REFINITIV

DELTA REPORT

10-Q

PRSO - PERASO INC.

10-Q - MARCH 31, 2024 COMPARED TO 10-Q - SEPTEMBER 30, 2023

The following comparison report has been automatically generated

TOTAL DELTAS	758
CHANGES	152
DELETIONS	294
ADDITIONS	312

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, DC 20549

FORM 10-Q

(Mark one)
☒ QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the quarterly period ended September 30, 2023 March 31, 2024

OR

☐ TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the transition period from to

Commission file number 000-32929

PERASO INC.
(Exact name of registrant as specified in its charter)

Delaware	**77-0291941**
(State or other jurisdiction of Incorporation or organization)	(I.R.S. Employer Identification Number)

2309 Bering Drive
San Jose, California 95131
(Address of principal executive office and zip code)

(408) 418-7500
(Registrant's telephone number, including area code)

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Trading symbol(s)	Name of each exchange on which registered
Common Stock, par value $0.001 per share	**PRSO**	**The Nasdaq Stock Market, LLC**

Indicate by check mark whether the Registrant (1) has 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 the registrant was required to file such reports), and (2) has been subject to filing requirements for the past 90 days. YES ☒ NO ☐

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). YES ☒ NO ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company or an emerging growth company. See definitions of "large accelerated filer," "accelerated filer," "smaller reporting company" and "emerging growth company" in Rule 12b-2 of the Exchange Act:

Large accelerated filer	☐	Accelerated filer	☐
Non-accelerated filer	☒	Smaller reporting company	☒
Emerging growth company	☐		

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes ☐ No ☒

The number of outstanding shares of the registrant's exchangeable shares, no par value, was 5,102,360 95,093 as of November 6, 2023 May 8, 2024.

The number of outstanding shares of the registrant's common stock, par value $0.001 per share, was 25,339,070 2,595,143 as of November 6, 2023 May 8, 2024.

PERASO INC.

FORM 10-Q

September 30, 2023 March 31, 2024

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PART I—FINANCIAL INFORMATION

Item 1. Financial Statements

PERASO INC.
CONDENSED CONSOLIDATED BALANCE SHEETS
(In thousands, except par value)

	September 30, 2023 (unaudited)	December 31, 2022	March 31, 2024 (unaudited)	December 31, 2023
ASSETS				
Current assets				
Cash and cash equivalents	$ 689	$ 1,828	$ 2,435	$ 1,583
Short-term investments	—	1,078		
Accounts receivable, net	3,064	3,244	1,482	731
Inventories	5,696	5,348		
Deferred cost of net revenue	—	600		
Inventories, net			2,756	2,606
Tax credits and receivables			27	36
Prepaid expenses and other	781	615	758	584
Total current assets	10,230	12,713	7,458	5,540
Property and equipment, net	1,624	2,225	981	1,156
Right-of-use lease assets			524	615
Intangible assets, net	4,209	6,278	2,464	3,280
Right-of-use lease assets, net	647	1,147		
Other	121	123	121	123
Total assets	$ 16,831	$ 22,486	$ 11,548	$ 10,714
LIABILITIES AND STOCKHOLDERS' EQUITY				
Current liabilities				
Accounts payable	$ 2,583	$ 1,844	$ 2,221	$ 2,448
Accrued expenses and other	689	1,817	748	611
Deferred revenue	74	332	1,110	1,105
Short-term lease liabilities	348	687	328	370
Total current liabilities	3,694	4,680	4,407	4,534
Long-term lease liabilities	379	470	277	349
Warrant liabilities	1,003	2,079	158	1,748
Total liabilities	5,076	7,229	4,842	6,631
Commitments and contingencies (Note 4)				
Stockholders' equity				
Preferred stock, $0.01 par value; 20,000 shares authorized; none issued and outstanding	—	—	—	—
Series A, special voting preferred stock, $0.01 par value; one share authorized; and one share issued and outstanding at September 30, 2023 and December 31, 2022, respectively	—	—		
Common stock, $0.001 par value; 120,000 shares authorized; 25,308 shares and 14,270 shares issued and outstanding at September 30, 2023 and December 31, 2022, respectively	25	14		
Exchangeable shares, no par value; unlimited shares authorized; 5,106 shares and 9,107 shares outstanding at September 30, 2023 and December 31, 2022, respectively	—	—		
Series A, special voting preferred stock, $0.01 par value; one share authorized; and one share issued and outstanding at March 31, 2024 and December 31, 2023			—	—
Common stock, $0.001 par value; 120,000 shares authorized; 2,289 shares and 673 shares issued and outstanding at March 31, 2024 and December 31, 2023, respectively			2	1
Exchangeable shares, no par value; unlimited shares authorized; 95 shares outstanding at March 31, 2024 and December 31, 2023			—	—
Additional paid-in capital	169,184	164,865	175,127	170,474
Accumulated other comprehensive loss	—	(25)		

Accumulated deficit	(157,454)	(149,597)	(168,423)	(166,392)
Total stockholders’ equity	11,755	15,257	6,706	4,083
Total liabilities and stockholders’ equity	$ 16,831	$ 22,486	$ 11,548	$ 10,714

The accompanying notes are an integral part of these condensed consolidated financial statements.

PERASO INC.
CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS AND COMPREHENSIVE LOSS
(Unaudited)
(In thousands, except per share data)

	Three Months Ended March 31, 2024	Three Months Ended March 31, 2023
Net revenue		
Product	$ 2,676	$ 4,888
Royalty and other	140	145
Total net revenue	2,816	5,033
Cost of net revenue	1,510	3,106
Gross profit	1,306	1,927
Operating expenses		
Research and development	2,835	3,887
Selling, general and administrative	2,102	2,242
Gain on license and asset sale	—	(406)
Total operating expenses	4,937	5,723
Loss from operations	(3,631)	(3,796)
Change in fair value of warrant liabilities	1,591	658
Other income (expense), net	9	(10)
Net loss	$ (2,031)	$ (3,148)
Other comprehensive loss, net of tax:		
Net unrealized gain on available-for-sale-securities	—	14
Comprehensive loss	$ (2,031)	$ (3,134)
Net loss per share		
Basic and diluted	$ (1.07)	$ (5.54)
Shares used in computing net loss per share		
Basic and diluted	1,907	568

Note: Share and per share amounts for the three months ended March 31, 2024 and 2023 have been adjusted to reflect the impact of a 1-for-40 reverse stock split effected in January 2024, as discussed in Note 1.

The accompanying notes are an integral part of these condensed consolidated financial statements.

PERASO INC.

CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS AND COMPREHENSIVE LOSS

(Unaudited)

(In thousands, except per share data)

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2023	2022	2023	2022
Net revenue				
Product	$ 4,262	$ 3,060	$ 11,385	$ 10,384
Royalty and other	219	234	531	597
Total net revenue	4,481	3,294	11,916	10,981
Cost of net revenue	2,445	2,000	7,346	6,747
Gross profit	2,036	1,294	4,570	4,234
Operating expenses				
Research and development	3,484	4,509	11,038	15,636
Selling, general and administrative	2,112	3,353	6,331	8,938
Gain on license and asset sale	—	(2,557)	(406)	(2,557)
Total operating expenses	5,596	5,305	16,963	22,017
Loss from operations	(3,560)	(4,011)	(12,393)	(17,783)
Change in fair value of warrant liabilities	2,615	—	4,239	—
Other income/(expense), net	322	3	297	(22)
Net loss	$ (623)	$ (4,008)	$ (7,857)	$ (17,805)
Other comprehensive loss, net of tax:				
Net unrealized gain (loss) on available-for-sale securities	4	5	25	(36)
Comprehensive loss	$ (619)	$ (4,003)	$ (7,832)	$ (17,841)
Net loss per share				
Basic and diluted	$ (0.02)	$ (0.20)	$ (0.32)	$ (0.89)
Shares used in computing net loss per share				
Basic and diluted	28,589	20,039	24,892	19,950

The accompanying notes are an integral part of these condensed consolidated financial statements.

PERASO INC.
CONDENSED CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY
(Unaudited)
(In thousands)

	Series A Special Voting Preferred Stock		Common Stock		Exchangeable Shares		Additional Paid-In Capital	Accumulated Other Comprehensive Loss	Accumulated Deficit	Total
	Shares	Amount	Shares	Amount	Shares	Amount				
Balance as of December 31, 2022	—	$ —	14,270	$ 14	9,107	$ —	$ 164,865	$ (25)	$ (149,597)	$ 15,257
Exchange of exchangeable shares			310	1	(310)		(1)			—
Stock-based compensation	—	—	—	—	—	—	1,307	—	—	1,307
Unrealized gain on available-for-sale securities	—	—	—	—	—	—	—	14	—	14
Net loss	—	—	—	—	—	—	—	—	(3,148)	(3,148)
Balance as of March 31, 2023	—	—	14,580	15	8,797	—	166,171	(11)	(152,745)	13,430
Exchange of exchangeable shares	—	—	3,066	3	(3,066)	—	(3)	—	—	—
Issuance of common stock under stock plan, net	—	—	157	—	—	—	(36)	—	—	(36)
Sale of common stock and warrants	—	—	2,250	2	—	—	3,546	—	—	3,548
Issuance of common stock upon exercise of warrants	—	—	2,117	2	—	—	19	—	—	21
Initial recognition of fair value of warrant liability	—	—	—	—	—	—	(3,162)	—	—	(3,162)
Stock-based compensation	—	—	—	—	—	—	1,319	—	—	1,319
Unrealized gain on available-for-sale securities	—	—	—	—	—	—	—	7	—	7
Net loss	—	—	—	—	—	—	—	—	(4,086)	(4,086)
Balance as of June 30, 2023	—	—	22,170	22	5,731	—	167,854	(4)	(156,831)	11,041
Exchange of exchangeable shares	—	—	624	1	(624)	—	(1)	—	—	—
Issuance of common stock under stock plan, net	—	—	17	—	—	—	—	—	—	—
Issuance of common stock upon exercise of warrants	—	—	2,497	2	—	—	23	—	—	25
Stock-based compensation	—	—	—	—	—	—	1,308	—	—	1,308
Unrealized gain on available-for-sale securities	—	—	—	—	—	—	—	4	—	4
Net loss	—	—	—	—	—	—	—	—	(623)	(623)
Balance as of September 30, 2023	—	$ —	25,308	$ 25	5,107	$ —	$ 169,184	$ —	$ (157,454)	$ 11,755

	Series A Special Voting Preferred Stock		Common Stock		Exchangeable Shares		Additional Paid-In Capital	Accumulated Other Comprehensive Loss	Accumulated Deficit	Total
	Shares	Amount	Shares	Amount	Shares	Amount				
Balance as of December 31, 2023	—	$ —	673	$ 1	95	$ —	$ 170,474	$ —	$ (166,392)	$ 4,083
Shares issued for reverse stock split	—	—	52	—	—	—	—	—	—	—
Sale of common stock and warrants	—	—	563	—	—	—	3,431	—	—	3,431
Issuance of common stock upon exercise of warrants	—	—	1,001	1	—	—	—	—	—	1
Stock-based compensation	—	—	—	—	—	—	1,222	—	—	1,222
Net loss	—	—	—	—	—	—	—	—	(2,031)	(2,031)
Balance as of March 31, 2024	—	$ —	2,289	$ 2	95	$ —	$ 175,127	$ —	$ (168,423)	$ 6,706

	Series A Special Voting Preferred Stock		Common Stock		Exchangeable Shares		Additional Paid-In Capital	Accumulated Other Comprehensive Loss	Accumulated Deficit	Total
	Shares	Amount	Shares	Amount	Shares	Amount				
Balance as of December 31, 2021	—	$ —	12,284	$ 12	9,295	$ —	$ 159,256	$ —	$ (117,199)	$ 42,069

Series A Special Voting Preferred Stock		Common Stock		Sh
Shares	Amount	Shares	Amount	

Balance as of December 31, 2022											—	$ —	357	$ —
Exchange of exchangeable shares	—	—	100	—	(100)	—	—	—	—	—	—	—	8	—
Issuance of common stock under stock plan, net	—	—	9	—	—	—	(9)	—	—	(9)				
Stock-based compensation	—	—	—	—	—	—	1,171	—	—	1,171				
Unrealized loss on available-for-sale securities	—	—	—	—	—	—	—	(37)	—	(37)				
Net loss	—	—	—	—	—	—	—	—	(6,754)	(6,754)				
Balance as of March 31, 2022	—	—	12,393	12	9,195	—	160,418	(37)	(123,953)	36,440				
Issuance of common stock under stock plan, net	—	—	244	1	—	—	(51)	—	—	(50)				
Stock-based compensation	—	—	—	—	—	—	1,738	—	—	1,738				
Unrealized loss on available-for-sale securities	—	—	—	—	—	—	—	(4)	—	(4)				
Net loss	—	—	—	—	—	—	—	—	(7,043)	(7,043)				
Balance as of June 30, 2022	—	—	12,637	13	9,195	—	162,105	(41)	(130,996)	31,081				
Exchange of exchangeable shares	—	—	83	—	(83)	—	—	—	—	—				
Issuance of common stock under stock plan, net	—	—	37	—	—	—	(2)	—	—	(2)				
Stock-based compensation	—	—	—	—	—	—	1,448	—	—	1,448	—	—	—	—
Unrealized gain on available-for-sale securities	—	—	—	—	—	—	—	5	—	5	—	—	—	—
Net loss	—	—	—	—	—	—	—	—	(4,008)	(4,008)	—	—	—	—
Balance as of September 30, 2022	—	$ —	12,757	$ 13	9,112	$ —	$ 163,551	$ (36)	$ (135,004)	$ 28,524				
Balance as of March 31, 2023											—	$ —	365	$ —

Note: Share and per share amounts for the three months ended March 31, 2024 and 2023 have been adjusted to reflect the impact of a 1-for-40 reverse stock split effected in January 2024, as discussed in Note 1.

The accompanying notes are an integral part of these condensed consolidated financial statements.

PERASO INC.
CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS
(Unaudited)
(In thousands)

	Nine Months Ended September 30,		Three Months Ended March 31,	
	2023	2022	2024	2023
Cash flows from operating activities:				
Net loss	$ (7,857)	$ (17,805)	$ (2,031)	$ (3,148)
Adjustments to reconcile net loss to net cash used in operating activities:				
Depreciation and amortization	2,764	2,289	992	755
Stock-based compensation	3,933	4,357	1,222	1,307
Change in fair value of warrant liabilities	(4,239)	—	(1,591)	(658)
Inventory write-downs			—	369
Allowance for bad debt	(154)	683	—	(183)
Accrued interest	(17)	4		
Accrued interest on debt obligation			(3)	(6)
Other	3	199	(5)	5
Changes in assets and liabilities:				
Changes in assets and liabilities				
Accounts receivable	334	117	(750)	546
Inventories	(348)	(1,447)	(146)	126
Prepaid expenses and other assets	(164)	213	(173)	474
Deferred cost of net revenue	600	(600)		
Tax credits and receivables			9	—
Accounts payable	739	(193)	(226)	(480)
Right-of-use assets	500	418	91	165
Lease liabilities - operating	(335)	(462)	(80)	(147)
Deferred revenue and other liabilities	(1,386)	(1,192)	141	(539)
Net cash used in operating activities	(5,627)	(13,419)	(2,550)	(1,414)
Cash flows from investing activities:				
Purchases of property and equipment	(93)	(577)	—	(84)
Purchases of intangible assets	—	(21)		
Proceeds from maturities of marketable securities	1,100	11,534	—	500
Purchases of marketable securities	—	(497)		
Net cash provided by investing activities	1,007	10,439	—	416
Cash flows from financing activities:				
Proceeds from sale of common stock, net	3,595	—		
Taxes paid to net share settle equity awards	(36)	(61)		
Repayment of financing leases	(78)	—		
Proceeds from sale of common stock and warrants, net			3,432	—
Repayment of financing lease			(30)	(25)
Net cash provided by (used in) financing activities	3,481	(61)	3,402	(25)
Net decrease in cash and cash equivalents	(1,139)	(3,041)		
Net increase (decrease) in cash and cash equivalents			852	(1,023)
Cash and cash equivalents at beginning of period	1,828	5,893	1,583	1,828
Cash and cash equivalents at end of period	$ 689	$ 2,852	$ 2,435	$ 805
Supplemental disclosure:				
Initial recognition of warrant liability	$ 3,162	$ —		
Recognition of right-of-use asset and lease liability	$ —	$ 1,003		
Unrealized (gain) loss on securities	$ (25)	$ 36		
Noncash investing and financing activities:				
Unrealized gain on available-for-sale securities			$ —	$ 14

The accompanying notes are an integral part of these condensed consolidated financial statements.

PERASO INC.
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS
(Unaudited)

Note 1. The Company and Summary of Significant Accounting Policies

Peraso Inc. (the Company), formerly known as MoSys, Inc. (MoSys) (the Company), was incorporated in California in 1991 and reincorporated in 2000 in Delaware. The Company is a fabless semiconductor company and derives revenue from selling its semiconductor devices and antenna modules, performance of non-recurring engineering services and licensing of its technologies. The Company specializes specializing in the development of millimeter wave (mmWave), which is generally described as the frequency band from 24 Gigahertz (GHz) to 300GHz, wireless technology. In addition, the The Company derives revenue from selling its semiconductor devices and modules and performance of non-recurring engineering services. The Company also manufactures and sells high-performance memory semiconductor devices for a wide range of markets and receives royalties from licensees of its memory technology.

On September 14, 2021, the Company and its subsidiaries, 2864552 Ontario Inc. (Callco) and 2864555 Ontario Inc. (Canco), entered into an Arrangement Agreement (the Arrangement Agreement) with Peraso Technologies Inc. (Peraso Tech), a corporation existing under the laws of the province of Ontario, to acquire all of the issued and outstanding common shares of Peraso Tech (the Peraso Shares), including those Peraso Shares to be issued in connection with the conversion or exchange of secured convertible debentures and common share purchase warrants of Peraso Tech, as applicable, by way of a statutory plan of arrangement (the Arrangement) under the Business Corporations Act (Ontario). On December 17, 2021, following the satisfaction of the closing conditions set forth in the Arrangement Agreement, the Arrangement was completed and, the Company changed its name to “Peraso Inc.” and began trading on the Nasdaq Stock Market (the Nasdaq) under the symbol “PRSO.”

For accounting purposes, Peraso Tech, the legal subsidiary, was treated as the accounting acquirer and the Company, the legal parent, was treated as the accounting acquiree. The transaction was accounted for as a reverse acquisition in accordance with Financial Accounting Standards Board (FASB) Accounting Standards Codification (ASC) 805, *Business Combinations*.

The accompanying condensed consolidated financial statements of the Company have been prepared without audit. The condensed consolidated balance sheet as of December 31, 2022 December 31, 2023 has been derived from the audited consolidated financial statements at that date. Certain information and disclosures normally included in financial statements prepared in accordance with accounting principles generally accepted in the United States (GAAP) have been condensed or omitted in accordance with the rules and regulations of the Securities and Exchange Commission (SEC). The information in this report should be read in conjunction with the Company’s consolidated financial statements and notes thereto included in its most recent annual report on Form 10-K filed with the SEC.

In the opinion of management, the accompanying unaudited condensed consolidated financial statements reflect all adjustments (consisting only of normal recurring adjustments) necessary to summarize fairly the Company’s financial position, results of operations and cash flows for the interim periods presented. The operating results for the three and nine months ended September 30, 2023 March 31, 2024 are not necessarily indicative of the results that may be expected for the year ending December 31, 2023 December 31, 2024 or for any other future period.

Liquidity and Going Concern

The Company incurred net losses of approximately $7.9 million $2.0 million for the nine three months ended September 30, 2023 March 31, 2024 and $32.4 million $16.8 million for the year ended December 31, 2022 December 31, 2023 and had an accumulated deficit of approximately $157.5 million $168.4 million as of September 30, 2023 March 31, 2024. These and prior year losses have resulted in significant negative cash flows and have required the Company to raise substantial amounts of additional capital. To date, the Company has primarily financed its operations through multiple offerings of equity common stock and equity-linked securities, issuance of convertible notes and loans. loans to investors and affiliates. As disclosed in Note 7, in February 2024, the Company completed a public offering of its common stock and common stock purchase warrants for net proceeds of $3.4 million.

The Company expects to continue to incur operating losses for the foreseeable future as it secures new additional customers for and continues to invest in the development commercialization of its products. Further, the Company expects its cash expenditures to continue to exceed receipts for the foreseeable future, as its revenues will not be sufficient to offset its operating expenses.

The Company will need to increase revenues substantially beyond levels that it has attained in the past in order to generate sustainable operating profit and sufficient cash flows to continue doing business without raising additional capital from time to time.

As a result of the Company's expected operating losses and cash burn for the foreseeable future, as well as recurring losses from operations, if the Company is unable to raise sufficient capital through additional debt or equity arrangements, there will be uncertainty regarding the Company's ability to maintain liquidity sufficient to operate its business effectively, which raises substantial doubt as to the Company's ability to continue as a going concern within one year from the date of issuance of these condensed consolidated financial statements. The In addition, the Company's independent registered public accounting firm, in its report on the Company's consolidated financial statements for the year ended December 31, 2022 December 31, 2023, expressed substantial doubt about the Company's ability to continue as a going concern. These condensed consolidated financial statements do not include any adjustments that might result from this uncertainty. There can be no assurance that such additional capital, whether in the form of debt or equity financing, will be sufficient or available and, if available, that such capital will be offered on terms and conditions acceptable to the Company. The Company's primary focus is producing and selling its products. If the Company is unsuccessful in these efforts, it will need to implement additional cost reduction strategies, which could further affect its near- and long-term business plan. These efforts may include, but are not limited to, reducing headcount and curtailing business activities. The Company believes that its existing cash and cash equivalents as of September 30, 2023, plus expected receipts associated with product sales, will provide the Company with liquidity to fund its planned operating needs into the first quarter of 2024.

Basis of Presentation

The condensed consolidated financial statements include the accounts of the Company and its wholly-owned subsidiaries. All significant intercompany transactions and balances have been eliminated in consolidation. The Company's fiscal year ends on December 31 of each calendar year. Certain prior year amounts have been reclassified for consistency with the current period presentation. These reclassifications had no effect on the reported results of operations or cash flows.

Reverse Stock Split

On December 15, 2023, the Company filed a certificate of amendment to its amended and restated certificate of incorporation with the Secretary of State of the State of Delaware to effect a 1-for-40 reverse stock split of the Company's shares of common stock. Further, on January 2, 2024, Canco filed a certificate of amendment to its amended and restated certificate of incorporation under the Ontario Business Corporations Act to effect a 1-for-40 reverse stock split of the outstanding exchangeable shares. Such amendments and ratio were previously approved by the Company's stockholders and board of directors.

As a result of the reverse stock split, which was effective for trading purposes on January 3, 2024, every 40 shares of the Company's pre-reverse split outstanding common stock and exchangeable shares were combined and reclassified into one share of common stock. Proportionate voting rights and other rights of holders of common stock and exchangeable shares were not affected by the reverse stock split. Any fractional shares of common stock and exchangeable shares resulting from the reverse stock split were rounded up to the nearest whole share. All stock options and restricted stock units outstanding and common stock reserved for issuance under the Company's equity incentive plans and warrants outstanding immediately prior to the reverse stock split were adjusted by dividing the number of affected shares of common stock by 40 and, as applicable, multiplying the exercise price by 40, as a result of the reverse stock split. All share and per-share amounts in these condensed consolidated financial statements have been restated to reflect the reverse stock split as if it had occurred at the beginning of the earliest period presented.

Risks and Uncertainties

The Company is subject to risks from, among other things, competition associated with the industry in general, other risks associated with financing, liquidity requirements, rapidly changing customer requirements, limited operating history and the volatility of public markets.

COVID-19 and World Unrest

The global outbreak of the coronavirus disease 2019 (COVID-19) was declared a pandemic by the World Health Organization and a national emergency by the U.S. government in March 2020. This negatively affected the U.S. and global economy, disrupted global supply chains, significantly restricted travel and transportation, resulted in mandated closures and orders to “shelter-in-place” and created significant disruption of the financial markets. While the U.S. national emergency expired in May 2023 and substantially all closures and “shelter-in-place” orders have ended, there can be no assurance that the COVID-19 pandemic will not impact the Company’s operational and financial performance in the future, as the duration and spread of the pandemic and related actions taken by U.S. and foreign government agencies to prevent disease spread are uncertain, out of the Company’s control, and cannot be predicted.

World unrest due to wars and terrorist attacks have led to further economic disruptions. Mounting inflationary cost pressures and recessionary fears have negatively impacted the global economy. Since mid-2022, at times, the U.S. Federal Reserve has addressed elevated inflation by increasing interest rates, as inflation remains elevated. rates. Given current market conditions, the Company may be unable to access the capital markets, and additional capital may only be available to the Company on terms that could be significantly detrimental to the Company’s existing current stockholders and to the Company’s business.

Use of Estimates

The preparation of financial statements in accordance with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, the disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses recognized during the reported period. Material estimates may include assumptions made in determining reserves for uncollectible receivables, inventory write-downs, impairment of long-term assets, valuation allowance on deferred tax assets, accruals for potential liabilities and assumptions made in valuing equity instruments. instruments and warrant liabilities. Actual results could differ from those estimates.

Cash Equivalents and Investments

The Company has invested its excess cash in money market accounts, certificates of deposit, corporate debt, government-sponsored enterprise bonds and municipal bonds and considers all highly liquid debt instruments purchased with an original maturity of three months or less to be cash equivalents. Investments with original maturities greater than three months and remaining maturities less than one year are classified as short-term investments. Investments with remaining maturities greater than one year are classified as long-term investments. Management generally determines the appropriate classification of securities at the time of purchase. All securities are classified as available-for-sale. The Company's available-for-sale short-term and long-term investments are carried at fair value, with the unrealized holding gains and losses reported in accumulated other comprehensive income (loss). Realized gains and losses and declines in the value judged to be other-than-temporary are included in the other income, net line item in the condensed consolidated statements of operations. The cost of securities sold is based on the specific identification method.

Fair Value Measurements

The Company measures the fair value of financial instruments using a fair value hierarchy that prioritizes the inputs to valuation techniques used to measure fair value into three broad levels:

Level 1—Inputs used to measure fair value are unadjusted quoted prices that are available in active markets for the identical assets or liabilities as of the reporting date.

Level 2—Pricing is provided by third party sources of market information obtained through the Company’s investment advisors, rather than models. The Company does not adjust for, or apply, any additional assumptions or estimates to the pricing information it receives from advisors. The Company’s Level 2 securities include cash equivalents and available-for-sale securities, which consisted primarily of certificates of deposit, corporate debt, and government agency and municipal debt securities from issuers with high-quality credit ratings. The Company’s investment advisors obtain pricing data from independent sources, such as Standard & Poor’s, Bloomberg and Interactive Data Corporation, and rely on comparable pricing of other securities because the Level 2 securities are not actively traded and have fewer observable transactions. The Company considers this the most reliable information available for the valuation of the securities.

Level 3—Unobservable inputs that are supported by little or no market activity and reflect the use of significant management judgment are used to measure fair value. These values are generally determined using pricing models for which the assumptions utilize management’s estimates of market participant assumptions. The determination of fair value for Level 3 investments and other financial instruments involves the most management judgment and subjectivity.

The carrying amounts of financial assets and liabilities, such as cash and cash equivalents, accounts receivable, accounts payable, and other payables, approximate their fair values because of the short maturity of these instruments. The carrying values of lease obligations and long-term financing obligations approximate their fair values because interest rates on these obligations are based on prevailing market interest rates. The Company measures the fair value of its warrant liabilities using Level 3 inputs.

Derivatives and Liability-Classified Instruments

The Company accounts for common stock warrants as either equity-classified or liability-classified instruments based on an assessment of the specific terms of the warrants and the guidance provided by the Financial Accounting Standards Board (FASB) in ASC 480, *Distinguishing Liabilities from Equity (ASC 480)* and ASC 815, *Derivatives and Hedging (ASC 815)*. The assessment considers whether the warrants are freestanding financial instruments pursuant to ASC 480, meet the definition of a liability pursuant to ASC 480, and meet all of the requirements for equity classification under ASC 815, including whether the warrants are indexed to the Company's own stock and whether the holders of the warrants could potentially require net cash settlement in a circumstance outside of the Company's control, among other conditions for equity classification. This assessment, which requires the use of professional judgment, is conducted at the time of warrant issuance and as of each subsequent quarterly period end date while the warrants are outstanding.

Allowance for Doubtful Accounts

The Company establishes an allowance for doubtful accounts to ensure that its trade receivables balances are not overstated due to uncollectibility. The Company performs ongoing customer credit evaluations within the context of the industry in which it operates and generally does not require collateral from its customers. A specific allowance of up to 100% of the invoice value is provided for any problematic customer balances. Delinquent account balances are written off after management has determined that the likelihood of collection is remote. The Company grants credit only to customers deemed creditworthy in the judgment of management. The allowance for doubtful accounts receivable was approximately $30,000 as of September 30, 2023 March 31, 2024 and approximately $183,000 as of December 31, 2022 December 31, 2023.

Inventories

The Company values its inventories at the lower of cost, which approximates actual cost on a first-in, first-out basis, or net realizable value. Costs of inventories primarily consisted of material and third party assembly costs. The Company records inventory reserves write-downs for estimated obsolescence or unmarketable inventories based upon assumptions about future demand and market conditions. Once a reserve is established, it is maintained until the product to which it relates is sold or otherwise disposed of. If actual market conditions are less favorable than those expected by management, additional adjustment adjustments to inventory valuation may be required. Charges for obsolete and slow-moving inventories are recorded based upon an analysis of specific identification of obsolete inventory items and quantification of slow moving inventory items. The Company determined that it had excess and obsolete inventory, primarily related to its mmWave products, and recorded write-downs of inventory of approximately $793,000 and $420,000 $369,000 during the nine three months ended September 30, 2023 and 2022, respectively. March 31, 2023. No material write-downs of inventory were recorded during the three months ended March 31, 2024. If the Company's recognition of excess or obsolete inventory is, or if its estimates of inventory's potential utility become, less favorable than currently expected, additional inventory write-downs may be required.

Intangible and Long-lived Assets

Intangible assets are recorded at cost and amortized on a straight-line method over their estimated useful lives of three to ten years. Amortization of developed technology and other intangibles directly related to the Company’s products is included in cost of net revenue, while amortization of customer relationships and other intangibles not associated with the Company’s products is included in selling, general and administrative expense in the condensed consolidated statements of operations.

The Company regularly reviews the carrying value and estimated lives of its long-lived assets and finite-lived intangible assets to determine whether indicators of impairment may exist which warrant adjustments to carrying values or estimated useful lives. The determinants used for this evaluation include management's estimate of the asset's ability to generate positive income from operations and positive cash flow in future periods as well as the strategic significance of the assets to the Company's business objective. Should an impairment exist, the impairment loss would be measured based on the excess of the carrying amount of the long-lived asset group over the asset's fair value.

Purchased Intangible Assets

Intangible assets acquired in business combinations are accounted for based on the fair value of assets purchased and are amortized over the period in which economic benefit is estimated to be received. Intangible assets subject to amortization, including those acquired in business combinations were as follows (amounts in thousands):

	September 30, 2023			March 31, 2024		
	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount
Developed technology	$ 5,726	$ (2,908)	$ 2,818	$ 5,726	$ (4,035)	$ 1,691
Customer relationships	2,556	(1,298)	1,258	2,556	(1,801)	755
Other	186	(53)	133	186	(168)	18
Total	$ 8,468	$ (4,259)	$ 4,209	$ 8,468	$ (6,004)	$ 2,464

	December 31, 2022			December 31, 2023			
	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount	Gross Carrying Amount	Accumulated Amortization	Other Impairment	Net Carrying Amount
Developed technology	$ 5,726	$ (1,491)	$ 4,235	$ 5,726	$ (3,471)	$ —	$ 2,255
Customer relationships	2,556	(666)	1,890	2,556	(1,550)	—	1,006
Other	186	(33)	153	186	(61)	(106)	19
Total	$ 8,468	$ (2,190)	$ 6,278	$ 8,468	$ (5,082)	$ (106)	$ 3,280

Developed technology primarily consisted of MoSys' products that have reached technological feasibility and primarily relate to its memory semiconductor products and technology. The value of the developed technology was determined by discounting estimated net future cash flows of these products. The Company has revised the remaining estimated life to 18 months as a result of the end of life for our memory products (see Note 11). Amortization related to developed technology of $0.6 million and $1.4 million for the three and nine months ended September 30, 2023, respectively, March 31, 2024 has been included in cost of net revenue in the condensed consolidated statements of operations and comprehensive loss.

Customer relationships relate to the Company's ability to sell existing and future versions of its products to MoSys' customers existing at the time of the arrangement. The fair value of the customer relationships was determined by discounting estimated net future cash flows from the customer relationships. The Company has revised the amortization period to conclude on December 31, 2024, as a result of the end-of-life announcement on May 1, 2023 (see Note 11). Amortization related to customer relationships of $0.2 million and $0.6 million for the three and nine months ended September 30, 2023, respectively, March 31, 2024 has been included in selling, general and administrative expense in the condensed consolidated statements of operations and comprehensive loss.

Other amortization expense was approximately $6,000 and $20,000 $1,000 for the three and nine months ended September 30, 2023, respectively. March 31, 2024.

As of September 30, 2023, estimated future amortization expense related to intangible assets was as follows (in thousands):

Year ending December 31,		
2023	$	823
2024		3,289
2025		28
2026		28
2027		10
Thereafter		31
	$	4,209

To date, as of September 30, 2023 At March 31, 2024, the Company has not identified any intangible asset impairments. However, current macroeconomic conditions, which have been impacted by inflation and other world unrest, could negatively impact our business and stock price and trigger the Company to test for impairment. The Company will continue to evaluate for impairment indicators, as necessary, on a quarterly basis.

Revenue Recognition

The Company recognizes revenue in accordance with ASC Topic 606, *Revenue from Contracts with Customers*, and its amendments (ASC 606). As described below, the analysis of contracts under ASC 606 supports the recognition of revenue at a point in time, resulting in revenue recognition timing that is materially consistent with the Company's historical practice of recognizing product revenue when title and risk of loss pass to the customer.

The Company generates revenue primarily from sales of integrated circuits and antenna module products, performance of engineering services and licensing of its intellectual property. Revenues are recognized when control is transferred to customers in amounts that reflect the consideration the Company expects to be entitled to receive in exchange for those goods. Revenue recognition is evaluated through the following five steps: (i) identification of the contract, or contracts, with a customer; (ii) identification of the performance obligations in the contract; (iii) determination of the transaction price; (iv) allocation of the transaction price to the performance obligations in the contract; and (v) recognition of revenue when or as a performance obligation is satisfied.

Product revenue

Revenue is recognized when performance obligations under the terms of a contract with a customer are satisfied. The majority of the Company's contracts have a single performance obligation to transfer products. Accordingly, the Company recognizes revenue when title and risk of loss have been transferred to the customer, generally at the time of shipment of products. Revenue is measured as the amount of consideration the Company expects to receive in exchange for transferring products and is generally based upon a negotiated, formula, list or fixed price. The Company sells its products both directly to customers and through distributors generally under agreements with payment terms typically 60 days or less.

The Company may record an estimated allowance, at the time of shipment, for future returns and other charges against revenue consistent with the terms of sale.

Royalty and other

The Company's licensing contracts typically provide for royalties based on the licensee's use of the Company's memory technology in its currently shipping commercial products. The Company estimates its royalty revenue in the calendar quarter in which the licensee uses the licensed technology. Payments are received in the subsequent quarter. The Company also generates revenue from licensing its technology. The Company recognizes license fees as revenue at the point of time when the control of the license has been transferred and the Company has no continuing performance obligations to the customer.

Engineering services revenue

Engineering and development contracts with customers generally contain a single performance obligation that is delivered over time. Revenue is recognized using an output method that is consistent with the satisfaction of the performance obligation as a measure of progress.

Deferred cost of net revenue

As of December 31, 2022, the Company had $1.1 million of product shipments for which the revenue recognition criteria under ASC 606 had not been met. Accordingly, the Company deferred the cost of net revenue of $600,000 associated with these shipments, and the amount deferred was presented as deferred cost of net revenue in the condensed consolidated balance sheets. During the three months ended March 31, 2023, the Company recognized the associated revenue and cost of net revenue.

Contract liabilities – deferred revenue

The Company's contract liabilities consist of advance customer payments and deferred revenue. The Company classifies advance customer payments and deferred revenue as current or non-current based on the timing of when the Company expects to recognize revenue. As of September 30, 2023 March 31, 2024 and December 31, 2022 December 31, 2023, contract liabilities were in a current position and included in deferred revenue.

During the nine three months ended September 30, 2023 March 31, 2024, the Company recognized approximately $157,000 $201,800 of revenue that had been included in deferred revenue as of December 31, 2022 December 31, 2023.

See Note 5 for disaggregation of revenue by geography.

The Company does not have significant financing components, as payments from customers are typically due within 60 days of invoicing, and the Company has elected the practical expedient to not value financing components that are less than one year. Shipping and handling costs are generally incurred by the customer, and, therefore, are not recorded as revenue.

Cost of Net Revenue

Cost of net revenue consists primarily of direct and indirect costs of product sales, including amortization of intangible assets and depreciation of production-related fixed assets.

Stock-Based Compensation

The Company periodically issues stock options and restricted stock units to employees and non-employees. The Company accounts for such awards based on ASC 505 and ASC 718, whereby the value of the award is measured on the date of award and recognized as compensation expense on a straight-line basis over the vesting period. The fair value of the Company's stock options is estimated using the Black-Scholes-Merton Option Pricing (Black Scholes) model, which uses certain assumptions related to risk-free interest rates, expected volatility, expected life of the options, and future dividends. Compensation expense is recorded based upon the value derived from the Black-Scholes model. The assumptions used in the Black-Scholes model could materially affect compensation expense recorded in future periods.

Foreign Currency Transactions

The functional currency of the Company is the U.S dollar. All foreign currency transactions are initially measured and recorded in an entity's functional currency using the exchange rate on the date of the transaction. All monetary assets and liabilities are remeasured at the end of each reporting period using the exchange rate at that date. All non-monetary assets and related expense, depreciation or amortization are not subsequently remeasured and are measured using the historical exchange rate. An average exchange rate may be used to recognize income and expense items earned or incurred evenly over a period. Foreign exchange gains and losses resulting from the settlement of such transactions are recognized in the statement of operations, except for the gains and losses arising from the conversion of the carrying amount of the foreign currency denominated convertible preferred shares into the functional currency that are presented as adjustment to the net loss to arrive at net loss attributable to common stockholders.

Per-Share Amounts

Basic net loss per share is computed by dividing net loss for the period by the weighted-average number of exchangeable shares and shares of common stock outstanding (WASO) during the period. In addition, the Company includes the number of shares of common stock issuable under upon exercise of pre-funded warrants as outstanding. Diluted net loss per share gives effect to all potentially dilutive exchangeable and common shares outstanding during the period. Potentially dilutive common shares consist of incremental exchangeable shares and shares of common stock issuable upon the achievement of escrow terms, exercise of stock options, vesting of stock awards and exercise of warrants.

Prior to June 30, 2023, the Company excluded shares of common stock issuable upon exercise of pre-funded warrants from the computation of WASO. The pre-funded warrant shares are now included in the computation of WASO. Prior period amounts have been conformed to the current-period presentation. The impact of the change reduced the previously reported loss per share by $0.30, and increased WASO by approximately 29,000 shares for the three months ended March 31, 2023. The reclassification had no impact on the Company's net loss or cash flows for the three months ended March 31, 2024.

The following table sets forth securities outstanding that were excluded from the computation of diluted net loss per share as their inclusion would be anti-dilutive (in thousands):

	September 30,		March 31,	
	2023	2022	2024	2023
Escrow shares - exchangeable shares	1,313	1,313	33	33
Escrow shares - common stock	502	502	13	13
Options to purchase common stock	1,449	1,514	36	37
Unvested restricted common stock units	915	1,229	15	27
Common stock warrants	9,490	134		
Warrants classified as equity			8,094	—
Warrants classified as liabilities			235	123
Total	13,669	4,692	8,426	233

Recently Issued Accounting Pronouncements

Management does not believe In November 2023, the FASB issued ASU No. 2023-07, *Segment Reporting (Topic 280): Improvements to Reportable Segment Disclosures*, which requires disclosure of incremental segment information on an annual and interim basis. ASU No. 2023-07 is effective for fiscal years beginning after December 15, 2023, and interim periods within fiscal years beginning after December 15, 2024, and it requires retrospective application to all prior periods presented in the financial statements. The Company is currently evaluating the impact that there are this ASU will have on the presentation of its consolidated financial statements.

In December 2023, the FASB issued ASU No. 2023-09, *Income Taxes (Topic 740): Improvements to Income Tax Disclosures*, which expands disclosures in an entity's income tax rate reconciliation table and disclosures regarding cash taxes paid both in the U.S. and foreign jurisdictions. The update will be effective for annual periods beginning after December 15, 2024. The Company is currently any recently issued, but not yet effective, evaluating the impact that this ASU will have on the presentation of its consolidated financial statements.

Other recent authoritative guidance if currently adopted, would issued by the FASB (including technical corrections to the ASC), the American Institute of Certified Public Accountants, and the Securities and Exchange Commission (the SEC) did not, or is not expected to, have a material impact on the Company's consolidated financial statement presentation or statements and related disclosures.

Note 2: 2. Fair Value of Financial Instruments

The following table represents tables represent the Company's assets and liabilities measured at fair value on a recurring basis and the basis for that measurement (in thousands):

	September 30, 2023			
	Fair Value	Level 1	Level 2	Level 3
Assets:				
Money market funds (1)	$ 1	$ —	$ —	$ —
Liabilities:				
Warrant	$ 1,003	$ —	$ —	$ 1,003

	March 31, 2024			
	Fair Value	Level 1	Level 2	Level 3
Assets:				
Money market funds (1)	$ 1	$ —	$ —	$ —
Liabilities:				
Warrant liabilities	$ 158	$ —	$ —	$ 158

	December 31, 2022				December 31, 2023			
	Fair Value	Level 1	Level 2	Level 3	Fair Value	Level 1	Level 2	Level 3
Assets:								
Money market funds (1)	$ 73	$ —	$ —	$ —	$ 1	$ —	$ —	$ —
Corporate notes and commercial paper	$ 1,078	$ —	$ 1,078	$ —				
Liabilities:								
Warrants	$ 2,079	$ —	$ —	$ 2,079				
Warrant liabilities					$ 1,748	$ —	$ —	$ 1,748

(1) Amounts are included in cash and cash equivalents on the condensed consolidated balance sheets.

The following tables represents represent the Company's determination of fair value for its financial assets (cash equivalents and investments) (in thousands):

	September 30, 2023			
	Cost	Unrealized Gains	Unrealized Losses	Fair Value
Cash and cash equivalents	$ 689	$ —	$ —	$ 689

	March 31, 2024			
	Cost	Unrealized Gains	Unrealized Losses	Fair Value
Cash and cash equivalents	$ 2,435	$ —	$ —	$ 2,435

	December 31, 2022			
	Cost	Unrealized Gains	Unrealized Losses	Fair Value
Cash and cash equivalents	$ 1,828	$ —	$ —	$ 1,828
Short-term investments	1,103	—	(25)	1,078
	$ 2,931	$ —	$ (25)	$ 2,906

	December 31, 2023			
	Cost	Unrealized Gains	Unrealized Losses	Fair Value
Cash and cash equivalents	$ 1,583	$ —	$ —	$ 1,583

Note 3. Balance Sheet Detail

Inventories

	September 30, 2023	December 31, 2022	March 31, 2024	December 31, 2023
	(in thousands)		(in thousands)	
Inventories:				
Raw materials	$ 938	$ 1,279	$ 147	$ 209
Work-in-process	3,241	2,595	1,778	1,517
Finished goods	1,517	1,474	831	880
	$ 5,696	$ 5,348	$ 2,756	$ 2,606

Note 4. Commitments and Contingencies

Leases

The Company has facility leases that it accounts for under ASC 842, including the operating leases for its corporate headquarters facility in San Jose, California and facilities in Toronto and Markham Ontario, Canada. The Canada and recognizes lease expense on a straight-line basis over the respective lease terms.

In November 2023, the Company renewed the San Jose facility lease for a one-year term, which commenced January 15, 2024 (the Renewal Term), and, Toronto leases expire in January 2024 and effective with the commencement of the Renewal Term, the Company ceased accounting for the lease under ASC 842. In December 2023, respectively. the Company renewed the Toronto office lease for a reduced amount of square footage for a one-year term, which commenced January 1, 2024. In May 2022, the Company entered into a new lease for the facility in Markham with a 60-month term, which commenced June 21, 2022. The Markham landlord also provided a lease incentive of approximately $220,000 $286,200 (the Incentive), which will be payable. In 2023, the Company received payment of $143,100 from the Markham landlord of the first installment of the Incentive. The remaining balance of the Incentive is paid to the Company as follows: one-half in the form of an adjustment to rent during the last three months of each year during the remaining lease term. During 2023, a credit of $35,775 was made against the rent during the three months ended December 31, 2023. As of March 31, 2024, the pending Incentive payable subsequent to the completion of the improvements to the leased space and the second half-ratably on an annual basis commencing with the second year of the lease. be received was $107,325.

Upon the renewal of the Toronto lease in December 2023, the Company recognized a right-of-use asset of approximately $137,700. The discount rate used to measure the lease assets and liabilities for the renewal was 8%.

The initial right-of-use assets asset and corresponding liabilities liability of approximately $1.0 million for the San Jose and Markham facility leases lease were measured at the present value of the future minimum lease payments. The discount rate used to measure the lease assets and liabilities was 8%.

On March 1, 2022, the Company entered into a 36-month finance lease agreement for the lease of equipment resulting in the recognition of a right-of-use asset and lease liability of approximately $274,000.

On November 1, 2022, the Company entered into a 36-month finance lease agreement for the lease of equipment resulting in the recognition of a right-of-use asset of approximately $124,000 and lease liability of approximately $117,000.

The following table provides the details of right-of-use assets and lease liabilities as of September 30, 2023 March 31, 2024 (in thousands):

	Nine Months Ended September 30, 2023	Three Months Ended March 31, 2024
Right-of-use assets:		
Operating leases	$ 421	$ 365
Finance lease	226	159
Total right-of-use assets	$ 647	$ 524
Lease liabilities:		
Operating leases	$ 500	$ 445
Finance lease	227	160
Total lease liabilities	$ 727	$ 605

Future minimum payments under the leases at September 30, 2023 March 31, 2024 are listed in the table below (in thousands):

Year ending December 31,	
2024	$ 293
2025	164
2026	107
2027	104
Total future lease payments	668
Less: imputed interest	(63)
Present value of lease liabilities	$ 605

Year ending December 31,	Operating and Finance leases
Remainder of 2023	$ 171
2024	263
2025	164
2026	108
2027	101
Total future lease payments	807
Less: imputed interest	(80)
Present value of lease liabilities	$ 727

The following table provides the details of supplemental cash flow information (in thousands):

	Three Months Ended March 31, 2024	Three Months Ended March 31, 2023
Cash paid for amounts included in the measurement of lease liabilities:		
Operating cash flows for leases	$ 106	$ 199

	Nine Months Ended September 30, 2023	Nine Months Ended September 30, 2022
Cash paid for amounts included in the measurement of lease liabilities:		
Operating cash flows for leases	$ 492	$ 504

Rent expense was approximately $0.2 million for each of the three-month periods ended September 30, 2023 March 31, 2024 and 2022. Rent expense was approximately $0.6 million for each of the nine-month periods ended September 30, 2023 and 2022. 2023. In addition to the minimum lease payments, the Company is responsible for property taxes, insurance and certain other operating costs related to the leased facilities and equipment.

Indemnification

In the ordinary course of business, the Company enters into contractual arrangements under which it may agree to indemnify the counterparties from any losses incurred relating to breach of representations and warranties, failure to perform certain covenants, or claims and losses arising from certain events as outlined within the particular contract, which may include, for example, losses arising from litigation or claims relating to past performance. Such indemnification clauses may not be subject to maximum loss clauses. The Company has also entered into indemnification agreements with its officers and directors. No material amounts were reflected in the Company's condensed consolidated financial statements for the nine three months ended September 30, 2023 March 31, 2024 and 2022 2023 related to these indemnifications.

The Company has not estimated the maximum potential amount of indemnification liability under these agreements due to the limited history of prior claims and the unique facts and circumstances applicable to each particular agreement. To date, the Company has not made any payments related to these indemnification agreements.

Product Warranties

The Company warrants certain of its products to be free of defects generally for a period of three years. The Company estimates its warranty costs based on historical warranty claim experience and includes such costs in cost of net revenues. Warranty costs were not material for the nine three months ended September 30, 2023 March 31, 2024 and 2022. 2023.

Legal Matters

The Company is not a party to any legal proceeding that the Company believes is likely to have a material adverse effect on its condensed consolidated financial position or results of operations. From time to time the Company may be subject to legal proceedings and claims in the ordinary course of business. These claims, even if not meritorious, could result in the expenditure of significant financial resources and diversion of management efforts.

Purchase Obligations

The Company's primary purchase obligations include non-cancelable purchase orders for inventory and computer-aided-design (CAD) software. At September 30, 2023 March 31, 2024, the Company had outstanding non-cancelable purchase orders for inventory, primarily wafers and substrates, and related expenditures of approximately $2.3 million $3.2 million and non-cancelable purchase orders for CAD software of $3.1 million $2.2 million.

Note 5. Business Segments, Concentration of Credit Risk and Significant Customers

The Company determined its reporting units in accordance with ASC 280, *Segment Reporting* (ASC 280). Management evaluates a reporting unit by first identifying its operating segments under ASC 280. The Company then evaluates each operating segment to determine if it includes one or more components that constitute a business. If there are components within an operating segment that meet the definition of a business, the Company evaluates those components to determine if they must be aggregated into one or more reporting units. If applicable, when determining if it is appropriate to aggregate different operating segments, the Company determines if the segments are economically similar and, if so, the operating segments are aggregated.

Management has determined that the Company has one consolidated operating segment. The Company's reporting segment reflects the manner in which its chief operating decision maker reviews results and allocates resources. The Company's reporting segment meets the definition of an operating segment and does not include the aggregation of multiple operating segments.

The Company recognized revenue from shipments of product, licensing of its technologies and performance of services to customers by geographical location as follows (in thousands):

	Three Months Ended September 30,		Nine Months Ended September 30,		Three Months Ended March 31,	
	2023	2022	2023	2022	2024	2023
United States	$ 3,359	$ 1,918	$ 7,868	$ 7,158	$ 2,230	$ 3,089
Hong Kong					213	146
Taiwan	544	131	2,535	646	89	1,429
China	321	447	614	1,328		
Japan	6	368	20	905		
Rest of world	251	430	879	944	284	369
Total net revenue	$ 4,481	$ 3,294	$ 11,916	$ 10,981	$ 2,816	$ 5,033

The following is a breakdown of product revenue by category (in thousands):

Product category	Three Months Ended September 30, 2023	Three Months Ended September 30, 2022	Nine Months Ended September 30, 2023	Nine Months Ended September 30, 2022	Three Months Ended March 31, 2024	Three Months Ended March 31, 2023
Memory ICs	$ 3,384	$ 1,748	$ 7,181	$ 5,528	$ 2,383	$ 2,181
mmWave ICs	576	533	2,614	1,699	77	1,479
mmWave antenna modules	302	779	1,586	3,139		
mmWave modules					203	1,224
mmWave other products	-	-	4	18	13	4
	$ 4,262	$ 3,060	$ 11,385	$ 10,384	$ 2,676	$ 4,888

Customers who accounted for at least The following lists significant customers that represented more than 10% of the Company's total revenue and/or net revenue were: accounts receivable balance, as applicable, at each respective balance sheet date:

	Three Months Ended September 30, 2023	Three Months Ended September 30, 2022	Nine Months Ended September 30, 2023	Nine Months Ended September 30, 2022	Revenue For the Three Months Ended March 31, 2024	Revenue For the Three Months Ended March 31, 2023	Accounts Receivable March 31, 2024	Accounts Receivable December 31, 2023
Customer A	45 %	24 %	29 %	24 %	51 %	13 %	42 %	36 %
Customer D	11 %	*	20 %	*				
Customer B	*	*	*	24 %	28 %	25 %	42 %	33 %
Customer C	*	14 %	*	10 %	*	27 %	*	*
Customer D					*	21 %	*	*
Customer E	*	*	*	11 %	*	*	*	14 %

The following lists significant vendors that represented more than 10% of the Company's total accounts payable balance at each respective balance sheet date:

	Accounts Payable March 31, 2024	Accounts Payable December 31, 2023
Vendor A	52 %	47 %
Vendor B	*	12 %

* Represents less than 10%

As of September 30, 2023, two customers accounted for 82% of accounts receivable. Four customers accounted for 79% of accounts receivable as of December 31, 2022.

Note 6. Stock-Based Compensation

Common Stock Equity Plans

In 2010, the Company adopted the 2010 Equity Incentive Plan and later amended it in 2014, 2017 and 2018 (the Amended 2010 Plan). The Amended 2010 Plan was terminated in August 2019 and remains in effect as to outstanding equity awards granted prior to the date of expiration. No new awards may be made under the Amended 2010 Plan.

In August 2019, the Company’s stockholders approved the 2019 Stock Incentive Plan (the 2019 Plan) to replace the Amended 2010 Plan. The 2019 Plan authorizes the board of directors or the compensation committee of the board of directors to grant a broad range of awards including stock options, stock appreciation rights, restricted stock, performance-based awards, and restricted stock units. Under the 2019 Plan, 182,500 4,563 shares were initially reserved for issuance. In November 2021, in connection with the approval of the Arrangement, the Company’s stockholders approved an amendment increasing the number of shares reserved for issuance under the 2019 Plan by 3,106,937 77,674 shares.

Under the 2019 Plan, the term of all incentive stock options granted to a person who, at the time of grant, owns stock representing more than 10% of the voting power of all classes of the Company’s stock may not exceed five years. The exercise price of stock options granted under the 2019 Plan must be at least equal to the fair market value of the shares on the date of grant. Generally, awards under the 2019 Plan will vest over a three to four-year period, and options will have a term of 10 years from the date of grant. In addition, the 2019 Plan provides for automatic acceleration of vesting for options granted to non-employee directors upon a change of control of the Company.

In connection with the Arrangement, the Company assumed the Peraso Technologies Inc. 2009 Share Option Plan (the 2009 Plan) and all outstanding options granted pursuant to the terms of the 2009 Plan. Each outstanding, unexercised and unexpired option under the 2009 Plan, whether vested or unvested, was assumed by the Company and converted into options to purchase shares of the Company’s common stock stock. No further awards will be made under the 2009 Plan.

The 2009 Plan, the Amended 2010 Plan and the 2019 Plan are referred to collectively as the “Plans.”

Stock-Based Compensation Expense

The Company reflected compensation costs of $3.1 million $1.0 million and $3.4 million $1.1 million related to the vesting of stock options during each of the nine-month three-month periods ended September 30, 2023 March 31, 2024 and 2022, 2023, respectively. At September 30, 2023 March 31, 2024, the unamortized compensation cost was approximately $4.4 million $2.2 million related to stock options and is expected to be recognized as expense over a weighted average period of approximately 1.2 0.8 years. The Company reflected compensation costs of $0.8 million and $1.0 million $0.2 million related to the vesting of restricted stock during each of the nine three months ended September 30, 2023 March 31, 2024 and 2022, respectively. 2023. The unamortized compensation cost at September 30, 2023 March 31, 2024 was $1.3 million $0.7 million related to restricted stock units and is expected to be recognized as expense over a weighted average period of approximately 1.3 0.9 years. There were no stock options granted or exercised during the nine three months ended September 30, 2023 March 31, 2024 and 2022. 2023.

Common Stock Options and Restricted Stock

The term of all incentive stock options granted to a person who, at the time of grant, owns stock representing more than 10% of the voting power of all classes of the Company's stock may not exceed five years. The exercise price of stock options granted under the 2019 Plan must be at least equal to the fair market value of the shares on the date of grant. Generally, options granted under the 2019 Plan will vest over a three to four-year period and have a term of 10 years from the date of grant. In addition, the 2019 Plan provides for automatic acceleration of vesting for options granted to non-employee directors upon a change of control (as defined in the 2019 Plan) of the Company.

The following table summarizes the activity in the shares available for grant under the Plans during the nine three months ended September 30, 2023 March 31, 2024 and options outstanding as of March 31, 2024 (in thousands, except exercise price):

		Options Outstanding	
	Shares Available for Grant	Number of Shares	Weighted Average Exercise Prices
Balance as of December 31, 2022	1,556	1,499	$ 3.32
RSUs granted	(80)	—	$ —
RSUs cancelled and returned to the Plans	51	—	$ —
Options cancelled	—	(17)	$ 6.76
Balance as of March 31, 2023	1,527	1,482	$ 3.28
RSUs granted	(69)	—	$ —
RSUs cancelled and returned to the Plans	57	—	$ —
Options cancelled	—	(9)	$ 2.92
Balance as of June 30, 2023	1,515	1,473	$ 3.28
RSUs cancelled and returned to the Plans	10	—	$ —
Options cancelled	—	(24)	$ 12.34
Balance as of September 30, 2023	1,525	1,449	$ 3.07

		Options Outstanding	
	Shares Available for Grant	Number of Shares	Weighted Average Exercise Prices
Balance as of December 31, 2023	39	36	$ 127.00
RSUs granted	(2)	—	—
RSUs cancelled and returned to the 2019 Plan	2	—	—
Options cancelled	—	(1)	$ 147.64
Balance as of March 31, 2024	39	35	$ 126.70

A summary of RSU activity under the Plans is presented below (in thousands, except for fair value):

	Number of Shares	Weighted Average Grant-Date Fair Value
Non-vested shares as of December 31, 2022	1,057	$ 2.06
Granted	80	$ 0.99
Vested	(51)	$ 2.07
Non-vested shares as of March 31, 2023	1,086	$ 1.98
Granted	69	$ 0.52
Vested	(210)	$ 2.16
Cancels	(3)	$ 2.15
Non-vested shares as of June 30, 2023	942	$ 1.98
Vested	(17)	$ 1.83
Cancels	(10)	$ 2.15
Non-vested shares as of September 30, 2023	915	$ 1.83

	Number of Shares	Weighted Average Grant-Date Fair Value
Non-vested shares as of December 31, 2023	15	$ 69.63
Granted	2	$ 1.55
Cancelled	(2)	$ 53.54
Non-vested shares as of March 31, 2024	15	$ 62.04

The following table summarizes significant ranges of outstanding and exercisable options as of September 30, 2023 March 31, 2024 (in thousands, except contractual life and exercise price):

	Options Outstanding			Options Exercisable		
Range of Exercise Price	Number Outstanding	Weighted Average Remaining Contractual Life (in Years)	Weighted Average Exercise Price	Number Exercisable	Weighted Average Exercise Price	Aggregate Intrinsic value
$1.57 - $14.99	1,446	6.95	$ 2.63	1,055	$ 2.59	$ —
$25.60 - $143.99	—	2.89	$ 101.27	—	$ 101.27	$ —
$144.00 - $409.99	2	2.90	$ 144.00	2	$ 144.00	$ —

$410.00 - $924.00	1	1.50	$	410.00	1	$	410.00	$	—
$1.57 - $924.00	1,449	6.93	$	3.07	1,058	$	3.19	$	—

	Options Outstanding				Options Exercisable				
Range of Exercise Price	Number Outstanding	Weighted Average Remaining Contractual Life (in Years)	Weighted Average Exercise Price		Number Exercisable	Weighted Average Exercise Price		Aggregate Intrinsic value	
$0.00 - $62.80	2	5.64	$	62.80	2	$	62.80	$	—
$62.81 - $599.60	33	6.49	$	108.06	27	$	107.66	$	—
$0.00 - $599.60	35	6.43	$	126.70	29	$	130.00	$	—

Note 7. Equity

Exchangeable Shares and Preferred Stock

As discussed in Note 1, on December 17, 2021, following the satisfaction of the closing conditions set forth in the Arrangement Agreement, the Arrangement was completed. Pursuant to the completion of the Arrangement, each Peraso Share that was issued and outstanding immediately prior to December 17, 2021 was converted into either newly issued shares of common stock of the Company or shares of Canco, which are exchangeable for shares of the Company's common stock (Exchangeable Shares), at the election of each former Peraso Tech stockholder. Of the shares issued to the holders of Peraso Tech Shares, pursuant to the terms of the Agreement, the Company held in escrow an aggregate of 1,312,878 32,822 Exchangeable Shares and 502,567 12,564 shares of common stock (collectively, the Escrow Shares). The Escrow Shares are escrowed pursuant to the terms of an escrow agreement on a pro rata basis from the aggregate consideration received by the holders of Peraso Shares, subject to the offset by the Company for any losses in accordance with the Agreement. Such Escrow Shares shall be released, subject to any offset claim, upon the satisfaction of the earlier of: (a) any date following the first anniversary of December 17, 2021 and prior to December 17, 2024 where the volume weighted average price of the common stock for any 20 trading days within a period of 30 consecutive trading days is at least $8.57 $342.80 per share, subject to adjustment for stock splits or other similar transactions; (b) the date of any sale of all or substantially all of the assets or shares of the Company; or (c) the date of any bankruptcy, insolvency, restructuring, receivership, administration, wind-up, liquidation, dissolution, or similar event involving the Company. All and any voting rights and other stockholder rights, other than with respect to dividends and distributions, with respect to the Escrow Shares are suspended until the Escrow Shares are released from escrow.

The Exchangeable Share structure is commonly used for cross-border transactions of this nature so as to provide non-tax-exempt Canadian shareholders with the same economic rights and benefits as holders of the Company's shares into which the Exchangeable Shares are exchangeable, while allowing those Canadian shareholders to benefit from the tax-rollover available on the issuance of the Exchangeable Shares. In general terms, by choosing to acquire Exchangeable Shares from Canco, such a former Peraso Tech shareholder was able to rely on a rollover rule in the Income Tax Act (Canada) in order to defer any capital gain that he/she/it would have otherwise realized.

Callco was incorporated to exercise the call rights, while Canco was incorporated to acquire the shares of Peraso Tech from Canadian shareholders that wished to receive Exchangeable Shares as consideration, so it was a tax deferred transaction for such Canadian shareholders. The use of a separate entity, Callco, helps maximize cross border paid-up capital, which represents the amount that can generally be distributed free of Canadian withholding tax. The call rights also allow Callco to "purchase" the Exchangeable Shares rather than having them redeemed by Canco on a redemption or retraction or in connection with a liquidity event, thus avoiding the adverse deemed dividend tax consequences to shareholders that may arise from a redemption or retraction of Exchangeable Shares.

Holders of Exchangeable Shares have the right at any time (the Retraction Right) to retract or redeem any or all of the Exchangeable Shares owned by them for an amount per share equal to the market price of a share of the Company's common stock plus the full amount of all declared and unpaid dividends on such Exchangeable Share (the Exchangeable Share Purchase Price). The Exchangeable Share Purchase Price is payable only by the Company delivering or causing to be delivered to the relevant holder one share of the Company's common stock for each Exchangeable Share purchased plus a cash amount equal to the amount of any accrued and unpaid dividends on such Exchangeable Share. The Company and Callco each have an overriding right, in the event that a holder of Exchangeable Shares exercises its Retraction Right, to redeem from such holder all, but not less than all, of the Exchangeable Shares tendered for redemption.

The Exchangeable Shares are subject to redemption by the Company, Callco and Canco at the Exchangeable Share Purchase Price, on the "Redemption Date," which date shall be no earlier than the seventh anniversary of the date on which Exchangeable Shares are first issued, unless: (a) less than 10% of the aggregate number of Exchangeable Shares issued remain outstanding; (b) there is a change in control of the Company (defined generally as (i) any merger, amalgamation, arrangement, takeover bid or tender offer, material sale of shares or rights or interests that results in the holders of outstanding voting securities of the Company directly or indirectly owning, or exercising control or direction over, voting securities representing less than 50% of the total voting power of all of the voting securities of the surviving entity; or (ii) any sale or disposition of all or substantially of the Company's assets), and (c) upon the occurrence of certain other events. The Exchangeable Share Purchase Price is payable only by the Company delivering or causing to be delivered to the relevant holder one share of the Company's common stock for each Exchangeable Share purchased plus a cash amount equal to the amount of any accrued and unpaid dividends on such Exchangeable Share.

In the event of the liquidation, dissolution or winding-up of Canco, holders of Exchangeable Shares have the right to receive in respect of each Exchangeable Share held by such holder, an amount per share equal to the Exchangeable Share Purchase Price, which shall be satisfied in full by Canco by delivering to such holder one Company Share, plus an amount equal to the Dividend Amount. The Company and Callco each have an overriding right to purchase from all holders all but not less than all of the Exchangeable Shares upon the occurrence of such events.

In addition, the Company and Callco have the right to purchase all outstanding Exchangeable Shares at the Exchangeable Share Purchase Price if there is a change of law that permits holders of Exchangeable Shares to exchange their Exchangeable Shares for shares of common stock on a basis that will not require holders to recognize any gain or loss or any actual or deemed dividend for Canadian tax purposes.

The holders of Exchangeable Shares have an "automatic exchange right" in the event of any insolvency, liquidation, dissolution or winding-up or in general, related proceedings, of the Company for an amount per share equal to the Exchangeable Share Purchase Price.

It is expected that Callco will exercise its call rights, as that is more beneficial to the holders of the Exchangeable Shares. Once Callco acquires the Exchangeable Shares from a holder, it (Callco and the Company) is obligated to deliver the Company shares to the holder. Callco discharges this obligation by arranging for the Company to issue and deliver those shares to the holders on behalf of Callco. As consideration for satisfying the delivery obligation, Callco would issue its own shares to the Company.

There are no cash redemption features, as all redemption and exchange scenarios are payable in a share of the Company's common stock. Neither Canco, Callco, or the Company assume any tax liabilities of a former Peraso Tech shareholder who acquired Exchangeable Shares under the plan of arrangement. The purchase price computed upon the exercise of rights pertaining to retraction, redemption, or liquidation, or otherwise giving rise to a purchase or cancellation of an Exchangeable Share, will, in all cases, consist of a 1:1 exchange involving the Company's common stock, regardless of the market price of a share of the Company's common stock.

In connection with the Arrangement, on December 15, 2021, the Company filed the Certificate of Designation of Series A Special Voting Preferred Stock (the Certificate) with the Secretary of State of the State of Delaware to designate Series A Special Voting Preferred Stock (the Special Voting Share) in accordance with the terms of the Arrangement Agreement in order to enable the holders of Exchangeable Shares to exercise their voting rights. The Special Voting Share was issued to a third-party administrative agent (the Agent) solely to facilitate the exercise of rights by holders of Exchangeable Shares. The rights of the Agent, as holder of the Special Voting Share, are limited to effecting the rights of the holders of the Exchangeable Shares; the Special Voting Share does not confer any independent rights to the Agent. Under the Certificate, when all of the Exchangeable shares Shares have been converted into shares of the Company's common stock, the Special Voting Share shall be automatically cancelled and shall not be reissued. Each Exchangeable Share is exchangeable for one share of common stock of the Company and while outstanding, the Special Voting Share enables holders of Exchangeable Shares to cast votes on matters for which holders of the common stock are entitled to vote, and by virtue of the share terms relating to the Exchangeable Shares, enable the Exchangeable Shares to receive dividends that are economically equivalent to any dividends declared with respect to the shares of common stock. As the Special Voting Share does not participate in dividends (only the Exchangeable Shares participate in dividends) and is not entitled to participate in the residual interest of the Company, it is not classified as an equity instrument in the Company's financial statements.

The Exchangeable Shares, which can be converted into common stock at the option of the holder and have the same voting and dividend rights as common stock, are similar in substance to shares of common stock. Further, Canco and Callco are non-substantive entities, which are looked through with the Exchangeable Shares being, in substance, common stock of the Company. Therefore, the Exchangeable Shares have been included in the determination of outstanding common stock. The Special Voting Share was issued to a third-party administrative agent (the Agent) solely to facilitate the exercise of rights by holders of Exchangeable Shares, Shares. The rights of the Agent, as holder of the Special Voting Share, are limited to effecting the rights of the holders of the Exchangeable Shares; the Special Voting Share does not confer any independent rights to the Agent. Under the Certificate, when all of the Exchangeable shares Shares have been converted into shares of the Company's common stock, the Special Voting Share shall be automatically cancelled and shall not be reissued.

February 2024 Public Offering

On February 6, 2024, the Company entered into an underwriting agreement (the Underwriting Agreement) with Ladenburg Thalmann & Co. Inc., as the sole underwriter (the Underwriter), relating to the issuance and sale in a public offering (the Offering) of: (i) 480,000 shares of common stock, (ii) pre-funded warrants to purchase up to 1,424,760 shares of common stock, (iii) Series A warrants to purchase up to 3,809,520 shares of common stock, (iv) Series B warrants to purchase up to 3,809,520 shares of common stock, and (v) up to 285,714 additional shares of common stock, Series A warrants to purchase up to 571,428 shares of common stock and Series B warrants to purchase up to 571,428 shares of common stock that may be purchased pursuant to a 45-day option to purchase additional securities granted to the Underwriter by the Company. The Underwriter partially exercised this option on February 7, 2024 for 82,500 shares of common stock, Series A warrants to purchase up to 165,000 shares of common stock and Series B warrants to purchase up to 165,000 shares of common stock. The combined public offering price of each share of common stock, together with the accompanying Series A warrants and Series B warrants, was $2.10, less underwriting discounts and commissions. The combined public offering price of each pre-funded warrant, together with the accompanying Series A warrants and Series B warrants, was $2.099, less underwriting discounts and commissions.

June 2023 Registered Direct The Offering,

On May 31, 2023, including the Company entered into a securities purchase agreement (the SPA) with an institutional investor (the Investor), pursuant to which the Company sold to the Investor, in a registered direct offering that closed on June 2, 2023, an aggregate of 2,250,000 additional shares of common stock, at a purchase price of $0.70 per share. Net proceeds Series A warrants and Series B warrants sold pursuant to the Company partial exercise of the Underwriter’s option, closed on February 8, 2024.

The net proceeds from the registered direct offering, after offering costs, were approximately $3.6 million. The Company also offered and sold to Offering, including the Investor pre-funded warrants to purchase up to 3,464,286 additional shares of common stock, (the 2023 PF Warrants). Each Series A warrants and Series B warrants sold pursuant to the partial exercise of the Underwriter’s option, after deducting underwriting discounts and commissions and other estimated Offering expenses payable by the Company and excluding any proceeds from the exercise of the Series A warrants, Series B warrants and pre-funded warrant is exercisable for one share of common stock. warrants, were approximately $3.4 million.

The purchase price of Series A warrants and Series B warrants each pre-funded warrant was $0.69, and the have an exercise price of each pre-funded warrant is $0.01 $2.25 per share. The 2023 PF Warrants share and were immediately exercisable upon issuance. The Series A warrants expire on the five-year anniversary of the date of issuance and the Series B warrants expire on the six-month anniversary of the date of issuance. The pre-funded warrants have an exercise price of $0.001 per share, were exercisable immediately and may be exercised at any time until all of such the pre-funded warrants are exercised in full. In June 2023, the Investor exercised 967,286 The exercise price and number of shares of common stock issuable upon exercise of the 2023 PF Warrants, warrants is subject to appropriate adjustment in the event of stock dividends, stock splits, reorganizations or similar events affecting the common stock and in September 2023, the remaining 2,497,000 exercise price. Subject to limited exceptions, a holder may not exercise any portion of its warrants to the extent that the holder would beneficially own more than 9.99% or 4.99% (at the election of the 2023 PF Warrants were exercised by the Investor. In connection with the execution holder) of the SPA, Company’s outstanding common stock after exercise.

On February 8, 2024, pursuant to the Underwriting Agreement, the Company and the Investor entered into an amendment (the Amendment) issued Series A warrants to the 2022 Purchase Warrant. Pursuant to the terms of the Amendment, the 2022 Purchase Warrant (as defined below) was amended to reduce the exercise price per share from $1.36 to $1.00, effective as of June 2, 2023.

In a concurrent private placement that closed on June 2, 2023, the Company also sold to the Investor a warrant Underwriter to purchase up to 5,714,286 139,108 shares of common stock (the 2023 Purchase Warrant). The 2023 Purchase Warrant was immediately exercisable at an exercise price of $0.70 per share with a five-year term. As discussed $2.625, subject to adjustments, which are exercisable at any time and from time to time, in Note 8, the 2023 Purchase Warrant is accounted for as a liability. Fair value of the warrant at the date of issuance was determined to be $3,162,401 and was accounted for as a cost of the offering.

November 2022 Registered Direct Offering

On November 28, 2022, the Company entered into a securities purchase agreement with the Investor, pursuant to which the Company sold to the Investor, whole or in a registered direct offering that closed on November 30, 2022, an aggregate of 1,300,000 shares of common stock at a negotiated purchase price of $1.00 per share. The Company also offered and sold to the investor pre-funded warrants to purchase up to 1,150,000 shares of common stock. Each pre-funded warrant was exercisable for one share of common stock. The purchase price of each pre-funded warrant was $0.99, and the exercise price of each pre-funded warrant was $0.01 per share. The pre-funded warrants were exercised in full by the Investor in April 2023. Net proceeds to the Company from the registered direct offering, after offering costs, were approximately $2.1 million.

In a concurrent private placement, the Company also sold to the Investor a warrant to purchase up to 3,675,000 shares of common stock (the 2022 Purchase Warrant) part, until February 8, 2029. The 2022 Purchase Warrant became exercisable on May 29, 2023 at an initial exercise price of $1.36 per share, which was subsequently reduced to $1.00 per share per the Amendment, and expires on May 29, 2028. As discussed in Note 8, the 2022 Purchase Warrant is accounted for as a liability.

Warrants Classified as Equity

As of September 30, 2023 March 31, 2024, the Company had the following equity-classified common stock purchase warrants outstanding (share amounts in thousands):

Warrant Type	Number of Shares	Exercise Price	Expiration
Balance as of December 31, 2022	1,284		
Warrants expired	(33)	$ 47.00	January 2023
Balance as of March 31, 2023	1,251		
Pre-funded warrants issued	3,464	$ 0.01	—
Pre-funded warrants exercised	(2,117)	$ 0.01	—
Balance as of June 30, 2023	2,598		
Pre-funded warrants exercised	(2,497)	$ 0.01	—
Balance as of September 30, 2023	101		

	Number of Shares	Exercise Price	Expiration
Balance as of December 31, 2023	7	$ 28.00	June 28, 2023
Pre-funded warrants issued	1,425	$ 0.001	—
Pre-funded warrants exercised	(1,001)	$ 0.001	—
Series A warrants issued	3,974	$ 2.250	February 8, 2029
Series A warrants issued	139	$ 2.625	February 8, 2029
Series B warrants issued	3,974	$ 2.250	August 8, 2024
Balance as of March 31, 2024	8,518		

As During the three months ended March 31, 2024, holders exercised warrants for an aggregate of December 31, 2022 674,920 shares of common stock based on the exercise price of $0.001 per share for aggregate proceeds of approximately $675. Also, during the three months ended March 31, 2024, holders exercised warrants for an aggregate of 326,190 shares of common stock on a cashless basis and surrendered 127 shares of common stock as payment of the Company had the following equity-classified warrants outstanding (share amounts in thousands): aggregate exercise price.

Warrant Type	Number of Shares	Exercise Price	Expiration
Common stock	33	$ 47.00	January 2023
Common stock	101	$ 2.40	October 2023
Common stock	1,150	$ 0.01	—
	1,284		

Note 8. Warrants Classified as Liabilities

In November 2022 and June 2023, the Company completed registered direct offerings and sold shares of its common stock and common stock purchase warrants (the “Purchase Warrants”). The 2023 Purchase Warrant and the 2022 Purchase Warrant (collectively, securities purchase agreements governing the Purchase Warrants) Warrants provide for a value calculation for such warrants using the Black Scholes model in the event of certain fundamental transactions, as defined in the Purchase Warrants. transactions. The fair value calculation provides for a floor on the volatility amount utilized in the value calculation at 100% or greater. The Company has determined that this provision introduces leverage to the holder(s) holders of the Purchase Warrants that could result in a value that would be greater than the settlement amount of a fixed-for-fixed option on the Company’s own equity shares. Therefore, pursuant to ASC 815, the Company has classified the Purchase Warrants as liabilities in its condensed consolidated balance sheets. The classification of the Purchase Warrants, including whether the Purchase Warrants should be recorded as liabilities or as equity, is evaluated at the end of each reporting period with changes in the fair value reported in other income (expense) in the condensed consolidated statements of operations and comprehensive loss.

On June 2, 2023, the 2023 Purchase Warrant was initially recorded at a fair value at $3,162,401, and, as of September 30, 2023, the fair value of the warrant liability was reduced to $634,828. As a result, the Company recorded a gain $2,527,572 for the nine months ended September 30, 2023 for the change in fair value of the 2023 Purchase Warrant. The Company also recorded a gain of $1,711,527 for the nine months ended September 30, 2023 for the change in the fair value of the warrant liability for the 2022 Purchase Warrant.

The fair value of the Purchase Warrants at September 30, 2023 was determined using the Black Scholes model with the following assumptions: (i) expected term based on the remaining contractual terms, (ii) risk-free interest rate of 4.16%, which was based on a comparable US Treasury 5-year bond, (iii) expected volatility of 118% and (iv) an expected dividend of zero.

As of September 30, 2023 March 31, 2024 and December 31, 2023, the Company had the following liability-classified warrants outstanding (amounts in thousands):

	Number of Warrants on Common Shares	Amount
Balance as of December 31, 2021	—	$ —
Recognition of warrant liability	3,675	3,674
Change in fair value of warrant	—	(1,595)
Balance as of December 31, 2022	3,675	2,079
Change in fair value of warrant	—	(658)
Balance as of March 31, 2023	3,675	1,421
Recognition of warrant liability	5,714	3,163
Change in fair value of warrants	—	(966)
Balance as of June 30, 2023	9,389	3,618
Change in fair value of warrants	—	(2,615)
Balance as of September 30, 2023	9,389	$ 1,003

	Number of Shares	Exercise Price	Expiration Date
Warrants issued - November 2022	92	$ 40.00	May 28, 2028
Warrants issued - June 2023	143	$ 28.00	June 2, 2028
	235		

	Number of Shares	Fair Value
Balance as of December 31, 2023	235	$ 1,748
Change in fair value of warrants	—	(1,591)
Balance as of March 31, 2024	235	$ 157

The fair value of the Purchase Warrants at March 31, 2024 was determined using the Black Scholes model with the assumptions in the following table. The table also includes the total fair value determined at the valuation date based on these assumptions.

	2022 Purchase Warrant	2023 Purchase Warrant
Expected term based on contractual term	4.2 years	4.2 years
Interest rate (risk-free rate)	4.22%	4.22%
Expected volatility	124%	124%
Expected dividend yield	—	—
Fair value of warrants (in thousands)	$ 57	$ 100

Note. 9 The fair value of the Purchase Warrants at December 31, 2023 was determined using the Black Scholes model with the assumptions in the following table. The table also includes the total fair value determined at valuation date based on these assumptions.

	2022 Purchase Warrant	2023 Purchase Warrant
Expected term based on contractual term	4.4 years	4.4 years
Interest rate (risk-free rate)	3.84 %	3.84 %
Expected volatility	116 %	116 %
Expected dividend yield	—	—
Fair value of warrants (in thousands)	$ 653	$ 1,095

Note 9. Related Party Transactions

A family member of one of the Company's executive officers served as a consultant to the Company during 2022. During the nine months ended September 30, 2022, the Company incurred consulting expenses of approximately $126,800 for the family member. Additionally, a family member of one of the Company's executive officers is an employee of the Company. During the nine months ended September 30, 2023 and 2022, the The Company recorded compensation expense of approximately $83,800 and $127,500, respectively, $27,800 for the employed family member. member for each of the three months ended March 31, 2024 and 2023.

Note 10. License and Asset Sale Transaction

On August 5, 2022, the Company entered into a Technology License and Patent Assignment Agreement (the Intel Agreement) with Intel Corporation (Intel), pursuant to which Intel: (i) licensed from the Company, on an exclusive basis, certain software and technology assets related to the Company's Stellar packet classification intellectual property, including its graph memory engine technology, and any roadmap variant, in the form existing as of the date of the Intel Agreement (the Licensed Technology); (ii) acquired from the Company certain patent applications and patents owned by the Company; and (iii) assumed a professional services agreement, dated March 24, 2020, between Fabulous Inventions AB (Fabulous) and the Company, (the Fabulous Agreement), pursuant to which, among other things, the Company licensed from Fabulous certain technology incorporated into the Licensed Technology.

As consideration for the Company to enter into the Intel Agreement, Intel agreed to pay the Company $3,062,500 at the closing of the transaction (the Closing) and $437,500 (the Holdback) upon the satisfaction by the Company, as mutually agreed upon by the parties in good faith, of certain release criteria set forth in the Intel Agreement relating to various due diligence activities of Intel regarding the Licensed Technology (the Release Criteria). Technology.

The Company determined that the license and asset sale did not qualify as a sale of a business, but as a sale of a non-financial asset, with the resultant gain recorded as income from operations in accordance with ASC 610-20, *Other Income - Gains and Losses from the Derecognition of Nonfinancial Assets*. During the year ended December 31, 2022, the Company recognized a $2.6 million gain on this transaction, net of transaction costs. During the nine three months ended September 30, 2023 March 31, 2023, Intel paid the Holdback, and the Company recognized a $0.4 million gain, net of transaction costs, which was recorded as a reduction of operating expenses in the condensed consolidated statements of operations and comprehensive loss.

Note 11. Memory IC Product End-of-Life

Taiwan Semiconductor Manufacturing Corporation (TSMC) is the sole foundry that manufactures the wafers used to produce the Company's memory IC products. TSMC has informed the Company that TSMC is discontinuing the foundry process used to produce wafers, in turn, necessary to manufacture the Company's memory ICs. As a result, in May 2023, the Company informed its customers that the Company would be initiating an end-of-life (EOL) of its memory IC products. During the three months ended September 2023, As of March 31, 2024, the Company commenced initial had a non-cancelable purchase order backlog for its memory IC products of approximately $12.6 million. The Company expects to fulfill this backlog and complete final shipments of EOL orders and expects shipments its memory IC products by March 31, 2025.

Note 12. Subsequent Events

Subsequent to extend until at least December 31, 2024. March 31, 2024, the holders of the pre-funded warrants issued in the Offering exercised warrants for an additional 307,460 shares of common stock.

ITEM 2. Management's Discussion and Analysis of Financial Condition and Results of Operations

This Management's Discussion and Analysis of Financial Condition and Results of Operations should be read in conjunction with the accompanying condensed consolidated financial statements and notes included in this report. This Form 10-Q contains forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended, which include, without limitation, statements about the market for our technology, our strategy, competition, expected financial performance and capital raising effort, the impacts of COVID-19 on our business, the effects of the Russia/Ukraine conflict, and inflation, which could cause customers to delay or reduce purchases of our products or delay payments to us, which would adversely affect our financial results, including cash flows, and other aspects of our business identified in our most recent annual report on Form 10-K filed with the Securities and Exchange Commission on March 29, 2023 March 29, 2024 and in other reports that we file from time to time with the Securities and Exchange Commission. Any statements about our business, financial results, financial condition and operations contained in this Form 10-Q that are not statements of historical fact may be deemed to be forward-looking statements. Without limiting the foregoing, the words "believes," "anticipates," "expects," "intends," "plans," "projects" or similar expressions are intended to identify forward-looking statements. Our actual results could differ materially from those expressed or implied by these forward-looking statements as a result of various factors, including the risk factors described under Item 1A of our annual report on Form 10-K for the year ended December 31, 2022 December 31, 2023 and the risk factors described below under Item 1A of this Form 10-Q. We undertake no obligation to update publicly any forward-looking statements for any reason, except as required by law, even as new information becomes available or events occur in the future.

Overview

We were formerly known as MoSys, Inc. (MoSys) ("MoSys") and we were incorporated in California in 1991 and reincorporated in 2000 in Delaware. On September 14, 2021, we and our subsidiaries, 2864552 Ontario Inc. and 2864555 Ontario Inc., entered into an Arrangement Agreement (the Arrangement Agreement) "Arrangement Agreement") with Peraso Technologies Inc. (Peraso Tech) ("Peraso Tech"), a corporation existing under the laws of the province of Ontario, to acquire all of the issued and outstanding common shares of Peraso Tech (the Peraso Shares) "Peraso Shares"), including those Peraso Shares to be issued in connection with the conversion or exchange of secured convertible debentures and common share purchase warrants of Peraso Tech, as applicable, by way of a statutory plan of arrangement (the Arrangement) "Arrangement") under the Business Corporations Act (Ontario). On December 17, 2021, following the satisfaction of the closing conditions set forth in the Arrangement Agreement, the Arrangement was completed and we changed our name to "Peraso Inc." and began trading on the Nasdaq Stock Market (the Nasdaq) "Nasdaq") under the symbol "PRSO."

Our strategy and primary business objective is to be a profitable, IP-rich fabless semiconductor company offering integrated circuits, or ICs, antenna modules and related non-recurring engineering services. We specialize in the development of mmWave semiconductors, primarily in the unlicensed 60 GHz spectrum band for 802.11ad/ay ay- compliant devices and in the 28/39 GHz spectrum bands for 5G-compliant devices. We derive our revenue from selling semiconductor devices, as well as antenna modules based on using those mmWave semiconductor devices. We have pioneered a high-volume mmWave IC production test methodology using standard, low cost low-cost production test equipment. It has taken us several years to refine performance of this production test methodology, and we believe this places us in a leadership position in addressing operational challenges of delivering mmWave products into high-volume markets. We also produce and sell complete mmWave antenna modules. The primary advantage provided by an our antenna module modules is the silicon that our proprietary mmWave ICs and the antenna are integrated into a single device. A differentiating characteristic of mmWave technology is that the radio frequency RF amplifiers must be as close as possible to the antenna to minimize loss, and by providing a loss. With our module, we can guarantee the performance of the amplifier/antenna interface. interface and simplify customers' radio frequency ("RF") engineering, facilitating more opportunities for customer prospects that have not provided RF-type systems, as well as shortening the time to market for new products.

We also acquired a memory product line marketed under the Accelerator Engine name. This memory product line comprises comprising our Bandwidth Engine IC products. These products which integrate our proprietary, 1T-SRAM high-density embedded memory and a highly-efficient serial interface protocol resulting in a monolithic memory IC solution optimized for memory bandwidth and transaction access performance. Taiwan Semiconductor Manufacturing Corporation, or TSMC, is the sole foundry that manufactures the wafers used to produce our memory IC products. TSMC recently has informed us that it would be discontinuing the foundry process used to produce wafers, in turn, necessary to manufacture our memory ICs. As a result, in May 2023, we have informed our customers that we are initiating initiated an end-of-life, or EOL, of our memory IC products. We have notified our customers to provide purchase orders by December 22, 2023, products, and we commenced initial EOL shipments during the quarter ended September 30, 2023. We have requested customers to pay a deposit upon purchase order placement to reserve supply and provide funding for our required inventory purchases. In addition, we have requested customers to accelerate payments to improve our cash flows. Under our EOL plan, we expect shipments of our memory products to continue until at least December 31, 2024 through March 31, 2025. However, the timing of EOL shipments will be dependent on receipt of purchase orders from customers, deliveries from our suppliers, and the delivery schedules requested by our customers.

We incurred net losses of approximately $7.9 million $2.0 million for the nine three months ended September 30, 2023 March 31, 2024 and $32.4 million $16.8 million for the year ended December 31, 2022 December 31, 2023, and we had an accumulated deficit of approximately $157.5 million $168.4 million as of September 30, 2023 March 31, 2024. These and prior year losses have resulted in significant negative cash flows and historically have required us to raise substantial amounts of additional capital. As discussed below, this raises significant doubt about our ability to continue as a going concern. We will need to increase revenues substantially beyond levels that we have attained in the past in order to generate sustainable operating profit and sufficient cash flows to continue doing business without raising additional capital from time to time.

Exploring Strategic Alternatives Reverse Stock Split

In August 2023, On December 15, 2023, at our annual meeting of stockholders, our stockholders approved a certificate of amendment to our Second Amended and Restated Certificate of Incorporation (the "Charter Amendment") to effect a reverse stock split of our outstanding shares of common stock at a ratio to be determined by our board of directors. On December 15, 2023, we engaged an investment bank to assist filed the Charter Amendment with the exploration Secretary of strategic alternatives, including State of Delaware which effected a merger, sale 1-for-40 reverse stock split of assets or other similar transaction, our outstanding shares of common stock as of 4:01 p.m. Eastern Time on January 2, 2024. As a result of the reverse stock split, every forty shares of common stock were combined into one issued and outstanding share of common stock, with no change in the intention $0.001 par value per share. Holders of fractional shares received, in lieu of any fractional share, the number of shares rounded up to maximize stockholder value the next whole number. All equity awards outstanding and further common stock reserved for issuance under our business operations. There equity incentive plans and warrants outstanding immediately prior to the reverse stock split were appropriately adjusted by dividing the number of affected shares of common stock by 40 and, as applicable, multiplying the exercise price by 40, as a result of the reverse stock split. Exchangeable shares, which can be no assurance that converted to common stock at any time by their respective holders, were also adjusted to reflect the exploration process will result in any strategic alternative, or as to its outcome or timing. We have neither set a timetable for completion of this process, nor have we made any decisions related to strategic alternatives at this time. If a strategic process is unsuccessful and we are unable to raise additional capital, we may be unable to continue our operations at planned levels and be forced to further reduce or terminate our operations. These factors raise substantial doubt about our ability to continue as a going concern, as discussed below. reverse stock split.

COVID-19 and World Unrest

The global outbreak of the coronavirus disease 2019 (COVID-19) was declared a pandemic by the World Health Organization and a national emergency by the U.S. government in March 2020. This negatively affected the U.S. and global economy, disrupted global supply chains, significantly restricted travel and transportation, resulted in mandated closures and orders to "shelter-in-place" and created significant disruption of the financial markets. While the U.S. national emergency expired in May 2023 and substantially all closures and "shelter-in-place" orders have ended, there can be no assurance that the COVID-19 pandemic will not impact our operational and financial performance in the future, as the duration and spread of the pandemic and related actions taken by U.S. and foreign government agencies to prevent disease spread are uncertain, out of our control, and cannot be predicted.

World unrest due to wars and terrorist attacks have led to further economic disruptions. Mounting inflationary cost pressures and recessionary fears have negatively impacted the global economy. Since mid-2022, at times, the U.S. Federal Reserve has addressed elevated inflation by increasing interest rates, as inflation remains elevated. Given current market conditions, we may be unable to access the capital markets, and additional capital may only be available to us on terms that could be significantly detrimental to our existing stockholders and to our business.

For additional information on risks that could impact our future results of operations, please refer to "Risk Factors" in Part II, Item 1A. of this quarterly report on Form 10-Q.

Critical Accounting Policies and Estimates

The discussion and analysis of our financial condition and results of operations are based upon our condensed consolidated financial statements, which have been prepared in accordance with accounting principles generally accepted in the United States (GAAP). The preparation of these condensed consolidated financial statements requires us to make certain estimates and judgments that affect the reported amounts of assets, liabilities, revenues and expenses. On an ongoing basis we make these estimates based on our historical experience and on assumptions that we consider reasonable under the circumstances. Actual results may differ from these estimates and reported results could differ under different assumptions or conditions. Our significant accounting policies and estimates are disclosed in Note 1 of the "Notes to Condensed Consolidated Financial Statements" included in Part I, Item 1 of this report and Note 1 of the "Notes to Consolidated Financial Statements" in our annual report on Form 10-K for the year ended December 31, 2022 December 31, 2023. As of September 30, 2023 March 31, 2024, there have been no material changes to our significant accounting policies and estimates.

Results of Operations

Net Revenue

	September 30, 2023	September 30, 2022	Change 2022 to 2023		March 31, 2024	March 31, 2023	Year-Over-Year Change 2023 to 2024	
	(dollar amounts in thousands)				(dollar amounts in thousands)			
Product -three months ended	$ 4,262	$ 3,060	$ 1,202	39 %				
Product - three months ended					$ 2,676	$ 4,888	$ (2,212)	(45)%
Percentage of total net revenue	95 %	93 %			95 %	97 %		
Product -nine months ended	$ 11,385	$ 10,384	$ 1,001	10 %				
Percentage of total net revenue	96 %	95 %						

The following table details revenue by product category for the three and nine months ended September 30, 2023 March 31, 2024 and 2022: 2023:

(amounts in thousands)	Three Months Ended September 30,			Nine Months Ended September 30,			Three Months Ended March 31,		
Product category	**2023**	**2022**	**change**	**2023**	**2022**	**change**	**2024**	**2023**	**change**
Memory ICs	$ 3,384	$ 1,748	$ 1,636	$ 7,181	$ 5,528	$ 1,653	$ 2,383	$ 2,181	202
mmWave ICs	576	533	43	2,614	1,699	915	77	1,479	(1,402)
mmWave antenna modules	302	779	(477)	1,586	3,139	(1,553)			
mmWave modules							203	1,224	(1,021)
mmWave other products	-	-	-	4	18	(14)	13	4	9
	$ 4,262	$ 3,060	$ 1,202	$ 11,385	$ 10,384	$ 1,001	$ 2,676	$ 4,888	$ (2,212)

Product revenue increased for the three months ended September 30, 2023 compared with the same period of 2022 primarily due to increases in shipments related to our end-of-life announcement of our memory IC products, partially offset by a reduction in shipments of our antenna modules.

Product revenue increased decreased for the nine three months ended September 30, 2023 March 31, 2024 compared with the same period of 2022 2023 primarily due to increases in shipments related to our end-of-life announcement of our memory IC products combined with year-over year increases the decrease in shipments of our mmWave ICs and antenna modules, which was partially offset by a reduction increases in EOL shipments of our antenna modules. memory IC products. We initiated price increases on certain of our antenna module products in 2022, however, through September 30, 2023 March 31, 2024, we had not realized any material increase in revenue as a result of those price increases.

	September 30, 2023	September 30, 2022	Change 2022 to 2023	
	(dollar amounts in thousands)			
Royalty and other -three months ended	$ 219	$ 234	$ (15)	(6)%
Percentage of total net revenue	5 %	7 %		
Royalty and other -nine months ended	$ 531	$ 597	$ (66)	(11)%
Percentage of total net revenue	4 %	5 %		

Taiwan Semiconductor Manufacturing Corporation (TSMC) is the sole foundry that manufactures the wafers used to produce our memory IC products. TSMC has informed us that TSMC is discontinuing the foundry process used to produce wafers, in turn, necessary to manufacture our memory ICs. As a result, in May 2023, we informed our customers that we would be initiating an end-of-life (EOL) of our memory IC products. As of March 31, 2024, we had a non-cancelable purchase order backlog for our memory IC products of approximately $12.6 million. We expect to fulfill this backlog and complete final shipments of our memory IC products by March 31, 2025.

We expect revenues to increase in 2024 as compared with 2023, as we anticipate increased sales of our memory IC products, based on EOL purchase orders received from customers. In addition, we expect sales of our mmWave products to increase from a volume and revenue perspective over the next 12 months, as we expect new customers to commence production during 2024.

	March 31, 2024	March 31, 2023	Year-Over-Year Change 2023 to 2024	
	(dollar amounts in thousands)			
Royalty and other - three months ended	$ 140	$ 145	$ (5)	(3)%
Percentage of total net revenue	5 %	3 %		

Royalty and other includes royalty, non-recurring engineering or NRE, services and license revenues. The decrease in royalty and other revenue for the three months ended September 30, 2023 March 31, 2024 compared with the same period of 2022 2023 was primarily due to a decrease in royalty revenues from licensees of our memory technology due to reduced shipments by these licensees.

The decrease licensees and partially offset by an increase in royalty and other revenue for the nine months ended September 30, 2023 compared with the same period of 2022 was primarily due to a decrease in NRE non-recurring engineering services revenue related to our mmWave technology and a decrease in royalty revenues from licensees of our memory technology due to reduced shipments by these licensees. technology.

Cost of Net Revenue and Gross Profit

	September 30,		Change		March 31,		Year-Over-Year Change	
	2023	**2022**	**2022 to 2023**		**2024**	**2023**	**2023 to 2024**	
	(dollar amounts in thousands)				(dollar amounts in thousands)			
Cost of net revenue -three months ended	$ 2,445	$ 2,000	$ 445	22 %				
Cost of net revenue - three months ended					$ 1,510	$ 3,106	$ (1,596)	(51)%
Percentage of total net revenue	55 %	61 %			54 %	62 %		
Cost of net revenue -nine months ended	$ 7,346	$ 6,747	$ 599	9 %				
Percentage of total net revenue	62 %	61 %						

Cost of net revenue is primarily comprised of direct and indirect costs related to the sale of our products, including amortization of intangible assets and depreciation of production-related fixed assets.

Cost of net revenue increased decreased for the three months ended September 30, 2023 March 31, 2024 when compared with the same period in 2022, 2023, primarily due to the combined effect of i) increased shipment volumes of our memory products in 2023, partially offset by a decrease in sales of our mmWave product, IC and module products, partially offset by an increase in shipments of our memory IC products in 2024, and ii) increased amortization of developed technology of approximately $0.2 million. The revised remaining estimated life to 18 months of the intangible asset was a result of the end-of-life announcement on May 1, 2023 (see Note 11).

Cost of net revenue increased for the nine months ended September 30, 2023 when compared with the same period in 2022, due to the increase in sales of our IC products, partially offset by decrease in sales of our mmWave product. In addition, we incurred increased inventory write-down charges of $0.4 million primarily for mmWave product inventory, as we identified excess and obsolete inventory. If our utilization of inventory is, or if our estimates of our inventory's potential utility become, less favorable than currently expected, additional inventory write-downs may be required. Cost of net revenue represents a higher percentage of revenue for our mmWave products, as compared to our memory products.

	September 30,		Change		March 31,		Year-Over-Year Change	
	2023	**2022**	**2022 to 2023**		**2024**	**2023**	**2023 to 2024**	
	(dollar amounts in thousands)				(dollar amounts in thousands)			
Gross profit -three months ended	$ 2,036	$ 1,294	$ 742	57 %				
Gross profit - three months ended					$ 1,306	$ 1,927	$ (621)	(32)%
Percentage of total net revenue	45 %	39 %			46 %	38 %		
Gross profit -nine months ended	$ 4,570	$ 4,234	$ 336	8 %				
Percentage of total net revenue	38 %	39 %						

Gross profit increased decreased for the three months ended September 30, 2023 March 31, 2024 compared with the same period of 2022 2023 primarily due to the increase decrease in shipment volumes of our memory mmWave products. The increase in our gross profit margin percentage for the three months ended September 30, 2023 March 31, 2024 compared with the prior year period was primarily attributable to the increased volume increase in shipments of our memory products, which carry higher gross margins than our mmWave products.

Gross profit increased for the nine months ended September 30, 2023 compared with the same period of 2022 due to the increased shipments of our memory and mmWave IC products partially offset by a decrease in shipments of our mmWave antenna modules combined with the increase in cost of net revenues.

Research and Development

	September 30,		Change		March 31,		Year-Over-Year Change	
	2023	**2022**	**2022 to 2023**		**2024**	**2023**	**2023 to 2024**	
	(dollar amounts in thousands)				(dollar amounts in thousands)			
R&D -three months ended	$ 3,484	$ 4,509	$ (1,025)	(23)%				
R&D - three months ended					$ 2,835	$ 3,887	$ (1,052)	(27)%
Percentage of total net revenue	78 %	137 %			101 %	77 %		
Research and development -nine months ended	$ 11,038	$ 15,636	$ (4,598)	(29)%				
Percentage of total net revenue	93 %	142 %						

Our research and development, or R&D, expenses include costs related to the development of our products. We expense R&D costs as they are incurred.

The decrease for the three and nine months ended September 30, 2023 March 31, 2024 compared with the same periods period of 2022 2023 was primarily due to reduced salary and consulting costs. During the quarter ended December 31, 2022, costs, as we began implementing cost implemented reductions on force in February and November 2023 and terminated consultant contracts. Most recently, in November 2023, we implemented a reduction in our workforce and eliminated three full-time equivalent positions, which included a reduction of consulting positions one employee and the elimination of certain employee positions in February 2023, as well as targeted reductions in certain longer-term research and development projects. In August 2022, we entered into a Technology License and Patent Assignment Agreement, or the Agreement, with Intel Corporation, or Intel, and as a result we transferred certain employees and consultants to Intel. As a result of the Agreement and other cost reductions, our memory-related R&D expenses declined by approximately $0.6 million and $1.2 million for the three and nine months ended September 30, 2023, respectively. two consultants. In addition, during the nine months ended September 30, 2022, we incurred mask fabrication (i.e., tape-out) expenses initiated a temporary lay-off in Canada of $0.7 million for one of 16 positions, all intended to preserve cash while keeping capital expenditures to minimum levels in order to reduce operating costs and our mmWave ICs, and we incurred no mask fabrication costs in 2023. short-term cash needs.

We expect that total R&D expenses will decrease for the remainder of 2023 during 2024 compared with 2022, 2023, as a result of our cost reduction initiatives. initiatives initiated during 2023.

Selling, General and Administrative

	September 30,		Change		March 31,		Year-Over-Year Change	
	2023	2022	2022 to 2023		2024	2023	2023 to 2024	
	(dollar amounts in thousands)				(dollar amounts in thousands)			
SG&A -three months ended	$ 2,112	$ 3,353	$ (1,241)	(37)%				
SG&A - three months ended					$ 2,102	$ 2,242	$ (140)	(6)%
Percentage of total net revenue	47%	102%			75%	45%		
SG&A -nine months ended	$ 6,331	$ 8,938	$ (2,607)	(29)%				
Percentage of total net revenue	53%	81%						

Selling, general and administrative, or SG&A, expenses consist primarily of personnel and related overhead costs for sales, marketing, finance, human resources and general management and amortization of certain intangible assets.

The decrease for the three and nine months ended September 30, 2023 March 31, 2024 compared with the same period of 2022 2023 was primarily related attributable to cost reductions, which we initiated during the three months ended December 31, 2022. The reductions in SG&A expense in 2023 primarily resulted from lower headcount, including the elimination of certain employee and consulting positions and reductions of other discretionary operating expenses. expenses during 2023. We expect that total SG&A expense will remain flat or slightly decrease for the remainder of 2023 2024 compared with 2022 2023 due to our continued cost reduction initiatives, including lower headcount. initiatives.

Liquidity and Capital Resources; Changes in Financial Condition

Cash Flows

As of September 30, 2023 March 31, 2024, we had cash and cash equivalents and investments of $0.7 million $2.4 million and working capital of $6.5 million $3.1 million.

Net cash used in operating activities was $5.6 million $2.6 million for the first nine three months of 2023, 2024, which primarily resulted from our net loss of $7.9 million $2.0 million, as adjusted for a $4.2 million $1.6 million non-cash gain on the change in fair value of warrant liability, and $0.2 million in other non-cash changes, and was partially offset by non-cash charges of $2.8 million of depreciation and amortization and $3.9 million of stock based compensation.

Net cash used in operating activities was $13.4 million for the first nine months of 2022, which primarily resulted from our net loss of $17.8 million and $3.1 million $1.0 million in net changes in assets and liabilities and $0.2 million in other non-cash changes, as partially offset by non-cash charges of $2.3 million $1.0 million of depreciation and amortization $4.4 million and $1.2 million of stock based compensation, $0.7 million of allowance for doubtful accounts and $0.1 million for other non-cash items. compensation. The changes in assets and liabilities primarily related to the timing of accounts receivable collections, purchases of inventory and other vendor payables and prepayments.

Net cash used in operating activities was $1.4 million for the first three months of 2023, which primarily resulted from our net loss of $3.1 million, as adjusted for a $0.7 million non-cash gain on the change in fair value of warrant liability and $0.2 million of other non-cash changes, as partially offset by non-cash charges of $0.8 million of depreciation and amortization, $1.3 million of stock based compensation, and $0.5 million in net changes in assets and liabilities. The changes in assets and liabilities primarily related to the timing of accounts receivable collections, purchases of inventory and other vendor payables and prepayments.

Net cash provided by investing activities of $1.0 million $0.4 million for the nine three months ended September 30, 2023 March 31, 2023 represented $1.1 million $0.5 million in proceeds from maturities of short-term investments, partially offset by $0.1 million of purchases of property and equipment.

Net For the three months ended March 31, 2024, no cash was provided by or used in investing activities of $10.4 million for the nine months ended September 30, 2022 represented $11.5 million in proceeds from maturities of short-term investments, partially offset by $0.5 million purchases of short and long-term investments and $0.6 million of purchases of property and equipment. activities.

Net cash provided by financing activities for the nine three months ended September 30, 2023 consisted of $3.5 million, primarily March 31, 2024 comprised $3.6 million $3.4 million in net proceeds from a registered direct public offering of our common stock and common stock purchase warrants completed in September 2023, February 2024, partially offset by taxes paid to net share settle equity awards and repayment of finance financing lease liabilities.

Net cash used in financing activities for the nine three months ended September 30, 2022 March 31, 2023 consisted of taxes paid to net share settle equity awards. repayment of financing lease liabilities.

Our future liquidity and capital requirements are expected to vary from quarter-to-quarter, depending on numerous factors, including:

- level of revenue;
- cost, timing and success of technology development efforts;
- inventory levels, as supply chain disruption has required us to maintain higher inventory levels and place purchase orders with our suppliers longer into the future, which exposes us to additional inventory risk;
- timing of product shipments, which may be impacted by supply chain disruptions;
- length of billing and collection cycles, which may be impacted in the event of a global recession or economic downturn;
- fabrication costs, including mask costs, of our ICs, currently under development;
- variations in manufacturing yields, material lead time and costs and other manufacturing risks;
- costs of acquiring other businesses and integrating the acquired operations; and
- profitability of our business.

Subsequent to September 30, 2023, we collected approximately $3.7 million of EOL proceeds, including $2.2 million included in accounts receivable at September 30, 2023, $0.4 million related to October shipments and approximately $1.1 million of customer deposits to fund inventory purchases of our memory IC products.

During the three months ended March 31, 2023, we collected approximately $2.0 million of amounts past due from a large customer of our mmWave products. The amounts collected included approximately $0.9 million of accounts receivable outstanding at September 30, 2022, for which we had established a $0.2 million allowance for doubtful accounts, and $1.1 million for shipments in September 2022 for which we had deferred revenue recognition.

Purchase Obligations

Our primary purchase obligations include non-cancelable purchase orders for inventory and computer-aided-design (CAD) software. At September 30, 2023 March 31, 2024, we had outstanding non-cancelable purchase orders for inventory, primarily wafers and substrates, and related expenditures of approximately $2.3 million $3.2 million and non-cancelable purchase orders for CAD software of $3.1 million $2.2 million, which extend through approximately September 2025.

Going Concern - Working Capital

We incurred net losses of approximately $7.9 million $2.0 million for the nine three months ended September 30, 2023 March 31, 2024 and $32.4 million $16.8 million for the year ended December 31, 2022 December 31, 2023, and we had an accumulated deficit of approximately $157.5 million $168.4 million as of September 30, 2023 March 31, 2024. These and prior year losses have resulted in significant negative cash flows and have required us to raise substantial amounts of additional capital. To date, we have primarily financed our operations through offerings of equity and equity-linked securities, issuance of convertible notes and loans.

We expect to continue to incur operating losses for the foreseeable future as we continue to secure new customers for and continue to invest in the development of our products, and we expect our cash expenditures to continue to exceed receipts for the foreseeable future, as our revenues will not be sufficient to offset our operating expenses.

We will need to increase revenues beyond the levels that we have attained in the past in order to generate sustainable operating profit and sufficient cash flows to continue doing business without raising additional capital from time to time.

As a result of our expected operating losses and cash burn and recurring losses from operations, if we are unable to raise sufficient capital through additional equity or debt arrangements, there will be uncertainty regarding our ability to maintain liquidity sufficient to operate our business effectively, which raises substantial doubt as to our ability to continue as a going concern within one year from the date of issuance of these condensed consolidated financial statements. The condensed consolidated financial statements presented in Part I, Item 1 of this Report have been prepared assuming that we will continue as a going concern, and do not include any adjustments that might result from the outcome of this uncertainty. There can be no assurance that such additional capital, whether in the form of equity or debt financing, will be sufficient or available and, if available, that such capital will be offered on terms and conditions acceptable to us. We are currently seeking additional financing in order to meet our cash requirements for the foreseeable future. If the Company is unsuccessful in these efforts, it will need to implement additional cost reduction strategies, which could further affect its near- and long-term business plan. These efforts may include, but are not limited to, reducing headcount and curtailing business activities. In February 2023, we announced that we had implemented cost-reduction initiatives to reduce operating expenses by approximately $5 million on an annualized basis. Most recently, in November 2023, we initiated a temporary lay-off in Canada of 16 positions, and eliminated three full-time equivalent positions in the U.S. and Canada. We have the ability to recall the employees subject to temporary lay-off, however such recalls would be dependent on improvements in business conditions and our financial condition, which we are unable to predict. If we do not recall any of the affected employees in Canada, we would achieve annual total savings of approximately $2.8 million from these reductions, excluding the impacts of any severance and related termination payments.

In June 2023, As discussed in Note 7 of the “Notes to Condensed Consolidated Financial Statements” included in Part I, Item 1 of this report, in February 2024, we completed a registered direct public offering of common stock and common stock purchase warrants for net proceeds to us of approximately $3.6 million $3.4 million. If we were to raise additional capital through the exercise of the common stock purchase warrants issued in February 2024 or other sales of our equity securities, our stockholders would suffer dilution of their equity ownership. If we engage in debt financing, we may be required to accept terms that restrict our ability to incur additional indebtedness, prohibit us from paying dividends, repurchasing our stock or making investments, and force us to maintain specified liquidity or other ratios, any of which could harm our business, operating results and financial condition. If we need additional capital and cannot raise it on acceptable terms, we may not be able to, among other things:

- develop or enhance our products;
- continue to expand our product development and sales and marketing organizations;
- acquire complementary technologies, products or businesses;
- expand operations, in the United States or internationally;
- hire, train and retain employees; or
- respond to competitive pressures or unanticipated working capital requirements.

Discontinuing any of the above-mentioned activities could seriously harm our ability to execute our business strategy and may force us to curtail our existing operations.

We believe that our existing cash and cash equivalents as of September 30, 2023 March 31, 2024, plus expected receipts associated with forecasted product sales, will provide us with liquidity to fund our planned operating needs into the first quarter half of 2024. 2025. Variability in our operating forecast, driven primarily by (i) product sales and collections, (ii) potential customer licensing and NRE non-recurring engineering (NRE) transactions, (iii) timing of operating expenditures, and (iv) unanticipated changes in net working capital, will impact our cash runway. Likewise, we may decide to revise our financial priorities and operating plans, depending on the level of customer shipments, licensing and NRE arrangements and timing of related collections. This could impact our ability to enter into strategic arrangements and to access additional capital.

We will need additional funding to continue our operating activities beyond those activities currently included in our operating forecast and related cash projection. Therefore, we will need to secure additional capital or financing and/or significantly delay, defer or reduce our cash expenditures before the end of 2023. 2024. There can be no assurance that we will be able to obtain additional capital or financing on terms acceptable to us, on a timely basis or at all.

Off-Balance Sheet Arrangements

We do not maintain any off-balance sheet arrangements or obligations that are reasonably likely to have a material current or future effect on our financial condition, results of operations, liquidity or capital resources.

Indemnifications

In the ordinary course of business, we enter into contractual arrangements under which we may agree to indemnify the counter-party from losses relating to a breach of representations and warranties, a failure to perform certain covenants, or claims and losses arising from certain external events as outlined within the contract, which may include, for example, losses arising from litigation or claims relating to past performance. Such indemnification clauses may not be subject to maximum loss clauses. We have also entered into indemnification agreements with our officers and directors. No material amounts related to these indemnifications are reflected in our condensed consolidated financial statements for the nine three months ended September 30, 2023 March 31, 2024.

Recent Accounting Pronouncements

See Note 1 to the condensed consolidated financial statements for a discussion of recently-issued accounting pronouncements.

ITEM 4. Controls and Procedures

Disclosure Controls and Procedures. Our management is responsible for establishing and maintaining adequate internal control over our financial reporting. Because of inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Under the supervision and with the participation of our management, including our Chief Executive Officer and Chief Financial Officer, we conducted an evaluation of the effectiveness of the design and operation of our disclosure controls and procedures, as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934. Based on this evaluation, our management concluded that, as of September 30, 2023 March 31, 2024, our disclosure controls and procedures were effective.

Changes in Internal Control over Financial Reporting. During the nine three months ended September 30, 2023 March 31, 2024, there was no change in our internal control over financial reporting that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

PART II—OTHER INFORMATION

ITEM 1. Legal Proceedings

The discussion of legal matters in Note 4 of the Notes to Condensed Consolidated Financial Statements included in Part I, Item 1 of this report under the heading “Legal Matters” is incorporated by reference in response to this Part II, Item 1.

ITEM 1A. Risk Factors

We face many significant risks in our business, some of which are unknown to us and not presently foreseen. These risks could have a material adverse impact on our business, financial condition and results of operations in the future. Other than as set forth below, there There have been no material changes with respect to the risk factors disclosed under Item 1A of our annual report on Form 10-K for the year ended December 31, 2022 December 31, 2023, which we filed with the SEC on March 29, 2023 March 29, 2024.

We intend to discontinue the production of our memory productsITEM 5. Other Information

Taiwan Semiconductor Manufacturing Corporation, or TSMC, is the sole foundry that manufactures the wafers used to produce our memory IC products. TSMC has informed us that it will be discontinuing the foundry process used to produce the wafers necessary to produce our memory ICs. We are not in a position to transition wafer production to a new foundry and continue to manufacture these products. As a result, we have informed our customers that we are initiating an end-of-life, or EOL, of our memory IC products. We expect to fulfill product EOL orders during 2024 and into 2025. Our memory IC products represented over 50% of our revenues for the year ended December 31, 2022 and over 60% of our revenues for the nine months ended September 30, 2023. The discontinuation None of the production and sale of our memory IC products will negatively impact our future revenues, results of operations and cash flows.

Our gross profit may fluctuate due to Company’s directors or officers adopted, modified or terminated a variety of factors, which could negatively impact our results of operations and our financial condition.

Our gross profit may fluctuate due to a number of factors, including customer and product mix, market acceptance of our new products, yield, wafer pricing, packaging and testing costs, competitive pricing dynamics, charges for inventory write-downs and geographic and market pricing strategies. To the extent we may offer or be contractually obligated to offer certain customers favorable prices, it would decrease our average selling prices and likely impact our gross profit. In the possible event our customers, including our larger customers, exert more pressure with respect to pricing and other terms, it could put downward pressure on our profit.

Because we do not operate our own wafer fabrication, assembly, or testing facilities, we may not be able to reduce our costs as rapidly as companies that operate their own facilities, and in fact, our costs may even increase, which could further reduce our gross profit. We seek yield improvements and volume-based cost reductions to enable cost reductions. To the extent that such cost reductions do not occur at a sufficient level and in a timely manner, our business, financial condition, and results of operations could be adversely affected and may vary from our estimates.

In addition, we maintain an inventory of our products at various stages of production, as well as an inventory of finished goods. As we are generally a sole-source supplier, we hold these inventories in anticipation of customer orders. If those customer purchase orders do not materialize in a timely manner or customers do not honor those purchase orders, we can have excess or obsolete inventory which we would have to write-down, and our gross profit and results of operations would be adversely affected.

If we are unable to satisfy the continued listing requirements of The Nasdaq Stock Market, our common stock could be delisted and the price and liquidity of our common stock may be adversely affected.

Our common stock may lose value and could be delisted from The Nasdaq Stock Market (“Nasdaq”) due to several factors Rule 10b-5 trading arrangement or a combination non-Rule 10b-5 trading arrangement during the fiscal quarter ended March 31, 2024, as such terms are defined under Item 408(a) of such factors. While our common stock is currently listed on Nasdaq, there can be no assurance that we will be able to maintain such listing. To maintain the listing of our common stock on Nasdaq, we are required to meet certain listing requirements, including, among others, a requirement to maintain a minimum closing bid price of $1.00 per share. If our common stock trades below the $1.00 minimum closing bid price requirement for 30 consecutive business days or if we do not meet other listing requirements, we may be notified by Nasdaq of non-compliance. Regulation S-K.

On February 1, 2023, we received a notice from Nasdaq, indicating that, based upon the closing bid price of our common stock for the previous 30 business days, we no longer meet the requirement to maintain a minimum bid price of $1.00 per share, as set forth in Nasdaq Listing Rule 5550(a)(2) (the “Minimum Bid Price Rule”). Pursuant to Nasdaq Listing Rule 5810(c)(3)(A), we had a compliance period of 180 calendar days, or until July 31, 2023 (the “Compliance Period”) in which to regain compliance with the Minimum Bid Price Rule. We did not regain compliance with the Minimum Bid Price Rule during the first 180-calendar-day Compliance Period and submitted a written request to Nasdaq to afford us an additional 180-day compliance period to cure the deficiency. On August 1, 2023, we received written notification from the Listing Qualifications Department of Nasdaq, granting our request for a 180-day extension to regain compliance with the Minimum Bid Price Rule. We now have until January 29, 2024 to meet the requirement. If at any time prior to January 29, 2024, the bid price of our common stock closes at $1.00 per share or more for a minimum of 10 consecutive business days, we will regain compliance with the Minimum Bid Price Rule.

If we do not regain compliance with the Minimum Bid Price Rule during the additional 180-day extension, Nasdaq will provide written notification to us that our common stock will be delisted. At that time, we may appeal the relevant delisting determination to a hearings panel pursuant to the procedures set forth in the applicable Nasdaq Listing Rules. However, there can be no assurance that, if we do appeal the delisting determination by Nasdaq to the hearings panel, that such appeal would be successful. Nor is there any assurance that we would obtain a further extension of time to meet this requirement. We intend to actively monitor the closing bid price of our common stock and may, if appropriate, consider implementing available options to regain compliance with the Minimum Bid Price Rule.

If we were to be delisted, we would expect our common stock to be traded in the over-the-counter market which could adversely affect the liquidity of our common stock. Additionally, we could face significant material adverse consequences, including:

- a limited availability of market quotations for our common stock;
- a decreased ability to issue additional securities or obtain additional financing in the future;
- reduced liquidity for our stockholders;
- potential loss of confidence by customers, collaboration partners and employees; and
- loss of institutional investor interest.

We may fail to achieve the intended cost savings and related benefits from our reduction in workforce and temporary lay-offs.

In February 2023, we implemented a reduction in our workforce and eliminated 5 positions to help us achieve a more cost-efficient organization. In November 2023, we further reduced our workforce by eliminating 3 positions, which included one employee and two consultants, and we initiated a temporary lay-off in Canada of 16 positions, all intended to preserve cash to keep capital expenditures to minimum levels in order to reduce operating costs and our short-term cash needs.

We may fail to effectively execute on, or achieve the intended goals of, the reductions in operating costs. Our plans may also change as we continue to refocus on reducing operating costs and streamlining operations, while at the same time conserving cash by delaying or deferring certain expenditures as well. These actions may take more time than we currently estimate and we may not be able to achieve the cost-efficiencies sought. In addition, the reduction in workforce may negatively impact employee morale for those who are not directly impacted, which may increase employee attrition and hurt future recruiting efforts, hindering our ability to achieve our key priorities. Any failure to achieve the expected benefits from the reduction in workforce could adversely affect our stock price, financial condition and ability to achieve our goals.

ITEM 6. Exhibits

(a) Exhibits

31.1*	Rule 13a-14 certification
31.2*	Rule 13a-14 certification
32.1**	Section 1350 certifications
101*	The following financial information from Peraso Inc.'s quarterly report on Form 10-Q for the period ended September 30, 2023, filed with the SEC on November 13, 2023, formatted in Inline Extensible Business Reporting Language (Inline XBRL): (i) the Condensed Consolidated Statements of Operations and Comprehensive Income (Loss) for the three and nine months ended September 30, 2023 and 2022, (ii) the Condensed Consolidated Balance Sheets as of September 30, 2023 and December 31, 2022, (iii) the Condensed Consolidated Statements of Stockholders' Equity for the three and nine months ended September 30, 2023 and 2022, (iv) the Condensed Consolidated Statements of Cash Flows for the nine months ended September 30, 2023 and 2022, and (v) Notes to Condensed Consolidated Financial Statements.
104*	Cover Page Interactive Data File (formatted as Inline XBRL and contained in Exhibit 101).

* Filed herewith.

** Furnished herewith.

		Reference				Filed or Furnished
Exhibit No.	**Exhibit Description**	**Form**	**File No.**	**Form Exhibit**	**Filing Date**	**Herewith**
3.1	Restated Certificate of Incorporation of the Company	8-K	000-32929	3.6	November 12, 2010	
3.1.1	Certificate of Amendment to Restated Certificate of Incorporation of the Company	8-K	000-32929	3.1	February 14, 2017	
3.1.2	Certificate of Amendment to the Amended and Restated Certificate of Incorporation of the Company, filed with the Secretary of State of the State of Delaware on August 27, 2019	8-K	000-32929	3.1	August 27, 2019	
3.1.3	Certificate of Amendment to Articles of Incorporation (Name Change)	8-K	000-32929	3.1	December 20, 2021	
3.1.4	Certificate of Designation of Series A Special Voting Preferred Stock	8-K	000-32929	3.2	December 20, 2021	
3.1.5	Certificate of Amendment to Amended and Restated Certificate of Incorporation of the Company, filed with the Secretary of State of the State of Delaware on December 15, 2023	8-K	000-32929	3.1	December 19, 2023	
3.2	Amended and Restated Bylaws of the Company	8-K	000-32929	3.1	November 23, 2021	
4.1	Form of Series A Warrant	S-1/A	333-276247	4.15	February 5, 2024	
4.2	Form of Series B Warrant	S-1/A	333-276247	4.16	February 5, 2024	
4.3	Form of Pre-Funded Warrant	S-1/A	333-276247	4.16	January 23, 2024	
4.4	Form of Underwriter Warrant	S-1/A	333-276247	4.17	January 23, 2024	
10.1	Underwriting Agreement, dated February 6, 2024, by and between the Company and Ladenburg Thalmann & Co. Inc.	8-K	000-32929	1.1	February 9, 2024	
10.2	Form of Lock-Up Agreement	S-1/A	333-276247	10.30	January 23, 2024	
10.3	Warrant Agency Agreement, dated February 8, 2024, by and between the Company and Equiniti Trust Company, LLC	8-K	000-32929	10.2	February 9, 2024	
31.1	Rule 13a-14 Certification					X
31.2	Rule 13a-14 Certification					X
32.1	Section 1350 Certification					X
101	The following financial information from Peraso Inc.'s quarterly report on Form 10-Q for the period ended March 31, 2024, filed with the SEC on May 14, 2024, formatted in Inline Extensible Business Reporting Language (Inline XBRL): (i) the Condensed Consolidated Statements of Operations and Comprehensive Income (Loss) for the three months ended March 31, 2024 and 2023, (ii) the Condensed Consolidated Balance Sheets as of March 31, 2024 and December 31, 2023, (iii) the Condensed Consolidated Statements of Stockholders' Equity for the three months ended March 31, 2024 and 2023, (iv) the Condensed Consolidated Statements of Cash Flows for the three months ended March 31, 2024 and 2023, and (v) Notes to Condensed Consolidated Financial Statements					X
104	Cover Page Interactive Data File (embedded within the Inline XBRL document)					X

Signatures

Pursuant to the requirements of the Securities Exchange Act of 1934, as amended, the registrant has duly caused this report to be signed on its behalf by the undersigned thereunto duly authorized.

Dated: November 13, 2023 May 14, 2024

PERASO INC.

By: /s/ Ronald Glibbery
Ronald Glibbery
Chief Executive Officer
(Principal Executive Officer)

By: /s/ James Sullivan
James Sullivan
Chief Financial Officer
(Principal Financial and Accounting Officer)

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Exhibit 31.1

CERTIFICATION PURSUANT TO
RULE 13a-14 OF THE SECURITIES EXCHANGE ACT OF 1934

I, Ronald Glibbery, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Peraso Inc. for the period ended September 30, 2023 March 31, 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, fairly 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 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 or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: November 13, 2023 May 14, 2024

/s/ Ronald Glibbery
Ronald Glibbery
Chief Executive Officer
(Principal Executive Officer)

Exhibit 31.2

CERTIFICATION PURSUANT TO
RULE 13a-14 OF THE SECURITIES EXCHANGE ACT OF 1934

I, James Sullivan, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Peraso Inc. for the period ended September 30, 2023 March 31, 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, fairly 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 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 or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: November 13, 2023 May 14, 2024

/s/ James Sullivan
James Sullivan
Chief Financial Officer
(Principal Financial and Accounting Officer)

Exhibit 32.1

CERTIFICATION OF CEO AND CFO FURNISHED PURSUANT TO
18 U.S.C. § 1350,
AS ADOPTED PURSUANT TO
§ 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the quarterly report on Form 10-Q of Peraso Inc. (the "Company") for the quarterly period ended September 30, 2023 March 31, 2024, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), each of Ronald Glibbery, Chief Executive Officer of the Company, and James Sullivan, Chief Financial Officer of the Company, hereby certifies, pursuant to 18 U.S.C. § 1350, as adopted pursuant to § 906 of the Sarbanes-Oxley Act of 2002, to the best of his knowledge, that:

(1) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended; and

(1) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended; and

(2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

(2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

/s/ Ronald Glibbery
Ronald Glibbery
Chief Executive Officer
(Principal Executive Officer)
November 13, 2023 May 14, 2024

/s/ James Sullivan
James Sullivan
Chief Financial Officer
(Principal Financial and Accounting Officer)

November 13, 2023 May 14, 2024

This certification accompanies this Report pursuant to § 906 of the Sarbanes-Oxley Act of 2002 and shall not, except to the extent required by the Sarbanes-Oxley Act of 2002, or otherwise required, be deemed filed by the Company for purposes of § 18 of the Securities Exchange Act of 1934, as amended.