

**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 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 April 1, 2023

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 No. 001-39110

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

Delaware
(State or other jurisdiction of
incorporation or organization)

94-2276314
(I.R.S. Employer
Identification Number)

16 Jonspin Road, Wilmington, Massachusetts 01887
(Address of principal executive offices, including zip code)

Registrant's telephone number, including area code: (978) 253-6200

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, \$0.001 par value per share	ONTO	New York Stock Exchange (NYSE)

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 such 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 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 the 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	<input checked="" type="checkbox"/>	Accelerated filer	<input type="checkbox"/>
Non-accelerated filer	<input type="checkbox"/>	Smaller reporting company	<input type="checkbox"/>
		Emerging growth company	<input type="checkbox"/>

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 Common Stock on April 18, 2023 was 48,945,470.

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[Signatures](#)

PART I FINANCIAL INFORMATION

Item 1. Financial Statements

ONTO INNOVATION INC. **CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS** (In thousands, except per share data) (Unaudited)

	Three Months Ended	
	April 1, 2023	April 2, 2022
Revenue	\$ 199,165	\$ 241,350
Cost of revenue	94,190	110,327
Gross profit	104,975	131,023
Operating expenses:		
Research and development	27,242	26,341
Sales and marketing	15,637	15,632
General and administrative	19,237	16,487
Amortization	13,824	13,819
Total operating expenses	75,940	72,279
Operating income	29,035	58,744
Interest income, net	3,448	377
Other expense, net	(281)	(204)
Income before provision for income taxes	32,202	58,917
Provision for income taxes	3,134	5,587
Net income	\$ 29,068	\$ 53,330
Earnings per share:		
Basic	\$ 0.60	\$ 1.08
Diluted	\$ 0.59	\$ 1.07
Weighted average number of shares outstanding:		
Basic	48,788	49,437
Diluted	49,109	49,915

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

ONTO INNOVATION INC.
CONDENSED CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME
(In thousands)
(Unaudited)

	Three Months Ended	
	April 1, 2023	April 2, 2022
Net income	\$ 29,068	\$ 53,330
Other comprehensive income (loss), net of tax:		
Change in net unrealized losses on available-for-sale marketable securities	1,392	(3,001)
Change in currency translation adjustments	1,090	(3,612)
Total other comprehensive income (loss), net of tax	2,482	(6,613)
Total comprehensive income	\$ 31,550	\$ 46,717

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

ONTO INNOVATION INC.
CONDENSED CONSOLIDATED BALANCE SHEETS
(In thousands)
(Unaudited)

	April 1, 2023	December 31, 2022
ASSETS		
<i>Current Assets:</i>		
Cash and cash equivalents	\$ 230,484	\$ 175,872
Marketable securities	353,034	371,912
Accounts receivable, less allowance of \$1,125 and \$1,572	209,624	241,395
Inventories, net	338,358	324,282
Prepaid expenses and other current assets	23,596	21,411
Total current assets	1,155,096	1,134,872
Property, plant and equipment, net	97,624	91,980
Goodwill	315,811	315,811
Identifiable intangible assets, net	208,373	222,197
Deferred income taxes	4,787	4,778
Other assets	21,153	25,225
Total assets	\$ 1,802,844	\$ 1,794,863
LIABILITIES AND STOCKHOLDERS' EQUITY		
<i>Current liabilities:</i>		
Accounts payable	\$ 53,700	\$ 54,526
Accrued liabilities	37,804	48,836
Deferred revenue	27,702	30,163
	29,212	27,033
Other current liabilities		
Total current liabilities	148,418	160,558
Deferred income taxes	1,741	7,366
Other non-current liabilities	28,060	30,513
Total liabilities	178,219	198,437
Commitments and contingencies		
Stockholders' equity:		
Common stock	49	49
Additional paid-in capital	1,241,839	1,243,631
Accumulated other comprehensive loss	(7,528)	(10,010)
Accumulated earnings	390,265	362,756
Total stockholders' equity	1,624,625	1,596,426
Total liabilities and stockholders' equity	\$ 1,802,844	\$ 1,794,863

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

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

	Three Months Ended	
	April 1, 2023	April 2, 2022
Cash flows from operating activities:		
Net income	\$ 29,068	\$ 53,330
Adjustments to reconcile net income to net cash and cash equivalents provided by operating activities:		
Amortization of intangibles	13,824	13,819
Depreciation	2,916	2,366
Share-based compensation	6,119	4,832
Provision for inventory valuation	5,360	2,115
Deferred income taxes	(5,626)	(6,848)
Other, net	(611)	1,226
Changes in operating assets and liabilities	(983)	(25,384)
Net cash and cash equivalents provided by operating activities	50,067	45,456
Cash flows from investing activities:		
Purchases of marketable securities	(88,590)	(97,490)
Proceeds from maturities and sales of marketable securities	109,683	66,684
Purchases of property, plant and equipment	(7,855)	(2,494)
Net cash and cash equivalents provided by (used in) investing activities	13,238	(33,300)
Cash flows from financing activities:		
Purchases and retirement of common stock	(3,197)	—
Tax payments related to shares withheld for share-based compensation plans	(6,273)	(5,289)
Payment of contingent consideration for acquired business	—	(2,287)
Issuance of shares through share-based compensation plans	—	6
Net cash and cash equivalents used in financing activities	(9,470)	(7,570)
Effect of exchange rate changes on cash and cash equivalents	777	(1,725)
Net increase in cash and cash equivalents	54,612	2,861
Cash and cash equivalents at beginning of period	175,872	169,602
Cash and cash equivalents at end of period	\$ 230,484	\$ 172,463
Supplemental disclosure of cash flow information:		
Income taxes paid (net of refunds)	\$ 808	\$ 1,331

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

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

	Common Stock		Additional Paid-in Capital	Accumulated Other Comprehensive Loss	Accumulated Earnings	Total
	Shares	Amount				
Balance at December 31, 2022	48,684	\$ 49	\$ 1,243,631	\$ (10,010)	\$ 362,756	\$ 1,596,426
Net income	—	—	—	—	29,068	29,068
Share-based compensation	—	—	6,119	—	—	6,119
Issuance of shares through share-based compensation plans	225	—	—	—	—	—
Purchases of common stock	(46)	—	(1,638)	—	(1,559)	(3,197)
Share-based compensation plan withholdings	(62)	—	(6,273)	—	—	(6,273)
Currency translation	—	—	—	1,090	—	1,090
Unrealized gain on investments	—	—	—	1,392	—	1,392
Balance at April 1, 2023	48,801	\$ 49	\$ 1,241,839	\$ (7,528)	\$ 390,265	\$ 1,624,625

	Common Stock		Additional Paid-in Capital	Accumulated Other Comprehensive Income / (Loss)	Accumulated Earnings	Total
	Shares	Amount				
Balance at January 1, 2022	49,300	\$ 49	\$ 1,256,179	\$ 1,316	\$ 168,511	\$ 1,426,055
Net income	—	—	—	—	53,330	53,330
Share-based compensation	—	—	4,832	—	—	4,832
Issuance of shares through share-based compensation plans	184	—	6	—	—	6
Share-based compensation plan withholdings	(46)	—	(5,289)	—	—	(5,289)
Currency translation	—	—	—	(3,612)	—	(3,612)
Unrealized loss on investments	—	—	—	(3,001)	—	(3,001)
Balance at April 2, 2022	49,438	\$ 49	\$ 1,255,728	\$ (5,297)	\$ 221,841	\$ 1,472,321

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

ONTO INNOVATION INC.
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS
(In thousands, except per share data and percentages)
(Unaudited)

NOTE 1. Basis of Presentation

The accompanying interim unaudited Condensed Consolidated Financial Statements have been prepared by Onto Innovation Inc. (together with its consolidated subsidiaries, unless otherwise specified or suggested by the context, the "Company," "Onto Innovation," "we," "our" or "us") and in the opinion of management reflect all adjustments, consisting of normal recurring accruals, necessary for their fair presentation in accordance with accounting principles generally accepted in the United States of America ("U.S. GAAP"). Preparing financial statements requires management to make estimates and assumptions that affect amounts reported in the financial statements and accompanying notes. Actual amounts could differ materially from reported amounts. The interim results for the three months ended April 1, 2023 are not necessarily indicative of results to be expected for the entire year or any future periods. This interim financial information should be read in conjunction with the financial statements and the notes thereto included in the Company's Annual Report on Form 10-K for the year ended December 31, 2022 (the "2022 Form 10-K") filed with the Securities and Exchange Commission ("SEC") on February 24, 2023. The accompanying Condensed Consolidated Balance Sheet at December 31, 2022 has been derived from the audited consolidated financial statements included in the 2022 Form 10-K.

The Company operates on a 52- or 53-week fiscal year ending on the Saturday closest to December 31. Our fiscal year ending December 30, 2023 ("fiscal year 2023") is a 52-week fiscal year. The first quarter of the Company's fiscal year 2023 ended on April 1, 2023, the second quarter ends on July 1, 2023 and the third quarter ends on September 30, 2023. Our fiscal year ended December 31, 2022 was a 52-week fiscal year. The first quarter of the fiscal year ended December 31, 2022 ended on April 2, 2022.

Use of Estimates

The preparation of financial statements in conformity with U.S. GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities as of the date of the financial statements and the reported amounts of revenue and expenses during the reporting period. Significant estimates made by management include excess and obsolete inventory, fair value of assets acquired and liabilities assumed in a business combination, recoverability and useful lives of property, plant and equipment and identifiable intangible assets, recoverability of goodwill, recoverability of deferred tax assets, allowance for credit losses, liabilities for product warranty, contingencies, including litigation reserves and share-based payments and liabilities for tax uncertainties. Actual results could differ from those estimates.

These estimates and assumptions are based on historical experience and on various other factors which the Company believes to be reasonable under the circumstances. The Company may engage third-party valuation specialists to assist with estimates related to the valuation of financial instruments, assets and stock awards associated with various contractual arrangements. Such estimates often require the selection of appropriate valuation methodologies and significant judgment. Actual results could differ from these estimates under different assumptions or circumstances and such differences could be material.

Adoption of Accounting Standards

There have been no recent accounting pronouncements or changes in accounting pronouncements during the three months ended April 1, 2023, as compared to the recent accounting pronouncements described in the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2022, that are of significance, or potential significance to the Company.

NOTE 2. Fair Value Measurements

Fair Value of Financial Instruments

The Company has evaluated the estimated fair value of financial instruments using available market information and valuations as provided by third-party sources. The use of different market assumptions and/or estimation methodologies could have a significant effect on the estimated fair value amounts. The carrying value of cash and cash equivalents, accounts receivable, accounts payable and accrued liabilities approximates fair value because of the short-term maturity of these instruments.

Fair Value Hierarchy

The Company applies a three-level valuation hierarchy for fair value measurements. This hierarchy prioritizes the inputs into three broad levels. Level 1 inputs are quoted prices (unadjusted) in active markets for identical assets or liabilities. Level 2 inputs are quoted prices for similar assets and liabilities in active markets or inputs that are observable for the asset or liability, either directly or indirectly through market corroboration, for substantially the full term of the asset or liability. Level 3 inputs are unobservable inputs based on management's assumptions used to measure assets and liabilities at fair value. A financial asset's or liability's fair value measurement classification within the hierarchy is determined based on the lowest level input that is significant to the fair value measurement.

The following tables provide the assets and liabilities carried at fair value measured on a recurring basis at April 1, 2023 and December 31, 2022:

		Fair Value Measurements Using		
	Carrying Value	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
April 1, 2023				
Assets:				
Available-for-sale debt securities:				
Municipal notes and bonds	\$ 169,433	\$ —	\$ 169,433	\$ —
Asset-backed securities	1,107	—	1,107	—
Certificates of deposit	55,060	—	55,060	—
Commercial paper	71,785	—	71,785	—
Corporate bonds	55,649	—	55,649	—
Total assets	<u>\$ 353,034</u>	<u>\$ —</u>	<u>\$ 353,034</u>	<u>\$ —</u>
Liabilities:				
Foreign currency forward contracts	4	—	4	—
Total liabilities	<u>\$ 4</u>	<u>\$ —</u>	<u>\$ 4</u>	<u>\$ —</u>
December 31, 2022				
Assets:				
Available-for-sale debt securities:				
Municipal notes and bonds	\$ 178,868	\$ —	\$ 178,868	\$ —
Asset-backed securities	1,534	—	1,534	—
Certificates of deposit	52,095	—	52,095	—
Commercial paper	80,079	—	80,079	—
Corporate bonds	59,335	—	59,335	—
Total assets	<u>\$ 371,912</u>	<u>\$ —</u>	<u>\$ 371,912</u>	<u>\$ —</u>
Liabilities:				
Foreign currency forward contracts	135	—	135	—
Total liabilities	<u>\$ 135</u>	<u>\$ —</u>	<u>\$ 135</u>	<u>\$ —</u>

Available-for-sale debt securities classified as Level 2 are valued using observable inputs to quoted market prices, benchmark yields, reported trades, broker/dealer quotes or alternative pricing sources with reasonable levels of price transparency. The foreign currency forward contracts are primarily measured based on the foreign currency spot and forward rates quoted by the banks or foreign currency dealers. Investment prices are obtained from third party pricing providers, which

model prices utilizing the above observable inputs, for each asset class. Level 3 investments consisted of contingent consideration related to an acquisition for which the Company uses revenue projections to value this liability.

See Note 3 for additional discussion regarding the fair value of the Company's marketable securities.

NOTE 3. Marketable Securities

At April 1, 2023 and December 31, 2022, marketable securities are categorized as follows:

	Amortized Cost	Gross Unrealized Holding Gains	Gross Unrealized Holding Losses	Fair Value
April 1, 2023				
Municipal notes and bonds	\$ 170,829	\$ 71	\$ 1,467	\$ 169,433
Asset-backed securities	1,123	—	16	1,107
Certificates of deposit	55,129	16	85	55,060
Commercial paper	71,884	6	106	71,784
Corporate bonds	56,225	79	654	55,650
Total marketable securities	<u>\$ 355,190</u>	<u>\$ 172</u>	<u>\$ 2,328</u>	<u>\$ 353,034</u>
December 31, 2022				
Municipal notes and bonds	\$ 181,196	\$ 27	\$ 2,355	\$ 178,868
Asset-backed securities	1,555	—	21	1,534
Certificates of deposit	52,190	24	118	52,095
Commercial paper	80,199	16	136	80,079
Corporate bonds	60,334	4	1,003	59,335
Total marketable securities	<u>\$ 375,474</u>	<u>\$ 71</u>	<u>\$ 3,633</u>	<u>\$ 371,912</u>

The amortized cost and estimated fair value of marketable securities classified by the maturity date listed on the security, regardless of the Condensed Consolidated Balance Sheets classification, is as follows at April 1, 2023 and December 31, 2022:

	April 1, 2023		December 31, 2022	
	Amortized Cost	Fair Value	Amortized Cost	Fair Value
Due within one year	\$ 278,295	\$ 276,557	\$ 311,934	\$ 309,385
Due after one through five years	76,895	76,477	63,540	62,527
Due after five years	—	—	—	—
Total marketable securities	<u>\$ 355,190</u>	<u>\$ 353,034</u>	<u>\$ 375,474</u>	<u>\$ 371,912</u>

The Company has evaluated its investment policies and determined that all of its marketable securities, which are comprised of debt securities, are to be classified as available-for-sale. The Company's available-for-sale debt securities are carried at fair value, with the unrealized gains and losses reported in Stockholders' equity under the caption "Accumulated other comprehensive income (loss)." Gross realized gains and losses on available-for-sale securities are included in "Other expense, net" on the Condensed Consolidated Statements of Operations and were not material during the three months ended April 1, 2023 and December 31, 2022. The Company records credit losses for its available-for-sale debt securities when it intends to sell the securities, it is more-likely-than not that it will be required to sell the securities before a recovery, or when it does not expect to recover the entire amortized cost basis of the securities. The cost of securities sold is based on the specific identification method.

The Company has determined that the gross unrealized losses on its marketable securities at April 1, 2023 and December 31, 2022 are temporary in nature. The Company regularly reviews its investment portfolio to identify and evaluate marketable securities that have indications of possible impairment from credit losses or other factors. Factors considered in determining whether an unrealized loss is considered to be a credit loss include the length of time and extent to which fair value has been less than the cost basis, credit quality and the Company's ability and intent to hold the securities for a period of time sufficient to allow for any anticipated recovery in market value.

The following table summarizes the estimated fair value and gross unrealized holding losses of marketable securities, aggregated by investment instrument and period of time in an unrealized loss position, at April 1, 2023 and December 31, 2022:

	In Unrealized Loss Position For Less Than 12 Months		In Unrealized Loss Position For Greater Than 12 Months	
	Fair Value	Gross Unrealized Losses	Fair Value	Gross Unrealized Losses
April 1, 2023				
Municipal notes and bonds	\$ 87,869	\$ 618	\$ 68,290	\$ 849
Asset-backed securities	—	—	1,123	16
Certificates of deposit	28,890	85	—	—
Commercial paper	61,488	106	—	—
Corporate bonds	13,287	148	27,934	506
Total	<u>\$ 191,534</u>	<u>\$ 957</u>	<u>\$ 97,347</u>	<u>\$ 1,371</u>
December 31, 2022				
Municipal notes and bonds	\$ 96,301	\$ 1,273	\$ 69,159	\$ 1,082
Asset-backed securities	1,555	21	—	—
Certificates of deposit	22,400	118	—	—
Commercial paper	50,550	136	—	—
Corporate bonds	28,975	637	28,769	366
Total	<u>\$ 199,781</u>	<u>\$ 2,185</u>	<u>\$ 97,928</u>	<u>\$ 1,448</u>

See Note 2 for additional discussion regarding the fair value of the Company's marketable securities.

NOTE 4. Derivative Instruments and Hedging Activities

The Company, when it considers it to be appropriate, enters into forward contracts to hedge the economic exposures arising from foreign currency denominated transactions. At April 1, 2023 and December 31, 2022, these contracts included the future sale of euro, Israeli shekel, Japanese yen, Korean won, Singapore dollar, Taiwanese dollar, and Chinese renminbi to purchase U.S. dollars. Foreign currency forward contracts are not designated as hedges for accounting purposes, and therefore, the change in fair value is recorded in "Other expense, net," in the Condensed Consolidated Statements of Operations. The Company records its forward contracts at fair value in either prepaid expenses and other current assets or other current liabilities in the Condensed Consolidated Balance Sheets.

The dollar equivalent of the U.S. dollar forward contracts and related fair values as of April 1, 2023 and December 31, 2022 were as follows:

	April 1, 2023	December 31, 2022
Notional amount	\$ 23,657	\$ 27,923
Fair value of liability	\$ 4	\$ 135

NOTE 5. Purchased Intangible Assets
Intangible Assets

Purchased intangible assets as of April 1, 2023 and December 31, 2022 are as follows:

	Gross Carrying Amount	Accumulated Amortization	Net
April 1, 2023			
Finite-lived intangibles:			
Developed technology	\$ 378,197	\$ 217,741	\$ 160,456
Customer and distributor relationships	73,321	31,342	41,979
Trademarks and trade names	14,171	8,233	5,938
Total identifiable intangible assets	<u>\$ 465,689</u>	<u>\$ 257,316</u>	<u>\$ 208,373</u>
December 31, 2022			
Finite-lived intangibles:			
Developed technology	\$ 378,197	\$ 205,386	\$ 172,811
Customer and distributor relationships	73,321	30,195	43,126
Trademarks and trade names	14,171	7,911	6,260
Total identifiable intangible assets	<u>\$ 465,689</u>	<u>\$ 243,492</u>	<u>\$ 222,197</u>

Assuming no change in the gross carrying value of identifiable intangible assets and estimated lives, future estimated amortization expenses are:

Fiscal Year:	Expected Amortization Expense
2023 (remainder)	\$ 40,999
2024	49,137
2025	32,587
2026	31,394
2027	23,173
2028	12,288
Thereafter	18,795
Total	<u>\$ 208,373</u>

NOTE 6. Balance Sheet Components
Inventories

Inventories, net are comprised of the following:

	April 1, 2023	December 31, 2022
Materials	\$ 234,725	\$ 231,029
Work-in-process	80,999	69,072
Finished goods	22,634	24,181
Total inventories, net	<u>\$ 338,358</u>	<u>\$ 324,282</u>

Property, Plant and Equipment

Property, plant and equipment, net is comprised of the following:

	April 1, 2023	December 31, 2022
Machinery and equipment	\$ 62,765	\$ 56,924
Land and building	50,357	50,344
Computer equipment and software	15,795	15,415
Leasehold improvements	20,672	18,539
Furniture and fixtures	3,163	2,949
	152,752	144,171
Accumulated depreciation	(55,128)	(52,191)
Total property, plant and equipment, net	\$ 97,624	\$ 91,980

Other assets

Other assets are comprised of the following:

	April 1, 2023	December 31, 2022
Operating lease right-of-use assets	\$ 19,698	\$ 20,746
Other	1,455	4,479
Total other assets	\$ 21,153	\$ 25,225

Accrued liabilities

Accrued liabilities are comprised of the following:

	April 1, 2023	December 31, 2022
Payroll and related expenses	\$ 26,590	\$ 36,529
Warranty	9,799	10,890
Other	1,415	1,417
Total accrued liabilities	\$ 37,804	\$ 48,836

Other current liabilities

Other current liabilities are comprised of the following:

	April 1, 2023	December 31, 2022
Customer deposits	\$ 8,478	\$ 12,482
Current operating lease obligations	5,811	5,678
Income tax payable	7,089	1,910
Accrued professional fees	881	968
Other	6,953	5,995
Total other current liabilities	\$ 29,212	\$ 27,033

Other non-current liabilities

Other non-current liabilities are comprised of the following:

	April 1, 2023	December 31, 2022
Non-current operating lease obligations	\$ 14,981	\$ 16,345
Unrecognized tax benefits (including interest)	8,260	7,693
Deferred revenue	2,681	2,852
Other	2,138	3,623
Total other non-current liabilities	\$ 28,060	\$ 30,513

NOTE 7. Commitments and Contingencies

Factoring

The Company maintains arrangements under which eligible accounts receivable in Japan are sold without recourse to unrelated third-party financial institutions. The Company sold \$4,297 of receivables during the three months ended April 1, 2023. These receivables were not included in the Condensed Consolidated Balance Sheets as the criteria for sale treatment had been met. There were no material gains or losses on the sale of such receivables. There were no amounts due from such third-party financial institutions at April 1, 2023.

Intellectual Property Indemnification Obligations

The Company has entered into agreements with customers that include limited intellectual property indemnification obligations that are customary in the industry. These guarantees generally require the Company to compensate the other party for certain damages and costs incurred as a result of third-party intellectual property claims arising from these transactions. The nature of the intellectual property indemnification obligations prevents the Company from making a reasonable estimate of the maximum potential amount it could be required to pay to its customers. Historically, the Company has not made any indemnification payments under such agreements and no amount has been accrued in the accompanying Condensed Consolidated Financial Statements with respect to these indemnification guarantees.

Warranty Reserves

The Company generally provides a warranty on its products for a period of 12 to 14 months against defects in material and workmanship. The Company estimates the costs that may be incurred during the warranty period and records a liability in the amount of such costs at the time revenue is recognized. The Company's estimate is based primarily on historical experience. The Company periodically assesses the adequacy of its recorded warranty liabilities and adjusts the amounts as necessary. Warranty provisions are generally related to current period sales. Settlements of warranty reserves are generally associated with sales that occurred during the 12 to 14 months prior to the period-end.

Changes in the Company's warranty reserves are as follows:

	Three Months Ended	
	April 1, 2023	April 2, 2022
Balance, beginning of the period	\$ 11,830	\$ 9,682
Accruals	2,551	3,619
Usage	(3,879)	(2,726)
Balance, end of the period	\$ 10,502	\$ 10,575

Warranty reserves are reported in the Condensed Consolidated Balance Sheets under the captions "Accrued liabilities" and "Other non-current liabilities."

Legal Matters

From time to time, the Company is subject to legal proceedings and claims in the ordinary course of business. The following reflects an overview of the material developments with regard to the Company's pending material legal proceedings.

Optical Solutions Inc. v. Nanometrics Incorporated (Case No. 18-cv-00417-BLF): On August 2, 2017, Nanometrics was named as defendant in a complaint filed by Optical Solutions, Inc. ("OSI") in New Hampshire Superior Court (the "OSI Action"). OSI's complaint alleged claims arising from a purchase contract between OSI and Nanometrics. The relief sought was the award of damages in an amount to be proven at trial, attorney's fees and costs, and such other relief that the court deemed just and proper. The OSI Action was subsequently removed to the United States District Court for the District of New Hampshire and then transferred to the United States District Court for the Northern District of California (the "Northern District of California"). On December 20, 2017, Nanometrics filed its own complaint against OSI in the California Superior Court for the County of Santa Clara alleging claims arising from OSI's breach of certain purchase orders (the "Nanometrics Action"). The relief sought was the

award of damages in an amount to be proven at trial, including pre- and post-judgment interest, punitive damages, restitution for benefits unjustly received by OSI, attorney's fees and costs, and such other relief the court deemed just and proper. The Nanometrics Action was later removed to the Northern District of California and then consolidated with the OSI Action. On July 7, 2020, after the Northern District of California granted the Company's motion to dismiss with prejudice with regard to two of OSI's claims and dismissed two other claims asserted by OSI with leave to amend, OSI filed a Fourth Amended Complaint. On August 14, 2020, the Company filed a motion to dismiss one of the two remaining claims. On December 1, 2020, the Northern District of California denied the Company's motion and as a result the Company filed its Answer in this matter on December 22, 2020. Discovery is now closed. On March 1, 2023, the Company filed a motion for summary judgment, and the hearing on that motion is scheduled for June 29, 2023. The trial date is set for December 4, 2023. At the time of filing of this Quarterly Report on Form 10-Q (this "Form 10-Q"), the loss contingency in this matter is remote and the Company does not anticipate the outcome of the matter to have a material impact on its financial position, results of operations, or cash flows.

Line of Credit

The Company has a credit agreement with a bank that provides for a line of credit which is secured by the marketable securities the Company has with the bank. The Company is permitted to borrow up to 70% of the value of eligible securities held at the time the line of credit is accessed. The available line of credit as of April 1, 2023 was approximately \$100.0 million with an available interest rate of 6.5%. The credit agreement is available to the Company until such time that either party terminates the arrangement at their discretion. The Company has not utilized the line of credit as of the date of this filing.

NOTE 8. Revenue

The following table represents a disaggregation of revenue by timing of revenue:

	Three Months Ended	
	April 1, 2023	April 2, 2022
Point-in-time	\$ 186,374	\$ 229,970
Over-time	12,791	11,380
Total revenue	<u>\$ 199,165</u>	<u>\$ 241,350</u>

See Note 14 for additional discussion of the Company's disaggregated revenue in detail.

Contract Liabilities

The Company records contract liabilities when the customer has been billed in advance of the Company completing its performance obligations primarily with respect to liabilities related to service contracts and installation. For contracts that have a duration of one year or less, these amounts are recorded as current deferred revenue in the Condensed Consolidated Balance Sheets. As of April 1, 2023 and December 31, 2022, the Company carried a long-term deferred revenue balance of \$2,681 and \$2,852, respectively, in "Other non-current liabilities" on the Condensed Consolidated Balance Sheets.

Changes in deferred revenue were as follows:

	Three Months Ended	
	April 1, 2023	April 2, 2022
Balance, beginning of the period	\$ 33,014	\$ 31,672
Deferral of revenue	16,077	23,500
Recognition of deferred revenue	(18,708)	(16,573)
Balance, end of the period	<u>\$ 30,383</u>	<u>\$ 38,599</u>

NOTE 9. Share-Based Compensation

Restricted Stock Unit Activity

A summary of the Company's restricted stock unit activity with respect to the three months ended April 1, 2023 is as follows:

	Number of Shares	Weighted Average Grant Date Fair Value
Nonvested at December 31, 2022	743	\$ 69.01
Granted	140	\$ 82.32
Vested	(205)	\$ 60.87
Forfeited	(9)	\$ 68.97
Nonvested at April 1, 2023	669	\$ 74.28

Of the 669 nonvested shares outstanding at April 1, 2023, 566 are service-based RSUs and 103 are market-based PRSUs. The fair value of the Company's service-based RSUs was calculated based on the fair market value of the Company's stock at the date of grant. The fair value of the Company's market-based PRSUs granted during fiscal years 2023 and 2022 was calculated using a Monte Carlo simulation model at the date of the grant, resulting in a weighted average grant-date fair value per share of \$100.79 and \$85.49, respectively.

As of April 1, 2023 and December 31, 2022, there was \$31,644 and \$28,653 of total unrecognized compensation cost related to restricted stock units granted under the Company's stock plans, respectively. That cost is expected to be recognized over a weighted average period of 1.6 years and 1.5 years for April 1, 2023 and December 31, 2022, respectively.

NOTE 10. Other Expense, Net

Other expense, net, is comprised of the following:

	Three Months Ended	
	April 1, 2023	April 2, 2022
Foreign currency exchange losses, net	\$ (307)	\$ (214)
Other	26	10
Total other expense, net	\$ (281)	\$ (204)

NOTE 11. Income Taxes

The following table provides details of income taxes:

	Three Months Ended	
	April 1, 2023	April 2, 2022
Income before income taxes	\$ 32,202	\$ 58,917
Provision for income taxes	\$ 3,134	\$ 5,587
Effective tax rate	10%	9%

The income tax provision for the three months ended April 1, 2023 was computed based on the Company's annual forecast of profit by jurisdiction and forecasted effective tax rate for the year. The income tax provision for the three months ended April 1, 2023 and April 2, 2022 reflected the impact of a change in U.S. tax law effective January 1, 2022, which requires the capitalization and amortization of research and development expenditures incurred after December 31, 2021. The decrease in the Company's income tax provision for the three months ended April 1, 2023 as compared to the three months ended April 2, 2022 was primarily due to a decrease in quarterly earnings and an increase in the federal research and development tax credit.

offset by a decrease in the Foreign Derived Intangible Income ("FDII") deduction. The Company's recorded effective tax rate for the periods presented is less than the U.S. statutory rate primarily due to projected FDII deductions, federal research and development tax credits, and excess tax benefits associated with equity compensation.

The Company currently has a partial valuation allowance recorded against certain foreign and state net operating loss and credit carryforwards where the realizability of such deferred tax assets is substantially in doubt. Each quarter, the Company assesses the likelihood that it will be able to recover its deferred tax assets. The Company considers available evidence, both positive and negative, including forecasted earnings, in assessing its need for a valuation allowance. As a result of the Company's analysis, it concluded that it is more likely than not that a portion of its deferred tax assets will not be realized. Therefore, the Company continues to provide a valuation allowance against certain deferred tax assets. The Company continues to monitor available evidence and may reverse some or all of its remaining valuation allowance in future periods, if appropriate. The Company has a recorded valuation allowance against a certain portion of its deferred tax assets of \$11,473 and \$11,772 for the quarter ending April 1, 2023 and December 31, 2022, respectively.

NOTE 12. Earnings Per Share

Basic earnings per share is calculated using the weighted average number of shares of common stock outstanding during the period. Restricted stock units, employee stock purchase grants and stock options are included in the calculation of diluted earnings per share, except when their effect would be anti-dilutive.

The Company's basic and diluted earnings per share amounts are as follows:

	Three Months Ended	
	April 1, 2023	April 2, 2022
Numerator:		
Net income	\$ 29,068	\$ 53,330
Denominator:		
Basic earnings per share - weighted average shares outstanding	48,788	49,437
Effect of potential dilutive securities:		
Employee stock options, employee stock purchase grants and restricted stock units - dilutive shares	321	478
Diluted earnings per share - weighted average shares outstanding	49,109	49,915
Earnings per share:		
Basic	\$ 0.60	\$ 1.08
Diluted	\$ 0.59	\$ 1.07

NOTE 13. Accumulated Other Comprehensive Loss

The components of accumulated other comprehensive loss, net of tax, at April 1, 2023, as well as the activity for the three months ended April 1, 2023, were as follows:

	Foreign currency translation adjustments	Net unrealized losses on available-for-sale marketable securities	Accumulated other comprehensive loss
Balance at December 31, 2022	\$ (7,115)	\$ (2,895)	\$ (10,010)
Net current period other comprehensive income	1,090	1,392	2,482
Reclassifications	—	—	—
Balance at April 1, 2023	\$ (6,025)	\$ (1,503)	\$ (7,528)

For the three months ended April 1, 2023, tax effects on net income of amounts recorded in other comprehensive loss for net unrealized gains on available-for-sale marketable securities and foreign currency translation adjustments was \$298.

NOTE 14. Segment Reporting and Geographic Information

The Company is engaged in the design, development, manufacture and support of high-performance control metrology, defect inspection, lithography and data analysis systems used by microelectronics device manufacturers. The Company and its subsidiaries currently operate in a single operating segment: the design, development, manufacture and support of high-performance process control defect inspection and metrology, lithography and process control software systems used by microelectronics device manufacturers. Therefore, the Company has one reportable segment. The Company's chief operating decision maker is the Chief Executive Officer (the "CEO"). The CEO allocates resources and assesses performance of the business and other activities at the reportable segment level.

The following table lists the different sources of revenue:

	Three Months Ended			
	April 1, 2023		April 2, 2022	
Systems and software	\$	166,824	84 %	\$ 209,383 87 %
Parts		20,423	10 %	19,857 8 %
Services		11,918	6 %	12,110 5 %
Total revenue	\$	199,165	100 %	\$ 241,350 100 %

The Company's significant operations outside the United States include sales, service and application offices in Asia and Europe. For geographical revenue reporting, revenue is attributed to the geographic location to which the product is shipped. Revenue by geographic region is as follows:

	Three Months Ended			
	April 1, 2023		April 2, 2022	
Revenue from third parties:				
South Korea	\$	45,473	\$	61,135
United States		40,713		26,801
China		36,551		63,394
Taiwan		26,705		53,392
Europe		17,918		18,428
Southeast Asia		17,301		9,225
Japan		14,504		8,975
Total revenue	\$	199,165	\$	241,350

The following customers accounted for 10% or more of total revenue for the indicated periods:

	Three Months Ended			
	April 1, 2023		April 2, 2022	
Samsung Semiconductor		20 %		10 %
Taiwan Semiconductor Manufacturing Co. Ltd.		14 %		16 %
SK Hynix Inc.		2 %		19 %

NOTE 15. Share Repurchase Authorization

In November 2020, the Onto Innovation Board of Directors approved a share repurchase authorization, which allows the Company to repurchase up to \$100,000 worth of shares of its common stock. Repurchases may be made through both public market and private transactions from time to time with shares purchased being subsequently retired. During the three month period ended April 1, 2023, the Company purchased and retired 46 shares of its common stock. The amount paid to repurchase the shares in excess of par value, including transaction costs, is recorded directly as a decrease to additional paid-in capital and retained earnings. At April 1, 2023, there was \$31,577 available for future share repurchases under this share repurchase authorization.

NOTE 16. Restructuring

The Company initiated a restructuring plan to streamline operations and align the Company's cost structure with its business outlook for 2023. During the three months ended April 1, 2023, restructuring cost of \$2,034 were recorded in operating expense for employee severance and \$2,279 was recorded in cost of goods sold for inventory write-downs. All employee severance costs were paid during the quarter. The Company anticipates that these activities will continue into subsequent quarters of 2023 and anticipates recording additional restructuring charges.

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

Forward-Looking Statements

Certain statements in this Form 10-Q, or incorporated by reference in this Form 10-Q, of Onto Innovation Inc. (referred to in this Form 10-Q, together with its consolidated subsidiaries, unless otherwise specified or suggested by the context, as the "Company," "Onto Innovation," "we," "our" or "us") may be considered "forward-looking statements" or may be based on "forward-looking statements," including, but not limited to, those concerning:

- our business momentum and future growth;
- technology development, product introduction and acceptance of our products and services;
- our manufacturing practices and ability to deliver both products and services consistent with our customers' demands and expectations and to strengthen our market position, including our ability to source components, materials, and equipment due to supply chain delays or shortages;
- our expectations of the semiconductor market outlook;
- future revenue, gross profits, research and development and engineering expenses, selling, general and administrative expenses, and cash requirements;
- the effects of political, economic, legal, and regulatory changes or conflicts on our global operations;
- the effects of natural disasters or public health emergencies, such as the current COVID-19 pandemic, on the global economy and on our customers, suppliers, employees, and business;
- our dependence on certain significant customers and anticipated trends and developments in and management plans for our business and the markets in which we operate; and
- our ability to be successful in managing our cost structure and cash expenditures and results of litigation.

Statements contained or incorporated by reference in this Form 10-Q that are not purely historical are forward-looking statements and are subject to safe harbors under Section 27A of the Securities Act of 1933, as amended, Section 21E of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), and the Private Securities Litigation Reform Act of 1995. Forward-looking statements may be identified by words such as, but not limited to, "anticipate," "believe," "continue," "estimate," "expect," "intend," "plan," "should," "may," "could," "will," "would," "forecast," "project" and words or phrases of similar meaning, as they relate to our management or us.

Forward-looking statements contained herein reflect our current expectations, assumptions and projections with respect to future events and are subject to certain risks, uncertainties and assumptions, including, but not limited to, those identified in Part II, Item 1A. "Risk Factors" and elsewhere in this Form 10-Q. Actual results may differ materially and adversely from those included in such forward-looking statements. Forward-looking statements reflect our position as of the date of this Form 10-Q and we undertake no obligation to update any forward-looking statements, whether as a result of new information, future events or otherwise, except as required by law.

Critical Accounting Policies and Estimates

The preparation of condensed consolidated financial statements and related disclosures in conformity with accounting principles generally accepted in the United States ("U.S. GAAP") requires management to make judgments, assumptions and estimates that affect the amounts reported. Certain of these significant accounting policies are considered to be critical accounting policies, as defined below.

A critical accounting policy is defined as one that is both material to the presentation of our condensed consolidated financial statements and requires management to make difficult, subjective or complex judgments that could have a material effect on our financial condition or results of operations. Specifically, these policies have the following attributes: (1) we are required to make judgments and assumptions about matters that are highly uncertain at the time of the estimate; and (2) different estimates we could reasonably have used, or changes in the estimate that are reasonably likely to occur, could have a material effect on our financial position and results of operations.

Estimates and assumptions about future events and their effects cannot be determined with certainty. We base our estimates on historical experience and on various other assumptions believed to be applicable and reasonable under the circumstances. These estimates may change as new events occur, as additional information is obtained and as our operating environment changes. In addition, management is periodically faced with uncertainties, the outcomes of which are not within our control and will not be known for prolonged periods of time. Certain of these uncertainties are discussed in our Annual Report on Form 10-K for the fiscal year ended December 31, 2022 (the "2022 Form 10-K") filed with the Securities and Exchange Commission on February 24, 2023 in the Items entitled "Risk Factors" and "Management's Discussion and Analysis of Financial Condition and Results of Operations." Based on a critical assessment of our accounting policies and the underlying judgments and uncertainties affecting the application of those policies, we believe that our condensed consolidated financial statements are fairly stated in accordance with U.S. GAAP and provide a fair presentation of our financial position and results of operations. There have been no material changes in our critical accounting policies and estimates from the information presented in Part II, Item 7. "Management's Discussion and Analysis of Financial Condition and Results of Operations," in the 2022 Form 10-K.

For more information, please see our critical accounting policies and estimates as previously disclosed in our 2022 Form 10-K and recent accounting pronouncements discussed in Note 1 to the Condensed Consolidated Financial Statements.

Executive Summary

We are a worldwide leader in the design, development, manufacture and support of metrology and inspection tools for the semiconductor industry, including process control tools that perform optical metrology on patterned and unpatterned wafers, wafer macro-defect inspection, including macro-inspection of both 2D and 3D wafer features, wafer substrate and panel substrate lithography systems, and process control analytical software. Our products are primarily used by silicon wafer manufacturers, semiconductor device fabricators, and advanced packaging manufacturers operating in the semiconductor market. Our products are also used for process control in a number of other specialty device manufacturing markets, including light emitting diodes ("LED"), vertical-cavity surface-emitting lasers ("VCSEL"), micro-electromechanical systems ("MEMS"), CMOS image sensors ("CIS"), silicon and compound semiconductor (SiC and GaN) power devices, analog devices, RF filters, data storage, and certain industrial and scientific applications.

We provide process and yield management solutions used in bare silicon wafer production and wafer processing facilities, often referred to as "front-end" manufacturing, and advanced packaging of chips and test facilities, or "back-end" manufacturing, through a portfolio of standalone systems for optical metrology, macro-defect inspection, packaging lithography, as well as transparent and opaque thin film measurements. Our automated and integrated metrology systems measure critical dimensions, device structures, topography, shape, and various thin film compositions, including three-dimensional features and film thickness, as well as optical, electrical and material properties. Our primary areas of focus include products that provide critical yield-enhancing and actionable information, which is used by microelectronic device manufacturers to improve yield and time to market of their next-generation devices. Our systems feature sophisticated software and production-worthy automation. In addition, our advanced process control software portfolio includes powerful solutions for standalone tools, groups of tools, and factory-wide and enterprise-wide suites to enhance productivity and achieve significant cost savings. Our systems are backed by worldwide customer service and applications support.

The semiconductor and electronics industries have been characterized by constant technological innovations. We believe that, over the long term, our customers will continue to invest in advanced technologies and new materials to enable smaller design rules and higher density applications that fuel demand for process control equipment.

The following table summarizes certain key financial information for the periods indicated below (in thousands, except per share and percent data):

	Three Months Ended		
	April 1, 2023	December 31, 2022	April 2, 2022
Revenue	\$ 199,165	\$ 253,270	\$ 241,350
Gross profit	\$ 104,975	\$ 137,222	\$ 131,023
Gross profit as a percent of revenue	53 %	54 %	54 %
Total operating expenses	\$ 75,940	\$ 76,010	\$ 72,279
Net income	\$ 29,068	\$ 66,214	\$ 53,330
Diluted earnings per share	\$ 0.59	\$ 1.34	\$ 1.07

- In the fiscal quarter ended April 1, 2023 (the “April 2023 quarter”), revenue decreased 21% compared to the fiscal quarter ended December 31, 2022 (the “December 2022 quarter”), primarily due to a decline in sales to memory customers in advanced nodes applications, and foundry and power customers in specialty device and advanced packaging applications.
- Gross profit as a percentage of revenue in the April 2023 quarter compared to the December 2022 quarter decreased primarily due to a decrease in revenue volume, partially offset by a favorable product mix.
- Operating expenses in the April 2023 quarter compared to the December 2022 quarter were relatively flat primarily due to lower travel and project expenses, offset by restructuring charges related to employee severance.
- In the first quarter of 2023, customer demand weakened due to a reduction in wafer fabrication equipment spending. As a result, we initiated a restructuring plan that included workforce reductions and the write-down of inventory for older product lines. We incurred a charge of \$2.0 million for employee severance costs and \$2.3 million for inventory write-downs of older product lines. We anticipate that these activities will continue into subsequent quarters of 2023 and anticipate recording additional restructuring charges.

Our cash, cash equivalents and marketable securities balance increased to \$583.5 million as of April 1, 2023 compared to \$547.8 million as of December 31, 2022. This increase was primarily the result of \$50.1 million of cash generated from operating activities. This source of cash was partially offset by cash of \$3.2 million used for purchases of our common stock, \$7.9 million used for capital expenditures and \$6.3 million used for tax payments related to shares withheld to satisfy employee tax obligations in connection with the vesting of awards under share-based compensation plans. Employee headcount as of April 1, 2023 was approximately 1,580.

We experienced supply chain constraints and inflationary pressures in 2022, and although there have been improvements in supply chain performance, we expect supply chain shortages as well as inflationary cost pressures to persist throughout fiscal 2023.

In 2022, the United States government implemented additional export regulations for U.S. semiconductor technology sold in China. We have applied for export licenses to continue doing business with our customers that are affected by the new export rules. However, the new export controls have resulted in lower net sales in China for the first quarter of fiscal 2023 compared to the same period last year.

For a discussion of the risks related to the our business and operations, see Part II, Item 1A – Risk Factors of this Form 10-Q.

Results of Operations for the Three Months Ended April 1, 2023 and April 2, 2022

Revenue. Our revenue is primarily derived from the sale of our systems, software licensing, services and spare parts. Our revenue of \$199.2 million decreased 17.5% for the three months ended April 1, 2023 as compared to three months ended April 2, 2022, in which revenue totaled \$241.3 million.

The following table lists, for the periods indicated, the different sources of our revenue in dollars (thousands) and as percentages of our total revenue:

	Three Months Ended			
	April 1, 2023		April 2, 2022	
Systems and software	\$ 166,824	84%	\$ 209,383	87%
Parts	20,423	10%	19,857	8%
Services	11,918	6%	12,110	5%
Total revenue	<u>\$ 199,165</u>	<u>100%</u>	<u>\$ 241,350</u>	<u>100%</u>

Total systems and software revenue decreased \$42.6 million for the three months ended April 1, 2023, as compared to the three months ended April 2, 2022, primarily due to decreases of units shipped in our metrology, inspection and lithography product lines. The increase in parts and services revenue for the three months ended April 1, 2023, as compared to the three months ended April 2, 2022, was primarily due to servicing a larger installed base. Parts and services revenue is generated from part sales, maintenance service contracts, and system upgrades, as well as time and material billable service calls.

Gross Profit. Our gross profit has been and will likely continue to be affected by a variety of factors, including manufacturing efficiencies, provision for excess and obsolete inventory, pricing by competitors or suppliers, new product introductions, production volume, customization and reconfiguration of systems, international and domestic sales mix, system and software product mix and parts and service margins. Our gross profit was \$105.0 million and \$131.0 million for the three months ended April 1, 2023 and April 2, 2022, respectively. Our gross profit represented 52.7% and 54.3% of our revenue for the three months ended April 1, 2023 and April 2, 2022, respectively. The decrease in gross profit as a percentage of revenue for the three months ended April 1, 2023 as compared to the three months ended April 2, 2022 was primarily due to lower sales volume and charges related to excess and obsolete inventory for older product lines.

Operating Expenses.

Our operating expenses consist of:

•**Research and Development.** We believe that it is critical to continue to make substantial investments in research and development to ensure the availability of innovative technology that meets the current and projected requirements of our customers' most advanced designs. We have maintained and intend to continue our commitment to investing in research and development in order to continue to offer new products and technologies. Accordingly, we devote a significant portion of our technical, management and financial resources to research and development programs. Research and development expenditures consist primarily of salaries and related expenses of employees engaged in research, design and development activities. They also include consulting fees, the cost of related supplies and legal costs to defend our patents. Our research and development expenses were \$27.2 million and \$26.3 million for the three months ended April 1, 2023 and April 2, 2022, respectively. The increases in research and development expenses for the three months ended April 1, 2023, as compared to the three months ended April 2, 2022, were primarily due to increased compensation costs and material expenses for new product initiatives, partially offset by decreased outside service expenses.

•**Sales and Marketing.** Sales and marketing expenses are primarily comprised of salaries, commissions and related costs for sales and marketing personnel, as well as other non-personnel related expenses. Our sales and marketing expenses of \$15.6 million remained flat for the three months ended April 1, 2023 as compared to the three months ended April 2, 2022.

•**General and Administrative.** General and administrative expenses are primarily comprised of salaries and related costs for corporate and administrative personnel, as well as other non-personnel related expenses. Our general and administrative expenses were \$19.2 million and \$16.5 million for the three months ended April 1, 2023 and April 2, 2022, respectively. The increases in general and administrative expenses for the three months ended April 1, 2023, as compared to the three months ended April 2, 2022, were primarily due to restructuring charges for employee severance costs and increased merger and acquisition related expenses.

•**Amortization of Identifiable Intangible Assets.** Amortization of identifiable intangible assets remained consistent period over period and was \$13.8 million for both the three months ended April 1, 2023 and April 2, 2022.

Interest income, net. Net interest income was \$3.4 million and \$0.4 million for the three months ended April 1, 2023 and April 2, 2022, respectively. The increase in net interest income for the three months ended April 1, 2023, as compared to the three months ended April 2, 2022, was due to higher average marketable securities balances and interest rates during the 2023 period.

Other expense, net. Net other expense was \$0.3 million and \$0.2 million for the three months ended April 1, 2023 and April 2, 2022, respectively. The increase in other expense, net for the three months ended April 1, 2023, as compared to the three months ended April 2, 2022, was primarily due to higher foreign exchange losses during the 2023 period.

Income Taxes. We recorded an income tax provision of \$3.1 million and \$5.6 million for the three months ended April 1, 2023 and April 2, 2022, respectively. Our effective tax rate of 10% for the three months ended April 1, 2023, differs from the statutory rate of 21%, primarily due to (i) research and development tax credits, (ii) the deduction related to foreign derived intangible income ("FDII"), and (iii) excess tax benefits associated with equity compensation. Our effective tax rate of 9% for the three months ended April 2, 2022, differs from the statutory rate of 21%, primarily due to (i) foreign and research and development tax credits, (ii) the deduction related to FDII, and (iii) excess tax benefits associated with equity compensation.

Our future effective income tax rate depends on various factors, such as possible changes in tax legislation, the geographic composition of our pre-tax income, the amount of our pre-tax income as business activities fluctuate, non-deductible expenses incurred in connection with business combinations, and research and development tax credits as a percentage of aggregate pre-tax income.

We currently have a partial valuation allowance recorded for certain foreign and state loss and credit carryforwards where the realizability of such deferred tax assets is substantially in doubt. Each quarter we assess the likelihood that we will be able to recover our deferred tax assets primarily relating to state research and development credits. We consider available evidence, both positive and negative, including historical levels of income, expectations and risks associated with estimates of future taxable income and ongoing prudent and feasible tax planning strategies in assessing the need for a valuation allowance. As a result of our analysis, we concluded that it is more likely than not that a portion of our net deferred tax assets will not be realized. Therefore, we continue to provide a valuation allowance against certain net deferred tax assets. We continue to monitor available evidence and may reverse some or all of the valuation allowance in future periods, if appropriate.

Liquidity and Capital Resources

At April 1, 2023, we had \$583.5 million of cash, cash equivalents and marketable securities and \$1,006.7 million in working capital. At December 31, 2022, we had \$547.8 million of cash, cash equivalents and marketable securities and \$974.3 million in working capital.

Net cash and cash equivalents provided by operating activities for the three months ended April 1, 2023 and April 2, 2022 were \$50.1 million and \$45.5 million, respectively.

- The net cash and cash equivalents provided by operating activities during the three months ended April 1, 2023 resulted primarily from net income, adjusted to exclude the effect of non-cash operating charges, of \$51.1 million, partially offset by a decrease in cash provided from operating assets and liabilities of \$1.0 million, primarily due to an increase in inventories and a decrease in accrued liabilities, offset by a decrease in accounts receivable.

- The net cash and cash equivalents provided by operating activities during the three months ended April 2, 2022 resulted primarily from net income, adjusted to exclude the effect of non-cash operating charges, of \$70.8 million, partially offset by a decrease in cash provided from operating assets and liabilities of \$25.4 million, primarily due to increases in inventories and accounts receivable.

Net cash and cash equivalents provided by investing activities for the three months ended April 1, 2023 was \$13.2 million. For the three months ended April 2, 2022, investing activities used net cash and cash equivalents of \$33.3 million.

- During the three months ended April 1, 2023, net cash and cash equivalents provided by investing activities included proceeds from maturities and sales of marketable securities of \$109.7 million, partially offset by purchases of marketable securities of \$88.6 million and capital expenditures of \$7.9 million.

- During the three months ended April 2, 2022, net cash and cash equivalents used in investing activities included purchases of marketable securities of \$97.5 million and capital expenditures of \$2.5 million, partially offset by proceeds from maturities and sales of marketable securities of \$66.7 million.

Net cash and cash equivalents used in financing activities for the three months ended April 1, 2023 and April 2, 2022 were \$9.5 million and \$7.6 million, respectively.

- During the three months ended April 1, 2023, financing activities used cash primarily for tax payments related to shares withheld to satisfy employee tax obligations in connection with the vesting of awards under share-based compensation plans of \$6.3 million and repurchases of common stock of \$3.2 million.

- During the three months ended April 2, 2022, financing activities used cash to primarily pay taxes related to shares withheld for share-based compensation plans of \$5.3 million and pay contingent consideration for acquired business of \$2.3 million, partially offset by proceeds from sales of shares through share-based compensation plans of \$6.0 thousand.

In November 2020, the Onto Innovation Board of Directors approved a share repurchase authorization, which allows the Company to repurchase up to \$100 million worth of shares of its common stock. Repurchases may be made through both public market and private transactions from time to time with shares purchased being subsequently retired. During the three months ended April 1, 2023, we repurchased 46 thousand shares of common stock under this repurchase authorization and those shares were subsequently retired. As of April 1, 2023, there was \$31.6 million available for future share repurchases under this share repurchase authorization.

We have a credit agreement with a bank that provides for a line of credit that is secured by the marketable securities we have with the bank. We are permitted to borrow up to 70% of the value of eligible securities held at the time the line of credit is accessed. As of April 1, 2023, the available line of credit was approximately \$100.0 million with an available interest rate of 6.5%. The credit agreement is available to us until such time that either party terminates the arrangement at its discretion. As of the date of this filing, we have not utilized the line of credit.

Our future capital requirements will depend on many factors, including the timing and amount of our revenue and our investment decisions, which will affect our ability to generate additional cash. We expect that our existing cash, cash equivalents, marketable securities and availability under our line of credit will be sufficient to meet our anticipated cash requirements for working capital, capital expenditures and other cash needs for the next 12 months following the filing of this Form 10-Q. Thereafter, if cash generated from operations and financing activities is insufficient to satisfy our working capital requirements, we may seek additional funding through bank borrowings, sales of securities or other means. However, the ongoing impacts of the COVID-19 pandemic have in the past caused disruption in the capital markets and were they to do the same in the future, may have an impact on our ability to access such additional funding. In addition, a reduction in or volatility with respect to our stock price or a general market downturn could materially impact our ability to sell securities on favorable terms or at all. There can be no assurance that we will be able to raise any such capital on terms acceptable to us or at all.

Item 3. Quantitative and Qualitative Disclosures About Market Risk

There have been no material changes in market risk from the information presented in Part II, Item 7A. "Quantitative and Qualitative Disclosures About Market Risk," in the 2022 Form 10-K.

Item 4. Controls and Procedures

Evaluation of Disclosure Controls and Procedures

We maintain disclosure controls and procedures that are designed to ensure that information we are required to disclose in reports that we file or submit under the Exchange Act is recorded, processed, summarized and reported within the time period specified in SEC rules and forms. These controls and procedures are also designed to ensure that such information is accumulated and communicated to our management, including our principal executive officer and principal financial officer, as appropriate, to allow timely decisions regarding required disclosure. In designing and evaluating disclosure controls and procedures, we have recognized that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving the desired control objectives. Management is required to apply judgment in evaluating its controls and procedures.

We performed an evaluation under the supervision and with the participation of our management, including our principal executive officer and principal financial officer, to assess the effectiveness of the design and operation of our disclosure controls and procedures under the Exchange Act as of April 1, 2023. Based on that evaluation, our management, including our principal executive officer and principal financial officer, concluded that our disclosure controls and procedures were effective as of April 1, 2023 at the reasonable assurance level.

Changes in Internal Control over Financial Reporting

There have been no changes in our internal control over financial reporting (as defined in Rule 13a-15(f) under the Exchange Act) that occurred during our fiscal quarter ended April 1, 2023 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

PART II OTHER INFORMATION

Item 1. Legal Proceedings

For a description of our material pending legal proceedings refer to the information set forth under "Legal Matters" of Note 7, "Commitments and Contingencies," to the Condensed Consolidated Financial Statements included in Part 1, Item 1 of this Form 10-Q.

Item 1A. Risk Factors.

Below is a summary the principal factors and uncertainties that make investing in our company risky. You should read this summary together with the more detailed description of each risk factor contained further below.

Risks Related to Our Operations

- If we do not manage our supply chain effectively, our operating results may be adversely affected, and any increases in material, labor, supplier, logistics and other operating costs, or supply chain delays and shortages, could lower our margins or result in lost sales.
- Variations in the amount of time it takes for us to sell our systems may cause fluctuations in our operating results, which could cause our stock price to decline.
- We are subject to order and shipment uncertainties. Our profitability will decline if we fail to accurately forecast customer demand when managing inventory.
- If we deliver systems with defects, our credibility will be harmed, and the sales and market acceptance of our systems will decrease.
- Our integrated metrology systems are integrated with systems sold independently by wafer fabrication equipment suppliers, and a decrease in sales by these suppliers, or the development of competing systems by these suppliers, could harm our business.
- We must attract and retain experienced senior executives and other key personnel with knowledge of semiconductor device manufacturing and inspection, metrology or lithography equipment and related software to help support our future growth, and competition for such personnel in our industry is high.
- The COVID-19 pandemic and the resulting economic impact and supply chain issues have affected our business and could, in the future, adversely affect our business, results of operations, and financial condition.
- Any prolonged disruption in the operations of our manufacturing facilities could have a material adverse effect on our revenue.
- We may outsource select manufacturing activities to third-party service providers, which decreases our control over the performance of these functions and may result in lower quality and functionality of our products.
- Our ability to fulfill our backlog may have an effect on our long-term ability to procure contracts and fulfill current contracts.

Risks Related to Our Customers

- Our largest customers account for a substantial portion of our revenue, and our revenue and cash flows could decline considerably if one or more of these customers were to purchase significantly fewer of our systems or delay or cancel a large order.

Risks Related to Product Development

- If we are not successful in developing new and enhanced products for the semiconductor device manufacturing industry, we will lose sales and market share to our competitors.
- If new products developed by us do not gain general market acceptance, we will be unable to generate revenue and recover our investments, which may result in a write down of inventory.
- Even if we are able to develop new products that gain market acceptance, sales of these new products could impair our ability to sell existing products.
- If our relationships with our large customers deteriorate, our product development activities could be adversely affected.

Risks Related to Intellectual Property and Data Security

- We may fail to adequately protect our intellectual property and, therefore, lose our competitive advantage.
- Protection of our intellectual property rights, or the efforts of third parties to enforce their own intellectual property rights against us, may result in costly and time-consuming litigation, substantial damages, lost product sales and/or the loss of important intellectual property rights.
- If our network security measures are breached and unauthorized access is obtained to a customer's data, to our data, or to our information technology systems, we may incur significant legal and financial exposure and liabilities and may experience disruptions in our operations.

Risks Related to Competition

- Some of our current and potential competitors have significantly greater resources than we do, and increased competition could impair sales of our products or cause us to reduce our prices.
- Because of the high cost of switching equipment vendors in our markets, it is sometimes difficult for us to win new customers from our competitors even if our systems are superior to theirs.

Risks Related to Our International Operations

- We are subject to compliance with domestic and foreign laws and regulations, and the burden of complying with such laws and regulations, or any failure to comply, has adversely affected and may continue to adversely affect our business, financial condition and results of operations.
- Tariffs, export regulations, and other market barriers have impacted and may continue to impact both our ability to compete for the business of domestic customers in China and our results of operations.
- Political and economic instability may result in reduced demand for our products.
- Natural disasters, changes in climate and geo-political conflicts could materially adversely affect our worldwide operations (or those of our business partners).
- We may face difficulties in staffing and managing foreign branch operations due to political tensions or cultural differences.
- Currency fluctuations may impact our international sales or expose us to exchange rate risk.
- Our internal controls with respect to anti-corruption laws may not be effective, and any failure to comply with such laws may result in severe sanctions and liabilities, which may negatively affect our business, operating results and financial condition.

Risks Related to Tax Laws, Financial Markets and the Environment

- Changes in tax rates or tax liabilities could affect results.
- Turmoil or fluctuations in the credit markets and the financial services industry may negatively impact our business, results of operations, financial condition or liquidity, and our factoring arrangements may expose us to additional risks.
- We are subject to various environmental laws and regulations that could impose substantial costs upon us, and failure to comply with such laws and regulations may harm our business, operating results and financial condition.
- Customer and investor focus on our environmental, social and governance responsibility practices and policies, and related regulatory requirements, may make our supply chain more complex, and any failure to comply with customer or investor guidelines or applicable laws and regulations may adversely affect our relationship with customers and investors or our reputation and results of operations.

Risks Related to Growth and Acquisitions

- We may choose to acquire new and complementary businesses, products or technologies instead of developing them ourselves, and we may be unable to complete these acquisitions or may not be able to successfully integrate an acquired business in a cost-effective and non-disruptive manner.
- If we cannot effectively manage growth, our business may suffer.

Risks Related to the Global Economy and the Semiconductor Industry

- Cyclicality in the semiconductor device industry has led to substantial decreases in demand for our systems in the past and may, from time to time, continue to do so.
- Our future rate of growth is highly dependent on the development and growth of the market for microelectronic device inspection, lithography and metrology equipment.

General Risk Factors

- Provisions of our charter documents and of Delaware law could discourage potential acquisition proposals and/or delay, deter or prevent a change in control of our company.
- Our stock price is volatile.

Risks Related to Our Operations

If we do not manage our supply chain effectively, our operating results may be adversely affected, and any increases in material, labor, supplier, logistics and other operating costs, or supply chain delays and shortages, could lower our margins or result in lost sales.

We need to continually evaluate our global supply chains and assess opportunities to reduce costs. We must also enhance quality, speed and flexibility to meet changing demand for our products and product mix and uncertain market conditions. Our success also depends in part on refining our cost structure and supply chains so that we have flexibility and can maintain and improve profitability. Deterioration in the tariff environment, political instability or changes in suppliers, may cause our costs to increase and, if we are not able to offset the increased costs by charging higher sales prices, will cause a decline in our margins. To improve our margins on a product, we will need to establish high volume supply agreements with our vendors. We cannot be certain that we will be able to timely negotiate vendor supply agreements on improved terms and conditions, or at all. Failure to achieve the desired level of cost reductions could adversely affect our financial results. Despite our efforts to control costs and increase efficiency in our facilities, changes in demand could still cause us to realize lower operating margins and profitability.

Further, our gross margins and financial performance may be adversely affected by increases in our operating costs, such as material, labor, supplier costs, logistics and energy costs, all of which have been and may continue to be subject to inflationary pressures. Operating costs have increased and may continue to increase further as a result of supply chain disruptions in connection with the sourcing of components, materials, equipment, engineering support, and services, labor shortages and other cost increases due to the COVID-19 pandemic and the effects of the Russia-Ukraine conflict. We have also experienced, and may continue to experience, production delays, disruptions and cost increases due to the worldwide shortage of semiconductor components as a result of sharp increases in demand for semiconductor products in general.

These risks may be heightened because we obtain some of the components and subassemblies included in our systems from a limited group of suppliers and do not have long-term contracts with many of our suppliers. Our dependence on limited-source suppliers of components and our lack of long-term contracts with many of our suppliers expose us to several risks, including a potential inability to obtain an adequate supply of components, price increases, late deliveries and poor component quality. A significant number of our suppliers are the sole source or single source for certain components or subassemblies. If such a supplier is unable or unwilling to manufacture and deliver components to us on the time schedule and of the quality or quantity that we require, we may be forced to seek to engage an additional or replacement supplier or redesign our product to use alternative components, which could result in additional expenses and delays in product development or shipment of product to our customers. Disruption or termination of the supply of components has delayed and could continue to delay shipments of some of our systems. Such delays may damage our customer relationships and reduce our sales. The lead-time required for shipments of some of our components can be greater than six months. In addition, the lead time required to qualify new suppliers for lasers and certain optics could be as long as a year, and the lead time required to qualify new suppliers of other components could be as long as nine months. In some cases, we may need to purchase components in advance of receiving customer orders for product. If we are unable to accurately predict our component needs, or if our component supply is disrupted, as it has been due to supply chain disruptions, logistics difficulties and shipping delays due to the COVID-19 pandemic and global electronic component shortages, we may miss market opportunities by not being able to meet the demand for our systems. Further, a significant increase in the price of one or more of these components or subassemblies could seriously harm our results of operations and cash flows.

Our efforts to mitigate any cost increases, labor impacts and supply chain delays and shortages may not be successful, and we cannot predict the duration of these current trends or other future increases in operating costs. We may not be able to pass cost increases through to our customers fully (or at all), and if supply chain delays and shortages delay delivery of our products, our customers may seek to purchase from our competitors. Any such occurrence may have a material adverse impact on our gross margins and business, financial position, results of operations and cash flows.

Variations in the amount of time it takes for us to sell our systems may cause fluctuations in our operating results, which could cause our stock price to decline.

Variations in the length of our sales cycles could cause our revenue and cash flows, and consequently, our business, financial condition, operating results and cash flows to fluctuate widely from period to period. This variation could cause our

stock price to decline. Our customers generally take a long time to evaluate our inspection and/or film metrology systems and many people are involved in the evaluation process. We expend significant resources educating and providing information to our prospective customers regarding the uses and benefits of our systems in the semiconductor fabrication process. The length of time it takes for us to make a sale depends upon many factors, including, but not limited to:

- the efforts of our sales force;
- the complexity of the customer's fabrication processes;
- the internal technical capabilities and sophistication of the customer;
- the customer's budgetary constraints; and
- the quality and sophistication of the customer's current metrology, inspection or lithography equipment.

Because of the number of factors influencing the sales process, the period between our initial contact with a customer and the time when we recognize revenue from that customer and receive payment, if ever, varies widely in length. Our sales cycles, including the time it takes for us to build a product to customer specifications after receiving an order to the time we recognize revenue, typically range from three to twenty-four months. Sometimes our sales cycles can be much longer, particularly with customers in Asia. During these cycles, we commit substantial resources to our sales efforts in advance of receiving any revenue, and we may never receive any revenue from a customer despite our sales efforts. If we do make a sale, our customers often purchase only one of our systems, the performance of which they then evaluate for a lengthy period before purchasing any more of our systems. The number of additional products a customer purchases, if any, depends on many factors, including the customer's capacity requirements. The period between a customer's initial purchase and any subsequent purchases can vary from three months to a year or longer, and variations in the length of this period could cause further fluctuations in our operating results and, possibly, in our stock price.

We are subject to order and shipment uncertainties. Our profitability will decline if we fail to accurately forecast customer demand when managing inventory.

We typically plan production and inventory levels based on internal forecasts of customer demand, which can be highly unpredictable and can fluctuate substantially, which could lead to excess inventory write-downs and resulting negative impacts on gross margin and net income. We have limited visibility into our customers' inventories, future customer demand and the product mix that our customers will require, which could adversely affect our production forecasts and operating margins. Recently, certain of our customers have publicly stated their intent to decrease their memory product inventory levels as lead time for components begins to decrease. This could lead to a temporary decrease in demand for our products as customers delay capacity expansions until inventory levels are sufficiently reduced. In addition, innovation in our industry could render significant portions of our inventory obsolete. If we overestimate our customers' requirements, we may have excess inventory, which could lead to obsolete inventory and unexpected costs. Conversely, if we underestimate our customers' requirements, or if we experience sustained disruptions to our supply chain or shipping delays, including those we continue to experience due to the COVID-19 pandemic, we may have inadequate inventory, which could lead to foregone revenue opportunities, loss of potential market share and damage to customer relationships as product deliveries may not be made on a timely basis, disrupting our customers' production schedules. In response to anticipated long lead times to obtain inventory and materials from outside suppliers and foundries, we periodically order materials in advance of customer demand. This advance ordering has in the past and may in the future result in excess inventory levels or unanticipated inventory write-downs if expected orders fail to materialize, or other factors make our products less saleable. In addition, any significant future cancellation or deferral of product orders could adversely affect our revenue and margins, increase inventory write-downs due to obsolete inventory, and adversely affect our operating results and stock price.

Our earnings could be negatively affected, and our inventory levels could materially increase, if we are unable to predict our inventory needs in an accurate and timely manner and adjust our orders for parts and subcomponents in the event that our needs increase or decrease materially due to unexpected increases or decreases in demand for our products. Any material increase in our inventories could result in an adverse effect on our financial position, while any material decrease in our ability to procure needed inventories could result in an inability to supply customer demand for our products, thus adversely affecting our revenue.

If we deliver systems with defects, our credibility will be harmed, and the sales and market acceptance of our systems will decrease.

Our systems are complex and have occasionally contained errors, defects and bugs when introduced. Defects may be created during probing, bumping, dicing or general handling, and can have a major impact on device and process quality. When this occurs, our credibility and the market acceptance and sales of our systems could be harmed. Further, if our systems contain errors, defects or bugs, computer viruses or malicious code as a result of cyber-attacks to our computer networks, we may be required to expend significant capital and resources to alleviate these problems. Defects could also lead to product liability as a result of product liability lawsuits against us or against our customers. We have agreed to indemnify our customers under certain circumstances against liability arising from defects in our systems provided that we also include a cap on our liability in the related sales agreements. Our product liability insurance policy currently provides both aggregate coverage as well as an overall umbrella coverage. In the event of a successful product liability claim, we could be obligated to pay damages significantly in excess of our product liability insurance limits.

Our integrated metrology systems are integrated with systems sold independently by wafer fabrication equipment suppliers, and a decrease in sales by these suppliers, or the development of competing systems by these suppliers, could harm our business.

We believe that sales of integrated metrology systems will continue to be an important source of our net revenues. Sales of our integrated metrology systems depend upon the ability of a small number of wafer fabrication equipment suppliers to sell semiconductor manufacturing equipment products that are compatible with our metrology systems as components. If these suppliers, such as Applied Materials, Inc., Ebara Corporation, Lam Research Corporation and Tokyo Electron, are unable to sell such products, if they choose to focus their attention on products that do not integrate with our systems, or if they choose to develop competing systems, our business could suffer.

We must attract and retain experienced senior executives and other key personnel with knowledge of semiconductor device manufacturing and inspection, metrology or lithography equipment and related software to help support our future growth, and competition for such personnel in our industry is high.

Our success depends, to a significant degree, upon the continued contributions of our key executive management, engineering, sales and marketing, customer support, finance and manufacturing personnel. The loss of any of these key personnel, each of whom would be extremely difficult to replace, through resignations, retirement or other circumstances, could harm our business and operating results. Despite our employment and noncompetition agreements with key members of our senior management team, these individuals or other key employees may still leave us, which could have a material adverse effect on our business. We do not have key person life insurance on any of our executives. In addition, to support our future growth, we will need to attract and retain additional qualified employees. Competition for such personnel in our industry is intense, and we may not be successful in attracting and retaining qualified employees.

The expansion of high technology companies worldwide and growth in the demand for semiconductors following the onset of the COVID-19 pandemic have increased demand and competition for qualified personnel. Competition for engineering and other technical personnel in some of the markets in which we operate is especially intense due to continued increases in the number of technology companies worldwide. In order to attract and retain executives and other key employees, we must provide a competitive compensation package, including cash and stock-based compensation. If the anticipated value of our stock-based incentive awards does not materialize so that they cease to be viewed as valuable, if our profits decrease, or if our total compensation package is not viewed as competitive, our ability to attract, retain and motivate executives and key employees could be weakened.

The COVID-19 pandemic and the resulting economic impact and supply chain issues have affected our business and could, in the future, adversely affect our business, results of operations, and financial condition.

The effects of the public health crisis caused by the COVID-19 pandemic and the resulting economic impact have affected, and may continue to affect, our operations and those of our suppliers, third-party service providers, and customers. The extent to which the COVID-19 pandemic will continue to impact our business, results of operations, and financial conditions is difficult to predict and depends on numerous evolving factors including the duration and scope of the pandemic; government, social, business, and other actions that have been and will be taken in response to the pandemic; appearance of new variants of COVID-19; the availability, adoption, and efficacy of vaccines and treatments; and the intensity and duration of the resulting macroeconomic conditions. The COVID-19 pandemic exposes our business, results of operations, and financial condition to the following risks: disruptions to our supply chain in connection with the sourcing of materials, support, and services; disruption of

operations due to unavailability of employees as a result of illness, risk of illness, travel restrictions or other factors; a potential decrease in short-term and/or long-term demand for our products; an increase in potential opportunities for the Company to be subject to an adverse cybersecurity event as a result of an increase in employees working from home, which could give rise to business disruptions, loss of information, intellectual property and critical data as well as other negative impacts; and potential difficulty accessing capital, if needed in the future, either through our credit agreement or through a sale of securities, due to market conditions generally or a decline or volatility in the market for our securities. The effects of these risks, alone or taken together, could have a material adverse effect on our business, results of operations, legal exposure, or financial condition. Additional sustained or prolonged outbreaks of COVID-19 could exacerbate the adverse impact of the conditions and may also heighten many of the other risks described in this "Risk Factors" section.

Any prolonged disruption in the operations of our manufacturing facilities could have a material adverse effect on our revenue.

We produce the majority of our systems in our manufacturing facilities located in Wilmington, Massachusetts, Milpitas, California and Bloomington, Minnesota. We use contract manufacturers in China, Japan and the United States. Our manufacturing processes are highly complex and require sophisticated and costly equipment and a specially designed facility. As a result, any prolonged disruption in the operations of our manufacturing facilities could seriously harm our ability to satisfy our customer order deadlines. For example, shelter-in-place orders and other measures implemented during the COVID-19 pandemic to protect employees resulted in reduced workforce availability at product manufacturing sites and reduced output at some of our vendors and suppliers. Restrictions on our access to or operation of manufacturing facilities or on our support operations or workforce, or similar limitations for our vendors and suppliers, may impact our ability to meet customer demand and could have a material adverse effect on our financial condition and results of operations. If we cannot timely deliver our systems, our results from operations and cash flows could be materially and adversely affected.

We outsource select manufacturing activities to third-party service providers, which decreases our control over the performance of these functions and may result in lower quality and functionality of our products.

We outsource product manufacturing to third-party service providers. Outsourcing reduces our control over the performance of the outsourced functions. Dependence on outsourcing may also adversely affect our ability to bring new products to market. If we do not effectively manage our outsourcing strategy or if third party service providers do not perform as anticipated, we may experience operational difficulties, increased costs, manufacturing interruptions or inefficiencies in the operation of our supply chain, any or all of which could delay our delivery of products to our customers, and materially and adversely affect our business, financial condition, and results of operations.

Our ability to fulfill our backlog may have an effect on our long-term ability to procure contracts and fulfill current contracts.

Our ability to fulfill our backlog may be limited by our ability to devote sufficient financial and human capital resources and may be limited by available material supplies. If we do not fulfill our backlog in a timely manner, we may experience delays in product delivery, which would postpone receipt of revenue from those delayed deliveries. Delayed fulfillment also increases the risk that a customer may change or cancel an order due to evolution of the customer's technological, production or market needs, which would result in a loss of revenue. Additionally, if we are consistently unable to fulfill our backlog, this may be a disincentive to customers to award large contracts to us in the future until they are comfortable that we can effectively manage our backlog.

Risks Related to Our Customers

Our largest customers account for a substantial portion of our revenue, and our revenue and cash flows could decline considerably if one or more of these customers were to purchase significantly fewer of our systems or delay or cancel a large order.

Sales to end user customers that individually represent at least ten percent of our revenue typically account for, in the aggregate, a considerable amount of our revenue. We operate in the highly concentrated, capital-intensive semiconductor device manufacturing industry. Historically, a substantial portion of our revenue in each quarter and year has been derived from sales to relatively few customers, and this trend is expected to continue. If any of our key customers were to purchase significantly fewer of our systems in the future, or if they delay or cancel a large order, our revenue and cash flows could meaningfully decline. We expect that we will continue to depend on a small number of large customers for a sizable portion of our revenue. In addition, as

large semiconductor device manufacturers seek to establish closer relationships with their suppliers, we expect that our customer base will become even more concentrated.

Risks Related to Product Development

If we are not successful in developing new and enhanced products for the semiconductor device manufacturing industry, we will lose sales and market share to our competitors.

We operate in an industry that is highly competitive and subject to evolving industry standards, rapid technological changes, rapid changes in consumer demands and the rapid introduction of new, higher performance systems with shorter product life cycles. To be competitive in our demanding market, we must continually design, develop and introduce in a timely manner new lithography, inspection and metrology process control systems that meet the performance and price demands of semiconductor device manufacturers. We must also continue to refine our current systems so that they remain competitive. We expect to continue to make significant investments in our research and development activities and at times may make inventory investments prior to commercialization. We may experience difficulties or delays in our development efforts with respect to new systems, and we may not ultimately be successful in our product enhancement efforts to improve and advance products or in responding effectively to technological change, as not all research and development activities result in viable commercial products. In addition, we cannot provide assurance that we will be able to develop new products for the most opportunistic new markets and applications. Any significant delay in releasing new systems could cause our products to become obsolete, adversely affect our reputation, give a competitor a first-to-market advantage or cause a competitor to achieve greater market share.

In addition, our competitors may provide innovative technology that may have performance advantages over systems we currently offer or may offer in the future. They may be able to develop products comparable or superior to those that we offer or may adapt more quickly to new technologies or evolving customer requirements. In particular, we currently are developing additional product enhancements that we believe will address future customer requirements, but we may fail in a timely manner to complete the development or introduction of these additional product enhancements successfully, or these product enhancements may not achieve market acceptance or be competitive.

Further, customers that may otherwise desire to purchase our products from us and purchase other products from our competitors may nevertheless purchase competing products from our competitors rather than purchase our products due to a variety of reasons, including to gain favor or volume pricing from our competitors.

If new products developed by us do not gain general market acceptance, we will be unable to generate revenue and recover our investments, which may result in a write down of inventory.

Inspection, lithography and metrology product development is inherently risky because it is difficult to foresee developments in semiconductor device manufacturing technology, coordinate technical personnel, and identify and eliminate system design flaws. Further, our products are leading edge and complex, and often the applications to our customers' businesses are unique. Any new systems we introduce may not achieve or sustain a significant degree of market acceptance and sales.

We expect to spend a significant amount of time and resources developing new systems and refining our existing systems. In light of the long product development cycles inherent in our industry, these expenditures will be made well in advance of the prospect of deriving revenue from the sale of those systems. The long lead times for some components may also require us to place orders for components and accumulate inventory in advance of market acceptance of our products.

Our ability to commercially introduce and successfully market new systems is subject to a wide variety of challenges during the development cycle, including start-up bugs, design defects, and other matters that could delay introduction of these systems. Since our customers are not obligated by long-term contracts to purchase our systems, our anticipated product orders may not materialize, or orders that are placed may be canceled.

If we do not achieve market acceptance of new products, we may be unable to generate sufficient revenue and cash flow to recover our research and development costs and may result in a write down of our investments in inventory. As a result, our market share, revenue, operating results or stock price would be negatively impacted.

Even if we are able to develop new products that gain market acceptance, sales of these new products could impair our ability to sell existing products.

Competition from our new systems could have a negative effect on sales of our existing systems and the prices that we could charge for these systems. We may also divert sales and marketing resources from our current systems in order to successfully launch and promote our new or next generation systems. This diversion of resources could have a further negative effect on sales of our current systems and the value of inventory.

If our relationships with our large customers deteriorate, our product development activities could be adversely affected.

The success of our product development efforts depends on our ability to anticipate market trends and the price, performance and functionality requirements of semiconductor device manufacturers. In order to anticipate these trends and ensure that critical development projects proceed in a coordinated manner, we must continue to collaborate closely with our largest customers. Our relationships with these and other customers provide us with access to valuable information regarding trends in the semiconductor device industry, which enables us to better plan our product development activities. If our current relationships with our large customers are impaired, or if we are unable to develop similar collaborative relationships with important customers in the future, our product development activities could be adversely affected.

Risks Related to Intellectual Property and Data Security

We may fail to adequately protect our intellectual property and, therefore, lose our competitive advantage.

Our future success and competitive position depend in part upon our ability to obtain and maintain proprietary technology for our principal product families. If we fail to adequately protect our intellectual property, it will give our competitors a significant advantage. We own or have licensed a number of patents relating to our metrology, lithography, wafer and defect inspection systems, as well as artificial intelligence and machine learning systems, and software, including both embedded and application software, and have filed applications for additional patents. Any of our pending patent applications may be rejected, however, and we may be unable to develop additional proprietary technology that is patentable in the future. In addition, the patents that we do own or that have been issued or licensed to us may not provide us with competitive advantages and/or may be challenged by third parties. Third parties may also design around our patents or copy our patented inventions without our knowledge.

In addition to patent protection, we rely upon copyrights for protection of our proprietary software and documentation, trademarks for protection of our brand and source of goods, and trade secret law, and confidentiality and non-compete agreements for protection of our confidential and proprietary information and technology. These measures do not guarantee protection of our intellectual property, however. We can give no assurance that our copyrights will be upheld or will successfully deter infringement by third parties. Even though we routinely enter into confidentiality agreements with our employees and other third parties there can be no assurances that trade secrets and proprietary information will not be disclosed, that others will not independently develop substantially equivalent proprietary information and techniques or otherwise gain access to our trade secrets, or that we can fully protect our trade secrets and proprietary information. Violations by others of our confidentiality agreements and the loss of employees who have specialized knowledge and expertise could harm our competitive position and cause our sales and operating results to decline as a result of increased competition. It is also possible that third parties will misappropriate our trade secrets or other confidential information. We may be subject to cybersecurity breaches in which a third party obtains our confidential information. Third parties may also reverse engineer our products to copy our technology. Any of these circumstances could result in harm to our competitive position in the market. Failure to protect our trademarks can lead to other companies selling products using confusing similar names, thereby damaging our brand. In some countries, it can be difficult to register trademarks because of the strict examination process or blocking trademarks for other goods. Costly and time-consuming litigation might be necessary to enforce and determine the scope of our intellectual property rights, and failure to obtain or maintain trade secret protection might adversely affect our ability to continue our research or bring products to market.

From time to time, we may find it necessary to initiate litigation against other persons or entities to protect and/or enforce our intellectual property or contractual rights. However, litigation is costly and time consuming and there is no assurance that any lawsuit we bring will yield the result that we seek, as (i) the lawsuit may be dismissed or there could be an adverse finding, (ii) we may not be able to pursue the lawsuit due to the laws of the applicable country or (iii) there may be a subsequent unfavorable change in law that limits our ability to pursue the lawsuit. For example, litigation discovery practice in China, Japan, South Korea, continental Europe and Taiwan is not as robust as the United States, so it can be more difficult to determine if a company is infringing on our patents and more challenging to bring a lawsuit. Monitoring and preventing unauthorized use are

also difficult and the measures we take to protect our intellectual property rights may not be adequate. Accordingly, infringement of our intellectual property rights poses a serious risk of doing business. There is a risk that we may be unable to adequately protect our intellectual property rights in certain foreign countries. For example, our competitors may independently develop similar technology or duplicate our products. If this occurs, it would be easier for our competitors to develop and sell competing products in these countries.

Protection of our intellectual property rights, or the efforts of third parties to enforce their own intellectual property rights against us, may result in costly and time-consuming litigation, substantial damages, lost product sales and/or the loss of important intellectual property rights.

We may be required to initiate litigation in order to enforce our intellectual property rights or to determine the noninfringement, scope or validity of a third party's intellectual property rights. Any litigation, regardless of outcome, could be expensive and time consuming and could subject us to significant liabilities or require us to re-engineer our products or obtain expensive licenses from third parties. There can be no assurance that any patents, copyrights or other intellectual property rights issued to or licensed by us will not be challenged, invalidated or circumvented, or that the rights granted thereunder will provide us with a competitive advantage. Furthermore, there is no assurance that any litigation we are involved in will yield the result that we seek as (i) the lawsuit may be dismissed or there could be an adverse finding, (ii) we may not be able to pursue the lawsuit due to the laws of the applicable country or (iii) there may be a subsequent unfavorable change in law that limits our ability to pursue the lawsuit.

In addition, our commercial success depends in part on our ability to avoid infringing or misappropriating patents or other intellectual property rights owned by third parties. From time to time, we receive communications from third parties asserting that our products or systems infringe, or may infringe, on the intellectual property rights of these third parties. These claims of infringement may lead to protracted and costly litigation, which could require us to pay substantial damages or have the sale of our products or systems stopped by an injunction. Infringement claims could also cause product or system delays or require us to redesign our products or systems, and these delays could result in the loss of substantial revenue. We may also be required to obtain a license from the third party or cease activities utilizing the third party's intellectual property rights. We may not be able to enter into such a license or such a license may not be available on commercially reasonable terms. Accordingly, the loss of an intellectual property dispute could hinder our ability to sell our products or systems or make the sale of our products or systems more expensive, which could lead to reduced revenue or lower margins, respectively.

If our network security measures are breached and unauthorized access is obtained to a customer's data, to our data, or to our information technology systems, we may incur significant legal and financial exposure and liabilities and may experience disruptions in our operations.

As part of our business, we store our data and certain data about our customers, vendors and employees in our information technology system. We also rely on our information technology system for business operations. If there is a breach as a result of third-party action, employee error, malfeasance, break-ins or otherwise, of our security measures designed to protect this information and prevent data loss and other security breaches, and someone obtains unauthorized access to our customers', vendors' or employees' data or disrupts our access to our own data and systems, we could face loss of business, regulatory investigations or court orders, our reputation could be severely damaged, we could be required to expend significant capital and other resources to alleviate the problem, as well as incur significant costs and liabilities, including due to litigation, indemnity obligations, damages for contract breach, penalties for violation of applicable laws or regulations, and costs for remediation and other incentives offered to customers.

Cyber-attacks and other malicious internet-based activities continue to increase. In response to the COVID-19 pandemic, our expanded reliance on remote access to our information systems has further increased our exposure to potential cybersecurity breaches. The Russia-Ukraine conflict and related sanctions imposed by the U.S. government may expose government entities and public and private U.S. companies to attempted or actual cybersecurity attacks launched in retaliation, and these attacks could materially disrupt our supply chain or our systems and operations or those of our customers and suppliers.

As the techniques used to obtain unauthorized access or sabotage systems change frequently and generally are not identified until they are launched against a target, our ability to anticipate these techniques or to implement adequate preventative measures is reduced. In addition, third parties have made attempts to fraudulently induce employees or users to disclose information to gain access to our data or our customers' data. As a result of any of these events, our or our customers' and vendors' information could be accessed or disclosed improperly. In addition, cybersecurity incidents affecting our customers could result in substantial delays in our ability to ship to those customers or install our products, which could result in delays in revenue recognition or the cancellation of orders, and cybersecurity incidents affecting our suppliers could result in substantial

delays in our ability to obtain necessary components for our products from those suppliers, which could hamper our ability to ship our products to our customers, harming our results of operations and our customer relationships. Any or all of the above issues could negatively affect our ability to attract new customers, cause existing customers to choose to purchase from our competitors, result in reputational damage or subject us to third-party lawsuits, regulatory fines or other action or liability, which could adversely affect our operating results.

The General Data Protection Regulation (“GDPR”) is a regulation in European Union (“EU”) law on data protection and privacy for the individuals within the EU and the European Economic Area (“EEA”). It also addresses the export of personal data outside the EU and EEA areas. The United Kingdom has adopted legislation that substantially implements the GDPR and provides for a similar penalty structure. We are also subject to the California Consumer Privacy Act of 2018 (“CCPA”), which became effective January 1, 2020, as well as the California Privacy Rights Act (CPRA), an amendment and expansion of the CCPA. Although the CPRA has an effective date of January 1, 2023, many of its provisions will retroactively apply to personal information collected from January 1, 2022. We may also be subject to other data privacy laws in the United States and the other countries in which we operate. In many cases, these laws apply not only to third-party transactions, but also to transfers of information between us and our subsidiaries, and among the subsidiaries and other parties with which we have commercial relations. The introduction of new products or expansion of our activities in certain jurisdictions may subject us to additional laws and regulations. These U.S. federal and state and foreign laws and regulations, including GDPR which can be enforced by private parties or government entities, are constantly evolving and can be subject to significant change. In addition, the application and interpretation of these laws and regulations, including GDPR, are often uncertain, particularly in our evolving industry, and may be interpreted and applied differently from country to country. Appropriate technical and organizational measures are necessary to implement these data protection principles. These laws and regulations can be costly to comply with and may delay or impede the development of new products, result in negative publicity, increase our operating costs, require significant management time and attention, or subject us to inquiries or investigations, claims or other remedies, including fines, which may be significant, or demands that we modify or cease existing business practices. A failure by us, our suppliers, or other parties with whom we do business to comply with posted privacy policies or with other federal, state, or international privacy-related or data protection laws and regulations, including GDPR, CCPA, CPRA and other new or changing privacy laws and regulations, could result in proceedings against us by governmental entities or others, which could have a material adverse effect on our business, results of operations, and financial condition.

Risks Related to Competition

Some of our current and potential competitors have significantly greater resources than we do, and increased competition could impair sales of our products or cause us to reduce our prices.

The market for semiconductor capital equipment is highly competitive. We face substantial competition from established companies in each of the markets we serve. We principally compete with KLA Corporation, Nova Measuring Instruments, Camtek, Ushio, Canon, and PDF Solutions. We compete to a lesser extent with Nikon. Each of our products also competes with products that use different metrology, inspection or lithography techniques. Some of our competitors have greater financial, engineering, manufacturing and marketing resources, broader product offerings and service capabilities and larger installed customer bases than we do. As a result, these competitors may be able to respond more quickly to new or emerging technologies or market developments by devoting greater resources to the development, promotion and sale of products, which, in turn, could impair sales of our products. Further, there may be significant merger and acquisition activity among our competitors and potential competitors, which, in turn, may provide them with a competitive advantage over us by enabling them to rapidly expand their product offerings and service capabilities to meet a broader range of customer needs.

Many of our customers and potential customers in the semiconductor device manufacturing industry are large companies that require global support and service for their semiconductor capital equipment. We believe that our global support and service infrastructure is sufficient to meet the needs of our customers and potential customers. However, some of our competitors have more extensive infrastructures than we do, which could place us at a disadvantage when competing for the business of global semiconductor device manufacturers. Many of our competitors are investing heavily in the development of new systems that will compete directly with our systems. We have, from time to time, selectively reduced prices on our systems in order to protect our market share, and competitive pressures may necessitate further price reductions. We expect our competitors in each product area to continue to improve the design and performance of their products and to introduce new products with competitive prices and performance characteristics. These product introductions would likely require us to decrease the prices of our systems and increase the level of discounts that we grant our customers. Price reductions or lost sales as a result of these competitive pressures would reduce our total revenue and could adversely impact our financial results.

Because of the high cost of switching equipment vendors in our markets, it is sometimes difficult for us to win new customers from our competitors even if our systems are superior to theirs.

We believe that once a semiconductor device manufacturer has selected one vendor's capital equipment for a production-line application, the manufacturer generally relies upon that capital equipment and, to the extent possible, subsequent generations of the same vendor's equipment for the life of the application. Once a vendor's equipment has been installed in a production line application, a semiconductor device manufacturer must often make substantial technical modifications and may experience production-line downtime in order to switch to another vendor's equipment. Accordingly, unless our systems offer performance or cost advantages that outweigh a customer's expense of switching to our systems, it will be difficult for us to achieve significant sales to that manufacturer once it has selected another vendor's capital equipment for an application.

Risks Related to Our International Operations

We are subject to compliance with domestic and foreign laws and regulations, and the burden of complying with such laws and regulations, or any failure to comply, has adversely affected and may continue to adversely affect our business, financial condition and results of operations.

Our business is subject to risks inherent in doing business internationally, including compliance with, inconsistencies among, and unexpected changes in, a wide variety of foreign laws and regulatory environments with which we are not familiar, including, among other issues, with respect to employees, protection of our intellectual property, and a wide variety of operational regulations and trade and export controls under domestic, foreign, and international law.

We are faced with various risks that may be associated with our compliance with existing, new, different, inconsistent or conflicting laws, regulations and rules enacted by governments and/or their regulatory agencies in the countries in which we operate as well as rules and policies implemented at our customer sites. These laws, regulations, rules and policies could relate to any of an array of issues including, but not limited to, environmental, tax, intellectual property, trade secrets, product liability, contracts, antitrust, employment, securities, import/export and unfair competition. The cost of maintaining compliance under multiple and changing regulatory regimes may adversely affect our business, financial condition and results of operations, and, in the case of export controls, has adversely affected and may continue to adversely affect our results of operations. As discussed below under the heading "Tariffs, export regulations, and other market barriers have impacted and may continue to impact both our ability to compete for the business of domestic customers in China and our results of operations," the U.S. government recently issued, on October 7, 2022, new export control rules aimed at restricting China's access to advanced computing technology. To comply with the new rules, Onto Innovation has had to expend time and resources that might otherwise have been used for revenue generating activities. Further regulatory changes could require additional diversion of resources to compliance efforts. In addition, in the event that we fail to comply with or violate U.S. or foreign laws or regulations or customer policies, we could be subject to civil or criminal claims or proceedings that may result in monetary fines, penalties or other costs against us or our employees, which may adversely affect our operating results, financial condition, customer relations and ability to conduct our business.

Tariffs, export regulations and other market barriers have impacted and may continue to impact both our ability to compete for the business of domestic customers in China and our results of operations.

The semiconductor device industry is a high-visibility industry in many of the European and Asian countries in which we sell our products. Because the governments of these countries have provided extensive financial support to our semiconductor device manufacturing customers in these countries, we believe that our customers could be disproportionately affected by any trade embargoes, excise taxes, tariffs, or other restrictions imposed by their governments on trade with U.S. companies such as ourselves, particularly with respect to the ongoing tensions between the United States and China.

Over the last several years, the U.S. government has significantly expanded export controls on certain technologies and commodities to certain markets, particularly with respect to semiconductor and other high technology exports to China. For example, effective June 2020, the U.S. Department of Commerce imposed new export controls on the transfer of many U.S. products and technologies, including many commercial-grade electronics, to "military end users" or for "military end use" in China, which may include many Chinese commercial companies that sell products to or do business with the Chinese military. Likewise, since May 2019, the U.S. Department of Commerce has imposed restrictions on the transfer of any products from the U.S., as well as many products produced overseas that incorporate U.S. content or rely on U.S. software or technology, to Huawei Technologies Co., Ltd., and its overseas affiliates, followed by a comparable action in December 2020, related to Semiconductor Manufacturing International Corporation (SMIC) and its overseas affiliates. Most recently, in October 2022, the Bureau of Industry and Security ("BIS") of the U.S. Department of Commerce implemented new export controls related to the Chinese

semiconductor manufacturing, advanced computing, and supercomputer industries (the “October 2022 Export Controls”). In 2022, BIS also added a number of companies in China to the Unverified List and Entity List of the Export Administration Regulations (“EAR”), including Yangtze Memory Technologies Co., Ltd (YMTC).

The effect of these changes, among others, is that Onto Innovation is required to conduct additional end-use diligence and in some instances obtain export licenses before providing products to certain customers. While we are taking appropriate measures to comply with all current export control laws and regulations applicable to our business and are applying for export licenses when required, there can be no assurance that export licenses applied for by us or our customers, will be granted in a timely manner or at all. We have experienced and may continue to experience a temporary loss of revenues while we are obtaining licenses with certain customers affected by export controls. Failure to obtain any required license could result in a reduction of anticipated revenues until we are able to replace unlicensed orders with other customer orders for which a license has been obtained or is not required, and there can be no assurance that replacement orders will be obtained on favorable terms, in a timely manner, or at all. In addition, any licenses that are granted to us or to our customers may have a short duration or require us to satisfy various conditions. Any of these occurrences could have a material adverse effect on our revenues, business, financial condition and results of operations. Further, we hold inventory of products that may be affected by these recent U.S. government actions, including potential order cancellations. If the sale of these products is delayed or we are unable to return or dispose of our inventory on favorable economic terms, we may incur additional carrying costs for the inventory or otherwise record charges associated with this inventory.

The administrative processing, attendant delays and risk of ultimately not obtaining required export approvals also put us at a disadvantage relative to our non-U.S. competitors who may not be required to comply with U.S. export controls. This difficulty and uncertainty has adversely affected our ability to compete for and win business from domestic customers in China.

It is possible that the U.S. government will impose additional export controls on our products or systems, which could lead to further revenue losses. Such changes could result in additional restrictions on our ability to sell products to customers in China and other jurisdictions. Foreign customers affected by current or future U.S. government sanctions, controls or threats of sanctions or controls may respond by developing their own solutions to replace our products or by utilizing our foreign competitors’ products. In addition, these export controls may also reduce overall global demand for our customers’ products or for other products produced or manufactured in the U.S. or based on U.S. technology, in turn reducing demand for our products, which could have a material adverse effect on our business, financial condition and results of operations. Increased restrictions on China exports may also lead to regulatory retaliation by the Chinese government, which may adversely impact our business. International trade disputes could result in increases in tariffs and other trade restrictions and protectionist measures that could adversely impact our operations and reduce the competitiveness of our products relative to local and global competitors.

Political and economic instability may result in reduced demand for our products.

We are subject to various global risks related to political and economic instabilities in countries in which we derive sales. If terrorist activities, armed conflict, civil or military unrest or political instability occurs outside of the United States, these events may result in reduced demand for our products. For example, the Ukraine–Russia geographic region is a major source of critical raw materials used for semiconductor manufacturing (such as neon and palladium), and any supply chain disruptions or shortages of such materials due to the ongoing conflict in that region could impact our customers in a manner that reduces demand for our products.

In addition, due to the complex relationships among China, Hong Kong, Taiwan, and the United States, there is risk that political, diplomatic, and national security influences might lead to trade, technology, or capital disputes, or disruptions affecting the semiconductor industry. In particular, the escalation of geopolitical tensions between China and Taiwan may cause disruptions in the markets in which we operate and lead to a decreased demand for our products, which could adversely affect our business in Asia or have a negative impact on the regional or global economy.

Furthermore, an outbreak of hostilities or other political upheaval in China, Taiwan, Japan, or South Korea, or an economic downturn in Asia or globally, would likely harm the operations of our customers in these countries. The effect of these types of events on our revenue and cash flows could be material because we derive substantial revenue from sales to semiconductor device foundries in Taiwan such as Taiwan Semiconductor Manufacturing Company Ltd., from memory chip manufacturers in South Korea such as Samsung Electronics Co., Ltd., and from semiconductor device manufacturers in Japan such as Toshiba Corporation.

Natural disasters, changes in climate and geo-political conflicts could materially adversely affect our worldwide operations (or those of our business partners).

The occurrence of one or more natural disasters such as hurricanes, tropical storms, fires, cyclones, earthquakes, tsunamis, flooding, typhoons, volcanic eruptions and weather conditions such as major or extended winter storms, droughts and tornadoes, whether as a result of climate change or otherwise, may disrupt manufacturing or other operations. For example, our Milpitas operations are located near major earthquake fault lines in California. There may also be conflict or uncertainty in the countries in which we operate, including public health issues (for example, an outbreak of a contagious disease such as COVID-19, avian influenza, measles or Ebola), safety issues, natural disasters, fire, disruptions of service from utilities, nuclear power plant accidents or general economic or political unrest, including war, civil unrest or terrorist attacks. We cannot provide any assurance that alternate means of conducting our operations (whether through alternate production capacity or service providers or otherwise) would be available if a major disruption were to occur or that, if such alternate means were available, they could be obtained on favorable terms. We have no operations in Russia, Belarus or Ukraine and do not have significant customers or suppliers in any of those countries. Consequently, to date, our operations have not been materially adversely affected by Russia's invasion of Ukraine. However, if the Russia-Ukraine conflict escalates and/or the U.S. and other jurisdictions impose additional sanctions on Russia and its supporters, there could be a disruption to the global economy and/or supply chains that could adversely affect our business. For example, components used in certain of our products use raw materials that may be sourced from Russia and Ukraine; if supply of those materials is disrupted it could adversely impact our ability manufacture and sell those products, which could adversely affect our results of operations.

We may face difficulties in staffing and managing foreign branch operations due to political tensions or cultural differences.

During periods of tension between the governments of the United States and certain other countries, it is often difficult for U.S. companies such as ours to staff and manage operations in such countries. Language and other cultural differences may also inhibit our sales and marketing efforts and create internal communication problems among our U.S. and foreign research and development teams, increasing the difficulty of managing multiple remote locations performing various development, quality assurance, and yield ramp analysis projects.

Currency fluctuations may impact our international sales or expose us to exchange rate risk.

A substantial portion of our international sales are denominated in U.S. dollars. As a result, if the dollar rises in value in relation to foreign currencies, our systems will become more expensive to customers outside the United States and may be less competitive with systems produced by competitors outside the United States. These conditions could negatively impact our international sales. Foreign sales also expose us to collection risk in the event it becomes more expensive for our foreign customers to convert their local currencies into U.S. dollars. Additionally, in the event a larger portion of our revenue becomes denominated in foreign currencies, we would be subject to a potentially significant exchange rate risk, and any failure to sufficiently hedge or otherwise manage these risks could materially and adversely affect our financial condition, results of operations, and liquidity.

Our internal controls with respect to anti-corruption laws may not be effective, and any failure to comply with such laws may result in severe sanctions and liabilities, which may negatively affect our business, operating results and financial condition.

We are subject to the Foreign Corrupt Practices Act of 1977, as amended (the "FCPA"), and other laws that prohibit improper payments or offers of payments to foreign governments and their officials and political parties by U.S. persons and issuers as defined by the statute, for the purpose of obtaining or retaining business. Also, similar worldwide anti-bribery laws, such as the U.K. Bribery Act and Chinese anti-corruption laws, generally prohibit companies and their intermediaries from making improper payments to non-U.S. officials for the purpose of obtaining or retaining business. Some of our distribution partners are located in parts of the world that have experienced governmental corruption to some degree and, in certain circumstances, strict compliance with anti-bribery laws may conflict with local customs and practices. The policies and procedures we have implemented to discourage these practices by our employees, our existing safeguards and any future improvements may prove to be ineffective, and our employees, consultants, sales agents or distributors may engage in conduct for which we might be held responsible. Violations of the FCPA or international anti-corruption laws may result in severe criminal or civil sanctions, and we may be subject to other liabilities, which could negatively affect our business, operating results and financial condition. In addition, the U.S. government may seek to hold us liable for successor liability FCPA violations committed by companies in which we invest or that we acquire. We cannot assure you that our internal control policies and procedures will protect us from reckless or negligent acts committed by our employees, distributors, partners, consultants or agents.

Risks Related to Tax Laws, Financial Markets and the Environment

Changes in tax rates or tax liabilities could affect results.

As a global company, we are subject to taxation in the United States and various other countries. Significant judgment is required to determine and estimate worldwide tax liabilities. Our future annual and quarterly tax rates could be affected by numerous factors, including changes in the (1) applicable tax laws; (2) composition of earnings in countries with differing tax rates; or (3) recoverability of our deferred tax assets and liabilities. Beginning in 2022, the U.S. Tax Cuts and Jobs Act of 2017 ("TCJA") eliminated the existing option to deduct research and development expenditures and requires taxpayers to amortize them over five years pursuant to IRC Section 174. Although Congress is considering legislation that would defer the amortization requirement to later years, we have no assurance that the provision will be repealed or otherwise modified. The requirement reduced our cash flows for 2022 and may continue to reduce our cash flows in 2023 and beyond, unless repealed. In addition, recent proposals to increase the U.S. corporate income tax rate, increase U.S. taxation of international business operations and impose a global minimum tax could have a negative impact on our tax position depending upon the terms of the final enacted legislation. Based on the nature of the uncertainties around specific legislation to be enacted, we have not quantified the impact of this risk. Many countries and organizations such as the Organization for Economic Cooperation and Development are also actively considering changes to existing tax laws or have proposed or enacted new laws that could increase our tax obligations in countries where we do business or cause us to change the way we operate our business. Any of these developments or changes in federal, state, or international tax laws or tax rulings could adversely affect our effective tax rate and our results of operations.

In addition, we are subject to regular examination of our income tax returns by the Internal Revenue Service and other tax authorities. We regularly assess the likelihood of favorable or unfavorable outcomes resulting from these examinations to determine the adequacy of our provision for income taxes. Although we believe our tax estimates are reasonable, there can be no assurance that any final determination will not be materially different from the treatment reflected in our historical income tax provisions and accruals, which could materially and adversely affect our results of operations.

The Organization for Economic Co-operation and Development ("OECD"), released guidance covering various topics, including country-by-country reporting, definitional changes to permanent establishment and Base Erosion and Profit Shifting ("BEPS"), an initiative that aims to standardize and modernize global tax policy. Depending on the final form of guidance adopted by OECD members and legislation ultimately enacted, if any, there may be significant consequences for us due to our international business activities, including, but not limited to, an increase in our tax uncertainty and adverse effects on our provision for income taxes.

Turmoil or fluctuations in the credit markets and the financial services industry may negatively impact our business, results of operations, financial condition or liquidity, and our factoring arrangements may expose us to additional risks.

In the past, global credit markets and the financial services industry have experienced periods of turmoil and upheaval characterized by the tightening of the credit markets, the weakening of the global economy and an unprecedented level of intervention from the United States and other governments. Adverse economic conditions, such as sustained periods of economic uncertainty or a crisis in the financial markets may have a material adverse effect on our liquidity and financial condition if our ability to obtain credit from the capital financial markets, or from trade creditors was impaired. In addition, a worsening economy or an economic crisis could also adversely impact our customers' ability to finance the purchase of systems from us or our suppliers' ability to provide us with product, either of which may negatively impact our business and results of operations.

We are subject to various environmental laws and regulations that could impose substantial costs upon us, and failure to comply with such laws and regulations may harm our business, operating results and financial condition.

Some of our operations use substances regulated under various federal, state, local, and international laws governing the environment, including those relating to the storage, use, discharge, disposal, labeling, and human exposure to hazardous and toxic materials. We could incur costs, fines and civil or criminal sanctions, third-party property damage or personal injury claims, or could be required to incur substantial investigation or remediation costs, if we were to violate or become liable under environmental laws. Liability under environmental laws can be joint and several and without regard to comparative fault. Compliance with current or future environmental laws and regulations could restrict our ability to expand our facilities or require us to acquire additional expensive equipment, modify our manufacturing processes, or incur other significant expenses. We may unintentionally violate environmental laws or regulations in the future as a result of human error, equipment failure or other causes. In addition to the potential adverse effects on our business operations of such an event, we are committed to maintaining

safe working conditions for our employees and sourcing, manufacturing, and distributing our products in a responsible and environmentally friendly manner, and any failure on our part to do so may cause reputational harm for the Company.

Customer and investor focus on our environmental, social and governance responsibility practices and policies, and related regulatory requirements, may make our supply chain more complex, and any failure to comply with customer or investor guidelines or applicable laws and regulations may adversely affect our relationship with customers and investors or our reputation and results of operations.

There is an increasing focus on corporate environmental, social and governance (“ESG”) responsibility in the semiconductor industry, particularly with OEMs that manufacture consumer electronics. A number of our customers have adopted, or may adopt, procurement policies that include ESG provisions or requirements that their suppliers should comply with, or they may seek to include such provisions or requirements in their procurement terms and conditions. An increasing number of investors are also requiring companies to disclose corporate ESG policies, practices and metrics. Legal and regulatory requirements, as well as investor expectations, on corporate ESG practices and disclosure, are subject to change, can be unpredictable, and may be difficult and expensive for us to comply with, given the complexity of our supply chain and manufacturing. If we are unable to comply, or are unable to cause our suppliers or contract manufacturers to comply, with such policies or provisions or meet the requirements of our customers and our investors, a customer may stop purchasing products from us or an investor may sell their shares, and may take legal action against us, which could harm our reputation, revenue and results of operations.

Risks Related to Growth and Acquisitions

We may choose to acquire new and complementary businesses, products or technologies instead of developing them ourselves, and we may be unable to complete these acquisitions or may not be able to successfully integrate an acquired business in a cost-effective and non-disruptive manner.

Our success depends on our ability to continually enhance and broaden our product offerings in response to changing technologies, customer demands and competitive pressures. To this end, we have, from time to time, engaged in the process of identifying, analyzing and negotiating possible acquisition transactions, and, from time to time, acquiring one or more businesses, and we expect to continue to do so in the future. We may choose to acquire new and complementary businesses, products, technologies and/or services instead of developing them ourselves. We may, however, face competition for acquisition targets from larger and more established companies with greater financial resources, making it more difficult for us to complete acquisitions. We cannot provide any assurance that we will be successful in consummating future acquisitions on favorable terms or that we will realize the benefits that we anticipate from one or more acquisitions that we consummate. Integrating any business, product, technology or service into our current operations could be expensive and time-consuming and/or disrupt our ongoing business. Further, there are numerous risks associated with acquisitions and potential acquisitions, including, but not limited to:

- diversion of management’s attention from day-to-day operational matters and current products and customers;
- lack of synergy or the inability to successfully integrate the new business or to realize expected synergies;
- integration of acquired businesses and their operations, including enterprise resource planning systems, may be costly and time-consuming and divert resources away from other projects;
- failure to commercialize the new technology or business;
- failure to meet the expected performance of the new technology or business;
- failure to retain key employees and customer or supplier relationships;
- lower-than-expected market opportunities or market acceptance of any new products; and
- unexpected reduction of sales of existing products as a result of the introduction of new products.

Our inability to consummate one or more acquisitions on favorable terms, or our failure to realize the intended benefits from one or more acquisitions, could have a material adverse effect on our business, liquidity, financial position and/or results of operations, including as a result of our incurrence of indebtedness and related interest expense and our assumption of unforeseen

contingent liabilities. We might need to raise additional funds through public or private equity or debt financings to finance any acquisition. In that event, we could be forced to obtain financing on terms that are not favorable to us and, in the case of equity financing, that result in dilution to our stockholders. In addition, any impairment of goodwill or other intangible assets, amortization of intangible assets, write-down of other assets or charges resulting from the costs of acquisitions and purchase accounting could harm our business and operating results.

If we cannot effectively manage growth, our business may suffer.

Over the long-term, we intend to grow our business by increasing our sales efforts and completing strategic acquisitions. To effectively manage growth, we must, among other things:

- engage, train and manage a larger sales force and additional service personnel;
- expand the geographic coverage of our sales force;
- expand our information systems;
- identify and successfully integrate acquired businesses into our operations; and
- administer appropriate financial and administrative control procedures.

Growth of our business will likely place a significant strain on our management, financial, operational, technical, sales and administrative resources. Any failure to effectively manage our growth may cause our business to suffer and our stock price to decline.

Risks Related to the Global Economy and the Semiconductor Industry

Cyclical nature of the semiconductor device industry has led to substantial decreases in demand for our systems in the past and may, from time to time, continue to do so.

Our operating results are subject to significant variation due to global economic conditions and the cyclical nature of the semiconductor device industry. Our business depends upon the capital expenditures of semiconductor device manufacturers, which, in turn, depend upon the current and anticipated market demand for semiconductors and products using semiconductors. The timing, length and severity of the up-and-down cycles in the semiconductor equipment industry are difficult to predict. In recent history, the industry has experienced significant downturns, generally in connection with declines in economic conditions. This cyclical nature of the industry in which we operate affects our ability to accurately predict future revenue and, thus, future expense levels. When cyclical fluctuations result in lower-than-expected revenue levels, operating results may be adversely affected, and cost reduction measures may be necessary in order for us to remain competitive and financially sound. During a down cycle, we must be in a position to adjust our cost and expense structure to prevailing market conditions and to continue to motivate and retain our key employees. In addition, during periods of rapid growth, we must be able to increase manufacturing capacity and personnel to meet customer demand. We can provide no assurance that these objectives can be met in a timely manner in response to industry cycles, and we cannot predict when and to what extent sales may normalize, or when and to what extent gross margins may improve, following any such occurrence. If we fail to respond to industry cycles, our business could be seriously harmed.

We may also experience supplier or customer issues as a result of adverse macroeconomic conditions. If our customers have difficulties in obtaining capital or financing, this could result in lower sales. Customers with liquidity issues could also result in an increase in bad debt expense. These conditions could also affect our key suppliers, which could affect their ability to supply parts and result in delays of our customer shipments.

Our future rate of growth is highly dependent on the development and growth of the market for microelectronic device inspection, lithography and metrology equipment.

We target our products to address the needs of microelectronic device manufacturers for defect inspection, metrology and lithography. If for any reason the market for microelectronic device inspection, lithography or metrology equipment fails to grow in the long term, we may be unable to maintain current revenue levels in the short term and maintain our historical growth in the long term. Growth in the inspection market is dependent to a large extent upon microelectronic manufacturers replacing manual

inspection with automated inspection technology. Growth in the metrology market is dependent to a large extent upon new chip designs and capacity expansion of microelectronic manufacturers. Growth in the lithography market is dependent on the development of cost-effective packaging with high fine pitch RDLs, ultimately migrating to multi-die, large, form-factor packages. There can be no assurance that manufacturers will undertake these actions at the rate we expect.

General Risk Factors

Provisions of our charter documents and of Delaware law could discourage potential acquisition proposals and/or delay, deter or prevent a change in control of our company.

Provisions of our certificate of incorporation and by-laws may inhibit changes in control of our company not approved by our Board of Directors. These provisions also limit the circumstances in which a premium can be paid for our common stock and in which a proxy contest for control of our board may be initiated. These provisions provide for:

- a prohibition on stockholder actions through written consent;
- a requirement that special meetings of stockholders be called only by the chairperson of our Board of Directors or majority of our directors;
- advance notice requirements for stockholder proposals and director nominations by stockholders;
- the authority of our Board of Directors to issue, without stockholder approval, preferred stock with such terms as the Board may determine; and
- the authority of our board, without stockholder approval, to adopt a stockholder rights plan.

We are also entitled to avail ourselves of the protections of Section 203 of the Delaware General Corporation Law, which could inhibit changes in control of the Company.

Our stock price is volatile.

The market price of our common stock has fluctuated widely. Consequently, the current market price of our common stock may not be indicative of future market prices, and we may be unable to sustain or increase the value of an investment in our common stock. Factors affecting our stock price may include:

- variations in operating results from quarter to quarter;
- changes in earnings estimates by analysts or our failure to meet analysts' expectations;
- changes in the market price per share of our public company customers;
- market conditions in the semiconductor and other industries into which we sell products;
- general economic conditions;
- political changes, hostilities or natural disasters such as hurricanes and floods;
- the impact of the COVID-19 pandemic, or other future infectious disease pandemics, on the global economy and on our customers, suppliers, employees, and business;
- low trading volume of our common stock; and
- the number of firms making a market in our common stock.

In addition, the stock market has experienced periods of significant price and volume fluctuations. These fluctuations have particularly affected the market prices of the securities of high technology companies like ours. Any such market fluctuations in the future could adversely affect the market price of our common stock.

Item 2. Unregistered Sales of Equity Securities and Use of Proceeds

In November 2020, the Onto Innovation Board of Directors approved a share repurchase authorization, which allows the Company to repurchase up to \$100 million worth of shares of its common stock. During the three months ended April 1, 2023, we repurchased 46 thousand shares of common stock under this repurchase authorization and those shares were subsequently retired. At April 1, 2023, there was \$31.6 million available for future share repurchases under this share repurchase authorization. For further information, see Note 15, "Share Repurchase Authorization" of the Notes to the Condensed Consolidated Financial Statements.

In addition to our share repurchase program, we withhold common stock shares associated with net share settlements to cover tax withholding obligations upon the vesting of restricted stock unit awards and stock option exercises under the Company's equity incentive program. During the three months ended April 1, 2023, we withheld 75 thousand shares through net share settlements. For the three month period ended April 1, 2023, net share settlements cost \$6.3 million. Please refer to Note 9, "Share-Based Compensation," of the Notes to the Condensed Consolidated Financial Statements for further discussion regarding our equity incentive plan.

The following table provides details of common stock purchased during the three months ended April 1, 2023 (in thousands, except per share data):

Period	Total Number of Shares Purchased (1)	Average Price Paid per Share	Total Number of Shares Purchased as Part of Publicly Announced Program	Maximum Approximate Dollar Value of Shares that May Yet be Purchased Under the Program
January 1, 2023 - February 1, 2023	48	\$ 69.55	46	\$ 31,577
February 2, 2023 - March 1, 2023	60	\$ 82.98	—	\$ 31,577
March 2, 2023 - April 1, 2023	13	\$ 87.69	—	\$ 31,577
Three months ended April 1, 2023	121	\$ 78.17	46	

¹ Includes shares withheld through net share settlements.

Item 3. Defaults Upon Senior Securities

None.

Item 4. Mine Safety Disclosures

None.

Item 5. Other Information

None.

Item 6. Exhibits

<u>Exhibit No.</u>	<u>Description</u>
<u>3.1</u>	<u>Amended and Restated Certificate of Incorporation of Onto Innovation Inc., dated October 25, 2019, incorporated by reference to Exhibit 3.2 to the Company's Form 8-K filed with the SEC on October 28, 2019 (File No. 001-39110).</u>
<u>3.2</u>	<u>Amended and Restated Bylaws of Onto Innovation Inc., dated January 22, 2020, incorporated by reference to Exhibit 3.1 to the Company's Form 8-K filed with the SEC on January 27, 2020 (File No. 001-39110).</u>
<u>31.1*</u>	<u>Rule 13a-14(a) Certification of Chief Executive Officer of the Registrant pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.</u>
<u>31.2*</u>	<u>Rule 13a-14(a) Certification of Chief Financial Officer of the Registrant pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.</u>
<u>32.1**</u>	<u>Certification of the Chief Executive Officer pursuant to 18 U.S.C Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.</u>
<u>32.2**</u>	<u>Certification of the Chief Financial Officer pursuant to 18 U.S.C Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.</u>
101.INS*	Inline XBRL Instance Document – the instance document does not appear in the Interactive Data File because its XBRL tags are embedded within the Inline XBRL document.
101.SCH*	Inline XBRL Taxonomy Extension Schema Document
101.CAL*	Inline XBRL Taxonomy Extension Calculation Linkbase Document
101.DEF*	Inline XBRL Taxonomy Extension Definition Linkbase Document
101.LAB*	Inline XBRL Taxonomy Extension Label Linkbase Document
101.PRE*	Inline XBRL Taxonomy Extension Presentation Linkbase Document
104*	Cover Page Interactive Data File (formatted as Inline XBRL and included in Exhibit 101)

* Filed herewith.

** Furnished herewith.

+ Management contract, compensatory plan or arrangement.

SIGNATURES

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

Onto Innovation Inc.

Date: May 4, 2023

By: /s/ Michael P. Plisinski

Michael P. Plisinski

Chief Executive Officer

Date: May 4, 2023

By: /s/ Mark R. Slicer

Mark R. Slicer

Chief Financial Officer and Principal Accounting Officer

**Rule 13a-14(a) Certification of Chief Executive Officer
Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002**

I, Michael P. Plisinski, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Onto Innovation Inc.;

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: May 4, 2023

By: /s/ Michael P. Plisinski
Michael P. Plisinski
Chief Executive Officer

**Rule 13a-14(a) Certification of Chief Financial Officer
Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002**

I, Mark R. Slicer, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Onto Innovation Inc.;
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: May 4, 2023

By: /s/ Mark R. Slicer
Mark R. Slicer
Chief Financial Officer

**CERTIFICATION OF CHIEF EXECUTIVE OFFICER PURSUANT TO 18 U.S.C. SECTION
1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002**

I, Michael P. Plisinski, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that the Quarterly Report of Onto Innovation Inc. on Form 10-Q for the period ended April 1, 2023 fully complies with the requirements of Section 13(a) or 15(d), as applicable, of the Securities Exchange Act of 1934 and that the information contained in the Quarterly Report on Form 10-Q fairly presents in all material respects the financial condition and results of operations of Onto Innovation Inc.

Date: May 4, 2023

By: /s/ Michael P. Plisinski
Michael P. Plisinski
Chief Executive Officer

**CERTIFICATION OF CHIEF FINANCIAL OFFICER
PURSUANT TO 18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002**

I, Mark R. Slicer, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that the Quarterly Report of Onto Innovation Inc. on Form 10-Q for the period ended April 1, 2023 fully complies with the requirements of Section 13(a) or 15(d), as applicable, of the Securities Exchange Act of 1934 and that the information contained in the Quarterly Report on Form 10-Q fairly presents in all material respects the financial condition and results of operations of Onto Innovation Inc.

Date: May 4, 2023

By: /s/ Mark R. Slicer
Mark R. Slicer
Chief Financial Officer
