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 July 1, 2022

or

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

For the transition period from to

Commission File Number: 001-35451

MACOM Technology Solutions Holdings, Inc.
(Exact name of registrant as specified in its charter)

Delaware	**27-0306875**
(State or other jurisdiction of incorporation or organization)	**(I.R.S. Employer Identification No.)**

100 Chelmsford Street
Lowell, MA 01851
(Address of principal executive offices and zip code)

(978) 656-2500
(Registrant's telephone number, including area code)

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

Title of each class	Trading Symbol(s)	Name of exchange on which registered
Common Stock, par value $0.001 per share	MTSI	Nasdaq Global Select Market

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 (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes ☒ No ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company or an emerging growth company. See 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	☒	Accelerated filer	☐
Non-accelerated filer	☐	Smaller reporting company	☐
		Emerging growth company	☐

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

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

As of July 25, 2022, there were 69,997,229 shares of the registrant's common stock outstanding.

MACOM TECHNOLOGY SOLUTIONS HOLDINGS, INC.
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PART I—FINANCIAL INFORMATION

ITEM 1. FINANCIAL STATEMENTS

MACOM TECHNOLOGY SOLUTIONS HOLDINGS, INC.
CONDENSED CONSOLIDATED BALANCE SHEETS
(Unaudited, in thousands)

	July 1, 2022	October 1, 2021
ASSETS		
Current assets:		
Cash and cash equivalents	$ 132,170	$ 156,537
Short-term investments	404,169	188,365
Accounts receivable, net	106,594	84,570
Inventories	110,228	82,699
Prepaid and other current assets	12,344	9,365
Total current assets	765,505	521,536
Property and equipment, net	122,498	120,526
Goodwill	311,958	314,240
Intangible assets, net	59,289	84,685
Deferred income taxes	37,519	39,516
Other investments	2,500	15,342
Other long-term assets	33,801	38,300
Total assets	$ 1,333,070	$ 1,134,145
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Current portion of finance lease obligations	$ 977	$ 958
Accounts payable	42,725	28,712
Accrued liabilities	57,731	63,374
Total current liabilities	101,433	93,044
Finance lease obligations, less current portion	27,292	28,037
Financing obligation	9,544	8,720
Long-term debt	565,509	492,097
Other long-term liabilities	33,652	40,511
Total liabilities	737,430	662,409
Commitments and contingencies (see Note 12)		
Stockholders' equity:		
Common stock	70	69
Treasury stock, at cost	(330)	(330)
Accumulated other comprehensive income	(2,766)	4,150
Additional paid-in capital	1,192,288	1,269,601
Accumulated deficit	(593,622)	(801,754)
Total stockholders' equity	595,640	471,736
Total liabilities and stockholders' equity	$ 1,333,070	$ 1,134,145

See notes to condensed consolidated financial statements.

MACOM TECHNOLOGY SOLUTIONS HOLDINGS, INC.
CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS
(Unaudited, in thousands, except per share data)

	Three Months Ended		Nine Months Ended	
	July 1, 2022	July 2, 2021	July 1, 2022	July 2, 2021
Revenue	$ 172,259	$ 152,622	$ 497,027	$ 451,709
Cost of revenue	67,717	65,353	199,353	200,065
Gross profit	104,542	87,269	297,674	251,644
Operating expenses:				
Research and development	37,625	33,610	108,550	105,165
Selling, general and administrative	30,914	29,985	93,481	91,758
Total operating expenses	68,539	63,595	202,031	196,923
Income from operations	36,003	23,674	95,643	54,721
Other (expense) income:				
Warrant liability expense	—	—	—	(11,130)
Interest expense, net	(845)	(5,526)	(3,928)	(15,111)
Other income (expense), net	13	(2,661)	114,866	(4,287)
Total other (expense) income, net	(832)	(8,187)	110,938	(30,528)
Income before income taxes	35,171	15,487	206,581	24,193
Income tax expense	2,937	482	5,962	3,349
Net income	$ 32,234	$ 15,005	$ 200,619	$ 20,844
Net income per share:				
Income per share - Basic	$ 0.46	$ 0.22	$ 2.88	$ 0.31
Income per share - Diluted	$ 0.45	$ 0.21	$ 2.82	$ 0.30
Weighted average shares used:				
Basic	69,946	68,732	69,712	68,331
Diluted	71,060	70,880	71,130	70,282

See notes to condensed consolidated financial statements.

MACOM TECHNOLOGY SOLUTIONS HOLDINGS, INC.
CONDENSED CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME
(Unaudited, in thousands)

	Three Months Ended		Nine Months Ended	
	July 1, 2022	July 2, 2021	July 1, 2022	July 2, 2021
Net income	$ 32,234	$ 15,005	$ 200,619	$ 20,844
Unrealized (loss) gain on short term investments	(1,219)	75	(4,171)	(121)
Foreign currency translation loss, net of tax	(1,742)	(69)	(2,745)	(420)
Other comprehensive (loss) income, net of tax	(2,961)	6	(6,916)	(541)
Total comprehensive income	$ 29,273	$ 15,011	$ 193,703	$ 20,303

See notes to condensed consolidated financial statements.

MACOM TECHNOLOGY SOLUTIONS HOLDINGS, INC.
CONDENSED CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY
(Unaudited, in thousands)

	Three Months Ended							
	Common Stock		Treasury Stock		Accumulated Other Comprehensive Income	Additional Paid-in Capital	Accumulated Deficit	Total Stockholders' Equity
	Shares	Amount	Shares	Amount				
Balance as of April 1, 2022	69,910	$ 70	(23)	$ (330)	$ 195	$ 1,180,204	$ (625,856)	$ 554,283
Vesting of restricted common stock and units	67	—	—	—	—	—	—	—
Issuance of common stock pursuant to employee stock purchase plan	66	—	—	—	—	2,917	—	2,917
Shares repurchased for tax withholdings on restricted stock awards	(23)	—	—	—	—	(1,178)	—	(1,178)
Share-based compensation	—	—	—	—	—	10,345	—	10,345
Other comprehensive loss, net of tax	—	—	—	—	(2,961)	—	—	(2,961)
Net income	—	—	—	—	—	—	32,234	32,234
Balance as of July 1, 2022	70,020	$ 70	(23)	$ (330)	$ (2,766)	$ 1,192,288	$ (593,622)	$ 595,640

	Nine Months Ended							
	Common Stock		Treasury Stock		Accumulated Other Comprehensive Income	Additional Paid-in Capital	Accumulated Deficit	Total Stockholders' Equity
	Shares	Amount	Shares	Amount				
Balance as of October 1, 2021	68,877	$ 69	(23)	$ (330)	$ 4,150	$ 1,269,601	$ (801,754)	$ 471,736
Stock option exercises	190	—	—	—	—	2,688	—	2,688
Vesting of restricted common stock and units	1,351	1	—	—	—	—	—	1
Issuance of common stock pursuant to employee stock purchase plan	122	—	—	—	—	5,364	—	5,364
Shares repurchased for tax withholdings on equity awards	(520)	—	—	—	—	(35,935)	—	(35,935)
Share-based compensation	—	—	—	—	—	30,260	—	30,260
Other comprehensive loss, net of tax	—	—	—	—	(6,916)	—	—	(6,916)
Cumulative-effect adjustment from adoption of ASU 2020-06, net	—	—	—	—	—	(79,690)	7,513	(72,177)
Net income	—	—	—	—	—	—	200,619	200,619
Balance as of July 1, 2022	70,020	$ 70	(23)	$ (330)	$ (2,766)	$ 1,192,288	$ (593,622)	$ 595,640

See notes to condensed consolidated financial statements.

MACOM TECHNOLOGY SOLUTIONS HOLDINGS, INC.
CONDENSED CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY
(Unaudited, in thousands)

Three Months Ended

	Common Stock Shares	Common Stock Amount	Treasury Stock Shares	Treasury Stock Amount	Accumulated Other Comprehensive Income	Additional Paid-in Capital	Accumulated Deficit	Total Stockholders' Equity
Balance as of April 2, 2021	68,692	$ 69	(23)	$ (330)	$ 4,462	$ 1,241,820	$ (833,888)	$ 412,133
Stock option exercises	10	—	—	—	—	161	—	161
Vesting of restricted common stock and units	62	—	—	—	—	—	—	—
Issuance of common stock pursuant to employee stock purchase plan	73	—	—	—	—	2,557	—	2,557
Shares repurchased for tax withholdings on equity awards	(21)	—	—	—	—	(1,066)	—	(1,066)
Share-based compensation	—	—	—	—	—	8,141	—	8,141
Other comprehensive income, net of tax	—	—	—	—	6	—	—	6
Equity component of convertible notes, net	—	—	—	—	—	8,856	—	8,856
Net income	—	—	—	—	—	—	15,005	15,005
Balance as of July 2, 2021	68,816	$ 69	(23)	$ (330)	$ 4,468	$ 1,260,469	$ (818,883)	$ 445,793

Nine Months Ended

	Common Stock Shares	Common Stock Amount	Treasury Stock Shares	Treasury Stock Amount	Accumulated Other Comprehensive Income	Additional Paid-in Capital	Accumulated Deficit	Total Stockholders' Equity
Balance as of October 2, 2020	66,921	$ 67	(23)	$ (330)	$ 5,009	$ 1,135,127	$ (839,727)	$ 300,146
Stock option exercises	60	—	—	—	—	978	—	978
Vesting of restricted common stock and units	1,284	1	—	—	—	—	—	1
Issuance of common stock pursuant to employee stock purchase plan	166	—	—	—	—	4,796	—	4,796
Shares repurchased for tax withholdings on equity awards	(473)	—	—	—	—	(23,404)	—	(23,404)
Share-based compensation	—	—	—	—	—	26,841	—	26,841
Other comprehensive loss, net of tax	—	—	—	—	(541)	—	—	(541)
Issuance of common stock for the cashless exercise of warrants	858	1	—	—	—	36,441	—	36,442
Equity component of convertible notes, net	—	—	—	—	—	79,690	—	79,690
Net income	—	—	—	—	—	—	20,844	20,844
Balance as of July 2, 2021	68,816	$ 69	(23)	$ (330)	$ 4,468	$ 1,260,469	$ (818,883)	$ 445,793

See notes to condensed consolidated financial statements.

MACOM TECHNOLOGY SOLUTIONS HOLDINGS, INC.
CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS
(Unaudited, in thousands)

	Nine Months Ended	
	July 1, 2022	**July 2, 2021**
CASH FLOWS FROM OPERATING ACTIVITIES:		
Net income	$ 200,619	$ 20,844
Adjustments to reconcile net income to net cash provided by operating activities:		
Depreciation and intangibles amortization	43,052	52,854
Share-based compensation	30,260	26,841
Warrant liability expense	—	11,130
Deferred financing cost and discount amortization and write-offs	1,281	6,029
Accretion of discount on convertible note	—	3,925
Deferred income taxes	2,110	2,200
(Gain) loss on equity method investment, net	(114,908)	287
Other adjustments, net	(85)	1,053
Change in operating assets and liabilities:		
Accounts receivable	(22,024)	(25,735)
Inventories	(27,529)	8,089
Prepaid expenses and other assets	897	(1,025)
Accounts payable	14,128	3,100
Accrued and other liabilities	(12,657)	(1,606)
Income taxes	1,845	(384)
Net cash provided by operating activities	116,989	107,602
CASH FLOWS FROM INVESTING ACTIVITIES:		
Proceeds from sale of equity method investment	127,750	—
Purchases of property and equipment	(18,818)	(12,926)
Proceeds from sales and maturities of short-term investments	165,998	191,306
Purchases of short-term investments	(386,762)	(152,336)
Proceeds from sale of property and equipment	23	280
Net cash (used in) provided by investing activities	(111,809)	26,324
CASH FLOWS FROM FINANCING ACTIVITIES:		
Proceeds from convertible notes, net of issuance costs	—	444,249
Payments on long-term debt	—	(545,321)
Payments on finance leases	(726)	(1,012)
Proceeds from stock option exercises and employee stock purchases	8,052	5,774
Repurchase of common stock - tax withholdings on equity awards	(35,935)	(23,404)
Net cash used in financing activities	(28,609)	(119,714)
Foreign currency effect on cash	(938)	481
NET CHANGE IN CASH AND CASH EQUIVALENTS	(24,367)	14,693
CASH AND CASH EQUIVALENTS — Beginning of period	156,537	129,441
CASH AND CASH EQUIVALENTS — End of period	$ 132,170	$ 144,134

See notes to condensed consolidated financial statements.

1. BASIS OF PRESENTATION AND SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Unaudited Interim Financial Information—The accompanying unaudited, condensed consolidated financial statements have been prepared according to the rules and regulations of the United States (the “U.S.”) Securities and Exchange Commission (the “SEC”) and, in the opinion of management, reflect all adjustments, which include normal recurring adjustments, necessary for a fair statement of the condensed consolidated balance sheets, condensed consolidated statements of operations, comprehensive income, stockholders' equity and cash flows of MACOM Technology Solutions Holdings, Inc. (“MACOM”, the “Company”, “us”, “we” or “our”) for the periods presented. We prepare our interim financial information using the same accounting principles we use for our annual audited consolidated financial statements. Certain information and note disclosures normally included in the annual audited consolidated financial statements have been condensed or omitted in accordance with prescribed SEC rules. We believe that the disclosures made in our condensed consolidated financial statements and the accompanying notes are adequate to make the information presented not misleading.

The condensed consolidated balance sheet as of October 1, 2021 is as reported in our audited consolidated financial statements as of that date. Our accounting policies are described in the notes to our October 1, 2021 consolidated financial statements, which were included in our Annual Report on Form 10-K for our fiscal year ended October 1, 2021 filed with the SEC on November 15, 2021 (the “2021 Annual Report on Form 10-K”). We recommend that the financial statements included in this Quarterly Report on Form 10-Q be read in conjunction with the consolidated financial statements and notes included in our 2021 Annual Report on Form 10-K.

Principles of Consolidation—The accompanying condensed consolidated financial statements include our accounts and the accounts of our majority-owned subsidiaries. All intercompany balances and transactions have been eliminated in consolidation.

We have a 52- or 53-week fiscal year ending on the Friday closest to the last day of September. Fiscal years 2022 and 2021 each include 52 weeks. To offset the effect of holidays, for fiscal years in which there are 53 weeks, we include the extra week arising in such fiscal years in the first fiscal quarter.

Use of Estimates—The preparation of condensed consolidated financial statements in conformity with U.S. generally accepted accounting principles (“GAAP”) requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities during the reporting periods, the reported amounts of revenue and expenses during the reporting periods, and the disclosure of contingent assets and liabilities at the date of the financial statements. On an ongoing basis, we determine estimates and assumptions on historical experience, currently available information and various other factors that management believes to be reasonable under the circumstances. Actual results may differ materially from these estimates and assumptions. The accounting policies which our management believes involve the most significant application of judgment or involve complex estimation, are inventories and associated reserves; goodwill and long-lived asset valuations and associated impairment assessments; revenue reserves; share-based compensation valuations and income taxes.

Recent Accounting Pronouncements—Our Recent Accounting Pronouncements are described in our 2021 Annual Report on Form 10-K.

Pronouncements Adopted in Fiscal Year 2022

In August 2020, the Financial Accounting Standards Board (the “FASB”) issued Accounting Standards Update (“ASU”) 2020-06, *Debt—Debt with Conversion and Other Options (Subtopic 470-20) and Derivatives and Hedging—Contracts in Entity’s Own Equity (Subtopic 815-40): Accounting for Convertible Instruments and Contracts in an Entity’s Own Equity (“ASU 2020-06”)*, which simplifies the accounting for certain financial instruments with characteristics of liability and equity, including convertible instruments and contracts on an entity’s own equity. The standard reduces the number of models used to account for convertible instruments, removes certain settlement conditions that are required for equity contracts to qualify for the derivative scope exception, and requires the if-converted method for calculation of diluted earnings per share for all convertible instruments. We early adopted this standard effective October 2, 2021 using the modified retrospective approach transition method. Therefore, the condensed consolidated financial statements for the three and nine months ended July 1, 2022 are presented under the new standard, while the comparative periods presented are not adjusted and continue to be reported in accordance with the Company's historical accounting policy. Refer to *Note 8 - Debt* for the impact of adoption on our 2026 Convertible Notes (as defined below).

Pronouncements for Adoption in Subsequent Periods

In March 2020, the FASB issued ASU 2020-04, *Reference Rate Reform (Topic 848): Facilitation of the Effects of Reference Rate Reform on Financial Reporting*, which provides optional expedients and exceptions to applying the guidance on contract modifications, hedge accounting, and other transactions, to simplify the accounting for transitioning from the London Interbank Offered Rate, and other interbank offered rates expected to be discontinued, to alternative reference rates. The guidance in this update was effective upon its issuance. If elected, the guidance is to be applied prospectively through December 31, 2022. We are currently evaluating the effect the potential adoption of this ASU will have on our consolidated financial statements, including, but not limited to, our Credit Agreement (defined below). For additional information regarding our Credit Agreement, refer to *Note 8 - Debt.*

2. REVENUE

Disaggregation of Revenue

We disaggregate revenue from contracts with customers by markets and geography, as we believe it best depicts how the nature, amount, timing and uncertainty of revenue and cash flows are affected by economic factors.

The following tables present our revenue disaggregated by markets and geography (in thousands):

	Three Months Ended		Nine Months Ended	
	July 1, 2022	July 2, 2021	July 1, 2022	July 2, 2021
Revenue by Market:				
Telecommunications	$ 61,988	$ 47,995	$ 180,738	$ 141,799
Industrial & Defense	75,509	71,370	215,794	205,078
Data Center	34,762	33,257	100,495	104,832
Total	$ 172,259	$ 152,622	$ 497,027	$ 451,709

	Three Months Ended		Nine Months Ended	
	July 1, 2022	July 2, 2021	July 1, 2022	July 2, 2021
Revenue by Geographic Region:				
United States	$ 77,434	$ 70,329	$ 226,407	$ 206,566
China	47,613	44,521	129,705	124,097
Asia Pacific, excluding China (1)	27,225	22,023	83,756	69,310
Other Countries (2)	19,987	15,749	57,159	51,736
Total	$ 172,259	$ 152,622	$ 497,027	$ 451,709

(1) Asia Pacific primarily represents Australia, Japan, Malaysia, Singapore, South Korea, Taiwan and Thailand.
(2) No country or region represented greater than 10% of our total revenue as of the dates presented, other than the United States, China and Asia Pacific region as presented above.

Contract Balances

We record contract assets or contract liabilities depending on the timing of revenue recognition, billings and cash collections on a contract-by-contract basis. Our contract liabilities primarily relate to deferred revenue, including advanced consideration received from customers for contracts prior to the transfer of control to the customer, and therefore revenue is subsequently recognized upon delivery of products and services.

The following table presents the changes in contract liabilities during the nine months ended July 1, 2022 (in thousands, except percentage):

	July 1, 2022	October 1, 2021	$ Change	% Change
Contract liabilities	$ 2,633	$ 2,793	$ (160)	(6)%

As of July 1, 2022 and October 1, 2021, $0.2 million and $0.9 million, respectively, of our contract liabilities, were recorded as other long-term liabilities on our balance sheet with the remainder recorded as accrued liabilities. During the three and nine months ended July 1, 2022, we recognized net sales of $0.3 million and $1.3 million, respectively, that were included in the contract liabilities balance as of the beginning of the period. The decrease in contract liabilities during the nine months ended July 1, 2022 was primarily related to recognition of revenue that was previously deferred for products and services invoiced prior to when certain of our customers obtained control of such products and/or services.

3. INVESTMENTS

All investments are short-term in nature and are invested in corporate bonds and commercial paper and are classified as available-for-sale. The amortized cost, gross unrealized holding gains or losses and fair value of our available-for-sale investments by major investment type are summarized in the tables below (in thousands):

	July 1, 2022			
	Amortized Cost	Gross Unrealized Holding Gains	Gross Unrealized Holding Losses	Aggregate Fair Value
Corporate bonds	$ 130,741	$ 8	$ (2,821)	$ 127,928
Commercial paper	277,605	50	(1,414)	276,241
Total short-term investments	$ 408,346	$ 58	$ (4,235)	$ 404,169

	October 1, 2021			
	Amortized Cost	Gross Unrealized Holding Gains	Gross Unrealized Holding Losses	Aggregate Fair Value
Corporate bonds	$ 73,653	$ 151	$ (171)	$ 73,633
Commercial paper	114,718	21	(7)	114,732
Total short-term investments	$ 188,371	$ 172	$ (178)	$ 188,365

The contractual maturities of available-for-sale investments were as follows (in thousands):

	July 1, 2022	October 1, 2021
Less than one year	$ 316,363	$ 120,590
Over one year	87,806	67,775
Total available-for-sale investments	$ 404,169	$ 188,365

We have determined that the gross unrealized losses on available for sale securities as of July 1, 2022 and October 1, 2021 are temporary in nature and/or do not relate to credit loss, and therefore there is no expense for credit losses recorded in our condensed consolidated statements of operations. Unrealized gains and losses on available-for-sale investments are reported as a separate component of stockholders' equity within accumulated other comprehensive income.

Other Investments — As of July 1, 2022, we held a non-marketable equity investment in Series B preferred stock of a privately held manufacturing corporation with preferred liquidation rights over other equity shares. As the equity securities do not have a readily determinable fair value and do not qualify for the practical expedient under Accounting Standards Codification ("ASC") 820, *Fair Value Measurement,* we have elected to account for this investment at cost less any impairment. We evaluate this investment for impairment at each balance sheet date. As of July 1, 2022 and October 1, 2021, the carrying value of this investment was $2.5 million and is classified as a long-term investment.

As of October 1, 2021, also included in long-term investments was a non-controlling investment of less than 10% in the outstanding equity of a private company, Ampere Computing Holdings LLC ("Ampere"), that was acquired in conjunction with our divestiture of our compute business during our fiscal year 2018. This investment's carrying value was updated quarterly based on our proportionate share of the gains or losses, as well as any changes in Ampere's equity, utilizing the equity method. As of October 1, 2021, the carrying value of this investment was $12.8 million.

On December 23, 2021, we sold our investment in Ampere to one of Ampere's other limited liability company members, pursuant to the terms of a previously negotiated call option included in Ampere's limited liability company agreement, as amended and restated (the "LLC Agreement"), in exchange for a predetermined fixed price as set forth in the LLC Agreement of approximately $127.8 million in cash consideration. As of December 23, 2021, the carrying value of this investment was approximately $9.5 million. As a result of this transaction, during the three months ended December 31, 2021, we recorded a gain of $118.2 million in Other income (expense), net in our condensed consolidated statements of operations.

During the three months ended December 31, 2021, we also recorded our proportionate share of the losses on this investment of $3.3 million in Other income (expense), net in our condensed consolidated statements of operations. We do not anticipate any further Ampere income or losses to be recorded. During the three and nine months ended July 2, 2021, we recorded net losses of $2.0 million and $0.3 million, respectively, associated with this investment. The nine months ended July 2, 2021 include a non-cash gain of $9.8 million associated with an increase in Ampere's equity.

4. FAIR VALUE

We group our financial assets and liabilities measured at fair value on a recurring basis in three levels, based on the markets in which the assets and liabilities are traded, and the reliability of the assumptions used to determine fair value. These levels are:

Level 1 *- Quoted prices in active markets for identical assets or liabilities.*

Level 2 *- Observable inputs other than Level 1 prices, such as quoted prices for similar assets or liabilities, quoted prices in markets with insufficient volume or infrequent transactions (less active markets), or model-driven valuations in which all significant inputs are observable or can be derived principally from, or corroborated with, observable market data.*

Level 3 *- Fair value is derived from valuation techniques in which one or more significant inputs are unobservable, including assumptions and judgments made by us.*

Assets and Liabilities Measured and Recorded at Fair Value on a Recurring Basis

We measure certain assets and liabilities at fair value on a recurring basis such as our financial instruments. There have been no transfers between Level 1, 2 or 3 assets or liabilities during the three and nine months ended July 1, 2022.

Assets and liabilities measured at fair value on a recurring basis consist of the following (in thousands):

	July 1, 2022			
	Fair Value	Active Markets for Identical Assets (Level 1)	Observable Inputs (Level 2)	Unobservable Inputs (Level 3)
Assets				
Money market funds	$ 14,310	$ 14,310	$ —	$ —
Commercial paper	276,241	—	276,241	—
Corporate bonds	127,928	—	127,928	—
Total assets measured at fair value	$ 418,479	$ 14,310	$ 404,169	$ —

	October 1, 2021			
	Fair Value	Active Markets for Identical Assets (Level 1)	Observable Inputs (Level 2)	Unobservable Inputs (Level 3)
Assets				
Money market funds	$ 26,363	$ 26,363	$ —	$ —
Commercial paper	114,732	—	114,732	—
Corporate bonds	73,633	—	73,633	—
Total assets measured at fair value	$ 214,728	$ 26,363	$ 188,365	$ —

All common stock warrants were exercised during the fiscal quarter ended January 1, 2021. During the nine months ended July 2, 2021, the change in the fair value of the warrant liability, classified within Level 3 of the fair value hierarchy, consist of the following (in thousands):

	October 2, 2020	Net Realized Losses Included in Earnings	Sales and Settlements	July 2, 2021
Common stock warrant liability	$ 25,312	$ 11,130	$ (36,442)	$ —

5. INVENTORIES

Inventories consist of the following (in thousands):

	July 1, 2022	October 1, 2021
Raw materials	$ 70,519	$ 50,950
Work-in-process	13,290	9,201
Finished goods	26,419	22,548
Total inventory, net	$ 110,228	$ 82,699

6. PROPERTY AND EQUIPMENT

Property and equipment consists of the following (in thousands):

	July 1, 2022	October 1, 2021
Construction in process	$ 19,058	$ 24,086
Machinery and equipment	222,362	200,843
Leasehold improvements	26,480	24,347
Furniture and fixtures	2,664	2,377
Computer equipment and software	17,983	17,749
Finance lease assets	34,417	35,589
Total property and equipment	322,964	304,991
Less accumulated depreciation and amortization	(200,466)	(184,465)
Property and equipment, net	$ 122,498	$ 120,526

Depreciation and amortization expense related to property and equipment for the three and nine months ended July 1, 2022 was $5.9 million and $17.7 million, respectively. Depreciation and amortization expense related to property and equipment for the three and nine months ended July 2, 2021 was $5.8 million and $18.1 million, respectively.

7. INTANGIBLE ASSETS

Amortization expense related to intangible assets is as follows (in thousands):

	Three Months Ended		Nine Months Ended	
	July 1, 2022	July 2, 2021	July 1, 2022	July 2, 2021
Cost of revenue	$ 1,779	$ 3,806	$ 6,062	$ 11,489
Selling, general and administrative	6,276	7,602	19,334	23,318
Total	$ 8,055	$ 11,408	$ 25,396	$ 34,807

Intangible assets consist of the following (in thousands):

	July 1, 2022	October 1, 2021
Acquired technology	$ 179,434	$ 179,434
Customer relationships	245,870	245,870
Trade name (indefinite-lived)	3,400	3,400
Total	428,704	428,704
Less accumulated amortization	(369,415)	(344,019)
Intangible assets — net	$ 59,289	$ 84,685

A summary of the activity in gross intangible assets and goodwill is as follows (in thousands):

	Intangible Assets				
	Total Intangible Assets	Acquired Technology	Customer Relationships	Trade Name	Goodwill
Balance as of October 1, 2021	$ 428,704	$ 179,434	$ 245,870	$ 3,400	$ 314,240
Currency translation adjustment	—	—	—	—	(2,282)
Balance as of July 1, 2022	$ 428,704	$ 179,434	$ 245,870	$ 3,400	$ 311,958

As of July 1, 2022, our estimated amortization of our intangible assets in future fiscal years was as follows (in thousands):

	2022 Remaining	2023	2024	2025	2026	Thereafter	Total
Amortization expense	$ 8,037	26,048	15,410	3,490	1,644	1,260	$ 55,889

Accumulated amortization for acquired technology and customer relationships were $173.4 million and $196.0 million, respectively, as of July 1, 2022, and $167.3 million and $176.7 million, respectively, as of October 1, 2021.

8. DEBT

The following represents the outstanding balances and effective interest rates of our borrowings as of July 1, 2022 and October 1, 2021, (in thousands, except percentages):

	July 1, 2022		October 1, 2021	
	Principal Balance	Effective Interest Rate	Principal Balance	Effective Interest Rate
LIBOR plus 2.25% term loans due May 2024	$ 120,766	3.31 %	$ 120,766	2.33 %
0.25% convertible notes due March 2026	450,000	0.54 %	450,000	4.25 %
Total principal amount outstanding	570,766		570,766	
Less: Unamortized discount on term loans and deferred financing costs	(5,257)		(5,567)	
Less: Unamortized discount on convertible notes	—		(73,102)	
Total long-term debt	$ 565,509		$ 492,097	

Term Loans

As of July 1, 2022, we are party to a credit agreement, dated as of May 8, 2014, with a syndicate of lenders and Goldman Sachs Bank USA, as administrative agent (as amended on February 13, 2015, August 31, 2016, March 10, 2017, May 19, 2017, May 2, 2018 and May 9, 2018, the “Credit Agreement”).

As of July 1, 2022, the Credit Agreement consisted of term loans with an initial aggregate principal amount of $700.0 million (the “Term Loans”) that will mature in May 2024 and bear interest at: (i) for LIBOR loans for any interest period, a rate per annum equal to the LIBOR rate as determined by the administrative agent, plus an applicable margin of 2.25%; and (ii) for base rate loans, a rate per annum equal to the greater of (a) the prime rate quoted in the print edition of the Wall Street Journal, Money Rates Section, (b) the federal funds rate plus one-half of 1.00% and (c) the LIBOR rate applicable to a one-month interest period plus 1.00% (but, in each case, not less than 1.00%), plus an applicable margin of 1.25%.

During the nine months ended July 2, 2021, we repaid $543.6 million in principal under the Term Loans using $443.6 million of the net proceeds from our 2026 Convertible Notes offering, described below, as well as existing cash and short-term investments. In connection with this prepayment, we expensed unamortized deferred financing costs and recognized losses on extinguishment of debt of $0.6 million and $4.4 million for the three and nine months ended July 2, 2021, respectively. The loss on extinguishment is a non-cash adjustment to cash flows from operating activities in our condensed consolidated statements of cash flows for the nine months ended July 2, 2021.

As of July 1, 2022, there are no minimum principal repayments on the Term Loans until fiscal year 2024 when the remaining principal balance of $120.8 million becomes due. The fair value of the Term Loans was estimated to be approximately $119.6 million and $120.2 million, as of July 1, 2022 and October 1, 2021, respectively, and was determined using Level 2 inputs, including a quoted price from a financial institution.

As of July 1, 2022, approximately $0.7 million of deferred financing costs remain unamortized related to the Term Loans and is recorded as a direct reduction of the recognized debt liabilities in our accompanying condensed consolidated balance sheet.

The Term Loans are secured by a first priority lien on substantially all of our assets and provide that we must comply with certain financial and non-financial covenants.

2026 Convertible Notes

On March 25, 2021, we issued 0.25% convertible senior notes due in fiscal year 2026, pursuant to an indenture dated as of such date (the “Indenture”), between the Company and U.S. Bank National Association, as trustee, with an aggregate principal amount of $400.0 million (the “Initial Notes”), and on April 6, 2021, we issued an additional $50.0 million aggregate principal amount (the “Additional Notes”) (together, the “2026 Convertible Notes”). The aggregate principal balance of the 2026 Convertible Notes is $450.0 million. The 2026 Convertible Notes will mature on March 15, 2026, unless earlier converted, redeemed or repurchased.

The Additional Notes were issued and sold to the initial purchaser of the Initial Notes, pursuant to the option to purchase the Additional Notes granted by the Company to the initial purchaser and have the same terms as the Initial Notes.

Holders of the 2026 Convertible Notes may convert their notes at their option at any time prior to the close of business on the business day immediately preceding December 15, 2025 in multiples of $1,000 principal amount, only under the following circumstances: (i) during any fiscal quarter commencing after the fiscal quarter ending on July 2, 2021 (and only during such fiscal quarter), if the last reported sale price of our common stock for at least 20 trading days (whether or not consecutive) during a period of 30 consecutive trading days ending on the last trading day of the immediately preceding fiscal quarter is greater than or equal to 130% of the conversion price for the notes on each applicable trading day; (ii) during the five business day period after any five consecutive trading day period (the “Measurement Period”) in which the “trading price” (as defined in the Indenture) per $1,000 principal amount of the notes for each trading day of the Measurement Period was less than 98% of the product of the last reported sale price of our common stock and the conversion rate for the notes on each such trading day; (iii) if we call such notes for redemption, at any time prior to the close of business on the second scheduled trading day immediately preceding the applicable redemption date; or (iv) upon the occurrence of specified corporate events described in the Indenture. On or after December 15, 2025 until the close of business on the second scheduled trading day immediately preceding the maturity date, holders may convert their notes in multiples of $1,000 principal amount, regardless of the foregoing circumstances.

The initial conversion rate for the 2026 Convertible Notes is 12.1767 shares of common stock per $1,000 principal amount of the notes, equivalent to an initial conversion price of approximately $82.12 per share of common stock. The conversion rate will be subject to adjustment upon the occurrence of certain specified events in the Indenture.

In November 2021, we made an irrevocable election to pay cash for the aggregate principal amount of notes to be converted. Upon conversion of the 2026 Convertible Notes, we are required to pay cash up to the aggregate principal amount of the notes to be converted and pay or deliver, as the case may be, cash, shares of our common stock or a combination of cash and shares of our common stock, at our election, in respect of the remainder, if any, of our conversion obligation in excess of the aggregate principal amount of the notes being converted (subject to, and in accordance with, the settlement provisions of the Indenture). We may not redeem the notes prior to March 20, 2024. We may redeem for cash all or any portion of the notes, at our option, on or after March 20, 2024 if the last reported sale price per share of our common stock has been at least 130% of the conversion price then in effect for at least 20 trading days (whether or not consecutive), including the trading day immediately preceding the date on which we provide notice of redemption, during any 30 consecutive trading day period ending on, and including, the trading day immediately preceding the date on which we provide notice of redemption, at a redemption price equal to 100% of the principal amount of the notes to be redeemed, plus accrued and unpaid interest, to, but not including, the redemption date.

The Indenture does not contain any financial or operating covenants or restrictions on the payments of dividends, the making of investments, the incurrence of indebtedness or the purchase or prepayment of securities by us or any of our subsidiaries.

Prior to the adoption of ASU 2020-06 on October 2, 2021, the proceeds from the issuance of the 2026 Convertible Notes were allocated between the conversion feature recorded as equity and the liability for the notes themselves. The carrying amount of the liability component was calculated by measuring the fair value of a similar debt instrument that does not have an associated convertible feature. The carrying amount of the equity component representing the conversion option was determined by deducting the fair value of the liability component from the par value of the 2026 Convertible Notes. The difference of $80.7 million between the principal amount of the 2026 Convertible Notes and the liability component (the “Debt Discount”) was amortized to interest expense using the effective interest method over the term of the 2026 Convertible Notes until the adoption of ASU 2020-06. The equity component of the 2026 Convertible Notes was included in additional paid-in capital in the consolidated balance sheet and was not to be remeasured as long as it continued to meet the conditions for equity classification.

Prior to the adoption of ASU 2020-06, to account for the transaction costs related to the 2026 Convertible Notes, we allocated the total amount incurred of approximately $5.7 million to the liability and equity components of the 2026 Convertible Notes based on the proportion of the proceeds allocated to the debt and equity components. Issuance costs attributable to the liability component were approximately $4.7 million, were recorded as additional Debt Discount and were amortized to interest expense over the contractual terms of the 2026 Convertible Notes. Issuance costs attributable to the equity component were approximately $1.0 million and were recorded as a reduction of additional paid in capital in stockholders’ equity.

In connection with the adoption of ASU 2020-06, we reclassified $72.2 million, consisting of $73.1 million of principal and issuance costs of $0.9 million, previously allocated to the conversion feature, from additional paid-in capital to long-term debt on our condensed consolidated balance sheet as of October 2, 2021. The reclassification was recorded to combine the two legacy units of account into a single instrument classified as a liability. We also recognized a cumulative effect adjustment of $7.5 million to accumulated deficit on our condensed consolidated balance sheet as of October 2, 2021, that was primarily driven by the derecognition of interest expense related to the accretion of the Debt Discount as required under the legacy accounting guidance. Under ASU 2020-06, we will no longer incur non-cash interest expense related to the accretion of the debt discount associated with the embedded conversion option.

For the three and nine months ended July 2, 2021, accretion of the Debt Discount included in interest expense was $3.6 million and $3.9 million, respectively, and as of July 2, 2021, the unamortized discount on the 2026 Convertible Notes was $76.8 million. For the three and nine months ended July 2, 2021, total interest expense for the 2026 Convertible Notes was $3.9 million and $4.2 million, respectively. For the three and nine months ended July 1, 2022, total interest expense for the 2026 Convertible Notes was $0.3 million and $0.9 million, respectively.

The fair value of our 2026 Convertible Notes, including the conversion feature, was $390.7 million and $479.4 million, as of July 1, 2022 and October 1, 2021, respectively, and was determined based on quoted prices in markets that are not active, which is considered a Level 2 valuation input.

There are no future minimum principal payments under the notes as of July 1, 2022; the full amount of $450.0 million is due in fiscal year 2026.

9. FINANCING OBLIGATION

On July 17, 2020, we entered into a power purchase agreement, which includes installation of electric power and thermal energy producing systems at our fabrication facility in Lowell, Massachusetts. We do not own these systems; however, we control the use of the assets during construction and operation. As of July 1, 2022 and October 1, 2021, we capitalized $9.8 million and $8.9 million, respectively, to property and equipment, net, and recorded a corresponding liability of $9.8 million and $8.9 million, respectively, primarily to Financing obligation on our condensed consolidated balance sheet. The financing obligation was calculated based on future fixed payments allocated to the power generator of $16.8 million over the 15-year term, discounted at an implied discount rate of 7.4%, and the remaining future minimum payments are for power purchases. In total, we have $27.2 million in fixed payments associated with the power purchase agreement which is expected to commence in fiscal 2022 and has a 15-year term.

10. STOCKHOLDERS' EQUITY

We have authorized 10 million shares of $0.001 par value preferred stock and 300 million shares of $0.001 par value common stock as of July 1, 2022.

Common Stock Warrants—In March 2012, we issued warrants to purchase 1,281,358 shares of common stock for $14.05 per share. During the fiscal quarter ended January 1, 2021, the holders of the warrants made cashless exercises of 1,281,358 shares at an exercise price of $14.05 per share, resulting in the issuance of 857,631 shares of common stock.

During the nine months ended July 2, 2021, we recorded the changes in the estimated fair value of the warrants in the accompanying statements of operations. See *Note 4 - Fair Value* for additional information. See *Note 11 - Earnings Per Share* for impact of the common stock warrants on net income per share.

11. EARNINGS PER SHARE

The following table sets forth the computation for basic and diluted net income per share of common stock (in thousands, except per share data):

	Three Months Ended		Nine Months Ended	
	July 1, 2022	July 2, 2021	July 1, 2022	July 2, 2021
Numerator:				
Net income attributable to common stockholders	$ 32,234	$ 15,005	$ 200,619	$ 20,844
Denominator:				
Weighted average common shares outstanding-basic	69,946	68,732	69,712	68,331
Dilutive effect of stock options, restricted stock and restricted stock units	1,114	2,148	1,418	1,951
Weighted average common shares outstanding-diluted	71,060	70,880	71,130	70,282
Net income to common stockholders per share-Basic:	$ 0.46	$ 0.22	$ 2.88	$ 0.31
Net income to common stockholders per share-Diluted:	$ 0.45	$ 0.21	$ 2.82	$ 0.30

During the nine months ended July 2, 2021, we had warrants outstanding which were measured at fair value. When calculating net income per share, we are required to adjust for the dilutive effect of outstanding common stock equivalents, including adjustment to the numerator for the dilutive effect of contracts that must be settled in stock, including warrants. The table above excludes the effects of 116,659 shares for the nine months ended July 2, 2021 of potential shares of common stock issuable upon exercise of warrants as the inclusion would be antidilutive. The 2026 Convertible Notes do not have an impact on diluted net income per share for the three and nine months ended July 1, 2022 or July 2, 2021.

12. COMMITMENTS AND CONTINGENCIES

From time to time, we may be subject to commercial disputes, employment issues, claims by other companies in the industry that we have infringed their intellectual property rights and other similar claims and litigation. Any such claims may lead to future litigation and material damages and defense costs. We were not involved in any material pending legal proceedings during the three and nine months ended July 1, 2022.

13. SHARE-BASED COMPENSATION

Stock Plans

As of July 1, 2022, we had 5.3 million shares available for issuance under our 2021 Omnibus Incentive Plan (the “2021 Plan”), which replaced our 2012 Omnibus Incentive Plan (as amended and restated) (the “2012 Plan”), and 1.4 million shares available for issuance under our 2021 Employee Stock Purchase Plan (the “Employee Stock Purchase Plan”), which replaced our 2012 Employee Stock Purchase Plan. We have outstanding awards under the 2021 Plan and the 2012 Plan. Following the adoption of the 2021 Plan, no additional awards have been or will be made under the 2012 Plan. Under the 2021 Plan, we have the ability to issue incentive stock options (“ISOs”), non-statutory stock options (“NSOs”), stock appreciation rights (“SARs”), restricted stock awards (“RSAs”), unrestricted stock awards, stock units (including restricted stock units (“RSUs”) and performance-based restricted stock units (“PRSUs”)), performance awards, cash awards, and other share-based awards to employees, directors, consultants and advisors. The ISOs and NSOs must be granted at an exercise price, and the SARs must be granted at a base value, per share of not less than 100% of the closing price of a share of our common stock on the date of grant (or, if no closing price is reported on that date, the closing price on the immediately preceding date on which a closing price was reported) (110% in the case of certain ISOs). Options granted under the 2012 Plan primarily vested based on certain market-based and performance-based criteria and generally have a term of four years to seven years. Certain of the share-based awards granted and outstanding as of July 1, 2022 are subject to accelerated vesting upon a change in control of the Company.

Incentive Stock Units

Outside of the equity plans described above, we also grant incentive stock units (“ISUs”) to certain of our international employees which typically vest over three or four years and for which the fair value is determined by our underlying stock price, which are classified as liabilities and settled in cash upon vesting.

As of July 1, 2022 and October 1, 2021, the fair value of outstanding ISUs was $4.0 million and $8.9 million, respectively, and the associated accrued compensation liability was $2.7 million and $6.2 million, respectively. During the three and nine months ended July 1, 2022, we recorded a benefit for ISU awards of $0.4 million and expense of $0.2 million, respectively. During the three and nine months ended July 2, 2021, we recorded expense of $0.6 million and $4.8 million, respectively. These expenses are not included in the share-based compensation expense totals below.

Share-Based Compensation

The following table shows a summary of share-based compensation expense included in the condensed consolidated statements of operations (in thousands):

	Three Months Ended		Nine Months Ended	
	July 1, 2022	July 2, 2021	July 1, 2022	July 2, 2021
Cost of revenue	$ 929	$ 777	$ 3,035	$ 2,482
Research and development	3,709	3,198	10,818	10,183
Selling, general and administrative	5,707	4,166	16,407	14,176
Total share-based compensation expense	$ 10,345	$ 8,141	$ 30,260	$ 26,841

As of July 1, 2022, the total unrecognized compensation costs related to RSAs, RSUs and PRSUs was $54.6 million, which we expect to recognize over a weighted-average period of 2.1 years. As of July 1, 2022, total unrecognized compensation cost related to our Employee Stock Purchase Plan was $0.8 million.

Restricted Stock, Restricted Stock Units and Performance-Based Restricted Stock Unit Awards

A summary of stock award activity for the nine months ended July 1, 2022 is as follows:

	Number of shares (in thousands)	Weighted-Average Grant Date Fair Value
Balance as of October 1, 2021	2,351	$ 24.57
Granted	1,008	53.27
Vested and released	(1,351)	22.70
Forfeited, canceled or expired	(134)	37.83
Balance as of July 1, 2022	1,874	$ 40.40

Stock awards that vested during the nine months ended July 1, 2022 and July 2, 2021 had combined fair values of $92.7 million and $64.0 million, respectively, as of the vesting date. RSUs granted generally vest over a period of three or four years.

We granted 161,349 market-based PRSUs during the nine months ended July 1, 2022, at a weighted average grant date fair value of $89.82 per share, or $14.5 million. Recipients may earn between 0% and 200% of the target number of shares granted, based on our achievement of total shareholder return in comparison to a selected group of peer companies over a three-year performance period. The fair value of these awards was estimated using a Monte Carlo simulation and share-based compensation expense is recognized ratably over the service period, based on the grant date fair value of the awards subject to the market condition. The significant assumptions used in the Monte Carlo simulation to calculate the fair value of these market-based PRSUs are as follows:

	Nine Months Ended
	July 1, 2022
Grant date stock price	$ 66.12
Average stock price at the start of the performance period	$ 64.11
Risk free interest rate	0.8 %
Years to maturity	3.00
Expected volatility rate	57.8 %
Expected dividend yield	—

Stock Options

A summary of stock option activity for the nine months ended July 1, 2022 is as follows (in thousands, except per share amounts and contractual term):

	Number of Shares	Weighted-Average Exercise Price per Share	Weighted-Average Remaining Contractual Term (in Years)	Aggregate Intrinsic Value
Options outstanding as of October 1, 2021	205	$ 14.29		
Exercised	(190)	14.15		
Forfeited, canceled or expired	—	—		
Options outstanding as of July 1, 2022	15	$ 16.06	3.35	$ 423
Options vested and exercisable as of July 1, 2022	15	16.06	3.35	423

Aggregate intrinsic value represents the difference between our closing stock price on July 1, 2022 and the exercise price of outstanding, in-the-money options. The total intrinsic value of options exercised was $11.0 million for the nine months ended July 1, 2022 and was $0.4 million and $2.5 million for the three and nine months ended July 2, 2021, respectively. There were no options exercised during the three months ended July 1, 2022.

14. INCOME TAXES

We are subject to income tax in the U.S. as well as other tax jurisdictions in which we conduct business. Earnings from non-U.S. activities are subject to local country income tax and may also be subject to current U.S. income tax. For interim periods, we record a tax provision or benefit based upon the estimated effective tax rate expected for the full fiscal year, adjusted for material discrete taxation matters arising during the interim periods. Our quarterly tax provision or benefit, and its quarterly estimate of the annual effective tax rate, are subject to significant variation due to several factors. These factors include items such as: variability in accurately predicting pre-tax income/loss, the mix of jurisdictions in which we operate, intercompany transactions, changes in how we do business, tax law developments, and relative changes in permanent tax benefits or expenses.

The provision for income taxes and effective income tax rate are as follows (in thousands, except percentages):

	Three Months Ended		Nine Months Ended	
	July 1, 2022	July 2, 2021	July 1, 2022	July 2, 2021
Income tax expense	$ 2,937	$ 482	$ 5,962	$ 3,349
Effective income tax rate	8.4 %	3.1 %	2.9 %	13.8 %

The difference between the U.S. federal statutory income tax rate of 21% and our effective income tax rates for the three and nine months ended July 1, 2022 and July 2, 2021 was primarily driven by the continuation of a full valuation allowance against any expense or benefit associated with income or losses in the U.S. and income taxed in foreign jurisdictions generally at lower tax rates, where a valuation allowance does not apply. The gain on the sale of our equity interest in Ampere during the nine months ended July 1, 2022 has been offset by our net operating loss carryforwards.

We recognize deferred tax assets to the extent that we believe that these assets are more likely than not to be realized. In making this determination, we consider available positive and negative evidence. We look at factors that may impact the valuation of our deferred tax assets including results of recent operations, future reversals of existing taxable temporary differences, projected future taxable income, and tax-planning strategies. We have determined that there was not sufficient objectively verifiable positive evidence to offset our significant negative objective evidence, therefore, we concluded that a full valuation allowance is appropriate for our U.S. deferred tax assets as of July 1, 2022.

Our deferred income tax asset balance as of July 1, 2022 and October 1, 2021 is primarily attributable to an initial $39.8 million deferred asset generated from an intra-entity transfer of a license for intellectual property during the fiscal quarter ended September 27, 2019. We expect this deferred tax asset to amortize over the life of the intellectual property.

There were no unrecognized tax benefits as of July 1, 2022 and October 1, 2021. It is our policy to recognize any interest and penalties accrued related to unrecognized tax benefits in income tax expense. During the fiscal quarter ended July 1, 2022, we did not make any accrual or payment of interest or penalties.

15. SUPPLEMENTAL CASH FLOW INFORMATION

The following is a summary of supplemental cash flow information for the periods presented (in thousands):

	Nine Months Ended	
	July 1, 2022	July 2, 2021
Cash paid for interest	$ 4,332	$ 10,099
Cash paid for income taxes	$ 1,792	$ 1,378
Non-cash activities:		
Operating lease right-of-use assets obtained in exchange for new lease liabilities	$ 2,367	$ 3,447
Additions to property and equipment, net included in liabilities	$ 1,241	$ 7,065
Issuance of common stock for the cashless exercise of warrants	$ —	$ 36,442

During the nine months ended July 1, 2022 and July 2, 2021, we capitalized $0.9 million and $6.6 million, respectively, of non-cash costs to property and equipment associated with construction of a power generator that were paid by our service provider and included in non-cash capital expenditures above. See *Note 9 - Financing Obligation*.

16. GEOGRAPHIC AND SIGNIFICANT CUSTOMER INFORMATION

We have one reportable operating segment that designs, develops, manufactures and markets semiconductors and modules. The determination of the number of reportable operating segments is based on the chief operating decision maker's ("CODM") use of financial information provided for the purposes of assessing performance and making operating decisions. The Company's CODM is its President and Chief Executive Officer. In evaluating financial performance and making operating decisions, the CODM primarily uses consolidated metrics. The Company assesses its determination of operating segments at least annually. We continue to evaluate our internal reporting structure and the potential impact of any changes on our segment reporting.

For information about our revenue in different geographic regions, based upon customer locations, see *Note 2 - Revenue*. Information about net property and equipment in different geographic regions is presented below (in thousands):

	July 1, 2022	October 1, 2021
United States	$ 107,227	$ 103,527
Europe (1)	11,992	12,766
Other Countries (2)	3,279	4,233
Total	$ 122,498	$ 120,526

(1) Europe primarily represents Finland, France, Ireland and Italy.
(2) Other than the United States and Europe, no country or region represented greater than 10% of the total net property and equipment as of the dates presented.

The following is a summary of customer concentrations as a percentage of revenue and accounts receivable as of and for the periods presented:

	Three Months Ended		Nine Months Ended	
Revenue	July 1, 2022	July 2, 2021	July 1, 2022	July 2, 2021
Customer A	11 %	10 %	—	10 %
Customer B	—	—	—	12 %

Customer A did not represent more than 10% of our revenue in the nine months ended July 1, 2022. Customer B did not represent more than 10% of our revenue in the three and nine months ended July 1, 2022 or the three months ended July 2, 2021. No other customer represented more than 10% of revenue and none of our customers represented more than 10% of accounts receivable in the periods presented in the accompanying condensed consolidated financial statements. For the three and nine months ended July 1, 2022, our top ten customers represented 51% and 47%, respectively, of total revenue, and for the three and nine months ended July 2, 2021, our top ten customers represented 48% and 51%, respectively, of total revenue.

ITEM 2. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

The following discussion of our financial condition and results of operations should be read in conjunction with the condensed consolidated financial statements and the notes thereto included elsewhere in this Quarterly Report on Form 10-Q and our Annual Report on Form 10-K for the fiscal year ended October 1, 2021 filed with the United States Securities and Exchange Commission (“SEC”) on November 15, 2021 (the “2021 Annual Report on Form 10-K”).

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Cautionary Note Regarding Forward-Looking Statements

This Item 2, “Management's Discussion and Analysis of Financial Condition and Results of Operations” and other sections of this Quarterly Report on Form 10-Q contain “forward-looking statements” within the meaning of the Private Securities Litigation Reform Act of 1995. In addition, we may make other written and oral communications from time to time that contain such statements. Forward-looking statements include statements regarding our business outlook, strategic plans and priorities, expectations, anticipated drivers of future revenue growth, industry trends, the potential impacts of COVID-19 on our future operations and results, our plans for use of our cash and cash equivalents and short-term investments, our ability to meet working capital requirements, estimates and objectives for future operations, our future results of operations and our financial position and other matters that do not relate strictly to historical facts. Forward-looking statements generally may be identified by terms such as “anticipates,” “believes,” “could,” “continue,” “estimates,” “expects,” “intends,” “may,” “plans,” “potential,” “predicts,” “projects,” “seeks,” “should,” “targets,” “will,” “would” or similar expressions or variations or the negatives of those terms. These statements are based on management's beliefs and assumptions as of the date of this Quarterly Report on Form 10-Q, based on information currently available to us. Such forward-looking statements are subject to risks, uncertainties and other factors that could cause actual results to differ materially from future results expressed or implied by such forward-looking statements. Important factors that could cause actual results to differ materially from the forward-looking statements include, among others, the risks described in the section entitled “Risk Factors” in this Quarterly Report on Form 10-Q and the 2021 Annual Report on Form 10-K. We caution the reader to carefully consider such factors. Furthermore, such forward-looking statements speak only as of the date of this Quarterly Report on Form 10-Q. Except as required by law, we undertake no obligation to update any forward-looking statements to reflect events or circumstances after the date of such statements.

Overview

We design and manufacture semiconductor products for Telecommunications (“Telecom”), Industrial and Defense (“I&D”) and Data Center industries. Headquartered in Lowell, Massachusetts, with operational facilities throughout North America, Europe and Asia, we design, develop and manufacture differentiated semiconductor products for customers who demand high performance, quality and reliability. We have more than 70 years of application expertise, combined with expertise in analog and mixed signal circuit design, compound semiconductor fabrication (including gallium arsenide (“GaAs”), indium phosphide (“InP”) and specialized silicon), advanced packaging and back-end assembly and test. We offer a broad portfolio of thousands of standard and custom devices, which include integrated circuits (“IC”), multi-chip modules (“MCM”), diodes, amplifiers, switches and switch limiters, passive and active components and complete subsystems, across dozens of product lines serving over 6,000 end customers in three primary markets. Our semiconductor products are electronic components that our customers incorporate into larger electronic systems, such as wireless communication systems including basestations, high capacity optical networks, data center applications, radar, medical systems and test and measurement applications. Our primary end markets are: (1) Telecom, which includes carrier infrastructure such as long-haul/metro, 5G and Fiber-to-the-X (“FTTx”)/passive optical network (“PON”), among others; (2) I&D, which includes military and commercial radar, radio frequency (“RF”) jammers, electronic countermeasures, communication data links, satellite communications and multi-market applications, which include industrial, medical, test and measurement and scientific applications; and (3) Data Center, which includes intra-Data Center, Data Center Interconnect (“DCI”) applications, at 100G, 200G, 400G, 800G and higher speeds, enabled by our broad portfolio of analog ICs and photonic components for high speed optical module customers.

COVID-19 Impact

COVID-19 has spread throughout areas of the world where we operate and resulted in authorities implementing numerous measures to try to contain the virus. As a result of these measures and the spread of COVID-19, we have modified our business practices and may further modify our practices as required, or as we determine appropriate. While these measures, as well as other disruptions, have impacted our operations, the operations of our customers and those of our respective vendors and suppliers, such impacts did not, through the nine months ended July 1, 2022, have a material impact on our consolidated operating results.

Given the significant continued economic uncertainty and volatility created by the pandemic, it is difficult to predict the nature and extent of impacts on the demand for our products. The continued spread of COVID-19 could cause a further economic slowdown or recession and could result in adverse impacts to our overall business, such as increased credit and collectability risks, adverse impacts on our supply chain, asset impairments, declines in the value of our financial instruments and adverse impacts on our capital resources. The degree to which the COVID-19 pandemic impacts our future business, financial condition, results of operations, liquidity and cash flows will depend on future developments, which are highly uncertain and cannot be accurately predicted, including the duration and spread of the outbreak, its severity, any resurgence of COVID-19 cases, including as a result of variant strains of the underlying virus, actions taken to contain the virus or treat its impact, the availability and efficacy of vaccines against COVID-19, how quickly and to what extent normal operating conditions can resume, and the economic impact on local, regional, national and international markets.

For additional information on risk factors that could impact our future results, please refer to the section entitled “Risk Factors” in this Quarterly Report on Form 10-Q and the 2021 Annual Report on Form 10-K.

Description of Our Revenue

Revenue. Our revenue is derived from sales of high-performance RF, microwave, millimeter wave, optical and photonic semiconductor products. We design, integrate, manufacture and package differentiated semiconductor-based products that we sell to customers through our direct sales organization, our network of independent sales representatives and our distributors.

We believe the primary drivers of our future revenue growth will include:

- continued growth in the demand for high-performance analog, digital and optical semiconductors in our three primary markets;
- introducing new products using advanced technologies, added features, higher levels of integration and improved performance;
- increasing content of our semiconductor solutions in customers’ systems through cross-selling our product lines;
- leveraging our core strength and leadership position in standard, catalog products that service all of our end applications; and
- engaging early with our lead customers to develop custom and standard products.

Our core strategy is to develop and innovate high-performance products that address our customers’ most difficult technical challenges in our primary markets: Telecom, I&D and Data Center.

We expect our revenue in the Telecom market to be driven by 5G deployments, with continued upgrades and expansion of communications equipment, and increasing adoption of our high-performance RF, millimeter wave, optical and photonic components.

We expect our revenue in the I&D market to be driven by the expanding product portfolio that we offer which services applications such as test and measurement, satellite communications, civil and military radar, industrial, scientific and medical applications, further supported by growth in applications for our multi-market catalog products.

We expect our revenue in the Data Center market to be driven by the adoption of cloud-based services and the upgrade of data center architectures to 100G, 200G, 400G and 800G interconnects, which we expect will drive adoption of higher speed optical and photonic components.

Critical Accounting Policies and Estimates

Our discussion and analysis of our financial condition and results of operations are based on our condensed consolidated financial statements. The preparation of financial statements, in conformity with U.S. GAAP, requires management to make estimates and judgments that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenue and expenses during the reporting period. By their nature, these estimates and judgments are subject to an inherent degree of uncertainty and could be material if our actual or expected experience were to change unexpectedly. On an ongoing basis, we re-evaluate our estimates and judgments.

Due to the COVID-19 pandemic, there has been uncertainty and disruption in the global economy and financial markets. We are not aware of any specific event or circumstance that would require updates to our estimates or judgments or require us to revise the carrying value of our assets or liabilities as of the date of filing of this Quarterly Report on Form 10-Q with the

SEC. These estimates may change as new events occur and additional information is obtained. Actual results could differ materially from these estimates under different assumptions or conditions.

We base our estimates and judgments on our historical experience and on other assumptions that we believe are reasonable under the circumstances, the results of which form the basis for making the judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. Actual results could differ from those estimates and material effects on our operating results and financial position may result. The accounting policies which our management believes involve the most significant application of judgment or involve complex estimation, are inventories and associated reserves; goodwill and long-lived asset valuations and associated impairment assessments; revenue reserves; share-based compensation valuations and income taxes.

For additional information related to these and other accounting policies refer to *Note 2 - Summary of Significant Accounting Policies* to our Consolidated Financial Statements included in Item 8 of Part II, "Financial Statements and Supplementary Data," of the 2021 Annual Report on Form 10-K and *Note 1 - Basis of Presentation and Summary of Significant Accounting Policies* to our Condensed Consolidated Financial Statements in this Quarterly Report on Form 10-Q.

Results of Operations

The following table sets forth, for the periods indicated, our statements of operations data (in thousands):

	Three Months Ended		Nine Months Ended	
	July 1, 2022	July 2, 2021	July 1, 2022	July 2, 2021
Revenue	$ 172,259	$ 152,622	$ 497,027	$ 451,709
Cost of revenue (1)	67,717	65,353	199,353	200,065
Gross profit	104,542	87,269	297,674	251,644
Operating expenses:				
Research and development (1)	37,625	33,610	108,550	105,165
Selling, general and administrative (1)	30,914	29,985	93,481	91,758
Total operating expenses	68,539	63,595	202,031	196,923
Income from operations	36,003	23,674	95,643	54,721
Other (expense) income:				
Warrant liability expense (2)	—	—	—	(11,130)
Interest expense, net	(845)	(5,526)	(3,928)	(15,111)
Other income (expense), net (3)	13	(2,661)	114,866	(4,287)
Total other (expense) income, net	(832)	(8,187)	110,938	(30,528)
Income before income taxes	35,171	15,487	206,581	24,193
Income tax expense	2,937	482	5,962	3,349
Net income	$ 32,234	$ 15,005	$ 200,619	$ 20,844

(1) Includes (a) Amortization expense related to intangible assets arising from acquisitions and (b) Share-based compensation expense included in our condensed consolidated statements of operations as set forth below (in thousands):

	Three Months Ended		Nine Months Ended	
	July 1, 2022	July 2, 2021	July 1, 2022	July 2, 2021
(a) Intangible amortization expense:				
Cost of revenue	$ 1,779	$ 3,806	$ 6,062	$ 11,489
Selling, general and administrative	6,276	7,602	19,334	23,318
(b) Share-based compensation expense:				
Cost of revenue	$ 929	$ 777	$ 3,035	$ 2,482
Research and development	3,709	3,198	10,818	10,183
Selling, general and administrative	5,707	4,166	16,407	14,176

(2) Represents changes in the fair value of common stock warrants recorded as liabilities and adjusted each reporting period to fair value. See *Note 10 - Stockholders' Equity* to our Condensed Consolidated Financial Statements in this Quarterly Report on Form 10-Q.

(3) The nine months ended July 1, 2022 includes gain on sale of our equity method investment of $118.2 million. Includes net losses of $3.3 million for the nine months ended July 1, 2022 and net losses of $2.0 million and $0.3 million for the three and nine months

ended July 2, 2021, respectively, associated with our equity method investment. See *Note 3 - Investments* to our Condensed Consolidated Financial Statements in this Quarterly Report on Form 10-Q for additional information. The three and nine months ended July 2, 2021 includes losses on extinguishment of debt of $0.6 million and $4.4 million, respectively. See *Note 8 - Debt* to our Condensed Consolidated Financial Statements in this Quarterly Report on Form 10-Q for additional information.

The following table sets forth, for the periods indicated, our statements of operations data expressed as a percentage of our revenue:

	Three Months Ended		Nine Months Ended	
	July 1, 2022	July 2, 2021	July 1, 2022	July 2, 2021
Revenue	100.0 %	100.0 %	100.0 %	100.0 %
Cost of revenue	39.3	42.8	40.1	44.3
Gross profit	60.7	57.2	59.9	55.7
Operating expenses:				
Research and development	21.8	22.0	21.8	23.3
Selling, general and administrative	17.9	19.6	18.8	20.3
Total operating expenses	39.8	41.7	40.6	43.6
Income from operations	20.9	15.5	19.2	12.1
Other (expense) income:				
Warrant liability expense	—	—	—	(2.5)
Interest expense	(0.5)	(3.6)	(0.8)	(3.3)
Other income (expense), net	0.0	(1.7)	23.1	(0.9)
Total other (expense) income, net	(0.5)	(5.4)	22.3	(6.8)
Income before income taxes	20.4	10.1	41.6	5.4
Income tax expense	1.7	0.3	1.2	0.7
Net income	18.7 %	9.8 %	40.4 %	4.6 %

Comparison of the Three and Nine Months Ended July 1, 2022 to the Three and Nine Months Ended July 2, 2021

Revenue. Our revenue increased by $19.6 million, or 12.9%, to $172.3 million for the three months ended July 1, 2022, from $152.6 million for the three months ended July 2, 2021, and our revenue increased by $45.3 million, or 10.0%, to $497.0 million for the nine months ended July 1, 2022, from $451.7 million for the nine months ended July 2, 2021. The increase in revenue in the three and nine months ended July 1, 2022 is described by end market in the following paragraphs.

Revenue from our primary markets, the percentage of change between the periods presented, and revenue by primary markets expressed as a percentage of total revenue in the periods presented were (in thousands, except percentages):

	Three Months Ended			Nine Months Ended		
	July 1, 2022	July 2, 2021	% Change	July 1, 2022	July 2, 2021	% Change
Telecom	$ 61,988	$ 47,995	29.2 %	$ 180,738	$ 141,799	27.5 %
Industrial & Defense	75,509	71,370	5.8 %	215,794	205,078	5.2 %
Data Center	34,762	33,257	4.5 %	100,495	104,832	(4.1)%
Total	$ 172,259	$ 152,622	12.9 %	$ 497,027	$ 451,709	10.0 %
Telecom	36.0 %	31.4 %		36.4 %	31.4 %	
Industrial & Defense	43.8 %	46.8 %		43.4 %	45.4 %	
Data Center	20.2 %	21.8 %		20.2 %	23.2 %	
Total	100.0 %	100.0 %		100.0 %	100.0 %	

In the three months ended July 1, 2022, our Telecom market revenue increased by $14.0 million, or 29.2%, compared to the three months ended July 2, 2021. In the nine months ended July 1, 2022, our Telecom market revenue increased by $38.9 million, or 27.5%, compared to the nine months ended July 2, 2021. The increase for the three and nine months ended July 1, 2022 was primarily driven by an increase in RF and microwave products for broadband access and video infrastructure, products targeted for 5G applications and carrier-based optical semiconductor products.

In the three months ended July 1, 2022, our I&D market revenue increased by $4.1 million, or 5.8%, compared to the three months ended July 2, 2021. In the nine months ended July 1, 2022, our I&D market revenue increased by $10.7 million, or 5.2%, compared to the nine months ended July 2, 2021. The increase in the three and nine months ended July 1, 2022 was primarily related to new program wins and expansion of our product lines, partially offset by lower sales of legacy products.

In the three months ended July 1, 2022, our Data Center market revenue increased by $1.5 million, or 4.5%, compared to the three months ended July 2, 2021. In the nine months ended July 1, 2022, our Data Center market revenue decreased by $4.3 million, or 4.1%, compared to the nine months ended July 2, 2021. The increase in the three months ended July 1, 2022 was primarily due to an increase in sales of our high-performance analog Data Center products partially offset by lower sales of legacy products. The decrease in the nine months ended July 1, 2022 was primarily due to a decrease in sales of legacy products partially offset by an increase in sales of our optical semiconductor Data Center products.

Gross profit. Gross margin was 60.7% and 57.2% for the three months ended July 1, 2022 and July 2, 2021, respectively, and 59.9% and 55.7% for the nine months ended July 1, 2022 and July 2, 2021, respectively. Gross profit was $104.5 million and $87.3 million for the three months ended July 1, 2022 and July 2, 2021, respectively, and $297.7 million and $251.6 million for the nine months ended July 1, 2022 and July 2, 2021, respectively. Gross profit increased for the three and nine months ended July 1, 2022 as compared to the three and nine months ended July 2, 2021 primarily as a result of higher sales, favorable revenue mix, production efficiencies, as well as decreases in intangible amortization and depreciation expense, partially offset by increases in production supplies, employee headcount and employee-related costs.

Research and development. Research and development expense increased by $4.0 million, or 11.9%, to $37.6 million, or 21.8% of our revenue, for the three months ended July 1, 2022, compared to $33.6 million, or 22.0% of our revenue, for the three months ended July 2, 2021. Research and development expense increased by $3.4 million, or 3.2%, to $108.6 million, or 21.8% of our revenue, for nine months ended July 1, 2022, compared to $105.2 million, or 23.3% of our revenue, for the nine months ended July 2, 2021. Research and development expense increased in the three and nine months ended July 1, 2022 primarily as a result of an increase in employee headcount, employee-related costs, share-based compensation expense, depreciation expense, development foundry costs and design software costs, partially offset by lower lease costs.

Selling, general and administrative. Selling, general and administrative expense increased by $0.9 million, or 3.1%, to $30.9 million, or 17.9% of our revenue, for the three months ended July 1, 2022, compared to $30.0 million, or 19.6% of our revenue, for the three months ended July 2, 2021. Selling, general and administrative expense increased by $1.7 million, or 1.9%, to $93.5 million, or 18.8% of our revenue, for the nine months ended July 1, 2022, compared to $91.8 million, or 20.3% of our revenue, for the nine months ended July 2, 2021. Selling, general and administrative expense increased in the three and nine months ended July 1, 2022 primarily due to an increase in employee-related costs, share-based compensation expense and variable selling costs, partially offset by a decrease in intangible amortization.

Warrant liability expense. There was no warrant liability expense for the three and nine months ended July 1, 2022 or the three months ended July 2, 2021, compared to an expense of $11.1 million for the nine months ended July 2, 2021. The expense for the nine months ended July 2, 2021 was driven by a change in the estimated fair value of common stock warrants, primarily driven by the increase in the underlying price of our common stock, which was recorded as a liability at fair value. During November 2020, all of the warrants were exercised and 857,631 shares of common stock were issued. For additional information refer to *Note 10 - Stockholders' Equity* to our Condensed Consolidated Financial Statements in this Quarterly Report on Form 10-Q.

Interest expense, net. In the three months ended July 1, 2022, interest expense, net was $0.8 million, or 0.5% of our revenue, compared to $5.5 million, or 3.6% of our revenue, for the three months ended July 2, 2021. In the nine months ended July 1, 2022, interest expense, net was $3.9 million, or 0.8% of our revenue, compared to $15.1 million, or 3.3% of our revenue, for the nine months ended July 2, 2021. The decrease for the three and nine months ended July 1, 2022 is primarily due to the issuance of our 2026 Convertible Notes with a lower interest rate as compared to our Term Loans, the adoption of ASU 2020-06 resulting in a lower effective interest rate on our 2026 Convertible Notes, as well as the reduction in our Term Loan balance. For additional information refer to *Note 8 - Debt* to our Condensed Consolidated Financial Statements in this Quarterly Report on Form 10-Q.

Other income (expense), net. In the three months ended July 1, 2022, other income, net was less than $0.1 million, or less than 0.1% of our revenue, compared to other expense, net of $2.7 million, or 1.7% of our revenue, for the three months ended July 2, 2021. In the nine months ended July 1, 2022, other income, net was $114.9 million, or 23.1% of our revenue, compared to other expense, net of $4.3 million, or 0.9% of our revenue, for the nine months ended July 2, 2021. The change in other income (expense), net in the three months ended July 1, 2022 is due to a loss from our equity method investment in the three months ended July 2, 2021 that was sold during the three months ended December 31, 2021. The increase in the nine months ended July 1, 2022 is primarily due to the gain on sale of our equity method investment of $118.2 million. See *Note 3 -*

Investments to our Condensed Consolidated Financial Statements in this Quarterly Report on Form 10-Q for additional information.

Provision for income taxes. Our income tax expense and effective income tax rates for the periods indicated were (in thousands, except percentages):

	Three Months Ended		Nine Months Ended	
	July 1, 2022	July 2, 2021	July 1, 2022	July 2, 2021
Income tax expense	2,937	482	5,962	3,349
Effective income tax rate	8.4 %	3.1 %	2.9 %	13.8 %

Our estimated annual effective tax rate for the year ending September 30, 2022 is expected to be approximately 3%, adjusted for discrete taxation matters arising during the interim periods.

The difference between the U.S. federal statutory income tax rate of 21% and our effective income tax rate for the three and nine months ended July 1, 2022 and July 2, 2021 was primarily driven by the continuation of a full valuation allowance against any expense or benefit associated with income or losses in the U.S. and income taxed in foreign jurisdictions at generally lower tax rates, where a valuation allowance does not apply. The gain on the sale of our equity interest in Ampere during the nine months ended July 1, 2022 has been offset by our net operating loss carryforwards.

As of July 1, 2022, we maintain a full valuation allowance against our U.S. deferred tax assets. We will continue to monitor all evidence in the future as we assess the impact of the full valuation allowance for U.S. deferred tax assets. For additional information refer to *Note 14 - Income Taxes* to our Condensed Consolidated Financial Statements in this Quarterly Report on Form 10-Q.

Liquidity and Capital Resources

The following table summarizes our cash flow activities (in thousands):

	Nine Months Ended	
	July 1, 2022	July 2, 2021
Cash and cash equivalents, beginning of period	$ 156,537	$ 129,441
Net cash provided by operating activities	116,989	107,602
Net cash (used in) provided by investing activities	(111,809)	26,324
Net cash used in financing activities	(28,609)	(119,714)
Foreign currency effect on cash	(938)	481
Cash and cash equivalents, end of period	$ 132,170	$ 144,134

Cash Flow from Operating Activities

Our cash flow from operating activities for the nine months ended July 1, 2022 of $117.0 million consisted of a net income of $200.6 million, less adjustments of $38.3 million, to reconcile our net income to cash provided by operating activities, and cash used in operating assets and liabilities of $45.3 million. Adjustments to reconcile our net income to cash provided by operating activities primarily included a net gain of $114.9 million related to the sale of our equity method investment offset by equity method investment losses, depreciation and intangible amortization expense of $43.1 million and share-based compensation expense of $30.3 million. In addition, cash used in operating assets and liabilities was $45.3 million for the nine months ended July 1, 2022, primarily driven by an increase in accounts receivable of $22.0 million, an increase in inventories of $27.5 million and a decrease of $12.7 million in accrued and other liabilities, partially offset by an increase in accounts payable of $14.1 million.

Our cash flow from operating activities for the nine months ended July 2, 2021 of $107.6 million consisted of a net income of $20.8 million, plus adjustments to reconcile our net income to cash provided by operating activities of $104.4 million, offset by cash used in operating assets and liabilities of $17.6 million. Adjustments to reconcile our net income to cash provided by operating activities primarily included depreciation and intangible amortization expense of $52.9 million, share-based compensation expense of $26.8 million, warrant liability expense of $11.1 million, deferred financing cost amortization and write-offs of $6.0 million and accretion of the discount on convertible debt of $3.9 million. In addition, cash used in operating assets and liabilities was $17.6 million for the nine months ended July 2, 2021, primarily driven by an increase in accounts receivable of $25.7 million, a decrease in inventories of $8.1 million and an increase in accounts payable of $3.1 million.

Cash Flow from Investing Activities

Our cash flow used in investing activities for the nine months ended July 1, 2022 of $111.8 million consisted primarily of purchases of $386.8 million of short-term investments and capital expenditures of $18.8 million, offset by proceeds from the sale of our equity method investment of $127.8 million and proceeds of $166.0 million for the sale and maturity of short-term investments. For additional information on the sale of our equity method investment, see *Note 3 - Investments* to our Condensed Consolidated Financial Statements in this Quarterly Report on Form 10-Q.

Our cash flow provided by investing activities for the nine months ended July 2, 2021 of $26.3 million consisted primarily of proceeds of $191.3 million for the sale and maturity of short-term investments, offset by purchases of $152.3 million of short-term investments and capital expenditures of $12.9 million.

Cash Flow from Financing Activities

During the nine months ended July 1, 2022, our cash used in financing activities of $28.6 million was primarily related to $35.9 million of repurchases of common stock associated with employee tax withholdings on vested equity awards, partially offset by $8.1 million of proceeds from stock option exercises and employee stock purchases.

During the nine months ended July 2, 2021, our cash used in financing activities of $119.7 million was primarily related to $545.3 million of payments on the Term Loans and $23.4 million of repurchases of stock associated with employee tax withholdings on vested equity awards, partially offset by proceeds from the 2026 Convertible Notes, net of issuance costs, of $444.2 million and $5.8 million of proceeds from stock option exercises and employee stock purchases.

Liquidity

As of July 1, 2022, we held $132.2 million of cash and cash equivalents, primarily deposited with financial institutions, as well as $404.2 million of liquid short-term investments. During the three months ended December 31, 2021, our revolving credit facility, which had $160.0 million in borrowing capacity, expired and is no longer available. The undistributed earnings of certain foreign subsidiaries are considered indefinitely reinvested for the periods presented and we do not intend to repatriate such earnings. We believe the decision to reinvest these earnings will not have a significant impact on our liquidity. As of July 1, 2022, cash held by our indefinitely reinvested foreign subsidiaries was $13.6 million, which, along with cash generated from foreign operations, is expected to be used in the support of international growth and working capital requirements as well as the repayment of certain intercompany loans.

We plan to use our remaining available cash and cash equivalents and short-term investments for general corporate purposes, including working capital, or for the acquisition of or investment in complementary technologies, design teams, products and businesses. We believe that our cash and cash equivalents, short-term investments and cash generated from operations will be sufficient to meet our working capital requirements for at least the next twelve months. We may need to raise additional capital from time to time through the issuance and sale of equity or debt securities, and there is no assurance that we will be able to do so on favorable terms or at all.

As of July 1, 2022, we had no off-balance sheet arrangements.

For additional information related to our Liquidity and Capital Resources, see *Note 8 - Debt* to our Condensed Consolidated Financial Statements in this Quarterly Report on Form 10-Q.

Recent Accounting Pronouncements

See *Note 1 - Basis of Presentation and Summary of Significant Accounting Policies* to our Condensed Consolidated Financial Statements in this Quarterly Report on Form 10-Q for information about recent accounting pronouncements.

ITEM 3. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

We are exposed to market risk in the ordinary course of business, which consists primarily of interest rate risk associated with our cash and cash equivalents, short-term investments and our variable rate debt, as well as foreign exchange rate risk.

Interest rate risk. The primary objectives of our investment activity are to preserve principal, provide liquidity and invest excess cash for an average rate of return. To minimize market risk, we maintain our portfolio in cash and diversified investments, which may consist of corporate bonds, bank deposits, money market funds and commercial paper. The interest rates are variable and fluctuate with current market conditions. The risk associated with fluctuating interest rates is limited to this investment portfolio. We believe that a 10% change in interest rates would not have a material impact on our financial position or results of operations. We do not enter into financial instruments for trading or speculative purposes.

Our exposure to interest rate risk also relates to the increase or decrease in the amount of interest expense we must pay on the outstanding debt under the Credit Agreement. The interest rates on our Term Loans are variable interest rates based on our lender’s prime rate or a LIBOR rate, in each case plus an applicable margin, which exposes us to market interest rate risk when we have outstanding borrowings under the Credit Agreement. As of July 1, 2022, we had $120.8 million of outstanding borrowings under the Credit Agreement. Assuming our outstanding debt remains constant under the Credit Agreement for an entire year and the applicable annual interest rate increases or decreases by 1%, our annual interest expense would increase or decrease by $1.2 million. The interest rates on our 2026 Convertible Notes are fixed and therefore not subject to interest rate risk.

Foreign currency risk. To date, our international customer agreements have been denominated primarily in U.S. dollars. Accordingly, we have limited exposure to foreign currency exchange rates. The functional currency of a majority of our foreign operations continues to be in U.S. dollars with the remaining operations being local currency. Increases in the value of the U.S. dollar relative to other currencies could make our products more expensive, which could negatively impact demand in certain regions. Conversely, decreases in the value of the U.S. dollar relative to other currencies could result in our products being more expensive to certain customers and could reduce or delay orders, or otherwise negatively affect how they do business with us. The effects of exchange rate fluctuations on the net assets of the majority of our operations are accounted for as transaction gains or losses. We believe that a change of 10% in such foreign currency exchange rates would not have a material impact on our financial position or results of operations. In the future, we may enter into foreign currency exchange hedging contracts to reduce our exposure to changes in exchange rates.

ITEM 4. CONTROLS AND PROCEDURES

Evaluation of Disclosure Controls and Procedures

As of the end of the period covered by this Quarterly Report on Form 10-Q, we carried out an evaluation of the effectiveness of the design and operation of our disclosure controls and procedures (as defined in Rule 13a-15(e) under the Securities Exchange Act of 1934, as amended (the “Exchange Act”)). Based on this evaluation, our Chief Executive Officer and Chief Financial Officer concluded that our disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) were effective as of July 1, 2022.

Changes in Internal Control over Financial Reporting

There were no changes to our internal control over financial reporting (as defined in Rules 13a-15(f) and 15d-15(f) of the Exchange Act) that occurred during our most recent fiscal quarter that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Limitations on Controls

Our disclosure controls and procedures and internal control over financial reporting are designed to provide reasonable assurance of achieving the desired control objectives. Our management recognizes that any control system, no matter how well designed and operated, is based upon certain judgments and assumptions and cannot provide absolute assurance that its objectives will be met. Similarly, an evaluation of controls cannot provide absolute assurance that misstatements due to error or fraud will not occur or that all control issues and instances of fraud, if any, have been detected.

PART II—OTHER INFORMATION

ITEM 1. LEGAL PROCEEDINGS

See *Note 12 - Commitments and Contingencies* to our Condensed Consolidated Financial Statements in this Quarterly Report on Form 10-Q for information about our legal proceedings.

ITEM 1A. RISK FACTORS

Our business involves a high degree of risk. In addition to the other information set forth in this Quarterly Report on Form 10-Q, you should carefully consider the factors discussed in Part I, “Item 1A. Risk Factors” in our 2021 Annual Report on Form 10-K, which could materially affect our business, financial condition or future results. As of the date of this Quarterly Report on Form 10-Q, there have been no material changes in any of the risk factors described in our 2021 Annual Report on Form 10-K, except as discussed in Part II, “Item 1A. Risk Factors” in our Quarterly Report on Form 10-Q for the fiscal quarter ended April 1, 2022, as filed with the SEC on April 28, 2022.

ITEM 2. UNREGISTERED SALES OF EQUITY SECURITIES AND USE OF PROCEEDS

Issuer Purchases of Equity Securities

The following table presents information with respect to purchases of common stock we made during the fiscal quarter ended July 1, 2022.

Period	Total Number of Shares (or Units) Purchased [(1)]	Average Price Paid per Share (or Unit)	Total Number of Shares (or Units) Purchased as Part of Publicly Announced Plans or Programs	Maximum Number (or Approximate Dollar Value) of Shares (or Units) that May Yet Be Purchased Under the Plans or Programs
April 2, 2022-April 29, 2022	1,571	$ 52.45	—	—
April 30, 2022-May 27, 2022	19,005	52.18	—	—
May 28, 2022-July 1, 2022	2,168	47.97	—	—
Total	22,744	$ 51.79	—	—

(1) We employ “withhold to cover” as a tax payment method for vesting of restricted stock awards for our employees, pursuant to which, we withheld from employees the shares noted in the table above to cover tax withholding related to the vesting of their awards. The average prices listed in the above table are averages of the fair market prices at which we valued shares withheld for purposes of calculating the number of shares to be withheld.

ITEM 6. EXHIBITS

Exhibit Number	Description
3.1	Fifth Amended and Restated Certificate of Incorporation (incorporated by reference to Exhibit 3.1 to our Current Report on Form 8-K filed on June 2, 2016).
3.2	Third Amended and Restated Bylaws (incorporated by reference to Exhibit 3.2 to our Current Report on Form 8-K filed on June 2, 2016).
31.1	Certification of Principal Executive Officer Required Under Rule 13a-14(a) and 15d-14(a) of the Securities Exchange Act of 1934, as amended.
31.2	Certification of Principal Financial Officer Required Under Rule 13a-14(a) and 15d-14(a) of the Securities Exchange Act of 1934, as amended.
32.1	Certification of Principal Executive Officer and Principal Financial Officer Required Under Rule 13a-14(b) of the Securities Exchange Act of 1934, as amended, and 18 U.S.C. §1350.
101	The following material from the Quarterly Report on Form 10-Q of MACOM Technology Solutions Holdings, Inc. for the fiscal quarter ended July 1, 2022, formatted in Inline XBRL: (i) Consolidated Balance Sheets, (ii) Consolidated Statements of Operations, (iii) Consolidated Statements of Comprehensive Loss, (iv) Consolidated Statements of Stockholders' Equity, (v) Consolidated Statements of Cash Flows, (vi) Notes to Consolidated Financial Statements and (vii) document and entity information, tagged as blocks of text and including detailed tags.
104	The cover page for the Quarterly Report on Form 10-Q of MACOM Technology Solutions Holdings, Inc. for the fiscal quarter ended July 1, 2022, formatted in Inline XBRL and included as Exhibit 101

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this Quarterly Report on Form 10-Q to be signed on its behalf by the undersigned thereunto duly authorized.

MACOM TECHNOLOGY SOLUTIONS HOLDINGS, INC.

Dated: July 28, 2022	By:	/s/ Stephen G. Daly
		Stephen G. Daly *President and Chief Executive Officer* *(Principal Executive Officer)*
Dated: July 28, 2022	By:	/s/ John F. Kober
		John F. Kober *Senior Vice President and Chief Financial Officer* *(Principal Accounting and Principal Financial Officer)*

Exhibit 31.1

CERTIFICATION OF THE PRESIDENT AND CEO PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Stephen G. Daly, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of MACOM Technology Solutions Holdings, 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(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a–15(e) and 15d–15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a–15(f) and 15d–15(f)) for the registrant and have:
   (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
   (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
   (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
   (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
   (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
   (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: July 28, 2022

/s/ Stephen G. Daly
Stephen G. Daly
President and Chief Executive Officer
(Principal Executive Officer)

Exhibit 31.2

CERTIFICATION OF THE CFO PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, John F. Kober, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of MACOM Technology Solutions Holdings, 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(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a–15(e) and 15d–15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a–15(f) and 15d–15(f)) for the registrant and have:
   (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
   (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
   (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
   (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
   (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
   (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: July 28, 2022

/s/ John F. Kober
John F. Kober
SVP and Chief Financial Officer
(Principal Financial Officer)

Exhibit 32.1

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

In connection with the Quarterly Report of MACOM Technology Solutions Holdings, Inc. (the “Company”) on Form 10-Q for the quarter ended July 1, 2022 as filed with the Securities and Exchange Commission on the date hereof (the “Report”), Stephen G. Daly, as President and Chief Executive Officer of the Company, and John F. Kober, as SVP and Chief Financial Officer of the Company, each hereby certifies, pursuant to and solely for the purpose of 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that:

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

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

Date: July 28, 2022

By: /s/ Stephen G. Daly
Stephen G. Daly
President and Chief Executive Officer
(Principal Executive Officer)

By: /s/ John F. Kober
John F. Kober
SVP and Chief Financial Officer
(Principal Financial Officer)