

**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 June 29, 2024

OR

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

For the transition period from to

Commission File 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 July 16, 2024 was 49,383,617.

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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		Six Months Ended	
	June 29, 2024	July 1, 2023	June 29, 2024	July 1, 2023
Revenue	\$ 242,327	\$ 190,662	\$ 471,172	\$ 389,827
Cost of revenue	114,091	90,201	224,651	184,391
Gross profit	128,236	100,461	246,521	205,436
Operating expenses:				
Research and development	27,044	27,043	53,599	54,285
Sales and marketing	18,976	16,024	37,295	31,661
General and administrative	20,271	18,762	37,833	37,999
Amortization	13,112	13,825	26,224	27,649
Total operating expenses	79,403	75,654	154,951	151,594
Operating income	48,833	24,807	91,570	53,842
Interest income, net	8,496	4,758	15,857	8,206
Other (expense) income, net	(60)	(1,710)	734	(1,991)
Income before provision for income taxes	57,269	27,855	108,161	60,057
Provision for income taxes	4,320	1,959	8,359	5,093
Net income	\$ 52,949	\$ 25,896	\$ 99,802	\$ 54,964
Earnings per share:				
Basic	\$ 1.07	\$ 0.53	\$ 2.02	\$ 1.12
Diluted	\$ 1.07	\$ 0.53	\$ 2.01	\$ 1.12
Weighted average number of shares outstanding:				
Basic	49,342	48,976	49,286	48,865
Diluted	49,674	49,274	49,656	49,175

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		Six Months Ended	
	June 29, 2024	July 1, 2023	June 29, 2024	July 1, 2023
Net income	\$ 52,949	\$ 25,896	\$ 99,802	\$ 54,964
Other comprehensive loss, net of tax:				
Change in net unrealized (losses) gains on available-for-sale marketable securities	(201)	(163)	(858)	1,229
Change in currency translation adjustments	(1,996)	(2,998)	(4,589)	(1,908)
Total other comprehensive loss, net of tax	(2,197)	(3,161)	(5,447)	(679)
Total comprehensive income	\$ 50,752	\$ 22,735	\$ 94,355	\$ 54,285

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

ONTO INNOVATION INC.
CONDENSED CONSOLIDATED BALANCE SHEETS

(In thousands)
(Unaudited)

	June 29, 2024	December 30, 2023
ASSETS		
<i>Current Assets:</i>		
Cash and cash equivalents	\$ 172,571	\$ 233,508
Marketable securities	613,461	464,303
Accounts receivable, less allowance of \$2,468 and \$2,659	237,830	226,556
Inventories, net	319,712	327,773
Prepaid expenses and other current assets	41,638	31,127
Total current assets	1,385,212	1,283,267
Property, plant and equipment, net	115,467	103,611
Goodwill	315,811	315,811
Identifiable intangible assets, net	141,200	167,375
Deferred income taxes	29,374	18,836
Other assets	18,352	20,812
Total assets	\$ 2,005,416	\$ 1,909,712
LIABILITIES AND STOCKHOLDERS' EQUITY		
<i>Current liabilities:</i>		
Accounts payable	\$ 51,373	\$ 49,869
Accrued liabilities	40,450	42,062
Deferred revenue	28,167	24,763
Other current liabilities	28,430	31,032
Total current liabilities	148,420	147,726
Other non-current liabilities	25,320	25,451
Total liabilities	173,740	173,177
Commitments and contingencies		
<i>Stockholders' equity:</i>		
Common stock	49	49
Additional paid-in capital	1,262,815	1,262,029
Accumulated other comprehensive loss	(13,346)	(7,899)
Accumulated earnings	582,158	482,356
Total stockholders' equity	1,831,676	1,736,535
Total liabilities and stockholders' equity	\$ 2,005,416	\$ 1,909,712

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

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

	Six Months Ended	
	June 29, 2024	July 1, 2023
Cash flows from operating activities:		
Net income	\$ 99,802	\$ 54,964
Adjustments to reconcile net income to net cash and cash equivalents provided by operating activities:		
Amortization of intangibles	26,224	27,649
Depreciation	6,921	5,815
Share-based compensation	14,730	13,864
Provision for inventory valuation	3,941	6,386
Deferred income taxes	(10,823)	(11,020)
Other, net	(827)	1,136
Changes in operating assets and liabilities	(17,538)	(17,039)
Net cash and cash equivalents provided by operating activities	122,430	81,755
Cash flows from investing activities:		
Purchases of marketable securities	(394,756)	(209,154)
Proceeds from maturities and sales of marketable securities	248,084	198,717
Purchases of property, plant and equipment	(19,228)	(12,463)
Net cash and cash equivalents used in investing activities	(165,900)	(22,900)
Cash flows from financing activities:		
Purchases and retirement of common stock	—	(3,197)
Tax payments related to shares withheld for share-based compensation plans	(17,959)	(9,949)
Payment of contingent consideration for acquired business	—	(304)
Issuance of shares through share-based compensation plans	4,014	5,285
Net cash and cash equivalents used in financing activities	(13,945)	(8,165)
Effect of exchange rate changes on cash and cash equivalents	(3,522)	(2,305)
Net (decrease) increase in cash and cash equivalents	(60,937)	48,385
Cash and cash equivalents at beginning of period	233,508	175,872
Cash and cash equivalents at end of period	\$ 172,571	\$ 224,257
Supplemental disclosure of cash flow information:		
Income taxes paid (net of refunds)	\$ 21,524	\$ 18,888

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	Accumulated	Accumulated	
	Shares	Amount	Paid-in	Other	Earnings	Total
			Capital	Comprehensive		
				Loss		
Balance at December 30, 2023	49,086	\$ 49	\$ 1,262,029	\$ (7,899)	\$ 482,356	\$ 1,736,535
Net income	—	—	—	—	46,853	46,853
Share-based compensation	—	—	6,486	—	—	6,486
Issuance of shares through share-based compensation plans, net	169	—	4,015	—	—	4,015
Share-based compensation plan withholdings	(53)	—	(9,088)	—	—	(9,088)
Currency translation	—	—	—	(2,593)	—	(2,593)
Unrealized loss on investments	—	—	—	(657)	—	(657)
Balance at March 30, 2024	49,202	\$ 49	\$ 1,263,442	\$ (11,149)	\$ 529,209	\$ 1,781,551
Net income	—	—	—	—	52,949	52,949
Share-based compensation	—	—	8,244	—	—	8,244
Issuance of shares through share-based compensation plans, net	181	—	—	—	—	—
Share-based compensation plan withholdings	(44)	—	(8,871)	—	—	(8,871)
Currency translation	—	—	—	(1,996)	—	(1,996)
Unrealized loss on investments	—	—	—	(201)	—	(201)
Balance at June 29, 2024	49,339	\$ 49	\$ 1,262,815	\$ (13,346)	\$ 582,158	\$ 1,831,676

	Common Stock		Additional	Accumulated	Accumulated	
	Shares	Amount	Paid-in	Other	Earnings	Total
			Capital	Comprehensive		
				Loss		
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, net	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
Net income	—	—	—	—	25,896	25,896
Share-based compensation	—	—	7,745	—	—	7,745
Issuance of shares through share-based compensation plans, net	227	—	5,285	—	—	5,285
Share-based compensation plan withholdings	(56)	—	(3,676)	—	—	(3,676)
Currency translation	—	—	—	(2,998)	—	(2,998)
Unrealized loss on investments	—	—	—	(163)	—	(163)
Balance at July 1, 2023	48,972	\$ 49	\$ 1,251,193	\$ (10,689)	\$ 416,161	\$ 1,656,714

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 and six months ended June 29, 2024 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 30, 2023 (the “2023 Form 10-K”) filed with the Securities and Exchange Commission on February 26, 2024. The accompanying Condensed Consolidated Balance Sheet at December 30, 2023 has been derived from the audited consolidated financial statements included in the 2023 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 28, 2024 (“fiscal year 2024”) is a 52-week fiscal year. The first quarter of the Company’s fiscal year 2024 ended on March 30, 2024, the second quarter ended on June 29, 2024 and the third quarter ends on September 28, 2024. Our fiscal year ended December 30, 2023 was a 52-week fiscal year. The second quarter of the fiscal year ended December 30, 2023 ended on July 1, 2023.

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. 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, 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

Recently Adopted or Effective

There have been no recent accounting pronouncements or changes in accounting pronouncements during the three and six months ended June 29, 2024, as compared to the recent accounting pronouncements described in the Company’s Annual Report on Form 10-K for the fiscal year ended December 30, 2023, that are of significance, or potential significance, to the Company.

Updates Not Yet Effective

In November 2023, the Financial Accounting Standards Board (“FASB”) issued Accounting Standards Update (“ASU”) 2023-07, “Segment Reporting (Topic 280): Improvements to Reportable Segment Disclosures,” which expands disclosures about a public entity’s reportable segments and requires more enhanced information about a reportable segment including information about the reportable segment’s expenses, interim segment profit or loss, and how a public entity’s chief operating decision maker

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uses reported segment profit or loss information in assessing segment performance and allocating resources. The guidance is effective for financial statements issued for fiscal years beginning after December 15, 2023, and interim periods within fiscal years beginning after December 15, 2024, with early adoption permitted. The Company is required to adopt this standard in fiscal year 2024 for the annual reporting period ending December 28, 2024, with retrospective disclosure of prior periods presented. The Company is currently in the process of evaluating the impact of adoption on its Consolidated Financial Statements.

In December 2023, the FASB issued ASU 2023-09, "Income Taxes (Topic 740): Improvements to Income Tax Disclosures," which requires public entities to disclose consistent categories and greater disaggregation of information in the rate reconciliation and for income taxes paid. It also includes certain other amendments to improve the effectiveness of income tax disclosures. The guidance is effective for financial statements issued for annual periods beginning after December 15, 2024, with early adoption permitted. The Company is required to adopt this standard prospectively in fiscal year 2025 for the annual reporting period ending December 27, 2025. The Company is currently in the process of evaluating the impact of adoption on its Consolidated Financial Statements.

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 June 29, 2024 and December 30, 2023:

	Fair Value Measurements Using Significant Other Observable Inputs (Level 2)	
	June 29, 2024	December 30, 2023
Assets:		
Available-for-sale debt securities:		
Government notes and bonds	\$ 257,077	\$ 195,800
Certificates of deposit	79,858	67,467
Commercial paper	128,529	99,635
Corporate bonds	147,997	101,401
Foreign currency forward contracts	521	—
Total assets	<u>\$ 613,982</u>	<u>\$ 464,303</u>
Liabilities:		
Foreign currency forward contracts	\$ —	\$ 1,370
Total Liabilities	<u>\$ —</u>	<u>\$ 1,370</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

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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.

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

NOTE 3. Marketable Securities

At June 29, 2024 and December 30, 2023, marketable securities are categorized as follows:

	Amortized Cost	Gross Unrealized Holding Gains	Gross Unrealized Holding Losses	Fair Value
June 29, 2024				
Government notes and bonds	\$ 257,443	\$ 9	\$ 375	\$ 257,077
Certificates of deposit	79,860	19	21	79,858
Commercial paper	128,570	15	56	128,529
Corporate bonds	148,102	90	195	147,997
Total marketable securities	<u>\$ 613,975</u>	<u>\$ 133</u>	<u>\$ 647</u>	<u>\$ 613,461</u>
December 30, 2023				
Government notes and bonds	\$ 195,733	\$ 393	\$ 326	\$ 195,800
Certificates of deposit	67,377	93	3	67,467
Commercial paper	99,591	54	10	99,635
Corporate bonds	101,146	391	136	101,401
Total marketable securities	<u>\$ 463,847</u>	<u>\$ 931</u>	<u>\$ 475</u>	<u>\$ 464,303</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 June 29, 2024 and December 30, 2023:

	June 29, 2024		December 30, 2023	
	Amortized Cost	Fair Value	Amortized Cost	Fair Value
Due within one year	\$ 448,563	\$ 448,166	\$ 331,136	\$ 330,937
Due after one through five years	119,037	118,920	132,711	133,366
Due after five through ten years	—	—	—	—
Due after ten years	46,375	46,375	—	—
Total marketable securities	<u>\$ 613,975</u>	<u>\$ 613,461</u>	<u>\$ 463,847</u>	<u>\$ 464,303</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 loss." Gross realized gains and losses on available-for-sale securities are included in "Other (expense) income, net" on the Condensed Consolidated Statements of Operations and were not material during the three and six months ended June 29, 2024 and July 1, 2023. 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 June 29, 2024 and December 30, 2023 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.

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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 June 29, 2024 and December 30, 2023:

	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
June 29, 2024				
Government notes and bonds	\$ 107,898	\$ 262	\$ 38,854	\$ 114
Certificates of deposit	26,520	21	—	—
Commercial paper	92,029	56	—	—
Corporate bonds	81,490	163	10,634	31
Total	<u>\$ 307,937</u>	<u>\$ 502</u>	<u>\$ 49,488</u>	<u>\$ 145</u>
December 30, 2023				
Government notes and bonds	\$ 82,776	\$ 325	\$ 180	\$ 1
Certificates of deposit	11,839	3	—	—
Commercial paper	20,121	10	—	—
Corporate bonds	20,268	103	5,999	33
Total	<u>\$ 135,004</u>	<u>\$ 441</u>	<u>\$ 6,179</u>	<u>\$ 34</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 June 29, 2024 and December 30, 2023, these contracts were denominated in euro, Chinese renminbi, Japanese yen, Korean won, Singapore dollars, and Taiwanese 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) income, 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 June 29, 2024 and December 30, 2023 were as follows:

	June 29, 2024	December 30, 2023
Notional amount	\$ 47,175	\$ 51,551
Fair value of asset (liability)	\$ 521	\$ (1,370)

NOTE 5. Purchased Intangible Assets

Intangible Assets

Purchased intangible assets as of June 29, 2024 and December 30, 2023 are as follows:

	Gross Carrying Amount	Accumulated Amortization	Net
June 29, 2024			
Finite-lived intangibles:			
Developed technology	\$ 378,246	\$ 277,687	\$ 100,559
Customer and distributor relationships	73,321	37,076	36,245
Trademarks and trade names	14,171	9,775	4,396
Total identifiable intangible assets	<u>\$ 465,738</u>	<u>\$ 324,538</u>	<u>\$ 141,200</u>
December 30, 2023			
Finite-lived intangibles:			
Developed technology	\$ 378,197	\$ 254,350	\$ 123,847
Customer and distributor relationships	73,321	34,782	38,539
Trademarks and trade names	14,171	9,182	4,989
Total identifiable intangible assets	<u>\$ 465,689</u>	<u>\$ 298,314</u>	<u>\$ 167,375</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
2024 (remainder)	\$ 22,963
2025	32,587
2026	31,394
2027	23,173
2028	12,288
2029	5,038
Thereafter	13,757
Total	<u>\$ 141,200</u>

NOTE 6. Balance Sheet Components

Inventories

Inventories, net are comprised of the following:

	June 29, 2024	December 30, 2023
Materials	\$ 212,447	\$ 234,471
Work-in-process	80,732	67,816
Finished goods	26,533	25,486
Total inventories, net	<u>\$ 319,712</u>	<u>\$ 327,773</u>

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Property, Plant and Equipment

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

	June 29, 2024	December 30, 2023
Machinery and equipment	\$ 79,939	\$ 69,828
Land and building	47,809	47,889
Computer equipment and software	25,190	17,790
Leasehold improvements	22,177	22,089
Furniture and fixtures	3,967	3,921
	179,082	161,517
Accumulated depreciation	(63,615)	(57,906)
Total property, plant and equipment, net	<u>\$ 115,467</u>	<u>\$ 103,611</u>

Other assets

Other assets are comprised of the following:

	June 29, 2024	December 30, 2023
Operating lease right-of-use assets	\$ 16,222	\$ 18,360
Other	2,130	2,452
Total other assets	<u>\$ 18,352</u>	<u>\$ 20,812</u>

Accrued liabilities

Accrued liabilities are comprised of the following:

	June 29, 2024	December 30, 2023
Payroll and related expenses	\$ 31,561	\$ 33,052
Warranty	8,752	8,934
Other	137	76
Total accrued liabilities	<u>\$ 40,450</u>	<u>\$ 42,062</u>

Other current liabilities

Other current liabilities are comprised of the following:

	June 29, 2024	December 30, 2023
Customer deposits	\$ 8,799	\$ 9,972
Current operating lease obligations	5,564	5,494
Income tax payable	3,649	3,210
Accrued professional fees	1,338	1,751
Other accrued taxes	5,276	3,570
Other	3,804	7,035
Total other current liabilities	<u>\$ 28,430</u>	<u>\$ 31,032</u>

Other non-current liabilities

Other non-current liabilities are comprised of the following:

	June 29, 2024	December 30, 2023
Non-current operating lease obligations	\$ 12,130	\$ 14,027
Unrecognized tax benefits (including interest)	8,294	7,358
Deferred revenue	3,114	2,462
Other	1,782	1,604
Total other non-current liabilities	<u>\$ 25,320</u>	<u>\$ 25,451</u>

NOTE 7. Commitments and Contingencies*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:

	Six Months Ended	
	June 29, 2024	July 1, 2023
Balance, beginning of the period	\$ 9,380	\$ 11,830
Accruals	5,653	4,659
Usage	(5,768)	(6,708)
Balance, end of the period	<u>\$ 9,265</u>	<u>\$ 9,781</u>

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. In the opinion of management, any potential liabilities resulting from any current disputes would not have a material adverse effect on the Company's unaudited interim condensed consolidated financial statements.

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, up to a maximum of \$100 million. The available line of credit as of June 29, 2024 was \$100 million with an available interest rate of 7.1%. 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

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

	Three Months Ended		Six Months Ended	
	June 29, 2024	July 1, 2023	June 29, 2024	July 1, 2023
Point-in-time	\$ 227,733	\$ 178,325	\$ 441,582	\$ 364,699
Over-time	14,594	12,337	29,590	25,128
Total revenue	<u>\$ 242,327</u>	<u>\$ 190,662</u>	<u>\$ 471,172</u>	<u>\$ 389,827</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. For contracts with a duration longer than one year, these amounts are recorded in other non-current liabilities in the Condensed Consolidated Balance Sheets. As of June 29, 2024 and December 30, 2023, the Company carried a long-term deferred revenue balance of \$3,114 and \$2,462, respectively.

Changes in deferred revenue were as follows:

	Three Months Ended		Six Months Ended	
	June 29, 2024	July 1, 2023	June 29, 2024	July 1, 2023
Balance, beginning of the period	\$ 28,879	\$ 30,383	\$ 27,225	\$ 33,014
Deferral of revenue	17,373	18,214	34,675	34,290
Recognition of current year deferred revenue	(10,718)	(14,464)	(20,243)	(23,134)
Recognition of prior period deferred revenue	(4,253)	(6,877)	(10,376)	(16,914)
Balance, end of the period	<u>\$ 31,281</u>	<u>\$ 27,256</u>	<u>\$ 31,281</u>	<u>\$ 27,256</u>

NOTE 9. Share-Based Compensation

Restricted Stock Unit Activity

A summary of the Company's restricted stock unit activity with respect to the six months ended June 29, 2024 is as follows:

	Number of Shares	Weighted Average Grant Date Fair Value
Nonvested at December 30, 2023	584	\$ 85.41
Granted	156	\$ 192.42
Vested	(309)	\$ 81.01
Forfeited	(7)	\$ 87.90
Nonvested at June 29, 2024	<u>424</u>	<u>\$ 127.98</u>

Of the 424 nonvested shares outstanding at June 29, 2024, 342 are service-based RSUs and 82 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 2024 and 2023 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 \$251.51 and \$100.79, respectively.

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As of June 29, 2024 and December 30, 2023, there was \$39,921 and \$26,559 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 1.4 years for June 29, 2024 and December 30, 2023, respectively.

NOTE 10. Other (Expense) Income, Net

Other (expense) income, net, is comprised of the following:

	Three Months Ended		Six Months Ended	
	June 29, 2024	July 1, 2023	June 29, 2024	July 1, 2023
Foreign currency exchange (losses) gains, net	\$ (54)	\$ (1,800)	\$ 589	\$ (2,107)
Other	(6)	90	145	116
Total other (expense) income, net	<u>\$ (60)</u>	<u>\$ (1,710)</u>	<u>\$ 734</u>	<u>\$ (1,991)</u>

NOTE 11. Income Taxes

The following table provides details of income taxes:

	Three Months Ended		Six Months Ended	
	June 29, 2024	July 1, 2023	June 29, 2024	July 1, 2023
Income before income taxes	\$ 57,269	\$ 27,855	\$ 108,161	\$ 60,057
Provision for income taxes	\$ 4,320	\$ 1,959	\$ 8,359	\$ 5,093
Effective tax rate	8 %	7 %	8 %	8 %

The income tax provision for the three and six months ended June 29, 2024 was computed based on the Company's annual forecast of profit by jurisdiction and forecasted effective tax rate for the year. The increase in the Company's income tax provision for the three and six months ended June 29, 2024 as compared to the three and six months ended July 1, 2023 was primarily due, in each case, to an increase in quarterly earnings, offset by an increase in the excess benefits associated with equity compensation. The Company's recorded effective tax rate for the periods presented is less than the U.S. statutory rate primarily due to projected Foreign Derived Intangible Income 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 unrealizability of such deferred tax assets is more likely than not. 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 \$13,960 at June 29, 2024 and December 30, 2023.

The Organization for Economic Co-operation and Development ("OECD") has been working on a Base Erosion and Profits Shifting ("BEPS") project that would change various aspects of the existing framework under which the Company's tax obligations are determined in many of the countries in which we operate. As part of the BEPS project, the OECD issued policies aimed to modernize global tax systems, including a country-by-country 15% minimum effective tax rate ("Pillar Two") for multinational companies. Numerous countries have enacted, or are in the process of enacting, legislation to implement the Pillar Two model rules with a subset of the rules becoming effective during the current year, and the remaining rules becoming effective in later periods. At this point in time, the Company does not expect any material tax impact associated with Pillar Two rules in the countries where it operates. As these rules continue to evolve with new legislation and guidance, the Company will continue to monitor and account for the enactment of Pillar Two and the potential impacts such rules may have on its effective tax rate and cash flows in future years.

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		Six Months Ended	
	June 29, 2024	July 1, 2023	June 29, 2024	July 1, 2023
Numerator:				
Net income	\$ 52,949	\$ 25,896	\$ 99,802	\$ 54,964
Denominator:				
Basic earnings per share - weighted average shares outstanding	49,342	48,976	49,286	48,865
Effect of potential dilutive securities:				
Restricted stock units and employee stock purchase grants - dilutive shares	332	298	370	310
Diluted earnings per share - weighted average shares outstanding	49,674	49,274	49,656	49,175
Earnings per share:				
Basic	\$ 1.07	\$ 0.53	\$ 2.02	\$ 1.12
Diluted	\$ 1.07	\$ 0.53	\$ 2.01	\$ 1.12

NOTE 13. Accumulated Other Comprehensive Loss

The components of accumulated other comprehensive loss, net of tax, were as follows:

	Foreign currency translation adjustments	Net unrealized gains (losses) on available-for-sale marketable securities	Accumulated other comprehensive loss
Balance at December 30, 2023	\$ (8,664)	\$ 765	\$ (7,899)
Net current period other comprehensive loss	(4,589)	(858)	(5,447)
Balance at June 29, 2024	\$ (13,253)	\$ (93)	\$ (13,346)

	Foreign currency translation adjustments	Net unrealized (losses) gains 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 (loss) income	(1,908)	1,229	(679)
Balance at July 1, 2023	\$ (9,023)	\$ (1,666)	\$ (10,689)

For the six months ended June 29, 2024 and July 1, 2023, tax effects on net income of amounts recorded in other comprehensive income (loss) were \$236 and \$(264), respectively.

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

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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				Six Months Ended			
	June 29, 2024		July 1, 2023		June 29, 2024		July 1, 2023	
Systems and software	\$ 210,428	87 %	\$ 159,353	83 %	\$ 405,264	86 %	\$ 326,177	84 %
Parts	16,788	7 %	18,142	10 %	36,896	8 %	38,565	10 %
Services	15,111	6 %	13,167	7 %	29,012	6 %	25,085	6 %
Total revenue	<u>\$ 242,327</u>	<u>100 %</u>	<u>\$ 190,662</u>	<u>100 %</u>	<u>\$ 471,172</u>	<u>100 %</u>	<u>\$ 389,827</u>	<u>100 %</u>

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		Six Months Ended	
	June 29, 2024	July 1, 2023	June 29, 2024	July 1, 2023
Revenue from third parties:				
South Korea	\$ 70,705	\$ 37,840	\$ 150,943	\$ 83,313
Taiwan	59,630	31,013	130,733	57,718
China	33,115	41,957	54,110	78,509
Southeast Asia	24,130	25,680	40,207	42,980
United States	18,916	33,237	39,784	73,951
Japan	19,278	13,732	32,613	28,235
Europe	16,553	7,203	22,782	25,121
Total revenue	<u>\$ 242,327</u>	<u>\$ 190,662</u>	<u>\$ 471,172</u>	<u>\$ 389,827</u>

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

	Six Months Ended	
	June 29, 2024	July 1, 2023
Taiwan Semiconductor Manufacturing Co. Ltd.	23 %	13 %
Samsung Semiconductor	20 %	21 %
SK Hynix Inc.	13 %	^

^ The customer accounted for less than 10% of total revenue during the period.

One customer’s net accounts receivable balance, Taiwan Semiconductor Manufacturing Co. Ltd. was individually greater than 10% of net accounts receivable at June 29, 2024, approximately 21% of the Company’s total net accounts receivable.

Two customers’ net accounts receivable balances, Taiwan Semiconductor Manufacturing Co. Ltd. and Samsung Semiconductor, were individually greater than 10% of net accounts receivable at December 30, 2023, in the aggregate approximately 29% of the Company’s total net accounts receivable.

Substantially all of the Company’s long-lived assets are located within the United States of America.

NOTE 15. Share Repurchase Authorization

In February 2024, the Onto Innovation Board of Directors approved a new share repurchase authorization, which allows the Company to repurchase up to \$200,000 worth of shares of its common stock. Repurchases may be made through both public market and private transactions from time to time. Any amount paid to repurchase the shares in excess of par value, including transaction costs, would be recorded directly as a decrease to additional paid-in capital and accumulated earnings. During the three and six month periods ended June 29, 2024, no shares of the Company’s common stock were repurchased under the share

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repurchase authorization. At June 29, 2024, there was \$200,000 available for future share repurchases under this share repurchase authorization.

NOTE 16. Restructuring

From time to time, the Company approves restructuring plans, which include workforce reductions, to streamline operations and align the Company's cost structure with its business outlook. These restructuring plans may result in charges to cost of goods sold for streamlining of certain manufacturing activities or for inventory write-downs primarily related to the exit of older product lines. Charges to operating expenses primarily include employee severance costs that are paid during the period incurred.

Restructuring expenses recorded in the Condensed Consolidated Statements of Operations are as follows:

	Three Months Ended		Six Months Ended	
	June 29, 2024	July 1, 2023	June 29, 2024	July 1, 2023
Cost of goods sold	\$ 703	\$ —	\$ 1,491	\$ 2,279
Operating expenses	621	1,192	879	3,226
Total restructuring expenses	<u>\$ 1,324</u>	<u>\$ 1,192</u>	<u>\$ 2,370</u>	<u>\$ 5,505</u>

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 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.

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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 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.

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 30, 2023 (the “2023 Form 10-K”) filed with the Securities and Exchange Commission (the “SEC”) on February 26, 2024 in the Items entitled “Risk Factors” and “Management’s Discussion and Analysis of Financial Condition and Results of Operations.” There have been no material changes in our critical accounting estimates from the information presented in Part II, Item 7. “Management’s Discussion and Analysis of Financial Condition and Results of Operations,” in the 2023 Form 10-K.

For more information, please see our critical accounting estimates as previously disclosed in the 2023 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 integrated circuit 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 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):

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	Three Months Ended			
	June 29, 2024		March 30, 2024	
Revenue	\$	242,327	\$	228,846
Gross profit	\$	128,236	\$	118,285
Gross profit as a percent of revenue		53 %		52 %
Total operating expenses	\$	79,403	\$	75,547
Net income	\$	52,949	\$	46,853
Diluted earnings per share	\$	1.07	\$	0.94

- In the fiscal quarter ended June 29, 2024 (the “June 2024 quarter”), revenue increased 6.0% compared to the fiscal quarter ended March 30, 2024 (the “March 2024 quarter”), primarily due to increases in sales to NAND customers in advanced nodes applications and sales to power and logic customers in specialty devices and advanced packaging. These increases were partially offset by decline in sales to foundry and DRAM customers during the June 2024 quarter.
- Gross profit as a percentage of revenue in the June 2024 quarter increased by 1% compared to the March 2024 quarter primarily due to increased volume and change in product mix.
- Operating expenses in the June 2024 quarter increased by 5% compared to the March 2024 quarter primarily due to an increase in compensation cost and restructuring expenses.

Our cash, cash equivalents and marketable securities balance increased to \$786.0 million at June 29, 2024, compared to \$697.8 million at December 30, 2023. This increase was primarily the result of \$122.4 million of cash generated from operating activities, partially offset by cash used for capital expenditures of \$19.2 million and \$18.0 million for tax payments related to net share settlement of employee stock-based compensation plans. Employee headcount at June 29, 2024 was approximately 1,520.

In 2022 and 2023, the United States government implemented additional export regulations for U.S. semiconductor technology sold in China. We have applied for, and in some cases received, export licenses to continue doing business with our customers that are affected by the new export rules. However, the new export controls have continued to negatively impact our net sales in China for the first and second fiscal quarters of 2024.

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

Results of Operations for the Three and Six Months Ended June 29, 2024 and July 1, 2023

Revenue. Our revenue is primarily derived from the sale of our systems, software licensing, services and spare parts. Our revenue of \$242.3 million increased 27.1% for the three months ended June 29, 2024 as compared to the three months ended July 1, 2023, in which revenue totaled \$190.7 million. For the six-month periods ended June 29, 2024 and July 1, 2023, our revenue totaled \$471.1 million and \$389.8 million, respectively, representing a year-over-year increase of 20.9%.

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				Six Months Ended			
	June 29, 2024		July 1, 2023		June 29, 2024		July 1, 2023	
Systems and software	\$ 210,428	87 %	\$ 159,353	83 %	\$ 405,264	86 %	\$ 326,177	84 %
Parts	16,788	7 %	18,142	10 %	36,896	8 %	38,565	10 %
Services	15,111	6 %	13,167	7 %	29,012	6 %	25,085	6 %
Total revenue	<u>\$ 242,327</u>	<u>100 %</u>	<u>\$ 190,662</u>	<u>100 %</u>	<u>\$ 471,172</u>	<u>100 %</u>	<u>\$ 389,827</u>	<u>100 %</u>

Total systems and software revenue increased \$51.1 million and \$79.1 million for the three and six months ended June 29, 2024, respectively, as compared to the three and six months ended July 1, 2023, respectively. These increases were primarily due to an increase in shipments of our inspection product lines to foundry and DRAM customers, which was partially offset by a decrease in shipments of our metrology product lines to wafer manufacturing and foundry customers. The increase in total parts and services revenue for the three and six months ended June 29, 2024, as compared to the three and six months ended July 1, 2023, was primarily due to higher factory utilization by several of our customers, resulting in an increase in their spare parts requirements. 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.

	Three Months Ended		Six Months Ended	
	June 29, 2024	July 1, 2023	June 29, 2024	July 1, 2023
Gross profit	\$ 128,236	\$ 100,461	\$ 246,521	\$ 205,436
Gross profit as a percentage of revenue	52.9%	52.7%	52.3%	52.7%

The increase in gross profit as a percentage of revenue for the three month period ended June 29, 2024 as compared to the three month period ended July 1, 2023 was primarily due to increased volume and change in product mix. The decrease in gross profit as a percentage of revenue for the six month period ended June 29, 2024 as compared to the six month period ended July 1, 2023 was also primarily due to product mix.

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 \$27.0 million and \$53.6 million for the three and six month periods ended June 29, 2024, respectively, as compared to \$27.0 million and \$54.3 million for the three and six month periods ended July 1, 2023, respectively. The research and development expenses remained flat for the three month period ended June 29, 2024, as compared to the three month period ended July 1, 2023. The decrease in research and development expenses of \$0.7 million for the six month period ended June 29, 2024, as compared to the six month period ended July 1, 2023, was primarily due to decreases in compensation costs of \$1.0 million, product development costs of \$0.1 million and depreciation and amortization costs of \$0.1 million partially offset by increases in travel costs of \$0.3 million and outside services costs of \$0.3 million.
- **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 were \$19.0 million and \$37.3 million for the three and six month periods ended June 29, 2024, respectively, compared to \$16.0 million and \$31.7 million for the three and six month periods ended July 1, 2023, respectively. The increase in sales and marketing expenses of \$3.0 million for the three month period ended June 29, 2024, as compared to the three month period ended July 1, 2023, was primarily due to increases in compensations costs of \$2.4 million, outside services costs of \$0.1 million, production expenses of \$0.2 million and travel costs of \$0.2 million. The increase in sales and marketing expenses of \$5.6 million for the six month period ended June 29, 2024, as compared to the six month period ended July 1, 2023, was primarily due to increases in compensations costs of \$5.0 million, outside services costs of \$0.3 million, production expenses of \$0.2 million and travel costs of \$0.1 million.
- **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 \$20.3 million and \$37.8 million for the three and six month periods ended June 29, 2023, respectively, as compared to \$18.8 million and \$38.0 million for the three and six month periods ended July 1, 2023, respectively. The increase in general and administrative expenses of \$1.5 million for the three month period ended June 29, 2024, as compared to the three month period ended July 1, 2023, was primarily due to increases in compensation costs of \$0.8 million, outside services costs of \$0.3 million and travel costs of \$0.3 million. The decrease in general and administrative expenses of \$0.2 million for the six month period ended June 29, 2024, as compared to the six month period ended July 1, 2023, was primarily due to decreases in compensation costs of \$0.5

million and outside services costs of \$0.6 million, partially offset by an increase in depreciation and amortization of \$0.9 million.

- *Amortization of Identifiable Intangible Assets.* Amortization of identifiable intangible assets was \$13.1 million and \$26.2 million for the three and six month periods ended June 29, 2024, respectively, compared to \$13.8 million and \$27.6 million for the three and six month periods ended July 1, 2023, respectively. The decreases in amortization of identifiable intangible assets of \$0.7 million and \$1.4 million for the three and six month periods ended June 29, 2024, as compared to the three and six month periods ended July 1, 2023, respectively, were primarily due to certain assets becoming fully amortized.

Interest income, net. Net interest income was \$8.5 million and \$15.9 million for the three and six month periods ended June 29, 2024, respectively, as compared to \$4.8 million and \$8.2 million for the three and six month periods ended July 1, 2023, respectively. The increases in net interest income for both the three and six month periods ended June 29, 2024, as compared to the three and six month periods ended July 1, 2023, were due to higher cash and marketable securities balances and higher interest rates during the 2024 period.

Other (expense) income, net. Other expense, net was \$0.1 million for the three month period ended June 29, 2024, as compared to \$1.7 million for the same period in the prior year. Other income, net was \$0.7 million for the six month period ended June 29, 2024, as compared to other expense, net of \$2.0 million for the same period in the prior year. The decrease in other expense, net for the three months ended June 29, 2024 compared to the three months ended July 1, 2023, and the shift from net income for the six month period ended June 29, 2024 from net other expenses for the corresponding period of 2023, was primarily due to foreign exchange gains during the 2024 periods.

Income Taxes. We recorded an income tax provision of \$4.3 million and \$8.4 million for the three and six month periods ended June 29, 2024, respectively, as compared to \$2.0 million and \$5.1 million for the three and six month periods ended July 1, 2023, respectively. Our effective tax rate of 8% for both the three and six month periods ended June 29, 2024 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 7% and 8% for the three and six month periods ended July 1, 2023, differed from the statutory rate of 21%, primarily due to (i) 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.

The Organization for Economic Co-operation and Development ("OECD") has been working on a Base Erosion and Profits Shifting project that, upon implementation, would change various aspects of the existing framework under which our tax obligations are determined in many of the countries in which we operate. In this regard, the OECD has proposed policies aiming to modernize global tax systems, including a country-by-country 15% minimum effective tax rate ("Pillar Two") for multinational companies. Numerous countries have enacted, or are in the process of enacting, legislation to implement the Pillar Two model rules with a subset of the rules becoming effective during the current year, and the remaining rules becoming effective in later periods. At this point in time, we do not expect any material tax impact associated with Pillar Two rules in the countries where we operate. As these rules continue to evolve with new legislation and guidance, we will continue to monitor and account for the enactment of Pillar Two and the potential impacts such rules may have on our effective tax rate and cash flows in future years.

Liquidity and Capital Resources

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Our cash, cash equivalents and marketable securities consist of the following:

	June 29, 2024	December 30, 2023
Cash and cash equivalents	\$ 172,571	\$ 233,508
Marketable securities	613,461	464,303
Total cash, cash equivalents and marketable securities	<u>\$ 786,032</u>	<u>\$ 697,811</u>

Sources and Uses of Cash

A summary of cash provided by (used in) operating, investing, and financing activities is as follows:

	Six Months Ended	
	June 29, 2024	July 1, 2023
Cash provided by operating activities	\$ 122,430	\$ 81,755
Cash used in investing activities	\$ (165,900)	\$ (22,900)
Cash used in financing activities	\$ (13,945)	\$ (8,165)

Operating Activities

Net cash and cash equivalents provided by operating activities for the six months ended June 29, 2024 were \$122.4 million. The net cash and cash equivalents provided by operating activities during the six months ended June 29, 2024 resulted primarily from net income, adjusted to exclude the effect of non-cash operating charges, of \$140.0 million. Significant non-cash operating charges included depreciation, amortization, share-based compensation, provision for inventory valuation and deferred income taxes. Cash provided by operating activities for the first six months of fiscal 2024 increased compared to the corresponding period in fiscal 2023 primarily due to improved inventory management, higher cash collections and higher investment income.

Our working capital was \$1,236.8 million at June 29, 2024 and \$1,135.5 million at December 30, 2023.

Investing Activities

Net cash and cash equivalents used in investing activities for the six months ended June 29, 2024 were \$165.9 million. During the six months ended June 29, 2024, net cash and cash equivalents used in investing activities included purchases of marketable securities, net proceeds from maturities and sales of marketable securities of \$146.7 million and capital expenditures of \$19.2 million.

From time to time, we evaluate whether to acquire new or complementary businesses, products or technologies. We may fund all of or a portion of the price of these investments or acquisitions in cash, stock, or a combination of cash and stock.

Financing Activities

Net cash and cash equivalents used in financing activities for the six months ended June 29, 2024 were \$13.9 million. During the six months ended June 29, 2024, 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 \$17.9 million, partially offset by proceeds from sales of shares through share-based compensation plans of \$4.0 million.

In February 2024, the Onto Innovation Board of Directors approved a share repurchase authorization, which allows the Company to repurchase up to \$200 million worth of shares of its common stock. Repurchases may be made through both public market and private transactions from time to time. During the three and six months ended June 29, 2024, we repurchased no shares of common stock under this repurchase authorization. As of June 29, 2024, there was \$200 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, up to a maximum of \$100 million. As of June 29, 2024, the available line of credit was \$100 million with an available interest rate of 7.1%. 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.

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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. 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 2023 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 June 29, 2024. 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 June 29, 2024 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 June 29, 2024 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 I, Item 1 of this Form 10-Q.

Item 1A. Risk Factors.

Below is a summary of 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.
- Any prolonged disruption in the operations of our manufacturing facilities could have a material adverse effect on our revenue.
- We outsource select manufacturing activities to third-party service providers, which decreases our control over the performance of these functions, may result in lower quality and functionality of our products, and exposes us to additional supply chain risks.
- 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.
- Compliance with data protection laws may be costly and may impede development of new products, and any failure to comply with, or inquiries under, these laws 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.

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- 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

- Tariffs, export regulations, and other market barriers have impacted and may continue to impact our ability to compete for the business of domestic customers in China and other jurisdictions, which has adversely affected and may continue to adversely affect our, business, financial condition and results of 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.
- Political and economic instability may result in reduced demand for our products.
- Natural disasters, changes in climate, public health crises, 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 Laws, Legal Proceedings, 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.
- Legal proceedings, claims and investigations may expose us to increased costs and may negatively affect our business 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

- Cyclicity 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 margins on our products, we would need to negotiate price reductions with our vendors. But we cannot be certain that we will be able to do so in a timely manner, 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, high inflation rates, and cost increases attributable to the COVID-19 pandemic and the effects of the Russia-Ukraine conflict. In addition, we source components for certain of our tools from a supplier in Israel. If the conflict in Israel and the surrounding area escalates, it could disrupt our supply chain, resulting in a material adverse impact on our business.

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 certain 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 in the future 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, 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 result in 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. 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 has and could continue to result in 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, 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 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 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.

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 also 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. 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, may result in lower quality and functionality of our products, and exposes us to additional supply chain risks.

We outsource select 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 third-party service providers could also be, and certain of our service providers have been, subject to cybersecurity incidents or other events that negatively impact their operations and their ability to perform services for us in a timely manner or at all. Such disruptions could impact our ability to manufacture products in a timely manner or force us to work with another service provider at a higher cost. Any such event could materially and adversely affect our business, financial condition, and results of operations. In addition, some of our third-party service providers also have product designs, know-how, data files and other important confidential information regarding our products. If a third-party service provider experiences a

cybersecurity event in which such confidential information is publicly exposed or shared with bad actors, it could materially and adversely impact our competitive position in the market.

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 and our suppliers' own supply chain issues. 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. Our competitors may also develop products, including through the use of artificial intelligence, that may have performance advantages over systems we currently offer or may offer in the future, which could similarly weaken our competitive position.

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 favorable 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 experience a write down of our investments in inventory. As a result, our market share, revenue, operating results or stock price could 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 invalidated, unenforceable and/or 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. There can be no assurances that our confidentiality agreements with employees and other third parties will be sufficient to protect our trade secrets and proprietary information or that such 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. 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. Any of these circumstances could result in harm to our competitive position in the market.

Monitoring and preventing unauthorized use are also difficult and the measures we take to protect our intellectual property rights may not be adequate. 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 could be easier for our competitors to develop and sell competing products in these countries. Accordingly, infringement of our intellectual property rights poses a serious risk to our ability to conduct business.

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.

From time to time, we may be required to initiate litigation in order to enforce our intellectual property rights or to determine the non-infringement, 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. For example, litigation discovery practice in China, Japan, South Korea, continental Europe and Taiwan is not as robust as in 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.

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, including through the use of artificial intelligence, employee misuse, human 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 or damage to our reputation, and 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. 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. As discussed herein under the heading “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, and exposes us to increased supply chain risks,” cybersecurity incidents affecting our service providers could negatively impact our ability to timely and cost-effectively produce products and/or negatively impact our competitive position in the market. Likewise, cybersecurity events impacting 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.

Compliance with data protection laws may be costly and may impede development of new products, and any failure to comply with, or inquiries under, these laws may could have a material adverse effect on our business, results of operations, and financial condition.

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”) and the California Privacy Rights Act (“CPRA”), an amendment and expansion of the CCPA. 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, Nova, Camtek, Ushio, Canon, and PDF Solutions. 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 existing and potential customers in the semiconductor device manufacturing industry are large companies that require global support and service for their semiconductor capital equipment. Some of our competitors have more extensive support and service 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

Tariffs, export regulations, and other market barriers have impacted and may continue to impact our ability to compete for the business of domestic customers in China and other jurisdictions, which has adversely affected and may continue to adversely affect our, business, financial condition and 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, the U.S. Department of Commerce ("DoC") has imposed export controls on the transfer of certain U.S. products and technologies to "military end users" in China, as well as restrictions on the transfer of U.S. products to certain companies, including Huawei Technologies Co., Ltd., and its affiliates. Most recently, in 2022, the DoC imposed new export controls related to the Chinese semiconductor manufacturing, advanced computing, and supercomputer industries. In 2022, the DoC 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). In October 2023, the DoC revised and expanded the 2022 export controls.

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. 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 (who are not subject to the same export controls and can fulfill the orders). 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.

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, 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 herein 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 issued new export control rules in 2022 and 2023 aimed at restricting China’s access to semiconductor equipment and advanced computing technology, among other things. 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.

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 or adversely affect our supply chain. 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. Similarly, if the conflict in Israel and the surrounding area escalates further, it could result in disruptions to our supply chain and/or the operations of 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, public health crises, 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. 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.

Our business may also be affected by public health issues (for example, an outbreak of a contagious disease such as COVID-19, avian influenza, measles or Ebola). 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 economic effects of the COVID-19 pandemic could continue to impact our business, results of operations, and financial conditions is difficult to predict and depends on numerous evolving factors including any future resurgences of the pandemic and the intensity and duration of any resulting adverse macroeconomic conditions. The COVID-19 pandemic exposed our business, results of operations, and financial condition to the following adverse impacts: 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, travel restrictions and other factors; and a decrease in demand for our products; Additional sustained or prolonged outbreaks of COVID-19, or any ongoing, worsening or recurring supply chain disruptions or macroeconomic effects of the pandemic could have a material adverse effect on our business, results of operations, legal exposure, or financial condition and may also heighten many of the other risks described in this “Risk Factors” section.

There may also be conflict or uncertainty in the countries in which we operate, including safety issues, disruptions of service from utilities, nuclear power plant accidents or general economic or political unrest, including war, civil unrest or terrorist attacks. We have no material operations in Russia, Belarus, Ukraine, or Israel. Consequently, to date, our operations have not been materially adversely affected by Russia’s invasion of Ukraine, or the Israel-Hamas conflict. However, if the Russia-Ukraine or Israel-Hamas conflicts escalate further and/or the U.S. or other jurisdictions impose additional sanctions on the governments or entities involved, this could result in disruptions to the global economy and/or supply chains that could adversely affect our business.

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 Laws, Legal Proceedings, 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 2023, and may continue to reduce our cash flows 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.

In December 2021, 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. The proposed guidance also established a global minimum tax of 15%. 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. If banks and financial institutions with whom we have banking relationships enter receivership or become insolvent in the future, we may be unable to access, and we may lose, some or all of our existing cash, cash equivalents and investments to the extent those funds are not insured or otherwise protected by the FDIC. 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. For example, we are or expect to become subject to various new or proposed climate-related and other sustainability laws and regulations, including, for example, the state of California’s new climate change disclosure requirements, the EU’s new Corporate Sustainability Reporting Directive and proposed climate-change disclosure requirements from the SEC. Compliance with such laws and regulations, as well as the overall increased focus and scrutiny from the SEC and other regulators, investors, customers, vendors, employees, and other stakeholders concerning environmental, social and governance (“ESG”) and climate matters, could impose additional costs on us. 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.

Legal proceedings, claims and investigations may expose us to increased costs and may negatively affect our business and results of operations.

We have been from time to time, and in the future may be, involved in legal proceedings or claims regarding any number of matters, including intellectual property infringement, contract disputes, trade compliance, antitrust, environmental regulations, privacy and data protection, securities, product performance, product liability, employment and workplace safety, and other matters. In addition, we may receive, and have received, inquiries, warrants, subpoenas, and other requests for information in connection with government investigations of potential or suspected violations of law by our company and/or other companies

that we work with. We have also received, and may receive in the future, claims from customers who believe we owe them product warranty protection, indemnification or other obligations.

Legal proceedings, claims, and government investigations, whether with or without merit, may be time-consuming and expensive to respond to and defend. They may also divert management's attention and our other resources from day-to-day operational matters; constrain our ability to sell products and services; result in adverse judgments for damages, injunctive relief, penalties and fines; and negatively affect our business and results of operations. We cannot predict the outcome of current or future legal proceedings, claims or investigations.

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 customer-anticipated process changes, strategic opportunities for growth, and industry technology trends. 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 challenge our management, financial, operational, technical, sales, administrative, and other 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:

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- 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 or uncertainties, including as a result of the upcoming U.S. presidential election, hostilities or natural disasters such as hurricanes and floods;
- the impact of 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 February 2024, the Onto Innovation Board of Directors approved a new share repurchase authorization, which allows the Company to repurchase up to \$200 million worth of shares of its common stock. There were no repurchases of common stock under this authorization during the three and six months ended June 29, 2024. There was \$200 million available for future share repurchases under this share repurchase authorization at June 29, 2024. 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 under the Company's equity incentive program. During the three and six months ended June 29, 2024, we withheld 44 thousand and 97 thousand shares through net share settlements. For the three and six month periods ended June 29, 2024, net share settlements cost \$8.9 million and \$18.0 million, respectively. 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.

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The following table provides details of common stock purchased during the three months ended June 29, 2024 (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
March 31, 2024 - April 29, 2024	27	\$ 184.97	—	\$ 200,000
April 30, 2024 - May 29, 2024	15	\$ 231.22	—	\$ 200,000
May 30, 2024 - June 29, 2024	2	\$ 221.94	—	\$ 200,000
Three months ended June 29, 2024	44	\$ 202.65	—	

[†] Includes shares withheld through net share settlements.

Item 3. Defaults Upon Senior Securities

None.

Item 4. Mine Safety Disclosures

None.

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Item 5. Other Information

Rule 10b5-1 Plan Elections

During the fiscal quarter ended June 29, 2024, none of our directors or officers (as defined in Rule 16a-1 under the Exchange Act) adopted, modified or terminated a “Rule 10b5-1 trading arrangement” or “non-Rule 105b-1 trading arrangement” (as those terms are defined in Item 408 of Regulation S-K).

Item 6. Exhibits

<u>Exhibit No.</u>	<u>Description</u>
3.1	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).
3.2	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).
10.1*	Onto Innovation Inc. 2020 Stock Plan, as Amended and Restated.
31.1*	Rule 13a-14(a) Certification of Chief Executive Officer of the Registrant pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
31.2*	Rule 13a-14(a) Certification of Chief Financial Officer of the Registrant pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
32.1**	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.
32.2**	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.
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 With Embedded Linkbase Documents
104*	Cover Page Interactive Data File (formatted as Inline XBRL and included in Exhibit 101)

* Filed herewith.

** Furnished herewith.

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: August 8, 2024

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

Date: August 8, 2024

By: /s/ Mark R. Slicer
Mark R. Slicer
Chief Financial Officer and Principal Accounting Officer

ONTO INNOVATION INC.
2020 STOCK PLAN, AS AMENDED AND RESTATED

1. Purposes of the Plan. The purposes of this 2020 Stock Plan are:

- to attract and retain the best available personnel for positions of substantial responsibility,
- to provide additional incentive to Employees, Directors and Consultants, and
- to promote the success of the Company's business.

The Plan permits the grant of Incentive Stock Options, Nonstatutory Stock Options, Stock Appreciation Rights, Restricted Stock, Restricted Stock Units, Performance Units and Performance Shares.

2. Definitions. As used herein, the following definitions shall apply:

(a) "Administrator" means the Committee or the Board, as applicable.

(b) "Affiliate" means any corporation or any other entity (including, but not limited to, partnerships and joint ventures) controlling, controlled by, or under common control with the Company.

(c) "Applicable Laws" means any applicable law, including without limitation, provisions of the Code, the Securities Act of 1933, as amended, the Exchange Act and any rules or regulations thereunder; corporate, securities, tax or other laws, statutes, rules, requirements or regulations, whether federal, state or local; and rules of any securities exchange or automated quotation system on which the Stock is listed, quoted or traded; and the applicable laws of any foreign country or jurisdiction where Awards are, or will be, granted under the Plan.

(d) "Award" means a grant under the Plan of Options, Stock Appreciation Rights, Restricted Stock, Restricted Stock Units, Shares pursuant to Section 4(e), Performance Units or Performance Shares.

(e) "Award Agreement" means the written or electronic agreement setting forth the terms and provisions applicable to each Award granted under the Plan. The Award Agreement is subject to the terms and conditions of the Plan.

(f) "Board" means the Board of Directors of the Company.

(g) "Cause" means, in the absence of any employment agreement then in effect between a Participant and the Company (or the Affiliate employing the Participant) otherwise defining Cause:

(i) acts of personal dishonesty, gross negligence or willful misconduct on the part of a Participant in the course of his or her employment or services;

(ii) a Participant's engagement in conduct that results, or could reasonably be expected to result, in material injury to the reputation or business of the Company or its Affiliates;

(iii) misappropriation by a Participant of the assets or business opportunities of the Company or its Affiliates;

(iv) embezzlement or fraud committed by a Participant, or at his or her direction, or with his or her personal knowledge;

(v) a Participant's conviction by a court of competent jurisdiction of, or pleading "guilty" or "no contest" to:

(A) a felony (or its state law equivalent); or

(B)any other criminal charge (other than minor traffic violations) that has, or could be reasonably expected to have, an adverse impact on the performance of the Participant's duties to the Company or its Affiliates; or

(vi) failure by a Participant to follow the lawful directions of a superior officer or manager or the Board.

In the event there is then in effect an employment agreement between a Participant and the Company or Affiliate employing Participant defining Cause, "Cause" will have the meaning provided in such agreement.

(h) "Change-in-Control" means the occurrence of any of the following events:

(i) A change in the ownership of the Company which occurs on the date that any one person or more than one person acting as a group ("Person") acquires ownership of the stock of the Company that, together with the stock held by such Person, constitutes more than fifty percent (50%) of the total voting power of the stock of the Company; provided, however, that for purposes of this subsection 2(h)(i), the acquisition of additional stock by any Person, who is considered to own more than fifty percent (50%) of the total voting power of the stock of the Company, will not be considered a Change-in-Control; or

(ii) A change in the effective control of the Company which occurs on the date that a majority of members of the Board is replaced during any twelve (12) month period by Directors whose appointment or election is not approved by a majority of the members of the Board prior to the date of the appointment or election. For purposes of this subsection 2(h)(ii), if any Person is considered to be in effective control of the Company, the acquisition of additional control of the Company by the same Person will not be considered a Change-in-Control; or

(iii) A change in the ownership of a substantial portion of the Company's assets which occurs on the date that any Person acquires (or has acquired during the twelve (12) month period ending on the date of the most recent acquisition by such Person or Persons) assets from the Company that have a total gross fair market value equal to or more than fifty percent (50%) of the total gross fair market value of all of the assets of the Company immediately prior to such acquisition; provided, however, that for purposes of this subsection 2(h)(iii), the following will not constitute a change in the ownership of a substantial portion of the Company's assets:

(A)a transfer to an entity that is controlled by the Company's stockholders immediately after the transfer; or

(B)a transfer of assets by the Company to:

(1)a stockholder of the Company (immediately before the asset transfer) in exchange for or with respect to the Company's stock;

(2)an entity, fifty percent (50%) or more of the total value or voting power of which is owned, directly or indirectly, by the Company;

(3)a Person, that owns, directly or indirectly, fifty percent (50%) or more of the total value or voting power of all the outstanding stock of the Company; or

(4)an entity, at least fifty percent (50%) of the total value or voting power of which is owned, directly or indirectly, by a Person described in subsection 2(h)(iii)(B)(3).

For purposes of this subsection 2(h)(iii), gross fair market value means the value of the assets of the Company, or the value of the assets being disposed of, determined without regard to any liabilities associated with such assets.

For purposes of this definition, “group” shall have the meaning under Section 13 of the Exchange Act.

In the event that this Section 2(h) is inconsistent with the definition of Change-in-Control under Section 409A of the Code and the regulations thereunder, the definition under Section 409A of the Code and regulations shall apply.

(i) “Code” means the Internal Revenue Code of 1986, as amended. Any reference to a section of the Code herein will be a reference to any successor or amended section of the Code.

(j) “Committee” means the Compensation Committee of the Board or other committee appointed by the Board to administer the Plan, in either case, the composition of which shall at all times satisfy the provisions of Rule 16b-3 and applicable stock exchange rules, except that, if for any reason the Committee does not meet the requirements of Rule 16b-3, such noncompliance with the requirements of Rule 16b-3 shall not affect the validity of the Awards, interpretations or other actions of the Committee. If no committee of the Board has been established to administer the Plan, the Board shall exercise all of the powers of the Committee granted herein, and, in any event, the Board may in its discretion exercise any or all of such powers.

(k) “Common Stock” means the common stock of the Company, \$0.001 par value per share.

(l) “Company” means Onto Innovation Inc., a Delaware corporation, and its Subsidiaries, successors and assigns.

(m) “Consultant” means any person, including an advisor, engaged by the Company or its Affiliates to render services to such entity.

(n) “Director” means a member of the Board.

(o) “Disability” means a determination that the Participant or Service Provider is unable to engage in any substantial gainful activity by reason of any medically determinable physical or mental impairment that can be expected to result in death or can be expected to last for a continuous period of not less than twelve (12) months, as determined by the Administrator upon the basis of such evidence as the Administrator deems appropriate or necessary. A determination that a Participant or Service Provider is eligible for full long-term disability under any long-term disability plan, as may then be in effect at the Company, will be conclusive evidence of Disability.

(p) “Effective Date” has the meaning set forth in Section 18.

(q) “Employee” means any person, including Officers and Directors, employed by the Company or its Affiliates. Neither service as a Director nor payment of a Director’s fee by the Company shall be sufficient to constitute “employment” by the Company.

(r) “Exchange Act” means the Securities Exchange Act of 1934, as amended.

(s) “Exchange Program” means a program, which may be applicable to a single Award or Participant or multiple Awards or Participants, under which, subject to stockholder approval thereof:

(i) outstanding Options or Stock Appreciation Rights are surrendered or cancelled when the exercise price per Share exceeds the Fair Market Value of one Share in exchange for Awards of the same type, Awards of a different type, and/or cash (other than in connection with a merger, acquisition or similar transaction);

(ii) the exercise price of an outstanding Option or Stock Appreciation Right is reduced; and/or

(iii) any other action is taken with respect to an Award that would be treated as a repricing under the rules and regulations of the national securities exchange on which the Shares are then listed.

(f) “Fair Market Value” means, as of any date, the value of Common Stock determined as follows:

(i) If the Common Stock is listed on any established stock exchange or a national market system, including without limitation the New York Stock Exchange, its Fair Market Value shall be the closing sales price for such stock (or the closing bid, if no sales were reported) on such exchange or system on the day of determination, as reported in *The Wall Street Journal* or such other source as the Administrator deems reliable;

(ii) If the Common Stock is regularly quoted by a recognized securities dealer but selling prices are not reported, the Fair Market Value of a Share of Common Stock shall be the mean between the high bid and low asked prices for the Common Stock on the day of determination, as reported in *The Wall Street Journal* or such other source as the Administrator deems reliable; or

(iii) In the absence of an established market for the Common Stock, the Fair Market Value shall be determined in good faith by the Administrator.

(u) “Family Member” means any child, stepchild, grandchild, parent, stepparent, grandparent, spouse, former spouse, sibling, niece, nephew, mother-in-law, father-in-law, son-in-law, daughter-in-law, brother-in-law, or sister-in-law (including adoptive relationships) of the Employee, any person sharing the Employee’s household (other than a tenant or employee), a trust in which these persons (or the Employee) have more than fifty percent (50%) of the beneficial interest, a foundation in which these persons (or the Employee) control the management of assets, and any other entity in which these persons (or the Employee) own more than fifty percent (50%) of the voting interests.

(v) “Fiscal Year” means the fiscal year of the Company.

(w) “Incentive Stock Option” means an Option intended to qualify as an incentive stock option within the meaning of Section 422 of the Code and the regulations promulgated thereunder.

(x) “Nonstatutory Stock Option” means an Option not intended to qualify as an Incentive Stock Option.

(y) “Officer” means a person who is an officer of the Company within the meaning of Section 16 of the Exchange Act and the rules and regulations promulgated thereunder.

(z) “Option” means a stock option granted pursuant to the Plan.

(aa) “Outside Director” means a Director who is not an Employee.

(bb). "Parent" means a "parent corporation," whether now or hereafter existing, as defined in Section 424(e) of the Code.

(cc). "Participant" means the holder of an outstanding Award.

(dd). "Performance Share" means an Award denominated in Shares which may be earned in whole or in part upon attainment of performance goals or other vesting criteria as the Administrator may determine pursuant to Section 10 and which may be settled for Shares.

(ee). "Performance Period" shall have the meaning set forth in Section 10(b) of the Plan.

(ff). "Performance Unit" means an Award denominated in units, which may be earned in whole or in part upon attainment of performance goals or other vesting criteria as the Administrator may determine and which may be settled for cash, Shares or other securities or a combination of the foregoing pursuant to Section 10.

(gg). "Period of Restriction" means the period during which the transfer of Shares of Restricted Stock is subject to restrictions, and therefore, the Shares are subject to a substantial risk of forfeiture. Such restrictions may be based on the passage of time, the achievement of target levels of performance, or the occurrence of other events as determined by the Administrator, subject to Section 4(d) of the Plan.

(hh). "Plan" means this 2020 Stock Plan.

(ii). "Prior Plans" means the Nanometrics Incorporated 2005 Equity Incentive Plan and the Rudolph Technologies, Inc. 2018 Stock Plan.

(jj). "Restricted Stock" means shares of Common Stock issued pursuant to Section 7 of the Plan subject to certain restrictions and risk of forfeiture.

(kk). "Restricted Stock Unit" means a bookkeeping entry representing one Share, granted pursuant to Section 8. Each Restricted Stock Unit represents an unfunded and unsecured obligation of the Company.

(ll). "Rule 16b-3" means Rule 16b-3 of the Exchange Act or any successor to Rule 16b-3.

(mm). "Section 16(b)" means Section 16(b) of the Exchange Act.

(nn). "Service Provider" means an Employee, Director or Consultant.

(oo). "Share" means a share of the Common Stock, as may be adjusted in accordance with Section 14 of the Plan.

(pp). "Specified Employee" is a Participant or Service Provider who, as of the Participant's or Service Provider's date of termination, is a key employee of the Company within the meaning of Section 416(i)(1)(A)(i), (ii), or (iii) of the Code (applied in accordance with the regulations thereunder and disregarding Section 416(i)(5)) at any time during the twelve (12) month period ending on a Specified Employee Identification Date. If a Participant or Service Provider is a key employee as of a Specified Employee Identification Date, the Participant or Service Provider is treated as a key employee for purposes of the Plan for the entire twelve (12) month period beginning on the Specified Employee Effective Date.

(qq). “Specified Employee Effective Date” is the date as set forth in Treasury Regulation Section 1.409A-1(i)(4).

(rr). “Specified Employee Identification Date” shall mean December 31 of each year.

(ss). “Stock Appreciation Right” means an Award, granted alone or in connection with an Option, that, pursuant to Section 9, is designated as a Stock Appreciation Right.

(tt). “Subsidiary” means a “subsidiary corporation”, whether now or hereafter existing, as defined in Section 424(f) of the Code.

(uu). “Substitute Awards” has the meaning set forth in Section 3(e) of the Plan.

3. Stock Subject to the Plan.

(a). Share Reserve. Subject to the provisions of Section 14 of the Plan, the maximum number of Shares that may be issued under the Plan is 3,500,000 Shares. Upon the Effective Date, no further awards shall be granted under the Prior Plans. If, after the Effective Date, any Shares subject to awards granted under a Prior Plan would again become available for new awards under the terms of such plan if such plan were still in effect and without regard to any termination thereof, then those Shares will be available for the purpose of granting Awards under this Plan, thereby increasing the limit in the preceding sentence. The Shares issued pursuant to Awards under the Plan may be authorized, but unissued, or reacquired Common Stock.

(b). Certain Adjustments to Share Reserve.

(i). To the extent that an Award terminates, expires or becomes unexercisable without having been exercised in full, is surrendered pursuant to an Exchange Program approved by stockholders, or, with respect to Restricted Stock, Restricted Stock Units, Performance Units or Performance Shares, is terminated or forfeited in whole or in part due to failure to vest, the Shares (or for Awards other than Options or Stock Appreciation Rights, the forfeited Shares) which were subject to such terminated, expired, unexercised, surrendered or forfeited Award shall become available for future grant or issuance under the Plan. To the extent that the full number of Shares subject to an Award of Performance Units, Performance Shares or other Award subject to performance-based vesting criteria is not issued by reason of failure to achieve maximum performance goals, the number of Shares not issued shall be shall become available for future grant or issuance under the Plan.

(ii). All Shares subject to a Stock Appreciation Right (not the number of net Shares actually issued pursuant to a Stock Appreciation Right upon any exercise) will be counted against the number of Shares available for issuance under Section 3(a).

(iii). Shares used to pay the exercise price of an Award or to satisfy the tax withholding obligations related to an Award will not again become available for future grant or sale under the Plan.

(iv). To the extent an Award under the Plan is paid out in cash rather than Shares, such cash payment will not result in reducing the number of Shares available for issuance under the Plan.

(v). Any dividend equivalent denominated in Shares will be counted against the number of Shares available for issuance under Section 3(a) in such amount and at such time as the dividend equivalent first constitutes an unconditional obligation to issue Shares.

(c) Incentive Stock Option Limit. Notwithstanding the foregoing and, subject to adjustment as provided in Section 14, the maximum number of Shares that may be issued upon the exercise of Incentive Stock Options will equal the aggregate Share number stated in the first sentence of subsection 3(a) above, plus, to the extent allowable under Section 422 of the Code and the Treasury Regulations promulgated thereunder, any Shares that become available for issuance under the Plan pursuant to Sections 3(a) and 3(b) above.

(d) Outside Director Award Limits. For any calendar year, the value of Awards granted to an individual Outside Director may not exceed \$600,000, calculating the value of any such Awards based on the grant date fair value of such Awards for financial reporting purposes.

(e) Substitute Awards.

(i) In connection with an entity's merger or consolidation with the Company or any Subsidiary or the direct or indirect acquisition by the Company or any Subsidiary of an entity's property or stock, the Committee may grant Awards in substitution or exchange for any options or other stock or stock-based awards granted before such merger or consolidation by such entity or its affiliate ("Substitute Awards"). Substitute Awards may be granted on such terms and conditions as the Committee deems appropriate, notwithstanding any limitations on Awards in the Plan, including, but not limited to, the limitation under Section 4(d). Substitute Awards will not count against the aggregate Share reserve in Section 3(a), except that Shares acquired by exercise of substitute Incentive Stock Options will count against the maximum number of Shares that may be issued pursuant to the exercise of Incentive Stock Options under the Plan.

(ii) Additionally, in the event that a company acquired by the Company or any Subsidiary, or with which the Company or any Subsidiary combines by merger, consolidation or otherwise, has shares available under a pre-existing plan approved by its stockholders and not adopted in contemplation of such acquisition or combination as determined by the Administrator, the shares available for grant pursuant to the terms of such pre-existing plan (as appropriately adjusted to reflect the transaction) may be used for Awards under the Plan and shall not reduce the Shares authorized for grant under the Plan under Section 3(a) (and shares subject to such Awards, which, for the avoidance of doubt, excludes Substitute Awards, may again become available for Awards under the Plan as provided under Section 3(b) above); provided that Awards using such available Shares (or any Shares that again become available for issuance under the Plan under Section 3(b) above) shall not be made after the date awards or grants could have been made under the terms of the pre-existing plan absent the acquisition or combination, and shall only be made to individuals who were employees or directors of such acquired or combined company or any of its subsidiaries prior to such acquisition or combination.

4. Administration of the Plan.

(a) Powers of the Administrator. Subject to the provisions of the Plan, the Administrator shall have the authority, in its discretion:

- (i) to determine the Fair Market Value;
- (ii) to select the Service Providers to whom Awards may be granted hereunder;
- (iii) to determine the number of Shares to be covered by each Award granted hereunder;
- (iv) to approve forms of Award Agreements for use under the Plan;

(v) to determine the terms and conditions, not inconsistent with the terms of the Plan, of any Award granted hereunder. Such terms and conditions may include, but are not limited to, the exercise price; the vesting period of Awards or the time or times when Awards may be exercised (which may be based in whole or in part on performance criteria), which shall be established in accordance with Section 4(d); any vesting acceleration or waiver of forfeiture restrictions (notwithstanding Section 4(d) to the contrary); any restriction or limitation regarding any Award or the Shares relating thereto and any and all other Award terms and conditions;

(vi) to interpret, construe and administer the Plan and Awards granted pursuant to the Plan, including the adoption of rules, modifications, procedures and sub-plans as may be necessary or desirable for administration of the Plan, including for purposes of granting Awards to Participants in foreign countries and qualifying any such Awards for preferential tax treatment under Applicable Law; the Administrator may correct any defect or supply any omission or reconcile any inconsistency in the Plan or in any Award in the manner and to the extent the Administrator deems necessary or desirable to carry it into effect. Any action or decision of the Administrator in the interpretation or administration of the Plan, as described herein, shall be within its sole and absolute discretion and shall be final, conclusive and binding on all parties concerned;

(vii) to prescribe, amend and rescind rules and regulations relating to the Plan, including rules and regulations relating to sub-plans established for the purpose of satisfying applicable foreign laws;

(viii) to modify or amend each Award (subject to Section 19 of the Plan), including, but not limited to, the discretionary authority to extend the post-termination exercisability or vesting period of Awards (but in no event shall such period of exercisability be extended beyond the expiration of the term of the Award);

(ix) to allow Participants to satisfy withholding tax obligations in such a manner as prescribed in Section 15;

(x) to authorize any person to execute on behalf of the Company any instrument required to effect the grant of an Award previously granted by the Administrator;

(xi) delegate to a committee of one or more Outside Directors or, to the extent permitted by Applicable Law, to one or more officers or a committee of officers, the authority to grant Awards to, and to cancel or take any other action in respect of, any Awards to Employees or Consultants of the Company who are not Directors or Officers;

(xii) to allow a Participant to defer the receipt of the payment of cash or the delivery of Shares that would otherwise be due to such Participant under an Award, subject to compliance with Section 409A of the Code; and

(xiii) to make all other determinations deemed necessary or advisable for administering the Plan.

Notwithstanding the foregoing, other than pursuant to Section 14, no Exchange Program may be implemented by the Administrator without the prior approval of the Company's stockholders.

(b) Effect of Administrator's Decision. All decisions, determinations, interpretations or actions of the Administrator made or taken pursuant to grants of authority under the Plan shall be made or taken in the sole discretion of the Administrator and shall be final, conclusive and binding on all persons for all purposes. The Administrator's decisions and determinations under the Plan need not be uniform and may be made selectively among Participants, whether or not such Participants are similarly situated.

(c) No Liability. Under no circumstances shall the Company, its Affiliates, the Administrator, the Board, any Director or any Officer of the Company incur any liability, including for any direct, indirect, incidental, consequential or special damages (including lost profits) of any form, whether or not foreseeable, with respect to the Plan or the Company's, its Affiliates', the Administrator's, the Board's or any Director's or Officer's roles, acts, omissions, determinations or interpretations in connection with the Plan or any Award.

(d) Minimum Vesting. All Awards granted to all Participants under the Plan shall be subject to a minimum vesting period of not less than one year from the date of grant; provided, however, the Administrator may provide for the grant of Awards to Participants without regard to the foregoing minimum vesting requirement with respect to a maximum of five percent (5%) of the total number of Shares authorized for issuance under the Plan pursuant to Section 3(a), as may be adjusted under Section 14(a).

5. Eligibility. Nonstatutory Stock Options, Restricted Stock, Restricted Stock Units, Performance Units, and Performance Shares may be granted to Service Providers. Incentive Stock Options may be granted only to employees of the Company or any Parent or Subsidiary of the Company.

6. Stock Options.

(a) Limitations. Each Option shall be designated in the Award Agreement as either an Incentive Stock Option or a Nonstatutory Stock Option. However, notwithstanding such designation, to the extent that the aggregate Fair Market Value of the Shares with respect to which Incentive Stock Options are exercisable for the first time by the Participant during any calendar year (under all plans of the Company and any Parent or Subsidiary) exceeds one hundred thousand dollars (\$100,000), such Options shall be treated as Nonstatutory Stock Options. For purposes of this subsection 6(a), Incentive Stock Options shall be taken into account in the order in which they were granted. The Fair Market Value of the Shares shall be determined as of the time the Option with respect to such Shares is granted. No dividends or dividend equivalents may be granted in respect of any Option, and holders of Options carry no voting rights.

(b) Term of Option. The term of each Option shall be stated in the Award Agreement. In the case of an Incentive Stock Option, the term shall be ten (10) years from the date of grant or such shorter term as may be provided in the Award Agreement. Moreover, in the case of an Incentive Stock Option granted to a Participant who, at the time the Incentive Stock Option is granted, owns stock representing more than ten percent (10%) of the total combined voting power of all classes of stock of the Company or any Parent or Subsidiary, the term of the Incentive Stock Option shall be five (5) years from the date of grant or such shorter term as may be provided in the Award Agreement. In the case of a Nonqualified Stock Option, the term shall be ten (10) years from the date of grant or such shorter term as may be provided in the Award Agreement.

(c) Option Exercise Price and Consideration.

(i) Exercise Price. The per share exercise price for the Shares to be issued pursuant to exercise of an Option shall be determined by the Administrator, but will be no less than one hundred percent (100%) of the Fair Market Value per Share on the date of the grant. In addition, in the case of an Incentive Stock Option granted to an employee of the Company or any Parent or Subsidiary of the Company who, at the time the Incentive Stock Option is granted, owns stock representing more than ten percent (10%) of the voting power of all classes of stock of the Company or any Parent or Subsidiary, the per Share exercise price shall be no less than one hundred ten percent (110%) of the Fair Market Value per Share on the date of grant.

(ii) Vesting Period. At the time an Option is granted, the Administrator shall fix the period within which the Option may be exercised and shall determine any conditions that must be satisfied before the Option may be exercised. Any vesting period shall be established in accordance with Section 4(d) of the Plan.

(d) Exercise of Option.

(i) Procedure for Exercise; Rights as a Stockholder. Any Option granted hereunder shall be exercisable according to the terms of the Plan and the Award Agreement and at such times and under such conditions as determined by the Administrator and set forth in the Award Agreement. An Option may not be exercised for a fraction of a Share.

An Option shall be deemed exercised when the Company receives:

(A) notice of exercise (in such form as the Administrator may specify from time to time) from the person entitled to exercise the Option, and

(B) full payment for the Shares with respect to which the Option is exercised (together with applicable withholding taxes). Full payment shall be made:

(1) in cash or by personal check, certified check or bank check or wire transfer of immediately available funds;

(2) other Shares provided that such Shares have a Fair Market Value on the date of surrender equal to the aggregate exercise price of the Shares as to which said Option is exercised, provided that accepting such Shares will not result in any adverse accounting consequences to the Company, as the Administrator determines in its sole discretion;

(3) by delivery of a properly executed exercise notice together with any other documentation as the Administrator and the Participant's broker, if applicable, require to effect an exercise of the Option and delivery to the Company of the sale or other proceeds (as permitted by Applicable Law) required to pay the exercise price;

(4) by withholding Shares otherwise issuable in connection with the exercise of the Option ("net exercise");

(5) such other consideration and method of payment authorized by the Administrator in its discretion or permitted by the Award Agreement, the Plan and Applicable Law; or

(6) any combination of the foregoing methods of payment.

Shares issued upon exercise of an Option shall be issued in the name of the Participant or, if requested by the Participant, in the name of the Participant and his or her spouse. Until the Shares are issued (as evidenced by the appropriate entry on the books of the Company or of a duly authorized transfer agent of the Company), no right to vote or receive dividends or any other rights as a stockholder shall exist with respect to the Shares subject to an Option, notwithstanding the exercise of the Option. The Company shall issue (or cause to be issued) such Shares promptly after the Option is exercised. No adjustment will be made for a dividend or other right for which the record date is prior to the date the Shares are issued, except as provided in Section 14 of the Plan.

Exercising an Option in any manner shall decrease the number of Shares thereafter available under the Option by the number of Shares as to which the Option is exercised.

(ii) Termination of Relationship as a Service Provider. If a Participant ceases to be a Service Provider, other than for Cause or due to the Participant's death or Disability, the Participant may exercise his or her Option within such period of time as is specified in the Award Agreement to the extent that the Option is vested on the date of termination (but in no event later than the expiration of the term of such Option as set forth in the Award Agreement). In the absence of a specified time in the Award Agreement, any vested portion of the Option shall remain exercisable for three (3) months following the Participant's termination (but in no event later than the expiration of the term of such Option as set forth in the Award Agreement). Unless otherwise provided by the Administrator or in the Award Agreement, if on the date of termination, the Participant is not vested as to all or any portion of his or her Option, the unvested portion of the Option shall terminate. If after termination, the Participant does not exercise his or her Option within the time period specified by the Administrator or in the Award Agreement, the Option shall terminate at the end of such period.

(iii) Disability of Participant. If a Participant ceases to be a Service Provider as a result of the Participant's Disability, the Participant may exercise his or her Option within such period of time as is specified in the Award Agreement to the extent the Option is vested on the date of termination (but in no event later than the expiration of the term of such Option as set forth in the Award Agreement). In the absence of a specified time in the Award Agreement, any vested portion of the Option shall remain exercisable for twelve (12) months following the Participant's termination (but in no event later than the expiration of the term of such Option as set forth in the Award Agreement). Unless otherwise provided by the Administrator or in the Award Agreement, if on the date of termination the Participant is not vested as to all or any portion of his or her Option, the unvested portion of the Option shall terminate. If after termination the Participant does not exercise his or her Option within the time period specified by the Administrator or in the Award Agreement, the Option shall terminate at the end of such period.

(iv) Death of Participant. If a Participant dies while a Service Provider, the Option may be exercised following the Participant's death within such period of time as is specified in the Award Agreement to the extent that the Option is vested on the date of death (but in no event later than the expiration of the term of such Option as set forth in the Award Agreement). In the absence of a specified time in the Award Agreement, any vested portion of the Option shall remain exercisable for twelve (12) months following the Participant's death (but in no event later than the expiration of the term of such Option as set forth in the Award Agreement). The Option may be exercised by the Participant's designated beneficiary, provided such beneficiary has been designated prior to Participant's death in a form acceptable by the Administrator. If no such beneficiary has been designated by the Participant, then such Option may be exercised by the personal representative of the Participant's estate or by the person or persons to whom the Option is transferred pursuant to the Participant's will or in accordance with the laws of descent and distribution. Unless otherwise provided by the Administrator or in the Award Agreement, if at the time of death the Participant is not vested as to all or any portion of his or her Option, the unvested portion of the Option shall terminate. If the Option is not so exercised within the time period specified by the Administrator or in the Award Agreement, the Option shall terminate at the end of such period.

(v) Termination for Cause. If a Participant's status as a Service Provider is terminated for Cause, then the Option, whether vested or unvested, will immediately terminate upon such termination.

7. Restricted Stock.

(a) Grant of Restricted Stock. Subject to the terms and provisions of the Plan, the Administrator, at any time and from time to time, may grant Shares of Restricted Stock to Service Providers in such amounts as the Administrator, in its sole discretion, will determine.

(b) Restricted Stock Agreement. Each Award of Restricted Stock will be evidenced by an Award Agreement that will specify the Period of Restriction, which shall be established in accordance with Section 4(d) of the Plan; the number of Shares granted; and such other terms and conditions as the Administrator, in its sole discretion, will determine. Unless the Administrator determines otherwise, the Company (or its designee) as escrow agent will hold Shares of Restricted Stock (or a stop-transfer restriction will be placed on any Shares of Restricted Stock issued in book-entry form) until the restrictions on such Shares have lapsed.

(c) Transferability. Except as provided in this Section 7 and Section 13, Shares of Restricted Stock may not be sold, transferred, pledged, assigned, or otherwise alienated or hypothecated until the end of the applicable Period of Restriction.

(d) Other Restrictions. The Administrator, in its sole discretion, may impose such other restrictions on Shares of Restricted Stock as it may deem advisable or appropriate.

(e) Removal of Restrictions. Except as otherwise provided in this Section 7, Shares of Restricted Stock granted under the Plan will be released from these restrictions as soon as practicable after the last day of the Period of Restriction, as provided in the Award Agreement or at such other time as the Administrator may determine. Notwithstanding the foregoing, the Administrator is authorized, in its sole discretion, to allow participants to cause their otherwise vested Restricted Stock to be deferred pursuant to the terms of any nonqualified deferred compensation program as may be established by the Company from time to time in its discretion for eligible employees or Directors. Notwithstanding any provision of the Plan to the contrary, including but not limited to Section 4(d), in the event of the death, Disability, retirement or other termination of service of a Service Provider or a Change-in-Control, the Administrator, in its discretion, may accelerate or otherwise modify the time at which any restrictions will lapse or be removed.

(f) Voting Rights. During the Period of Restriction, Participants holding Shares of Restricted Stock granted hereunder may exercise full voting rights with respect to those Shares, unless the Administrator determines otherwise.

(g) Dividends. The Administrator may, in its sole discretion, provide that Awards of Restricted Stock earn dividends paid with respect to such Shares. Any such dividends shall be accumulated and credited to an account for the Participant, settled in cash or shares of Stock as determined by the Administrator, and shall be subject to the same terms and conditions, including vesting restrictions, as the Award with respect to which the dividends are credited. The Administrator may determine that any dividends so credited to a Participant's account shall accrue interest at a rate per annum specified by the Administrator. Any credited dividends and accrued interest, if any, shall be paid as soon as administratively practicable following the time the related shares of Restricted Stock vest and are paid to the Participant. For the avoidance of doubt, no dividends or accrued interest, if any, may be paid before the underlying Restricted Stock vests, and to the extent an Award of Restricted Stock is terminated, cancelled or forfeited in whole or in part, due to failure to meet performance conditions or otherwise, any dividends and accrued interest, if any, credited with respect to such Award shall be terminated, cancelled or forfeited at the same time and to the same extent as such Award.

(h) Termination of Restricted Stock Award. On the date set forth in, and otherwise subject to the terms and conditions of, the Award Agreement or as provided by the Administrator, the Restricted Stock for which restrictions have not lapsed will be forfeited to the Company.

8. Restricted Stock Units.

(a) Grant. Restricted Stock Units may be granted at any time and from time to time as determined by the Administrator. After the Administrator determines that it will grant Restricted Stock Units under the Plan, it will advise the Participant in an Award Agreement of the terms, conditions, and restrictions related to the grant, including the number of Restricted Stock Units.

(b) Vesting Criteria and Other Terms. The Administrator will set the vesting period, which shall be established in accordance with Section 4(d) of the Plan, and the vesting criteria in its discretion, which may be service-based and/or performance-based vesting criteria. The Administrator may set vesting criteria based upon the achievement of Company-wide, business unit, or individual goals (including, but not limited to, continued employment), or any other basis determined by the Administrator in its discretion.

(c) Earning Restricted Stock Units. Upon meeting the applicable vesting criteria, the Participant will be entitled to receive a payout as determined by the Administrator. Notwithstanding any provision of the Plan to the contrary, including but not limited to Section 4(d), in the event of the death, Disability, retirement or other termination of service of a Service Provider or a Change-in-Control at any time after the grant of Restricted Stock Units, the Administrator, in its sole discretion, may reduce or waive any vesting criteria that must be met to receive a payout.

(d) Form and Timing of Payment. Payment of earned Restricted Stock Units will be made as soon as practicable, and in no event later than sixty (60) days, after the date(s) set forth in, and otherwise subject to the terms and conditions of, the Award Agreement or as provided by the Administrator. The Administrator, in its sole discretion, may settle earned Restricted Stock Units in cash, Shares, or a combination of both, as provided in the Award Agreement. Notwithstanding the foregoing to the contrary, the Administrator is authorized, in its sole discretion from time to time, to allow participants to further defer receipt of the Shares or cash issued in settlement of Restricted Stock Units pursuant to the terms of any nonqualified deferred compensation program as may be established by the Company from time to time in its discretion for eligible employees or Directors.

(e) Cancellation. On the date set forth in, and otherwise subject to the terms and conditions of, the Award Agreement or as provided by the Administrator, all unearned Restricted Stock Units will be terminated and forfeited to the Company.

(f) Dividend Equivalents. The Administrator is authorized to grant to Participants dividend equivalents based on the dividends declared on Shares that are subject to any outstanding Restricted Stock Unit. Unless otherwise provided by the Administrator or in the Award Agreement, for an Award of Restricted Stock Units that is subject to performance-based vesting conditions, dividend equivalents shall be accrued only with respect to the target number of Restricted Stock Units, and additional dividend equivalents will not be earned for any Restricted Stock Units earned in excess of target. Dividend equivalents shall be credited as of dividend payment dates during the period between the date the Restricted Stock Unit Award is granted and the date the Restricted Stock Unit Award is vested, paid or expired. Such dividend equivalents shall be converted to cash, Shares or additional Restricted Stock Units by such formula and at such time and subject to such limitations as may be determined by the Administrator. Dividend equivalents accruing on unvested Restricted Stock Units shall, as provided in the Award Agreement, either (i) be reinvested in the form of additional Shares, which shall be subject to the same vesting provisions as provided for in the Restricted Stock Unit Award or (ii) be held by the Company under the same vesting provisions in an account allocated to the Participant and accumulated, with or without interest in the Administrator's discretion, until the date upon which the Restricted Stock Unit Award becomes vested. For the avoidance of doubt, no dividend equivalents or accrued interest, if any, may be paid before the underlying Restricted Stock Units vest, and to the extent an Award of Restricted Stock Units is terminated,

cancelled or forfeited in whole or in part, due to failure to meet performance conditions or otherwise, any dividend equivalents and accrued interest, if any, credited with respect to such Award shall be terminated, cancelled or forfeited at the same time and to the same extent as such Award.

9. Stock Appreciation Rights.

(a) Grant of Stock Appreciation Rights. Subject to the terms and conditions of the Plan, a Stock Appreciation Right may be granted to Service Providers at any time and from time to time as determined by the Administrator, in its sole discretion. No dividends or dividend equivalents may be granted in respect of any Stock Appreciation Right, and holders of Stock Appreciation Rights carry no voting rights.

(b) Number of Shares. The Administrator will have complete discretion to determine the number of Stock Appreciation Rights granted to any Service Provider.

(c) Exercise Price and Other Terms. The per share exercise price for the Shares to be issued pursuant to exercise of a Stock Appreciation Right will be determined by the Administrator and will be no less than one hundred percent (100%) of the Fair Market Value per Share on the date of grant. Otherwise, the Administrator, subject to the provisions of the Plan, will have complete discretion to determine the terms and conditions of Stock Appreciation Rights granted under the Plan. Any vesting period for a Stock Appreciation Right shall be established in accordance with Section 4(d) of the Plan.

(d) Stock Appreciation Right Agreement. Each Stock Appreciation Right grant will be evidenced by an Award Agreement that will specify the exercise price, the term of the Stock Appreciation Right, the conditions of exercise, and such other terms and conditions as the Administrator, in its sole discretion, will determine.

(e) Expiration of Stock Appreciation Rights. A Stock Appreciation Right granted under the Plan will expire upon the date determined by the Administrator, in its sole discretion, and set forth in the Award Agreement or as provided by the Administrator. Notwithstanding the foregoing, Stock Appreciation Rights shall be subject to a maximum term of ten (10) years and to the provisions of subsection 6(d) relating to exercise.

(f) Payment of Stock Appreciation Right Amount. Upon exercise of a Stock Appreciation Right, a Participant will be entitled to receive payment from the Company in an amount determined by multiplying:

- (i). The difference between the Fair Market Value of a Share on the date of exercise over the exercise price; times
- (ii). The number of Shares with respect to which the Stock Appreciation Right is exercised.

As provided in the Award Agreement or except as otherwise determined by the Administrator, the payment to the Participant upon exercise of a Stock Appreciation Right may be in cash, in Shares of equivalent value, or in some combination thereof.

10. Performance Units and Performance Shares.

(a) Grant of Performance Units and/or Performance Shares. Performance Units and Performance Shares may be granted to Service Providers at any time and from time to time, as determined by the Administrator, in its sole discretion. The Administrator will have complete discretion in determining

the number of Performance Units and Performance Shares granted to each Participant. The Administrator may, in its sole discretion, provide that Awards of Performance Shares and Performance Units earn dividends or dividend equivalents, as applicable, in accordance with, and subject to the restrictions of, Section 7(g) and Section 8(f), respectively. For the avoidance of doubt, no dividends or dividend equivalents or accrued interest, if any, earned with respect to a Performance Unit Award or a Performance Share Award may be paid before the underlying Award vests, and to the extent an Award of Performance Units or Performance Shares is terminated, cancelled or forfeited in whole or in part, due to failure to meet performance conditions or otherwise, any dividends, dividend equivalents and accrued interest if any, credited with respect to such Award shall be terminated, cancelled or forfeited at the same time and to the same extent as such Award.

(b) Performance Objectives and Other Terms. The Administrator will set performance objectives and/or other vesting provisions (including, without limitation, continued status as a Service Provider) in its discretion which, depending on the extent to which they are met, will determine the number or value of Performance Units or Performance Shares that will be paid out to the Service Providers. The time period during which the performance objectives or other vesting provisions must be met will be called the “Performance Period.” Each Award of Performance Units and Performance Shares will be evidenced by an Award Agreement that will specify the Performance Period, vesting period (which shall be established in accordance with Section 4(d)) and such other terms and conditions as the Administrator, in its sole discretion, will determine. The Administrator may set performance objectives, which may be based on financial, strategic or operational goals or any other performance goals or metrics determined by the Administrator in its discretion. Such performance objectives may be based upon the achievement of Company-wide, divisional, or individual goals, measured on an absolute or relative basis, or any other goals, metrics or bases determined by the Administrator in its discretion.

(c) Earning of Performance Units and Performance Shares. After the applicable Performance Period has ended, the holder of Performance Units or Performance Shares will be entitled to receive a payout of the number of Performance Units or Performance Shares earned by the Participant over the Performance Period, to be determined as a function of the extent to which the corresponding performance objectives or other vesting provisions have been achieved, as determined by the Committee. After the grant of a Performance Units or Performance Shares, notwithstanding any provision of the Plan to the contrary, including but not limited to Section 4(d), the Administrator may, in its sole discretion, reduce or waive any performance objectives or other vesting provisions for such Performance Unit or Performance Share.

(d) Form and Timing of Payment of Performance Units and Performance Shares. Payment of earned Performance Units and Performance Shares will be made as soon as practicable after the expiration of the applicable Performance Period, and in no event later than sixty (60) days after the date(s) set forth in, and otherwise subject to the terms and conditions of, the Award Agreement or as provided by the Administrator. The Administrator, in its sole discretion, may pay earned Performance Units and Performance Shares in the form of cash, in Shares, or a combination thereof.

(e) Cancellation of Performance Units and Performance Shares. On the date set forth in, and otherwise subject to the terms and conditions of, the Award Agreement or as otherwise provided by the Administrator, all unearned or unvested Performance Units and Performance Shares will be forfeited to the Company.

11. Compliance With Code Section 409A.

(a) Awards are intended to operate in a manner that they are either exempt from the application of, or comply with, the requirements of Code Section 409A such that the grant, payment, settlement or deferral will not be subject to the additional tax or interest applicable under Code Section 409A, except as otherwise determined in the sole discretion of the Administrator, provided no warranty of such compliance

or exemption is hereby made. The Plan and each Award Agreement under the Plan is intended to meet the requirements of Code Section 409A and will be construed and interpreted in accordance with such intent, except as otherwise determined in the sole discretion of the Administrator. To the extent that an Award or payment, or the settlement or deferral thereof, is subject to Code Section 409A, the Award is intended to be granted, paid, settled or deferred in a manner that will meet the requirements of Code Section 409A, and the Plan and Award Agreements shall be interpreted and administered accordingly, though no guarantee or warranty of such compliance is made to any individual. The parties agree that this Plan may be amended, as determined in the discretion of the Administrator, and as may be necessary or advisable to comply with Section 409A of the Code and all related rules and regulations in order to preserve the payments and benefits provided hereunder.

(b) Notwithstanding anything in the Plan or in any Award Agreement to the contrary, to the extent that any amount or benefit that would constitute non-exempt “deferred compensation” for purposes of Section 409A of the Code would otherwise be payable or distributable under the Plan or any Award Agreement by reason of the occurrence of a Change-in-Control, or the Participant’s Disability or separation from service, such amount or benefit will not be payable or distributable to the Participant by reason of such circumstance unless (i) the circumstances giving rise to such Change-in-Control, Disability or separation from service meet any description or definition of “change-in-control event”, “disability” or “separation from service,” as the case may be, in Section 409A of the Code and applicable regulations (without giving effect to any elective provisions that may be available under such definition), or (ii) the payment or distribution of such amount or benefit would be exempt from the application of Section 409A of the Code by reason of the short-term deferral exemption or otherwise. This provision does not prohibit the vesting of any Award. If this provision prevents or delays the payment or distribution of any amount or benefit, such payment or distribution shall be made on the next earliest payment or distribution date or event specified in the Award Agreement that is permissible under Section 409A of the Code.

(c) Notwithstanding anything in the Plan or in any Award Agreement to the contrary, if any amount or benefit that would constitute non-exempt “deferred compensation” for purposes of Section 409A of the Code would otherwise be payable or distributable under this Plan or any Award Agreement by reason of a Participant’s separation from service during a period in which the Participant is a Specified Employee, then, subject to any permissible acceleration of payment by the Administrator under Treas. Reg. Section 1.409A-3(j)(4)(ii) (domestic relations order), (j)(4)(iii) (conflicts of interest), or (j)(4)(vi) (payment of employment taxes):

(i) if the payment or distribution is payable in a lump sum, the Participant’s right to receive payment or distribution of such non-exempt deferred compensation will be delayed until the earlier of the Participant’s death or the first day of the seventh month following the Participant’s separation from service; and

(ii) if the payment or distribution is payable over time, the amount of such non-exempt deferred compensation that would otherwise be payable during the six-month period immediately following the Participant’s separation from service will be accumulated and the Participant’s right to receive payment or distribution of such accumulated amount will be delayed until the earlier of the Participant’s death or the first day of the seventh month following the Participant’s separation from service, whereupon the accumulated amount will be paid or distributed to the Participant and the normal payment or distribution schedule for any remaining payments or distributions will resume.

For purposes of this Plan, the term “Specified Employee” has the meaning in Section 2(pp) of the Plan, provided, however, that, as permitted in such final regulations, the Company’s Specified Employees and its application of the six-month delay rule of Section 409A(a)(2)(B)(i) of the Code shall be determined in accordance with any rules adopted by the Board or any committee of the Board, which shall be applied

consistently with respect to all nonqualified deferred compensation arrangements of the Company, including this Plan.

(d) If any one or more Awards granted under the Plan to a Participant could qualify for any separation pay exemption described in Treas. Reg. Section 1.409A-1(b)(9), but such Awards in the aggregate exceed the dollar limit permitted for the separation pay exemptions, the Administrator may determine which Awards or portions thereof will be subject to such exemptions.

(e) If, pursuant to an Award, a Participant is entitled to a series of installment payments, such Participant's right to the series of installment payments shall be treated as a right to a series of separate payments and not to a single payment. For purposes of the preceding sentence, the term "series of installment payments" has the meaning provided in Treas. Reg. Section 1.409A-2(b)(2)(iii) (or any successor thereto).

12. Leaves of Absence/Transfer Between Locations. Unless the Administrator provides otherwise, vesting of Awards granted hereunder will be suspended during any unpaid leave of absence. A Participant will not cease to be an Employee in the case of:

- (a) any leave of absence approved by the Company; or
- (b) transfers between locations of the Company or between the Company, its Parent, or any Subsidiary.

For purposes of Incentive Stock Options, no such leave may exceed three (3) months, unless reemployment upon expiration of such leave is guaranteed by statute or contract. If reemployment upon expiration of a leave of absence approved by the Company is not so guaranteed, then six (6) months following the first day of such leave, any Incentive Stock Option held by the Participant will cease to be treated as an Incentive Stock Option and will be treated for tax purposes as a Nonstatutory Stock Option.

13. Transferability of Awards. Unless determined otherwise by the Administrator, an Award may not be sold, pledged, assigned, hypothecated, transferred, or disposed of in any manner other than by will or by the laws of descent or distribution or as otherwise provided in this Section 13 and may be exercised, during the lifetime of the Participant, only by the Participant. If the Administrator makes an Award transferable, including, without limitation, for estate planning purposes by instrument to an inter vivos or testamentary trust in which the Awards are to be passed to beneficiaries upon the death of the trustor (settlor) or by gift to Family Members, or pursuant to a domestic relations order (as defined in the Code) or other court-ordered marital settlement agreement, such Award shall be subject to the terms of the Plan and the Award Agreement and shall contain such additional terms and conditions as the Administrator deems appropriate. Notwithstanding the foregoing, under no circumstance may unvested or unexercised Awards be transferred for value or consideration.

14. Adjustments; Dissolution or Liquidation; Merger or Change-in-Control.

(a) Adjustments. In the event that any dividend (other than ordinary cash dividends) or other distribution (whether in the form of cash, Shares, other securities, or other property), recapitalization, stock split, reverse stock split, reorganization, merger, consolidation, split-up, spin-off, combination, repurchase, or exchange of Shares or other securities of the Company, or other change in the corporate structure of the Company affecting the Shares occurs, the Administrator, in order to prevent diminution or enlargement of the benefits or potential benefits intended to be made available under the Plan, will adjust, in such equitable manner as the Administrator deems appropriate, the number and class of Shares issuable under the Plan and/or the number, class and, if applicable, exercise price, of Shares subject to each outstanding Award.

(b) Dissolution or Liquidation. In the event of the proposed dissolution or liquidation of the Company, the Administrator shall notify each Participant as soon as practicable prior to the effective date of such proposed transaction. To the extent it has not been previously exercised, an Award will terminate immediately prior to the consummation of such proposed action.

(c) Change-in-Control.

(i) In the event of a Change-in-Control, then notwithstanding any other provision of the Plan or an Award to the contrary, including without limitation Section 4(d), each outstanding Award shall be treated as the Administrator determines in its discretion without a Participant's consent, including, without limitation:

(A) Awards may be assumed, or substantially equivalent Awards may be substituted, by the acquiring or succeeding entity or an affiliate thereof (for purposes of this Section 14, the "successor") with appropriate adjustments as to the number and kind of shares and prices;

(B) upon written notice to a Participant, the Participant's Awards will terminate immediately prior to the consummation of such Change-in-Control;

(C) Awards will vest and become exercisable, realizable, or payable, or restrictions applicable to an Award will lapse, in whole or in part, prior to or upon consummation of such Change-in-Control, and, to the extent the Administrator determines, terminate upon the effectiveness of such Change-in-Control;

(D)(1) Awards will terminate in exchange for an amount of cash and/or property, if any, equal to the amount (if any) that would have been attained upon the exercise of such Award or realization of the Participant's rights as of the date of the occurrence of the transaction (and, for the avoidance of doubt, if as of the date of the occurrence of the transaction the Administrator determines in good faith that no amount would have been attained upon the exercise of such Award or realization of the Participant's rights, then such Award may be terminated by the Company without payment), or (2) the replacement of such Award with other rights or property selected by the Administrator in its sole discretion; or

(E) any combination of the foregoing.

In taking any of the actions permitted under this subsection 14(c), the Administrator will not be obligated to treat all Awards, all Awards held by a Participant, or all Awards of the same type, similarly.

(ii) If, in the event of a Change-in-Control, the successor elects not to assume or substitute an Award, as determined by the Administrator, then upon the effective date of the Change-in-Control, the Participant shall fully vest in and have the right to exercise all of his or her outstanding Options and Stock Appreciation Rights; all restrictions on then outstanding Restricted Stock and Restricted Stock Units will lapse; and, with respect to then outstanding Performance Units, Performance Shares and any other Awards subject to performance-based vesting conditions, all performance goals or other vesting conditions will be deemed achieved at one hundred percent (100%) of target levels and all other terms and conditions met. In addition, if an Option or Stock Appreciation Right is not assumed or substituted by the successor in the event of a Change-in-Control, as determined by the Administrator, the Administrator may notify the Participant in writing or electronically that the Option or Stock Appreciation Right shall be exercisable for a period of time determined by the Administrator in its sole discretion (but in no event later than the expiration of the term of such Option as set forth in the Award Agreement), and the Option or Stock Appreciation Right shall terminate upon the expiration of such period.

(d) Outside Director Awards. With respect to Awards granted to an Outside Director that are assumed or substituted by a successor (in each case as determined by the Administrator), if, on the date of or following such assumption or substitution, the Participant's status as a Director or a director of the successor, as applicable, is terminated other than upon a voluntary resignation by the Participant (unless such resignation is at the request of the successor), then the Participant will fully vest in and have the right to exercise Options and/or Stock Appreciation Rights as to all of the Shares underlying such Award for a period of one year following such termination (but in no event later than the expiration of the term of such Option as set forth in the Award Agreement); all restrictions on Restricted Stock and Restricted Stock Units will lapse; and, with respect to Performance Units, Performance Shares and any other Awards subject to performance-based vesting conditions, all performance goals or other vesting conditions will be deemed achieved at one hundred percent (100%) of target levels and all other terms and conditions met.

(e) Assumption, Conversion or Substitution of Awards. For the purposes of Sections 14(c) and 14(d), a successor will be deemed to have "assumed or substituted" an Award under this Plan if the surviving entity substitutes an Award under this Plan with an award under a plan of the surviving entity having substantially equivalent value to and terms and conditions not materially less favorable than the original Award, or otherwise assumes the obligations under and/or equitably adjusts such original Award. The Administrator or the Board shall have sole and complete authority and discretion (which authority and discretion the Administrator or Board may exercise prior to the Change-in-Control, in which case such exercise of authority and discretion shall be final and binding) to determine whether the proposed assumption or substitution of an Award by a successor meets the requirements provided for in this paragraph. Notwithstanding anything in this Section 14(e) to the contrary, an Award that vests, is earned or paid out upon the satisfaction of one or more performance goals will not be considered assumed or substituted if, as determined by the Administrator or the Board, the Company or its successor modifies any of such performance goals without the Participant's consent; provided, however, a modification to such performance goals only to reflect the successor's post-Change-in-Control corporate structure will not be deemed to invalidate an otherwise valid Award assumption, as determined by the Administrator or the Board.

15. Tax Withholding.

(a) Withholding Requirements. Prior to the delivery of any Shares or cash pursuant to an Award (or exercise thereof), the Company will have the power and the right to deduct or withhold, or require a Participant to remit to the Company, an amount sufficient to satisfy any federal, state, local, foreign or other taxes (including the Participant's FICA obligation) required to be withheld with respect to such Award (or exercise thereof).

(b) Withholding Arrangements. The Administrator, in its sole discretion and pursuant to such procedures as it may specify from time to time, may permit a Participant to satisfy such tax withholding obligation, in whole or in part by (without limitation):

(i) paying cash;

(ii) electing to have the Company withhold otherwise deliverable cash or Shares having a Fair Market Value equal to the minimum statutory amount required to be withheld (or such other amount in the Administrator's discretion that does not cause the Award to be treated as a liability instrument under generally accepted accounting principles); or

(iii) delivering to the Company already-owned Shares having a Fair Market Value equal to the minimum statutory amount required to be withheld (or such other amount in the Administrator's discretion)

that does not cause the Award to be treated as a liability instrument under generally accepted accounting principles).

The Fair Market Value of the Shares to be withheld or delivered will be determined as of the date that the taxes are required to be withheld.

16. No Effect on Employment or Service. Neither the Plan nor any Award shall confer upon a Participant any right with respect to continuing the Participant's relationship as a Service Provider with the Company, nor shall they interfere in any way with the Participant's right or the Company's right to terminate such relationship at any time, with or without cause, to the extent permitted by Applicable Laws.

17. Date of Grant. The date of grant of an Award shall be, for all purposes, the date on which the Administrator (or its delegee, to the extent permitted by the Plan) makes the determination granting such Award, or such other later date as is determined by the Administrator (or its delegee, to the extent permitted by the Plan). Notice of the determination shall be provided to each Participant within a reasonable time after the date of such grant.

18. Term of Plan. Following the Board's adoption of the Plan, the Plan will become effective upon its approval by the Company's stockholders (the "Effective Date"). It will continue in effect for a term of ten (10) years from the Effective Date, unless terminated earlier under Section 19 of the Plan.

19. Amendment and Termination of the Plan.

(a) Amendment and Termination. The Board may at any time amend, alter, suspend or terminate the Plan.

(i) Stockholder Approval. The Company shall obtain stockholder approval of any Plan amendment to the extent required by Applicable Laws or otherwise in the Board's discretion.

(ii) Effect of Amendment or Termination. Subject to Section 19(c), no amendment, alteration, suspension or termination of the Plan shall impair the rights of any Participant under any then outstanding Award, unless mutually agreed otherwise between the Participant and the Administrator, which agreement must be in writing and signed by the Participant and the Company. Termination of the Plan shall not affect the Administrator's ability to exercise the powers granted to it hereunder with respect to Awards granted under the Plan prior to the date of such termination.

(b) Awards Previously Granted. The Administrator may waive any conditions or restrictions under, amend or modify the terms and conditions of, or cancel or terminate any outstanding Award at any time, in connection with any termination of service of a Service Provider or otherwise and notwithstanding any provision of the Plan to the contrary, including but not limited to Section 4(d); provided, however, subject to Section 19(c) and the provisions of the applicable Award Agreement, no such amendment, modification, cancellation or termination shall impair the rights of a Participant under an Award unless mutually agreed between the Participant and the Administrator, which agreement must be in writing and signed by the Participant and the Company.

(c) Compliance Amendments. Notwithstanding any other provision of this Section 19, the Plan or any Award Agreement to the contrary, the Administrator may, in its sole discretion and without the consent of any Participant, amend the Plan or any Award Agreement, to take effect retroactively or otherwise, as it deems necessary or advisable in order for the Company, the Plan, an Award or an Award Agreement to satisfy or conform to any present or future Applicable Law (including, without limitation, Code Section 409A) or to meet the requirements of any accounting standard.

20. Conditions Upon Issuance of Shares.

(a) Legal Compliance. Shares shall not be issued pursuant to the exercise of an Award unless the exercise of such Award and the issuance and delivery of such Shares shall comply with Applicable Laws and shall be further subject to the approval of counsel for the Company with respect to such compliance.

(b) Investment Representations. As a condition to the exercise of an Award, the Company may require the person exercising such Award to represent and warrant at the time of any such exercise that the Shares are being purchased only for investment and without any present intention to sell or distribute such Shares if, in the opinion of counsel for the Company, such a representation is required.

21. Inability to Obtain Authority. The inability of the Company to obtain authority from any regulatory body having jurisdiction, which authority is deemed by the Company's counsel to be necessary to the lawful issuance and sale of any Shares hereunder, shall relieve the Company of any liability in respect of the failure to issue or sell such Shares as to which such requisite authority shall not have been obtained.

22. Recoupment. A Participant's rights with respect to any Award hereunder shall in all events be subject to (i) any right that the Company may have under any Company clawback or recoupment policy as may be in effect from time to time or any other clawback or recoupment agreement or arrangement applicable to a Participant; or (ii) any right or obligation that the Company may have regarding the recoupment of "incentive-based compensation" under Section 10D of the Exchange Act and any applicable rules and regulations promulgated thereunder from time to time by the U.S. Securities and Exchange Commission.

**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: August 8, 2024

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: August 8, 2024

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 June 29, 2024 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: August 8, 2024

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 June 29, 2024 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: August 8, 2024

By: /s/ Mark R. Slicer

Mark R. Slicer
Chief Financial Officer
