topic 470 -SubTopic 20 -Name Accounting Standards Codification -Section 50 -Paragraph 1E -Subparagraph (b) -Publisher FASB -URI https://asc.fasb.org/1943274/2147481139/470-20-50-1EReference 19: http://www.xbrl.org/2003/role/disclosureRef -Topic 470 -SubTopic 20 -Name Accounting Standards Codification -Section 50 -Paragraph 1I -Subparagraph (a) -Publisher FASB -URI https://asc.fasb.org/1943274/2147481139/470-20-50-1IReference 20: http://www.xbrl.org/2003/role/disclosureRef -Topic 470 -SubTopic 20 -Name Accounting Standards Codification -Section 50 -Paragraph 1I -Subparagraph (b) -Publisher FASB -URI https://asc.fasb.org/1943274/2147481139/470-20-50-1IReference 21: http://www.xbrl.org/2003/role/disclosureRef -Topic 470 -SubTopic 20 -Name Accounting Standards Codification -Section 50 -Paragraph 1I -Subparagraph (d) -Publisher FASB -URI https://asc.fasb.org/1943274/2147481139/470-20-50-1I + Details Name: us-gaap DebtDisclosureTextBlock Namespace Prefix: us-gaap Data Type: dtr-types:textBlockItem Type: na:Period Type: duration XML 29 R18.htm IDEA: XBRL DOCUMENT v3.24.2.u1 Stockholders' Equity 6 Months Ended Jun. 30, 2024 Equity [Abstract] A Stockholders' Equity (12) Stockholders' Equity A The total number of shares of stock this Corporation is authorized to issue shall be five hundred one million (501,000,000) shares, par value \$0.001 per share. Our authorized capital stock consists of 500,000,000 shares of common stock and 1,000,000 shares of blank check preferred stock. A Preferred Stock A On July 10, 2013, the Board of Directors of the Company approved a certificate of amendment to the articles of incorporation and changed the authorized capital stock of the Company to include and authorize 500,000 shares of Preferred Stock, par value \$0.001 per share. On October 7, 2020, the Board of Directors of the Company approved a certificate of amendment to the articles of incorporation and changed the total number of authorized shares of Preferred Stock to 1,000,000 shares, \$0.001 per share. A On October 7, 2020, our Board of Directors and our stockholders approved a resolution to amend and restate the certificate of designation of preferences, rights and limitations of Series A Convertible Preferred Stock to restate that there are 401,000 shares of the Company's blank check Preferred Stock designated as Series A Convertible Preferred Stock. The amended and restated certificate clarifies that the Series A Convertible Preferred Stock convert at a rate of five shares of the Company's common stock for every share of Series A Convertible Preferred Stock, and also restates that the Series A Convertible Preferred Stock shall be entitled to vote on all matters submitted to shareholders of the Company for each share of Series A Convertible Preferred Stock owned on the record date for the determination of shareholders entitled to vote on such matter or, if no such record date is established, on the date such vote is taken, or any written consent of shareholders is solicited. The number of votes entitled to be cast by the holders of the Series A Convertible Preferred Stock equals that number of votes that, together with votes otherwise entitled to be cast by the holders of the Series A Convertible Preferred Stock at a meeting, whether by virtue of stock ownership, proxies, voting trust agreements or otherwise, entitle the holders to exercise 51% of all votes entitled to be cast to approve any action which Nevada law provides may or must be approved by vote or consent of the holders of common stock entitled to vote. A AmpliTech Group, Inc. Notes To Condensed Consolidated Financial Statements For the Six Months Ended June 30, 2024 and 2023 A Common Stock: A The Company originally authorized 50,000,000 shares of common stock with a par value of \$0.001. Effective May 20, 2014, the Company increased its authorized shares of common stock from 50,000,000 to 500,000,000. A On February 17, 2021, AmpliTech Group Inc., common stock and warrants under the symbols æAMPGæ and æAMPGWæ, respectively, commenced trading on NASDAQ. A 2020 Equity Incentive Plan: A In October 2020, the Board of Directors and shareholders adopted the Company's 2020 Equity Incentive Plan (the æ2020 Planæ), effective as of December 14, 2020. Under the 2020 Plan, the Company reserved 1,250,000 shares of common stock to grant shares of the Company's common stock to employees and individuals who perform services for the Company. The purpose of the 2020 Plan is to attract and retain the best available personnel for positions of substantial responsibility, to provide incentives to individuals who perform services for the Company, and to promote the success of the Company's business. The 2020 Plan permits the grant of Incentive Stock Options, Nonstatutory Stock Options, Stock Appreciation Rights, Restricted Stock, Restricted Stock Units, Performance Units, Performance Shares, and other stock or cash awards as the Board of Directors may determine. A In 2023, the Board and the shareholders adopted the Company's Amended and Restated 2020 Equity Incentive Plan (the æAmended and Restated Planæ), effective as of December 11, 2023. The Amended and Restated Plan is substantially similar to the 2020 Plan except that it increases the shares of our common stock available for issuance thereunder to 2,250,000 shares of common stock. A As of June 30, 2024, all outstanding stock options were issued according to the Company's 2020 Plan, and there remains 811,500 shares of common stock available for future issuance under the 2020 Plan A Stock Options: A On January 9, 2024, the Company granted a consultant, ten-year stock options to purchase 2,500 shares of common stock according to the Company's 2020 Plan. The stock options vested immediately, with an exercise price of \$1.86 per share. The Company has calculated these options estimated fair market value at \$3,800 using the Black-Scholes model, with the following assumptions: expected term of 5.00 years, stock price of \$1.86, exercise price of \$1.86, volatility of 116.1%, risk-free rate of 3.97%, and no forfeiture rate. A On January 16, 2024, the Company granted an employee ten-year stock options to purchase 5,000 shares of common stock according to the Company's 2020 Plan. The stock options vest in equal quarterly installments over five years commencing on April 16, 2024, with an exercise price of \$1.93 per share. The Company has calculated these options estimated fair market value at \$8,800 using the Black-Scholes model, with the following assumptions: expected term of 7.51 years, stock price of \$1.93, exercise price of \$1.93, volatility of 120.1%, risk-free rate of 4.01%, and no forfeiture rate. A AmpliTech Group, Inc. Notes To Condensed Consolidated Financial Statements For the Six Months Ended June 30, 2024 and 2023 A On January 16, 2024, the Company granted an independent contractor ten-year stock options to purchase 50,000 shares of common stock according to the Company's 2020 Plan. 20,000 stock options vested immediately and the balance of 30,000 shall vest in equal quarterly installments over three years commencing on June 30, 2024, with an exercise price of \$2.19 per share. The Company has calculated these options estimated fair market value at \$98,600 using the Black-Scholes model, with the following assumptions: expected term of 10.00 years, stock price of \$2.19, exercise price of \$2.19, volatility of 123.0%, risk-free rate of 4.07%, and no forfeiture rate. A Below is a table summarizing the changes in stock options outstanding for the six months ended June 30, 2024: A Schedule of Stock Options Outstanding A A Number of A Weighted Average A A Options A Exercise Price (\$/A Outstanding at December 31, 2023 A 1,236,000 A \$2.30 A Granted A 57,500 A \$2.15 A Exercised A A A A Expired A A A Outstanding at June 30, 2024 A 1,293,500 A \$2.30 A Exercisable at June 30, 2024 A 604,810 A \$2.76 A Stock-based compensation expense related to stock options of \$91,901 and \$225,687 was recorded for the three and six months ended June 30, 2024. As of June 30, 2024, the remaining unrecognized compensation cost related to non-vested stock options is \$1,140,807 and is expected to be recognized over 4.55 years. The outstanding stock options have a weighted average remaining contractual life of 4.97 years and a total

intrinsic value of \$0.4. AmpliTech Group, Inc. Notes To Condensed Consolidated Financial Statements For the Six Months Ended June 30, 2024 and 2023 Warrants: Below is a table summarizing the changes in warrants outstanding for the six months ended June 30, 2024: Schedule of Warrants Outstanding: A Number of A Weighted Average A Warrants A Exercise Price (S) Outstanding at December 31, 2023A 3,296,942A \$ 7.83A GrantedA A A A ExercisedA A A A ExpiredA A A A Outstanding at June 30, 2024A 3,296,942A \$ 7.83A Exercisable at June 30, 2024A 3,296,942A \$ 7.83A Stock-based compensation expense related to warrants of \$0 was recorded for the three and six months ended June 30, 2024. As of June 30, 2024, the remaining unrecognized compensation cost related to non-vested warrants is \$0. The outstanding warrants have a weighted average remaining contractual life of 1.73 years and a total intrinsic value of \$0.4. AmpliTech Group, Inc. Notes To Condensed Consolidated Financial Statements For the Six Months Ended June 30, 2024 and 2023 Restricted Stock Units: On May 20, 2022, 30,000 restricted stock units at an exercise price of \$1.96 were issued to a board advisor. Vesting will occur in equal quarterly installments of 2,500 shares beginning on May 20, 2022. As of June 30, 2024, 15,000 shares of common stock were issued. A Below is a table summarizing the changes in restricted stock units outstanding for the six months ended June 30, 2024: A Schedule of Changes in Restricted Stock Units Outstanding: A Number of A Weighted Average A RSUA Exercise Price (S) Outstanding at December 31, 2023A 12,500A A 1.96A GrantedA A A A ExercisedA (5,000)A 1.96A ExpiredA A A A Outstanding at June 30, 2024A 7,500A A 1.96A Exercisable at June 30, 2024A A A A A Stock-based compensation expense related to restricted stock units of \$4,871 and \$9,742 was recorded for the three and six months ended June 30, 2024. As of June 30, 2024, the remaining unrecognized compensation cost related to non-vested restricted stock units is \$17,503. The outstanding restricted stock units have a weighted average remaining contractual life of .64 years and a total intrinsic value of \$0.4. X - ReferencesNo definition available. + Details Name: us-gaap EquityAbstract Namespace Prefix: us-gaap Data Type: xbrli:stringItemType Balance Type: na Period Type: duration X - DefinitionThe entire disclosure for equity. + ReferencesReference 1: http://www.xbrl.org/2003/role/disclosureRef - Topic 505 - SubTopic 10 - Name Accounting Standards Codification - Section 50 - Paragraph 13 - Subparagraph (b) - Publisher FASB - URI https://asc.fasb.org/1943274/2147481112/505-10-50-13Reference 2: http://www.xbrl.org/2003/role/disclosureRef - Topic 505 - SubTopic 10 - Name Accounting Standards Codification - Section 50 - Paragraph 13 - Subparagraph (b) - Publisher FASB - URI https://asc.fasb.org/1943274/2147481112/505-10-50-13Reference 3: http://www.xbrl.org/2003/role/disclosureRef - Topic 505 - SubTopic 10 - Name Accounting Standards Codification - Section 50 - Paragraph 14 - Subparagraph (b) - Publisher FASB - URI https://asc.fasb.org/1943274/2147481112/505-10-50-14Reference 4: http://www.xbrl.org/2003/role/disclosureRef - Topic 946 - SubTopic 235 - Name Accounting Standards Codification - Section 50 - Paragraph 2 - Subparagraph (a) - Publisher FASB - URI https://asc.fasb.org/1943274/214747968/946-235-50-2Reference 5: http://www.xbrl.org/2003/role/disclosureRef - Topic 946 - SubTopic 235 - Name Accounting Standards Codification - Section 50 - Paragraph 2 - Subparagraph (d) - Publisher FASB - URI https://asc.fasb.org/1943274/214747968/946-235-50-2Reference 6: http://www.xbrl.org/2003/role/disclosureRef - Topic 946 - SubTopic 505 - Name Accounting Standards Codification - Section 50 - Paragraph 6 - Publisher FASB - URI https://asc.fasb.org/1943274/214747648/946-505-50-6Reference 7: http://www.xbrl.org/2003/role/disclosureRef - Topic 815 - SubTopic 40 - Name Accounting Standards Codification - Section 50 - Paragraph 6 - Subparagraph (a) - Publisher FASB - URI https://asc.fasb.org/1943274/2147480237/815-40-50-6Reference 8: http://www.xbrl.org/2003/role/disclosureRef - Topic 505 - SubTopic 10 - Name Accounting Standards Codification - Section 599 - Paragraph 1 - Subparagraph (SX 210.3-04) - Publisher FASB - URI https://asc.fasb.org/1943274/2147480008/505-10-599-1Reference 9: http://www.xbrl.org/2003/role/disclosureRef - Topic 235 - SubTopic 10 - Name Accounting Standards Codification - Section 599 - Paragraph 1 - Subparagraph (SX 210.4-08(e)(1)) - Publisher FASB - URI https://asc.fasb.org/1943274/2147480678/235-10-599-1Reference 10: http://fasb.org/us-gaap/role/ref/legacyRef - Topic 505 - Name Accounting Standards Codification - Publisher FASB - URI https://asc.fasb.org/505/tableOfContentReference 11: http://www.xbrl.org/2003/role/disclosureRef - Topic 505 - SubTopic 10 - Name Accounting Standards Codification - Section 50 - Paragraph 13 - Publisher FASB - URI https://asc.fasb.org/1943274/2147481112/505-10-50-13Reference 12: http://www.xbrl.org/2003/role/disclosureRef - Topic 505 - SubTopic 10 - Name Accounting Standards Codification - Section 50 - Paragraph 13 - Subparagraph (g) - Publisher FASB - URI https://asc.fasb.org/1943274/2147481112/505-10-50-13Reference 13: http://www.xbrl.org/2003/role/disclosureRef - Topic 505 - SubTopic 10 - Name Accounting Standards Codification - Section 50 - Paragraph 13 - Subparagraph (i) - Publisher FASB - URI https://asc.fasb.org/1943274/2147481112/505-10-50-13Reference 14: http://www.xbrl.org/2003/role/disclosureRef - Topic 505 - SubTopic 10 - Name Accounting Standards Codification - Section 50 - Paragraph 14 - Subparagraph (a) - Publisher FASB - URI https://asc.fasb.org/1943274/2147481112/505-10-50-14Reference 15: http://www.xbrl.org/2003/role/disclosureRef - Topic 505 - SubTopic 10 - Name Accounting Standards Codification - Section 50 - Paragraph 14 - Subparagraph (c) - Publisher FASB - URI https://asc.fasb.org/1943274/2147481112/505-10-50-14Reference 16: http://www.xbrl.org/2003/role/disclosureRef - Topic 505 - SubTopic 10 - Name Accounting Standards Codification - Section 50 - Paragraph 16 - Subparagraph (b) - Publisher FASB - URI https://asc.fasb.org/1943274/2147481112/505-10-50-16Reference 17: http://www.xbrl.org/2003/role/disclosureRef - Topic 505 - SubTopic 10 - Name Accounting Standards Codification - Section 50 - Paragraph 18 - Subparagraph (a) - Publisher FASB - URI https://asc.fasb.org/1943274/2147481112/505-10-50-18Reference 18: http://www.xbrl.org/2003/role/disclosureRef - Topic 505 - SubTopic 10 - Name Accounting Standards Codification - Section 50 - Paragraph 18 - Subparagraph (d) - Publisher FASB - URI https://asc.fasb.org/1943274/2147481112/505-10-50-18Reference 19: http://www.xbrl.org/2003/role/disclosureRef - Topic 505 - SubTopic 10 - Name Accounting Standards Codification - Section 50 - Paragraph 18 - Subparagraph (d) - Publisher FASB - URI https://asc.fasb.org/1943274/2147481112/505-10-50-18 + Details Name: us-gaap StockholdersEquityNoteDisclosureTextBlock Namespace Prefix: us-gaap Data Type: dtr-types:textBlockItemType Balance Type: na Period Type: duration XML 30 R19.htm IDEA: XBRL DOCUMENT v3.24.2.u1 Subsequent events 6 Months Ended Jun. 30, 2024 Subsequent Events [Abstract] A Subsequent events (13) Subsequent events A On July 23, 2024, the Company entered into a business loan and security agreement with Althabq Lending II LLC in the amount of \$1,300,000, with an origination fee of \$26,000. The loan is payable within 76 weeks through 38 bi-weekly payments of \$44,816 and bears an annual interest rate of 21.2%. The loan is secured by the Company's assets through a UCC filing. Proceeds from the business loan will be used for working capital and 5G licensing and certification fees. A On July 26, 2024, the Company's AGTGS division entered into a licensing product agreement with a leading radio contract manufacturing company. Under the terms of the agreement, the licensor agreed to an exclusive United States distribution and global licensing rights for certain 5G telecom equipment for 18 months for the purpose of marketing, selling, renting, deployment and maintenance of the licensed products with the Company. A For these services, the Company will pay the Licensor certain software IP license fees in the amount of \$1,250,000. In addition, the licensor may provide certain product certification support for certain fees. X - ReferencesNo definition available. + Details Name: us-gaap SubsequentEventsAbstract Namespace Prefix: us-gaap Data Type: xbrli:stringItemType Balance Type: na Period Type: duration X - DefinitionThe entire disclosure for significant events or transactions that occurred after the balance sheet date through the date the financial statements were issued or the date the financial statements were available to be issued. Examples include: the sale of a capital stock issue, purchase of a business, settlement of litigation, catastrophic loss, significant foreign exchange rate changes, loans to insiders or affiliates, and transactions not in the ordinary course of business. + ReferencesReference 1: http://www.xbrl.org/2003/role/disclosureRef - Topic 855 - Name Accounting Standards Codification - Publisher FASB - URI https://asc.fasb.org/855/tableOfContentReference 2: http://www.xbrl.org/2003/role/disclosureRef - Topic 855 - SubTopic 10 - Name Accounting Standards Codification - Section 50 - Paragraph 2 - Subparagraph (a) - Publisher FASB - URI https://asc.fasb.org/1943274/2147483399/855-10-50-2 + Details Name: us-gaap SubsequentEventsTextBlock Namespace Prefix: us-gaap Data Type: dtr-types:textBlockItemType Balance Type: na Period Type: duration XML 31 R20.htm IDEA: XBRL DOCUMENT v3.24.2.u1 Summary of Significant Accounting Policies (Policies) 6 Months Ended Jun. 30, 2024 Accounting Policies [Abstract] A Basis of Accounting Basis of Accounting A The accompanying condensed consolidated financial statements have been prepared using the accrual basis of accounting. A Principles of Consolidation Principles of Consolidation A The accompanying condensed consolidated financial statements include the accounts of the Company and its subsidiaries. All intercompany accounts and transactions have been eliminated in consolidation. A Use of Estimates Use of Estimates A The preparation of financial statements in conformity with generally accepted accounting principles requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and the disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses for the periods presented. Actual results could differ from those estimates. A Cash and Cash Equivalents Cash and Cash Equivalents A The Company considers deposits that can be redeemed on demand and investments and marketable securities that have original maturities of less than three months, when purchased, to be cash equivalents. As of June 30, 2024 the Company's cash and cash equivalents were deposited in four financial institutions. A The Company's policy is to place its cash and cash equivalents with high-quality, major financial and investment institutions to limit the amount of credit exposure. Accounts at each financial institution are insured by the Federal Deposit Insurance Corporation (FDIC) up to \$250,000. At June 30, 2024 and December 31, 2023, the Company had \$434,792 and \$3,170,500 in excess of FDIC insured limits, respectively. The Company has not experienced any losses on such accounts. A Accounts Receivable Accounts Receivable A Accounts receivable consist of trade receivables arising from credit sales to customers in the normal course of business. These receivables are recorded at the time of sale, net of an allowance for current expected credit losses. In accordance with ASC Topic 326, Financial Instruments, Credit Losses, the Company estimates expected credit losses based on historical bad debt experience, the aging of accounts receivable, the current creditworthiness of our customers, prevailing economic conditions, and reasonable and supportable forward-looking information. A An allowance of \$0 has been recorded at June 30, 2024 and December 31, 2023, respectively. A AmpliTech Group, Inc. Notes To Condensed Consolidated Financial Statements For the Six Months Ended June 30, 2024 and 2023 Inventories Inventories A Inventories, which consist primarily of raw materials, work in progress and finished goods, are stated at the lower of cost (first-in, first-out basis) or market (net realizable value). A Inventory quantities and related values are analyzed at the end of each fiscal quarter to determine those items that are slow moving and obsolete. An inventory reserve is recorded for those items determined to be slow moving with a corresponding charge to cost of goods sold. Inventory items that are determined obsolete are written off currently with a corresponding charge to cost of goods sold. A As of June 30, 2024 and December 31, 2023 the reserve for inventory obsolescence was \$1,163,000 and \$1,146,000, respectively. A Property and Equipment Property and Equipment A Property and equipment are recorded at cost. Depreciation is provided over the estimated useful lives of the related assets using the straight-line method for financial statement purposes. Amortization of leasehold improvements is computed using the straight-line method over the shorter of the remaining lease term or the estimated useful lives of the improvements. A Property and equipment are depreciated as follows: A Schedule of property and equipment depreciated A Description A Useful Life A Method Office equipment A 3 to 7 years A Straight-line Machinery/shop equipment A 7 to 15 years A Straight-line Computer equipment/software A 1 to 7 years A Straight-line Vehicles A 5 years A Straight-line Leasehold improvements A 7 years A Straight-line Intangible Assets Intangible Assets A Definite-lived intangible assets including customer relationships and intellectual property are subject to amortization. Intangible assets are amortized over their estimated useful life on a straight-line basis. Estimated useful lives are determined considering the period the assets are expected to contribute to future cash flows. Indefinite-lived intangible assets are not subject to amortization. A Intangible assets are amortized as follows: A Schedule of Intangible Assets A Description A Useful Life A Method Trade names A Indefinite A N/A Customer relationships A 15 to 20 years A Straight-line Intellectual property A 15 years A Straight-line A AmpliTech Group, Inc. Notes To Condensed Consolidated Financial Statements For the Six Months Ended June 30, 2024 and 2023 Long-Lived Assets Long-Lived Assets A The Company reviews the carrying value of long-lived assets such property and equipment, right-of-use (ROU) assets, and definite-lived intangible assets for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. Circumstances which could trigger a review include, but are not limited to; significant decrease in the market price of the asset; significant adverse changes in the business climate or legal factors; current period cash flow or operating losses combined with a history of losses or a forecast of continuing losses associated with the use of the asset; and current expectation that the asset will more likely than not be sold or disposed of significantly before the end of its estimated useful life. A The recoverability of assets to be held and used is measured by a comparison of the carrying amount of an asset to estimated undiscounted future cash flows expected to be generated by the asset. If the carrying amount of an asset exceeds its estimated undiscounted future cash flows, an impairment charge is recognized by the amount by which the carrying amount of the asset exceeds the fair value of the asset. Assets to be disposed of would be separately presented in the balance sheet and reported at the lower of the carrying amount of fair value less costs to sell and would no longer be depreciated. The depreciable basis of assets that are impaired and continue in use is their respective fair values. During the six months ended June 30, 2024 and the year ended December 31, 2023, there were no impairments of long-lived assets. A Goodwill and Indefinite-Lived Intangible Assets Goodwill and Indefinite-Lived Intangible Assets A We follow the acquisition method of accounting to record the assets and liabilities of acquired businesses at their estimated fair value at the date of acquisition. We initially record goodwill for the amount the consideration transferred exceeds the acquisition-date fair value of net tangible and identifiable intangible assets acquired. A Goodwill and intangible assets deemed to have indefinite lives are not amortized, but are tested for impairment annually on December 31, or more frequently when events or circumstances indicate an impairment may have occurred. When assessing the recoverability of goodwill and indefinite-lived intangible assets, the Company may first assess qualitative factors in determining whether it is more likely than not that the fair value of a reporting unit, including goodwill, or an indefinite-lived intangible asset is less than its carrying amount. The qualitative assessment is based on several factors, including the current operating environment, industry and market conditions, and overall financial performance. The Company may elect to bypass this qualitative assessment for some or all of its reporting units or other indefinite-lived intangible assets and perform a quantitative assessment, based on management's judgment. A If we quantitatively test goodwill and indefinite-lived intangible assets for possible impairment, we calculate the fair value for the reporting unit and indefinite-lived assets and compare the amount to their carrying amount. If the fair value of a reporting unit and indefinite-lived asset exceeds their carrying amount, the reporting unit and indefinite-lived assets are not considered impaired. If the carrying amount of the reporting unit and indefinite-lived assets exceed their fair value, the reporting unit and indefinite-lived assets are considered to be impaired, and an impairment charge is recognized for the difference. A AmpliTech Group, Inc. Notes To Condensed Consolidated Financial Statements For the Six Months Ended June 30, 2024 and 2023 A We estimate the fair value of our reporting units and indefinite-lived intangible assets based on the present value of estimated future cash flows. Considerable management judgment is necessary to evaluate the impact of operating and macroeconomic changes and to estimate the future cash flows used to measure fair value. Our estimates of future cash flows consider past performance, current and anticipated market conditions and internal projections and operating plans. Additional assumptions include forecasted growth rates, estimated discount rates, and estimated royalty rates for our indefinite-lived intangible assets. A During the six months ended June 30, 2024 and the year ended December 31, 2023, there were no impairments of indefinite-lived intangible assets. A Investment Policy-Cost Method Investment Policy-Cost Method A Investments consist of non-controlling equity investments in privately held companies. The Company elected the measurement alternative for these investments without readily determinable fair values and for which the Company does not control or have the ability to exercise considerable influence over operating and financial policies. These investments are accounted for under the cost method of accounting. Under the cost method of accounting, the non-marketable equity securities are carried at cost less any impairment, adjusted for observable price changes of similar investments of the same issuer. Fair value is not estimated for these investments if there are no identified events or changes in circumstances that may influence the fair value of the investment. Under this method, the Company's share of the earnings or losses of such investee companies is not included in the consolidated balance sheet or consolidated statements of operations. The Company held \$348,250 of investments without readily determinable fair values at June 30, 2024 and December 31, 2023, respectively. (see Note 9). These investments are included in other assets on the consolidated balance sheets. There were no indicators of impairment during the three months ended June 30, 2024 and the year ended December 31, 2023. A Investment in Digital Assets Investment in Digital Assets A We account for all digital assets as indefinite-lived intangible assets in accordance with ASC 350, Intangibles Goodwill and Other. The Company presents digital assets separately from other intangible assets, recorded as digital assets on the condensed consolidated balance sheets. The digital assets are initially recorded at cost and are subsequently remeasured at cost, net of any impairment losses incurred since acquisition. A AmpliTech Group, Inc. Notes To Condensed Consolidated Financial Statements For the Six Months Ended June 30, 2024 and 2023 A We performed an analysis this quarter to identify whether events or changes in circumstances, principally decreases in the quoted prices on active exchanges, indicate that it is more likely than not that our digital assets are impaired. In determining if an impairment has occurred, we consider the lowest market price of one unit of digital asset quoted on the active exchange since acquiring the digital asset. When the then current carrying value of a digital asset exceeds the fair value determined each quarter, an impairment loss has occurred with respect to those digital assets in the amount equal to the difference between their carrying values and the prices determined. Gains are not recorded until realized upon sale(s), at which point they are presented net of any impairment losses for the same digital assets. In determining the gain to be

recognized upon sale, we calculate the difference between the sales price and carrying value of the digital assets sold immediately prior to sale. Leases Leases A We lease property and equipment under finance and operating leases. For leases with terms greater than 12 months, we record the related asset and obligation at the present value of lease payments over the lease term. The Company has elected not to separate lease and non-lease components for all property leases for the purpose of calculating ROU assets and lease liabilities. Many of our leases include rental escalation clauses, renewal options and/or termination options that are factored into our determination of lease payments when appropriate. When available, we use the rate implicit in the lease to discount lease payments to present value; however, most of our leases do not provide a readily determinable implicit rate. Therefore, we must estimate our incremental borrowing rate to discount the lease payments based on information available at lease commencement. The incremental borrowing rate is the rate of interest that a lessee would have to pay to borrow on a collateralized basis considering such factors as lease term and economic environment risks. Revenue Recognition Revenue Recognition A We sell our products through a combination of a direct sales force in the United States and independent sales representatives in international markets. Revenue is recognized when a customer obtains control of promised goods based on the consideration we expect to receive in exchange for these goods. This core principle is achieved through the following steps: A Identify the contract with the customer. A contract with a customer exists when (i) we enter into an enforceable contract with a customer that defines each party's rights regarding the goods to be transferred and identifies the payment terms related to these goods, (ii) the contract has commercial substance and, (iii) we determine that collection of substantially all consideration for services that are transferred is probable based on the customer's intent and ability to pay the promised consideration. We do not have significant costs to obtain contracts with customers. For commissions on product sales, we have elected the practical expedient to expense the costs as incurred. A Identify the performance obligations in the contract. Our contracts with customers do not include multiple performance obligations to be completed over a period. A Our performance obligations relate to delivering single-use products to a customer, subject to the shipping terms of the contract. Limited warranties are provided, under which we typically accept returns and provide either replacement parts or refunds. A We do not have significant returns. We do not typically offer extended warranty or service plans. A AmpliTech Group, Inc. Notes To Condensed Consolidated Financial Statements For the Six Months Ended June 30, 2024 and 2023 A Determine the transaction price. Payment by the customer is due under customary fixed payment terms, and we evaluate if collectability is reasonably assured. None of our contracts as of June 30, 2024 contained a significant financing component. Revenue is recorded at the net sales price, which includes estimates of variable consideration such as product returns, rebates, discounts, and other adjustments. The estimates of variable consideration are based on historical payment experience, historical and projected sales data, and current contract terms. Variable consideration is included in revenue only to the extent that it is probable that a significant reversal of the revenue recognized will not occur when the uncertainty associated with the variable consideration is subsequently resolved. Taxes collected from customers relating to product sales and remitted to governmental authorities are excluded from revenues. A Allocate the transaction price to performance obligations in the contract. We typically do not have multiple performance obligations in our contracts with customers. We recognize revenue upon transfer of the product to the customer's control at contractually stated pricing. A Recognize revenue when or as we satisfy a performance obligation. We generally satisfy performance obligations at a point in time upon either shipment or delivery of goods, in accordance with the terms of each contract with the customer. We do not have significant service revenue. A Cost of Sales Cost of Sales A We include product costs such as material, direct labor, overhead costs, production-related depreciation expense, outside labor and production supplies in cost of sales. A Shipping and Handling Shipping and Handling A Shipping and handling charges are generally incurred at the customer's expense. However, when billed to our customers, shipping and handling charges are included in net sales for the applicable period, and the corresponding shipping and handling expense is reported in cost of sales. A Research and Development Research and Development A Research and development expenditures are charged to operations as incurred. The major components of research and development costs include payroll, consultants, outside service, and supplies. A Research and development costs for the six months ended June 30, 2024 and 2023 were \$736,877 and \$1,217,885, respectively. A AmpliTech Group, Inc. Notes To Condensed Consolidated Financial Statements For the Six Months Ended June 30, 2024 and 2023 A Income Taxes Income Taxes A The Company's deferred tax assets and liabilities for the expected future tax consequences of events have been included in the financial statements or tax returns. Under this method, deferred tax assets and liabilities are determined based on the differences between the financial statement carrying amounts and tax bases of certain assets and liabilities using enacted tax rates in effect in the years in which the differences are expected to reverse. The deferred tax assets and liabilities are classified according to the financial statement classification of the assets and liabilities generating the differences. Valuation allowances are established when necessary to reduce deferred tax assets to the amount expected to be realized. The ASC prescribes a recognition threshold and measurement attribute for the financial statement recognition and measurement of a tax position taken or expected to be taken in a tax return. The ASC provides guidance on de-recognition, classification, interest and penalties, accounting in interim periods, disclosure and transition. At June 30, 2024 and December 31, 2023, the Company had no material unrecognized tax benefits. A Earnings Per Share Earnings Per Share A Basic earnings (loss) per share is calculated by dividing net income (loss) by the weighted average number of shares of common stock outstanding during each period. Diluted earnings (loss) per share is calculated by adjusting the weighted average number of shares of common stock outstanding for the dilutive effect, if any, of common stock equivalents. Common stock equivalents whose effect would be anti-dilutive are not included in diluted earnings (loss) per share. The Company uses the treasury stock method to determine the dilutive effect, which assumes that all common stock equivalents have been exercised at the beginning of the period and that the funds obtained from those exercises were used to repurchase shares of common stock of the Company at the average closing market price during the period. As of June 30, 2024 and 2023, there were 4,597,942 and 4,242,442, respectively, potential common share equivalents from stock options excluded from the diluted loss per share calculations as their effect is anti-dilutive. A Fair Value Measurements Fair Value Measurements A The fair value of a financial instrument is the amount that could be received upon the sale of an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. Financial assets are marked to bid prices and financial liabilities are marked to offer prices. Fair value measurements do not include transaction costs. A fair value hierarchy is used to prioritize the quality and reliability of the information used to determine fair values. Categorization within the fair value hierarchy is based on the lowest level of input that is significant to the fair value measurement. The fair value hierarchy is defined in the following three categories: A Level 1: Unadjusted quoted prices that are available in active markets for identical assets or liabilities at the measurement date. A Level 2: Significant other observable inputs available at the measurement date, other than quoted prices included in Level 1, either directly or indirectly. A Level 3: Significant unobservable inputs that cannot be corroborated by observable market data and reflect the use of significant management judgment. A Cash and cash equivalents, receivables, inventories, prepaid expenses, accounts payable, accrued expenses, and customer deposits approximate fair value, due to their short-term nature. The carrying value of notes payable and short and long-term debt also approximates fair value since these instruments bear market rates of interest. A AmpliTech Group, Inc. Notes To Condensed Consolidated Financial Statements For the Six Months Ended June 30, 2024 and 2023 A Assets and liabilities that are measured at fair value on a nonrecurring basis relate primarily to long-lived assets, intangible assets, and goodwill, which are remeasured when the derived fair value is below carrying value in the consolidated balance sheets. A Stock-Based Compensation Stock-Based Compensation A The Company records stock-based compensation in accordance with ASC 718, Compensation-Stock Compensation. All transactions in which goods or services are the consideration received for the issuance of equity instruments are accounted for based on the fair value of the consideration received or the fair value of the equity instrument issued, whichever is more reliably measurable. Equity instruments issued to employees and the cost of the services received as consideration are measured and recognized based on the fair value of the equity instruments issued and are recognized over the employees required service period, which is generally the vesting period. A Concentration of Credit Risk Concentration of Credit Risk A Financial instruments that potentially subject the Company to concentration of credit risk consist primarily of cash and cash equivalents, marketable securities and accounts receivable. A The Company places its cash and cash equivalents and marketable securities with high-quality, major financial and investment institutions in order to limit the amount of credit exposure. For accounts receivable, the Company performs ongoing credit evaluations of its customers and maintains allowances for potential credit losses. A Recent Accounting Pronouncements Recent Accounting Pronouncements A In December 2023, the FASB issued ASU 2023-09, Income Taxes (Topic 740): Improvements to Income Tax Disclosures, which enhances the transparency and decision usefulness of income tax disclosures by requiring: (1) consistent categories and greater disaggregation of information in the rate reconciliation and (2) income taxes paid disaggregated by jurisdiction. It also includes certain other amendments to improve the effectiveness of income tax disclosures. ASU 2023-09 is effective for fiscal years beginning after December 15, 2025, with early adoption permitted. These amendments are to be applied prospectively, with retrospective application permitted. We are currently evaluating the impact this standard will have on our consolidated financial statement disclosures. A AmpliTech Group, Inc. Notes To Condensed Consolidated Financial Statements For the Six Months Ended June 30, 2024 and 2023 A In November 2023, the FASB issued ASU 2023-07, Segment Reporting (Topic 280): Improvements to Reportable Segment Disclosures, which requires a public entity to disclose significant segment expenses and other segment items on an annual and interim basis and to provide in interim periods all disclosures about reportable segment's profit or loss and assets that are currently required annually. ASU 2023-07 is effective for fiscal years beginning after December 15, 2023, and interim periods within fiscal years beginning after December 15, 2024, with early adoption permitted. The Company has adopted this pronouncement and does not expect the adoption to have a material impact on our results of operation, financial position or cash flow. A In August 2023, the FASB issued ASU 2023-05, Business Combinations (Topic 805): Joint Venture Formations (Subtopic 805-60): Recognition and Initial Measurement, which requires a newly-formed joint venture to apply a new basis of accounting to its contributed net assets, resulting in the joint venture initially measuring its contributed net assets at fair value on the formation date. ASU 2023-05 is effective for all joint venture formations with a formation date on or after January 1, 2025, with early adoption permitted. These amendments are to be applied prospectively, with retrospective application permitted for joint ventures formed before the effective date. We are currently evaluating the impact this standard will have on our consolidated financial statement disclosures. X - DefinitionInvestment in digital assets [Policy] + ReferencesNo definition available. + Details Name: AMPG InvestmentInDigitalAssetsPolicy Namespace Prefix: AMPG Data Type: dtr-types:textBlockItem Type Balance Type: na Period Type: duration X - DefinitionShipping And Handling [Policy Text Block] + ReferencesNo definition available. + Details Name: AMPG ShippingAndHandlingPolicyTextBlock Namespace Prefix: AMPG Data Type: dtr-types:textBlockItem Type Balance Type: na Period Type: duration X - ReferencesNo definition available. + Details Name: us-gaap AccountingPoliciesAbstract Namespace Prefix: us-gaap Data Type: xbrli:stringItem Type Balance Type: na Period Type: duration X - DefinitionDisclosure of accounting policy for basis of accounting, or basis of presentation, used to prepare the financial statements (for example, US Generally Accepted Accounting Principles, Other Comprehensive Basis of Accounting, IFRS). + ReferencesNo definition available. + Details Name: us-gaap BasisOfAccountingPolicyTextBlock Namespace Prefix: us-gaap Data Type: dtr-types:textBlockItem Type Balance Type: na Period Type: duration X - DefinitionDisclosure of accounting policy for cash and cash equivalents, including the policy for determining which items are treated as cash equivalents. Other information that may be disclosed includes (1) the nature of any restrictions on the entity's use of its cash and cash equivalents, (2) whether the entity's cash and cash equivalents are insured or expose the entity to credit risk, (3) the classification of any negative balance accounts (overdrafts), and (4) the carrying basis of cash equivalents (for example, at cost) and whether the carrying amount of cash equivalents approximates fair value. + ReferencesReference 1: http://fasb.org/us-gaap/role/ref/legacyRef -Name Accounting Standards Codification -Topic 230 -SubTopic 10 -Section 50 -Paragraph 1 -Publisher FASB -URI https://asc.fasb.org/1943274/2147482913/230-10-50-1 + Details Name: us-gaap CashAndCashEquivalentsPolicyTextBlock Namespace Prefix: us-gaap Data Type: dtr-types:textBlockItem Type Balance Type: na Period Type: duration X - DefinitionDisclosure of accounting policy for salaries, bonuses, incentive awards, postretirement and postemployment benefits granted to employees, including equity-based arrangements; discloses methodologies for measurement, and the bases for recognizing related assets and liabilities and recognizing and reporting compensation expense. + ReferencesReference 1: http://fasb.org/us-gaap/role/ref/legacyRef -Topic 718 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 2 -Subparagraph (f)(1) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480429/718-10-50-2Reference 2: http://fasb.org/us-gaap/role/ref/legacyRef -Topic 718 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 2 -Subparagraph (b) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480429/718-10-50-2 + Details Name: us-gaap CompensationRelatedCostsPolicyTextBlock Namespace Prefix: us-gaap Data Type: dtr-types:textBlockItem Type Balance Type: na Period Type: duration X - DefinitionDisclosure of accounting policy for credit risk. + ReferencesReference 1: http://fasb.org/us-gaap/role/ref/legacyRef -Name Accounting Standards Codification -Topic 942 -SubTopic 825 -Section 50 -Paragraph 1 -Publisher FASB -URI https://asc.fasb.org/1943274/2147478898/942-825-50-1Reference 2: http://www.xbrli.org/2003/role/disclosureRef -Name Accounting Standards Codification -Section 50 -Paragraph 1 -Subparagraph (d) -SubTopic 10 -Topic 275 -Publisher FASB -URI https://asc.fasb.org/1943274/2147482861/275-10-50-1 + Details Name: us-gaap ConcentrationRiskCreditRisk Namespace Prefix: us-gaap Data Type: dtr-types:textBlockItem Type Balance Type: na Period Type: duration X - DefinitionDisclosure of accounting policy regarding (1) the principles it follows in consolidating or combining the separate financial statements, including the principles followed in determining the inclusion or exclusion of subsidiaries or other entities in the consolidated or combined financial statements and (2) its treatment of interests (for example, common stock, a partnership interest or other means of exerting influence) in other entities, for example consolidation or use of the equity or cost methods of accounting. The accounting policy may also address the accounting treatment for intercompany accounts and transactions, noncontrolling interest, and the income statement treatment in consolidation for issuances of stock by a subsidiary. + ReferencesReference 1: http://www.xbrli.org/2003/role/exampleRef -Topic 235 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 4 -Subparagraph (a) -Publisher FASB -URI https://asc.fasb.org/1943274/2147483426/235-10-50-4Reference 2: http://fasb.org/us-gaap/role/ref/legacyRef -Name Accounting Standards Codification -Topic 810 -SubTopic 10 -Section 50 -Paragraph 1 -Publisher FASB -URI https://asc.fasb.org/1943274/2147481203/810-10-50-1 + Details Name: us-gaap ConsolidationPolicyTextBlock Namespace Prefix: us-gaap Data Type: dtr-types:textBlockItem Type Balance Type: na Period Type: duration X - DefinitionDisclosure of accounting policy for cost of product sold and service rendered. + ReferencesReference 1: http://www.xbrli.org/2009/role/commonPracticeRef -Name Accounting Standards Codification -Topic 705 -Publisher FASB -URI https://asc.fasb.org/705/tableOfContent + Details Name: us-gaap CostOfSalesPolicyTextBlock Namespace Prefix: us-gaap Data Type: dtr-types:textBlockItem Type Balance Type: na Period Type: duration X - DefinitionDisclosure of accounting policy for computing basic and diluted earnings or loss per share for each class of common stock and participating security. Addresses all significant policy factors, including any antidilutive items that have been excluded from the computation and takes into account stock dividends, splits and reverse splits that occur after the balance sheet date of the latest reporting period but before the issuance of the financial statements. + ReferencesReference 1: http://www.xbrli.org/2003/role/disclosureRef -Topic 260 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 1 -Subparagraph (d) -Publisher FASB -URI https://asc.fasb.org/1943274/2147482662/260-10-50-1Reference 2: http://fasb.org/us-gaap/role/ref/legacyRef -Name Accounting Standards Codification -Topic 260 -SubTopic 10 -Section 50 -Paragraph 2 -Publisher FASB -URI https://asc.fasb.org/1943274/2147482662/260-10-50-2 + Details Name: us-gaap EarningsPerSharePolicyTextBlock Namespace Prefix: us-gaap Data Type: dtr-types:textBlockItem Type Balance Type: na Period Type: duration X - DefinitionDisclosure of accounting policy for fair value measurements of financial and non-financial assets, liabilities and instruments classified in shareholders' equity. Disclosures include, but are not limited to, how an entity that manages a group of financial assets and liabilities on the basis of its net exposure measures the fair value of those assets and liabilities. + ReferencesNo definition available. + Details Name: us-gaap FairValueMeasurementPolicyTextBlock Namespace Prefix: us-gaap Data Type: dtr-types:textBlockItem Type Balance Type: na Period Type: duration X - DefinitionDisclosure of accounting policy for indefinite-lived intangible assets (that is, those intangible assets not subject to amortization). This accounting policy also may address how the entity assesses whether events and circumstances continue to support an indefinite useful life and how the entity assesses and measures impairment of such assets. + ReferencesReference 1: http://www.xbrli.org/2009/role/commonPracticeRef -Topic 350 -SubTopic 30 -Name Accounting Standards Codification -Publisher FASB -URI https://asc.fasb.org/350-30/tableOfContent + Details Name: us-gaap GoodwillAndIntangibleAssetsIntangibleAssetsIndefiniteLivedPolicy Namespace Prefix: us-gaap Data Type: dtr-types:textBlockItem Type Balance Type: na Period Type: duration X - DefinitionDisclosure of accounting policy for recognizing and measuring the impairment of long-lived assets. An entity also may disclose its accounting policy for long-lived assets to be sold. This policy excludes goodwill and intangible assets. + ReferencesReference 1: http://fasb.org/us-gaap/role/ref/legacyRef -Topic 360 -SubTopic 10 -Name Accounting Standards Codification -Section S99 -Paragraph 2 -Subparagraph (SAB Topic 5.CC) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480091/360-10-S99-2Reference 2: http://fasb.org/us-gaap/role/ref/legacyRef -

Name Accounting Standards Codification -Section 05 -Paragraph 4 -SubTopic 10 -Topic 360 -Publisher FASB -URI https://asc.fasb.org/1943274/2147482338/360-10-05-4 + Details Name: us-gaap ImpairmentOrDisposalOfLongLivedAssetsPolicyTextBlock Namespace Prefix: us-gaap Data Type: dtr-types:textBlockItem Type Balance Type: na Period Type: duration X - DefinitionDisclosure of accounting policy for income taxes, which may include its accounting policies for recognizing and measuring deferred tax assets and liabilities and related valuation allowances, recognizing investment tax credits, operating loss carryforwards, tax credit carryforwards, and other carryforwards, methodologies for determining its effective income tax rate and the characterization of interest and penalties in the financial statements. + ReferencesReference 1: http://www.xbrl.org/2003/role/disclosureRef -Topic 740 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 20 -Publisher FASB -URI https://asc.fasb.org/1943274/2147482685/740-10-50-20Reference 2: http://www.xbrl.org/2003/role/disclosureRef -Topic 740 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 19 -Publisher FASB -URI https://asc.fasb.org/1943274/2147482685/740-10-50-19Reference 3: http://www.xbrl.org/2003/role/disclosureRef -Topic 740 -SubTopic 10 -Name Accounting Standards Codification -Section 45 -Paragraph 25 -Publisher FASB -URI https://asc.fasb.org/1943274/2147482525/740-10-45-25Reference 4: http://www.xbrl.org/2003/role/disclosureRef -Topic 946 -SubTopic 10 -Name Accounting Standards Codification -Section S99 -Paragraph 3 -Subparagraph (SX 210.6-03(h)(1)) -Publisher FASB -URI https://asc.fasb.org/1943274/2147479886/946-10-S99-3Reference 5: http://www.xbrl.org/2003/role/disclosureRef -Topic 740 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 17 -Subparagraph (b) -Publisher FASB -URI https://asc.fasb.org/1943274/2147482685/740-10-50-17Reference 6: http://www.xbrl.org/2003/role/disclosureRef -Topic 740 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 9 -Publisher FASB -URI https://asc.fasb.org/1943274/2147482685/740-10-50-9Reference 7: http://www.xbrl.org/2003/role/disclosureRef -Topic 740 -SubTopic 10 -Name Accounting Standards Codification -Section 45 -Paragraph 28 -Publisher FASB -URI https://asc.fasb.org/1943274/2147482525/740-10-45-28Reference 8: http://www.xbrl.org/2003/role/disclosureRef -Topic 220 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 1 -Publisher FASB -URI https://asc.fasb.org/1943274/2147482765/220-10-50-1 + Details Name: us-gaap IncomeTaxPolicyTextBlock Namespace Prefix: us-gaap Data Type: dtr-types:textBlockItem Type Balance Type: na Period Type: duration X - DefinitionDisclosure of accounting policy for finite-lived intangible assets. This accounting policy also might address: (1) the amortization method used; (2) the useful lives of such assets; and (3) how the entity assesses and measures impairment of such assets. + ReferencesReference 1: http://www.xbrl.org/2003/role/exampleRef -Topic 235 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 4 -Subparagraph (c) -Publisher FASB -URI https://asc.fasb.org/1943274/2147483426/235-10-50-4Reference 2: http://www.xbrl.org/2009/role/commonPracticeRef -Topic 350 -SubTopic 30 -Name Accounting Standards Codification -Publisher FASB -URI https://asc.fasb.org/350-30/tableOfContentReference 3: http://www.xbrl.org/2003/role/disclosureRef -Topic 926 -SubTopic 20 -Name Accounting Standards Codification -Section 50 -Paragraph 5 -Publisher FASB -URI https://asc.fasb.org/1943274/2147483154/926-20-50-5Reference 4: http://www.xbrl.org/2003/role/disclosureRef -Topic 920 -SubTopic 350 -Name Accounting Standards Codification -Section 50 -Paragraph 1 -Subparagraph (a) -Publisher FASB -URI https://asc.fasb.org/1943274/2147478609/920-350-50-1Reference 5: http://www.xbrl.org/2003/role/disclosureRef -Topic 920 -SubTopic 350 -Name Accounting Standards Codification -Section 50 -Paragraph 1 -Subparagraph (b) -Publisher FASB -URI https://asc.fasb.org/1943274/2147478609/920-350-50-1Reference 6: http://www.xbrl.org/2003/role/disclosureRef -Topic 920 -SubTopic 350 -Name Accounting Standards Codification -Section 50 -Paragraph 4 -Subparagraph (a) -Publisher FASB -URI https://asc.fasb.org/1943274/2147478609/920-350-50-4 + Details Name: us-gaap IntangibleAssetsFiniteLivedPolicy Namespace Prefix: us-gaap Data Type: dtr-types:textBlockItem Type Balance Type: na Period Type: duration X - DefinitionDisclosure of inventory accounting policy for inventory classes, including, but not limited to, basis for determining inventory amounts, methods by which amounts are added and removed from inventory classes, loss recognition on impairment of inventories, and situations in which inventories are stated above cost. + ReferencesReference 1: http://www.xbrl.org/2003/role/disclosureRef -Topic 210 -SubTopic 10 -Name Accounting Standards Codification -Section S99 -Paragraph 1 -Subparagraph (SX 210.5-02(6)(b)) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480566/210-10-S99-1Reference 2: http://www.xbrl.org/2003/role/disclosureRef -Topic 330 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 1 -Publisher FASB -URI https://asc.fasb.org/1943274/2147483080/330-10-50-1Reference 3: http://www.xbrl.org/2003/role/disclosureRef -Topic 210 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 1 -Publisher FASB -URI https://asc.fasb.org/1943274/2147483489/210-10-50-1Reference 4: http://www.xbrl.org/2003/role/exampleRef -Topic 235 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 4 -Subparagraph (d) -Publisher FASB -URI https://asc.fasb.org/1943274/2147483426/235-10-50-4Reference 5: http://www.xbrl.org/2003/role/disclosureRef -Topic 912 -SubTopic 330 -Name Accounting Standards Codification -Section 50 -Paragraph 1 -Publisher FASB -URI https://asc.fasb.org/1943274/2147478411/912-330-50-1Reference 6: http://www.xbrl.org/2003/role/disclosureRef -Topic 330 -Name Accounting Standards Codification -Publisher FASB -URI https://asc.fasb.org/330/tableOfContentReference 7: http://www.xbrl.org/2003/role/disclosureRef -Topic 330 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 4 -Publisher FASB -URI https://asc.fasb.org/1943274/2147483080/330-10-50-4Reference 8: http://www.xbrl.org/2003/role/disclosureRef -Name Accounting Standards Codification -Section 45 -Paragraph 6 -Subparagraph (a) -SubTopic 10 -Topic 270 -Publisher FASB -URI https://asc.fasb.org/1943274/2147482989/270-10-45-6 + Details Name: us-gaap InventoryPolicyTextBlock Namespace Prefix: us-gaap Data Type: dtr-types:textBlockItem Type Balance Type: na Period Type: duration X - DefinitionDisclosure of accounting policy for investment in financial asset. + ReferencesReference 1: http://www.xbrl.org/2003/role/disclosureRef -Topic 944 -SubTopic 220 -Name Accounting Standards Codification -Section S99 -Paragraph 1 -Subparagraph (SX 210.7-04(3)(b)) -Publisher FASB -URI https://asc.fasb.org/1943274/2147477250/944-220-S99-1Reference 2: http://www.xbrl.org/2003/role/disclosureRef -Topic 946 -SubTopic 10 -Name Accounting Standards Codification -Section S99 -Paragraph 3 -Subparagraph (SX 210.6-03(d)) -Publisher FASB -URI https://asc.fasb.org/1943274/2147479886/946-10-S99-3Reference 3: http://www.xbrl.org/2003/role/disclosureRef -Topic 946 -SubTopic 10 -Name Accounting Standards Codification -Section S99 -Paragraph 3 -Subparagraph (SX 210.6-03(f)(1)) -Publisher FASB -URI https://asc.fasb.org/1943274/2147479886/946-10-S99-3Reference 4: http://www.xbrl.org/2003/role/disclosureRef -Topic 946 -SubTopic 10 -Name Accounting Standards Codification -Section S99 -Paragraph 3 -Subparagraph (SX 210.6-03(f)(2)) -Publisher FASB -URI https://asc.fasb.org/1943274/2147479886/946-10-S99-3Reference 5: http://www.xbrl.org/2003/role/disclosureRef -Topic 946 -SubTopic 10 -Name Accounting Standards Codification -Section S99 -Paragraph 3 -Subparagraph (SX 210.6-03(f)(3)) -Publisher FASB -URI https://asc.fasb.org/1943274/2147479886/946-10-S99-3Reference 6: http://www.xbrl.org/2003/role/disclosureRef -Topic 946 -SubTopic 320 -Name Accounting Standards Codification -Section S99 -Paragraph 12 -Subparagraph (1) -Publisher FASB -URI https://asc.fasb.org/1943274/2147477271/946-320-S99-12Reference 7: http://www.xbrl.org/2003/role/disclosureRef -Topic 946 -SubTopic 320 -Name Accounting Standards Codification -Section S99 -Paragraph 19 -Subparagraph (2) -Publisher FASB -URI https://asc.fasb.org/1943274/2147477271/946-320-S99-19 + Details Name: us-gaap InvestmentPolicyTextBlock Namespace Prefix: us-gaap Data Type: dtr-types:textBlockItem Type Balance Type: na Period Type: duration X - DefinitionDisclosure of accounting policy for leasing arrangement entered into by lessee. + ReferencesReference 1: http://www.xbrl.org/2003/role/disclosureRef -Topic 842 -SubTopic 20 -Name Accounting Standards Codification -Section 50 -Paragraph 1 -Subparagraph (b) -Publisher FASB -URI https://asc.fasb.org/1943274/2147478964/842-20-50-1 + Details Name: us-gaap LesseeLeasesPolicyTextBlock Namespace Prefix: us-gaap Data Type: dtr-types:textBlockItem Type Balance Type: na Period Type: duration X - DefinitionDisclosure of accounting policy pertaining to new accounting pronouncements that may impact the entity's financial reporting. Includes, but is not limited to, quantification of the expected or actual impact. + ReferencesNo definition available. + Details Name: us-gaap NewAccountingPronouncementsPolicyTextBlock Namespace Prefix: us-gaap Data Type: dtr-types:textBlockItem Type Balance Type: na Period Type: duration X - DefinitionDisclosure of accounting policy for long-lived, physical asset used in normal conduct of business and not intended for resale. Includes, but is not limited to, work of art, historical treasure, and similar asset classified as collections. + ReferencesReference 1: http://fasb.org/us-gaap/role/ref/legacyRef -Name Accounting Standards Codification -Section 50 -Paragraph 1 -SubTopic 10 -Topic 360 -Publisher FASB -URI https://asc.fasb.org/1943274/2147482099/360-10-50-1Reference 2: http://www.xbrl.org/2003/role/disclosureRef -Topic 944 -SubTopic 210 -Name Accounting Standards Codification -Section S99 -Paragraph 1 -Subparagraph (SX 210.7-03(a)(8)(a)) -Publisher FASB -URI https://asc.fasb.org/1943274/2147478777/944-210-S99-1Reference 3: http://www.xbrl.org/2003/role/disclosureRef -Name Accounting Standards Codification -Section 50 -Paragraph 6 -SubTopic 360 -Topic 958 -Publisher FASB -URI https://asc.fasb.org/1943274/2147477998/958-360-50-6Reference 4: http://www.xbrl.org/2003/role/disclosureRef -Name Accounting Standards Codification -Section 50 -Paragraph 1 -Subparagraph (d) -SubTopic 360 -Topic 958 -Publisher FASB -URI https://asc.fasb.org/1943274/2147477998/958-360-50-1 + Details Name: us-gaap PropertyPlantAndEquipmentPolicyTextBlock Namespace Prefix: us-gaap Data Type: dtr-types:textBlockItem Type Balance Type: na Period Type: duration X - DefinitionDisclosure of accounting policy for receivable. Includes, but is not limited to, accounts receivable and financing receivable. + ReferencesReference 1: http://www.xbrl.org/2009/role/commonPracticeRef -Topic 310 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 2 -Subparagraph (c) -Publisher FASB -URI https://asc.fasb.org/1943274/2147481962/310-10-50-2Reference 2: http://www.xbrl.org/2003/role/disclosureRef -Topic 310 -SubTopic 20 -Name Accounting Standards Codification -Section 50 -Paragraph 1 -Publisher FASB -URI https://asc.fasb.org/1943274/2147481569/310-20-50-1Reference 3: http://www.xbrl.org/2003/role/disclosureRef -Topic 310 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 2 -Subparagraph (d) -Publisher FASB -URI https://asc.fasb.org/1943274/2147481962/310-10-50-2Reference 4: http://www.xbrl.org/2003/role/disclosureRef -Topic 310 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 2 -Subparagraph (a) -Publisher FASB -URI https://asc.fasb.org/1943274/2147481962/310-10-50-2 + Details Name: us-gaap ReceivablesPolicyTextBlock Namespace Prefix: us-gaap Data Type: dtr-types:textBlockItem Type Balance Type: na Period Type: duration X - DefinitionDisclosure of accounting policy for costs it has incurred (1) in a planned search or critical investigation aimed at discovery of new knowledge with the hope that such knowledge will be useful in developing a new product or service, a new process or technique, or in bringing about a significant improvement to an existing product or process; or (2) to translate research findings or other knowledge into a plan or design for a new product or process or for a significant improvement to an existing product or process. + ReferencesReference 1: http://www.xbrl.org/2003/role/disclosureRef -Topic 730 -SubTopic 10 -Name Accounting Standards Codification -Section 05 -Paragraph 1 -Subparagraph (c) -Publisher FASB -URI https://asc.fasb.org/1943274/2147483044/730-10-05-1 + Details Name: us-gaap ResearchAndDevelopmentExpensePolicy Namespace Prefix: us-gaap Data Type: dtr-types:textBlockItem Type Balance Type: na Period Type: duration X - DefinitionDisclosure of accounting policy for revenue. Includes revenue from contract with customer and from other sources. + ReferencesReference 1: http://www.xbrl.org/2003/role/disclosureRef -Topic 946 -SubTopic 220 -Name Accounting Standards Codification -Section S99 -Paragraph 1 -Subparagraph (SX 210.6-07(1)) -Publisher FASB -URI https://asc.fasb.org/1943274/2147479134/946-220-S99-1Reference 2: http://www.xbrl.org/2003/role/exampleRef -Topic 235 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 4 -Subparagraph (f) -Publisher FASB -URI https://asc.fasb.org/1943274/2147483426/235-10-50-4Reference 3: http://www.xbrl.org/2003/role/exampleRef -Name Accounting Standards Codification -Section 50 -Paragraph 4 -Subparagraph (e) -SubTopic 10 -Topic 235 -Publisher FASB -URI https://asc.fasb.org/1943274/2147483426/235-10-50-4 + Details Name: us-gaap RevenueRecognitionPolicyTextBlock Namespace Prefix: us-gaap Data Type: dtr-types:textBlockItem Type Balance Type: na Period Type: duration X - DefinitionDisclosure of accounting policy for the use of estimates in the preparation of financial statements in conformity with generally accepted accounting principles. + ReferencesReference 1: http://fasb.org/us-gaap/role/ref/legacyRef -Name Accounting Standards Codification -Topic 275 -SubTopic 10 -Section 50 -Paragraph 9 -Publisher FASB -URI https://asc.fasb.org/1943274/2147482861/275-10-50-9Reference 2: http://fasb.org/us-gaap/role/ref/legacyRef -Name Accounting Standards Codification -Topic 275 -SubTopic 10 -Section 50 -Paragraph 4 -Publisher FASB -URI https://asc.fasb.org/1943274/2147482861/275-10-50-4Reference 3: http://www.xbrl.org/2003/role/disclosureRef -Name Accounting Standards Codification -Section 50 -Paragraph 1 -Subparagraph (b) -SubTopic 10 -Topic 275 -Publisher FASB -URI https://asc.fasb.org/1943274/2147482861/275-10-50-1Reference 4: http://www.xbrl.org/2003/role/disclosureRef -Name Accounting Standards Codification -Section 50 -Paragraph 1 -Subparagraph (c) -SubTopic 10 -Topic 275 -Publisher FASB -URI https://asc.fasb.org/1943274/2147482861/275-10-50-1Reference 5: http://www.xbrl.org/2003/role/disclosureRef -Name Accounting Standards Codification -Section 50 -Paragraph 11 -SubTopic 10 -Topic 275 -Publisher FASB -URI https://asc.fasb.org/1943274/2147482861/275-10-50-11Reference 6: http://www.xbrl.org/2003/role/disclosureRef -Name Accounting Standards Codification -Section 50 -Paragraph 12 -SubTopic 10 -Topic 275 -Publisher FASB -URI https://asc.fasb.org/1943274/2147482861/275-10-50-12Reference 7: http://fasb.org/us-gaap/role/ref/legacyRef -Name Accounting Standards Codification -Topic 275 -SubTopic 10 -Section 50 -Paragraph 8 -Publisher FASB -URI https://asc.fasb.org/1943274/2147482861/275-10-50-8 + Details Name: us-gaap UseOfEstimates Namespace Prefix: us-gaap Data Type: dtr-types:textBlockItem Type Balance Type: na Period Type: duration XML 32 R21.htm IDEA: XBRL DOCUMENT v3.24.2.u1 Summary of Significant Accounting Policies (Tables) 6 Months Ended Jun. 30, 2024 Accounting Policies [Abstract] A Schedule of property and equipment depreciated Property and equipment depreciated Property and equipment depreciated A Schedule of property and equipment depreciated A Description A Useful Life A Method Office equipment A 3 to 7 years A Straight-line Machinery/shop equipment A 7 to 15 years A Straight-line Computer equipment/software A 1 to 7 years A Straight-line Vehicles A 5 years A Straight-line Leasehold improvements A 7 years A Straight-line Schedule of Intangible Assets Intangible assets are amortized as follows: A Schedule of Intangible Assets A Description A Useful Life A Method Trade names A Indefinite A N/A Customer relationships A 15 to 20 years A Straight-line Intellectual property A 15 years A Straight-line X - DefinitionProperty Plant and Equipment Depreciated [Table Text Block] + ReferencesNo definition available. + Details Name: AMPG PropertyPlantAndEquipmentDepreciatedTableTextBlock Namespace Prefix: AMPG Data Type: dtr-types:textBlockItem Type Balance Type: na Period Type: duration X - ReferencesNo definition available. + Details Name: us-gaap AccountingPoliciesAbstract Namespace Prefix: us-gaap Data Type: xbrli:stringItem Type Balance Type: na Period Type: duration X - DefinitionTabular disclosure of amortization expense of assets, excluding financial assets, that lack physical substance, having a limited useful life. + ReferencesNo definition available. + Details Name: us-gaap FiniteLivedIntangibleAssetsAmortizationExpenseTableTextBlock Namespace Prefix: us-gaap Data Type: dtr-types:textBlockItem Type Balance Type: na Period Type: duration XML 33 R22.htm IDEA: XBRL DOCUMENT v3.24.2.u1 Revenues (Tables) 6 Months Ended Jun. 30, 2024 Revenue from Contract with Customer [Abstract] A Schedule of disaggregated revenue The following table presents sales disaggregated based on geographic regions and for the three and six months ended: A Schedule of disaggregated revenue A A June 30, 2024 A A June 30, 2023 A A Three months ended A A June 30, 2024 A A June 30, 2023 A AmpliTech Inc. and Specialty Microwave A A A A A Domestic sales A \$705,794 A A \$1,445,063 A International sales A \$6,470 A A \$317,514 A Total sales A \$762,264 A A \$1,763,308 A A A A Spectrum A A A A A Domestic sales A \$1,359,811 A A \$1,997,917 A International sales A \$405,367 A A \$812,737 A Total sales A \$1,765,178 A A \$2,312,648 A A A A A Total sales A \$2,527,442 A A \$4,073,231 A A AmpliTech Group, Inc. Notes To Condensed Consolidated Financial Statements For the Six Months Ended June 30, 2024 and 2023 A A June 30, 2024 A A June 30, 2023 A A Six months ended A A June 30, 2024 A A June 30, 2023 A AmpliTech Inc. and Specialty Microwave A A A A A Domestic sales A \$1,383,976 A A \$2,468,059 A International sales A \$419,155 A A \$516,717 A Total sales A \$1,803,131 A A \$2,984,776 A A A A A A Spectrum A A A A A Domestic sales A \$2,141,925 A A \$3,373,860 A International sales A \$875,717 A A \$1,826,894 A Total sales A \$3,017,642 A A \$5,200,754 A A A A A A Total sales A \$4,820,773 A A \$8,185,530 A X - DefinitionTabular disclosure of disaggregation of revenue into categories depicting how nature, amount, timing, and uncertainty of revenue and cash flows are affected by economic factor. + ReferencesReference 1: http://www.xbrl.org/2009/role/commonPracticeRef -Topic 606 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 5 -Publisher FASB -URI https://asc.fasb.org/1943274/2147479806/606-10-50-5 + Details Name: us-gaap DisaggregationOfRevenueTableTextBlock Namespace Prefix: us-gaap Data Type: dtr-types:textBlockItem Type Balance Type: na Period Type: duration X - ReferencesNo definition available. + Details Name: us-gaap RevenueFromContractWithCustomerAbstract Namespace Prefix: us-gaap Data Type: xbrli:stringItem Type Balance Type: na Period Type: duration XML 34 R23.htm IDEA: XBRL DOCUMENT v3.24.2.u1 Segment Reporting (Tables) 6 Months Ended Jun. 30, 2024 Segment Reporting [Abstract] A Schedule of Segment Reporting The following table presents summary information by segment for the three months ended June 30, 2024: A Schedule of Segment Reporting A A Manufacturing and Engineering A A Distribution A A Corporate A A Total Revenue A \$762,264 A A \$1,765,178 A A A \$2,527,442 A Cost of Goods Sold A \$623,830 A A \$846,525 A A A A \$1,470,355 A Net Income (Loss) A \$(314,836) A A \$253,081 A A \$(514,519) A A \$(1,576,274) Total Assets A \$10,532,203 A A \$14,758,006 A A \$122,031 A A \$25,412,240 A Depreciation and Amortization A \$100,400 A A \$28,922 A A A \$129,322 A Interest Expense, net A \$5,847 A A A \$2,337 A A A \$8,184 A The following table presents summary information by segment for the six months ended

June 30, 2024: A A Manufacturing and Engineering A Distribution A Corporate A Total Revenue \$1,803,131 A \$3,017,642 A A \$4,820,773 Cost of Goods Sold A 1,399,301A A 1,481,755A A A 2,881,056A Net Income (Loss) A (2,319,810) A 204,134 A A (4,115,759) A (6,231,435) Total Assets A 10,532,203A A 14,758,006A A 122,031A A 25,412,240A Depreciation and Amortization A 200,601A A 57,844A A A 258,445A Interest Expense, net A 7,527A A A 5,000A A 12,527A X - DefinitionTabular disclosure of the profit or loss and total assets for each reportable segment. An entity discloses certain information on each reportable segment if the amounts (a) are included in the measure of segment profit or loss reviewed by the chief operating decision maker or (b) are otherwise regularly provided to the chief operating decision maker, even if not included in that measure of segment profit or loss. + ReferencesReference 1: <http://fasb.org/us-gaap/role/ref/legacyRef-Name Accounting Standards Codification -Topic 280 -SubTopic 10 -Section 50 -Paragraph 25 -Publisher FASB -URI https://asc.fasb.org/1943274/2147482810/280-10-50-25>Reference 2: <http://fasb.org/us-gaap/role/ref/legacyRef-Name Accounting Standards Codification -Topic 280 -SubTopic 10 -Section 50 -Paragraph 25 -Publisher FASB -URI https://asc.fasb.org/1943274/2147482810/280-10-50-22>Reference 3: <http://fasb.org/us-gaap/role/ref/legacyRef-Name Accounting Standards Codification -Topic 280 -SubTopic 10 -Section 50 -Paragraph 30 -Publisher FASB -URI https://asc.fasb.org/1943274/2147482810/280-10-50-30> + Details Name: us-gaap\_ScheduleOfSegmentReportingInformationBySegmentTextBlock Namespace Prefix: us-gaap\_Data Type: dtr-types:textBlockItem Type Balance Type: na Period Type: duration X - ReferencesNo definition available. + Details Name: us-gaap\_SegmentReportingAbstract Namespace Prefix: us-gaap\_Data Type: xbrli:stringItem Type Balance Type: na Period Type: duration XML 35 R24.htm IDEA: XBRL DOCUMENT v3.24.2.u1 Inventories (Tables) 6 Months Ended Jun. 30, 2024 Inventory Disclosure [Abstract] A Schedule of Inventory The inventory consists of the following at June 30, 2024 and December 31, 2023: A Schedule of Inventory A A June 30, 2024 A December 31, 2023 A A A A Raw Materials \$1,364,072A A \$959,645A Work-in-Progress A 120,119A A 51,140A Finished Goods A 7,212,446A A 6,672,793A Subtotal \$8,696,637A A \$7,683,578A Less: Reserve for Obsolescence A (1,163,000)A A (1,146,000) A A A A Total \$7,533,637A A \$6,537,578A X - ReferencesNo definition available. + Details Name: us-gaap\_InventoryDisclosureAbstract Namespace Prefix: us-gaap\_Data Type: xbrli:stringItem Type Balance Type: na Period Type: duration X - DefinitionTabular disclosure of the carrying amount as of the balance sheet date of merchandise, goods, commodities, or supplies held for future sale or to be used in manufacturing, servicing or production process. + ReferencesReference 1: [http://fasb.org/us-gaap/role/ref/legacyRef-Topic 210 -SubTopic 10 -Name Accounting Standards Codification -Section S99 -Paragraph 1 -Subparagraph \(SX 210.5-02\(6\)\(a\)\) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480566/210-10-S99-1](http://fasb.org/us-gaap/role/ref/legacyRef-Topic 210 -SubTopic 10 -Name Accounting Standards Codification -Section S99 -Paragraph 1 -Subparagraph (SX 210.5-02(6)(a)) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480566/210-10-S99-1)Reference 2: [http://fasb.org/us-gaap/role/ref/legacyRef-Topic 210 -SubTopic 10 -Name Accounting Standards Codification -Section S99 -Paragraph 1 -Subparagraph \(SX 210.5-02\(6\)\(b\)\) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480566/210-10-S99-1](http://fasb.org/us-gaap/role/ref/legacyRef-Topic 210 -SubTopic 10 -Name Accounting Standards Codification -Section S99 -Paragraph 1 -Subparagraph (SX 210.5-02(6)(b)) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480566/210-10-S99-1)Reference 3: [http://fasb.org/us-gaap/role/ref/legacyRef-Topic 210 -SubTopic 10 -Name Accounting Standards Codification -Section S99 -Paragraph 1 -Subparagraph \(SX 210.5-02\(6\)\(c\)\) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480566/210-10-S99-1](http://fasb.org/us-gaap/role/ref/legacyRef-Topic 210 -SubTopic 10 -Name Accounting Standards Codification -Section S99 -Paragraph 1 -Subparagraph (SX 210.5-02(6)(c)) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480566/210-10-S99-1)Reference 4: <http://fasb.org/us-gaap/role/ref/legacyRef-Name Accounting Standards Codification -Topic 210 -SubTopic 10 -Section 50 -Paragraph 1 -Publisher FASB -URI https://asc.fasb.org/1943274/2147483489/210-10-50-1> + Details Name: us-gaap\_ScheduleOfInventoryCurrentTableTextBlock Namespace Prefix: us-gaap\_Data Type: dtr-types:textBlockItem Type Balance Type: na Period Type: duration XML 36 R25.htm IDEA: XBRL DOCUMENT v3.24.2.u1 Property and Equipment (Tables) 6 Months Ended Jun. 30, 2024 Property, Plant and Equipment [Abstract] A Schedule of Property and Equipment Property and Equipment consisted of the following at June 30, 2024 and December 31, 2023: A Schedule of Property and Equipment A A June 30, 2024 A December 31, 2023 A A A A Lab Equipment \$3,400,207A A \$3,400,207A Manufacturing Equipment A 129,745A A 129,745A Automobiles A 7,335A A 7,335A Computer Equipment and Software A 146,785A A 194,238A Leasehold Improvements A 84,172A A 84,172A Furniture and Fixtures A 170,643A A 170,643A A A A A Subtotal \$3,938,887A A \$3,986,340A Property plant and equipment, gross A 3,938,887A A 3,986,340A Less: Accumulated Depreciation A (1,509,274)A A (1,386,892)A A A A A Total \$2,429,613A A \$2,599,448A Property plant and equipment, net \$2,429,613A A \$2,599,448A X - ReferencesNo definition available. + Details Name: us-gaap\_PropertyPlantAndEquipmentAbstract Namespace Prefix: us-gaap\_Data Type: xbrli:stringItem Type Balance Type: na Period Type: duration X - DefinitionTabular disclosure of physical assets used in the normal conduct of business and not intended for resale. Includes, but is not limited to, balances by class of assets, depreciation and depletion expense and method used, including composite depreciation, and accumulated depreciation. + ReferencesReference 1: <http://fasb.org/us-gaap/role/ref/legacyRef-Name Accounting Standards Codification -Section 50 -Paragraph 1 -SubTopic 10 -Topic 360 -Publisher FASB -URI https://asc.fasb.org/1943274/2147482099/360-10-50-1> + Details Name: us-gaap\_PropertyPlantAndEquipmentTextBlock Namespace Prefix: us-gaap\_Data Type: dtr-types:textBlockItem Type Balance Type: na Period Type: duration XML 37 R26.htm IDEA: XBRL DOCUMENT v3.24.2.u1 Goodwill and Intangible Assets (Tables) 6 Months Ended Jun. 30, 2024 Goodwill and Intangible Assets Disclosure [Abstract] A Schedule of Intangible Assets Intangible assets with an estimated useful life of fifteen and twenty years consisted of the following at June 30, 2024: A Schedule of Intangible Assets A A Gross Carrying Amount A Accumulated Amortization A Net A Weighted Average Life A Trade name \$584,517A A \$584,517A A Indefinite A Customer relationships A 2,591,491A A 404,521A A 2,186,970A A 16.31A Intellectual Property A 202,771A A 65,055A A 137,716A A 10.21A A A A A A Total \$3,378,779A A \$469,576A A \$2,909,203A A A A Schedule of Amortization of Assets Annual amortization of intangible assets are as follows: A Schedule of Amortization of Assets A A A 2024-remaining A 75,043A 2025 A 149,974A 2026 A 149,974A 2027 A 149,974A 2028 A 149,974A Thereafter A 1,649,747A Total \$2,324,686A X - ReferencesNo definition available. + Details Name: us-gaap\_GoodwillAndIntangibleAssetsDisclosureAbstract Namespace Prefix: us-gaap\_Data Type: xbrli:stringItem Type Balance Type: na Period Type: duration X - DefinitionTabular disclosure of assets, excluding financial assets and goodwill, lacking physical substance with a finite life, by either major class or business segment. + ReferencesReference 1: <http://www.xbrl.org/2003/role/exampleRef-Topic 350 -SubTopic 30 -Name Accounting Standards Codification -Section 55 -Paragraph 4 -Publisher FASB -URI https://asc.fasb.org/1943274/2147482640/350-30-55-4>Reference 2: [http://www.xbrl.org/2009/role/commonPracticeRef-Topic 350 -SubTopic 30 -Name Accounting Standards Codification -Section 55 -Paragraph 2 -Subparagraph \(a\) -Publisher FASB -URI https://asc.fasb.org/1943274/2147482665/350-30-50-2](http://www.xbrl.org/2009/role/commonPracticeRef-Topic 350 -SubTopic 30 -Name Accounting Standards Codification -Section 55 -Paragraph 2 -Subparagraph (a) -Publisher FASB -URI https://asc.fasb.org/1943274/2147482665/350-30-50-2) + Details Name: us-gaap\_ScheduleOfFiniteLivedIntangibleAssetsTableTextBlock Namespace Prefix: us-gaap\_Data Type: dtr-types:textBlockItem Type Balance Type: na Period Type: duration XML 38 R27.htm IDEA: XBRL DOCUMENT v3.24.2.u1 Leases (Tables) 6 Months Ended Jun. 30, 2024 Leases [Abstract] A Schedule of Lease Assets and Liabilities The following was included in our balance sheet as of June 30, 2024: A Schedule of Lease Assets and Liabilities A A June 30, 2024 A Operating leases A A A Assets A A A ROU operating lease assets \$3,268,136A A A A Liabilities A A A Current portion of operating lease \$421,803A Operating lease, net of current portion \$3,025,741A Total operating lease liabilities \$3,447,544A A A A Financing leases A A A Assets A A A Property and equipment, gross \$234,036A A Accumulated depreciation A (171,068)A Property and equipment, net \$62,968A A A A Liabilities A A A Current portion of financing lease \$17,208A Financing lease, net of current portion \$23,829A Total financing lease liabilities \$41,037A Schedule of Weighted Average Remaining Lease Term and Weighted Average Discount Rate The weighted average remaining lease term and weighted average discount rate at June 30, 2024 are as follows: A Schedule of Weighted Average Remaining Lease Term and Weighted Average Discount Rate A Weighted average remaining lease term (years) A June 30, 2024 A Operating leases A 9.22A Financing leases A 2.51A Weighted average discount rate A A A Operating leases A 4.47% Financing leases A 4.70% Schedule Of Future Minimum Lease Payments For Finance Lease The following table reconciles future minimum financing lease payments to the discounted lease liability as of June 30, 2024: A Schedule Of Future Minimum Lease Payments For Finance Lease A A A 2024-remaining A 9,384A 2025 A 18,195A 2026 A 11,982A 2027 A 3,994A Total lease payments A 43,555A Less imputed interest A (2,518) Total lease obligations A 41,037A Less current obligations A (17,208) Long-term lease obligations \$23,829A Schedule of Future Minimum Operating Lease Payments The following table reconciles future minimum operating lease payments to the discounted lease liability as of June 30, 2024: A Schedule of Future Minimum Operating Lease Payments A A A 2024-remaining A 349,808A 2025 A 407,581A 2026 A 389,397A 2027 A 393,899A 2028 A 404,721A Thereafter A 2,313,460A Total lease payments A 4,258,866A Less imputed interest A (811,322) Total lease obligations A 3,447,544A Less current obligations A (421,803) Long-term lease obligations \$3,025,741A X - DefinitionSchedule Of Weighted Average Remaining Lease Term And Weighted Average Discount Rate[TableText Block] + ReferencesNo definition available. + Details Name: AMPG\_ScheduleOfWeightedAverageRemainingLeaseTermAndWeightedAverageDiscountRateTableTextBlock Namespace Prefix: AMPG\_Data Type: dtr-types:textBlockItem Type Balance Type: na Period Type: duration X - DefinitionTabular disclosure of contractual obligation by timing of payment due. Includes, but is not limited to, long-term debt obligation, lease obligation, and purchase obligation. + ReferencesReference 1: [http://www.xbrl.org/2009/role/commonPracticeRef-Name Regulation S-X \(SX\) -Number 210 -Section 12 -Subsection 04 -Subparagraph \(a\) -Publisher SECReference 2: http://www.xbrl.org/2009/role/commonPracticeRef-Topic 235 -SubTopic 10 -Name Accounting Standards Codification -Section S99 -Paragraph 3 -Subparagraph \(SX 210.12-04\(a\)\) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480678/235-10-S99-3](http://www.xbrl.org/2009/role/commonPracticeRef-Name Regulation S-X (SX) -Number 210 -Section 12 -Subsection 04 -Subparagraph (a) -Publisher SECReference 2: http://www.xbrl.org/2009/role/commonPracticeRef-Topic 235 -SubTopic 10 -Name Accounting Standards Codification -Section S99 -Paragraph 3 -Subparagraph (SX 210.12-04(a)) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480678/235-10-S99-3) + Details Name: srt\_ContractualObligationFiscalYearMaturityScheduleTableTextBlock Namespace Prefix: srt\_Data Type: dtr-types:textBlockItem Type Balance Type: na Period Type: duration X - ReferencesNo definition available. + Details Name: us-gaap\_LeasesAbstract Namespace Prefix: us-gaap\_Data Type: xbrli:stringItem Type Balance Type: na Period Type: duration X - DefinitionTabular disclosure of undiscounted cash flows of lessee's operating lease liability. Includes, but is not limited to, reconciliation of undiscounted cash flows to operating lease liability recognized in statement of financial position. + ReferencesReference 1: <http://www.xbrl.org/2009/role/commonPracticeRef-Topic 842 -SubTopic 20 -Name Accounting Standards Codification -Section 50 -Paragraph 6 -Publisher FASB -URI https://asc.fasb.org/1943274/2147478964/842-20-50-6> + Details Name: us-gaap\_LesseeOperatingLeaseLiabilityMaturityTableTextBlock Namespace Prefix: us-gaap\_Data Type: dtr-types:textBlockItem Type Balance Type: na Period Type: duration X - DefinitionTabular disclosure of the components of the investment in leveraged leases. + ReferencesReference 1: <http://fasb.org/us-gaap/role/ref/otherTransitionRef-Topic 840 -SubTopic 30 -Name Accounting Standards Codification -Section 50 -Paragraph 5 -Publisher FASB -URI https://asc.fasb.org/1943274/2147481161/840-30-50-5>Reference 2: <http://www.xbrl.org/2009/role/commonPracticeRef-Topic 842 -SubTopic 50 -Name Accounting Standards Codification -Section 50 -Paragraph 1 -Publisher FASB -URI https://asc.fasb.org/1943274/2147479711/842-50-50-1> + Details Name: us-gaap\_ScheduleOfComponentsOfLeveragedLeaseInvestmentsTableTextBlock Namespace Prefix: us-gaap\_Data Type: dtr-types:textBlockItem Type Balance Type: na Period Type: duration XML 39 R28.htm IDEA: XBRL DOCUMENT v3.24.2.u1 Notes Payable (Tables) 6 Months Ended Jun. 30, 2024 Debt Disclosure [Abstract] A Schedule of Future Principal and Interest Payments Future principal payments over the term of the loans as of June 30, 2024 are as follows: A Schedule of Future Principal and Interest Payments A A Payments A 2024 remaining \$36,388A Total remaining payments \$36,388A X - DefinitionSchedule Of Future Principal And Interest Payments [TableText Block] + ReferencesNo definition available. + Details Name: AMPG\_ScheduleOfFuturePrincipalAndInterestPaymentsTableTextBlock Namespace Prefix: AMPG\_Data Type: dtr-types:textBlockItem Type Balance Type: na Period Type: duration X - ReferencesNo definition available. + Details Name: us-gaap\_DebtDisclosureAbstract Namespace Prefix: us-gaap\_Data Type: xbrli:stringItem Type Balance Type: na Period Type: duration XML 40 R29.htm IDEA: XBRL DOCUMENT v3.24.2.u1 Stockholders' Equity (Tables) 6 Months Ended Jun. 30, 2024 Equity [Abstract] A Schedule of Stock Options Outstanding Below is a table summarizing the changes in stock options outstanding for the six months ended June 30, 2024: A Schedule of Stock Options Outstanding A A Number of A Weighted Average A A Options A Exercise Price (\$A) Outstanding at December 31, 2023 A 1,236,000A A 2.30A Granted A 57,500A A 2.15A Exercised A A A Expired A A A Outstanding at June 30, 2024 A 1,293,500A A 2.30A Exercisable at June 30, 2024 A 604,810A A 2.76A Schedule of Warrants Outstanding Below is a table summarizing the changes in warrants outstanding for the six months ended June 30, 2024: A Schedule of Warrants Outstanding A A Number of A Weighted Average A A Warrants A Exercise Price (\$A) Outstanding at December 31, 2023 A 3,296,942A A 7.83A Granted A A A Exercised A A A Expired A A A Outstanding at June 30, 2024 A 3,296,942A A 7.83A Exercisable at June 30, 2024 A 3,296,942A A 7.83A Schedule of Changes in Restricted Stock Units Outstanding Below is a table summarizing the changes in restricted stock units outstanding for the six months ended June 30, 2024: A Schedule of Changes in Restricted Stock Units Outstanding A A Number of A Weighted Average A A RSUs A Exercise Price (\$A) Outstanding at December 31, 2023 A 12,500A A 1.96A Granted A A A Exercised A (5,000)A \$1.96A Expired A A A Outstanding at June 30, 2024 A 7,500A A 1.96A Exercisable at June 30, 2024 A A A X - ReferencesNo definition available. + Details Name: us-gaap\_EquityAbstract Namespace Prefix: us-gaap\_Data Type: xbrli:stringItem Type Balance Type: na Period Type: duration X - DefinitionTabular disclosure of the number and weighted-average grant date fair value for restricted stock units that were outstanding at the beginning and end of the year, and the number of restricted stock units that were granted, vested, or forfeited during the year. + ReferencesReference 1: [http://fasb.org/us-gaap/role/ref/legacyRef-Topic 718 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 2 -Subparagraph \(c\)\(1\) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480429/718-10-50-2](http://fasb.org/us-gaap/role/ref/legacyRef-Topic 718 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 2 -Subparagraph (c)(1) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480429/718-10-50-2) + Details Name: us-gaap\_ScheduleOfShareBasedCompensationRestrictedStockUnitsAwardActivityTableTextBlock Namespace Prefix: us-gaap\_Data Type: dtr-types:textBlockItem Type Balance Type: na Period Type: duration X - DefinitionTabular disclosure of the change in stock options. + ReferencesNo definition available. + Details Name: us-gaap\_ScheduleOfStockOptionsRollForwardTableTextBlock Namespace Prefix: us-gaap\_Data Type: dtr-types:textBlockItem Type Balance Type: na Period Type: duration X - DefinitionTabular disclosure of warrants or rights issued. Warrants and rights outstanding are derivative securities that give the holder the right to purchase securities (usually equity) from the issuer at a specific price within a certain time frame. Warrants are often included in a new debt issue to entice investors by a higher return potential. The main difference between warrants and call options is that warrants are issued and guaranteed by the company, whereas options are exchange instruments and are not issued by the company. Also, the lifetime of a warrant is often measured in years, while the lifetime of a typical option is measured in months. Disclose the title of issue of securities called for by warrants and rights outstanding, the aggregate amount of securities called for by warrants and rights outstanding, the date from which the warrants or rights are exercisable, and the price at which the warrant or right is exercisable. + ReferencesReference 1: [http://fasb.org/us-gaap/role/ref/legacyRef-Name Accounting Standards Codification -Topic 718 -SubTopic 10 -Section 50 -Paragraph 1 -Subparagraph \(a\) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480429/718-10-50-1](http://fasb.org/us-gaap/role/ref/legacyRef-Name Accounting Standards Codification -Topic 718 -SubTopic 10 -Section 50 -Paragraph 1 -Subparagraph (a) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480429/718-10-50-1) + Details Name: us-gaap\_ScheduleOfStockholdersEquityNoteWarrantsOrRightsTextBlock Namespace Prefix: us-gaap\_Data Type: dtr-types:textBlockItem Type Balance Type: na Period Type: duration XML 41 R30.htm IDEA: XBRL DOCUMENT v3.24.2.u1 Organization and Business Description (Details Narrative) - / shares Feb. 17, 2021 Aug. 13, 2012 Jun. 30, 2024 Dec. 31, 2023 Restructuring Cost and Reserve [Line Items] A A A Common stock, outstanding A 9,719,613 9,714,613 Reverse stock split 1-for-20 A A IPO [Member] A A Restructuring Cost and Reserve [Line Items] A A A Public offering shares 1,371,428 A A Public offering per share \$ 7.00 A A Amptech Inc [Member] A A Restructuring Cost and Reserve [Line Items] A A A Acquisition of entity by issuing of common stock \$ 833,750 A A Percentage of voting interest acquired A 100.00% A A Equity interests owned by selling share holders A 60,000 A A Common stock, outstanding A 893,750 A X - DefinitionBusiness acquisition equity interests owned by selling share holders. + ReferencesNo definition available. + Details Name: AMPG\_BusinessAcquisitionEquityInterestsOwnedBySellingShareHolders Namespace Prefix: AMPG\_Data Type: xbrli:sharesItem Type Balance Type: na Period Type: duration X - DefinitionNumber of shares of equity interests issued or issuable to acquire entity. + ReferencesReference 1: [http://fasb.org/us-gaap/role/ref/legacyRef-Topic 805 -SubTopic 30 -Name Accounting Standards Codification -Section 50 -Paragraph 1 -Subparagraph \(b\)\(4\) -Publisher FASB -URI https://asc.fasb.org/1943274/2147479581/805-30-50-1](http://fasb.org/us-gaap/role/ref/legacyRef-Topic 805 -SubTopic 30 -Name Accounting Standards Codification -Section 50 -Paragraph 1 -Subparagraph (b)(4) -Publisher FASB -URI https://asc.fasb.org/1943274/2147479581/805-30-50-1) + Details Name: us-gaap\_BusinessAcquisitionEquityInterestsIssuedOrIssuableNumberOfSharesIssued Namespace Prefix: us-gaap\_Data Type: xbrli:sharesItem Type Balance Type: na Period Type: duration X - DefinitionPercentage of voting equity interests acquired at the acquisition date in the business combination. + ReferencesReference 1: [http://fasb.org/us-gaap/role/ref/legacyRef-Name Accounting Standards Codification -Topic 805 -SubTopic 10 -Section 50 -Paragraph 2 -Subparagraph \(c\) -Publisher FASB -URI https://asc.fasb.org/1943274/2147479328/805-10-50-2](http://fasb.org/us-gaap/role/ref/legacyRef-Name Accounting Standards Codification -Topic 805 -SubTopic 10 -Section 50 -Paragraph 2 -Subparagraph (c) -Publisher FASB -URI https://asc.fasb.org/1943274/2147479328/805-10-50-2) + Details Name: us-gaap\_BusinessAcquisitionPercentageOfVotingInterestsAcquired Namespace Prefix: us-gaap\_Data Type:

dtr-types:percentItem Type Balance Type: na Period Type: instant X - Definition Number of shares of common stock outstanding. Common stock represent the ownership interest in a corporation. + ReferencesReference 1: <http://fasb.org/us-gaap/role/ref/legacyRef> -Name Accounting Standards Codification -Section 50 -Paragraph 2 -SubTopic 10 -Topic 505 -Publisher FASB -URI <https://asc.fasb.org/1943274/214748112/505-10-502-2Reference> 2: <http://fasb.org/us-gaap/role/ref/legacyRef> -Topic 210 -SubTopic 10 -Name Accounting Standards Codification -Section 599 -Paragraph 1 -Subparagraph (SX 210.5-02(29)) -Publisher FASB -URI <https://asc.fasb.org/1943274/2147480566/210-10-599-1Reference> 3: <http://www.xbrl.org/2003/role/disclosureRef> -Topic 946 -SubTopic 210 -Name Accounting Standards Codification -Section 599 -Paragraph 2 -Subparagraph (SX 210.6-05(4)) -Publisher FASB -URI <https://asc.fasb.org/1943274/2147479170/946-210-599-2Reference> 4: <http://www.xbrl.org/2009/role/commonPracticeRef> -Topic 946 -SubTopic 220 -Name Accounting Standards Codification -Section 599 -Paragraph 3 -Subparagraph (SX 210.6-09(4)(b)) -Publisher FASB -URI <https://asc.fasb.org/1943274/2147479134/946-220-599-3Reference> 5: <http://www.xbrl.org/2003/role/disclosureRef> -Topic 946 -SubTopic 210 -Name Accounting Standards Codification -Section 599 -Paragraph 1 -Subparagraph (SX 210.6-04(16)(a)) -Publisher FASB -URI <https://asc.fasb.org/1943274/2147479170/946-210-599-1Reference> 6: <http://www.xbrl.org/2009/role/commonPracticeRef> -Topic 946 -SubTopic 220 -Name Accounting Standards Codification -Section 599 -Paragraph 3 -Subparagraph (SX 210.6-09(7)) -Publisher FASB -URI <https://asc.fasb.org/1943274/2147479134/946-220-599-3> + Details Name: us-gaap CommonStockSharesOutstanding Namespace Prefix: us-gaap Data Type: xbrli:sharesItem Type Balance Type: na Period Type: instant X - Definition Line items represent financial concepts included in a table. These concepts are used to disclose reportable information associated with domain members defined in one or many axes to the table. + ReferencesReference 1: <http://www.xbrl.org/2003/role/disclosureRef> -Topic 420 -SubTopic 10 -Name Accounting Standards Codification -Section 599 -Paragraph 2 -Subparagraph (SAB Topic 5.P.4.d) -Publisher FASB -URI <https://asc.fasb.org/1943274/2147479823/420-10-599-2Reference> 2: <http://www.xbrl.org/2003/role/disclosureRef> -Topic 420 -SubTopic 10 -Name Accounting Standards Codification -Section 599 -Paragraph 2 -Subparagraph (SAB Topic 5.P.4.b.1) -Publisher FASB -URI <https://asc.fasb.org/1943274/2147479823/420-10-599-2Reference> 3: <http://www.xbrl.org/2003/role/disclosureRef> -Topic 420 -SubTopic 10 -Name Accounting Standards Codification -Section 599 -Paragraph 2 -Subparagraph (SAB Topic 5.P.4.b.2) -Publisher FASB -URI <https://asc.fasb.org/1943274/2147479823/420-10-599-2Reference> 4: <http://www.xbrl.org/2003/role/disclosureRef> -Topic 420 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 1 -Subparagraph (c) -Publisher FASB -URI <https://asc.fasb.org/1943274/2147482017/420-10-50-1Reference> 5: <http://www.xbrl.org/2003/role/disclosureRef> -Topic 420 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 1 -Subparagraph (b)(2) -Publisher FASB -URI <https://asc.fasb.org/1943274/2147482017/420-10-50-1Reference> 6: <http://www.xbrl.org/2003/role/disclosureRef> -Topic 420 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 1 -Subparagraph (b)(1) -Publisher FASB -URI <https://asc.fasb.org/1943274/2147482017/420-10-50-1Reference> 7: <http://www.xbrl.org/2003/role/disclosureRef> -Topic 420 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 1 -Subparagraph (d) -Publisher FASB -URI <https://asc.fasb.org/1943274/2147482017/420-10-50-1> + Details Name: us-gaap RestructuringCostAndReserveLineItems Namespace Prefix: us-gaap Data Type: xbrli:stringItem Type Balance Type: na Period Type: duration X - Definition The number of shares issued or sold by the subsidiary or equity method investee per stock transaction. + ReferencesNo definition available. + Details Name: us-gaap SaleOfStockNumberOfSharesIssuedInTransaction Namespace Prefix: us-gaap Data Type: xbrli:sharesItem Type Balance Type: na Period Type: duration X - Definition Per share amount received by subsidiary or equity investee for each share of common stock issued or sold in the stock transaction. + ReferencesNo definition available. + Details Name: us-gaap SaleOfStockPricePerShare Namespace Prefix: us-gaap Data Type: dtr-types:perShareItem Type Balance Type: na Period Type: instant X - Definition Description of the reverse stock split arrangement. Also provide the retroactive effect given by the reverse split that occurs after the balance sheet date but before the release of financial statements. + ReferencesReference 1: <http://fasb.org/us-gaap/role/ref/legacyRef> -Topic 505 -SubTopic 10 -Name Accounting Standards Codification -Section 599 -Paragraph 4 -Subparagraph (SAB Topic 4.C) -Publisher FASB -URI <https://asc.fasb.org/1943274/2147480008/505-10-599-4> + Details Name: us-gaap StockholdersEquityReverseStockSplit Namespace Prefix: us-gaap Data Type: xbrli:stringItem Type Balance Type: na Period Type: duration X - Details Name: us-gaap SubsidiarySaleOfStockAxis=us-gaap IPOMember Namespace Prefix: Data Type: na Balance Type: Period Type: X - Details Name: us-gaap BusinessAcquisitionAxis=AMPG AmplitudeIncMember Namespace Prefix: Data Type: na Balance Type: Period Type: XML 42 R31.htm IDEA: XBRL DOCUMENT v3.24.2.u1 Loss on Investment of Digital Assets (Details Narrative) - USD (\$) 3 Months Ended 6 Months Ended Jun. 30, 2024 Jun. 30, 2023 Jun. 30, 2024 Jun. 30, 2023 Loss On Investment Of Digital Assets Á Á Á Transactions in digital currency Á Á \$ 3,250,000 Á Loss from the investment in digital assets 3,248,911 Remaining balance on investment of digital assets 0 Á \$ 0 Á X - ReferencesNo definition available. + Details Name: AMPG DisclosureLossOnInvestmentOfDigitalAssetsAbstract Namespace Prefix: AMPG Data Type: xbrli:stringItem Type Balance Type: na Period Type: duration X - Definition Loss on investment in digital assets. + ReferencesNo definition available. + Details Name: AMPG LossOnInvestmentInDigitalAssets Namespace Prefix: AMPG Data Type: xbrli:monetaryItem Type Balance Type: debit Period Type: duration X - Definition Amount of realized and unrealized gain (loss) on investment. + ReferencesReference 1: <http://fasb.org/us-gaap/role/ref/legacyRef> -Topic 220 -SubTopic 10 -Name Accounting Standards Codification -Section 599 -Paragraph 2 -Subparagraph (SX 210.5-03(9)(a)) -Publisher FASB -URI <https://asc.fasb.org/1943274/2147483621/220-10-599-2Reference> 2: <http://fasb.org/us-gaap/role/ref/legacyRef> -Topic 220 -SubTopic 10 -Name Accounting Standards Codification -Section 599 -Paragraph 2 -Subparagraph (SX 210.5-03(7)(c)) -Publisher FASB -URI <https://asc.fasb.org/1943274/2147483621/220-10-599-2Reference> 3: <http://www.xbrl.org/2003/role/recommendedDisclosureRef> -Topic 230 -SubTopic 10 -Name Accounting Standards Codification -Section 45 -Paragraph 28 -Subparagraph (b) -Publisher FASB -URI <https://asc.fasb.org/1943274/2147482740/230-10-45-28> + Details Name: us-gaap GainLossOnInvestments Namespace Prefix: us-gaap Data Type: xbrli:monetaryItem Type Balance Type: credit Period Type: duration X - Definition Amount of investments classified as other. + ReferencesReference 1: <http://www.xbrl.org/2009/role/commonPracticeRef> -Topic 210 -SubTopic 10 -Name Accounting Standards Codification -Section 599 -Paragraph 1 -Subparagraph (SX 210.5-02(12)) -Publisher FASB -URI <https://asc.fasb.org/1943274/2147480566/210-10-599-1Reference> 2: <http://www.xbrl.org/2003/role/disclosureRef> -Topic 944 -SubTopic 210 -Name Accounting Standards Codification -Section 599 -Paragraph 1 -Subparagraph (SX 210.7-03(a)(3)(a)) -Publisher FASB -URI <https://asc.fasb.org/1943274/2147478777/944-210-599-1> + Details Name: us-gaap OtherInvestments Namespace Prefix: us-gaap Data Type: xbrli:monetaryItem Type Balance Type: debit Period Type: instant XML 43 R32.htm IDEA: XBRL DOCUMENT v3.24.2.u1 Schedule of property and equipment depreciated (Details) 6 Months Ended Jun. 30, 2024 Office Equipment [Member] Á Property, Plant and Equipment [Line Items] Á Depreciation Method Straight-line Office Equipment [Member] | Minimum [Member] Á Property, Plant and Equipment [Line Items] Á Estimated useful life 3 years Office Equipment [Member] | Maximum [Member] Á Property, Plant and Equipment [Line Items] Á Estimated useful life 7 years Machinery and Equipment [Member] Á Property, Plant and Equipment [Line Items] Á Depreciation Method Straight-line Machinery and Equipment [Member] | Minimum [Member] Á Property, Plant and Equipment [Line Items] Á Estimated useful life 7 years Machinery and Equipment [Member] | Maximum [Member] Á Property, Plant and Equipment [Line Items] Á Estimated useful life 15 years Computer Equipment Software [Member] Á Property, Plant and Equipment [Line Items] Á Depreciation Method Straight-line Computer Equipment Software [Member] | Minimum [Member] Á Property, Plant and Equipment [Line Items] Á Estimated useful life 1 year Computer Equipment Software [Member] | Maximum [Member] Á Property, Plant and Equipment [Line Items] Á Estimated useful life 7 years Vehicles [Member] Á Property, Plant and Equipment [Line Items] Á Estimated useful life 5 years Depreciation Method Straight-line Leasehold Improvements [Member] Á Property, Plant and Equipment [Line Items] Á Estimated useful life 7 years Depreciation Method Straight-line X - Definition Property plant and equipments depreciation methods. + ReferencesNo definition available. + Details Name: AMPG PropertyPlantAndEquipmentsDepreciationMethods Namespace Prefix: AMPG Data Type: xbrli:stringItem Type Balance Type: na Period Type: duration X - Definition Line items represent financial concepts included in a table. These concepts are used to disclose reportable information associated with domain members defined in one or many axes to the table. + ReferencesReference 1: <http://www.xbrl.org/2003/role/disclosureRef> -Topic 842 -SubTopic 20 -Name Accounting Standards Codification -Section 50 -Paragraph 7A -Subparagraph (a) -Publisher FASB -URI <https://asc.fasb.org/1943274/2147478964/842-20-50-7A> + Details Name: us-gaap PropertyPlantAndEquipmentLineItems Namespace Prefix: us-gaap Data Type: xbrli:stringItem Type Balance Type: na Period Type: duration X - Definition Useful life of long lived, physical assets used in the normal conduct of business and not intended for resale, in 'PnYmMnDtnHmMns' format, for example, 'P1Y5M13D' represents the reported fact of one year, five months, and thirteen days. Examples include, but not limited to, land, buildings, machinery and equipment, office equipment, furniture and fixtures, and computer equipment. + ReferencesNo definition available. + Details Name: us-gaap PropertyPlantAndEquipmentUsefulLife Namespace Prefix: us-gaap Data Type: xbrli:durationItem Type Balance Type: na Period Type: instant X - Details Name: us-gaap PropertyPlantAndEquipmentByTypeAxis=us-gaap OfficeEquipmentMember Namespace Prefix: Data Type: na Balance Type: srt RangeAxis=srt MinimumMember Namespace Prefix: Data Type: na Balance Type: Period Type: X - Details Name: srt RangeAxis=srt MaximumMember Namespace Prefix: Data Type: na Balance Type: Period Type: X - Details Name: us-gaap PropertyPlantAndEquipmentByTypeAxis=us-gaap MachineryAndEquipmentMember Namespace Prefix: Data Type: na Balance Type: Period Type: X - Details Name: us-gaap PropertyPlantAndEquipmentByTypeAxis=AMPG ComputerEquipmentSoftwareMember Namespace Prefix: Data Type: na Balance Type: Period Type: X - Details Name: us-gaap PropertyPlantAndEquipmentByTypeAxis=us-gaap VehiclesMember Namespace Prefix: Data Type: na Balance Type: Period Type: X - Details Name: us-gaap PropertyPlantAndEquipmentByTypeAxis=us-gaap LeaseholdImprovementsMember Namespace Prefix: Data Type: na Balance Type: Period Type: XML 44 R33.htm IDEA: XBRL DOCUMENT v3.24.2.u1 Schedule of Intangible Assets (Details) - USD (\$) 6 Months Ended Jun. 30, 2024 Dec. 31, 2023 Property, Plant and Equipment [Line Items] Á Accumulated Amortization \$ 469,576 Á Net 2,324,686 Á Gross Carrying Amount 3,378,779 Á Net \$ 2,909,203 Á 2,984,133 Customer Relationships [Member] Á Á Property, Plant and Equipment [Line Items] Á Á Depreciation Method Straight-line Á Gross Carrying Amount \$ 2,591,491 Á Accumulated Amortization 404,521 Á Net \$ 2,186,970 Á Weighted Average Life 16 years 3 months 21 days Á Customer Relationships [Member] | Minimum [Member] Á Á Property, Plant and Equipment [Line Items] Á Á Useful Life 15 years Á Customer Relationships [Member] | Maximum [Member] Á Á Property, Plant and Equipment [Line Items] Á Á Useful Life 20 years Á Intellectual Property [Member] Á Á Property, Plant and Equipment [Line Items] Á Á Useful Life 15 years Á Depreciation Method Straight-line Á Gross Carrying Amount \$ 202,771 Á Accumulated Amortization 65,055 Á Net \$ 137,716 Á Weighted Average Life 10 years 2 months 15 days Á Trade Names [Member] Á Á Property, Plant and Equipment [Line Items] Á Á Gross Carrying Amount \$ 584,517 Á Accumulated Amortization Á Net \$ 584,517 Á X - Definition Weighted average amortization period of finite-lived intangible assets acquired either individually or as part of a group of assets, in 'PnYmMnDtnHmMns' format, for example, 'P1Y5M13D' represents the reported fact of one year, five months, and thirteen days. + ReferencesReference 1: <http://www.xbrl.org/2003/role/disclosureRef> -Topic 350 -SubTopic 30 -Name Accounting Standards Codification -Section 50 -Paragraph 1 -Subparagraph (a)(3) -Publisher FASB -URI <https://asc.fasb.org/1943274/2147482665/350-30-50-1Reference> 2: <http://www.xbrl.org/2003/role/disclosureRef> -Topic 985 -SubTopic 20 -Name Accounting Standards Codification -Section 50 -Paragraph 2 -Publisher FASB -URI <https://asc.fasb.org/1943274/2147481283/985-20-50-2> + Details Name: us-gaap AcquiredFiniteLivedIntangibleAssetsWeightedAverageUsefulLife Namespace Prefix: us-gaap Data Type: xbrli:durationItem Type Balance Type: na Period Type: duration X - Definition Useful life of finite-lived intangible assets, in 'PnYmMnDtnHmMns' format, for example, 'P1Y5M13D' represents the reported fact of one year, five months, and thirteen days. + ReferencesNo definition available. + Details Name: us-gaap FiniteLivedIntangibleAssetUsefulLife Namespace Prefix: us-gaap Data Type: xbrli:durationItem Type Balance Type: na Period Type: instant X - Definition Accumulated amount of amortization of assets, excluding financial assets and goodwill, lacking physical substance with a finite life. + ReferencesReference 1: <http://www.xbrl.org/2003/role/exampleRef> -Topic 350 -SubTopic 30 -Name Accounting Standards Codification -Section 55 -Paragraph 40 -Publisher FASB -URI <https://asc.fasb.org/1943274/2147482640/350-30-55-40Reference> 2: <http://www.xbrl.org/2003/role/disclosureRef> -Topic 350 -SubTopic 10 -Name Accounting Standards Codification -Section 545 -Paragraph 1 -Publisher FASB -URI <https://asc.fasb.org/1943274/2147480265/350-10-545-1Reference> 3: <http://www.xbrl.org/2003/role/disclosureRef> -Topic 350 -SubTopic 30 -Name Accounting Standards Codification -Section 545 -Paragraph 1 -Publisher FASB -URI <https://asc.fasb.org/1943274/2147480265/350-10-545-1Reference> 3: <http://www.xbrl.org/2003/role/disclosureRef> -Topic 350 -SubTopic 30 -Name Accounting Standards Codification -Section 545 -Paragraph 2 -Subparagraph (a)(1) -Publisher FASB -URI <https://asc.fasb.org/1943274/2147482665/350-30-50-2Reference> 4: <http://www.xbrl.org/2003/role/disclosureRef> -Topic 210 -SubTopic 10 -Name Accounting Standards Codification -Section 599 -Paragraph 1 -Subparagraph (SX 210.5-02(16)) -Publisher FASB -URI <https://asc.fasb.org/1943274/2147480566/210-10-599-1> + Details Name: us-gaap FiniteLivedIntangibleAssetsAccumulatedAmortization Namespace Prefix: us-gaap Data Type: xbrli:monetaryItem Type Balance Type: credit Period Type: instant X - Definition The amortization method of a major finite-lived intangible asset class. A major class is composed of intangible assets that can be grouped together because they are similar either by their nature or by their use in the operations of a company. The straight-line method is the preferred amortization method, unless another method better reflects the pattern in which the asset is consumed. + ReferencesReference 1: <http://www.xbrl.org/2003/role/exampleRef> -Topic 235 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 4 -Subparagraph (c) -Publisher FASB -URI <https://asc.fasb.org/1943274/2147483426/235-10-50-4Reference> 2: <http://www.xbrl.org/2003/role/disclosureRef> -Topic 350 -SubTopic 30 -Name Accounting Standards Codification -Publisher FASB -URI <https://asc.fasb.org/350-30/tableOfContent> + Details Name: us-gaap FiniteLivedIntangibleAssetsAmortizationMethod Namespace Prefix: us-gaap Data Type: xbrli:stringItem Type Balance Type: na Period Type: duration X - Definition Amount before amortization of assets, excluding financial assets and goodwill, lacking physical substance with a finite life. + ReferencesReference 1: <http://www.xbrl.org/2003/role/exampleRef> -Topic 350 -SubTopic 30 -Name Accounting Standards Codification -Section 55 -Paragraph 40 -Publisher FASB -URI <https://asc.fasb.org/1943274/2147482640/350-30-55-40Reference> 2: <http://www.xbrl.org/2003/role/disclosureRef> -Topic 350 -SubTopic 10 -Name Accounting Standards Codification -Section 545 -Paragraph 1 -Publisher FASB -URI <https://asc.fasb.org/1943274/2147480265/350-10-545-1Reference> 3: <http://www.xbrl.org/2003/role/disclosureRef> -Topic 350 -SubTopic 30 -Name Accounting Standards Codification -Section 545 -Paragraph 1 -Publisher FASB -URI <https://asc.fasb.org/1943274/2147480265/350-10-545-1Reference> 3: <http://www.xbrl.org/2003/role/disclosureRef> -Topic 350 -SubTopic 30 -Name Accounting Standards Codification -Section 50 -Paragraph 2 -Subparagraph (a)(1) -Publisher FASB -URI <https://asc.fasb.org/1943274/2147482665/350-30-50-2Reference> 4: <http://www.xbrl.org/2003/role/disclosureRef> -Topic 926 -SubTopic 20 -Name Accounting Standards Codification -Section 50 -Paragraph 5 -Publisher FASB -URI <https://asc.fasb.org/1943274/2147483154/926-20-50-5> + Details Name: us-gaap FiniteLivedIntangibleAssetsNet Namespace Prefix: us-gaap Data Type: xbrli:monetaryItem Type Balance Type: debit Period Type: instant X - Definition Amount of assets, excluding financial assets and goodwill, lacking physical substance and having a projected indefinite period of benefit. + ReferencesReference 1: <http://www.xbrl.org/2003/role/exampleRef> -Topic 350 -SubTopic 30 -Name Accounting Standards Codification -Section 55 -Paragraph 40 -Publisher FASB -URI <https://asc.fasb.org/1943274/2147482640/350-30-55-40Reference> 2: <http://www.xbrl.org/2003/role/disclosureRef> -Topic 350 -SubTopic 10 -Name Accounting Standards Codification -Section 545 -Paragraph 1 -Publisher FASB -URI <https://asc.fasb.org/1943274/2147480265/350-10-545-1Reference> 3: <http://www.xbrl.org/2003/role/disclosureRef> -Topic 350 -SubTopic 30 -Name Accounting Standards Codification -Section 545 -Paragraph 1 -Publisher FASB -URI <https://asc.fasb.org/1943274/2147480265/350-10-545-1Reference> 3: <http://www.xbrl.org/2003/role/disclosureRef> -Topic 350 -SubTopic 30 -Name Accounting Standards Codification -Section 50 -Paragraph 2 -Subparagraph (a)(1) -Publisher FASB -URI <https://asc.fasb.org/1943274/2147482665/350-30-50-2Reference> 4: <http://www.xbrl.org/2009/role/commonPracticeRef> -Topic 350 -SubTopic 30 -Name Accounting Standards Codification -Section 50 -Paragraph 2 -Subparagraph (b) -Publisher FASB -URI <https://asc.fasb.org/1943274/2147482665/350-30-50-2Reference> 3: <http://www.xbrl.org/2003/role/disclosureRef> -Topic 350 -SubTopic 30 -Name Accounting Standards Codification -Section 45 -Paragraph 1 -Publisher FASB -URI <https://asc.fasb.org/1943274/2147482686/350-30-45-1> + Details Name: us-





Type: duration X - DefinitionAmount of revenue recognized from goods sold, services rendered, insurance premiums, or other activities that constitute an earning process. Includes, but is not limited to, investment and interest income before deduction of interest expense when recognized as a component of revenue, and sales and trading gain (loss). + ReferencesReference 1: <https://www.xbrl.org/2003/role/exampleRef -Topic 280 -SubTopic 10 -Name Accounting Standards Codification -Section 55 -Paragraph 48 -Publisher FASB -URI https://asc.fasb.org/1943274/2147482785/280-10-55-48>Reference 2: [http://www.xbrl.org/2003/role/disclosureRef -Topic 280 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 41 -Subparagraph \(a\) -Publisher FASB -URI https://asc.fasb.org/1943274/2147482810/280-10-50-41](http://www.xbrl.org/2003/role/disclosureRef -Topic 280 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 41 -Subparagraph (a) -Publisher FASB -URI https://asc.fasb.org/1943274/2147482810/280-10-50-41)Reference 3: [http://www.xbrl.org/2003/role/disclosureRef -Topic 270 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 1 -Subparagraph \(i\) -Publisher FASB -URI https://asc.fasb.org/1943274/2147482964/270-10-50-1](http://www.xbrl.org/2003/role/disclosureRef -Topic 270 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 1 -Subparagraph (i) -Publisher FASB -URI https://asc.fasb.org/1943274/2147482964/270-10-50-1)Reference 4: [http://www.xbrl.org/2003/role/disclosureRef -Topic 280 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 32 -Subparagraph \(ee\) -Publisher FASB -URI https://asc.fasb.org/1943274/2147482810/280-10-50-32](http://www.xbrl.org/2003/role/disclosureRef -Topic 280 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 32 -Subparagraph (ee) -Publisher FASB -URI https://asc.fasb.org/1943274/2147482810/280-10-50-32)Reference 5: [http://fasb.org/us-gaap/role/ref/otherTransitionRef -Topic 280 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 32 -Subparagraph \(b\) -Publisher FASB -URI https://asc.fasb.org/1943274/2147482810/280-10-50-32](http://fasb.org/us-gaap/role/ref/otherTransitionRef -Topic 280 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 32 -Subparagraph (b) -Publisher FASB -URI https://asc.fasb.org/1943274/2147482810/280-10-50-32)Reference 6: [http://fasb.org/us-gaap/role/ref/otherTransitionRef -Topic 280 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 32 -Subparagraph \(a\) -Publisher FASB -URI https://asc.fasb.org/1943274/2147482810/280-10-50-32](http://fasb.org/us-gaap/role/ref/otherTransitionRef -Topic 280 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 32 -Subparagraph (a) -Publisher FASB -URI https://asc.fasb.org/1943274/2147482810/280-10-50-32)Reference 7: [http://www.xbrl.org/2003/role/disclosureRef -Topic 235 -SubTopic 10 -Name Accounting Standards Codification -Section S99 -Paragraph 1 -Subparagraph \(i\)\(1\)\(i\) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480678/235-10-S99-1](http://www.xbrl.org/2003/role/disclosureRef -Topic 235 -SubTopic 10 -Name Accounting Standards Codification -Section S99 -Paragraph 1 -Subparagraph (i)(1)(i) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480678/235-10-S99-1)Reference 8: [http://www.xbrl.org/2003/role/disclosureRef -Topic 323 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 3 -Subparagraph \(c\) -Publisher FASB -URI https://asc.fasb.org/1943274/2147481687/323-10-3](http://www.xbrl.org/2003/role/disclosureRef -Topic 323 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 3 -Subparagraph (c) -Publisher FASB -URI https://asc.fasb.org/1943274/2147481687/323-10-3)Reference 9: [http://www.xbrl.org/2003/role/disclosureRef -Topic 825 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 28 -Subparagraph \(f\) -Publisher FASB -URI https://asc.fasb.org/1943274/2147482907/825-10-50-28](http://www.xbrl.org/2003/role/disclosureRef -Topic 825 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 28 -Subparagraph (f) -Publisher FASB -URI https://asc.fasb.org/1943274/2147482907/825-10-50-28)Reference 10: [http://www.xbrl.org/2003/role/disclosureRef -Topic 470 -SubTopic 10 -Name Accounting Standards Codification -Section S99 -Paragraph 1A -Subparagraph \(SX 210.13-01\(a\)\(4\) \(i\)\) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480097/470-10-S99-1](http://www.xbrl.org/2003/role/disclosureRef -Topic 470 -SubTopic 10 -Name Accounting Standards Codification -Section S99 -Paragraph 1A -Subparagraph (SX 210.13-01(a)(4) (i)) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480097/470-10-S99-1)Reference 11: [http://www.xbrl.org/2009/role/commonPracticeRef -Topic 470 -SubTopic 10 -Name Accounting Standards Codification -Section S99 -Paragraph 1A -Subparagraph \(SX 210.13-01\(a\)\(4\)\(iii\)\) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480097/470-10-S99-1](http://www.xbrl.org/2009/role/commonPracticeRef -Topic 470 -SubTopic 10 -Name Accounting Standards Codification -Section S99 -Paragraph 1A -Subparagraph (SX 210.13-01(a)(4)(iii)) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480097/470-10-S99-1)Reference 12: [http://www.xbrl.org/2003/role/disclosureRef -Topic 470 -SubTopic 10 -Name Accounting Standards Codification -Section S99 -Paragraph 1A -Subparagraph \(SX 210.13-01\(a\)\(4\)\(iii\)\(A\)\) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480097/470-10-S99-1](http://www.xbrl.org/2003/role/disclosureRef -Topic 470 -SubTopic 10 -Name Accounting Standards Codification -Section S99 -Paragraph 1A -Subparagraph (SX 210.13-01(a)(4)(iii)(A)) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480097/470-10-S99-1)Reference 13: [http://www.xbrl.org/2003/role/disclosureRef -Topic 470 -SubTopic 10 -Name Accounting Standards Codification -Section S99 -Paragraph 1A -Subparagraph \(SX 210.13-01\(a\)\(4\)\(iv\)\) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480097/470-10-S99-1](http://www.xbrl.org/2003/role/disclosureRef -Topic 470 -SubTopic 10 -Name Accounting Standards Codification -Section S99 -Paragraph 1A -Subparagraph (SX 210.13-01(a)(4)(iv)) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480097/470-10-S99-1)Reference 14: [http://www.xbrl.org/2003/role/disclosureRef -Topic 470 -SubTopic 10 -Name Accounting Standards Codification -Section S99 -Paragraph 1A -Subparagraph \(SX 210.13-01\(a\)\(5\)\) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480097/470-10-S99-1](http://www.xbrl.org/2003/role/disclosureRef -Topic 470 -SubTopic 10 -Name Accounting Standards Codification -Section S99 -Paragraph 1A -Subparagraph (SX 210.13-01(a)(5)) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480097/470-10-S99-1)Reference 15: [http://www.xbrl.org/2003/role/disclosureRef -Topic 470 -SubTopic 10 -Name Accounting Standards Codification -Section S99 -Paragraph 1B -Subparagraph \(SX 210.13-02\(a\)\(4\)\(i\)\) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480097/470-10-S99-1](http://www.xbrl.org/2003/role/disclosureRef -Topic 470 -SubTopic 10 -Name Accounting Standards Codification -Section S99 -Paragraph 1B -Subparagraph (SX 210.13-02(a)(4)(i)) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480097/470-10-S99-1)Reference 16: [http://www.xbrl.org/2003/role/disclosureRef -Topic 470 -SubTopic 10 -Name Accounting Standards Codification -Section S99 -Paragraph 1B -Subparagraph \(SX 210.13-02\(a\)\(4\)\(iii\)\(A\)\) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480097/470-10-S99-1](http://www.xbrl.org/2003/role/disclosureRef -Topic 470 -SubTopic 10 -Name Accounting Standards Codification -Section S99 -Paragraph 1B -Subparagraph (SX 210.13-02(a)(4)(iii)(A)) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480097/470-10-S99-1)Reference 17: [http://www.xbrl.org/2003/role/disclosureRef -Topic 470 -SubTopic 10 -Name Accounting Standards Codification -Section S99 -Paragraph 1B -Subparagraph \(SX 210.13-02\(a\)\(4\)\(iii\)\(B\)\) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480097/470-10-S99-1](http://www.xbrl.org/2003/role/disclosureRef -Topic 470 -SubTopic 10 -Name Accounting Standards Codification -Section S99 -Paragraph 1B -Subparagraph (SX 210.13-02(a)(4)(iii)(B)) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480097/470-10-S99-1)Reference 18: [http://www.xbrl.org/2003/role/disclosureRef -Topic 470 -SubTopic 10 -Name Accounting Standards Codification -Section S99 -Paragraph 1B -Subparagraph \(SX 210.13-02\(a\)\(4\)\(iv\)\) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480097/470-10-S99-1](http://www.xbrl.org/2003/role/disclosureRef -Topic 470 -SubTopic 10 -Name Accounting Standards Codification -Section S99 -Paragraph 1B -Subparagraph (SX 210.13-02(a)(4)(iv)) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480097/470-10-S99-1)Reference 19: [http://www.xbrl.org/2003/role/disclosureRef -Topic 470 -SubTopic 10 -Name Accounting Standards Codification -Section S99 -Paragraph 1B -Subparagraph \(SX 210.13-02\(a\)\(5\)\) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480097/470-10-S99-1](http://www.xbrl.org/2003/role/disclosureRef -Topic 470 -SubTopic 10 -Name Accounting Standards Codification -Section S99 -Paragraph 1B -Subparagraph (SX 210.13-02(a)(5)) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480097/470-10-S99-1)Reference 20: [http://www.xbrl.org/2003/role/disclosureRef -Topic 280 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 30 -Subparagraph \(a\) -Publisher FASB -URI https://asc.fasb.org/1943274/2147482810/280-10-50-30](http://www.xbrl.org/2003/role/disclosureRef -Topic 280 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 30 -Subparagraph (a) -Publisher FASB -URI https://asc.fasb.org/1943274/2147482810/280-10-50-30)Reference 21: <http://www.xbrl.org/2003/role/disclosureRef -Topic 280 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 42 -Publisher FASB -URI https://asc.fasb.org/1943274/2147482810/280-10-50-42>Reference 22: <http://www.xbrl.org/2003/role/disclosureRef -Topic 280 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 40 -Publisher FASB -URI https://asc.fasb.org/1943274/2147482810/280-10-50-40>Reference 23: <http://www.xbrl.org/2003/role/disclosureRef -Topic 280 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 40 -Publisher FASB -URI https://asc.fasb.org/1943274/2147482810/280-10-50-40>Reference 24: [http://www.xbrl.org/2003/role/disclosureRef -Topic 280 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 22 -Subparagraph \(a\) -Publisher FASB -URI https://asc.fasb.org/1943274/2147482810/280-10-50-22](http://www.xbrl.org/2003/role/disclosureRef -Topic 280 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 22 -Subparagraph (a) -Publisher FASB -URI https://asc.fasb.org/1943274/2147482810/280-10-50-22)Reference 25: [http://www.xbrl.org/2003/role/disclosureRef -Topic 942 -SubTopic 235 -Name Accounting Standards Codification -Section S99 -Paragraph 1 -Subparagraph \(SX 210.9-05\(b\)\(2\)\) -Publisher FASB -URI https://asc.fasb.org/1943274/2147477314/942-235-S99-1](http://www.xbrl.org/2003/role/disclosureRef -Topic 942 -SubTopic 235 -Name Accounting Standards Codification -Section S99 -Paragraph 1 -Subparagraph (SX 210.9-05(b)(2)) -Publisher FASB -URI https://asc.fasb.org/1943274/2147477314/942-235-S99-1)Reference 26: [http://www.xbrl.org/2003/role/disclosureRef -Topic 220 -SubTopic 10 -Name Accounting Standards Codification -Section S99 -Paragraph 2 -Subparagraph \(SX 210.5-03\(1\)\) -Publisher FASB -URI https://asc.fasb.org/1943274/2147483621/220-10-S99-2](http://www.xbrl.org/2003/role/disclosureRef -Topic 220 -SubTopic 10 -Name Accounting Standards Codification -Section S99 -Paragraph 2 -Subparagraph (SX 210.5-03(1)) -Publisher FASB -URI https://asc.fasb.org/1943274/2147483621/220-10-S99-2) + Details Name: us-gaap Revenues Namespace Prefix: us-gaap Data Type: xbrli:monetaryItemType Balance Type: credit Period Type: duration X - DefinitionLine items represent financial concepts included in a table. These concepts are used to disclose reportable information associated with domain members defined in one or many axes to the table. + ReferencesNo definition available. + Details Name: us-gaap SegmentReportingInformationLineItems Namespace Prefix: us-gaap Data Type: xbrli:stringItemType Balance Type: na Period Type: duration X - Details Name: us-gaap StatementBusinessSegmentsAxis=AMPG ManufacturingAndEngineeringMember Namespace Prefix: Data Type: na Balance Type: Period Type: X - Details Name: us-gaap StatementBusinessSegmentsAxis=AMPG DistributionMember Namespace Prefix: Data Type: na Balance Type: Period Type: X - Details Name: us-gaap StatementBusinessSegmentsAxis=AMPG CorporatesMember Namespace Prefix: Data Type: na Balance Type: Period Type: XML 48 R37.htm IDEA: XBRL DOCUMENT v3.24.2.u1 Schedule of Inventory (Details) - USD (\$) Jun. 30, 2024 Dec. 31, 2023 Inventory Disclosure [Abstract] Á Á Raw Materials \$ 1,364,072 \$ 959,645 Work-in Progress 120,119 51,140 Finished Goods 7,212,446 6,672,793 Subtotal 8,696,637 7,683,578 Less: Reserve for Obsolescence (1,163,000) (1,146,000) Total \$ 7,533,637 \$ 6,537,578 X - DefinitionAmount of inventory reserves for last-in first-out (LIFO) and other inventory valuation methods. + ReferencesReference 1: [http://www.xbrl.org/2009/role/commonPracticeRef -Topic 210 -SubTopic 10 -Name Accounting Standards Codification -Section S99 -Paragraph 1 -Subparagraph \(SX 210.5-02\(6\)\) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480566/210-10-S99-1](http://www.xbrl.org/2009/role/commonPracticeRef -Topic 210 -SubTopic 10 -Name Accounting Standards Codification -Section S99 -Paragraph 1 -Subparagraph (SX 210.5-02(6)) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480566/210-10-S99-1)Reference 2: <http://fasb.org/us-gaap/role/ref/legacyRef -Name Accounting Standards Codification -Topic 330 -SubTopic 10 -Section 50 -Paragraph 1 -Publisher FASB -URI https://asc.fasb.org/1943274/2147483080/330-10-50-1> + Details Name: us-gaap InventoryAdjustments Namespace Prefix: us-gaap Data Type: xbrli:monetaryItemType Balance Type: credit Period Type: instant X - ReferencesNo definition available. + Details Name: us-gaap InventoryDisclosureAbstract Namespace Prefix: us-gaap Data Type: xbrli:stringItemType Balance Type: na Period Type: duration X - DefinitionAmount before valuation and LIFO reserves of completed merchandise or goods expected to be sold within one year or operating cycle, if longer. + ReferencesReference 1: [http://www.xbrl.org/2009/role/commonPracticeRef -Topic 210 -SubTopic 10 -Name Accounting Standards Codification -Section S99 -Paragraph 1 -Subparagraph \(SX 210.5-02\(6\)\(a\)\(1\)\) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480566/210-10-S99-1](http://www.xbrl.org/2009/role/commonPracticeRef -Topic 210 -SubTopic 10 -Name Accounting Standards Codification -Section S99 -Paragraph 1 -Subparagraph (SX 210.5-02(6)(a)(1)) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480566/210-10-S99-1) + Details Name: us-gaap InventoryFinishedGoods Namespace Prefix: us-gaap Data Type: xbrli:monetaryItemType Balance Type: debit Period Type: instant X - DefinitionGross amount, as of the balance sheet date, of merchandise, goods, commodities, or supplies held for future sale or to be used in manufacturing, servicing or production process. + ReferencesReference 1: [http://www.xbrl.org/2009/role/commonPracticeRef -Topic 210 -SubTopic 10 -Name Accounting Standards Codification -Section S99 -Paragraph 1 -Subparagraph \(SX 210.5-02\(6\)\) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480566/210-10-S99-1](http://www.xbrl.org/2009/role/commonPracticeRef -Topic 210 -SubTopic 10 -Name Accounting Standards Codification -Section S99 -Paragraph 1 -Subparagraph (SX 210.5-02(6)) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480566/210-10-S99-1) + Details Name: us-gaap InventoryGross Namespace Prefix: us-gaap Data Type: xbrli:monetaryItemType Balance Type: debit Period Type: instant X - DefinitionAmount after valuation and LIFO reserves of inventory expected to be sold, or consumed within one year or operating cycle, if longer. + ReferencesReference 1: <http://www.xbrl.org/2003/role/exampleRef -Topic 852 -SubTopic 10 -Name Accounting Standards Codification -Section 55 -Paragraph 10 -Publisher FASB -URI https://asc.fasb.org/1943274/2147481372/852-10-55-10>Reference 2: [http://www.xbrl.org/2003/role/exampleRef -Topic 10 -SubTopic 10 -Name Accounting Standards Codification -Section 45 -Paragraph 1 -Subparagraph \(b\) -Publisher FASB -URI https://asc.fasb.org/1943274/2147483467/10-10-45-1](http://www.xbrl.org/2003/role/exampleRef -Topic 10 -SubTopic 10 -Name Accounting Standards Codification -Section 45 -Paragraph 1 -Subparagraph (b) -Publisher FASB -URI https://asc.fasb.org/1943274/2147483467/10-10-45-1)Reference 3: [http://www.xbrl.org/2003/role/disclosureRef -Topic 210 -SubTopic 10 -Name Accounting Standards Codification -Section S99 -Paragraph 1 -Subparagraph \(SX 210.5-02\(6\)\) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480566/210-10-S99-1](http://www.xbrl.org/2003/role/disclosureRef -Topic 210 -SubTopic 10 -Name Accounting Standards Codification -Section S99 -Paragraph 1 -Subparagraph (SX 210.5-02(6)) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480566/210-10-S99-1) + Details Name: us-gaap InventoryNet Namespace Prefix: us-gaap Data Type: xbrli:monetaryItemType Balance Type: debit Period Type: instant X - DefinitionAmount before valuation and LIFO reserves of raw materials expected to be sold, or consumed within one year or operating cycle, if longer. + ReferencesReference 1: [http://www.xbrl.org/2009/role/commonPracticeRef -Topic 210 -SubTopic 10 -Name Accounting Standards Codification -Section S99 -Paragraph 1 -Subparagraph \(SX 210.5-02\(6\)\(a\)\(4\)\) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480566/210-10-S99-1](http://www.xbrl.org/2009/role/commonPracticeRef -Topic 210 -SubTopic 10 -Name Accounting Standards Codification -Section S99 -Paragraph 1 -Subparagraph (SX 210.5-02(6)(a)(4)) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480566/210-10-S99-1) + Details Name: us-gaap InventoryRawMaterials Namespace Prefix: us-gaap Data Type: xbrli:monetaryItemType Balance Type: debit Period Type: instant X - DefinitionAmount before valuation and LIFO reserves of merchandise or goods in the production process expected to be completed within one year or operating cycle, if longer. + ReferencesReference 1: [http://www.xbrl.org/2009/role/commonPracticeRef -Topic 210 -SubTopic 10 -Name Accounting Standards Codification -Section S99 -Paragraph 1 -Subparagraph \(SX 210.5-02\(6\)\(a\)\(3\)\) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480566/210-10-S99-1](http://www.xbrl.org/2009/role/commonPracticeRef -Topic 210 -SubTopic 10 -Name Accounting Standards Codification -Section S99 -Paragraph 1 -Subparagraph (SX 210.5-02(6)(a)(3)) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480566/210-10-S99-1) + Details Name: us-gaap InventoryWorkInProcess Namespace Prefix: us-gaap Data Type: xbrli:monetaryItemType Balance Type: debit Period Type: instant XML 49 R38.htm IDEA: XBRL DOCUMENT v3.24.2.u1 Schedule of Property and Equipment (Details) - USD (\$) Jun. 30, 2024 Dec. 31, 2023 Property, Plant and Equipment [Line Items] Á Á Property plant and equipment, gross \$ 3,938,887 \$ 3,986,340 Less: Accumulated Depreciation (1,509,274) (1,386,892) Property plant and equipment, net 2,429,613 2,599,448 Lab Equipment [Member] Á Á Property, Plant and Equipment [Line Items] Á Á Property plant and equipment, gross 3,400,207 3,400,207 Manufacturing Equipment [Member] Á Á Property, Plant and Equipment [Line Items] Á Á Property plant and equipment, gross 129,745 129,745 Automobiles [Member] Á Á Property, Plant and Equipment [Line Items] Á Á Property plant and equipment, gross 7,335 7,335 Computer Equipment [Member] Á Á Property, Plant and Equipment [Line Items] Á Á Property plant and equipment, gross 146,785 194,238 Leasehold Improvements [Member] Á Á Property, Plant and Equipment [Line Items] Á Á Property plant and equipment, gross 84,172 84,172 Furniture and Fixtures [Member] Á Á Property, Plant and Equipment [Line Items] Á Á Property plant and equipment, gross \$ 170,643 \$ 170,643 X - DefinitionAmount of accumulated depreciation, depletion and amortization for physical assets used in the normal conduct of business to produce goods and services. + ReferencesReference 1: [http://www.xbrl.org/2003/role/disclosureRef -Topic 944 -SubTopic 210 -Name Accounting Standards Codification -Section S99 -Paragraph 1 -Subparagraph \(SX 210.7-03\(a\)\(8\)\(b\)\) -Publisher FASB -URI https://asc.fasb.org/1943274/2147478777/944-210-S99-1](http://www.xbrl.org/2003/role/disclosureRef -Topic 944 -SubTopic 210 -Name Accounting Standards Codification -Section S99 -Paragraph 1 -Subparagraph (SX 210.7-03(a)(8)(b)) -Publisher FASB -URI https://asc.fasb.org/1943274/2147478777/944-210-S99-1)Reference 2: [http://www.xbrl.org/2003/role/disclosureRef -Topic 210 -SubTopic 10 -Name Accounting Standards Codification -Section S99 -Paragraph 1 -Subparagraph \(SX 210.5-02\(14\)\) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480566/210-10-S99-1](http://www.xbrl.org/2003/role/disclosureRef -Topic 210 -SubTopic 10 -Name Accounting Standards Codification -Section S99 -Paragraph 1 -Subparagraph (SX 210.5-02(14)) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480566/210-10-S99-1)Reference 3: [http://fasb.org/us-gaap/role/ref/legacyRef -Name Accounting Standards Codification -Topic 360 -SubTopic 10 -Section 50 -Paragraph 1 -Subparagraph \(c\) -Publisher FASB -URI https://asc.fasb.org/1943274/2147482099/360-10-50-1](http://fasb.org/us-gaap/role/ref/legacyRef -Name Accounting Standards Codification -Topic 360 -SubTopic 10 -Section 50 -Paragraph 1 -Subparagraph (c) -Publisher FASB -URI https://asc.fasb.org/1943274/2147482099/360-10-50-1) + Details Name: us-gaap AccumulatedDepreciationDepletionAndAmortizationPropertyPlantAndEquipment Namespace Prefix: us-gaap Data Type: xbrli:monetaryItemType Balance Type: credit Period Type: instant X - DefinitionAmount before accumulated depreciation, depletion and amortization of physical assets used in the normal conduct of business and not intended for resale. Examples include, but are not limited to, land, buildings, machinery and equipment, office equipment, and furniture and fixtures. + ReferencesReference 1: [http://www.xbrl.org/2003/role/disclosureRef -Topic 944 -SubTopic 210 -Name Accounting Standards Codification -Section S99 -Paragraph 1 -Subparagraph \(SX 210.7-03\(a\)\(8\)\) -Publisher FASB -URI https://asc.fasb.org/1943274/2147478777/944-210-S99-1](http://www.xbrl.org/2003/role/disclosureRef -Topic 944 -SubTopic 210 -Name Accounting Standards Codification -Section S99 -Paragraph 1 -Subparagraph (SX 210.7-03(a)(8)) -Publisher FASB -URI https://asc.fasb.org/1943274/2147478777/944-210-S99-1)Reference 2: [http://www.xbrl.org/2003/role/disclosureRef -Topic 210 -SubTopic 10 -Name Accounting Standards Codification -Section S99 -Paragraph 1 -Subparagraph \(SX 210.5-02\(13\)\) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480566/210-10-S99-1](http://www.xbrl.org/2003/role/disclosureRef -Topic 210 -SubTopic 10 -Name Accounting Standards Codification -Section S99 -Paragraph 1 -Subparagraph (SX 210.5-02(13)) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480566/210-10-S99-1)Reference 3: [http://fasb.org/us-gaap/role/ref/legacyRef -Topic 360 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 1 -Subparagraph \(b\) -Publisher FASB -URI https://asc.fasb.org/1943274/2147482099/360-10-50-1](http://fasb.org/us-gaap/role/ref/legacyRef -Topic 360 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 1 -Subparagraph (b) -Publisher FASB -URI https://asc.fasb.org/1943274/2147482099/360-10-50-1) + Details Name: us-gaap PropertyPlantAndEquipmentGross Namespace Prefix: us-gaap Data Type: xbrli:monetaryItemType Balance Type: debit Period Type: instant X - DefinitionLine items represent financial concepts included in a table. These concepts are used to disclose reportable information associated with domain members defined in one or many axes to the table. + ReferencesReference 1: [http://www.xbrl.org/2003/role/disclosureRef -Topic 842 -SubTopic 20 -Name Accounting Standards Codification -Section 50 -Paragraph 7A -Subparagraph \(a\) -Publisher FASB -URI https://asc.fasb.org/1943274/2147478964/842-20-50-7A](http://www.xbrl.org/2003/role/disclosureRef -Topic 842 -SubTopic 20 -Name Accounting Standards Codification -Section 50 -Paragraph 7A -Subparagraph (a) -Publisher FASB -URI https://asc.fasb.org/1943274/2147478964/842-20-50-7A) + Details Name: us-gaap PropertyPlantAndEquipmentLineItems Namespace Prefix: us-gaap Data Type: xbrli:stringItemType Balance Type: na Period Type: duration X - DefinitionAmount after accumulated depreciation, depletion and amortization of physical assets used in the normal conduct of business to produce goods and services and not intended for resale. Examples include, but are not limited to, land, buildings, machinery and equipment, office equipment, and furniture and fixtures. + ReferencesReference 1: <http://fasb.org/us-gaap/role/ref/legacyRef -Name Accounting Standards Codification -Section 50 -Paragraph 1 -SubTopic 10 -Topic 360 -Publisher FASB -URI https://asc.fasb.org/1943274/2147482099/360-10-50-1>Reference 2: <http://www.xbrl.org/2003/role/disclosureRef -Topic 842 -SubTopic 20 -Name Accounting Standards Codification -Section 55 -Paragraph 10 -Publisher FASB -URI https://asc.fasb.org/1943274/2147478964/842-20-50-7A>Reference 3: <http://www.xbrl.org/2003/role/exampleRef -Topic 852 -SubTopic 10 -Name Accounting Standards Codification -Section 55 -Paragraph 10 -Publisher FASB -URI https://asc.fasb.org/1943274/2147481372/852-10-55-10>Reference 4: [http://www.xbrl.org/2003/role/disclosureRef -Topic 944 -SubTopic 210 -Name Accounting Standards Codification -Section S99 -Paragraph 1 -Subparagraph \(SX 210.7-03\(a\)\(8\)\) -Publisher FASB -URI https://asc.fasb.org/1943274/2147478777/944-210-S99-1](http://www.xbrl.org/2003/role/disclosureRef -Topic 944 -SubTopic 210 -Name Accounting Standards Codification -Section S99 -Paragraph 1 -Subparagraph (SX 210.7-03(a)(8)) -Publisher FASB -URI https://asc.fasb.org/1943274/2147478777/944-210-S99-1)Reference 5: [http://www.xbrl.org/2003/role/disclosureRef -Topic 942 -SubTopic 235 -Name Accounting Standards Codification -Section S99 -Paragraph 1 -Subparagraph \(SX 210.5-03\(2\)\(a\)\) -Publisher FASB -URI https://asc.fasb.org/1943274/2147483621/220-10-S99-2](http://www.xbrl.org/2003/role/disclosureRef -Topic 942 -SubTopic 235 -Name Accounting Standards Codification -Section S99 -Paragraph 1 -Subparagraph (SX 210.5-03(2)(a)) -Publisher FASB -URI https://asc.fasb.org/1943274/2147483621/220-10-S99-2)Reference 6: [http://www.xbrl.org/2003/role/disclosureRef -Topic 924 -SubTopic 10 -Name Accounting Standards Codification -Section S99 -Paragraph 1 -Subparagraph \(SAB Topic 11.L\) -Publisher FASB -URI https://asc.fasb.org/1943274/2147479941/924-10-S99-1](http://www.xbrl.org/2003/role/disclosureRef -Topic 924 -SubTopic 10 -Name Accounting Standards Codification -Section S99 -Paragraph 1 -Subparagraph (SAB Topic 11.L) -Publisher FASB -URI https://asc.fasb.org/1943274/2147479941/924-10-S99-1) + Details Name: us-gaap CostOfGoodsAndServicesSold Namespace Prefix: us-gaap Data Type: xbrli:monetaryItemType Balance Type: debit Period Type: duration X - DefinitionThe amount of expense recognized in the current period that reflects the allocation of the cost of tangible assets over the assets' useful lives. Includes production and non-production related depreciation. + ReferencesReference 1: [http://fasb.org/us-gaap/role/ref/legacyRef -Name Accounting Standards Codification -Section 45 -Paragraph 28 -Subparagraph \(b\) -SubTopic 10 -Topic 230 -Publisher FASB -URI https://asc.fasb.org/1943274/2147482810/280-10-50-42](http://fasb.org/us-gaap/role/ref/legacyRef -Name Accounting Standards Codification -Section 45 -Paragraph 28 -Subparagraph (b) -SubTopic 10 -Topic 230 -Publisher FASB -URI https://asc.fasb.org/1943274/2147482810/280-10-50-42)

https://asc.fasb.org/1943274/2147482740/230-10-45-28Reference 2: http://fasb.org/us-gaap/role/ref/legacyRef - Name Accounting Standards Codification - Topic 360 - SubTopic 10 - Section 50 - Paragraph 1 - Subparagraph (a) - Publisher FASB - URI https://asc.fasb.org/1943274/2147482099/360-10-50-1 + Details Name: us-gaap Depreciation Namespace Prefix: us-gaap\_Data Type: xbrli:monetaryItemType Balance Type: debit Period Type: duration X - DefinitionPresent value of lessee's discounted obligation for lease payments from finance lease. + ReferencesReference 1: http://www.xbrl.org/2003/role/disclosureRef - Topic 842 - SubTopic 20 - Name Accounting Standards Codification - Section 50 - Paragraph 6 - Publisher FASB - URI https://asc.fasb.org/1943274/214748964/842-20-50-6Reference 2: http://www.xbrl.org/2003/role/disclosureRef - Topic 842 - SubTopic 20 - Name Accounting Standards Codification - Section 45 - Paragraph 1 - Subparagraph (b) - Publisher FASB - URI https://asc.fasb.org/1943274/2147479001/842-20-45-1 + Details Name: us-gaap FinanceLeaseLiability Namespace Prefix: us-gaap\_Data Type: xbrli:monetaryItemType Balance Type: credit Period Type: instant X - ReferencesNo definition available. + Details Name: us-gaap\_PropertyPlantAndEquipmentAbstract Namespace Prefix: us-gaap\_Data Type: xbrli:stringItem Type Balance Type: na Period Type: duration X - DefinitionAmount, before accumulated depreciation and amortization, of property, plant, and equipment and finance lease right-of-use asset. + ReferencesReference 1: http://www.xbrl.org/2009/role/commonPracticeRef - Topic 360 - SubTopic 10 - Name Accounting Standards Codification - Section 50 - Paragraph 1 - Subparagraph (b) - Publisher FASB - URI https://asc.fasb.org/1943274/2147482099/360-10-50-1Reference 2: http://www.xbrl.org/2009/role/commonPracticeRef - Topic 210 - SubTopic 10 - Name Accounting Standards Codification - Section S99 - Paragraph 1 - Subparagraph (SX 210.5-02(18)) - Publisher FASB - URI https://asc.fasb.org/1943274/2147480566/210-10-S99-1Reference 3: http://www.xbrl.org/2009/role/commonPracticeRef - Name Accounting Standards Codification - Section 45 - Paragraph 1 - Subparagraph (a) - SubTopic 20 - Topic 842 - Publisher FASB - URI https://asc.fasb.org/1943274/2147479041/842-20-45-1 + Details Name: us-gaap\_PropertyPlantAndEquipmentAndFinanceLeaseRightOfUseAssetBeforeAccumulatedDepreciationAndAmortization Namespace Prefix: us-gaap\_Data Type: xbrli:monetaryItemType Balance Type: debit Period Type: instant X - DefinitionAmount of divestiture of long-lived, physical assets used in the normal conduct of business and not intended for resale. Examples include, but are not limited to, land, buildings, machinery and equipment, office equipment, furniture and fixtures, and computer equipment. + ReferencesNo definition available. + Details Name: us-gaap\_PropertyPlantAndEquipmentDisposals Namespace Prefix: us-gaap\_Data Type: xbrli:monetaryItemType Balance Type: credit Period Type: duration X - DefinitionAmount, before accumulated depreciation and amortization, of property, plant, and equipment and finance lease right-of-use asset. + ReferencesReference 1: http://www.xbrl.org/2009/role/commonPracticeRef - Topic 360 - SubTopic 10 - Name Accounting Standards Codification - Section 50 - Paragraph 1 - Subparagraph (b) - Publisher FASB - URI https://asc.fasb.org/1943274/2147482099/360-10-50-1Reference 2: http://www.xbrl.org/2009/role/disclosureRef - Topic 985 - SubTopic 20 - Name Accounting Standards Codification - Section 50 - Paragraph 2 - Subparagraph (a)(3) - Publisher FASB - URI https://asc.fasb.org/1943274/2147482665/350-30-50-2Reference 3: http://www.xbrl.org/2003/role/disclosureRef - Topic 985 - SubTopic 20 - Name Accounting Standards Codification - Section 50 - Paragraph 2 - Subparagraph (a)(3) - Publisher FASB - URI https://asc.fasb.org/1943274/2147481283/985-20-50-2 + Details Name: us-gaap\_FiniteLivedIntangibleAssetsAmortizationExpenseNextTwelveMonths Namespace Prefix: us-gaap\_Data Type: xbrli:monetaryItemType Balance Type: debit Period Type: instant X - DefinitionAmount of amortization for assets, excluding financial assets and goodwill, lacking physical substance with finite life expected to be recognized in remainder of current fiscal year. + ReferencesReference 1: http://www.xbrl.org/2009/role/commonPracticeRef - Topic 985 - SubTopic 20 - Name Accounting Standards Codification - Section 50 - Paragraph 2 - Publisher FASB - URI https://asc.fasb.org/1943274/2147481283/985-20-50-2 + Details Name: us-gaap\_FiniteLivedIntangibleAssetsAmortizationExpenseRemainderOffiscalYear Namespace Prefix: us-gaap\_Data Type: xbrli:monetaryItemType Balance Type: debit Period Type: instant X - DefinitionAmount of amortization for assets, excluding financial assets and goodwill, lacking physical substance with finite life expected to be recognized in fourth fiscal year following current fiscal year. Excludes interim and annual periods when interim periods are reported from current statement of financial position date (rolling approach). + ReferencesReference 1: http://www.xbrl.org/2003/role/exampleRef - Topic 350 - SubTopic 30 - Name Accounting Standards Codification - Section 55 - Paragraph 40 - Publisher FASB - URI https://asc.fasb.org/1943274/2147482640/350-30-55-40Reference 2: http://www.xbrl.org/2003/role/disclosureRef - Topic 350 - SubTopic 30 - Name Accounting Standards Codification - Section 50 - Paragraph 2 - Subparagraph (a)(3) - Publisher FASB - URI https://asc.fasb.org/1943274/2147482665/350-30-50-2Reference 3: http://www.xbrl.org/2003/role/disclosureRef - Topic 985 - SubTopic 20 - Name Accounting Standards Codification - Section 50 - Paragraph 2 - Subparagraph (a)(3) - Publisher FASB - URI https://asc.fasb.org/1943274/2147482665/350-30-50-2Reference 4: http://www.xbrl.org/2003/role/disclosureRef - Topic 985 - SubTopic 20 - Name Accounting Standards Codification - Section 50 - Paragraph 2 - Subparagraph (a)(3) - Publisher FASB - URI https://asc.fasb.org/1943274/2147481283/985-20-50-2 + Details Name: us-gaap\_FiniteLivedIntangibleAssetsAmortizationExpenseYearFour Namespace Prefix: us-gaap\_Data Type: xbrli:monetaryItemType Balance Type: debit Period Type: instant X - DefinitionAmount of amortization for assets, excluding financial assets and goodwill, lacking physical substance with finite life expected to be recognized in third fiscal year following current fiscal year. Excludes interim and annual periods when interim periods are reported from current statement of financial position date (rolling approach). + ReferencesReference 1: http://www.xbrl.org/2003/role/exampleRef - Topic 350 - SubTopic 30 - Name Accounting Standards Codification - Section 55 - Paragraph 40 - Publisher FASB - URI https://asc.fasb.org/1943274/2147482640/350-30-55-40Reference 2: http://www.xbrl.org/2003/role/disclosureRef - Topic 350 - SubTopic 30 - Name Accounting Standards Codification - Section 50 - Paragraph 2 - Subparagraph (a)(3) - Publisher FASB - URI https://asc.fasb.org/1943274/2147482665/350-30-50-2Reference 3: http://www.xbrl.org/2003/role/disclosureRef - Topic 985 - SubTopic 20 - Name Accounting Standards Codification - Section 50 - Paragraph 2 - Subparagraph (a)(3) - Publisher FASB - URI https://asc.fasb.org/1943274/2147482665/350-30-50-2Reference 4: http://www.xbrl.org/2003/role/disclosureRef - Topic 985 - SubTopic 20 - Name Accounting Standards Codification - Section 50 - Paragraph 2 - Subparagraph (a)(3) - Publisher FASB - URI https://asc.fasb.org/1943274/2147481283/985-20-50-2 + Details Name: us-gaap\_FiniteLivedIntangibleAssetsAmortizationExpenseYearThree Namespace Prefix: us-gaap\_Data Type: xbrli:monetaryItemType Balance Type: debit Period Type: instant X - DefinitionAmount of amortization for assets, excluding financial assets and goodwill, lacking physical substance with finite life expected to be recognized in second fiscal year following current fiscal year. Excludes interim and annual periods when interim periods are reported from current statement of financial position date (rolling approach). + ReferencesReference 1: http://www.xbrl.org/2003/role/exampleRef - Topic 350 - SubTopic 30 - Name Accounting Standards Codification - Section 55 - Paragraph 40 - Publisher FASB - URI https://asc.fasb.org/1943274/2147482640/350-30-55-40Reference 2: http://www.xbrl.org/2003/role/disclosureRef - Topic 350 - SubTopic 30 - Name Accounting Standards Codification - Section 50 - Paragraph 2 - Subparagraph (a)(3) - Publisher FASB - URI https://asc.fasb.org/1943274/2147482665/350-30-50-2Reference 3: http://www.xbrl.org/2003/role/disclosureRef - Topic 985 - SubTopic 20 - Name Accounting Standards Codification - Section 50 - Paragraph 2 - Subparagraph (a)(3) - Publisher FASB - URI https://asc.fasb.org/1943274/2147482665/350-30-50-2Reference 4: http://www.xbrl.org/2003/role/disclosureRef - Topic 985 - SubTopic 20 - Name Accounting Standards Codification - Section 50 - Paragraph 2 - Subparagraph (a)(3) - Publisher FASB - URI https://asc.fasb.org/1943274/2147481283/985-20-50-2 + Details Name: us-gaap\_FiniteLivedIntangibleAssetsAmortizationExpenseYearTwo Namespace Prefix: us-gaap\_Data Type: xbrli:monetaryItemType Balance Type: debit Period Type: instant X - DefinitionAmount after amortization of assets, excluding financial assets and goodwill, lacking physical substance with a finite life. + ReferencesReference 1: http://www.xbrl.org/2009/role/commonPracticeRef - Topic 350 - SubTopic 30 - Name Accounting Standards Codification - Section 50 - Paragraph 2 - Subparagraph (a)(1) - Publisher FASB - URI https://asc.fasb.org/1943274/2147482665/350-30-50-2Reference 2: http://www.xbrl.org/2003/role/disclosureRef - Topic 926 - SubTopic 20 - Name Accounting Standards Codification - Section 50 - Paragraph 5 - Publisher FASB - URI https://asc.fasb.org/1943274/2147483154/926-20-50-5 + Details Name: us-gaap\_FiniteLivedIntangibleAssetsNet Namespace Prefix: us-gaap\_Data Type: xbrli:monetaryItemType Balance Type: debit Period Type: instant X - ReferencesNo definition available. + Details Name: us-gaap\_GoodwillAndIntangibleAssetsDisclosureAbstract Namespace Prefix: us-gaap\_Data Type: xbrli:stringItem Type Balance Type: na Period Type: duration XML 52 R41.htm IDEA: XBRL DOCUMENT v3.24.2.u1 Goodwill and Intangible Assets (Details Narrative) - USD (\$) 3 Months Ended 6 Months Ended Jun. 30, 2024 Jun. 30, 2023 Jun. 30, 2024 Jun. 30, 2023 Dec. 31, 2023 Goodwill and Intangible Assets Disclosure [Abstract] A A A A A Goodwill \$ 4,696,883 A \$ 4,696,883 A \$ 4,696,883 Amortization expenses \$ 37,465 \$ 37,466 \$ 74,930 \$ 74,819 A X - DefinitionThe aggregate expense charged against earnings to allocate the cost of intangible assets (nonphysical assets not used in production) in a systematic and rational manner to the periods expected to benefit from such assets. As a noncash expense, this element is added back to net income when calculating cash provided by or used in operations using the indirect method. + ReferencesReference 1: http://fasb.org/us-gaap/role/ref/legacyRef - Name Accounting Standards Codification - Section 45 - Paragraph 28 - Subparagraph (b) - SubTopic 10 - Topic 230 - Publisher FASB - URI https://asc.fasb.org/1943274/2147482740/230-10-45-28Reference 2: http://www.xbrl.org/2003/role/exampleRef - Topic 350 - SubTopic 30 - Name Accounting Standards Codification - Section 55 - Paragraph 40 - Publisher FASB - URI https://asc.fasb.org/1943274/2147482640/350-30-55-40Reference 3: http://www.xbrl.org/2003/role/disclosureRef - Topic 350 - SubTopic 30 - Name Accounting Standards Codification - Section 50 - Paragraph 2 - Subparagraph (a)(3) - Publisher FASB - URI https://asc.fasb.org/1943274/2147482665/350-30-50-2Reference 4: http://www.xbrl.org/2003/role/disclosureRef - Topic 350 - SubTopic 30 - Name Accounting Standards Codification - Section 55 - Paragraph 40 - Publisher FASB - URI https://asc.fasb.org/1943274/2147482665/350-30-50-2Reference 5: http://www.xbrl.org/2003/role/disclosureRef - Topic 350 - SubTopic 30 - Name Accounting Standards Codification - Section 50 - Paragraph 2 - Subparagraph (a)(3) - Publisher FASB - URI https://asc.fasb.org/1943274/2147482665/350-30-50-2Reference 6: http://www.xbrl.org/2003/role/disclosureRef - Topic 350 - SubTopic 30 - Name Accounting Standards Codification - Section 50 - Paragraph 2 - Subparagraph (a)(3) - Publisher FASB - URI https://asc.fasb.org/1943274/2147482665/350-30-50-2Reference 7: http://www.xbrl.org/2003/role/disclosureRef - Topic 350 - SubTopic 30 - Name Accounting Standards Codification - Section 50 - Paragraph 2 - Subparagraph (a)(3) - Publisher FASB - URI https://asc.fasb.org/1943274/2147482665/350-30-50-2Reference 8: http://www.xbrl.org/2009/role/commonPracticeRef - Topic 350 - SubTopic 20 - Name Accounting Standards Codification - Section 50 - Paragraph 1 - Subparagraph (h) - Publisher FASB - URI https://asc.fasb.org/1943274/2147482573/350-20-50-1Reference 9: http://www.xbrl.org/2003/role/disclosureRef - Topic 942 - SubTopic 210 - Name Accounting Standards Codification - Section S99 - Paragraph 1 - Subparagraph (SX 210.9-03(10)(1)) - Publisher FASB - URI https://asc.fasb.org/1943274/2147478546/942-210-S99-1 + Details Name: us-gaap\_Goodwill Namespace Prefix: us-gaap\_Data Type: xbrli:monetaryItemType Balance Type: debit Period Type: instant X - ReferencesNo definition available. + Details Name: us-gaap\_GoodwillAndIntangibleAssetsDisclosureAbstract Namespace Prefix: us-gaap\_Data Type: xbrli:stringItem Type Balance Type: na Period Type: duration XML 53 R42.htm IDEA: XBRL DOCUMENT v3.24.2.u1 Cost Method Investment (Details Narrative) - SN2NLLC [Member] - USD (\$) Jun. 10, 2021 Jun. 30, 2024 Jun. 15, 2022 Defined Benefit Plan Disclosure [Line Items] A A A Aggregate purchase price for membership interest \$ 350,000 A A Equity method investment additional information Each tranche represented a 5% membership interest, and in aggregate a 20% membership interest. A A Cost method investment membership interest percentage A A 19.90% Overpaid for the membership interest A \$ 1,750 Investments A \$ 348,250 A Cost method investment membership interest percentage A 19.90% A X - DefinitionAggregate purchase price for membership interest + ReferencesNo definition available. + Details Name: AMPG AggregatePurchasePriceForMembershipInterest Namespace Prefix: AMPG\_Data Type: xbrli:monetaryItemType Balance Type: debit Period Type: instant X - DefinitionAggregate purchase price for membership interest percentage. + ReferencesNo definition available. + Details Name: AMPG AggregatePurchasePriceForMembershipInterestPercentage Namespace Prefix: AMPG\_Data Type: dtr:types:percentItem Type Balance Type: na Period Type: instant X - DefinitionCost method investment membership interest percentage. + ReferencesNo definition available. + Details Name: AMPG CostMethodInvestmentMembershipInterestPercentage Namespace Prefix: AMPG\_Data Type: dtr:types:percentItem Type Balance Type: na Period Type: instant X - DefinitionOverpaid for the membership interest + ReferencesNo definition available. + Details Name: AMPG OverpaidForTheMembershipInterest Namespace Prefix: AMPG\_Data Type: xbrli:monetaryItemType Balance Type: debit Period Type: instant X - DefinitionLine items represent financial concepts included in a table. These concepts are used to disclose reportable information associated with domain members defined in one or many axes to the table. + ReferencesNo definition available. + Details Name: us-gaap\_DefinedBenefitPlanDisclosureLineItems Namespace Prefix: us-gaap\_Data Type: xbrli:stringItem Type Balance Type: na Period Type: duration X - DefinitionThis serves as a place to record data that is not required by accounting literature but is useful for readers of the financial statements as it relates to the details of an equity method investment in common stock. Such information may include the amount of change for a change in ownership (equity) percentage in a given period and the amount and type of the consideration given or received in relation to the change in ownership. + ReferencesNo definition available. + Details Name: us-gaap\_EquityMethodInvestmentAdditionalInformation Namespace Prefix: us-gaap\_Data Type: xbrli:stringItem Type Balance Type: na Period Type: duration X - DefinitionSum of the carrying amounts as of the balance sheet date of all investments. + ReferencesReference 1: http://www.xbrl.org/2003/role/exampleRef - Topic 944 - SubTopic 80 - Name Accounting Standards Codification - Section 55 - Paragraph 14 - Publisher FASB - URI https://asc.fasb.org/1943274/2147480078/944-80-55-14Reference 2: http://www.xbrl.org/2003/role/exampleRef - Topic 944 - SubTopic 80 - Name Accounting Standards Codification - Section 55 - Paragraph 9 - Publisher FASB - URI https://asc.fasb.org/1943274/2147480078/944-80-55-9Reference 3: http://www.xbrl.org/2003/role/disclosureRef - Topic 944 - SubTopic 210 - Name Accounting Standards Codification - Section S99 - Paragraph 1 - Subparagraph (SX 210.7-03(a)(1)(h)) - Publisher FASB - URI https://asc.fasb.org/1943274/2147478777/944-210-S99-1Reference 4: http://www.xbrl.org/2003/role/disclosureRef - Topic 944 - SubTopic 210 - Name Accounting Standards Codification - Section S99 - Paragraph 1 - Subparagraph (SX 210.7-03(a)(1)(6)) - Publisher FASB - URI https://asc.fasb.org/1943274/2147478777/944-210-S99-1 + Details Name: us-gaap\_Investments Namespace Prefix: us-gaap\_Data Type: xbrli:monetaryItemType Balance Type: debit Period Type: instant X - Details Name: us-gaap\_RelatedPartyTransactionsByRelatedPartyAxis=AMPG SN2NLLCMember Namespace Prefix: Data Type: na Balance Type: Period Type: XML 54 R43.htm IDEA: XBRL DOCUMENT v3.24.2.u1 Schedule of Lease Assets and Liabilities (Details) - USD (\$) Jun. 30, 2024 Dec. 31, 2023 Jun. 30, 2023 Leases [Abstract] A A A ROU operating lease assets \$ 3,268,136 \$ 3,538,798 A Current portion of operating lease 421,803 541,324 A Operating lease, net of current portion 3,025,741 3,171,979 A Total operating lease liabilities 3,447,544 A A Property and equipment, gross 234,036 A A Accumulated depreciation (171,068) A A Property and equipment, net 62,968 A A Current portion of financing lease 17,208 16,799 A Financing lease, net of current portion 23,829 \$ 32,537 A Total financing lease liabilities \$ 41,037 A \$ 57,438 X - DefinitionPresent value of lessee's discounted obligation for lease payments from finance lease. + ReferencesReference 1: http://www.xbrl.org/2003/role/disclosureRef - Topic 842 - SubTopic 20 - Name Accounting Standards Codification - Section 50 - Paragraph 6 - Publisher FASB - URI https://asc.fasb.org/1943274/2147479964/842-20-50-6Reference 2: http://www.xbrl.org/2003/role/disclosureRef - Topic 842 - SubTopic 20 - Name Accounting Standards Codification - Section 45 - Paragraph 1 - Subparagraph (b) - Publisher FASB - URI https://asc.fasb.org/1943274/2147479041/842-20-45-1 + Details Name: us-gaap\_FinanceLeaseLiability Namespace Prefix: us-gaap\_Data Type: xbrli:monetaryItemType Balance Type: credit Period Type: instant X - DefinitionPresent value of lessee's discounted obligation for lease payments from finance lease, classified as current. + ReferencesReference 1: http://www.xbrl.org/2003/role/disclosureRef - Topic 842 - SubTopic 20 - Name Accounting Standards Codification - Section 45 - Paragraph 1 - Subparagraph (b) - Publisher FASB - URI https://asc.fasb.org/1943274/2147479041/842-20-45-1 + Details Name: us-gaap\_FinanceLeaseLiabilityCurrent Namespace Prefix: us-gaap\_Data Type: xbrli:monetaryItemType Balance Type: credit Period Type: instant X - ReferencesNo definition available. + Details Name: us-gaap\_LeasesAbstract Namespace Prefix: us-gaap\_Data Type: xbrli:stringItem Type Balance Type: na Period Type: duration X - DefinitionPresent value of lessee's discounted obligation for lease payments from operating lease. + ReferencesReference 1:



Type: credit Period Type: instant XML 58 R47.htm IDEA: XBRL DOCUMENT v3.24.2.u1 Leases (Details Narrative) 6 Months Ended Jan. 15, 2024 USD (\$) ftA² Aug. 09, 2023 USD (\$) Dec. 15, 2021 USD (\$) Oct. 15, 2021 USD (\$) ftA² Nov. 27, 2019 USD (\$) Sep. 12, 2019 USD (\$) Jun. 30, 2024 USD (\$) Dec. 31, 2023 USD (\$) Collaborative Arrangement and Arrangement Other than Collaborative [Line Items] A A A A A A Finance lease agreement description A A A A A A The Company entered into several 60-month lease agreements to finance certain laboratory and office equipment. A Operating lease agreement description A A A A A A The Company entered into a new operating lease agreement to rent office space in Ronkonkoma, NY. This five-year agreement commenced on September 12, 2019 with an annual rent of \$90,000 and 3% increase in each successive lease year beginning in 2021 A A Annual rent A A \$ 20,880 A A \$ 90,000 A A Operating lease payments increase percentage 2.50% A A 2.75% A A 3.00% A A A Purchase option description A A A A A A The Company has an option to buy the property during the first two years of the lease for \$1,200,000 and then at fair market value for the remainder of the lease term A A Gain loss on termination of lease right of use operating A A A A A A \$ 8,461 A Payments for rent \$ 53,675 \$ 605 A \$ 346,242 \$ 420 A A A New lease for facility ftA² A A A A 20,000 A A A Lessee operating lease term of contract 5 years 1 month A A 7 years 2 months A A A Security deposit \$ 17,999 A A \$ 86,560 A A \$ 109,480 \$ 91,481 Lessee operating lease description A On August 9, 2023, the Company entered a 39-month agreement for \$20,880 to lease an automobile with a monthly payment of \$605. A A A A Triple lease for facility ftA² 1,900 A A A A A A Spectrum Semiconductor Materials Lease Agreement [Member] A A A A A A Collaborative Arrangement and Arrangement Other than Collaborative [Line Items] A A A A A A Operating lease payments increase percentage A A 3.00% A A A A Base rent A A \$ 24,234 A A A A X - Definition Finance lease agreement description. + References No definition available. + Details Name: AMPG\_FinanceLeaseAgreementDescription Namespace Prefix: AMPG\_Data Type: xbrli:stringItem Type Balance Type: na Period Type: duration X - Definition Gain loss on termination of lease right of use operating. + References No definition available. + Details Name: AMPG\_GainLossOnTerminationOfLeaseRightOfUseOperating Namespace Prefix: AMPG\_Data Type: xbrli:monetaryItem Type Balance Type: credit Period Type: duration X - Definition New lease for facility + References No definition available. + Details Name: AMPG\_NewLeaseForFacility Namespace Prefix: AMPG\_Data Type: dtr-types:arealtemType Balance Type: na Period Type: duration X - Definition Operating lease agreement description + References No definition available. + Details Name: AMPG\_OperatingLeaseAgreementDescription Namespace Prefix: AMPG\_Data Type: xbrli:stringItem Type Balance Type: na Period Type: duration X - Definition Operating lease payments increase percentage. + References No definition available. + Details Name: AMPG\_OperatingLeasePaymentsIncreasePercentage Namespace Prefix: AMPG\_Data Type: dtr-types:percentItem Type Balance Type: na Period Type: duration X - Definition Purchase option description. + References No definition available. + Details Name: AMPG\_PurchaseOptionDescription Namespace Prefix: AMPG\_Data Type: xbrli:stringItem Type Balance Type: na Period Type: duration X - Definition Triple lease for facility. + References No definition available. + Details Name: AMPG\_TripleLeaseForFacility Namespace Prefix: AMPG\_Data Type: dtr-types:arealtemType Balance Type: na Period Type: duration X - Definition Line items represent financial concepts included in a table. These concepts are used to disclose reportable information associated with domain members defined in one or many axes to the table. + References Reference 1: [http://www.xbrl.org/2003/role/disclosureRef-Topic 808-SubTopic 10-Name Accounting Standards Codification-Section 50-Paragraph 1-Subparagraph \(d\)-Publisher FASB-URI https://asc.fasb.org/1943274/2147479042/808-10-50-1](http://www.xbrl.org/2003/role/disclosureRef-Topic 808-SubTopic 10-Name Accounting Standards Codification-Section 50-Paragraph 1-Subparagraph (d)-Publisher FASB-URI https://asc.fasb.org/1943274/2147479042/808-10-50-1) + Details Name: us-gaap\_CollaborativeArrangementsAndNoncollaborativeArrangementTransactionsLineItems Namespace Prefix: us-gaap\_Data Type: xbrli:stringItem Type Balance Type: na Period Type: duration X - Definition Amount of rent expense incurred for leased assets, including but not limited to, furniture and equipment, that is not directly or indirectly associated with the manufacture, sale or creation of a product or product line. + References No definition available. + Details Name: us-gaap\_LeaseAndRentalExpense Namespace Prefix: us-gaap\_Data Type: xbrli:monetaryItem Type Balance Type: debit Period Type: duration X - Definition Description of lessee's operating lease. + References Reference 1: [http://www.xbrl.org/2003/role/disclosureRef-Topic 842-SubTopic 20-Name Accounting Standards Codification-Section 50-Paragraph 3-Subparagraph \(a\)\(1\)-Publisher FASB-URI https://asc.fasb.org/1943274/2147478964/842-20-50-3](http://www.xbrl.org/2003/role/disclosureRef-Topic 842-SubTopic 20-Name Accounting Standards Codification-Section 50-Paragraph 3-Subparagraph (a)(1)-Publisher FASB-URI https://asc.fasb.org/1943274/2147478964/842-20-50-3) + Details Name: us-gaap\_LesseeOperatingLeaseDescription Namespace Prefix: us-gaap\_Data Type: xbrli:stringItem Type Balance Type: na Period Type: duration X - Definition Term of lessee's operating lease, in 'PnYmMndTnHnMns' format, for example, 'P1Y5M13D' represents reported fact of one year, five months, and thirteen days. + References Reference 1: [http://www.xbrl.org/2009/role/commonPracticeRef-Topic 842-SubTopic 20-Name Accounting Standards Codification-Section 50-Paragraph 3-Subparagraph \(a\)\(3\)-Publisher FASB-URI https://asc.fasb.org/1943274/2147478964/842-20-50-3](http://www.xbrl.org/2009/role/commonPracticeRef-Topic 842-SubTopic 20-Name Accounting Standards Codification-Section 50-Paragraph 3-Subparagraph (a)(3)-Publisher FASB-URI https://asc.fasb.org/1943274/2147478964/842-20-50-3) + Details Name: us-gaap\_LesseeOperatingLeaseTermOfContract Namespace Prefix: us-gaap\_Data Type: xbrli:durationItem Type Balance Type: na Period Type: instant X - Definition Amount of cash outflow from operating lease, excluding payments to bring another asset to condition and location necessary for its intended use. + References Reference 1: [http://www.xbrl.org/2003/role/disclosureRef-Topic 842-SubTopic 20-Name Accounting Standards Codification-Section 45-Paragraph 5-Subparagraph \(c\)-Publisher FASB-URI https://asc.fasb.org/1943274/2147479041/842-20-45-5](http://www.xbrl.org/2003/role/disclosureRef-Topic 842-SubTopic 20-Name Accounting Standards Codification-Section 45-Paragraph 5-Subparagraph (c)-Publisher FASB-URI https://asc.fasb.org/1943274/2147479041/842-20-45-5) Reference 2: [http://www.xbrl.org/2003/role/disclosureRef-Topic 842-SubTopic 20-Name Accounting Standards Codification-Section 50-Paragraph 4-Subparagraph \(g\)\(1\)-Publisher FASB-URI https://asc.fasb.org/1943274/2147478964/842-20-50-4](http://www.xbrl.org/2003/role/disclosureRef-Topic 842-SubTopic 20-Name Accounting Standards Codification-Section 50-Paragraph 4-Subparagraph (g)(1)-Publisher FASB-URI https://asc.fasb.org/1943274/2147478964/842-20-50-4) + Details Name: us-gaap\_OperatingLeasePayments Namespace Prefix: us-gaap\_Data Type: xbrli:monetaryItem Type Balance Type: credit Period Type: duration X - Definition Cash payments to lessor's for use of assets under operating leases. + References Reference 1: [http://fasb.org/us-gaap/role/ref/legacyRef-Name Accounting Standards Codification-Section 45-Paragraph 25-Subparagraph \(g\)-SubTopic 10-Under Topic 230-Publisher FASB-URI https://asc.fasb.org/1943274/2147482740/230-10-45-25](http://fasb.org/us-gaap/role/ref/legacyRef-Name Accounting Standards Codification-Section 45-Paragraph 25-Subparagraph (g)-SubTopic 10-Under Topic 230-Publisher FASB-URI https://asc.fasb.org/1943274/2147482740/230-10-45-25) + Details Name: us-gaap\_PaymentsForRent Namespace Prefix: us-gaap\_Data Type: xbrli:monetaryItem Type Balance Type: credit Period Type: duration X - Definition The amount of an asset, typically cash, provided to a counterparty to provide certain assurance of performance by the entity pursuant to the terms of a written or oral agreement, such as a lease. + References Reference 1: [http://www.xbrl.org/2009/role/commonPracticeRef-Topic 210-SubTopic 10-Name Accounting Standards Codification-Section S99-Paragraph 1-Subparagraph \(SX 210.5-02\(17\)\)-Publisher FASB-URI https://asc.fasb.org/1943274/2147480566/210-10-S99-1](http://www.xbrl.org/2009/role/commonPracticeRef-Topic 210-SubTopic 10-Name Accounting Standards Codification-Section S99-Paragraph 1-Subparagraph (SX 210.5-02(17))-Publisher FASB-URI https://asc.fasb.org/1943274/2147480566/210-10-S99-1) + Details Name: us-gaap\_SecurityDeposit Namespace Prefix: us-gaap\_Data Type: xbrli:monetaryItem Type Balance Type: debit Period Type: instant X - Details Name: us-gaap\_TypeOfArrangementAxis=AMPG\_SpectrumSemiconductorMaterialsLeaseAgreementMember Namespace Prefix: Data Type: na Balance Type: Period Type: XML 59 R48.htm IDEA: XBRL DOCUMENT v3.24.2.u1 Schedule of Future Principal and Interest Payments (Details) Jun. 30, 2024 USD (\$) Debt Disclosure [Abstract] A 2024 remaining \$ 36,388 Total remaining payments \$ 36,388 X - References No definition available. + Details Name: us-gaap\_DebtDisclosureAbstract Namespace Prefix: us-gaap\_Data Type: xbrli:stringItem Type Balance Type: na Period Type: duration X - Definition Amount, after deduction of unamortized premium (discount) and debt issuance cost, of long-term debt. Excludes lease obligation. + References Reference 1: [http://fasb.org/us-gaap/role/ref/legacyRef-Name Accounting Standards Codification-Section S99-Paragraph 1-Subparagraph \(SX 210.5-02\(22\)\)-SubTopic 10-Topic 210-Publisher FASB-URI https://asc.fasb.org/1943274/2147480566/210-10-S99-1](http://fasb.org/us-gaap/role/ref/legacyRef-Name Accounting Standards Codification-Section S99-Paragraph 1-Subparagraph (SX 210.5-02(22))-SubTopic 10-Topic 210-Publisher FASB-URI https://asc.fasb.org/1943274/2147480566/210-10-S99-1) Reference 2: <http://www.xbrl.org/2003/role/exampleRef-Topic 835-SubTopic 30-Name Accounting Standards Codification-Section 55-Paragraph 8-Publisher FASB-URI https://asc.fasb.org/1943274/2147482949/835-50-55-8> Reference 3: [http://fasb.org/us-gaap/role/ref/legacyRef-Topic 942-SubTopic 210-Name Accounting Standards Codification-Section S99-Paragraph 1-Subparagraph \(SX 210.9-03\(16\)\)-Publisher FASB-URI https://asc.fasb.org/1943274/2147478546/942-210-S99-1](http://fasb.org/us-gaap/role/ref/legacyRef-Topic 942-SubTopic 210-Name Accounting Standards Codification-Section S99-Paragraph 1-Subparagraph (SX 210.9-03(16))-Publisher FASB-URI https://asc.fasb.org/1943274/2147478546/942-210-S99-1) Reference 4: [http://www.xbrl.org/2003/role/exampleRef-Topic 470-SubTopic 20-Name Accounting Standards Codification-Section 55-Paragraph 69C-Publisher FASB-URI https://asc.fasb.org/1943274/2147481568/470-20-55-69C](http://www.xbrl.org/2003/role/exampleRef-Topic 470-SubTopic 20-Name Accounting Standards Codification-Section 55-Paragraph 69B-Publisher FASB-URI https://asc.fasb.org/1943274/2147481568/470-20-55-69B) Reference 6: [http://www.xbrl.org/2003/role/disclosureRef-Topic 470-SubTopic 20-Name Accounting Standards Codification-Section 50-Paragraph 1D-Subparagraph \(b\)-Publisher FASB-URI https://asc.fasb.org/1943274/2147481139/470-20-50-1D](http://www.xbrl.org/2003/role/disclosureRef-Topic 470-SubTopic 20-Name Accounting Standards Codification-Section 50-Paragraph 1D-Subparagraph (b)-Publisher FASB-URI https://asc.fasb.org/1943274/2147481139/470-20-50-1D) Reference 7: [http://www.xbrl.org/2009/role/commonPracticeRef-Topic 944-SubTopic 210-Name Accounting Standards Codification-Section S99-Paragraph 1-Subparagraph \(SX 210.7-03\(a\)\(16\)\(a\)\(2\)\)-Publisher FASB-URI https://asc.fasb.org/1943274/2147478777/944-210-S99-1](http://www.xbrl.org/2009/role/commonPracticeRef-Topic 944-SubTopic 210-Name Accounting Standards Codification-Section S99-Paragraph 1-Subparagraph (SX 210.7-03(a)(16)(a)(2))-Publisher FASB-URI https://asc.fasb.org/1943274/2147478777/944-210-S99-1) Reference 8: [http://www.xbrl.org/2003/role/disclosureRef-Topic 470-SubTopic 20-Name Accounting Standards Codification-Section 50-Paragraph 4-Subparagraph \(b\)\(3\)-Publisher FASB-URI https://asc.fasb.org/1943274/2147481139/470-20-50-4](http://www.xbrl.org/2003/role/disclosureRef-Topic 470-SubTopic 20-Name Accounting Standards Codification-Section 50-Paragraph 4-Subparagraph (b)(3)-Publisher FASB-URI https://asc.fasb.org/1943274/2147481139/470-20-50-4) + Details Name: us-gaap\_LongTermDebt Namespace Prefix: us-gaap\_Data Type: xbrli:monetaryItem Type Balance Type: credit Period Type: instant X - Definition Amount of long-term debt payable, sinking fund requirement, and other securities issued that are redeemable by holder at fixed or determinable price and date, maturing in next fiscal year following current fiscal year. Excludes interim and annual periods when interim periods are reported from current statement of financial position date (rolling approach). + References Reference 1: [http://www.xbrl.org/2003/role/disclosureRef-Topic 235-SubTopic 10-Name Accounting Standards Codification-Section S99-Paragraph 3-Subparagraph \(SX 210.12-04\(a\)\)-Publisher FASB-URI https://asc.fasb.org/1943274/2147480678/235-10-S99-3](http://www.xbrl.org/2003/role/disclosureRef-Topic 235-SubTopic 10-Name Accounting Standards Codification-Section S99-Paragraph 3-Subparagraph (SX 210.12-04(a))-Publisher FASB-URI https://asc.fasb.org/1943274/2147480678/235-10-S99-3) Reference 2: [http://www.xbrl.org/2003/role/disclosureRef-Topic 470-SubTopic 20-Name Accounting Standards Codification-Section 50-Paragraph 1E-Subparagraph \(d\)-Publisher FASB-URI https://asc.fasb.org/1943274/2147481139/470-20-50-1E](http://www.xbrl.org/2003/role/disclosureRef-Topic 470-SubTopic 20-Name Accounting Standards Codification-Section 50-Paragraph 1E-Subparagraph (d)-Publisher FASB-URI https://asc.fasb.org/1943274/2147481139/470-20-50-1E) Reference 3: <http://fasb.org/us-gaap/role/ref/legacyRef-Name Accounting Standards Codification-Section 50-Paragraph 1-SubTopic 10-Topic 470-Publisher FASB-URI https://asc.fasb.org/1943274/2147481544/470-10-50-1> + Details Name: us-gaap\_LongTermDebtMaturitiesRepaymentsOfPrincipalInNextTwelveMonths Namespace Prefix: us-gaap\_Data Type: xbrli:monetaryItem Type Balance Type: credit Period Type: instant XML 60 R49.htm IDEA: XBRL DOCUMENT v3.24.2.u1 Notes Payable (Details Narrative) - USD (\$) 1 Months Ended 6 Months Ended Jun. 10, 2020 May 14, 2020 Sep. 12, 2019 Sep. 12, 2019 Jan. 31, 2022 Jun. 30, 2024 Jun. 30, 2023 Mar. 31, 2023 Short-Term Debt [Line Items] A A A A A A Line of credit facility, periodic payment A A A \$ 250,000 A A A Line of credit facility, maximum borrowing capacity A A \$ 500,000 A A A A Line of credit, closure of equipment A A A A A \$ 500,000 Line of credit equipments A A A A A \$ 0 May 14, 2020 [Member] A Loans Payable [Member] A A A A A A Short-Term Debt [Line Items] A A A A A A Interest rate percentage A 4.27% A A A A Principal payment A A A \$ 0 \$ 3,230 A Interest expense A A A A 0 30 A Proceeds from loans A \$ 27,494 A A A A Debt instrument periodic payments interest A \$ 815 A A A A A Repayments of debt A A A A 0 0 A June 10, 2020 [Member] A Loans Payable [Member] A A A A A A Short-Term Debt [Line Items] A A A A A A Interest rate percentage 4.28% A A A A A A Principal payment A A A A A 0 6,012 A Interest expense A A A A 0 68 A Proceeds from loans \$ 41,015 A A A A A A Debt instrument periodic payments interest \$ 1,216 A A A A A A Repayments of debt A A A A 0 0 A January 2022 [Member] A A A A A A Short-Term Debt [Line Items] A A A A A A Interest rate percentage A A A 1.90% A A A A Principal payment A A A A 0 20,751 A Interest expense A A A A 0 314 A Repayments of debt A A A A 0 \$ 20,949 A Payments of stock issuance costs A A A \$ 91,795 A A A Payments for deposits A A A 9,180 A A A Machinery financed, balance A A A \$ 82,616 A A A Number of payments A A A 24 payments A A A Promissory Note [Member] A A A A A A Short-Term Debt [Line Items] A A A A A A Total consideration paid A A 1,143,633 A A A Cash paid in acquisition, net of cash acquired A A 668,633 A A A A Consideration paid in promissory note A A \$ 475,000 A A A A Interest rate percentage A A 6.00% 6.00% A A A Debt instrument, description A A Beginning November 1, 2019, payment of principal and interest shall be due payable in fifty-nine (59) monthly payments of \$9,213 with a final payment due October 1, 2024 of \$9,203. A A A A Notes payable A A A A A 36,388 A A Principal payment A A A A 44,453 A A A Interest expense A A A A 1,615 A A X - Definition Line of credit closure of equipment. + References No definition available. + Details Name: AMPG\_LineOfCreditClosureOfEquipment Namespace Prefix: AMPG\_Data Type: xbrli:monetaryItem Type Balance Type: credit Period Type: instant X - Definition Line of credit equipments. + References No definition available. + Details Name: AMPG\_LineOfCreditEquipments Namespace Prefix: AMPG\_Data Type: xbrli:monetaryItem Type Balance Type: credit Period Type: instant X - Definition Number of payments. + References No definition available. + Details Name: AMPG\_NumberOfPayments Namespace Prefix: AMPG\_Data Type: xbrli:stringItem Type Balance Type: na Period Type: duration X - Definition Amount of consideration transferred, consisting of acquisition-date fair value of assets transferred by the acquirer, liabilities incurred by the acquirer, and equity interest issued by the acquirer. + References Reference 1: <http://fasb.org/us-gaap/role/ref/legacyRef-Name Accounting Standards Codification-Section 30-Paragraph 8-SubTopic 30-Topic 805-Publisher FASB-URI https://asc.fasb.org/1943274/2147479637/805-30-8> Reference 2: [http://fasb.org/us-gaap/role/ref/legacyRef-Name Accounting Standards Codification-Section 50-Paragraph 1-Subparagraph \(b\)-SubTopic 30-Topic 805-Publisher FASB-URI https://asc.fasb.org/1943274/2147479581/805-30-50-1](http://fasb.org/us-gaap/role/ref/legacyRef-Name Accounting Standards Codification-Section 50-Paragraph 1-Subparagraph (b)-SubTopic 30-Topic 805-Publisher FASB-URI https://asc.fasb.org/1943274/2147479581/805-30-50-1) Reference 3: <http://fasb.org/us-gaap/role/ref/legacyRef-Name Accounting Standards Codification-Section 30-Paragraph 7-SubTopic 30-Topic 805-Publisher FASB-URI https://asc.fasb.org/1943274/2147479637/805-30-7> + Details Name: us-gaap\_BusinessCombinationConsiderationTransferred1 Namespace Prefix: us-gaap\_Data Type: xbrli:monetaryItem Type Balance Type: credit Period Type: duration X - Definition Identification of the lender and information about a contractual promise to repay a short-term or long-term obligation, which includes borrowings under lines of credit, notes payable, commercial paper, bonds payable, debentures, and other contractual obligations for payment. This may include rationale for entering into the arrangement, significant terms of the arrangement, which may include amount, repayment terms, priority, collateral required, debt covenants, borrowing capacity, call features, participation rights, conversion provisions, sinking-fund requirements, voting rights, basis for conversion if convertible and remarketing provisions. The description may be provided for individual debt instruments, rational groupings of debt instruments, or by debt in total. + References Reference 1: [http://fasb.org/us-gaap/role/ref/legacyRef-Name Accounting Standards Codification-Section S99-Paragraph 1-Subparagraph \(SX 210.5-02\(22\)\)-SubTopic 10-Topic 210-Publisher FASB-URI https://asc.fasb.org/1943274/2147480566/210-10-S99-1](http://fasb.org/us-gaap/role/ref/legacyRef-Name Accounting Standards Codification-Section S99-Paragraph 1-Subparagraph (SX 210.5-02(22))-SubTopic 10-Topic 210-Publisher FASB-URI https://asc.fasb.org/1943274/2147480566/210-10-S99-1) Reference 2: [http://fasb.org/us-gaap/role/ref/legacyRef-Topic 210-SubTopic 10-Name Accounting Standards Codification-Section S99-Paragraph 1-Subparagraph \(SX 210.5-02\(19\)\)-Publisher FASB-URI https://asc.fasb.org/1943274/2147480566/210-10-S99-1](http://fasb.org/us-gaap/role/ref/legacyRef-Topic 210-SubTopic 10-Name Accounting Standards Codification-Section S99-Paragraph 1-Subparagraph (SX 210.5-02(19))-Publisher FASB-URI https://asc.fasb.org/1943274/2147480566/210-10-S99-1) Reference 3: [http://fasb.org/us-gaap/role/ref/legacyRef-Topic 942-SubTopic 210-Name Accounting Standards Codification-Section S99-Paragraph 1-Subparagraph \(SX 210.9-03\(16\)\)-Publisher FASB-URI https://asc.fasb.org/1943274/2147478546/942-210-S99-1](http://fasb.org/us-gaap/role/ref/legacyRef-Topic 942-SubTopic 210-Name Accounting Standards Codification-Section S99-Paragraph 1-Subparagraph (SX 210.9-03(16))-Publisher FASB-URI https://asc.fasb.org/1943274/2147478546/942-210-S99-1) Reference 5: [http://fasb.org/us-gaap/role/ref/legacyRef-Name Accounting Standards Codification-Section S99-Paragraph 1-Subparagraph \(SX 210.9-03\(13\)\)-Publisher FASB-URI https://asc.fasb.org/1943274/2147478546/942-210-S99-1](http://fasb.org/us-gaap/role/ref/legacyRef-Name Accounting Standards Codification-Section S99-Paragraph 1-Subparagraph (SX 210.9-03(13))-Publisher FASB-URI https://asc.fasb.org/1943274/2147478546/942-210-S99-1) Reference 6: [http://fasb.org/us-gaap/role/ref/legacyRef-Name Accounting Standards Codification-Section S99-Paragraph 3-Subparagraph \(a\)-Publisher FASB-URI https://asc.fasb.org/1943274/2147481112/505-10-50-3](http://fasb.org/us-gaap/role/ref/legacyRef-Name Accounting Standards Codification-Section S99-Paragraph 3-Subparagraph (a)-Publisher FASB-URI https://asc.fasb.org/1943274/2147481112/505-10-50-3) Reference 7: <http://www.xbrl.org/2003/role/disclosureRef-Topic 835-SubTopic 30-Name Accounting Standards Codification-Section 45-Paragraph 2-Publisher FASB-URI https://asc.fasb.org/1943274/2147482925/835-30-45-2> + Details Name: us-gaap\_DebtInstrumentDescription Namespace Prefix: us-gaap\_Data Type: xbrli:stringItem Type Balance Type: na Period Type: duration X - Definition Contractual interest rate for funds borrowed, under the debt agreement. + References Reference 1: [http://fasb.org/us-gaap/role/ref/legacyRef-Topic 210-SubTopic 10-Name Accounting Standards Codification-Section S99-Paragraph 1-Subparagraph \(SX 210.5-02\(22\)\)\(a\)\(1\)\)-Publisher FASB-URI https://asc.fasb.org/1943274/2147480566/210-10-S99-1](http://fasb.org/us-gaap/role/ref/legacyRef-Topic 210-SubTopic 10-Name Accounting Standards Codification-Section S99-Paragraph 1-Subparagraph (SX 210.5-02(22))(a)(1))-Publisher FASB-URI https://asc.fasb.org/1943274/2147480566/210-10-S99-1) Reference 2: [http://www.xbrl.org/2003/role/disclosureRef-Topic 470-SubTopic 20-Name Accounting Standards Codification-Section 50-Paragraph 1B-Subparagraph \(b\)-Publisher FASB-URI https://asc.fasb.org/1943274/2147481139/470-20-50-1B](http://www.xbrl.org/2003/role/disclosureRef-Topic 470-SubTopic 20-Name Accounting Standards Codification-Section 50-Paragraph 1B-Subparagraph (b)-Publisher FASB-URI https://asc.fasb.org/1943274/2147481139/470-20-50-1B) + Details Name: us-gaap\_DebtInstrumentInterestRateStatedPercentage Namespace Prefix: us-gaap\_Data Type: dtr-types:percentItem Type Balance Type: na Period Type: instant X - Definition Amount of the required periodic payments applied to interest. + References Reference 1: [http://fasb.org/us-gaap/role/ref/legacyRef-Name Accounting Standards Codification-Section S99-Paragraph 1-Subparagraph \(SX 210.5-02\(22\)\)-SubTopic 10-Topic 210-Publisher FASB-URI https://asc.fasb.org/1943274/2147480566/210-10-S99-1](http://fasb.org/us-gaap/role/ref/legacyRef-Name Accounting Standards Codification-Section S99-Paragraph 1-Subparagraph (SX 210.5-02(22))-SubTopic 10-Topic 210-Publisher FASB-URI https://asc.fasb.org/1943274/2147480566/210-10-S99-1) + Details Name: us-gaap\_DebtInstrumentPeriodicPaymentInterest Namespace Prefix: us-gaap\_Data Type: xbrli:monetaryItem Type Balance Type: debit Period Type: duration X - Definition Amount of the required periodic payments applied to principal. + References Reference 1: [http://fasb.org/us-gaap/role/ref/legacyRef-Name Accounting Standards Codification-Section S99-Paragraph 1-Subparagraph \(SX 210.5-02\(22\)\)-SubTopic 10-Topic 210-Publisher FASB-URI https://asc.fasb.org/1943274/2147480566/210-10-S99-1](http://fasb.org/us-gaap/role/ref/legacyRef-Name Accounting Standards Codification-Section S99-Paragraph 1-Subparagraph (SX 210.5-02(22))-SubTopic 10-Topic 210-Publisher FASB-URI https://asc.fasb.org/1943274/2147480566/210-10-S99-1) + Details Name: us-gaap\_DebtInstrumentPeriodicPaymentPrincipal Namespace Prefix: us-gaap\_Data Type: xbrli:monetaryItem Type Balance Type: debit Period Type: duration X - Definition This element represents interest incurred for borrowed money which was used to produce goods or render services. + References Reference 1: [http://fasb.org/us-gaap/role/ref/legacyRef-Topic 220-SubTopic 10-Name Accounting Standards Codification-Section S99-Paragraph 2-Subparagraph \(SX 210.5-03\(2\)\)-Publisher FASB-URI https://asc.fasb.org/1943274/2147483621/220-10-S99-2](http://fasb.org/us-gaap/role/ref/legacyRef-Topic 220-SubTopic 10-Name Accounting Standards Codification-Section S99-Paragraph 2-Subparagraph (SX 210.5-03(2))-Publisher FASB-URI https://asc.fasb.org/1943274/2147483621/220-10-S99-2) + Details Name: us-gaap\_FinancingInterestExpense Namespace Prefix: us-gaap\_Data Type: xbrli:monetaryItem Type Balance Type: debit Period Type: duration X - Definition Amount of interest expense classified as operating and nonoperating. Includes, but is not limited to, cost of borrowing accounted for as interest expense. + References Reference 1: [http://www.xbrl.org/2003/role/disclosureRef-Topic 280-SubTopic 10-Name Accounting Standards Codification-Section 50-Paragraph 22-Subparagraph \(d\)-Publisher FASB-URI https://asc.fasb.org/1943274/2147482810/280-10-50-22](http://www.xbrl.org/2003/role/disclosureRef-Topic 280-SubTopic 10-Name Accounting Standards Codification-Section 50-Paragraph 22-Subparagraph (d)-Publisher FASB-URI https://asc.fasb.org/1943274/2147482810/280-10-50-22) Reference 2: <http://www.xbrl.org/2003/role/exampleRef-Topic 280-SubTopic 10-Name Accounting Standards Codification-Section 55-Paragraph 48-Publisher FASB-URI https://asc.fasb.org/1943274/2147482785/280-10-55-48> Reference 3:

<http://www.xbrl.org/2003/role/exampleRef-Topic 280 -SubTopic 10 -Name Accounting Standards Codification -Section 55 -Paragraph 49 -Publisher FASB -URI https://asc.fasb.org/1943274/2147482785/280-10-55-49>Reference 4: [http://www.xbrl.org/2003/role/disclosureRef -Topic 270 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 1 -Subparagraph \(i\) -Publisher FASB -URI https://asc.fasb.org/1943274/2147482964/270-10-50-1](http://www.xbrl.org/2003/role/disclosureRef -Topic 270 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 1 -Subparagraph (i) -Publisher FASB -URI https://asc.fasb.org/1943274/2147482964/270-10-50-1)Reference 5: [http://www.xbrl.org/2003/role/disclosureRef -Topic 280 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 32 -Subparagraph \(ee\) -Publisher FASB -URI https://asc.fasb.org/1943274/2147482810/280-10-50-32](http://www.xbrl.org/2003/role/disclosureRef -Topic 280 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 32 -Subparagraph (ee) -Publisher FASB -URI https://asc.fasb.org/1943274/2147482810/280-10-50-32)Reference 6: <http://www.xbrl.org/2003/role/disclosureRef -Topic 280 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 24 -Publisher FASB -URI https://asc.fasb.org/1943274/2147482810/280-10-50-24>Reference 7: <http://www.xbrl.org/2003/role/disclosureRef -Topic 280 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 22 -Publisher FASB -URI https://asc.fasb.org/1943274/2147482810/280-10-50-22>Reference 8: [http://www.xbrl.org/2003/role/disclosureRef -Topic 835 -SubTopic 20 -Name Accounting Standards Codification -Section 50 -Paragraph 1 -Subparagraph \(a\) -Publisher FASB -URI https://asc.fasb.org/1943274/2147483013/835-20-50-1](http://www.xbrl.org/2003/role/disclosureRef -Topic 835 -SubTopic 20 -Name Accounting Standards Codification -Section 50 -Paragraph 1 -Subparagraph (a) -Publisher FASB -URI https://asc.fasb.org/1943274/2147483013/835-20-50-1) + Details Name: us-gaap InterestExpense Namespace Prefix: us-gaap Data Type: xbrli:monetaryItemType Balance Type: debit Period Type: duration X - DefinitionMaximum borrowing capacity under the credit facility without consideration of any current restrictions on the amount that could be borrowed or the amounts currently outstanding under the facility. + ReferencesReference 1: [http://fasb.org/us-gaap/role/ref/legacyRef -Topic 210 -SubTopic 10 -Name Accounting Standards Codification -Section S99 -Paragraph 1 -Subparagraph \(SX 210.5-02\(22\)\(b\)\) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480566/210-10-50-22](http://fasb.org/us-gaap/role/ref/legacyRef -Topic 210 -SubTopic 10 -Name Accounting Standards Codification -Section S99 -Paragraph 1 -Subparagraph (SX 210.5-02(22)(b)) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480566/210-10-50-22)Reference 2: [http://fasb.org/us-gaap/role/ref/legacyRef -Topic 210 -SubTopic 10 -Name Accounting Standards Codification -Section S99 -Paragraph 1 -Subparagraph \(SX 210.5-02\(19\)\(b\)\) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480566/210-10-50-19](http://fasb.org/us-gaap/role/ref/legacyRef -Topic 210 -SubTopic 10 -Name Accounting Standards Codification -Section S99 -Paragraph 1 -Subparagraph (SX 210.5-02(19)(b)) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480566/210-10-50-19) + Details Name: us-gaap LineOfCreditFacilityMaximumBorrowingCapacity Namespace Prefix: us-gaap Data Type: xbrli:monetaryItemType Balance Type: credit Period Type: instant X - DefinitionAmount of the required periodic payments of both interest and principal. + ReferencesReference 1: [http://fasb.org/us-gaap/role/ref/legacyRef -Topic 210 -SubTopic 10 -Name Accounting Standards Codification -Section S99 -Paragraph 1 -Subparagraph \(SX 210.5-02\(22\)\(b\)\) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480566/210-10-50-22](http://fasb.org/us-gaap/role/ref/legacyRef -Topic 210 -SubTopic 10 -Name Accounting Standards Codification -Section S99 -Paragraph 1 -Subparagraph (SX 210.5-02(22)(b)) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480566/210-10-50-22)Reference 2: [http://fasb.org/us-gaap/role/ref/legacyRef -Topic 210 -SubTopic 10 -Name Accounting Standards Codification -Section S99 -Paragraph 1 -Subparagraph \(SX 210.5-02\(19\)\(b\)\) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480566/210-10-50-19](http://fasb.org/us-gaap/role/ref/legacyRef -Topic 210 -SubTopic 10 -Name Accounting Standards Codification -Section S99 -Paragraph 1 -Subparagraph (SX 210.5-02(19)(b)) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480566/210-10-50-19) + Details Name: us-gaap LineOfCreditFacilityPeriodicPayment Namespace Prefix: us-gaap Data Type: xbrli:monetaryItemType Balance Type: debit Period Type: duration X - DefinitionIncluding the current and noncurrent portions, aggregate carrying amount of all types of notes payable, as of the balance sheet date, with initial maturities beyond one year or beyond the normal operating cycle, if longer. + ReferencesReference 1: [http://fasb.org/us-gaap/role/ref/legacyRef -Name Accounting Standards Codification -Section S99 -Paragraph 1 -Subparagraph \(SX 210.5-02\(22\)\) -SubTopic 10 -Topic 210 -Publisher FASB -URI https://asc.fasb.org/1943274/2147480566/210-10-50-22](http://fasb.org/us-gaap/role/ref/legacyRef -Name Accounting Standards Codification -Section S99 -Paragraph 1 -Subparagraph (SX 210.5-02(22)) -SubTopic 10 -Topic 210 -Publisher FASB -URI https://asc.fasb.org/1943274/2147480566/210-10-50-22)Reference 2: [http://fasb.org/us-gaap/role/ref/legacyRef -Topic 942 -SubTopic 210 -Name Accounting Standards Codification -Section S99 -Paragraph 1 -Subparagraph \(SX 210.9-03\(16\)\) -Publisher FASB -URI https://asc.fasb.org/1943274/2147485466/942-210-9-03-16](http://fasb.org/us-gaap/role/ref/legacyRef -Topic 942 -SubTopic 210 -Name Accounting Standards Codification -Section S99 -Paragraph 1 -Subparagraph (SX 210.9-03(16)) -Publisher FASB -URI https://asc.fasb.org/1943274/2147485466/942-210-9-03-16)Reference 3: [http://www.xbrl.org/2009/role/commonPracticeRef -Topic 944 -SubTopic 210 -Name Accounting Standards Codification -Section S99 -Paragraph 1 -Subparagraph \(SX 210.7-03\(a\)\(16\)\(a\)\(2\)\) -Publisher FASB -URI https://asc.fasb.org/1943274/214748777/944-210-7-03\(a\)\(16\)\(a\)\(2\)](http://www.xbrl.org/2009/role/commonPracticeRef -Topic 944 -SubTopic 210 -Name Accounting Standards Codification -Section S99 -Paragraph 1 -Subparagraph (SX 210.7-03(a)(16)(a)(2)) -Publisher FASB -URI https://asc.fasb.org/1943274/214748777/944-210-7-03(a)(16)(a)(2))Reference 4: [http://www.xbrl.org/2009/role/commonPracticeRef -Topic 944 -SubTopic 210 -Name Accounting Standards Codification -Section S99 -Paragraph 1 -Subparagraph \(SX 210.7-03\(a\)\(17\)\) -Publisher FASB -URI https://asc.fasb.org/1943274/214748777/944-210-7-03\(a\)\(17\)](http://www.xbrl.org/2009/role/commonPracticeRef -Topic 944 -SubTopic 210 -Name Accounting Standards Codification -Section S99 -Paragraph 1 -Subparagraph (SX 210.7-03(a)(17)) -Publisher FASB -URI https://asc.fasb.org/1943274/214748777/944-210-7-03(a)(17)) + Details Name: us-gaap NotesPayable Namespace Prefix: us-gaap Data Type: xbrli:monetaryItemType Balance Type: credit Period Type: instant X - DefinitionThe amount of cash paid for deposits on goods and services during the period; excludes time deposits and deposits with other institutions, which pertain to financial service entities. + ReferencesReference 1: [http://www.xbrl.org/2009/role/commonPracticeRef -Topic 230 -SubTopic 10 -Name Accounting Standards Codification -Section 45 -Paragraph 17 -Subparagraph \(b\) -Publisher FASB -URI https://asc.fasb.org/1943274/2147482740/230-10-45-17](http://www.xbrl.org/2009/role/commonPracticeRef -Topic 230 -SubTopic 10 -Name Accounting Standards Codification -Section 45 -Paragraph 17 -Subparagraph (b) -Publisher FASB -URI https://asc.fasb.org/1943274/2147482740/230-10-45-17)Reference 2: [http://www.xbrl.org/2009/role/commonPracticeRef -Topic 230 -SubTopic 10 -Name Accounting Standards Codification -Section 45 -Paragraph 17 -Subparagraph \(a\) -Publisher FASB -URI https://asc.fasb.org/1943274/2147482740/230-10-45-17](http://www.xbrl.org/2009/role/commonPracticeRef -Topic 230 -SubTopic 10 -Name Accounting Standards Codification -Section 45 -Paragraph 17 -Subparagraph (a) -Publisher FASB -URI https://asc.fasb.org/1943274/2147482740/230-10-45-17) + Details Name: us-gaap PaymentsForDeposits Namespace Prefix: us-gaap Data Type: xbrli:monetaryItemType Balance Type: credit Period Type: duration X - DefinitionThe cash outflow for cost incurred directly with the issuance of an equity security. + ReferencesReference 1: <http://fasb.org/us-gaap/role/ref/legacyRef -Name Accounting Standards Codification -Topic 230 -SubTopic 10 -Section 45 -Paragraph 15 -Publisher FASB -URI https://asc.fasb.org/1943274/2147482740/230-10-45-15> + Details Name: us-gaap PaymentsOfStockIssuanceCosts Namespace Prefix: us-gaap Data Type: xbrli:monetaryItemType Balance Type: credit Period Type: duration X - DefinitionThe cash outflow associated with the acquisition of a business, net of the cash acquired from the purchase. + ReferencesReference 1: [http://fasb.org/us-gaap/role/ref/legacyRef -Name Accounting Standards Codification -Topic 230 -SubTopic 10 -Section 45 -Paragraph 13 -Subparagraph \(b\) -Publisher FASB -URI https://asc.fasb.org/1943274/2147482740/230-10-45-13](http://fasb.org/us-gaap/role/ref/legacyRef -Name Accounting Standards Codification -Topic 230 -SubTopic 10 -Section 45 -Paragraph 13 -Subparagraph (b) -Publisher FASB -URI https://asc.fasb.org/1943274/2147482740/230-10-45-13) + Details Name: us-gaap PaymentsToAcquireBusinessesNetOfCashAcquired Namespace Prefix: us-gaap Data Type: xbrli:monetaryItemType Balance Type: credit Period Type: duration X - DefinitionCash received from principal payments made on loans related to operating activities. + ReferencesReference 1: [http://fasb.org/us-gaap/role/ref/legacyRef -Topic 230 -SubTopic 10 -Name Accounting Standards Codification -Section 45 -Paragraph 25 -Subparagraph \(c\) -Publisher FASB -URI https://asc.fasb.org/1943274/2147482740/230-10-45-25](http://fasb.org/us-gaap/role/ref/legacyRef -Topic 230 -SubTopic 10 -Name Accounting Standards Codification -Section 45 -Paragraph 25 -Subparagraph (c) -Publisher FASB -URI https://asc.fasb.org/1943274/2147482740/230-10-45-25) + Details Name: us-gaap ProceedsFromLoans Namespace Prefix: us-gaap Data Type: xbrli:monetaryItemType Balance Type: debit Period Type: duration X - DefinitionThe cash inflow from a borrowing supported by a written promise to pay an obligation. + ReferencesReference 1: [http://fasb.org/us-gaap/role/ref/legacyRef -Name Accounting Standards Codification -Topic 230 -SubTopic 10 -Section 45 -Paragraph 14 -Subparagraph \(b\) -Publisher FASB -URI https://asc.fasb.org/1943274/2147482740/230-10-45-14](http://fasb.org/us-gaap/role/ref/legacyRef -Name Accounting Standards Codification -Topic 230 -SubTopic 10 -Section 45 -Paragraph 14 -Subparagraph (b) -Publisher FASB -URI https://asc.fasb.org/1943274/2147482740/230-10-45-14) + Details Name: us-gaap ProceedsFromNotesPayable Namespace Prefix: us-gaap Data Type: xbrli:monetaryItemType Balance Type: debit Period Type: duration X - DefinitionAmount of cash outflow for short-term and long-term debt. Excludes payment of lease obligation. + ReferencesReference 1: [http://www.xbrl.org/2009/role/commonPracticeRef -Topic 230 -SubTopic 10 -Name Accounting Standards Codification -Section 45 -Paragraph 15 -Subparagraph \(b\) -Publisher FASB -URI https://asc.fasb.org/1943274/2147482740/230-10-45-15](http://www.xbrl.org/2009/role/commonPracticeRef -Topic 230 -SubTopic 10 -Name Accounting Standards Codification -Section 45 -Paragraph 15 -Subparagraph (b) -Publisher FASB -URI https://asc.fasb.org/1943274/2147482740/230-10-45-15) + Details Name: us-gaap RepaymentsOfDebt Namespace Prefix: us-gaap Data Type: xbrli:monetaryItemType Balance Type: credit Period Type: duration X - DefinitionLine items represent financial concepts included in a table. These concepts are used to disclose reportable information associated with domain members defined in one or many axes to the table. + ReferencesNo definition available. + Details Name: us-gaap ShortTermDebtLineItems Namespace Prefix: us-gaap Data Type: xbrli:stringItemType Balance Type: na Period Type: duration X - Details Name: us-gaap AwardDateAxis=AMPG MayFourteenTwoThousandAndTwentyMember Namespace Prefix: Data Type: na Balance Type: Period Type: X - Details Name: us-gaap AwardDateAxis=AMPG JuneTenTwentyTwentyMember Namespace Prefix: Data Type: na Balance Type: Period Type: X - Details Name: us-gaap AwardDateAxis=AMPG JanuaryTwoThousandTwentyTwoMember Namespace Prefix: Data Type: na Balance Type: Period Type: X - Details Name: us-gaap DebtInstrumentAxis=AMPG PromissoryNoteMember Namespace Prefix: Data Type: na Balance Type: Period Type: XML 61 R50.htm IDEA: XBRL DOCUMENT v3.24.2.u1 Schedule of Stock Options Outstanding (Details) - Share-Based Payment Arrangement, Option [Member] 6 Months Ended Jun. 30, 2024 \$ / shares Share-Based Compensation Arrangement by Share-Based Payment Award [Line Items] A Number of Options, Outstanding | shares 1,236,000 Weighted Average Exercise Price, Outstanding | \$ / shares \$ 2.30 Number of Options, Granted | shares 57,500 Weighted Average Exercise Price, Granted | \$ / shares \$ 2.15 Number of Options, Exercised | shares 293,500 Weighted Average Exercise Price, Exercised | \$ / shares Number of Options, Expired | shares 604,810 Weighted Average Exercise Price, Exercisable | \$ / shares 2.76 X - DefinitionLine items represent financial concepts included in a table. These concepts are used to disclose reportable information associated with domain members defined in one or many axes to the table. + ReferencesReference 1: <http://www.xbrl.org/2003/role/disclosureRef -Topic 718 -SubTopic 10 -Name Accounting Standards Codification -Section 35 -Paragraph 1D -Publisher FASB -URI https://asc.fasb.org/1943274/2147480483/718-10-35-1D>Reference 2: <http://www.xbrl.org/2003/role/disclosureRef -Topic 718 -SubTopic 10 -Name Accounting Standards Codification -Section 35 -Paragraph 3 -Publisher FASB -URI https://asc.fasb.org/1943274/2147480483/718-10-35-3>Reference 3: [http://www.xbrl.org/2003/role/disclosureRef -Topic 718 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 2 -Subparagraph \(a\)\(1\) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480429/718-10-50-2](http://www.xbrl.org/2003/role/disclosureRef -Topic 718 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 2 -Subparagraph (a)(1) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480429/718-10-50-2)Reference 4: [http://www.xbrl.org/2003/role/disclosureRef -Topic 718 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 2 -Subparagraph \(a\)\(2\) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480429/718-10-50-2](http://www.xbrl.org/2003/role/disclosureRef -Topic 718 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 2 -Subparagraph (a)(2) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480429/718-10-50-2)Reference 5: [http://www.xbrl.org/2003/role/disclosureRef -Topic 718 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 2 -Subparagraph \(a\)\(3\) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480429/718-10-50-2](http://www.xbrl.org/2003/role/disclosureRef -Topic 718 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 2 -Subparagraph (a)(3) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480429/718-10-50-2)Reference 6: [http://www.xbrl.org/2003/role/disclosureRef -Topic 718 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 2 -Subparagraph \(c\)\(1\)\(i\) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480429/718-10-50-2](http://www.xbrl.org/2003/role/disclosureRef -Topic 718 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 2 -Subparagraph (c)(1)(i) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480429/718-10-50-2)Reference 7: [http://www.xbrl.org/2003/role/disclosureRef -Topic 718 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 2 -Subparagraph \(c\)\(1\)\(ii\) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480429/718-10-50-2](http://www.xbrl.org/2003/role/disclosureRef -Topic 718 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 2 -Subparagraph (c)(1)(ii) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480429/718-10-50-2)Reference 8: [http://www.xbrl.org/2003/role/disclosureRef -Topic 718 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 2 -Subparagraph \(c\)\(1\)\(iii\) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480429/718-10-50-2](http://www.xbrl.org/2003/role/disclosureRef -Topic 718 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 2 -Subparagraph (c)(1)(iii) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480429/718-10-50-2)Reference 9: [http://www.xbrl.org/2003/role/disclosureRef -Topic 718 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 2 -Subparagraph \(c\)\(1\)\(iv\) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480429/718-10-50-2](http://www.xbrl.org/2003/role/disclosureRef -Topic 718 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 2 -Subparagraph (c)(1)(iv) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480429/718-10-50-2)Reference 10: [http://www.xbrl.org/2003/role/disclosureRef -Topic 718 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 2 -Subparagraph \(c\)\(1\)\(iv\)\(01\) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480429/718-10-50-2](http://www.xbrl.org/2003/role/disclosureRef -Topic 718 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 2 -Subparagraph (c)(1)(iv)(01) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480429/718-10-50-2)Reference 11: [http://www.xbrl.org/2003/role/disclosureRef -Topic 718 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 2 -Subparagraph \(c\)\(1\)\(iv\)\(02\) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480429/718-10-50-2](http://www.xbrl.org/2003/role/disclosureRef -Topic 718 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 2 -Subparagraph (c)(1)(iv)(02) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480429/718-10-50-2)Reference 12: [http://www.xbrl.org/2003/role/disclosureRef -Topic 718 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 2 -Subparagraph \(c\)\(2\)\(i\) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480429/718-10-50-2](http://www.xbrl.org/2003/role/disclosureRef -Topic 718 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 2 -Subparagraph (c)(2)(i) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480429/718-10-50-2)Reference 13: [http://www.xbrl.org/2003/role/disclosureRef -Topic 718 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 2 -Subparagraph \(c\)\(2\)\(ii\) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480429/718-10-50-2](http://www.xbrl.org/2003/role/disclosureRef -Topic 718 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 2 -Subparagraph (c)(2)(ii) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480429/718-10-50-2)Reference 14: [http://www.xbrl.org/2003/role/disclosureRef -Topic 718 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 2 -Subparagraph \(c\)\(2\)\(iii\) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480429/718-10-50-2](http://www.xbrl.org/2003/role/disclosureRef -Topic 718 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 2 -Subparagraph (c)(2)(iii) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480429/718-10-50-2)Reference 15: [http://www.xbrl.org/2003/role/disclosureRef -Topic 718 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 2 -Subparagraph \(c\)\(2\)\(iv\) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480429/718-10-50-2](http://www.xbrl.org/2003/role/disclosureRef -Topic 718 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 2 -Subparagraph (c)(2)(iv) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480429/718-10-50-2)Reference 16: [http://www.xbrl.org/2003/role/disclosureRef -Topic 718 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 2 -Subparagraph \(c\)\(2\)\(v\) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480429/718-10-50-2](http://www.xbrl.org/2003/role/disclosureRef -Topic 718 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 2 -Subparagraph (c)(2)(v) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480429/718-10-50-2)Reference 17: [http://www.xbrl.org/2003/role/disclosureRef -Topic 718 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 2 -Subparagraph \(c\)\(2\)\(iii\)\(01\) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480429/718-10-50-2](http://www.xbrl.org/2003/role/disclosureRef -Topic 718 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 2 -Subparagraph (c)(2)(iii)(01) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480429/718-10-50-2)Reference 18: [http://www.xbrl.org/2003/role/disclosureRef -Topic 718 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 2 -Subparagraph \(c\)\(2\)\(iii\)\(02\) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480429/718-10-50-2](http://www.xbrl.org/2003/role/disclosureRef -Topic 718 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 2 -Subparagraph (c)(2)(iii)(02) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480429/718-10-50-2)Reference 19: [http://www.xbrl.org/2003/role/disclosureRef -Topic 718 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 2 -Subparagraph \(c\)\(2\)\(iii\)\(03\) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480429/718-10-50-2](http://www.xbrl.org/2003/role/disclosureRef -Topic 718 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 2 -Subparagraph (c)(2)(iii)(03) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480429/718-10-50-2)Reference 20: [http://www.xbrl.org/2003/role/disclosureRef -Topic 718 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 2 -Subparagraph \(d\)\(1\) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480429/718-10-50-2](http://www.xbrl.org/2003/role/disclosureRef -Topic 718 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 2 -Subparagraph (d)(1) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480429/718-10-50-2)Reference 21: [http://www.xbrl.org/2003/role/disclosureRef -Topic 718 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 2 -Subparagraph \(d\)\(2\) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480429/718-10-50-2](http://www.xbrl.org/2003/role/disclosureRef -Topic 718 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 2 -Subparagraph (d)(2) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480429/718-10-50-2)Reference 22: [http://www.xbrl.org/2003/role/disclosureRef -Topic 718 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 2 -Subparagraph \(e\)\(1\) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480429/718-10-50-2](http://www.xbrl.org/2003/role/disclosureRef -Topic 718 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 2 -Subparagraph (e)(1) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480429/718-10-50-2)Reference 23: [http://www.xbrl.org/2003/role/disclosureRef -Topic 718 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 2 -Subparagraph \(e\)\(2\) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480429/718-10-50-2](http://www.xbrl.org/2003/role/disclosureRef -Topic 718 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 2 -Subparagraph (e)(2) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480429/718-10-50-2)Reference 24: [http://www.xbrl.org/2003/role/disclosureRef -Topic 718 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 2 -Subparagraph \(f\)\(2\)\(i\) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480429/718-10-50-2](http://www.xbrl.org/2003/role/disclosureRef -Topic 718 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 2 -Subparagraph (f)(2)(i) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480429/718-10-50-2)Reference 25: [http://www.xbrl.org/2003/role/disclosureRef -Topic 718 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 2 -Subparagraph \(f\)\(2\)\(ii\) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480429/718-10-50-2](http://www.xbrl.org/2003/role/disclosureRef -Topic 718 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 2 -Subparagraph (f)(2)(ii) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480429/718-10-50-2)Reference 26: [http://www.xbrl.org/2003/role/disclosureRef -Topic 718 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 2 -Subparagraph \(f\)\(2\)\(iii\) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480429/718-10-50-2](http://www.xbrl.org/2003/role/disclosureRef -Topic 718 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 2 -Subparagraph (f)(2)(iii) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480429/718-10-50-2)Reference 27: [http://www.xbrl.org/2003/role/disclosureRef -Topic 718 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 2 -Subparagraph \(f\)\(2\)\(iv\) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480429/718-10-50-2](http://www.xbrl.org/2003/role/disclosureRef -Topic 718 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 2 -Subparagraph (f)(2)(iv) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480429/718-10-50-2)Reference 28: [http://www.xbrl.org/2003/role/disclosureRef -Topic 718 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 2 -Subparagraph \(f\)\(2\)\(v\) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480429/718-10-50-2](http://www.xbrl.org/2003/role/disclosureRef -Topic 718 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 2 -Subparagraph (f)(2)(v) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480429/718-10-50-2) + Details Name: us-gaap ShareBasedCompensationArrangementByShareBasedPaymentAwardLineItems Namespace Prefix: us-gaap Data Type: xbrli:stringItemType Balance Type: na Period Type: duration X - DefinitionThe number of shares into which fully or partially vested stock options outstanding as of the balance sheet date can be currently converted under the option plan. + ReferencesReference 1: [http://www.xbrl.org/2003/role/disclosureRef -Topic 718 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 2 -Subparagraph \(c\)\(1\)\(iii\) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480429/718-10-50-2](http://www.xbrl.org/2003/role/disclosureRef -Topic 718 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 2 -Subparagraph (c)(1)(iii) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480429/718-10-50-2) + Details Name: us-gaap ShareBasedCompensationArrangementByShareBasedPaymentAwardOptionsExercisableNumber Namespace Prefix: us-gaap Data Type: xbrli:sharesItemType Balance Type: na Period Type: instant X - DefinitionThe weighted-average price as of the balance sheet date at which grantees can acquire the shares reserved for issuance on vested portions of options outstanding and currently exercisable under the stock option plan. + ReferencesReference 1: [http://www.xbrl.org/2003/role/disclosureRef -Topic 718 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 2 -Subparagraph \(c\)\(1\)\(iii\) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480429/718-10-50-2](http://www.xbrl.org/2003/role/disclosureRef -Topic 718 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 2 -Subparagraph (c)(1)(iii) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480429/718-10-50-2) + Details Name: us-gaap ShareBasedCompensationArrangementByShareBasedPaymentAwardOptionsExercisableWeightedAverageExercisePrice Namespace Prefix: us-gaap Data Type: dt-types:perShareItemType Balance Type: na Period Type: instant X - DefinitionNumber of options or other stock instruments for which the right to exercise has lapsed under the terms of the plan agreements. + ReferencesReference 1: [http://www.xbrl.org/2003/role/disclosureRef -Topic 718 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 2 -Subparagraph \(c\)\(1\)\(iv\)\(04\) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480429/718-10-50-2](http://www.xbrl.org/2003/role/disclosureRef -Topic 718 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 2 -Subparagraph (c)(1)(iv)(04) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480429/718-10-50-2) + Details Name: us-gaap ShareBasedCompensationArrangementByShareBasedPaymentAwardOptionsExpirationsInPeriodNamespace Prefix: us-gaap Data Type: xbrli:sharesItemType Balance Type: na Period Type: duration

gaap\_ShareBasedCompensationArrangementByShareBasedPaymentAwardOptionsOutstandingWeightedAverageExercisePrice Namespace Prefix: us-gaap\_Data Type: dtr-  
types:perShareItem Type Balance Type: na Period Type: instant X - DefinitionWeighted average price at which option holders acquired shares when converting their stock options into shares. +  
ReferencesReference 1: [http://www.xbrl.org/2003/role/disclosureRef-Topic 718-SubTopic 10-Name Accounting Standards Codification-Section 50-Paragraph 2-Subparagraph \(c\)\(1\)\(iv\)\(02\)-Publisher FASB-URI https://asc.fasb.org/1943274/2147480429/718-10-50-2](http://www.xbrl.org/2003/role/disclosureRef-Topic 718-SubTopic 10-Name Accounting Standards Codification-Section 50-Paragraph 2-Subparagraph (c)(1)(iv)(02)-Publisher FASB-URI https://asc.fasb.org/1943274/2147480429/718-10-50-2) + Details Name: us-  
gaap\_ShareBasedCompensationArrangementByShareBasedPaymentAwardOptionsExercisesInPeriodWeightedAverageExercisePrice Namespace Prefix: us-gaap\_Data Type: dtr-  
types:perShareItem Type Balance Type: na Period Type: duration X - DefinitionWeighted average price at which grantees could have acquired the underlying shares with respect to stock options  
of the plan that expired. + ReferencesReference 1: [http://www.xbrl.org/2003/role/disclosureRef-Topic 718-SubTopic 10-Name Accounting Standards Codification-Section 50-Paragraph 2-Subparagraph \(c\)\(1\)\(iv\)\(04\)-Publisher FASB-URI https://asc.fasb.org/1943274/2147480429/718-10-50-2](http://www.xbrl.org/2003/role/disclosureRef-Topic 718-SubTopic 10-Name Accounting Standards Codification-Section 50-Paragraph 2-Subparagraph (c)(1)(iv)(04)-Publisher FASB-URI https://asc.fasb.org/1943274/2147480429/718-10-50-2) + Details Name: us-  
gaap\_ShareBasedCompensationArrangementByShareBasedPaymentAwardOptionsExpirationsInPeriodWeightedAverageExercisePrice Namespace Prefix: us-gaap\_Data Type: dtr-  
types:perShareItem Type Balance Type: na Period Type: duration X - DefinitionWeighted average per share amount at which grantees can acquire shares of common stock by exercise of options.  
+ ReferencesReference 1: [http://www.xbrl.org/2003/role/disclosureRef-Topic 718-SubTopic 10-Name Accounting Standards Codification-Section 50-Paragraph 2-Subparagraph \(c\)\(1\)\(iv\)\(01\)-Publisher FASB-URI https://asc.fasb.org/1943274/2147480429/718-10-50-2](http://www.xbrl.org/2003/role/disclosureRef-Topic 718-SubTopic 10-Name Accounting Standards Codification-Section 50-Paragraph 2-Subparagraph (c)(1)(iv)(01)-Publisher FASB-URI https://asc.fasb.org/1943274/2147480429/718-10-50-2) + Details Name: us-  
gaap\_ShareBasedCompensationArrangementByShareBasedPaymentAwardOptionsGrantsInPeriodWeightedAverageExercisePrice Namespace Prefix: us-gaap\_Data Type: dtr-  
types:perShareItem Type Balance Type: na Period Type: duration X - DefinitionNumber of share options (or share units) exercised during the current period. + ReferencesReference 1:  
<http://fasb.org/us-gaap/role/ref/legacyRef-Name Accounting Standards Codification-Section 50-Paragraph 2-SubTopic 10-Topic 505-Publisher FASB-URI https://asc.fasb.org/1943274/2147480429/718-10-50-2>Reference 2: [http://www.xbrl.org/2003/role/disclosureRef-Topic 718-SubTopic 10-Name Accounting Standards Codification-Section 50-Paragraph 2-Subparagraph \(c\)\(1\)\(iv\)\(02\)-Publisher FASB-URI https://asc.fasb.org/1943274/2147480429/718-10-50-2](http://fasb.org/us-gaap/role/ref/legacyRef-Topic 210-SubTopic 10-Name Accounting Standards Codification-Section S99-Paragraph 1-Subparagraph (SX 210.3-02)(28)-Publisher FASB-URI https://asc.fasb.org/1943274/2147480566/210-10-S99-1-Reference 3: http://fasb.org/us-gaap/role/ref/legacyRef-Topic 210-SubTopic 10-Name Accounting Standards Codification-Section S99-Paragraph 1-Subparagraph (SX 210.5-02)(29)-Publisher FASB-URI https://asc.fasb.org/1943274/2147480566/210-10-S99-1-Reference 4: http://www.xbrl.org/2003/role/disclosureRef-Topic 718-SubTopic 10-Name Accounting Standards Codification-Section 50-Paragraph 2-Subparagraph (c)(1)(iv)(02)-Publisher FASB-URI https://asc.fasb.org/1943274/2147480429/718-10-50-2)Reference 5: [http://fasb.org/us-gaap/role/ref/legacyRef-Topic 505-SubTopic 10-Name Accounting Standards Codification-Section S99-Paragraph 1-Subparagraph \(SX 210.3-04\)-Publisher FASB-URI https://asc.fasb.org/1943274/2147480008/505-10-S99-1](http://fasb.org/us-gaap/role/ref/legacyRef-Topic 505-SubTopic 10-Name Accounting Standards Codification-Section S99-Paragraph 1-Subparagraph (SX 210.3-04)-Publisher FASB-URI https://asc.fasb.org/1943274/2147480008/505-10-S99-1) + Details Name: us-  
gaap\_StockIssuedDuringPeriodSharesStockOptionsExercised Namespace Prefix: us-gaap\_Data Type: xbrli:sharesItem Type Balance Type: na Period Type: duration X - Details Name: us-  
gaap\_AwardTypeAxis-us-gaap\_EmployeeStockOptionMember Namespace Prefix: Data Type: na Balance Type: Period Type: XML 62 R51.htm IDEA: XBRL DOCUMENT v3.24.2.u1 Schedule of  
Warrants Outstanding (Details) - Warrant [Member] 6 Months Ended Jun. 30, 2024 \$ / shares shares Share-Based Compensation Arrangement by Share-Based Payment Award [Line Items] A  
Number of Warrants, Outstanding shares 3,296,942 Weighted Average Exercise Price, Outstanding shares | \$ / shares \$ 7.83 Number of Warrants, Granted shares Weighted Average Exercise  
Price Outstanding, Granted shares | \$ / shares Number of Warrants, Exercised shares Number of Warrants, Expired shares Number of Warrants, Outstanding shares 3,296,942 Weighted  
Average Exercise Price, Outstanding shares | \$ / shares \$ 7.83 Number of Warrants, Exercisable shares 3,296,942 Weighted Average Exercise Price, Exercisable shares | \$ / shares \$ 7.83 X -  
DefinitionShare based compensation arrangement by share based payment award non option equity instruments exercisable number. + ReferencesNo definition available. + Details Name:  
AMPG\_ShareBasedCompensationArrangementByShareBasedPaymentAwardNonOptionEquityInstrumentsExercisableNumber Namespace Prefix: AMPG\_Data Type: xbrli:sharesItem Type  
Balance Type: na Period Type: instant X - DefinitionShare based compensation arrangement by share based payment award non option exercisable weighted average exercise price. +  
ReferencesNo definition available. + Details Name: AMPG\_ShareBasedCompensationArrangementByShareBasedPaymentAwardNonOptionExercisableWeightedAverageExercisePrice  
Namespace Prefix: AMPG\_Data Type: dtr-types:perShareItem Type Balance Type: na Period Type: instant X - DefinitionShare based compensation arrangement by share based payment award  
non option outstanding weighted average exercise price. + ReferencesNo definition available. + Details Name:  
AMPG\_ShareBasedCompensationArrangementByShareBasedPaymentAwardNonOptionOutstandingWeightedAverageExercisePrice Namespace Prefix: AMPG\_Data Type: dtr-  
types:perShareItem Type Balance Type: na Period Type: instant X - DefinitionShare based compensation arrangements by share based payment award non option grants in period weighted  
average exercise price. + ReferencesNo definition available. + Details Name:  
AMPG\_ShareBasedCompensationArrangementByShareBasedPaymentAwardNonOptionGrantsInPeriodWeightedAverageExercisePrice Namespace Prefix: AMPG\_Data Type: dtr-  
types:perShareItem Type Balance Type: na Period Type: duration X - DefinitionLine items represent financial concepts included in a table. These concepts are used to disclose reportable  
information associated with domain members defined in one or many axes to the table. + ReferencesReference 1: [http://fasb.org/us-gaap/role/ref/legacyRef-Name Accounting Standards Codification-Section 50-Paragraph 2-Subparagraph \(c\)\(1\)\(iv\)\(02\)-SubTopic 10-Topic 718-Publisher FASB-URI https://asc.fasb.org/1943274/2147480429/718-10-50-2](http://www.xbrl.org/2003/role/disclosureRef-Topic 718-SubTopic 10-Name Accounting Standards Codification-Section 35-Paragraph 1D-Publisher FASB-URI https://asc.fasb.org/1943274/2147480483/718-10-35-1DReference 2: http://www.xbrl.org/2003/role/disclosureRef-Topic 718-SubTopic 10-Name Accounting Standards Codification-Section 35-Paragraph 3-Publisher FASB-URI https://asc.fasb.org/1943274/2147480483/718-10-35-3Reference 3: http://www.xbrl.org/2003/role/disclosureRef-Topic 718-SubTopic 10-Name Accounting Standards Codification-Section 50-Paragraph 2-Subparagraph (a)(1)-Publisher FASB-URI https://asc.fasb.org/1943274/2147480429/718-10-50-2Reference 4: http://www.xbrl.org/2003/role/disclosureRef-Topic 718-SubTopic 10-Name Accounting Standards Codification-Section 50-Paragraph 2-Subparagraph (a)(2)-Publisher FASB-URI https://asc.fasb.org/1943274/2147480429/718-10-50-2Reference 5: http://www.xbrl.org/2003/role/disclosureRef-Topic 718-SubTopic 10-Name Accounting Standards Codification-Section 50-Paragraph 2-Subparagraph (a)(3)-Publisher FASB-URI https://asc.fasb.org/1943274/2147480429/718-10-50-2Reference 6: http://www.xbrl.org/2003/role/disclosureRef-Topic 718-SubTopic 10-Name Accounting Standards Codification-Section 50-Paragraph 2-Subparagraph (c)(1)(i)-Publisher FASB-URI https://asc.fasb.org/1943274/2147480429/718-10-50-2Reference 7: http://www.xbrl.org/2003/role/disclosureRef-Topic 718-SubTopic 10-Name Accounting Standards Codification-Section 50-Paragraph 2-Subparagraph (c)(1)(ii)-Publisher FASB-URI https://asc.fasb.org/1943274/2147480429/718-10-50-2Reference 8: http://www.xbrl.org/2003/role/disclosureRef-Topic 718-SubTopic 10-Name Accounting Standards Codification-Section 50-Paragraph 2-Subparagraph (c)(1)(iii)-Publisher FASB-URI https://asc.fasb.org/1943274/2147480429/718-10-50-2Reference 9: http://www.xbrl.org/2003/role/disclosureRef-Topic 718-SubTopic 10-Name Accounting Standards Codification-Section 50-Paragraph 2-Subparagraph (c)(1)(iv)-Publisher FASB-URI https://asc.fasb.org/1943274/2147480429/718-10-50-2Reference 10: http://www.xbrl.org/2003/role/disclosureRef-Topic 718-SubTopic 10-Name Accounting Standards Codification-Section 50-Paragraph 2-Subparagraph (c)(1)(iv)(01)-Publisher FASB-URI https://asc.fasb.org/1943274/2147480429/718-10-50-2Reference 11: http://www.xbrl.org/2003/role/disclosureRef-Topic 718-SubTopic 10-Name Accounting Standards Codification-Section 50-Paragraph 2-Subparagraph (c)(1)(iv)(02)-Publisher FASB-URI https://asc.fasb.org/1943274/2147480429/718-10-50-2Reference 12: http://www.xbrl.org/2003/role/disclosureRef-Topic 718-SubTopic 10-Name Accounting Standards Codification-Section 50-Paragraph 2-Subparagraph (c)(1)(iv)(03)-Publisher FASB-URI https://asc.fasb.org/1943274/2147480429/718-10-50-2Reference 13: http://www.xbrl.org/2003/role/disclosureRef-Topic 718-SubTopic 10-Name Accounting Standards Codification-Section 50-Paragraph 2-Subparagraph (c)(1)(iv)(04)-Publisher FASB-URI https://asc.fasb.org/1943274/2147480429/718-10-50-2Reference 14: http://www.xbrl.org/2003/role/disclosureRef-Topic 718-SubTopic 10-Name Accounting Standards Codification-Section 50-Paragraph 2-Subparagraph (c)(2)(i)-Publisher FASB-URI https://asc.fasb.org/1943274/2147480429/718-10-50-2Reference 15: http://www.xbrl.org/2003/role/disclosureRef-Topic 718-SubTopic 10-Name Accounting Standards Codification-Section 50-Paragraph 2-Subparagraph (c)(2)(ii)-Publisher FASB-URI https://asc.fasb.org/1943274/2147480429/718-10-50-2Reference 16: http://www.xbrl.org/2003/role/disclosureRef-Topic 718-SubTopic 10-Name Accounting Standards Codification-Section 50-Paragraph 2-Subparagraph (c)(2)(iii)-Publisher FASB-URI https://asc.fasb.org/1943274/2147480429/718-10-50-2Reference 17: http://www.xbrl.org/2003/role/disclosureRef-Topic 718-SubTopic 10-Name Accounting Standards Codification-Section 50-Paragraph 2-Subparagraph (c)(2)(iii)(01)-Publisher FASB-URI https://asc.fasb.org/1943274/2147480429/718-10-50-2Reference 18: http://www.xbrl.org/2003/role/disclosureRef-Topic 718-SubTopic 10-Name Accounting Standards Codification-Section 50-Paragraph 2-Subparagraph (c)(2)(iii)(02)-Publisher FASB-URI https://asc.fasb.org/1943274/2147480429/718-10-50-2Reference 19: http://www.xbrl.org/2003/role/disclosureRef-Topic 718-SubTopic 10-Name Accounting Standards Codification-Section 50-Paragraph 2-Subparagraph (c)(2)(iii)(03)-Publisher FASB-URI https://asc.fasb.org/1943274/2147480429/718-10-50-2Reference 20: http://www.xbrl.org/2003/role/disclosureRef-Topic 718-SubTopic 10-Name Accounting Standards Codification-Section 50-Paragraph 2-Subparagraph (d)(1)-Publisher FASB-URI https://asc.fasb.org/1943274/2147480429/718-10-50-2Reference 21: http://www.xbrl.org/2003/role/disclosureRef-Topic 718-SubTopic 10-Name Accounting Standards Codification-Section 50-Paragraph 2-Subparagraph (d)(2)-Publisher FASB-URI https://asc.fasb.org/1943274/2147480429/718-10-50-2Reference 22: http://www.xbrl.org/2003/role/disclosureRef-Topic 718-SubTopic 10-Name Accounting Standards Codification-Section 50-Paragraph 2-Subparagraph (e)(1)-Publisher FASB-URI https://asc.fasb.org/1943274/2147480429/718-10-50-2Reference 23: http://www.xbrl.org/2003/role/disclosureRef-Topic 718-SubTopic 10-Name Accounting Standards Codification-Section 50-Paragraph 2-Subparagraph (e)(2)-Publisher FASB-URI https://asc.fasb.org/1943274/2147480429/718-10-50-2Reference 24: http://www.xbrl.org/2003/role/disclosureRef-Topic 718-SubTopic 10-Name Accounting Standards Codification-Section 50-Paragraph 2-Subparagraph (f)(2)(i)-Publisher FASB-URI https://asc.fasb.org/1943274/2147480429/718-10-50-2Reference 25: http://www.xbrl.org/2003/role/disclosureRef-Topic 718-SubTopic 10-Name Accounting Standards Codification-Section 50-Paragraph 2-Subparagraph (f)(2)(ii)-Publisher FASB-URI https://asc.fasb.org/1943274/2147480429/718-10-50-2Reference 26: http://www.xbrl.org/2003/role/disclosureRef-Topic 718-SubTopic 10-Name Accounting Standards Codification-Section 50-Paragraph 2-Subparagraph (f)(2)(iii)-Publisher FASB-URI https://asc.fasb.org/1943274/2147480429/718-10-50-2Reference 27: http://www.xbrl.org/2003/role/disclosureRef-Topic 718-SubTopic 10-Name Accounting Standards Codification-Section 50-Paragraph 2-Subparagraph (f)(2)(iv)-Publisher FASB-URI https://asc.fasb.org/1943274/2147480429/718-10-50-2Reference 28: http://www.xbrl.org/2003/role/disclosureRef-Topic 718-SubTopic 10-Name Accounting Standards Codification-Section 50-Paragraph 2-Subparagraph (f)(2)(v)-Publisher FASB-URI https://asc.fasb.org/1943274/2147480429/718-10-50-2 + Details Name: us-gaap_ShareBasedCompensationArrangementByShareBasedPaymentAwardLineItems Namespace Prefix: us-gaap_Data Type: xbrli:stringItem Type Balance Type: na Period Type: duration X - DefinitionNumber of non-option equity instruments exercised by participants. + ReferencesReference 1: <a href=) + Details Name: us-  
gaap\_ShareBasedCompensationArrangementByShareBasedPaymentAwardNonOptionEquityInstrumentsExercised Namespace Prefix: us-gaap\_Data Type: xbrli:sharesItem Type Balance Type: na  
Period Type: duration X - DefinitionNumber of shares under non-option equity instrument agreements for which rights to exercise lapsed. + ReferencesReference 1: [http://fasb.org/us-gaap/role/ref/legacyRef-Topic 718-SubTopic 10-Name Accounting Standards Codification-Section 50-Paragraph 2-Subparagraph \(c\)\(1\)\(iv\)\(04\)-Publisher FASB-URI https://asc.fasb.org/1943274/2147480429/718-10-50-2](http://fasb.org/us-gaap/role/ref/legacyRef-Topic 718-SubTopic 10-Name Accounting Standards Codification-Section 50-Paragraph 2-Subparagraph (c)(1)(iv)(04)-Publisher FASB-URI https://asc.fasb.org/1943274/2147480429/718-10-50-2) + Details Name: us-  
gaap\_ShareBasedCompensationArrangementByShareBasedPaymentAwardNonOptionEquityInstrumentsExpirations Namespace Prefix: us-gaap\_Data Type: dtr-types:perShareItem Type Balance Type: na Period Type: duration X - DefinitionNet number of non-option equity instruments granted to participants. +  
ReferencesReference 1: [http://fasb.org/us-gaap/role/ref/legacyRef-Name Accounting Standards Codification-Section 50-Paragraph 2-Subparagraph \(c\)\(1\)\(iv\)\(01\)-SubTopic 10-Topic 718-Publisher FASB-URI https://asc.fasb.org/1943274/2147480429/718-10-50-2](http://fasb.org/us-gaap/role/ref/legacyRef-Name Accounting Standards Codification-Section 50-Paragraph 2-Subparagraph (c)(1)(iv)(01)-SubTopic 10-Topic 718-Publisher FASB-URI https://asc.fasb.org/1943274/2147480429/718-10-50-2) + Details Name: us-  
gaap\_ShareBasedCompensationArrangementByShareBasedPaymentAwardNonOptionEquityInstrumentsGranted Namespace Prefix: us-gaap\_Data Type: xbrli:sharesItem Type Balance Type: na  
Period Type: duration X - DefinitionNumber of equity instruments other than options outstanding, including both vested and non-vested instruments. + ReferencesReference 1:  
[http://fasb.org/us-gaap/role/ref/legacyRef-Topic 718-SubTopic 10-Name Accounting Standards Codification-Section 50-Paragraph 2-Subparagraph \(c\)\(1\)\(ii\)-Publisher FASB-URI https://asc.fasb.org/1943274/2147480429/718-10-50-2](http://fasb.org/us-gaap/role/ref/legacyRef-Topic 718-SubTopic 10-Name Accounting Standards Codification-Section 50-Paragraph 2-Subparagraph (c)(1)(ii)-Publisher FASB-URI https://asc.fasb.org/1943274/2147480429/718-10-50-2)Reference 2: [http://fasb.org/us-gaap/role/ref/legacyRef-Topic 718-SubTopic 10-Name Accounting Standards Codification-Section 50-Paragraph 2-Subparagraph \(c\)\(1\)\(i\)-Publisher FASB-URI https://asc.fasb.org/1943274/2147480429/718-10-50-2](http://fasb.org/us-gaap/role/ref/legacyRef-Topic 718-SubTopic 10-Name Accounting Standards Codification-Section 50-Paragraph 2-Subparagraph (c)(1)(i)-Publisher FASB-URI https://asc.fasb.org/1943274/2147480429/718-10-50-2) + Details Name: us-  
gaap\_ShareBasedCompensationArrangementByShareBasedPaymentAwardNonOptionEquityInstrumentsOutstandingNumber Namespace Prefix: us-gaap\_Data Type: xbrli:sharesItem Type  
Balance Type: na Period Type: instant X - Details Name: us-gaap\_AwardTypeAxis-us-gaap\_WarrantMember Namespace Prefix: Data Type: na Balance Type: Period Type: XML 63 R52.htm IDEA:  
XBRL DOCUMENT v3.24.2.u1 Schedule of Changes in Restricted Stock Units Outstanding (Details) - Restricted Stock Units (RSUs) [Member] 6 Months Ended Jun. 30, 2024 \$ / shares shares  
Share-Based Compensation Arrangement by Share-Based Payment Award [Line Items] A Number of RSUs's, Outstanding | shares 12,500 Weighted Average Exercise Price, Outstanding | \$ /  
shares \$ 1.96 Number of RSUs's, Granted | shares Weighted Average Exercise Price, Granted | \$ / shares Number of RSUs's, Exercised | shares (5,000) Weighted Average Exercise Price,  
Exercised | \$ / shares \$ 1.96 Number of RSUs's, Expired | shares Weighted Average Exercise Price, Expired | \$ / shares Number of RSUs's, Outstanding | shares 7,500 Weighted Average Exercise  
Price, Outstanding | \$ / shares \$ 1.96 Number of RSUs's, Exercisable | shares Weighted Average Exercise Price, Exercisable | \$ / shares X - DefinitionShare based compensation arrangement by  
share based payment award equity instruments other than options exercisable number. + ReferencesNo definition available. + Details Name:  
AMPG\_ShareBasedCompensationArrangementByShareBasedPaymentAwardEquityInstrumentsOtherThanOptionsExercisableNumber Namespace Prefix: AMPG\_Data Type: xbrli:sharesItem Type  
Balance Type: na Period Type: instant X - DefinitionShare based compensation arrangement by share based payment award equity instruments other than options exercisable weighted average  
grant date fair value. + ReferencesNo definition available. + Details Name:  
AMPG\_ShareBasedCompensationArrangementByShareBasedPaymentAwardEquityInstrumentsOtherThanOptionsExercisableWeightedAverageGrantDateFairValue Namespace Prefix: AMPG  
Data Type: dtr-types:perShareItem Type Balance Type: na Period Type: instant X - DefinitionShare based compensation arrangement by share based payment award equity instruments other  
than options exercised in period. + ReferencesNo definition available. + Details Name:  
AMPG\_ShareBasedCompensationArrangementByShareBasedPaymentAwardEquityInstrumentsOtherThanOptionsExercisedInPeriod Namespace Prefix: AMPG\_Data Type: xbrli:sharesItem Type  
Balance Type: na Period Type: duration X - DefinitionShare based compensation arrangement by share based payment award equity instruments other than options vested in period weighted  
average exercised fair value. + ReferencesNo definition available. + Details Name:  
AMPG\_ShareBasedCompensationArrangementByShareBasedPaymentAwardEquityInstrumentsOtherThanOptionsVestedInPeriodWeightedAverageExercisedFairValue Namespace Prefix:  
AMPG\_Data Type: dtr-types:perShareItem Type Balance Type: na Period Type: duration X - DefinitionThe number of grants made during the period on other than stock (or unit) option plans that  
were forfeited during the reporting period. + ReferencesReference 1: [http://www.xbrl.org/2003/role/disclosureRef-Topic 718-SubTopic 10-Name Accounting Standards Codification-Section 50-Paragraph 2-Subparagraph \(c\)\(2\)\(iii\)\(03\)-Publisher FASB-URI https://asc.fasb.org/1943274/2147480429/718-10-50-2](http://www.xbrl.org/2003/role/disclosureRef-Topic 718-SubTopic 10-Name Accounting Standards Codification-Section 50-Paragraph 2-Subparagraph (c)(2)(iii)(03)-Publisher FASB-URI https://asc.fasb.org/1943274/2147480429/718-10-50-2) + Details Name: us-  
gaap\_ShareBasedCompensationArrangementByShareBasedPaymentAwardEquityInstrumentsOtherThanOptionsForfeitedInPeriod Namespace Prefix: us-gaap\_Data Type: xbrli:sharesItem Type  
Balance Type: na Period Type: duration X - DefinitionWeighted average fair value as of the grant date of equity-based award plans other than stock (unit) option plans that were not exercised or  
put into effect as a result of the occurrence of a terminating event. + ReferencesReference 1: [http://www.xbrl.org/2003/role/disclosureRef-Topic 718-SubTopic 10-Name Accounting Standards Codification-Section 50-Paragraph 2-Subparagraph \(c\)\(2\)\(iii\)\(03\)-Publisher FASB-URI https://asc.fasb.org/1943274/2147480429/718-10-50-2](http://www.xbrl.org/2003/role/disclosureRef-Topic 718-SubTopic 10-Name Accounting Standards Codification-Section 50-Paragraph 2-Subparagraph (c)(2)(iii)(03)-Publisher FASB-URI https://asc.fasb.org/1943274/2147480429/718-10-50-2) + Details Name: us-  
gaap\_ShareBasedCompensationArrangementByShareBasedPaymentAwardEquityInstrumentsOtherThanOptionsForfeituresWeightedAverageGrantDateFairValue Namespace Prefix: us-gaap  
Data Type: dtr-types:perShareItem Type Balance Type: na Period Type: duration X - DefinitionThe number of grants made during the period on other than stock (or unit) option plans (for  
example, phantom stock or unit plan, stock or unit appreciation rights plan, performance target plan). + ReferencesReference 1: [http://www.xbrl.org/2003/role/disclosureRef-Topic 718-SubTopic 10-Name Accounting Standards Codification-Section 50-Paragraph 2-Subparagraph \(c\)\(2\)\(iii\)\(01\)-Publisher FASB-URI https://asc.fasb.org/1943274/2147480429/718-10-50-2](http://www.xbrl.org/2003/role/disclosureRef-Topic 718-SubTopic 10-Name Accounting Standards Codification-Section 50-Paragraph 2-Subparagraph (c)(2)(iii)(01)-Publisher FASB-URI https://asc.fasb.org/1943274/2147480429/718-10-50-2) +



Topic 210 -SubTopic 10 -Name Accounting Standards Codification -Section S99 -Paragraph 1 -Subparagraph (SX 210.5-02(29)) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480566/210-10-S99-1 + Details Name: us-gaap\_CommonStockCapitalSharesReservedForFutureIssuance Namespace Prefix: us-gaap\_Data Type: xbrli:sharesItem Type Balance Type: na Period Type: instant X - DefinitionFace amount or stated value per share of common stock. + ReferencesReference 1: http://fasb.org/us-gaap/role/ref/legacyRef -Topic 210 -SubTopic 10 -Name Accounting Standards Codification -Section S99 -Paragraph 1 -Subparagraph (SX 210.5-02(29)) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480566/210-10-S99-1 + Details Name: us-gaap\_CommonStockParOrStatedValuePerShare Namespace Prefix: us-gaap\_Data Type: dtr-types:perShareItem Type Balance Type: na Period Type: instant X - DefinitionThe maximum number of common shares permitted to be issued by an entity's charter and bylaws. + ReferencesReference 1: http://fasb.org/us-gaap/role/ref/legacyRef -Topic 210 -SubTopic 10 -Name Accounting Standards Codification -Section S99 -Paragraph 1 -Subparagraph (SX 210.5-02(29)) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480566/210-10-S99-1Reference 2: http://www.xbrl.org/2003/role/disclosureRef -Topic 946 -SubTopic 210 -Name Accounting Standards Codification -Section S99 -Paragraph 1 -Subparagraph (SX 210.6-04(16)(a)) -Publisher FASB -URI https://asc.fasb.org/1943274/2147479170/946-210-S99-1 + Details Name: us-gaap\_CommonStockSharesAuthorized Namespace Prefix: us-gaap\_Data Type: xbrli:sharesItem Type Balance Type: na Period Type: instant X - DefinitionWeighted-average period over which cost not yet recognized is expected to be recognized for award under share-based payment arrangement, in 'PnYnMndTnHnMns' format, for example, 'P1Y5M13D' represents reported fact of one year, five months, and thirteen days. + ReferencesReference 1: http://www.xbrl.org/2003/role/disclosureRef -Topic 718 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 2 -Subparagraph (i) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480429/718-10-50-2 + Details Name: us-gaap\_EmployeeServiceShareBasedCompensationNonvestedAwardsTotalCompensationCostNotYetRecognizedPeriodForRecognition1 Namespace Prefix: us-gaap\_Data Type: xbrli:durationItem Type Balance Type: na Period Type: duration X - DefinitionAmount of cost to be recognized for nonvested award under share-based payment arrangement. Excludes share and unit options. + ReferencesReference 1: http://www.xbrl.org/2009/role/commonPracticeRef -Topic 718 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 2 -Subparagraph (i) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480429/718-10-50-2 + Details Name: us-gaap\_EmployeeServiceShareBasedCompensationNonvestedAwardsTotalCompensationCostNotYetRecognizedShareBasedAwardsOtherThanOptions Namespace Prefix: us-gaap\_Data Type: xbrli:monetaryItem Type Balance Type: debit Period Type: instant X - DefinitionFace amount or stated value per share of preferred stock nonredeemable or redeemable solely at the option of the issuer. + ReferencesReference 1: http://fasb.org/us-gaap/role/ref/legacyRef -Topic 210 -SubTopic 10 -Name Accounting Standards Codification -Section S99 -Paragraph 1 -Subparagraph (SX 210.5-02(28)) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480566/210-10-S99-1Reference 2: http://www.xbrl.org/2003/role/disclosureRef -Topic 505 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 13 -Subparagraph (a) -Publisher FASB -URI https://asc.fasb.org/1943274/2147481112/505-10-10-13 + Details Name: us-gaap\_PreferredStockParOrStatedValuePerShare Namespace Prefix: us-gaap\_Data Type: dtr-types:perShareItem Type Balance Type: na Period Type: instant X - DefinitionThe maximum number of nonredeemable preferred shares (or preferred stock redeemable solely at the option of the issuer) permitted to be issued by an entity's charter and bylaws. + ReferencesReference 1: http://fasb.org/us-gaap/role/ref/legacyRef -Topic 210 -SubTopic 10 -Name Accounting Standards Codification -Section S99 -Paragraph 1 -Subparagraph (SX 210.5-02(28)) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480566/210-10-S99-1Reference 2: http://www.xbrl.org/2003/role/disclosureRef -Topic 946 -SubTopic 210 -Name Accounting Standards Codification -Section S99 -Paragraph 1 -Subparagraph (SX 210.6-04(16)(a)) -Publisher FASB -URI https://asc.fasb.org/1943274/2147479170/946-210-S99-1 + Details Name: us-gaap\_PreferredStockSharesAuthorized Namespace Prefix: us-gaap\_Data Type: xbrli:sharesItem Type Balance Type: na Period Type: instant X - DefinitionAgreed-upon price for the exchange of the underlying asset relating to the share-based payment award. + ReferencesNo definition available. + Details Name: us-gaap\_ShareBasedCompensationArrangementByShareBasedPaymentAwardFairValueAssumptionsExercisePrice Namespace Prefix: us-gaap\_Data Type: dtr-types:perShareItem Type Balance Type: na Period Type: instant X - DefinitionThe estimated amount of dividends to be paid to holders of the underlying shares (expected dividends) over the option's term. Dividends are taken into account because payment of dividends to shareholders reduces the fair value of the underlying shares, and option holders generally do not receive dividends. + ReferencesReference 1: http://www.xbrl.org/2003/role/disclosureRef -Topic 718 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 2 -Subparagraph (f)(2)(iii) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480429/718-10-50-2 + Details Name: us-gaap\_ShareBasedCompensationArrangementByShareBasedPaymentAwardFairValueAssumptionsExpectedDividendPayments Namespace Prefix: us-gaap\_Data Type: xbrli:monetaryItem Type Balance Type: debit Period Type: duration X - DefinitionThe estimated measure of the percentage by which a share price is expected to fluctuate during a period. Volatility also may be defined as a probability-weighted measure of the dispersion of returns about the mean. The volatility of a share price is the standard deviation of the continuously compounded rates of return on the share over a specified period. That is the same as the standard deviation of the differences in the natural logarithms of the stock prices plus dividends, if any, over the period. + ReferencesReference 1: http://www.xbrl.org/2003/role/disclosureRef -Topic 718 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 2 -Subparagraph (f)(2)(ii) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480429/718-10-50-2 + Details Name: us-gaap\_ShareBasedCompensationArrangementByShareBasedPaymentAwardFairValueAssumptionsExpectedVolatilityRate Namespace Prefix: us-gaap\_Data Type: dtr-types:percentItem Type Balance Type: na Period Type: duration X - DefinitionThe risk-free interest rate assumption that is used in valuing an option on its own shares. + ReferencesReference 1: http://www.xbrl.org/2003/role/disclosureRef -Topic 718 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 2 -Subparagraph (f)(2)(iv) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480429/718-10-50-2 + Details Name: us-gaap\_ShareBasedCompensationArrangementByShareBasedPaymentAwardFairValueAssumptionsRiskFreeInterestRate Namespace Prefix: us-gaap\_Data Type: dtr-types:percentItem Type Balance Type: na Period Type: duration X - DefinitionThe highest quantity of shares an employee can purchase under the plan per period. + ReferencesReference 1: http://fasb.org/us-gaap/role/ref/legacyRef -Name Accounting Standards Codification -Topic 718 -SubTopic 10 -Section 50 -Paragraph 2 -Publisher FASB -URI https://asc.fasb.org/1943274/2147480429/718-10-50-2 + Details Name: us-gaap\_ShareBasedCompensationArrangementByShareBasedPaymentAwardMaximumNumberOfSharesPerEmployee Namespace Prefix: us-gaap\_Data Type: xbrli:sharesItem Type Balance Type: na Period Type: duration X - DefinitionNet number of share options (or share units) granted during the period. + ReferencesReference 1: http://www.xbrl.org/2009/role/commonPracticeRef -Topic 718 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 2 -Subparagraph (c)(1)(iv)(01) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480429/718-10-50-2 + Details Name: us-gaap\_ShareBasedCompensationArrangementByShareBasedPaymentAwardOptionsGrantsInPeriod Namespace Prefix: us-gaap\_Data Type: xbrli:sharesItem Type Balance Type: na Period Type: duration X - DefinitionChange in the weighted average exercise price of options outstanding. + ReferencesNo definition available. + Details Name: us-gaap\_ShareBasedCompensationArrangementByShareBasedPaymentAwardOptionsOutstandingPeriodIncreaseDecreaseWeightedAverageExercisePrice Namespace Prefix: us-gaap\_Data Type: dtr-types:perShareItem Type Balance Type: na Period Type: duration X - DefinitionAn excess of the fair value of the modified award over the fair value of the award immediately before the modification. + ReferencesReference 1: http://www.xbrl.org/2003/role/disclosureRef -Topic 718 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 2 -Subparagraph (h)(2)(iii) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480429/718-10-50-2 + Details Name: us-gaap\_ShareBasedCompensationArrangementByShareBasedPaymentAwardPlanModificationIncrementalCompensationCost Namespace Prefix: us-gaap\_Data Type: xbrli:monetaryItem Type Balance Type: debit Period Type: duration X - DefinitionPrice of a single share of a number of saleable stocks of a company. + ReferencesNo definition available. + Details Name: us-gaap\_SharePrice Namespace Prefix: us-gaap\_Data Type: dtr-types:perShareItem Type Balance Type: na Period Type: instant X - DefinitionIntrinsic value of outstanding award under share-based payment arrangement. Excludes share and unit options. + ReferencesNo definition available. + Details Name: us-gaap\_ShareBasedCompensationArrangementByShareBasedPaymentAwardEquityInstrumentsOtherThanOptionsAggregateIntrinsicValueOutstanding Namespace Prefix: us-gaap\_Data Type: xbrli:monetaryItem Type Balance Type: debit Period Type: instant X - DefinitionExpected term of award under share-based payment arrangement, in 'PnYnMndTnHnMns' format, for example, 'P1Y5M13D' represents reported fact of one year, five months, and thirteen days. + ReferencesReference 1: http://www.xbrl.org/2003/role/disclosureRef -Topic 718 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 2 -Subparagraph (f)(2)(i) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480429/718-10-50-2 + Details Name: us-gaap\_ShareBasedCompensationArrangementByShareBasedPaymentAwardFairValueAssumptionsExpectedTerm1 Namespace Prefix: us-gaap\_Data Type: xbrli:durationItem Type Balance Type: na Period Type: duration X - DefinitionWeighted average remaining contractual term for option awards outstanding, in 'PnYnMndTnHnMns' format, for example, 'P1Y5M13D' represents the reported fact of one year, five months, and thirteen days. + ReferencesReference 1: http://fasb.org/us-gaap/role/ref/legacyRef -Topic 718 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 2 -Subparagraph (c)(1)(ii) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480429/718-10-50-2Reference 2: http://fasb.org/us-gaap/role/ref/legacyRef -Topic 718 -SubTopic 10 -Name Accounting Standards Codification -Section 50 -Paragraph 2 -Subparagraph (c)(1)(i) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480429/718-10-50-2 + Details Name: us-gaap\_ShareBasedCompensationSharesAuthorizedUnderStockOptionPlansExercisePriceRangeOutstandingOptionsWeightedAverageExercisePriceBeginningBalance1 Namespace Prefix: us-gaap\_Data Type: dtr-types:perShareItem Type Balance Type: na Period Type: instant X - DefinitionNumber of new stock issued during the period. + ReferencesReference 1: http://fasb.org/us-gaap/role/ref/legacyRef -Name Accounting Standards Codification -Section 50 -Paragraph 2 -SubTopic 10 -Topic 505 -Publisher FASB -URI https://asc.fasb.org/1943274/2147481112/505-10-50-2Reference 2: http://fasb.org/us-gaap/role/ref/legacyRef -Topic 210 -SubTopic 10 -Name Accounting Standards Codification -Section S99 -Paragraph 1 -Subparagraph (SX 210.5-02(28)) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480566/210-10-S99-1Reference 3: http://fasb.org/us-gaap/role/ref/legacyRef -Topic 210 -SubTopic 10 -Name Accounting Standards Codification -Section S99 -Paragraph 1 -Subparagraph (SX 210.5-02(29)) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480566/210-10-S99-1Reference 4: http://www.xbrl.org/2003/role/disclosureRef -Topic 946 -SubTopic 505 -Name Accounting Standards Codification -Section 50 -Paragraph 2 -Subparagraph (a) -Publisher FASB -URI https://asc.fasb.org/1943274/2147478448/946-505-50-2Reference 5: http://www.xbrl.org/2003/role/disclosureRef -Topic 946 -SubTopic 220 -Name Accounting Standards Codification -Section S99 -Paragraph 3 -Subparagraph (SX 210.6-09(4)(b)) -Publisher FASB -URI https://asc.fasb.org/1943274/2147479134/946-220-S99-3Reference 6: http://www.xbrl.org/2003/role/disclosureRef -Topic 946 -SubTopic 10 -Name Accounting Standards Codification -Section S99 -Paragraph 3 -Subparagraph (SX 210.6-03(i)(1)) -Publisher FASB -URI https://asc.fasb.org/1943274/2147479886/946-10-S99-3Reference 7: http://fasb.org/us-gaap/role/ref/legacyRef -Topic 505 -SubTopic 10 -Name Accounting Standards Codification -Section S99 -Paragraph 1 -Subparagraph (SX 210.3-04) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480008/505-10-S99-1 + Details Name: us-gaap\_StockIssuedDuringPeriodSharesNewIssues Namespace Prefix: us-gaap\_Data Type: xbrli:sharesItem Type Balance Type: na Period Type: duration X - Details Name: us-gaap\_AwardTypeAxis=AMPG StockOptionsMember Namespace Prefix: Data Type: na Balance Type: Period Type: X - Details Name: us-gaap\_AwardTypeAxis=us-gaap\_EmployeeStockOptionMember Namespace Prefix: Data Type: na Balance Type: Period Type: X - Details Name: us-gaap\_AwardTypeAxis=us-gaap\_WarrantMember Namespace Prefix: Data Type: na Balance Type: Period Type: X - Details Name: us-gaap\_AwardTypeAxis=us-gaap\_RestrictedStockUnitsRSUMember Namespace Prefix: Data Type: na Balance Type: Period Type: X - Details Name: us-gaap\_PlanNameAxis=AMPG TwoThousandAndTwentyEquityIncentivePlanMember Namespace Prefix: Data Type: na Balance Type: Period Type: X - Details Name: srt\_TitleOfIndividualAxis=AMPG ConsultantMember Namespace Prefix: Data Type: na Balance Type: Period Type: X - Details Name: srt\_TitleOfIndividualAxis=AMPG ContractorMember Namespace Prefix: Data Type: na Balance Type: Period Type: X - Details Name: srt\_RangeAxis=srt\_MinimumMember Namespace Prefix: Data Type: na Balance Type: Period Type: X - Details Name: srt\_RangeAxis=srt\_MaximumMember Namespace Prefix: Data Type: na Balance Type: Period Type: X - Details Name: us-gaap\_StatementEquityComponentsAxis=us-gaap\_CommonStockMember Namespace Prefix: Data Type: na Balance Type: Period Type: X - Details Name: us-gaap\_DebtInstrumentAxis=AMPG SeriesAConvertiblePreferredStockMember Namespace Prefix: Data Type: na Balance Type: Period Type: XML 65 R54.htm IDEA: XBRL DOCUMENT v3.24.2.1.1 Subsequent events (Details Narrative) - Subsequent Event [Member] - USD (\$ Jul. 26, 2024 Jul. 23, 2024 License and Service [Member] A A Subsequent Event [Line Items] A A Software ip license fee \$ 1,250,000 A Business Loan and Security Agreement [Member] A A Subsequent Event [Line Items] A A Business loan A \$ 1,300,000 Origination fee A 26,000 Payments of loan A \$ 44,816 Annual interest rate A 21.20% X - DefinitionFace (par) amount of debt instrument at time of issuance. + ReferencesReference 1: http://www.xbrl.org/2003/role/exampleRef -Topic 835 -SubTopic 30 -Name Accounting Standards Codification -Section 55 -Paragraph 8 -Publisher FASB -URI https://asc.fasb.org/1943274/2147482949/835-30-55-8Reference 2: http://www.xbrl.org/2003/role/disclosureRef -Topic 470 -SubTopic 20 -Name Accounting Standards Codification -Section 50 -Paragraph 1B -Subparagraph (a) -Publisher FASB -URI https://asc.fasb.org/1943274/2147481139/470-20-50-1BReference 3: http://www.xbrl.org/2003/role/exampleRef -Topic 470 -SubTopic 20 -Name Accounting Standards Codification -Section 55 -Paragraph 69B -Publisher FASB -URI https://asc.fasb.org/1943274/2147481568/470-20-55-69BReference 4: http://www.xbrl.org/2003/role/exampleRef -Topic 470 -SubTopic 20 -Name Accounting Standards Codification -Section 55 -Paragraph 69C -Publisher FASB -URI https://asc.fasb.org/1943274/2147481568/470-20-55-69CReference 5: http://www.xbrl.org/2003/role/disclosureRef -Topic 835 -SubTopic 30 -Name Accounting Standards Codification -Section 50 -Paragraph 1 -Publisher FASB -URI https://asc.fasb.org/1943274/2147482900/835-30-50-1Reference 6: http://www.xbrl.org/2003/role/disclosureRef -Topic 835 -SubTopic 30 -Name Accounting Standards Codification -Section 45 -Paragraph 2 -Publisher FASB -URI https://asc.fasb.org/1943274/2147482925/835-30-45-2 + Details Name: us-gaap\_DebtInstrumentFaceAmount Namespace Prefix: us-gaap\_Data Type: xbrli:monetaryItem Type Balance Type: credit Period Type: instant X - DefinitionAmount of the fee that accompanies borrowing money under the debt instrument. + ReferencesReference 1: http://fasb.org/us-gaap/role/ref/legacyRef -Topic 210 -SubTopic 10 -Name Accounting Standards Codification -Section S99 -Paragraph 1 -Subparagraph (SX 210.5-02(22)(b)) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480566/210-10-S99-1 + Details Name: us-gaap\_DebtInstrumentFeeAmount Namespace Prefix: us-gaap\_Data Type: xbrli:monetaryItem Type Balance Type: debit Period Type: instant X - DefinitionContractual interest rate for funds borrowed, under the debt agreement. + ReferencesReference 1: http://fasb.org/us-gaap/role/ref/legacyRef -Topic 210 -SubTopic 10 -Name Accounting Standards Codification -Section S99 -Paragraph 1 -Subparagraph (SX 210.5-02(22)(a)) -Publisher FASB -URI https://asc.fasb.org/1943274/2147480566/210-10-S99-1Reference 2: http://www.xbrl.org/2003/role/disclosureRef -Topic 470 -SubTopic 20 -Name Accounting Standards Codification -Section 50 -Paragraph 1B -Subparagraph (b) -Publisher FASB -URI https://asc.fasb.org/1943274/2147481139/470-20-50-1B + Details Name: us-gaap\_DebtInstrumentInterestRateStatedPercentage Namespace Prefix: us-gaap\_Data Type: dtr-types:percentItem Type Balance Type: na Period Type: instant X - DefinitionCash payments for and related to principal collection on loans related to operating activities. + ReferencesReference 1: http://fasb.org/us-gaap/role/ref/legacyRef -Name Accounting Standards Codification -Section 45 -Paragraph 25 -Subparagraph (g) -SubTopic 10 -Topic 230 -Publisher FASB -URI https://asc.fasb.org/1943274/2147482740/230-10-45-25 + Details Name: us-gaap\_PaymentsForLoans Namespace Prefix: us-gaap\_Data Type: xbrli:monetaryItem Type Balance Type: credit Period Type: duration X - DefinitionThe cash outflow associated with the development, modification or acquisition of software programs or applications for internal use (that is, not to be sold, leased or otherwise marketed to others) that qualify for capitalization. + ReferencesReference 1: http://fasb.org/us-gaap/role/ref/legacyRef -Topic 230 -SubTopic 10 -Name Accounting Standards











e.style.display=d;if(a.textContent){a.textContent=p+a.textContent.substring(1)}else{a.innerHTML=p+a.innerHTML.substring(1)}} XML 68 report.css IDEA: XBRL DOCUMENT  
# Updated 2009-11-04 \*/ /\* v2.2.0.24 \*/ /\* DefRef Styles \*/ .report table.authRefData { background-color: #def; border: 2px solid #2F4497; font-size: 1em; position: absolute; }  
.report table.authRefData a { display: block; font-weight: bold; } .report table.authRefData p { margin-top: 0px; } .report table.authRefData .hide { background-color: #2F4497; padding: 1px 3px 0px 0px; text-align: right; } .report table.authRefData .hide a:hover { background-color: #2F4497; } .report table.authRefData .body { height: 150px; overflow: auto; width: 400px; } .report table.authRefData table { font-size: 1em; } /\* Report Styles \*/ .pl a .pl a:visited { color: black; text-decoration: none; } /\* table \*/  
.report { background-color: white; border: 2px solid #acf; clear: both; color: black; font: normal 8pt Helvetica, Arial, sans-serif; margin-bottom: 2em; } .report hr { border: 1px solid #acf; } /\* Top labels \*/ .report th { background-color: #acf; color: black; font-weight: bold; text-align: center; } .report th void { background-color: transparent; color: #000000; font: bold 10pt Helvetica, Arial, sans-serif; text-align: left; } .report .pl { text-align: left; vertical-align: top; white-space: normal; width: 200px; white-space: normal; } /\* word-wrap; break-word; \*/ .report td.pl a a { font-size: 1em; font-weight: bold; display: block; width: 200px; overflow: hidden; } .report td.pl div a { width: 200px; } .report td.pl a: hover { background-color: #ffc; } /\* Header rows... \*/ .report tr.rh { background-color: #acf; color: black; font-weight: bold; } /\* Calendars... \*/ .report .rc { background-color: #f0f0f0; } /\* Even rows... \*/ .report .re .report .reu { background-color: #def; } .report .reu td { border-bottom: 1px solid black; } /\* Odd rows... \*/ .report .ro .report .rou { background-color: white; } .report .rou td { border-bottom: 1px solid black; } .report .rou table td .report .rou table td { border-bottom: 0px solid black; } /\* styles for footnote marker \*/ .report .fn { white-space: nowrap; } /\* styles for numeric types \*/ .report .num .report .num { text-align: right; white-space: nowrap; } .report .num { padding-left: 2em; } .report .num { padding: 0px 0.4em 0px 2em; } /\* styles for text types \*/ .report .text { text-align: left; white-space: normal; } .report .text .big { margin-bottom: 1em; width: 17em; } .report .text .more { display: none; } .report .text .note { font-style: italic; font-weight: bold; } .report .text .small { width: 10em; } .report .sup { font-style: italic; } .report .outerFootnotes { font-size: 1em; } XML 70 FilingSummary.xml IDEA: XBRL DOCUMENT 3.2.4.2.u1.html 177 330 1 false 47 0 false 5 false false R1.htm 00000001 - Document - Cover Sheet http://amplitechinc.com/role/Cover Cover Cover 1 false false R2.htm 00000002 - Statement - Condensed Consolidated Balance Sheets Sheet http://amplitechinc.com/role/BalanceSheets Condensed Consolidated Balance Sheets Statements 2 false false R3.htm 00000003 - Statement - Condensed Consolidated Balance Sheets (Parenthetical) Sheet http://amplitechinc.com/role/BalanceSheetsParenthetical Condensed Consolidated Balance Sheets (Parenthetical) Statements 3 false false R4.htm 00000004 - Statement - Condensed Consolidated Statements of Operations (Unaudited) Sheet http://amplitechinc.com/role/StatementsOfOperations Condensed Consolidated Statements of Operations (Unaudited) Statements 4 false false R5.htm 00000005 - Statement - Condensed Consolidated Statements of Stockholders' Equity (Unaudited) Sheet http://amplitechinc.com/role/StatementsOfStockholdersEquity Condensed Consolidated Statements of Stockholders' Equity (Unaudited) Statements 5 false false R6.htm 00000006 - Statement - Condensed Consolidated Statements of Cash Flows (Unaudited) Sheet http://amplitechinc.com/role/StatementsOfCashFlows Condensed Consolidated Statements of Cash Flows (Unaudited) Statements 6 false false R7.htm 00000007 - Disclosure - Organization and Business Description Sheet http://amplitechinc.com/role/OrganizationAndBusinessDescription Organization and Business Description Notes 7 false false R8.htm 00000008 - Disclosure - Loss on Investment of Digital Assets Sheet http://amplitechinc.com/role/LossOnInvestmentOfDigitalAssets Loss on Investment of Digital Assets Notes 8 false false R9.htm 00000009 - Disclosure - Summary of Significant Accounting Policies Sheet http://amplitechinc.com/role/SummaryOfSignificantAccountingPolicies Summary of Significant Accounting Policies Notes 9 false false R10.htm 00000010 - Disclosure - Revenues Sheet http://amplitechinc.com/role/Revenues Revenues Notes 10 false false R11.htm 00000011 - Disclosure - Segment Reporting Sheet http://amplitechinc.com/role/SegmentReporting Segment Reporting Notes 11 false false R12.htm 00000012 - Disclosure - Inventories Sheet http://amplitechinc.com/role/Inventories Inventories Notes 12 false false R13.htm 00000013 - Disclosure - Property and Equipment Sheet http://amplitechinc.com/role/PropertyAndEquipment Property and Equipment Notes 13 false false R14.htm 00000014 - Disclosure - Goodwill and Intangible Assets Sheet http://amplitechinc.com/role/GoodwillAndIntangibleAssets Goodwill and Intangible Assets Notes 14 false false R15.htm 00000015 - Disclosure - Cost Method Investment Sheet http://amplitechinc.com/role/CostMethodInvestment Cost Method Investment Notes 15 false false R16.htm 00000016 - Disclosure - Leases Sheet http://amplitechinc.com/role/Leases Leases Notes 16 false false R17.htm 00000017 - Disclosure - Notes Payable Notes http://amplitechinc.com/role/NotesPayable Notes Payable Notes 17 false false R18.htm 00000018 - Disclosure - Stockholders' Equity Sheet http://amplitechinc.com/role/StockholdersEquity Stockholders' Equity Notes 18 false false R19.htm 00000019 - Disclosure - Subsequent events Sheet http://amplitechinc.com/role/SubsequentEvents Subsequent events Notes 19 false false R20.htm 00000020 - Disclosure - Summary of Significant Accounting Policies (Policies) Sheet http://amplitechinc.com/role/SummaryOfSignificantAccountingPoliciesPolicies Summary of Significant Accounting Policies (Policies) Policies http://amplitechinc.com/role/SummaryOfSignificantAccountingPolicies 20 false false R21.htm 00000021 - Disclosure - Summary of Significant Accounting Policies (Tables) Sheet http://amplitechinc.com/role/SummaryOfSignificantAccountingPoliciesTables Summary of Significant Accounting Policies (Tables) Tables http://amplitechinc.com/role/SummaryOfSignificantAccountingPoliciesTables 21 false false R22.htm 00000022 - Disclosure - Revenues (Tables) Sheet http://amplitechinc.com/role/RevenuesTables Revenues (Tables) Tables http://amplitechinc.com/role/Revenues 22 false false R23.htm 00000023 - Disclosure - Segment Reporting (Tables) Sheet http://amplitechinc.com/role/SegmentReportingTables Segment Reporting (Tables) Tables http://amplitechinc.com/role/SegmentReporting 23 false false R24.htm 00000024 - Disclosure - Inventories (Tables) Sheet http://amplitechinc.com/role/InventoriesTables Inventories (Tables) Tables http://amplitechinc.com/role/Inventories 24 false false R25.htm 00000025 - Disclosure - Property and Equipment (Tables) Sheet http://amplitechinc.com/role/PropertyAndEquipmentTables Property and Equipment (Tables) Tables http://amplitechinc.com/role/PropertyAndEquipment 25 false false R26.htm 00000026 - Disclosure - Goodwill and Intangible Assets (Tables) Sheet http://amplitechinc.com/role/GoodwillAndIntangibleAssets Goodwill and Intangible Assets (Tables) Tables http://amplitechinc.com/role/GoodwillAndIntangibleAssets 26 false false R27.htm 00000027 - Disclosure - Leases (Tables) Sheet http://amplitechinc.com/role/LeasesTables Leases (Tables) Tables http://amplitechinc.com/role/Leases 27 false false R28.htm 00000028 - Disclosure - Notes Payable (Tables) Notes http://amplitechinc.com/role/NotesPayableTables Notes Payable (Tables) Tables http://amplitechinc.com/role/NotesPayable 28 false false R29.htm 00000029 - Disclosure - Stockholders' Equity (Tables) Sheet http://amplitechinc.com/role/StockholdersEquityTables Stockholders' Equity (Tables) Tables http://amplitechinc.com/role/StockholdersEquity 29 false false R30.htm 00000030 - Disclosure - Organization and Business Description (Details Narrative) Sheet http://amplitechinc.com/role/OrganizationAndBusinessDescriptionDetailsNarrative Organization and Business Description (Details Narrative) Details http://amplitechinc.com/role/OrganizationAndBusinessDescription 30 false false R31.htm 00000031 - Disclosure - Loss on Investment of Digital Assets (Details Narrative) Sheet http://amplitechinc.com/role/LossOnInvestmentOfDigitalAssetsDetailsNarrative Loss on Investment of Digital Assets (Details Narrative) Details http://amplitechinc.com/role/LossOnInvestmentOfDigitalAssets 31 false false R32.htm 00000032 - Disclosure - Schedule of property and equipment depreciated (Details) Sheet http://amplitechinc.com/role/ScheduleOfPropertyAndEquipmentDepreciatedDetails Schedule of property and equipment depreciated (Details) Details 32 false false R33.htm 00000033 - Disclosure - Schedule of Intangible Assets (Details) Sheet http://amplitechinc.com/role/ScheduleOfIntangibleAssetsDetails Schedule of Intangible Assets (Details) Details 33 false false R34.htm 00000034 - Disclosure - Summary of Significant Accounting Policies (Details Narrative) Sheet http://amplitechinc.com/role/SummaryOfSignificantAccountingPoliciesDetailsNarrative Summary of Significant Accounting Policies (Details Narrative) Details http://amplitechinc.com/role/SummaryOfSignificantAccountingPoliciesTables 34 false false R35.htm 00000035 - Disclosure - Schedule of disaggregated revenue (Details) Sheet http://amplitechinc.com/role/ScheduleOfDisaggregatedRevenueDetails Schedule of disaggregated revenue (Details) Details 35 false false R36.htm 00000036 - Disclosure - Schedule of Segment Reporting (Details) Sheet http://amplitechinc.com/role/ScheduleOfSegmentReportingDetails Schedule of Segment Reporting (Details) Details 36 false false R37.htm 00000037 - Disclosure - Schedule of Inventory (Details) Sheet http://amplitechinc.com/role/ScheduleOfInventoryDetails Schedule of Inventory (Details) Details 37 false false R38.htm 00000038 - 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Cost Method Investment (Details Narrative) Sheet http://amplitechinc.com/role/CostMethodInvestmentDetailsNarrative Cost Method Investment (Details Narrative) Details http://amplitechinc.com/role/CostMethodInvestment 42 false false R43.htm 00000043 - Disclosure - Schedule of Lease Assets and Liabilities (Details) Sheet http://amplitechinc.com/role/ScheduleOfLeaseAssetsAndLiabilitiesDetails Schedule of Lease Assets and Liabilities (Details) Details 43 false false R44.htm 00000044 - Disclosure - Schedule of Weighted Average Remaining Lease Term and Weighted Average Discount Rate (Details) Sheet http://amplitechinc.com/role/ScheduleOfWeightedAverageRemainingLeaseTermAndWeightedAverageDiscountRateDetails Schedule of Weighted Average Remaining Lease Term and Weighted Average Discount Rate (Details) Details 44 false false R45.htm 00000045 - Disclosure - Schedule of Future Minimum Lease Payments For Finance Lease (Details) Sheet http://amplitechinc.com/role/ScheduleOfFutureMinimumLeasePaymentsForFinanceLeaseDetails Schedule of Future Minimum Lease Payments For Finance Lease (Details) Details 45 false false R46.htm 00000046 - 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including liabilities incurred (and for which invoices have typically been received) and payable to vendors for goods and services received, taxes, interest, rent and utilities, accrued salaries and bonuses, payroll taxes and fringe benefits." } } , "auth\_ref": [ "r57", "r58" ] } , "us-gaap\_AccountsReceivableNetCurrent": { "xbrltype": "monetaryItemType", "nsuri": "http://fasb.org/us-gaap/2024", "localname": "AccountsReceivableNetCurrent", "crdr": "debit", "calculation": { "http://amplitechinc.com/role/BalanceSheets": { "parentTag": "us-gaap\_AssetsCurrent", "weight": 1.0, "order": 2.0 } } , "presentation": [ "http://amplitechinc.com/role/BalanceSheets" ] , "lang": { "en-us": { "role": { "label": "Accounts receivable", "documentation": "Amount, after allowance for credit loss, of right to consideration from customer for product sold and service rendered in normal course of business, classified as current." } } } , "auth\_ref": [ "r838" ] } } , "us-gaap\_AccumulatedDepreciationDepletionAndAmortizationPropertyPlantAndEquipment": { "xbrltype": "monetaryItemType", "nsuri": "http://fasb.org/us-gaap/2024", "localname": "AccumulatedDepreciationDepletionAndAmortizationPropertyPlantAndEquipment", "crdr": "credit", "calculation": { "http://amplitechinc.com/role/ScheduleOfPropertyAndEquipmentDetails": { "parentTag": "us-gaap\_PropertyPlantAndEquipmentNet", "weight": -1.0, "order": 2.0 } } , "presentation": [ "http://amplitechinc.com/role/ScheduleOfPropertyAndEquipmentDetails" ] , "lang": { "en-us": { "role": { "negatedLabel": "Less: Accumulated Depreciation", "label": "Accumulated Depreciation, Depletion and Amortization, Property, Plant, and Equipment", "documentation": "Amount of accumulated depreciation, depletion and amortization for physical assets used in the normal conduct of business to produce goods and services." } } } , "auth\_ref": [ "r36", "r173", "r560" ] } } , "us-gaap\_AccumulatedOtherComprehensiveIncomeLossLineItems": { "xbrltype": "stringItemType", "nsuri": "http://fasb.org/us-gaap/2024", "localname": "AccumulatedOtherComprehensiveIncomeLossLineItems", "presentation": [ "http://amplitechinc.com/role/StockholdersEquityDetailsNarrative" ] , "lang": { "en-us": { "role": { "label": "Accumulated Other Comprehensive Income (Loss) [Table]", "documentation": "Disclosure of information about components of accumulated other comprehensive income (loss)." } } } , "auth\_ref": [ "r188", "r189", "r473", "r474", "r475", "r476", "r477", "r478" ] } } , "us-gaap\_AcquiredFiniteLivedIntangibleAssetsWeightedAverageUsefulLife": { "xbrltype": "durationItemType", "nsuri": "http://fasb.org/us-gaap/2024", "localname": "AcquiredFiniteLivedIntangibleAssetsWeightedAverageUsefulLife", "presentation": [ "http://amplitechinc.com/role/ScheduleOfIntangibleAssetsDetails": { "parentTag": "us-gaap\_StockholdersEquityDetailsNarrative", "weight": 1.0, "order": 2.0 } } , "presentation": [ "http://amplitechinc.com/role/ScheduleOfIntangibleAssetsDetails" ] , "lang": { "en-us": { "role": { "label": "Weighted Average Life", "documentation": "Weighted average amortization period of finite-lived intangible assets acquired either individually or as part of a group of assets, in 'PnYmNdTnHmNs' format, for example, 'P1Y5M13D' represents the reported fact of one year, five months, and thirteen days." } } } , "auth\_ref": [ "r304", "r702" ] } } , "us-gaap\_AdditionalPaidInCapital": { "xbrltype": "monetaryItemType", "nsuri": "http://fasb.org/us-gaap/2024", "localname": "AdditionalPaidInCapital", "crdr": "credit", "calculation": { "http://amplitechinc.com/role/BalanceSheets": { "parentTag": "us-gaap\_StockholdersEquity", "weight": 1.0, "order": 2.0 } } , "presentation": [ "http://amplitechinc.com/role/BalanceSheets" ] , "lang": { "en-us": { "role": { "label": "Additional paid-in capital", "documentation": "Amount of excess of issue price over par or stated value of stock and from other transaction involving stock or stockholder. 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As a noncash expense, this element is added back to net income when calculating cash provided by or used in operations using the indirect method." } } } , "auth\_ref": [ "r6", "r301", "r308", "r727" ] } } , "AMPG\_AmplitechIncMember": { "xbrltype": "domainItemType", "nsuri": "http://amplitechinc.com/20240630", "localname": "AmplitechIncMember", "presentation": [ "http://amplitechinc.com/role/OrganizationAndBusinessDescriptionDetailsNarrative" ] , "lang": { "en-us": { "role": { "label": "Amplitech Inc [Member]", "documentation": "Amplitech Inc [Member]" } } } , "auth\_ref": [ ] } } , "AMPG\_AmplitechIncandSpecialtyMicrowaveMember": { "xbrltype": "domainItemType", "nsuri": "http://amplitechinc.com/20240630", "localname": "AmplitechIncandSpecialtyMicrowaveMember", "presentation": [ "http://amplitechinc.com/role/ScheduleOfDisaggregatedRevenueDetails" ] , "lang": { "en-us": { "role": { "label": "Amplitech Inc and Specialty Microwave [Member]", "documentation": "Amplitech Inc and Specialty 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Cash includes, but is not limited to, currency on hand, demand deposits with banks or financial institutions, and other accounts with general characteristics of demand deposits. Cash equivalents include, but are not limited to, short-term, highly liquid investments that are both readily convertible to known amounts of cash and so near their maturity that they present insignificant risk of changes in value because of changes in interest rates." } } } } , "auth\_ref": [ "r3", "r88" ] } } , "us-gaap\_CashFDICInsuredAmount": { "xbrltype": "monetaryItemType", "nsuri": "http://fasb.org/us-gaap/2024", "localname": "CashFDICInsuredAmount", "crdr": "debit", "presentation": [ "http://amplitechinc.com/role/SummaryOfSignificantAccountingPoliciesDetailsNarrative" ] , "lang": { "en-us": { "role": { "label": "FDIC maximum amount", "documentation": "The amount of cash deposited in financial institutions as of the balance sheet date that is insured by the Federal Deposit Insurance Corporation." } } } } , "auth\_ref": [ ] } } , "us-gaap\_CashFlowOperatingActivitiesLesseeAbstract": { "xbrltype": "stringItemType", "nsuri": "http://fasb.org/us-gaap/2024", "localname": "CashFlowOperatingActivitiesLesseeAbstract", "presentation": [ "http://amplitechinc.com/role/StatementsOfCashFlows" ] , "lang": { "en-us": { "role": { "label": "Cash Flows from Operating Activities", "documentation": "CityAreaCode", "presentation": [ "http://amplitechinc.com/role/Cover" ] , "lang": { "en-us": { "role": { "label": "City Area Code", "documentation": "Area code of city" } } } } } , "auth\_ref": [ ] } } , "us-gaap\_ClassOfStockDomain": { "xbrltype": "domainItemType", "nsuri": "http://fasb.org/us-gaap/2024", "localname": "ClassOfStockDomain", "presentation": [ "http://amplitechinc.com/role/Cover" ] , "lang": { "en-us": { "role": { "documentation": "Share of stock differentiated by the voting rights the holder receives. 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Addresses all significant policy factors, including any antidilutive items that have been excluded from the computation and takes into account stock dividends, splits and reverse splits that occur after the balance sheet date of the latest reporting period but before the issuance of the financial statements." } } }, "auth\_ref": [ "r26", "r27", "r227" ] }, "us-gaap\_EmployeeServiceShareBasedCompensationNonvestedAwardsTotalCompensationCostNotYetRecognizedPeriodForRecognition1": { "xbrltype": "durationItemType", "nsuri": "http://fasb.org/us-gaap/2024", "localname": "EmployeeServiceShareBasedCompensationNonvestedAwardsTotalCompensationCostNotYetRecognizedPeriodForRecognition1", "presentation": [ "http://amplitechinc.com/role/StockholdersEquityDetailsNarrative" ], "lang": { "en-us": { "role": { "label": "Weighted average remaining contractual life", "documentation": "Weighted-average period over which cost not yet recognized is expected to be recognized for award under share-based payment arrangement, in 'PnYnMnDnHnMnS' format, for example, 'P1Y5M13D' represents reported fact of one year, five months, and thirteen days." } } }, "auth\_ref": [ "r430" ] }, "us-gaap\_EmployeeServiceShareBasedCompensationNonvestedAwardsTotalCompensationCostNotYetRecognizedShareBasedAwardsOtherThanOptions": { "xbrltype": "monetaryItemType", "nsuri": "http://fasb.org/us-gaap/2024", "localname": "EmployeeServiceShareBasedCompensationNonvestedAwardsTotalCompensationCostNotYetRecognizedShareBasedAwardsOtherThanOptions", "presentation": [ "http://amplitechinc.com/role/StockholdersEquityDetailsNarrative" ], "lang": { "en-us": { "role": { "label": "Unrecognized compensation cost", "documentation": "Amount of cost to be recognized for nonvested award under share-based payment arrangement. 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Registrants not involved in bankruptcy proceedings during the preceding five years should not report this element." } } }, "auth\_ref": [ "r786" ] }, "dei\_EntityCentralIndexKey": { "xbrltype": "centralIndexKeyItemType", "nsuri": "http://xbrl.sec.gov/dei/2024", "localname": "EntityCentralIndexKey", "presentation": [ "http://amplitechinc.com/role/Cover" ], "lang": { "en-us": { "role": { "label": "Entity Central Index Key", "documentation": "A unique 10-digit SEC-issued value to identify entities that have filed disclosures with the SEC. 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Excludes interim and annual periods when interim periods are reported from current statement of financial position date (rolling approach)."} } }, "auth\_ref": [ "r496" ], "us-gaap\_FinanceLeaseLiabilityPaymentsRemainderOfFiscalYear": { "xbrltype": "monetaryItemType", "nsuri": "http://fasb.org/us-gaap/2024", "localname": "FinanceLeaseLiabilityPaymentsRemainderOfFiscalYear", "crdr": "credit", "calculation": { "parentTag": "us-gaap\_FinanceLeaseLiabilityPaymentsDue", "weight": 1.0, "order": 1.0 }, "presentation": "http://amplitechinc.com/role/ScheduleOfFutureMinimumLeasePaymentsForFinanceLeaseDetails", "lang": { "en-us": { "role": { "verboseLabel": "2024-remaining", "label": "Finance Lease, Liability, to be Paid, Remainder of Fiscal Year", "documentation": "Amount of lessee's undiscounted obligation for lease payment for finance lease to be paid in remainder of current fiscal year." } } }, "auth\_ref": [ "r906" ], "us-gaap\_FinanceLeaseLiabilityUndiscountedExcessAmount": { "xbrltype": 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Excludes interim and annual periods when interim periods are reported from current statement of financial position date (rolling approach)."} } }, "auth\_ref": [ "r309", "r702", "r727" ], "us-gaap\_FiniteLivedIntangibleAssetsAmortizationExpenseRemainderOfFiscalYear": { "xbrltype": "monetaryItemType", "nsuri": "http://fasb.org/us-gaap/2024", "localname": "FiniteLivedIntangibleAssetsAmortizationExpenseRemainderOfFiscalYear", "crdr": "debit", "calculation": { "parentTag": "us-gaap\_FiniteLivedIntangibleAssetsNet", "weight": 1.0, "order": 1.0 }, "presentation": "http://amplitechinc.com/role/ScheduleOfAmortizationOfAssetsDetails", "lang": { "en-us": { "role": { "label": "2024-remaining", "documentation": "Amount of amortization for assets, excluding financial assets and goodwill, lacking physical substance with finite life expected to be recognized in remainder of current fiscal year." } } }, "auth\_ref": [ "r955" ], "us-gaap\_FiniteLivedIntangibleAssetsAmortizationExpenseTableTextBlock": { "xbrltype": "textBlockItemType", "nsuri": "http://fasb.org/us-gaap/2024", "localname": "FiniteLivedIntangibleAssetsAmortizationExpenseTableTextBlock", "presentation": "http://amplitechinc.com/role/SummaryOfSignificantAccountingPoliciesTables", "lang": { "en-us": { "role": { "label": "Schedule of Intangible Assets", "documentation": "Tabular disclosure of amortization expense of assets, excluding financial assets, that lack physical substance, having a limited useful life." } } }, "auth\_ref": [ ] }, "us-gaap\_FiniteLivedIntangibleAssetsAmortizationExpenseYearFour": { "xbrltype": "monetaryItemType", "nsuri": "http://fasb.org/us-gaap/2024", "localname": "FiniteLivedIntangibleAssetsAmortizationExpenseYearFour", "crdr": "debit", "calculation": { "parentTag": "us-gaap\_FiniteLivedIntangibleAssetsNet", "weight": 1.0, "order": 5.0 }, "presentation": "http://amplitechinc.com/role/ScheduleOfAmortizationOfAssetsDetails", "lang": { "en-us": { "role": { "label": "2028", "documentation": "Amount of amortization for assets, excluding financial assets and goodwill, lacking physical substance with finite life expected to be recognized in fourth fiscal year following current fiscal year. Excludes interim and annual periods when interim periods are reported from current statement of financial position date (rolling approach)."} } }, "auth\_ref": [ "r309", "r702", "r727" ], "us-gaap\_FiniteLivedIntangibleAssetsAmortizationExpenseYearThree": { "xbrltype": "monetaryItemType", "nsuri": "http://fasb.org/us-gaap/2024", "localname": "FiniteLivedIntangibleAssetsAmortizationExpenseYearThree", "crdr": "debit", "calculation": { "parentTag": "us-gaap\_FiniteLivedIntangibleAssetsNet", "weight": 1.0, "order": 4.0 }, "presentation": "http://amplitechinc.com/role/ScheduleOfAmortizationOfAssetsDetails", "lang": { "en-us": { "role": { "label": "2027", "documentation": "Amount of amortization for assets, excluding financial assets and goodwill, lacking physical substance with finite life expected to be recognized in third fiscal year following current fiscal year. Excludes interim and annual periods when interim periods are reported from current statement of financial position date (rolling approach)."} } }, "auth\_ref": [ "r309", "r702", "r727" ], "us-gaap\_FiniteLivedIntangibleAssetsAmortizationExpenseYearTwo": { "xbrltype": "monetaryItemType", "nsuri": "http://fasb.org/us-gaap/2024", "localname": "FiniteLivedIntangibleAssetsAmortizationExpenseYearTwo", "crdr": "debit", "calculation": { "parentTag": "us-gaap\_FiniteLivedIntangibleAssetsNet", "weight": 1.0, "order": 3.0 }, "presentation": "http://amplitechinc.com/role/ScheduleOfAmortizationOfAssetsDetails", "lang": { "en-us": { "role": { "label": "2026", "documentation": "Amount of amortization for assets, excluding financial assets and goodwill, lacking physical substance with finite life expected to be recognized in second fiscal year following current fiscal year. Excludes interim and annual periods when interim periods are reported from current statement of financial position date (rolling approach)."} } }, "auth\_ref": [ "r309", "r702", "r727" ], "us-gaap\_FiniteLivedIntangibleAssetsAmortizationMethod": { "xbrltype": "stringItemType", "nsuri": "http://fasb.org/us-gaap/2024", "localname": "FiniteLivedIntangibleAssetsAmortizationMethod", "presentation": "http://amplitechinc.com/role/ScheduleOfIntangibleAssetsDetails", "lang": { "en-us": { "role": { "verboseLabel": "Depreciation Method", "label": "Finite-Lived Intangible Assets, Amortization Method", "documentation": "The amortization method of a major finite-lived intangible asset class. A major class is composed of intangible assets that can be grouped together because they are similar either by their nature or by their use in the operations of a company. The straight-line method is the preferred amortization method, unless another method better reflects the pattern in which the asset is consumed." } } }, "auth\_ref": [ "r299", "r710" ], "us-gaap\_FiniteLivedIntangibleAssetsByMajorClassAxis": { "xbrltype": "stringItemType", "nsuri": "http://fasb.org/us-gaap/2024", "localname": "FiniteLivedIntangibleAssetsByMajorClassAxis", "presentation": "http://amplitechinc.com/role/ScheduleOfIntangibleAssetsDetails", "lang": { "en-us": { "role": { "label": "Finite-Lived Intangible Assets by Major Class Axis", "documentation": "Information by major type or class of finite-lived intangible assets." } } }, "auth\_ref": [ "r300", "r302", "r303", "r304", "r306", "r307", "r311", "r312", "r512", "r513", "r702" ], "us-gaap\_FiniteLivedIntangibleAssetsGross": { "xbrltype": "monetaryItemType", "nsuri": "http://fasb.org/us-gaap/2024", "localname": "FiniteLivedIntangibleAssetsGross", "crdr": "debit", "presentation": "http://amplitechinc.com/role/ScheduleOfIntangibleAssetsDetails", "lang": { "en-us": { "role": { "label": "Gross Carrying Amount", "documentation": "Amount before amortization of assets, excluding financial assets and goodwill, lacking physical substance with a finite life." } } }, "auth\_ref": [ "r286", "r307", "r513", "r727" ], "us-gaap\_FiniteLivedIntangibleAssetsMajorClassNameDomain": { "xbrltype": "domainItemType", "nsuri": "http://fasb.org/us-gaap/2024", "localname": "FiniteLivedIntangibleAssetsMajorClassNameDomain", "presentation": "http://amplitechinc.com/role/ScheduleOfIntangibleAssetsDetails", "lang": { "en-us": { "role": { "documentation": "The major class of finite-lived intangible asset (for example, patents, trademarks, copyrights, etc.) A major class is composed of intangible assets that can be grouped together because they are similar, either by their nature or by their use in the operations of a company." } } }, "auth\_ref": [ "r300", "r302", "r303", "r304", "r306", "r307", "r311", "r312", "r702" ], "us-gaap\_FiniteLivedIntangibleAssetsNet": { "xbrltype": "monetaryItemType", "nsuri": "http://fasb.org/us-gaap/2024", "localname": "FiniteLivedIntangibleAssetsNet", "crdr": "debit", "calculation": { "parentTag": "us-gaap\_FiniteLivedIntangibleAssetsNet", "weight": null, "order": null, "auth\_ref": [ ] }, "presentation": "http://amplitechinc.com/role/ScheduleOfAmortizationOfAssetsDetails", "lang": { "en-us": { "role": { "totalLabel": "Net", "label": "Finite-Lived Intangible Assets, Net", "documentation": "Amount after amortization of assets, excluding financial assets and goodwill, lacking physical substance with a finite life." } } }, "auth\_ref": [ "r512", "r853" ], "us-gaap\_FurnitureAndFixturesMember": { "xbrltype": "domainItemType", "nsuri": "http://fasb.org/us-gaap/2024", "localname": "FurnitureAndFixturesMember", "presentation": "http://amplitechinc.com/role/ScheduleOfPropertyAndEquipmentDetails", "lang": { "en-us": { "role": { "label": "Furniture and Fixtures [Member]", "documentation": "Equipment commonly used in offices and stores that have no permanent connection to the structure of a building or utilities. Examples include, but are not limited to, desks, chairs, tables, and bookcases." } } }, "auth\_ref": [ ] }, "us-gaap\_GainLossOnInvestments": { "xbrltype": "monetaryItemType", "nsuri": "http://fasb.org/us-gaap/2024", "localname": "GainLossOnInvestments", "crdr": "credit", "presentation": "http://amplitechinc.com/role/LossOnInvestmentOfDigitalAssetsDetailsNarrative", "lang": { "en-us": { "role": { "label": "Transactions in digital currency", "label": "Gain (Loss) on Investments", "documentation": "Amount of realized and unrealized gain (loss) on investment." } } }, "auth\_ref": [ "r83", "r84", "r800" ], "us-gaap\_GainLossOnTerminationOfLease": { "xbrltype": "monetaryItemType", "nsuri": "http://fasb.org/us-gaap/2024", "localname": "GainLossOnTerminationOfLease", "crdr": "credit", "calculation": { "parentTag": "us-gaap\_NetCashProvidedByUsedInOperatingActivities", "weight": -1.0, "order": 5.0 }, "presentation": "http://amplitechinc.com/role/StatementsOfCashFlows", "lang": { "en-us": { "role": { "label": "Gain on termination of right-of-use operating lease", "label": "Gain (Loss) on Termination of Lease", "documentation": "Amount of gain (loss) on termination of lease before expiration of lease term." } } }, "auth\_ref": [ "r486" ], "AMPG\_GainLossOnTerminationOfLeaseRightOfUseOperating": { "xbrltype": "monetaryItemType", "nsuri": "http://amplitechinc.com/20240630", "localname": "GainLossOnTerminationOfLeaseRightOfUseOperating", "crdr": "credit", "presentation": "http://amplitechinc.com/role/LeasesDetailsNarrative", "lang": { "en-us": { "role": { "label": "Gain loss on termination of lease right of use operating", "documentation": "Gain loss on termination of lease right of use operating." } } }, "auth\_ref": [ ] }, "us-gaap\_Goodwill": { "xbrltype": "monetaryItemType", "nsuri": "http://fasb.org/us-gaap/2024", "localname": "Goodwill", "crdr": "debit", "calculation": { "parentTag": "us-gaap Assets", "weight": 1.0, "order": 5.0 }, "presentation": "http://amplitechinc.com/role/BalanceSheets", "http://amplitechinc.com/role/GoodwillAndIntangibleAssetsDetailsNarrative", "lang": { "en-us": { "role": { "label": "Goodwill", "documentation": "Amount, after accumulated impairment loss, of asset representing future economic benefit arising from other asset acquired in business combination or from joint venture formation or both, that is not individually identified and separately recognized." } } }, "auth\_ref": [ "r174",

"r287", "r544", "r721", "r726", "r745", "r752", "r843", "r844" ] }, "us-gaap\_GoodwillAndIntangibleAssetsDisclosureAbstract": { "xbrltype": "stringItemType", "nsuri": "http://fasb.org/us-gaap/2024", "localname": "GoodwillAndIntangibleAssetsDisclosureAbstract", "lang": { "en-us": { "role": { "label": "Goodwill and Intangible Assets Disclosure [Abstract]" } } }, "auth\_ref": [ "r842", "r845" ] }, "us-gaap\_GoodwillAndIntangibleAssetsDisclosureTextBlock": { "xbrltype": "textBlockItemType", "nsuri": "http://fasb.org/us-gaap/2024", "localname": "GoodwillAndIntangibleAssetsDisclosureTextBlock", "presentation": [ "http://amplitechinc.com/role/GoodwillAndIntangibleAssets" ], "lang": { "en-us": { "role": { "label": "Goodwill and Intangible Assets", "documentation": "The entire disclosure for goodwill and intangible assets." } } }, "auth\_ref": [ "r842", "r845" ] }, "us-gaap\_GoodwillAndIntangibleAssetsIntangibleAssetsIndefiniteLivedPolicy": { "xbrltype": "textBlockItemType", "nsuri": "http://fasb.org/us-gaap/2024", "localname": "GoodwillAndIntangibleAssetsIntangibleAssetsIndefiniteLivedPolicy", "presentation": [ "http://amplitechinc.com/role/SummaryOfSignificantAccountingPoliciesPolicies" ], "lang": { "en-us": { "role": { "label": "Goodwill and Indefinite-Lived Intangible Assets", "documentation": "Disclosure of accounting policy for indefinite-lived intangible assets (that is, those intangible assets not subject to amortization). This accounting policy also may address how the entity assesses whether events and circumstances continue to support an indefinite useful life and how the entity assesses and measures impairment of such assets." } } }, "auth\_ref": [ "r845" ] }, "us-gaap\_GoodwillImpairmentLoss": { "xbrltype": "monetaryItemType", "nsuri": "http://fasb.org/us-gaap/2024", "localname": "GoodwillImpairmentLoss", "crdr": "debit", "presentation": [ "http://amplitechinc.com/role/SummaryOfSignificantAccountingPoliciesDetailsNarrative" ], "lang": { "en-us": { "role": { "label": "Goodwill impairment", "documentation": "Amount of impairment loss from asset representing future economic benefit arising from other asset acquired in business combination or from joint venture formation or both, that is not individually identified and separately recognized." } } }, "auth\_ref": [ "r6", "r288", "r294", "r298", "r726", "r745" ] }, "us-gaap\_GrossProfit": { "monetaryItemType", "nsuri": "http://fasb.org/us-gaap/2024", "localname": "GrossProfit", "crdr": "credit", "calculation": { "parentTag": "us-gaap\_OperatingIncomeLoss", "weight": 1.0, "order": 1.0 }, "presentation": [ "http://amplitechinc.com/role/StatementsOfOperations" ], "lang": { "en-us": { "role": { "totalLabel": "Gross Profit", "label": "Gross Profit", "documentation": "Aggregate revenue less cost of goods and services sold or operating expenses directly attributable to the revenue generation activity." } } }, "auth\_ref": [ "r76", "r80", "r120", "r202", "r275", "r334", "r335", "r336", "r337", "r338", "r339", "r340", "r341", "r342", "r472", "r715", "r720", "r832", "r833", "r834", "r835", "r836", "r867" ] }, "us-gaap\_IPOMember": { "xbrltype": "domainItemType", "nsuri": "http://fasb.org/us-gaap/2024", "localname": "IPOMember", "presentation": [ "http://amplitechinc.com/role/OrganizationAndBusinessDescriptionDetailsNarrative" ], "lang": { "en-us": { "role": { "label": "IPO [Member]", "documentation": "First sale of stock by a private company to the public." } } }, "auth\_ref": [ "r6", "r288", "r294", "r298", "r726", "r745" ] }, "us-gaap\_ImpairmentOrDisposalOfLongLivedAssetsPolicyTextBlock": { "xbrltype": "textBlockItemType", "nsuri": "http://fasb.org/us-gaap/2024", "localname": "ImpairmentOrDisposalOfLongLivedAssetsPolicyTextBlock", "presentation": [ "http://amplitechinc.com/role/SummaryOfSignificantAccountingPoliciesPolicies" ], "lang": { "en-us": { "role": { "label": "Long-Lived Assets", "documentation": "Disclosure of accounting policy for recognizing and measuring the impairment of long-lived assets. An entity also may disclose its accounting policy for long-lived assets to be sold. This policy excludes goodwill and intangible assets." } } }, "auth\_ref": [ "r0", "r98" ] }, "us-gaap\_IncomeLossFromContinuingOperationsBeforeIncomeTaxesExtraordinaryItemsNoncontrollingInterest": { "xbrltype": "monetaryItemType", "nsuri": "http://fasb.org/us-gaap/2024", "localname": "IncomeLossFromContinuingOperationsBeforeIncomeTaxesExtraordinaryItemsNoncontrollingInterest", "crdr": "credit", "calculation": { "parentTag": "us-gaap\_NetIncomeLoss", "weight": 1.0, "order": 1.0 }, "presentation": [ "http://amplitechinc.com/role/StatementsOfOperations" ], "lang": { "en-us": { "role": { "label": "Net Loss Before Income Taxes", "documentation": "Amount of income (loss) from continuing operations, including income (loss) from equity method investments, before deduction of income tax expense (benefit), and income (loss) attributable to noncontrolling interest." } } }, "auth\_ref": [ "r77", "r116", "r120", "r547", "r562", "r715", "r720", "r832", "r833", "r834", "r835", "r836" ] }, 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vendors for goods and services received and the amount of obligations and expenses incurred but not paid." } } }, "auth\_ref": [ "r5" ] }, "us-gaap\_IncreaseDecreaseInAccountsReceivable": { "xbrltype": "monetaryItemType", "nsuri": "http://fasb.org/us-gaap/2024", "localname": "IncreaseDecreaseInAccountsReceivable", "crdr": "credit", "calculation": { "parentTag": "us-gaap\_NetCashProvidedByUsedInOperatingActivities", "weight": -1.0, "order": 9.0 }, "presentation": [ "http://amplitechinc.com/role/StatementsOfCashFlows" ], "lang": { "en-us": { "role": { "negatedLabel": "Accounts receivable", "label": "Increase (Decrease) in Accounts Receivable", "documentation": "The increase (decrease) during the reporting period in amount due within one year (or one business cycle) from customers for the credit sale of goods and services." } } }, "auth\_ref": [ "r5" ] }, "AMPG\_IncreaseDecreaseInCustomerDeposit": { "xbrltype": "monetaryItemType", "nsuri": "http://amplitechinc.com/20240630", "localname": 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"http://amplitechinc.com/role/StatementsOfCashFlows" ], "lang": { "en-us": { "role": { "label": "Operating lease obligations", "documentation": "Amount of increase (decrease) in obligation for operating lease." } } }, "auth\_ref": [ "r805", "r821" ] }, "us-gaap\_IncreaseDecreaseInPrepaidExpense": { "xbrltype": "monetaryItemType", "nsuri": "http://fasb.org/us-gaap/2024", "localname": "IncreaseDecreaseInPrepaidExpense", "crdr": "credit", "calculation": { "parentTag": "us-gaap\_NetCashProvidedByUsedInOperatingActivities", "weight": -1.0, "order": 11.0 }, "presentation": [ "http://amplitechinc.com/role/StatementsOfCashFlows" ], "lang": { "en-us": { "role": { "negatedLabel": "Prepaid expenses", "label": "Increase (Decrease) in Prepaid Expense", "documentation": "The increase (decrease) during the reporting period in the amount of outstanding money paid in advance for goods or services that bring economic benefits for future periods." } } }, "auth\_ref": [ "r5" ] }, 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This accounting policy also might address: (1) the amortization method used; (2) the useful lives of such assets; and (3) how the entity assesses and measures impairment of such assets." } } }, "auth\_ref": [ "r508", "r509", "r510", "r512", "r710", "r845" ] }, "us-gaap\_IntangibleAssetsGrossExcludingGoodwill": { "xbrltype": "monetaryItemType", "nsuri": "http://fasb.org/us-gaap/2024", "localname": "IntangibleAssetsGrossExcludingGoodwill", "crdr": "debit", "presentation": [ "http://amplitechinc.com/role/ScheduleOfIntangibleAssetsDetails" ], "lang": { "en-us": { "role": { "verboseLabel": "Gross Carrying Amount", "label": "Intangible Assets, Gross (Excluding Goodwill)", "documentation": "Amount before accumulated amortization of intangible assets, excluding goodwill." } } }, "auth\_ref": [ "r174" ] }, "us-gaap\_IntangibleAssetsNetExcludingGoodwill": { "xbrltype": "monetaryItemType", "nsuri": "http://fasb.org/us-gaap/2024", "localname": "IntangibleAssetsNetExcludingGoodwill", "crdr": "debit", "calculation": { "parentTag": "us-gaap\_Assets", "weight": 1.0, "order": 4.0 }, "presentation": [ "http://amplitechinc.com/role/BalanceSheets", "http://amplitechinc.com/role/ScheduleOfIntangibleAssetsDetails" ], "lang": { "en-us": { "role": { "label": "Intangible assets, net", "totalLabel": "Net", "documentation": "Sum of the carrying amounts of all intangible assets, excluding goodwill, as of the balance sheet date, net of accumulated amortization and impairment charges." } } }, "auth\_ref": [ "r300", "r853", "r855" ] }, "us-gaap\_IntellectualPropertyMember": { "xbrltype": "domainItemType", "nsuri": "http://fasb.org/us-gaap/2024", "localname": "IntellectualPropertyMember", "presentation": [ "http://amplitechinc.com/role/ScheduleOfIntangibleAssetsDetails" ], "lang": { "en-us": { "role": { "label": "Intellectual Property [Member]", "documentation": "Intangible asset arising from original creative thought. Include, but is not limited to, trademarks, patents, and copyrights." } } }, "auth\_ref": [ "r14", "r846", "r847", "r848", "r849", "r851", "r853", "r856", "r857" ] }, "us-gaap\_InterestExpense": { "xbrltype": "monetaryItemType", "nsuri": "http://fasb.org/us-gaap/2024", "localname": "InterestExpense", "crdr": "debit", "presentation": [ "http://amplitechinc.com/role/NotesPayableDetailsNarrative" ], "lang": { "en-us": { "role": { "label": "Interest expense", "documentation": "Amount of interest expense classified as operating and nonoperating. Includes, but is not limited to, cost of borrowing accounted for as interest expense." } } }, "auth\_ref": [ "r229", "r237", "r241", "r247", "r260", "r480", "r720", "r721" ] }, "us-gaap\_InterestIncomeExpenseNet": { "xbrltype": "monetaryItemType", "nsuri": "http://fasb.org/us-gaap/2024", "localname": "InterestIncomeExpenseNet", "crdr": "credit", "calculation": { "parentTag": "us-gaap\_OtherNoncashIncomeExpense", "weight": 1.0, "order": 4.0 }, "presentation": [ "http://amplitechinc.com/role/ScheduleOfSegmentReportingDetails", "http://amplitechinc.com/role/StatementsOfOperations" ], "lang": { "en-us": { "role": { "label": "Interest Income (expense), net", "verboseLabel": "Interest Income, net", "documentation": "Amount of interest income (expense) classified as operating." } } }, "auth\_ref": [ "r545", "r833" ] }, "us-gaap\_InterestPaidNet": { "xbrltype": "monetaryItemType", "nsuri": "http://fasb.org/us-gaap/2024", "localname": "InterestPaidNet", "crdr": "credit", "presentation": [ "http://amplitechinc.com/role/StatementsOfCashFlows" ], "lang": { "en-us": { "role": { "label": "Cash paid for interest expense", "documentation": "Amount of cash paid for interest, excluding capitalized interest, classified as operating activity. Includes, but is not limited to, payment to settle zero-coupon bond for accreted interest of debt discount and debt instrument with insignificant coupon interest rate in relation to effective interest rate of borrowing attributable to accreted interest of debt discount." } } }, "auth\_ref": [ "r193", "r195", "r196" ] }, "AMPG\_InternationalSalesMember": { "xbrltype": "domainItemType", "nsuri": "http://amplitechinc.com/20240630", "localname": "InternationalSalesMember", "presentation": [ "http://amplitechinc.com/role/ScheduleOfDisaggregatedRevenueDetails" ], "lang": { "en-us": { "role": { "label": "International Sales [Member]", "documentation": "International Sales [Member]" } } }, "auth\_ref": [ "r6", "r288", "r294", "r298", "r726", "r745" ] }, "us-gaap\_InventoryAdjustments": { "xbrltype": "monetaryItemType", "nsuri":



1.0, "order": 1.0 } }, "presentation": { "http://amplitechinc.com/role/ScheduleOfFutureMinimumOperatingLeasePaymentsDetails" }, "lang": { "en-us": { "role": { "label": "2024 remaining", "documentation": "Amount of lessee's undiscounted obligation for lease payment for operating lease having initial or remaining lease term in excess of one year to be paid in remainder of current fiscal year." } } }, "auth\_ref": { "r906" } }, "us-gaap\_LesseeOperatingLeaseLiabilityUndiscountedExcessAmount": { "xbrltype": "monetaryItemType", "nsuri": "http://fasb.org/us-gaap/2024", "localname": "LesseeOperatingLeaseLiabilityUndiscountedExcessAmount", "crdr": "credit", "presentation": { "http://amplitechinc.com/role/ScheduleOfFutureMinimumOperatingLeasePaymentsDetails" }, "lang": { "en-us": { "role": { "negatedLabel": "Less imputed interest", "label": "Lessee, Operating Lease, Liability, Undiscounted Excess Amount", "documentation": "Amount of lessee's undiscounted obligation for lease payments in excess of discounted obligation for lease payments for operating lease." } } }, "auth\_ref": { "r496" } }, "us-gaap\_LesseeOperatingLeaseTermOfContract": { "xbrltype": "durationItemType", "nsuri": "http://fasb.org/us-gaap/2024", "localname": "LesseeOperatingLeaseTermOfContract", "presentation": { "http://amplitechinc.com/role/LeasesDetailsNarrative" }, "lang": { "en-us": { "role": { "label": "Lessee operating lease term of contract", "documentation": "Term of lessee's operating lease. In 'PnYmNdThnMns' format, for example, 'P1Y5M13D' represents reported fact of one year, five months, and thirteen days." } } }, "auth\_ref": { "r905" } }, "us-gaap\_LesseeOperatingLeasesTextBlock": { "xbrltype": "textBlockItemType", "nsuri": "http://fasb.org/us-gaap/2024", "localname": "LesseeOperatingLeasesTextBlock", "presentation": { "http://amplitechinc.com/role/Leases" }, "lang": { "en-us": { "role": { "label": "Leases", "documentation": "The entire disclosure for operating leases of lessee. Includes, but is not limited to, description of operating lease and maturity analysis of operating lease liability." } } }, "auth\_ref": { "r484" } }, "us-gaap\_Liabilities": { "xbrltype": "monetaryItemType", "nsuri": "http://fasb.org/us-gaap/2024", "localname": "Liabilities", "crdr": "credit", "calculation": { "http://amplitechinc.com/role/BalanceSheets": { "parentTag": "us-gaap\_LiabilitiesAndStockholdersEquity", "weight": 1.0, "order": 1.0 } }, "presentation": { "http://amplitechinc.com/role/BalanceSheets" }, "lang": { "en-us": { "role": { "totalLabel": "Total Liabilities", "label": "Liabilities", "documentation": "Amount of liability recognized for present obligation requiring transfer or otherwise providing economic benefit to others." } } }, "auth\_ref": { "r15", "r57", "r58", "r59", "r62", "r63", "r64", "r65", "r202", "r275", "r334", "r335", "r336", "r337", "r338", "r339", "r340", "r341", "r342", "r458", "r459", "r460", "r472", "r627", "r714", "r779", "r867", "r910", "r911" } }, "us-gaap\_LiabilitiesAndStockholdersEquity": { "xbrltype": "monetaryItemType", "nsuri": "http://fasb.org/us-gaap/2024", "localname": "LiabilitiesAndStockholdersEquity", "crdr": "credit", "calculation": { "http://amplitechinc.com/role/BalanceSheets": { "parentTag": null, "weight": null, "order": null, "root": true } }, "presentation": { "http://amplitechinc.com/role/BalanceSheets" }, "lang": { "en-us": { "role": { "totalLabel": "Total Liabilities and Stockholders'2019 Equity", "label": "Liabilities and Equity", "documentation": "Amount of liabilities and equity items, including the portion of equity attributable to noncontrolling interests, if any." } } }, "auth\_ref": { "r72", "r115", "r536", "r752", "r825", "r841", "r901" } }, "us-gaap\_LiabilitiesAndStockholdersEquityAbstract": { "xbrltype": "stringItemType", "nsuri": "http://fasb.org/us-gaap/2024", "localname": "LiabilitiesAndStockholdersEquityAbstract", "presentation": { "http://amplitechinc.com/role/BalanceSheets" }, "lang": { "en-us": { "role": { "label": "Liabilities and Stockholders'2019 Equity" } } }, "auth\_ref": { "r15", "r57", "r58", "r59", "r62", "r63", "r64", "r65", "r202", "r275", "r334", "r335", "r336", "r337", "r338", "r339", "r340", "r341", "r342", "r458", "r459", "r460", "r472", "r627", "r714", "r779", "r867", "r910", "r911" } }, "us-gaap\_LiabilitiesCurrent": { "xbrltype": "monetaryItemType", "nsuri": "http://fasb.org/us-gaap/2024", "localname": "LiabilitiesCurrent", "crdr": "credit", "calculation": { "http://amplitechinc.com/role/BalanceSheets": { "parentTag": "us-gaap\_Liabilities", "weight": 1.0, "order": 1.0 } }, "presentation": { "http://amplitechinc.com/role/BalanceSheets" }, "lang": { "en-us": { "role": { "totalLabel": "Total Current Liabilities", "label": "Liabilities, Current", "documentation": "Total obligations incurred as part of normal operations that are expected to be paid during the following twelve months or within one business cycle, if longer." } } }, "auth\_ref": { "r59", "r168", "r202", "r275", "r334", "r335", "r336", "r337", "r338", "r339", "r340", "r341", "r342", "r458", "r459", "r460", "r472", "r752", "r867", "r910", "r911" } }, "us-gaap\_LiabilitiesCurrentAbstract": { "xbrltype": "stringItemType", "nsuri": "http://fasb.org/us-gaap/2024", "localname": "LiabilitiesCurrentAbstract", "presentation": { "http://amplitechinc.com/role/BalanceSheets" }, "lang": { "en-us": { "role": { "label": "Current Liabilities" } } }, "auth\_ref": { "r59", "r168", "r202", "r275", "r334", "r335", "r336", "r337", "r338", "r339", "r340", "r341", "r342", "r458", "r459", "r460", "r472", "r752", "r867", "r910", "r911" } }, "us-gaap\_LiabilitiesNoncurrentAbstract": { "xbrltype": "stringItemType", "nsuri": "http://fasb.org/us-gaap/2024", "localname": "LiabilitiesNoncurrentAbstract", "presentation": { "http://amplitechinc.com/role/BalanceSheets" }, "lang": { "en-us": { "role": { "label": "Long-term Liabilities" } } }, "auth\_ref": { "r59", "r168", "r202", "r275", "r334", "r335", "r336", "r337", "r338", "r339", "r340", "r341", "r342", "r458", "r459", "r460", "r472", "r752", "r867", "r910", "r911" } }, "us-gaap\_LicenseAndServiceMember": { "xbrltype": "domainItemType", "nsuri": "http://fasb.org/us-gaap/2024", "localname": "LicenseAndServiceMember", "presentation": { "http://amplitechinc.com/role/SubsequentEventsDetailsNarrative" }, "lang": { "en-us": { "role": { "label": "License and Service [Member]", "documentation": "Right to use intangible asset and performance of related service. Intangible asset includes, but is not limited to, patent, copyright, technology, manufacturing process, software or trademark." } } }, "auth\_ref": { "r871" } }, "AMPG\_LineOfCreditClosureOfEquipment": { "xbrltype": "monetaryItemType", "nsuri": "http://amplitechinc.com/20240630", "localname": "LineOfCreditClosureOfEquipment", "crdr": "credit", "presentation": { "http://amplitechinc.com/role/NotesPayableDetailsNarrative" }, "lang": { "en-us": { "role": { "label": "Line of credit, closure of equipment", "documentation": "Line of credit closure of equipment." } } }, "auth\_ref": { "r56", "r61" } }, "AMPG\_LineOfCreditEquipments": { "xbrltype": "monetaryItemType", "nsuri": "http://amplitechinc.com/20240630", "localname": "LineOfCreditEquipments", "crdr": "credit", "presentation": { "http://amplitechinc.com/role/NotesPayableDetailsNarrative" }, "lang": { "en-us": { "role": { "label": "Line of credit equipments", "documentation": "Line of credit equipments." } } }, "auth\_ref": { "r56", "r61" } }, "us-gaap\_LineOfCreditFacilityMaximumBorrowingCapacity": { "xbrltype": "monetaryItemType", "nsuri": "http://fasb.org/us-gaap/2024", "localname": "LineOfCreditFacilityMaximumBorrowingCapacity", "crdr": "credit", "presentation": { "http://amplitechinc.com/role/NotesPayableDetailsNarrative" }, "lang": { "en-us": { "role": { "label": "Line of credit facility, maximum borrowing capacity", "documentation": "Maximum borrowing capacity under the credit facility without consideration of any current restrictions on the amount that could be borrowed or the amounts currently outstanding under the facility." } } }, "auth\_ref": { "r56", "r61" } }, "us-gaap\_LineOfCreditFacilityPeriodicPayment": { "xbrltype": "monetaryItemType", "nsuri": "http://fasb.org/us-gaap/2024", "localname": "LineOfCreditFacilityPeriodicPayment", "crdr": "debit", "presentation": { "http://amplitechinc.com/role/NotesPayableDetailsNarrative" }, "lang": { "en-us": { "role": { "label": "Line of credit facility, periodic payment", "documentation": "Amount of the required periodic payments of both interest and principal." } } }, "auth\_ref": { "r56", "r61" } }, "us-gaap\_LoansPayableMember": { "xbrltype": "domainItemType", "nsuri": "http://fasb.org/us-gaap/2024", "localname": "LoansPayableMember", "presentation": { "http://amplitechinc.com/role/NotesPayableDetailsNarrative" }, "lang": { "en-us": { "role": { "label": "Loans Payable [Member]", "documentation": "Borrowing supported by a written promise to pay an obligation." } } }, "auth\_ref": { "r56", "r61" } }, "dei\_LocalPhoneNumber": { "xbrltype": "normalizedStringItemType", "nsuri": "http://xbrl.sec.gov/dei/2024", "localname": "LocalPhoneNumber", "presentation": { "http://amplitechinc.com/role/Cover" }, "lang": { "en-us": { "role": { "label": "Local Phone Number", "documentation": "Local phone number for entity." } } }, "auth\_ref": { "r56", "r61" } }, "us-gaap\_LongTermDebt": { "xbrltype": "monetaryItemType", "nsuri": "http://fasb.org/us-gaap/2024", "localname": "LongTermDebt", "crdr": "debit", "calculation": { "http://amplitechinc.com/role/ScheduleOfFuturePrincipalAndInterestPaymentsDetails": { "parentTag": null, "weight": null, "order": null, "root": true } }, "presentation": { "http://amplitechinc.com/role/ScheduleOfFuturePrincipalAndInterestPaymentsDetails" }, "lang": { "en-us": { "role": { "label": "Total remaining payments", "documentation": "Amount, after deduction of unamortized premium (discount) and debt issuance cost, of long-term debt. Excludes lease obligation." } } }, "auth\_ref": { "r15", "r113", "r356", "r369", "r729", "r730", "r750", "r919" } }, "us-gaap\_LongTermDebtMaturitiesRepaymentsOfPrincipalInNextTwelveMonths": { "xbrltype": "monetaryItemType", "nsuri": "http://fasb.org/us-gaap/2024", "localname": "LongTermDebtMaturitiesRepaymentsOfPrincipalInNextTwelveMonths", "crdr": "debit", "calculation": { "http://amplitechinc.com/role/ScheduleOfFuturePrincipalAndInterestPaymentsDetails": { "parentTag": "us-gaap\_LongTermDebt", "weight": 1.0, "order": 1.0 } }, "presentation": { "http://amplitechinc.com/role/ScheduleOfFuturePrincipalAndInterestPaymentsDetails" }, "lang": { "en-us": { "role": { "verboseLabel": "2024 remaining", "label": "Long-Term Debt, Maturity, Year One", "documentation": "Amount of long-term debt payable, sinking fund requirement, and other securities issued that are redeemable by holder at fixed or determinable price and date, maturing in next fiscal year following current fiscal year. Excludes interim and annual periods when interim periods are reported from current statement of financial position date (rolling approach)." } } }, "auth\_ref": { "r8", "r203", "r361" } }, "us-gaap\_LongTermInvestments": { "xbrltype": "monetaryItemType", "nsuri": "http://fasb.org/us-gaap/2024", "localname": "LongTermInvestments", "crdr": "debit", "calculation": { "http://amplitechinc.com/role/BalanceSheets": { "parentTag": "us-gaap\_Assets", "weight": 1.0, "order": 6.0 } }, "presentation": { "http://amplitechinc.com/role/BalanceSheets" }, "lang": { "en-us": { "role": { "label": "Cost method investment", "documentation": "The total amount of investments that are intended to be held for an extended period of time (longer than one operating cycle)." } } }, "auth\_ref": { "r171" } }, "AMPG\_LongTermLeaseObligations": { "xbrltype": "monetaryItemType", "nsuri": "http://amplitechinc.com/20240630", "localname": "LongTermLeaseObligations", "crdr": "debit", "presentation": { "http://amplitechinc.com/role/ScheduleOfFutureMinimumLeasePaymentsForFinanceLeaseDetails" }, "lang": { "en-us": { "role": { "label": "Long-term lease obligations", "documentation": "Long term lease obligations." } } }, "auth\_ref": { "r15", "r37", "r861", "r862", "r863" } }, "us-gaap\_LongTermDebtTypeAxis": { "xbrltype": "stringItemType", "nsuri": "http://fasb.org/us-gaap/2024", "localname": "LongTermDebtTypeAxis", "presentation": { "http://amplitechinc.com/role/NotesPayableDetailsNarrative" }, "lang": { "en-us": { "role": { "label": "Long-Term Debt, Type [Axis]", "documentation": "Information by type of long-term debt." } } }, "auth\_ref": { "r15", "r861", "r862", "r863" } }, "us-gaap\_LongTermDebtTypeDomain": { "xbrltype": "domainItemType", "nsuri": "http://fasb.org/us-gaap/2024", "localname": "LongTermDebtTypeDomain", "presentation": { "http://amplitechinc.com/role/NotesPayableDetailsNarrative" }, "lang": { "en-us": { "role": { "documentation": "Type of long-term debt arrangement, such as notes, line of credit, commercial paper, asset-based financing, project financing, letter of credit financing. These are debt arrangements that originally required repayment more than twelve months after issuance or greater than the normal operating cycle of the company, if longer." } } }, "auth\_ref": { "r15", "r37", "r861", "r862", "r863" } }, "AMPG\_LossOnInvestmentInDigitalAssets": { "xbrltype": "monetaryItemType", "nsuri": "http://amplitechinc.com/20240630", "localname": "LossOnInvestmentInDigitalAssets", "crdr": "debit", "calculation": { "http://amplitechinc.com/role/StatementsOfOperations": { "parentTag": "us-gaap\_OtherNoncashIncomeExpense", "weight": -1.0, "order": 1.0 } }, "presentation": { "http://amplitechinc.com/role/StatementsOfCashFlows": { "parentTag": "us-gaap\_NetCashProvidedByUsedInOperatingActivities", "weight": 1.0, "order": 8.0 } }, "presentation": { "http://amplitechinc.com/role/LossOnInvestmentOfDigitalAssetsDetailsNarrative" }, "lang": { "en-us": { "role": { "label": "Loss on investment of digital assets", "documentation": "Loss on investment in digital assets." } } }, 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including, but is not limited to, tools, dies and molds, computer and office equipment." } } }, "auth\_ref": { "r15", "r37", "r861", "r862", "r863" } }, "AMPG\_ManufacturingAndEngineeringMember": { "xbrltype": "domainItemType", "nsuri": "http://amplitechinc.com/20240630", "localname": "ManufacturingAndEngineeringMember", "presentation": { "http://amplitechinc.com/role/ScheduleOfSegmentReportingDetails" }, "lang": { "en-us": { "role": { "label": "Manufacturing And Engineering [Member]", "documentation": "Manufacturing And Engineering [Member]" } } }, "auth\_ref": { "r15", "r37", "r861", "r862", "r863" } }, "AMPG\_ManufacturingEquipmentMember": { "xbrltype": "domainItemType", "nsuri": "http://amplitechinc.com/20240630", "localname": "ManufacturingEquipmentMember", "presentation": { "http://amplitechinc.com/role/ScheduleOfPropertyAndEquipmentDepreciatedDetails": { "parentTag": "us-gaap\_ManufacturingEquipmentMember", "weight": 1.0, "order": 1.0 } }, "presentation": { 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Examples include land, buildings, machinery and equipment, and other types of furniture and equipment including, but not limited to, office equipment, furniture and fixtures, and computer equipment and software." } } }, "auth\_ref": [ "r97", "r497" ] }, "us-gaap\_PropertyPlantAndEquipmentUsefulLife": { "xbrltype": "durationItemType", "nsuri": "http://fasb.org/us-gaap/2024", "localname": "PropertyPlantAndEquipmentUsefulLife", "presentation": "http://amplitechinc.com/role/ScheduleOfPropertyAndEquipmentDepreciatedDetails", "lang": { "en-us": { "role": { "label": "Estimated useful life", "documentation": "Useful life of long lived, physical assets used in the normal conduct of business and not intended for resale, in PnYmNdInHnMnS format, for example, 'P1Y5M13D' represents the reported fact of one year, five months, and thirteen days. Examples include, but not limited to, land, buildings, machinery and equipment, office equipment, furniture and fixtures, and computer equipment." } } }, "auth\_ref": [ ] }, "AMPG\_PropertyPlantAndEquipmentsDepreciationMethods": { "xbrltype": "stringItemType", "nsuri": "http://amplitechinc.com/20240630", "localname": "PropertyPlantAndEquipmentsDepreciationMethods", "presentation": "http://amplitechinc.com/role/ScheduleOfPropertyAndEquipmentDepreciatedDetails", "lang": { "en-us": { "role": { "label": "Depreciation Method", "documentation": "Property plant and equipments depreciation methods." } } }, "auth\_ref": [ ] }, "AMPG\_PurchaseOptionDescription": { "xbrltype": "stringItemType", "nsuri": "http://amplitechinc.com/20240630", "localname": "PurchaseOptionDescription", "presentation": "http://amplitechinc.com/role/LeasesDetailsNarrative", "lang": { "en-us": { "role": { "label": "Purchase option description", "documentation": "Purchase option description." } } }, "auth\_ref": [ ] }, "srt\_RangeAxis": { "xbrltype": "stringItemType", "nsuri": "http://fasb.org/srt/2024", "localname": "RangeAxis", "presentation": "http://amplitechinc.com/role/ScheduleOfIntangibleAssetsDetails", "http://amplitechinc.com/role/ScheduleOfPropertyAndEquipmentDepreciatedDetails", "http://amplitechinc.com/role/StockholdersEquityDetailsNarrative", "http://amplitechinc.com/role/SummaryOfSignificantAccountingPoliciesDetailsNarrative", "lang": { "en-us": { "role": { "label": "Statistical Measurement [Axis]", "documentation": "Information by statistical measurement. Includes, but is not limited to, minimum, maximum, weighted average, arithmetic average, and median." } } }, "auth\_ref": [ "r136", "r138", "r140", "r141", "r143", "r162", "r163", "r328", "r329", "r330", "r331", "r396", "r398", "r424", "r425", "r426", "r432", "r471", "r504", "r505", "r506", "r586", "r587", "r593", "r619", "r620", "r673", "r677", "r679", "r680", "r682", "r700", "r701", "r725", "r733", "r743", "r746", "r747", "r748", "r749", "r762", "r772", "r864", "r869", "r900", "r913", "r914", "r915", "r916", "r917" ] }, "srt\_RangeMember": { "xbrltype": "domainItemType", "nsuri": "http://fasb.org/srt/2024", "localname": "RangeMember", "presentation": "http://amplitechinc.com/role/ScheduleOfIntangibleAssetsDetails", "http://amplitechinc.com/role/ScheduleOfPropertyAndEquipmentDepreciatedDetails", "http://amplitechinc.com/role/StockholdersEquityDetailsNarrative", "http://amplitechinc.com/role/SummaryOfSignificantAccountingPoliciesDetailsNarrative", "lang": { "en-us": { "role": { "documentation": "Statistical measurement. Includes, but is not limited to, minimum, maximum, weighted average, arithmetic average, and median." } } }, "auth\_ref": [ "r136", "r138", "r140", "r141", "r143", "r162", "r163", "r328", "r329", "r330", "r331", "r396", "r398", "r424", "r425", "r426", "r432", "r471", "r504", "r505", "r506", "r586", "r587", "r593", "r619", "r620", "r673", "r677", "r679", "r680", "r682", "r700", "r701", "r725", "r733", "r743", "r746", "r747", "r748", "r749", "r762", "r772", "r864", "r869", "r900", "r913", "r914", "r915", "r916", "r917" ] }, "AMPG\_RecognizedGainOnInvestment": { "xbrltype": "monetaryItemType", "nsuri": "http://amplitechinc.com/20240630", "localname": "RecognizedGainOnInvestment", "crdr": "credit", "calculation": { "http://amplitechinc.com/role/StatementsOfOperations": { "parentTag": "us-gaap\_OtherNoncashIncomeExpense", "weight": 1.0, "order": 3.0 }, "presentation": "http://amplitechinc.com/role/StatementsOfOperations", "lang": { "en-us": { "role": { "label": "Realized gain on investments", "documentation": "Realized gain on investment." } } }, "auth\_ref": [ ] }, "us-gaap\_ReceivablesPolicyTextBlock": { "xbrltype": "textBlockItemType", "nsuri": "http://fasb.org/us-gaap/2024", "localname": "ReceivablesPolicyTextBlock", "presentation": "http://amplitechinc.com/role/SummaryOfSignificantAccountingPolicies", "lang": { "en-us": { "role": { "label": "Accounts Receivable", "documentation": "Disclosure of accounting policy for receivable. Includes, but is not limited to, accounts receivable and financing receivable." } } }, "auth\_ref": [ "r269", "r270", "r271", "r273", "r839" ] }, "us-gaap\_RelatedPartyDomain": { "xbrltype": "domainItemType", "nsuri": "http://fasb.org/us-gaap/2024", "localname": "RelatedPartyDomain", "presentation": "http://amplitechinc.com/role/CostMethodInvestmentDetailsNarrative", "lang": { "en-us": { "role": { "documentation": "Related and nonrelated parties. Related party includes, but is not limited to, affiliate, other entity for which investment is accounted for under equity method, trust for benefit of employee, principal owner, management, and member of immediate family, and other party that may be prevented from pursuing separate interests because of control, significant influence, or ownership interest." } } }, "auth\_ref": [ "r268", "r397", "r499", "r500", "r552", "r558", "r622", "r623", "r624", "r625", "r626", "r646", "r648", "r672", "r909" ] }, "us-gaap\_RepaymentsOfDebt": { "xbrltype": "monetaryItemType", "nsuri": "http://fasb.org/us-gaap/2024", "localname": "RepaymentsOfDebt", "crdr": "debit", "calculation": { "http://amplitechinc.com/role/StatementsOfCashFlows": { "parentTag": "us-gaap\_NetCashProvidedByUsedInFinancingActivities", "weight": -1.0, "order": 2.0 }, "presentation": "http://amplitechinc.com/role/StatementsOfCashFlows", "lang": { "en-us": { "role": { "label": "Repayment of notes payable", "documentation": "The cash outflow for a borrowing supported by a written promise to pay an obligation." } } }, "auth\_ref": [ "r87" ] }, "us-gaap\_ResearchAndDevelopmentExpense": { "xbrltype": "monetaryItemType", "nsuri": "http://fasb.org/us-gaap/2024", "localname": "ResearchAndDevelopmentExpense", "crdr": "debit", "calculation": { "http://amplitechinc.com/role/StatementsOfOperations": { "parentTag": "us-gaap\_OperatingExpenses", "weight": 1.0, "order": 2.0 }, "presentation": "http://amplitechinc.com/role/StatementsOfOperations", "http://amplitechinc.com/role/SummaryOfSignificantAccountingPoliciesDetailsNarrative", "lang": { "en-us": { "role": { "label": "Research and development", "documentation": "Amount of expense for research and development. Includes, but is not limited to, cost for computer software product to be sold, leased, or otherwise marketed and writeoff of research and development assets acquired in transaction other than business combination or joint venture formation or both. Excludes write-down of intangible asset acquired in business combination or from joint venture formation or both, used in research and development activity." } } }, "auth\_ref": [ "r434", "r702", "r720", "r918" ] }, "us-gaap\_ResearchAndDevelopmentExpensePolicy": { "xbrltype": "textBlockItemType", "nsuri": "http://fasb.org/us-gaap/2024", "localname": "ResearchAndDevelopmentExpensePolicy", "presentation": "http://amplitechinc.com/role/SummaryOfSignificantAccountingPolicies", "lang": { "en-us": { "role": { "label": "Research and Development", "documentation": "Disclosure of accounting policy for costs it has incurred (1) in a planned search or critical investigation aimed at discovery of new knowledge with the hope that such knowledge will be useful in developing a new product or service, a new process or technique, or in bringing about a significant improvement to an existing product or process; or (2) to translate research findings or other knowledge into a plan or design for a new product or process or for a significant improvement to an existing product or process." } } }, "auth\_ref": [ "r433" ] }, "us-gaap\_RestrictedStockUnitsRSUMember": { "xbrltype": "domainItemType", "nsuri": "http://fasb.org/us-gaap/2024", "localname": "RestrictedStockUnitsRSUMember", "presentation": "http://amplitechinc.com/role/StockholdersEquityDetailsNarrative", "lang": { "en-us": { "role": { "label": "Restricted Stock Units [Member]", "documentation": "Share instrument which is convertible to stock or an equivalent amount of cash, after a specified period of time or when specified performance conditions are met." } } }, "auth\_ref": [ ] }, "us-gaap\_RestructuringCostAndReserveLineItems": { "xbrltype": "stringItemType", "nsuri": "http://fasb.org/us-gaap/2024", "localname": "RestructuringCostAndReserveLineItems", "presentation": "http://amplitechinc.com/role/OrganizationAndBusinessDescriptionDetailsNarrative", "lang": { "en-us": { "role": { "label": "Restructuring Cost and Reserve [Line Items]", "documentation": "Line items represent financial concepts included in a table. These concepts are used to disclose reportable information associated with domain members

defined in one or many axes to the table." } } }, "auth\_ref": [ "r321", "r322", "r323", "r324", "r325", "r326", "r327" ] }, "us-gaap\_RetainedEarningsAccumulatedDeficit": { "xbrltype": "monetaryItemType", "nsuri": "http://fasb.org/us-gaap/2024", "localname": "RetainedEarningsAccumulatedDeficit", "crdr": "credit", "calculation": { "http://amplitechinc.com/role/BalanceSheets": { "parentTag": "us-gaap\_StockholdersEquity", "weight": 1.0, "order": 3.0 } }, "presentation": [ "http://amplitechinc.com/role/BalanceSheets" ], "lang": { "en-us": { "role": { "label": "Accumulated deficit", "documentation": "Amount of accumulated undistributed earnings (deficit)." } } }, "auth\_ref": [ "r69", "r101", "r555", "r591", "r592", "r603", "r630", "r752" ] }, "us-gaap\_RetainedEarningsMember": { "xbrltype": "domainItemType", "nsuri": "http://fasb.org/us-gaap/2024", "localname": "RetainedEarningsMember", "presentation": [ "http://amplitechinc.com/role/StatementsOfStockholdersEquity" ], "lang": { "en-us": { "role": { "label": "Retained Earnings [Member]", "documentation": "Accumulated undistributed earnings (deficit)." } } }, "auth\_ref": [ "r164", "r204", "r205", "r206", "r208", "r213", "r215", "r217", "r276", "r277", "r314", "r445", "r446", "r448", "r449", "r450", "r452", "r454", "r455", "r461", "r463", "r464", "r466", "r468", "r483", "r485", "r588", "r590", "r604", "r953" ] }, "us-gaap\_RevenueFromContractWithCustomerAbstract": { "xbrltype": "stringItemType", "nsuri": "http://fasb.org/us-gaap/2024", "localname": "RevenueFromContractWithCustomerAbstract", "lang": { "en-us": { "role": { "label": "Revenue from Contract with Customer [Abstract]" } } }, "auth\_ref": [ ] }, "us-gaap\_RevenueFromContractWithCustomerExcludingAssessedTax": { "xbrltype": "monetaryItemType", "nsuri": "http://fasb.org/us-gaap/2024", "localname": "RevenueFromContractWithCustomerExcludingAssessedTax", "crdr": "credit", "presentation": [ "http://amplitechinc.com/role/ScheduleOfDisaggregatedRevenueDetails" ], "lang": { "en-us": { "role": { "label": "Total sales", "documentation": "Amount, excluding tax collected from customer, of revenue from satisfaction of performance obligation by transferring promised good or service to customer. Tax collected from customer is tax assessed by governmental authority that is both imposed on and concurrent with specific revenue-producing transaction, including, but not limited to, sales, use, value added and excise." } } }, "auth\_ref": [ "r118", "r119", "r229", "r238", "r239", "r254", "r260", "r263", "r265", "r267", "r393", "r394", "r511" ] }, "us-gaap\_RevenueFromContractWithCustomerTextBlock": { "xbrltype": "textBlockItemType", "nsuri": "http://fasb.org/us-gaap/2024", "localname": "RevenueFromContractWithCustomerTextBlock", "presentation": [ "http://amplitechinc.com/role/Revenues" ], "lang": { "en-us": { "role": { "label": "Revenues", "documentation": "The entire disclosure of revenue from contract with customer to transfer good or service and to transfer nonfinancial asset. Includes, but is not limited to, disaggregation of revenue, credit loss recognized from contract with customer, judgment and change in judgment related to contract with customer, and asset recognized from cost incurred to obtain or fulfill contract with customer. Excludes insurance and lease contracts." } } }, "auth\_ref": [ "r134", "r385", "r386", "r387", "r388", "r389", "r390", "r391", "r392", "r395" ] }, "us-gaap\_RevenueRecognitionPolicyTextBlock": { "xbrltype": "textBlockItemType", "nsuri": "http://fasb.org/us-gaap/2024", "localname": "RevenueRecognitionPolicyTextBlock", "presentation": [ "http://amplitechinc.com/role/SummaryOfSignificantAccountingPolicies" ], "lang": { "en-us": { "role": { "label": "Revenue Recognition", "documentation": "Disclosure of accounting policy for revenue. Includes revenue from contract with customer and from other sources." } } }, "auth\_ref": [ "r651", "r703", "r712" ] }, "us-gaap\_Revenues": { "xbrltype": "monetaryItemType", "nsuri": "http://fasb.org/us-gaap/2024", "localname": "Revenues", "crdr": "credit", "calculation": { "http://amplitechinc.com/role/StatementsOfOperations": { "parentTag": "us-gaap\_GrossProfit", "weight": 1.0, "order": 1.0 } }, "presentation": [ "http://amplitechinc.com/role/ScheduleOfSegmentReportingDetails", "http://amplitechinc.com/role/StatementsOfOperations" ], "lang": { "en-us": { "role": { "label": "Revenues", "documentation": "Amount of revenue recognized from goods sold, services rendered, insurance premiums, or other activities that constitute an earning process. Includes, but is not limited to, investment and interest income before deduction of interest expense when recognized as a component of revenue, and sales and trading gain (loss)." } } }, "auth\_ref": [ "r118", "r119", "r191", "r202", "r229", "r238", "r239", "r254", "r260", "r263", "r265", "r267", "r275", "r334", "r335", "r336", "r337", "r338", "r339", "r340", "r341", "r342", "r472", "r547", "r720", "r867" ] }, "AMPG\_SN2NLLCMember": { "xbrltype": "domainItemType", "nsuri": "http://amplitechinc.com/20240630", "localname": "SN2NLLCMember", "presentation": [ "http://amplitechinc.com/role/CostMethodInvestmentDetailsNarrative" ], "lang": { "en-us": { "role": { "label": "SN2NLLC [Member]", "documentation": "SN2NLLC [Member]" } } }, "auth\_ref": [ ] }, "us-gaap\_SaleOfStockNameOfTransactionDomain": { "xbrltype": "domainItemType", "nsuri": "http://fasb.org/us-gaap/2024", "localname": "SaleOfStockNameOfTransactionDomain", "presentation": [ "http://amplitechinc.com/role/OrganizationAndBusinessDescriptionDetailsNarrative" ], "lang": { "en-us": { "role": { "label": "Sale of the entity's stock, including, but not limited to, initial public offering (IPO) and private placement." } } }, "auth\_ref": [ ] }, "us-gaap\_SaleOfStockNumberOfSharesIssuedInTransaction": { "xbrltype": "sharesItemType", "nsuri": "http://fasb.org/us-gaap/2024", "localname": "SaleOfStockNumberOfSharesIssuedInTransaction", "presentation": [ "http://amplitechinc.com/role/OrganizationAndBusinessDescriptionDetailsNarrative" ], "lang": { "en-us": { "role": { "label": "Public offering shares", "documentation": "The number of shares issued or sold by the subsidiary or equity method investee per stock transaction." } } }, "auth\_ref": [ ] }, "us-gaap\_SaleOfStockPricePerShare": { "xbrltype": "perShareItemType", "nsuri": "http://fasb.org/us-gaap/2024", "localname": "SaleOfStockPricePerShare", "presentation": [ "http://amplitechinc.com/role/OrganizationAndBusinessDescriptionDetailsNarrative" ], "lang": { "en-us": { "role": { "label": "Public offering per share", "documentation": "Per share amount received by subsidiary or equity investee for each share of common stock issued or sold in the stock transaction." } } }, "auth\_ref": [ ] }, "us-gaap\_ScheduleOfCollaborativeArrangementsAndNoncollaborativeArrangementTransactionsTable": { "xbrltype": "stringItemType", "nsuri": "http://fasb.org/us-gaap/2024", "localname": "ScheduleOfCollaborativeArrangementsAndNoncollaborativeArrangementTransactionsTable", "presentation": [ "http://amplitechinc.com/role/LeasesDetailsNarrative" ], "lang": { "en-us": { "role": { "label": "Collaborative Arrangement and Arrangement Other than Collaborative [Table]", "documentation": "Disclosure of information about collaborative arrangement and arrangement other than collaborative applicable to revenue-generating activity or operations." } } }, "auth\_ref": [ "r456" ] }, "us-gaap\_ScheduleOfComponentsOfLeveragedLeaseInvestmentsTableTextBlock": { "xbrltype": "textBlockItemType", "nsuri": "http://fasb.org/us-gaap/2024", "localname": "ScheduleOfComponentsOfLeveragedLeaseInvestmentsTableTextBlock", "presentation": [ "http://amplitechinc.com/role/LeasesTables" ], "lang": { "en-us": { "role": { "label": "Schedule of Lease Assets and Liabilities", "documentation": "Tabular disclosure of the components of the investment in leveraged leases." } } }, "auth\_ref": [ "r122", "r907" ] }, "us-gaap\_ScheduleOfDefinedBenefitPlansDisclosuresTable": { "xbrltype": "stringItemType", "nsuri": "http://fasb.org/us-gaap/2024", "localname": "ScheduleOfDefinedBenefitPlansDisclosuresTable", "presentation": [ "http://amplitechinc.com/role/CostMethodInvestmentDetailsNarrative" ], "lang": { "en-us": { "role": { "label": "Defined Benefit Plan [Table]", "documentation": "Disclosure of information about individual defined benefit pension plan or other postretirement defined benefit plan. It may be appropriate to group certain similar plans. Also includes schedule for fair value of plan assets by major categories of plan assets by the level within the fair value hierarchy in which the fair value measurements in their entirety fall, segregating fair value measurements using quoted prices in active markets for identical assets or liabilities (Level 1), Significant other observable inputs (Level 2), and significant unobservable inputs (Level 3)." } } }, "auth\_ref": [ "r9", "r39", "r40", "r41", "r42" ] }, "us-gaap\_ScheduleOfFiniteLivedIntangibleAssetsTableTextBlock": { "xbrltype": "textBlockItemType", "nsuri": "http://fasb.org/us-gaap/2024", "localname": "ScheduleOfFiniteLivedIntangibleAssetsTableTextBlock", "presentation": [ "http://amplitechinc.com/role/GoodwillAndIntangibleAssetsTables" ], "lang": { "en-us": { "role": { "label": "Schedule of Intangible Assets", "documentation": "Schedule of Finite-Lived Intangible Assets [Table Block]", "documentation": "Tabular disclosure of assets, excluding financial assets and goodwill, lacking physical substance with a finite life, by either major class or business segment." } } }, "auth\_ref": [ "r727", "r852" ] }, "AMPG\_ScheduleOfFuturePrincipalAndInterestPaymentsTableTextBlock": { "xbrltype": "textBlockItemType", "nsuri": "http://amplitechinc.com/20240630", "localname": "ScheduleOfFuturePrincipalAndInterestPaymentsTableTextBlock", "presentation": [ "http://amplitechinc.com/role/NotesPayableTables" ], "lang": { "en-us": { "role": { "label": "Schedule of Future Principal and Interest Payments", "documentation": "Schedule of Future Principal and Interest Payments [Table Text Block]" } } }, "auth\_ref": [ ] }, "us-gaap\_ScheduleOfInventoryCurrentTableTextBlock": { "xbrltype": "textBlockItemType", "nsuri": "http://fasb.org/us-gaap/2024", "localname": "ScheduleOfInventoryCurrentTableTextBlock", "presentation": [ "http://amplitechinc.com/role/InventoriesTables" ], "lang": { "en-us": { "role": { "label": "Schedule of Inventory", "documentation": "Tabular disclosure of the carrying amount as of the balance sheet date of merchandise, goods, commodities, or supplies held for future sale or to be used in manufacturing, servicing or production process." } } }, "auth\_ref": [ "r16", "r73", "r74", "r75" ] }, "us-gaap\_ScheduleOfPropertyPlantAndEquipmentTable": { "xbrltype": "stringItemType", "nsuri": "http://fasb.org/us-gaap/2024", "localname": "ScheduleOfPropertyPlantAndEquipmentTable", "presentation": [ "http://amplitechinc.com/role/ScheduleOfIntangibleAssetsDetails", "http://amplitechinc.com/role/ScheduleOfPropertyAndEquipmentDepreciatedDetails", "http://amplitechinc.com/role/ScheduleOfPropertyAndEquipmentDetails", "http://amplitechinc.com/role/SummaryOfSignificantAccountingPoliciesDetailsNarrative" ], "lang": { "en-us": { "role": { "label": "Property, Plant and Equipment [Table]", "documentation": "Disclosure of information about physical assets used in the normal conduct of business and not intended for resale. Includes, but is not limited to, balances by class of assets, depreciation and depletion expense and method used, including composite depreciation, and accumulated depreciation." } } }, "auth\_ref": [ "r7", "r49" ] }, "us-gaap\_ScheduleOfRestructuringAndRelatedCostsTable": { "xbrltype": "stringItemType", "nsuri": "http://fasb.org/us-gaap/2024", "localname": "ScheduleOfRestructuringAndRelatedCostsTable", "presentation": [ "http://amplitechinc.com/role/OrganizationAndBusinessDescriptionDetailsNarrative" ], "lang": { "en-us": { "role": { "label": "Restructuring Cost [Table]", "documentation": "Disclosure of information about restructuring cost. Includes, but is not limited to, expected cost, cost incurred, statement of income caption that includes restructuring cost recognized, and amount of restructuring reserve." } } }, "auth\_ref": [ "r321", "r322", "r323", "r324", "r325", "r326", "r327" ] }, "us-gaap\_ScheduleOfSegmentReportingInformationBySegmentTable": { "xbrltype": "stringItemType", "nsuri": "http://fasb.org/us-gaap/2024", "localname": "ScheduleOfSegmentReportingInformationBySegmentTable", "presentation": [ "http://amplitechinc.com/role/ScheduleOfSegmentReportingDetails" ], "lang": { "en-us": { "role": { "label": "Schedule of Segment Reporting Information, by Segment [Table]", "documentation": "Disclosure of information about profit (loss) and total assets by reportable segment." } } }, "auth\_ref": [ "r31", "r32", "r33" ] }, "us-gaap\_ScheduleOfSegmentReportingInformationBySegmentTextBlock": { "xbrltype": "textBlockItemType", "nsuri": "http://fasb.org/us-gaap/2024", "localname": "ScheduleOfSegmentReportingInformationBySegmentTextBlock", "presentation": [ "http://amplitechinc.com/role/SegmentReportingTables" ], "lang": { "en-us": { "role": { "label": "Schedule of Segment Reporting", "documentation": "Tabular disclosure of the profit or loss and total assets for each reportable segment. An entity discloses certain information on each reportable segment if the amounts (a) are included in the measure of segment profit or loss reviewed by the chief operating decision maker or (b) are otherwise regularly provided to the chief operating decision maker, even if not included in that measure of segment profit or loss." } } }, "auth\_ref": [ "r31", "r32", "r33" ] }, "us-gaap\_ScheduleOfShareBasedCompensationArrangementsByShareBasedPaymentAwardTable": { "xbrltype": "stringItemType", "nsuri": "http://fasb.org/us-gaap/2024", "localname": "ScheduleOfShareBasedCompensationArrangementsByShareBasedPaymentAwardTable", "presentation": [ "http://amplitechinc.com/role/ScheduleOfChangesInRestrictedStockUnitsOutstandingDetails", "http://amplitechinc.com/role/ScheduleOfStockOptionsOutstandingDetails", "http://amplitechinc.com/role/ScheduleOfWarrantsOutstandingDetails" ], "lang": { "en-us": { "role": { "label": "Schedule of Share-Based Compensation Arrangements by Share-Based Payment Award [Table]", "documentation": "Disclosure of information about share-based payment arrangement." } } }, "auth\_ref": [ "r399", "r401", "r402", "r403", "r404", "r405", "r406", "r407", "r408", "r409", "r410", "r411", "r412", "r413", "r414", "r415", "r416", "r417", "r418", "r419", "r420", "r421", "r422", "r423", "r424", "r425", "r426", "r427" ] }, "us-gaap\_ScheduleOfShareBasedCompensationRestrictedStockUnitsAwardActivityTableTextBlock": { "xbrltype": "textBlockItemType", "nsuri": "http://fasb.org/us-gaap/2024", "localname": "ScheduleOfShareBasedCompensationRestrictedStockUnitsAwardActivityTableTextBlock", "presentation": [ "http://amplitechinc.com/role/StockholdersEquityTables" ], "lang": { "en-us": { "role": { "label": "Schedule of Changes in Restricted Stock Units Outstanding", "documentation": "Tabular disclosure of the number and weighted-average grant date fair value for restricted stock units that were outstanding at the beginning and end of the year, and the number of restricted stock units that were granted, vested, or forfeited during the year." } } }, "auth\_ref": [ "r104" ] }, "us-gaap\_ScheduleOfShortTermDebtTable": { "xbrltype": "stringItemType", "nsuri": "http://fasb.org/us-gaap/2024", "localname": "ScheduleOfShortTermDebtTable", "presentation": [ "http://amplitechinc.com/role/NotesPayableDetailsNarrative" ], "lang": { "en-us": { "role": { "label": "Short-Term Debt [Table]", "documentation": "Disclosure of information about short-term debt arrangement. Includes, but is not limited to, description of arrangement, lender, repayment term, weighted-average interest rate, borrowed amount, and description and amount of refinancing of short-term obligation when obligation is excluded from current liability." } } }, "auth\_ref": [ "r57" ] }, "us-gaap\_ScheduleOfStockOptionsRollForwardTableTextBlock": { "xbrltype": "textBlockItemType", "nsuri": "http://fasb.org/us-gaap/2024", "localname": "ScheduleOfStockOptionsRollForwardTableTextBlock", "presentation": [ "http://amplitechinc.com/role/StockholdersEquityTables" ], "lang": { "en-us": { "role": { "label": "Schedule of Warrants Outstanding", "documentation": "Tabular disclosure of the change in stock options." } } }, "auth\_ref": [ ] }, "us-gaap\_ScheduleOfStockholdersEquityNoteWarrantsOrRightsTextBlock": { "xbrltype": "textBlockItemType", "nsuri": "http://fasb.org/us-gaap/2024", "localname": "ScheduleOfStockholdersEquityNoteWarrantsOrRightsTextBlock", "presentation": [ "http://amplitechinc.com/role/StockholdersEquityTables" ], "lang": { "en-us": { "role": { "label": "Schedule of Stock Options Outstanding", "documentation": "Tabular disclosure of warrants or rights issued. Warrants and rights outstanding are derivative securities that give the holder the right to purchase securities (usually equity) from the issuer at a specific price within a certain time frame. Warrants are often included in a new debt issue to entice investors by a higher return potential. The main difference between warrants and call options is that warrants are issued and guaranteed by the company, whereas options are exchange instruments and are not issued by the company. Also, the lifetime of a warrant is often measured in years, while the lifetime of a typical option is measured in months. Disclose the title of issue of securities called for by warrants and rights outstanding, the aggregate amount of securities called for by warrants and rights outstanding, the date from which the warrants or rights are exercisable, and the price at which the warrant or right is exercisable." } } }, "auth\_ref": [ "r43" ] }, "AMPG\_ScheduleOfWeightedAverageRemainingLeaseTermAndWeightedAverageDiscountRateTableTextBlock": { "xbrltype": "textBlockItemType", "nsuri": "http://amplitechinc.com/20240630", "localname": "ScheduleOfWeightedAverageRemainingLeaseTermAndWeightedAverageDiscountRateTableTextBlock", "presentation": [ "http://amplitechinc.com/role/LeasesTables" ], "lang": { "en-us": { "role": { "label": "Schedule of Weighted Average Remaining Lease Term and Weighted Average Discount



Equity Instruments Other than Options, Nonvested, Weighted Average Grant Date Fair Value", "documentation": "Per share or unit weighted-average fair value of nonvested award under share-based payment arrangement. Excludes share and unit options." } } , "auth\_ref": [ "r413", "r414" ] } }  
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Dividends are taken into account because payment of dividends to shareholders reduces the fair value of the underlying shares, and option holders generally do not receive dividends." } } } } , "auth\_ref": [ "r425" ] } } , "us-gaap\_ShareBasedCompensationArrangementByShareBasedPaymentAwardFairValueAssumptionsExpectedVolatilityRate": { "xbrltype": "percentItemType", "nsuri": "http://fasb.org/us-gaap/2024", "localname": "ShareBasedCompensationArrangementByShareBasedPaymentAwardFairValueAssumptionsExpectedVolatilityRate", "presentation": [ "http://amplitechinc.com/role/StockholdersEquityDetailsNarrative" ], "lang": { "en-us": { "role": { "label": "Share based compensation, volatility", "documentation": "The estimated measure of the percentage by which a share price is expected to fluctuate during a period. Volatility also may be defined as a probability-weighted measure of the dispersion of returns about the mean. The volatility of a share price is the standard deviation of the continuously compounded rates of return on the share over a specified period. That is the same as the standard deviation of the differences in the natural logarithms of the stock prices plus dividends, if any, over the period." } } } } , "auth\_ref": [ "r424" ] } } , "us-gaap\_ShareBasedCompensationArrangementByShareBasedPaymentAwardFairValueAssumptionsRiskFreeInterestRate": { "xbrltype": "percentItemType", "nsuri": "http://fasb.org/us-gaap/2024", "localname": "ShareBasedCompensationArrangementByShareBasedPaymentAwardFairValueAssumptionsRiskFreeInterestRate", "presentation": [ "http://amplitechinc.com/role/StockholdersEquityDetailsNarrative" ], "lang": { "en-us": { "role": { "label": "Share based compensation, risk-free rate", "documentation": "The risk-free interest rate assumption that is used in valuing an option on its own shares." } } } } } , "auth\_ref": [ "r426" ] } } , "us-gaap\_ShareBasedCompensationArrangementByShareBasedPaymentAwardLineItems": { "xbrltype": "stringItemType", "nsuri": "http://fasb.org/us-gaap/2024", "localname": "ShareBasedCompensationArrangementByShareBasedPaymentAwardLineItems", "presentation": [ "http://amplitechinc.com/role/ScheduleOfChangesInRestrictedStockUnitsOutstandingDetails" ], "lang": { "en-us": { "role": { "label": "Share-Based Compensation Arrangement by Share-Based Payment Award [Line Items]", "documentation": "Line items represent financial concepts included in a table. These concepts are used to disclose reportable information associated with domain members defined in one or many axes to the table." } } } } , "auth\_ref": [ "r399", "r401", "r402", "r403", "r404", "r405", "r406", "r407", "r408", "r409", "r410", "r411", "r412", "r413", "r414", "r415", "r416", "r417", "r418", "r419", "r420", "r421", "r422", "r423", "r424", "r425", "r426", "r427" ] } } , "us-gaap\_ShareBasedCompensationArrangementByShareBasedPaymentAwardMaximumNumberOfSharesPerEmployee": { "xbrltype": "sharesItemType", "nsuri": "http://fasb.org/us-gaap/2024", "localname": "ShareBasedCompensationArrangementByShareBasedPaymentAwardMaximumNumberOfSharesPerEmployee", "presentation": [ "http://amplitechinc.com/role/StockholdersEquityDetailsNarrative" ], "lang": { "en-us": { "role": { "label": "Purchase shares of common stock", "documentation": "The highest quantity of shares an employee can purchase under the plan per period." } } } } , "auth\_ref": [ "r44" ] } } , 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**For the Six Months Ended June 30, 2024 and 2023**

Determine the transaction price. Payment by the customer is due under customary fixed payment terms, and we evaluate if collectability is reasonably assured. None of our contracts as of June 30, 2024 contained a significant financing component. Revenue is recorded at the net sales price, which includes estimates of variable consideration such as product returns, rebates, discounts, and other adjustments. The estimates of variable consideration are based on historical payment experience, historical and projected sales data, and current contract terms. Variable consideration is included in revenue only to the extent that it is probable that a significant reversal of the revenue recognized will not occur when the uncertainty associated with the variable consideration is subsequently resolved. Taxes collected from customers relating to product sales and remitted to governmental authorities are excluded from revenues.

Allocate the transaction price to performance obligations in the contract. We typically do not have multiple performance obligations in our contracts with customers. We recognize revenue upon transfer of the product to the customer's control at contractually stated pricing.

Recognize revenue when or as we satisfy a performance obligation. We generally satisfy performance obligations at a point in time upon either shipment or delivery of goods, in accordance with the terms of each contract with the customer. We do not have significant service revenue.

Cost of Sales

Shipping and Handling

Research and Development

Income Taxes

Fair Value Measurements

Assets and Liabilities

Stock-Based Compensation



















Table with 2 columns: Item Name and Value. The table lists various financial metrics such as Revenue, Net Income, Total Assets, and Expenses for different periods and segments. The values are presented in a structured format with alignment and background color specifications.



























