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 OCTOBER 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 000-18032

LATTICE SEMICONDUCTOR CORPORATION

(Exact name of Registrant as specified in its charter)

State of Delaware **(State or other jurisdiction of incorporation or organization)**	**93-0835214** **(I.R.S. Employer Identification No.)**
5555 NE Moore Court, Hillsboro, OR **(Address of principal executive offices)**	**97124** **(Zip Code)**

(503) 268-8000
(Registrant's telephone number, including area code)

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

Title of each class	Trading Symbol	Name of each exchange on which registered
Common Stock, $.01 par value	LSCC	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. (Check one):

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 ☒

Number of shares of common stock outstanding as of October 27, 2022 137,059,418

LATTICE SEMICONDUCTOR CORPORATION
QUARTERLY REPORT ON FORM 10-Q
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Note Regarding Forward-Looking Statements

This Quarterly Report on Form 10-Q contains forward-looking statements that involve estimates, assumptions, risks, and uncertainties. Any statements about our expectations, beliefs, plans, objectives, assumptions, or future events or performance are not historical facts and may be forward-looking. We use words or phrases such as “anticipate,” “believe,” “could,” “estimate,” “expect,” “intend,” “plan,” "possible," “predict,” “projects,” “may,” “will,” “should,” “continue,” “ongoing,” “future,” “potential,” and similar words or phrases to identify forward-looking statements.

Forward-looking statements include, but are not limited to, statements about: our target or expected financial performance and our ability to achieve those results; future impacts of the ongoing COVID-19 pandemic, including as a result of actions by governments, businesses, and individuals in response to the situation, on consumer, industrial, labor, and financial markets, our business operations, supply chain and partners, financial performance, results of operations, financial position, and the achievement of our strategic objectives; future impacts of the military conflict between Ukraine and Russia; the impact of any continuing trade or travel restrictions on the export and import of products between the U.S. and China; our opportunities to increase our addressable market; our expectations and strategies regarding market trends and opportunities, including market segment drivers such as 5G infrastructure deployments, cloud and enterprise servers, client computing platforms, industrial Internet of Things, factory automation, automotive electronics, smart homes and prosumers; our expectations regarding our customer base; our expectations regarding product offerings; our gross margin growth and our strategies to achieve gross margin growth and other financial results; our future investments in research and development, and our research and development expense efficiency; future financial results or accounting treatments; our judgments involved in accounting matters, including revenue recognition, inventories and cost of revenue, and income taxes; actions we may take regarding the design and continued effectiveness of our internal controls over financial reporting; our use of cash; our beliefs regarding the adequacy of our liquidity, capital resources and facilities; whether we will consider and act upon acquisition opportunities to extend our product, technology and product offerings; the expected costs of our restructuring plans; our expectations regarding taxes, including unrecognized tax benefits, and tax adjustments and allowances; whether we will pursue future stock repurchases and how any future repurchases will be funded; our ability to prevent and respond to information technology system failures, security breaches and incidents, cyber-attacks or fraud; the impact of laws and regulations addressing privacy, data protection, and cybersecurity and our ability to comply with the same; and our beliefs regarding legal proceedings.

These forward-looking statements are based on estimates and assumptions that are subject to risks and uncertainties that could cause actual results to differ materially from those statements expressed in the forward-looking statements. The key factors, among others, that could cause our actual results to differ materially from the forward-looking statements include the effects of the ongoing COVID-19 pandemic and the actions by governments, businesses, and individuals in response to the situation, the effects of which may give rise to or amplify the risks associated with many of these factors listed here; global economic conditions and uncertainty; and other factors more fully described herein or that are otherwise described from time to time in our filings with the Securities and Exchange Commission ("SEC"), including, but not limited to, the items discussed in Part I, Item 1A, “Risk Factors,” in our Annual Report on Form 10-K for the fiscal year ended January 1, 2022 filed with the SEC on February 23, 2022 and any additional or updated risk factors discussed in any subsequent Quarterly Report on Form 10-Q filed since that date.

You should not unduly rely on forward-looking statements because our actual results could differ materially from those expressed by us. In addition, any forward-looking statement applies only as of the date of this filing. We do not plan to, and undertake no obligation to, update any forward-looking statements to reflect new information or new events, circumstances or developments, or otherwise.

PART I. FINANCIAL INFORMATION

ITEM 1. FINANCIAL STATEMENTS

LATTICE SEMICONDUCTOR CORPORATION
CONSOLIDATED STATEMENTS OF OPERATIONS
(unaudited)

	Three Months Ended		Nine Months Ended	
(In thousands, except per share data)	**October 1, 2022**	**October 2, 2021**	**October 1, 2022**	**October 2, 2021**
Revenue	$ 172,509	$ 131,911	$ 484,396	$ 373,532
Cost of revenue	53,777	49,086	154,412	142,937
Gross margin	118,732	82,825	329,984	230,595
Operating expenses:				
Research and development	34,820	28,769	100,988	80,289
Selling, general, and administrative	31,926	26,272	89,721	76,971
Amortization of acquired intangible assets	869	603	2,908	1,809
Restructuring charges	2,315	166	2,505	546
Acquisition related charges	—	—	511	—
Total operating expenses	69,930	55,810	196,633	159,615
Income from operations	48,802	27,015	133,351	70,980
Interest expense	(1,267)	(661)	(2,866)	(2,081)
Other (expense) income, net	(820)	(87)	(1,085)	(384)
Income before income taxes	46,715	26,267	129,400	68,515
Income tax expense (benefit)	356	(472)	2,431	1,125
Net income	$ 46,359	$ 26,739	$ 126,969	$ 67,390
Net income per share:				
Basic	$ 0.34	$ 0.20	$ 0.92	$ 0.49
Diluted	$ 0.33	$ 0.19	$ 0.90	$ 0.47
Shares used in per share calculations:				
Basic	137,267	136,638	137,397	136,476
Diluted	139,935	141,632	140,921	142,163

See Accompanying Notes to Unaudited Consolidated Financial Statements.

LATTICE SEMICONDUCTOR CORPORATION
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME
(unaudited)

	Three Months Ended		Nine Months Ended	
(In thousands)	October 1, 2022	October 2, 2021	October 1, 2022	October 2, 2021
Net income	$ 46,359	$ 26,739	$ 126,969	$ 67,390
Other comprehensive income (loss):				
Translation adjustment	(987)	(19)	(2,215)	(68)
Comprehensive income	$ 45,372	$ 26,720	$ 124,754	$ 67,322

See Accompanying Notes to Unaudited Consolidated Financial Statements.

LATTICE SEMICONDUCTOR CORPORATION
CONSOLIDATED BALANCE SHEETS
(unaudited)

(In thousands, except share and par value data)	October 1, 2022	January 1, 2022
ASSETS		
Current assets:		
Cash and cash equivalents	$ 118,766	$ 131,570
Accounts receivable, net of allowance for credit losses	100,446	79,859
Inventories, net	93,964	67,594
Prepaid expenses and other current assets	27,132	22,328
Total current assets	340,308	301,351
Property and equipment, less accumulated depreciation of $114,948 at October 1, 2022 and $109,905 at January 1, 2022	45,217	38,094
Operating lease right-of-use assets	17,372	23,818
Intangible assets, net	26,085	29,782
Goodwill	315,358	315,358
Other long-term assets	14,605	18,091
Total assets	$ 758,945	$ 726,494
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	$ 43,635	$ 34,597
Accrued expenses	35,127	26,444
Accrued payroll obligations	31,516	27,967
Current portion of long-term debt	—	17,173
Total current liabilities	110,278	106,181
Long-term debt, net of current portion	148,685	140,760
Long-term operating lease liabilities, net of current portion	14,169	19,248
Other long-term liabilities	44,082	48,672
Total liabilities	317,214	314,861
Contingencies (Note 12)		
Stockholders' equity:		
Preferred stock, $.01 par value, 10,000,000 shares authorized, none issued and outstanding	—	—
Common stock, $.01 par value, 300,000,000 shares authorized; 137,028,000 shares issued and outstanding as of October 1, 2022 and 137,239,000 shares issued and outstanding as of January 1, 2022	1,370	1,372
Additional paid-in capital	607,034	701,688
Accumulated deficit	(163,007)	(289,976)
Accumulated other comprehensive loss	(3,666)	(1,451)
Total stockholders' equity	441,731	411,633
Total liabilities and stockholders' equity	$ 758,945	$ 726,494

See Accompanying Notes to Unaudited Consolidated Financial Statements.

LATTICE SEMICONDUCTOR CORPORATION
CONSOLIDATED STATEMENTS OF CASH FLOWS
(unaudited)

	Nine Months Ended	
(In thousands)	**October 1, 2022**	**October 2, 2021**
Cash flows from operating activities:		
Net income	$ 126,969	$ 67,390
Adjustments to reconcile net income to net cash provided by (used in) operating activities:		
Depreciation and amortization	21,498	17,839
Stock-based compensation expense	41,207	32,624
Amortization of right-of-use assets	4,995	4,926
Impairment of operating lease right-of-use asset	1,149	—
Other non-cash adjustments	791	157
Changes in assets and liabilities:		
Accounts receivable, net	(20,587)	(15,025)
Inventories, net	(26,370)	(1,506)
Prepaid expenses and other assets	(2,033)	(224)
Accounts payable	9,038	8,793
Accrued expenses	2,190	(1,464)
Accrued payroll obligations	3,549	7,337
Operating lease liabilities, current and long-term portions	(5,571)	(4,784)
Net cash provided by (used in) operating activities	156,825	116,063
Cash flows from investing activities:		
Capital expenditures	(13,080)	(7,118)
Cash paid for software and intellectual property licenses	(8,322)	(9,534)
Net cash provided by (used in) investing activities	(21,402)	(16,652)
Cash flows from financing activities:		
Restricted stock unit tax withholdings	(50,043)	(41,587)
Proceeds from issuance of common stock	4,317	5,240
Repurchase of common stock	(90,137)	(55,126)
Proceeds from long-term debt, net of issuance costs	148,601	—
Repayment of long-term debt	(158,750)	(8,750)
Net cash provided by (used in) financing activities	(146,012)	(100,223)
Effect of exchange rate change on cash	(2,215)	(68)
Net increase (decrease) in cash and cash equivalents	(12,804)	(880)
Beginning cash and cash equivalents	131,570	182,332
Ending cash and cash equivalents	$ 118,766	$ 181,452
Supplemental disclosure of cash flow information and non-cash investing and financing activities:		
Interest paid	$ 2,203	$ 1,755
Operating lease payments	$ 5,500	$ 5,786
Income taxes paid, net of refunds	$ 4,115	$ 2,842
Accrued purchases of plant and equipment	$ 4,822	$ 351
Operating lease right-of-use assets obtained in exchange for lease obligations	$ 639	$ 7,550

See Accompanying Notes to Unaudited Consolidated Financial Statements.

LATTICE SEMICONDUCTOR CORPORATION
CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY
(unaudited)

The following summarizes the changes in total equity for the nine-month period ended October 1, 2022:

(In thousands, except par value data)	Common Stock ($.01 par value) Shares	Common Stock ($.01 par value) Amount	Additional Paid-in Capital	Accumulated Deficit	Accumulated Other Comprehensive Loss	Total
Balances, January 1, 2022	137,239	$ 1,372	$ 701,688	$ (289,976)	$ (1,451)	$ 411,633
Components of comprehensive income, net of tax:						
Net income for the nine months ended October 1, 2022	—	—	—	126,969	—	126,969
Other comprehensive income (loss)	—	—	—	—	(2,215)	(2,215)
Total comprehensive income						124,754
Common stock issued in connection with employee equity incentive plans, net of shares withheld for employee taxes	1,452	15	(45,741)	—	—	(45,726)
Stock-based compensation expense	—	—	41,207	—	—	41,207
Repurchase of common stock	(1,663)	(17)	(90,120)	—	—	(90,137)
Balances, October 1, 2022	137,028	$ 1,370	$ 607,034	$ (163,007)	$ (3,666)	$ 441,731

The following summarizes the changes in total equity for the nine-month period ended October 2, 2021:

(In thousands, except par value data)	Common Stock ($.01 par value) Shares	Common Stock ($.01 par value) Amount	Additional Paid-in Capital	Accumulated Deficit	Accumulated Other Comprehensive Loss	Total
Balances, January 2, 2021	136,236	$ 1,362	$ 770,711	$ (385,898)	$ (1,748)	$ 384,427
Components of comprehensive income, net of tax:						
Net income for the nine months ended October 2, 2021	—	—	—	67,390	—	67,390
Other comprehensive income (loss)	—	—	—	—	(68)	(68)
Total comprehensive income						67,322
Common stock issued in connection with employee equity incentive plans, net of shares withheld for employee taxes	1,746	18	(36,365)	—	—	(36,347)
Stock-based compensation expense	—	—	32,624	—	—	32,624
Repurchase of common stock	(1,081)	(11)	(55,115)	—	—	(55,126)
Balances, October 2, 2021	136,901	$ 1,369	$ 711,855	$ (318,508)	$ (1,816)	$ 392,900

See Accompanying Notes to Unaudited Consolidated Financial Statements.

LATTICE SEMICONDUCTOR CORPORATION
CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY (continued)
(unaudited)

The following summarizes the changes in total equity for the three-month period ended October 1, 2022:

(In thousands, except par value data)	Common Stock ($.01 par value) Shares	Common Stock ($.01 par value) Amount	Additional Paid-in Capital	Accumulated Deficit	Accumulated Other Comprehensive Loss	Total
Balances, July 2, 2022	137,263	$ 1,373	$ 646,593	$ (209,366)	$ (2,679)	$ 435,921
Components of comprehensive income, net of tax:						
Net income for the three months ended October 1, 2022	—	—	—	46,359	—	46,359
Other comprehensive income (loss)	—	—	—	—	(987)	(987)
Total comprehensive income						45,372
Common stock issued in connection with employee equity incentive plans, net of shares withheld for employee taxes	450	4	(13,548)	—	—	(13,544)
Stock-based compensation expense	—	—	13,958	—	—	13,958
Repurchase of common stock	(685)	(7)	(39,969)	—	—	(39,976)
Balances, October 1, 2022	137,028	$ 1,370	$ 607,034	$ (163,007)	$ (3,666)	$ 441,731

The following summarizes the changes in total equity for the three-month period ended October 2, 2021:

(In thousands, except par value data)	Common Stock ($.01 par value) Shares	Common Stock ($.01 par value) Amount	Additional Paid-in Capital	Accumulated Deficit	Accumulated Other Comprehensive Loss	Total
Balances, July 3, 2021	136,344	$ 1,363	$ 742,996	$ (345,247)	$ (1,797)	$ 397,315
Components of comprehensive income, net of tax:						
Net income for the three months ended October 2, 2021	—	—	—	26,739	—	26,739
Other comprehensive income (loss)	—	—	—	—	(19)	(19)
Total comprehensive income						26,720
Common stock issued in connection with employee equity incentive plans, net of shares withheld for employee taxes	809	9	(26,381)	—	—	(26,372)
Stock-based compensation expense	—	—	10,250	—	—	10,250
Repurchase of common stock	(252)	(3)	(15,010)	—	—	(15,013)
Balances, October 2, 2021	136,901	$ 1,369	$ 711,855	$ (318,508)	$ (1,816)	$ 392,900

See Accompanying Notes to Unaudited Consolidated Financial Statements.

LATTICE SEMICONDUCTOR CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
(unaudited)

Note 1 - Basis of Presentation

Lattice Semiconductor Corporation and its subsidiaries (“Lattice,” the “Company,” “we,” “us,” or “our”) develop technologies that we monetize through differentiated programmable logic semiconductor products, silicon-enabling products, system solutions, design services, and licenses.

Basis of Presentation and Use of Estimates

The accompanying Consolidated Financial Statements are unaudited and have been prepared in accordance with U.S. Generally Accepted Accounting Principles ("U.S. GAAP") and pursuant to the rules and regulations of the Securities and Exchange Commission ("SEC"). In our opinion, they include all adjustments, consisting only of normal recurring adjustments, necessary for the fair presentation of results for the interim periods. Certain information and footnote disclosures normally included in financial statements prepared in accordance with U.S. GAAP have been condensed or omitted as permitted by the SEC's rules and regulations for interim reporting. These Consolidated Financial Statements should be read in conjunction with our audited financial statements and notes thereto included in our Annual Report on Form 10-K for the year ended January 1, 2022 ("2021 10-K").

The preparation of financial statements in conformity with U.S. GAAP requires management to make estimates and judgments affecting the amounts reported in our consolidated condensed financial statements and the accompanying notes. We base our estimates and judgments on historical experience, knowledge of current conditions, and our beliefs of what could occur in the future considering available information. While we believe that our estimates, assumptions, and judgments are reasonable, they are based on information available when made, and because of the uncertainty inherent in these matters, the actual results that we experience may differ materially from these estimates under different assumptions or conditions. We evaluate our estimates and judgments on an ongoing basis.

We describe our accounting methods and practices in more detail in our 2021 10-K. There have been no changes to the significant accounting policies, procedures, or general information described in our 2021 10-K that have had a material impact on our consolidated financial statements and related notes. The purchase price allocation for our acquisition of Mirametrix, Inc. in November 2021 has been substantially completed, but may be subject to revision as we perform and complete more detailed analysis of certain tax matters. Certain prior year balances have been reclassified to conform to the current year’s presentation.

Fiscal Reporting Periods

We report based on a 52 or 53-week fiscal year ending on the Saturday closest to December 31. Our fiscal 2022 will be a 52-week year and will end on December 31, 2022, and our fiscal 2021 was a 52-week year that ended January 1, 2022. Our third quarter of fiscal 2022 and third quarter of fiscal 2021 ended on October 1, 2022 and October 2, 2021, respectively. All references to quarterly financial results are references to the results for the relevant 13-week or 39-week fiscal period.

Concentrations of Risk

Potential exposure to concentrations of risk may impact revenue and accounts receivable. Distributors have historically accounted for a significant portion of our total revenue. Revenue attributable to distributors as a percentage of total revenue was 90% for the third quarter of both fiscal 2022 and 2021, and 89% and 88% for the nine months ended October 1, 2022 and October 2, 2021, respectively. Distributors also account for a substantial portion of our net accounts receivable. Our two largest distributors accounted for 40% and 33% of net accounts receivable at October 1, 2022 and 59% and 28% of net accounts receivable at January 1, 2022.

Note 2 - Net Income per Share

Our calculation of the diluted share count includes the number of shares from our equity awards with market conditions or performance conditions that would be issuable under the terms of such awards at the end of the reporting period. For equity awards with a market condition, the number of shares included in the diluted share count as of the end of each period presented is determined by measuring the achievement of the market condition as of the end of the respective reporting periods. For equity awards with a performance condition, the number of shares that qualified for vesting as of the end of each period presented are included in the diluted share count when the condition for their issuance was satisfied by the end of the respective reporting periods. See "Note 9 - Stock-Based Compensation" to our consolidated financial statements for further discussion of our equity awards with market conditions or performance conditions.

A summary of basic and diluted Net income per share is presented in the following table:

	Three Months Ended		Nine Months Ended	
(in thousands, except per share data)	October 1, 2022	October 2, 2021	October 1, 2022	October 2, 2021
Net income	$ 46,359	$ 26,739	$ 126,969	$ 67,390
Shares used in basic Net income per share	137,267	136,638	137,397	136,476
Dilutive effect of stock options, RSUs, ESPP shares, and equity awards with a market condition or performance condition	2,668	4,994	3,524	5,687
Shares used in diluted Net income per share	139,935	141,632	140,921	142,163
Basic Net income per share	$ 0.34	$ 0.20	$ 0.92	$ 0.49
Diluted Net income per share	$ 0.33	$ 0.19	$ 0.90	$ 0.47

The computation of diluted Net income per share excludes the effects of stock options, restricted stock units ("RSUs"), Employee Stock Purchase Plan ("ESPP") shares, and equity awards with a market condition or performance condition that are antidilutive, aggregating approximately the following number of shares:

	Three Months Ended		Nine Months Ended	
(in thousands)	October 1, 2022	October 2, 2021	October 1, 2022	October 2, 2021
Stock options, RSUs, ESPP shares, and equity awards with a market condition or performance condition excluded as they are antidilutive	604	358	535	182

Note 3 - Revenue from Contracts with Customers

Disaggregation of revenue

The following tables provide information about revenue from contracts with customers disaggregated by major class of revenue, revenue by channel, and by geographical market, based on ship-to location of the customer:

	Three Months Ended				Nine Months Ended			
Revenue by Channel *(In thousands)*	October 1, 2022		October 2, 2021		October 1, 2022		October 2, 2021	
Product revenue - Distributors	$ 154,417	90%	$ 118,227	90%	$ 433,535	89%	$ 328,174	88%
Product revenue - Direct	12,803	7%	9,190	7%	38,263	8%	33,371	9%
Licensing and services	5,289	3%	4,494	3%	12,598	3%	11,987	3%
Total revenue	$ 172,509	100%	$ 131,911	100%	$ 484,396	100%	$ 373,532	100%
Revenue by Geographical Market								
(In thousands)								
United States	$ 22,918	13%	$ 11,022	8%	$ 61,992	13%	$ 31,804	8%
Other Americas	236	—%	9,239	7%	4,984	1%	22,126	6%
Americas	23,154	13%	20,261	15%	66,976	14%	53,930	14%
China	75,933	44%	76,692	58%	232,099	48%	208,632	56%
Japan	26,924	16%	7,877	6%	62,784	13%	24,490	6%
Other Asia	20,003	12%	14,328	11%	55,449	11%	50,620	14%
Asia	122,860	72%	98,897	75%	350,332	72%	283,742	76%
Europe	26,495	15%	12,753	10%	67,088	14%	35,860	10%
Total revenue	$ 172,509	100%	$ 131,911	100%	$ 484,396	100%	$ 373,532	100%

Contract balances

Our contract assets relate to our rights to consideration for licenses and royalties due to us as a member of the HDMI Founders consortium. The balance results primarily from the amount of estimated revenue related to HDMI that we have recognized to date, but which has not yet been collected from the customers of the HDMI licensing agent. Contract assets are included in Prepaid expenses and other current assets on our Consolidated Balance Sheets. The following table summarizes activity during the first nine months of fiscal 2022:

(In thousands)		
Contract assets as of Year Ended January 1, 2022	$	5,672
Revenues recorded during the period		11,499
Transferred to Accounts receivable or collected		(10,679)
Contract assets as of October 1, 2022	$	6,492

Contract liabilities are included in Accrued expenses on our Consolidated Balance Sheets. The following table summarizes activity during the first nine months of fiscal 2022:

(In thousands)		
Contract liabilities as of Year Ended January 1, 2022	$	4,768
Accruals for estimated future stock rotation and scrap returns		4,268
Less: Release of accruals for recognized stock rotation and scrap returns		(3,144)
Contract liabilities as of October 1, 2022	$	5,892

Note 4 - Balance Sheet Components

Accounts Receivable

Accounts receivable do not bear interest and are shown net of an allowance for expected lifetime credit losses, which reflects our best estimate of probable losses inherent in the accounts receivable balance, as described in our 2021 10-K.

(In thousands)		**October 1, 2022**		**January 1, 2022**
Accounts receivable	$	100,446	$	79,859
Less: Allowance for credit losses		—		—
Accounts receivable, net of allowance for credit losses	$	100,446	$	79,859

Inventories

(In thousands)		**October 1, 2022**		**January 1, 2022**
Work in progress	$	60,798	$	43,546
Finished goods		33,166		24,048
Total inventories, net	$	93,964	$	67,594

Accrued Expenses

Included in Accrued expenses in the Consolidated Balance Sheets are the following balances:

(In thousands)		**October 1, 2022**		**January 1, 2022**
Liability for non-cancelable contracts	$	10,139	$	9,930
Current portion of operating lease liabilities		5,843		5,696
Contract liability under ASC 606		5,892		4,768
Taxes payable		3,669		3,058
Other accrued expenses		9,584		2,992
Total accrued expenses	$	35,127	$	26,444

Property and Equipment – Geographic Information

Our Property and equipment, net by country at the end of each period was as follows:

(In thousands)	October 1, 2022	January 1, 2022
United States	$ 30,829	$ 26,509
Taiwan	8,706	6,555
Philippines	3,178	2,498
China	1,362	1,643
Other	1,142	889
Total foreign property and equipment, net	14,388	11,585
Total property and equipment, net	$ 45,217	$ 38,094

Cloud Based Computing Implementation Costs

We capitalize the implementation costs for cloud computing arrangements, which are recorded in Prepaid expenses and other current assets and Other long-term assets on our Consolidated Balance Sheets. The following table summarizes activity during the first nine months of fiscal 2022:

(In thousands)	
Cloud based computing implementation costs as of January 1, 2022	$ 2,380
Costs capitalized	61
Amortization	(625)
Cloud based computing implementation costs as of October 1, 2022	$ 1,816

Note 5 - Long-Term Debt

On September 1, 2022, we entered into an Amended and Restated Credit Agreement (the “2022 Credit Agreement”), which provides for a five-year secured revolving loan facility with an aggregate principal amount of up to $350 million, along with other components and options, such as a letter of credit, swingline loan, and expansion of revolving and/or term loan commitments, currently not in use.

We drew down an initial $150 million revolving loan at closing, which we used along with $1.9 million of cash to (i) repay the $150.5 million term loan, revolving loan, and accrued interest obligations outstanding under our previous Credit Agreement (the “2019 Credit Agreement”), and (ii) pay fees and expenses totaling $1.4 million incurred in connection with the 2022 Credit Agreement. We intend to use the revolving loan facility for working capital and general corporate purposes.

At our option, the revolving loans accrue interest at a per annum rate based on ranges determined by our consolidated total leverage ratio of either (i) the base rate (as defined in the 2022 Credit Agreement) plus a margin ranging from 0.25% to 1.00%, or (ii) the adjusted Term Secured Overnight Financing Rate ("SOFR") for interest periods of 1, 3 or 6 months plus a margin ranging from 1.25% to 2.00%. Interest is due and payable in arrears quarterly for loans bearing interest at the base rate and at the end of an interest period (or at each three-month interval in the case of loans with interest periods greater than three months) in the case of loans bearing interest at the adjusted Term SOFR. In addition, we pay a quarterly commitment fee of 0.20% on the unused portion of the revolving facility.

With the amendment of our 2019 Credit Agreement pursuant to the 2022 Credit Agreement, we capitalized $0.9 million of the new debt costs, and expensed $0.7 million of debt costs and existing original issue discount ("OID") as a loss on refinancing in Other (expense) income, net on our Consolidated Statements of Operations for the third quarter of fiscal 2022. We determine the Current portion of long-term debt, if any, as the sum of the required debt payments to be made over the next twelve months, reduced by the OID and the debt issuance costs to be amortized over the next twelve months.

The revolving loans under the 2022 Credit Agreement may be repaid and reborrowed at our discretion, with any remaining outstanding principal amount due and payable on the maturity date of the revolving loan on September 1, 2027. During the first six months of fiscal 2022, we paid required quarterly installments totaling $8.8 million on the term loans outstanding under the 2019 Credit Agreement.

The fair value of our long-term debt approximates the carrying value, which is reflected in our Consolidated Balance Sheets as follows:

(In thousands)	October 1, 2022	January 1, 2022
Principal amount	$ 150,000	$ 158,750
Unamortized original issuance discount and debt costs	(1,315)	(817)
Less: Current portion of long-term debt	—	(17,173)
Long-term debt, net of current portion and unamortized debt issue costs	$ 148,685	$ 140,760

As of October 1, 2022, the effective interest rate on the revolving loan was 3.94%. Interest expense related to our long-term debt was included in Interest expense on our Consolidated Statements of Operations as follows:

	Three Months Ended		Nine Months Ended	
(In thousands)	October 1, 2022	October 2, 2021	October 1, 2022	October 2, 2021
Contractual interest	$ 1,328	$ 568	$ 2,690	$ 1,753
Amortization of original issuance discount and debt costs	76	90	243	274
Total interest expense related to long-term debt	$ 1,404	$ 658	$ 2,933	$ 2,027

Note 6 - Restructuring

In September 2022, our management approved and implemented additional contract cancellations and headcount reductions under the Q2 2019 Sales Plan, which focused on a restructuring of the global sales organization. With these actions, we incurred approximately $1.0 million of incremental restructuring costs in the third quarter and first nine months of fiscal 2022. No restructuring expense was incurred under the Q2 2019 Sales Plan during the third quarter and first nine months of fiscal 2021. Under this plan, approximately $3.1 million of total expense has been incurred through October 1, 2022. All actions planned under the Q2 2019 Sales Plan have been implemented.

Under the June 2017 Plan, which is described in the 2021 10-K, we incurred approximately $1.1 million of incremental restructuring costs in the third quarter of fiscal 2022 related to an impairment of the operating lease right-of-use asset for our partially vacated facility in San Jose, California. Including these charges, we incurred restructuring expense of approximately $1.3 million and approximately $0.1 million during the third quarter of fiscal 2022 and 2021, respectively; and approximately $1.6 million and approximately $0.5 million during the first nine months of fiscal 2022 and 2021, respectively. We have incurred approximately $23.2 million of total expense through October 1, 2022 under the June 2017 Plan, and all planned actions have been implemented.

These expenses were recorded to Restructuring charges on our Consolidated Statements of Operations. The restructuring accrual balance is presented in Accrued expenses and in Other long-term liabilities on our Consolidated Balance Sheets. The following table displays the activity related to our restructuring plans:

(In thousands)	Severance & Related (1)	Lease Termination & Fixed Assets	Other (2)	Total
Accrued Restructuring at January 1, 2022	$ 251	$ 7,130	$ —	$ 7,381
Restructuring charges	303	1,562	640	2,505
Costs paid or otherwise settled	(154)	(2,477)	—	(2,631)
Accrued Restructuring at October 1, 2022	$ 400	$ 6,215	$ 640	$ 7,255
Accrued Restructuring at January 2, 2021	$ 246	$ 8,233	$ 664	$ 9,143
Restructuring charges	15	531	—	546
Costs paid or otherwise settled	(165)	(1,346)	(664)	(2,175)
Accrued Restructuring at October 2, 2021	$ 96	$ 7,418	$ —	$ 7,514

(1) Includes employee relocation and outplacement costs
(2) Includes termination fees on the cancellation of certain contracts

Note 7 - Leases

We have operating leases for corporate offices, sales offices, research and development facilities, storage facilities, and a data center, the terms of which are described in our 2021 10-K. All of our facilities are leased under operating leases, which expire at various times through 2028, with a weighted-average remaining lease term of 3.6 years and a weighted-average discount rate of 5.4% as of October 1, 2022.

We recorded fixed operating lease expenses of $1.9 million and $2.0 million for the third quarter of fiscal 2022 and 2021, respectively, and $5.8 million and $5.9 million for the first nine months of fiscal 2022 and 2021, respectively.

The following table presents the lease balance classifications within the Consolidated Balance Sheets and summarizes their activity during the first nine months of fiscal 2022:

Operating lease right-of-use assets		*(in thousands)*
Balance as of January 1, 2022	$	23,818
Right-of-use assets obtained for new lease contracts during the period		639
Amortization of right-of-use assets during the period		(4,995)
Impairment of right-of use asset during the period (recorded in Restructuring charges)		(1,149)
Adjustments for present value and foreign currency effects		(941)
Balance as of October 1, 2022	$	17,372

Operating lease liabilities		*(in thousands)*
Balance as of January 1, 2022	$	24,944
Lease liabilities incurred for new lease contracts during the period		639
Accretion of lease liabilities		849
Operating cash used by payments on lease liabilities		(5,500)
Adjustments for present value and foreign currency effects		(920)
Balance as of October 1, 2022		20,012
Less: Current portion of operating lease liabilities (included in Accrued expenses)		(5,843)
Long-term operating lease liabilities, net of current portion	$	14,169

Maturities of operating lease liabilities as of October 1, 2022 are as follows:

Fiscal year		*(in thousands)*
2022 (Remaining quarter)		1,305
2023		7,333
2024		5,331
2025		3,608
2026		2,549
Thereafter		2,103
Total lease payments		22,229
Less: amount representing interest		(2,217)
Total lease liabilities	$	20,012

Lease obligations for facilities restructured prior to the adoption of Topic 842 totaled approximately $6.2 million at October 1, 2022 and continued to be recorded in Other long-term liabilities on our Consolidated Balance Sheets.

Note 8 - Intangible Assets

In connection with our acquisition of Mirametrix, Inc. in November 2021, we recorded identifiable intangible assets during fiscal year 2021. On our Consolidated Balance Sheets at October 1, 2022 and January 1, 2022, Intangible assets, net are shown net of accumulated amortization of $139.2 million and $135.5 million, respectively. In prior years, we entered into license agreements for third-party technology and have recorded them as intangible assets. These licenses are being amortized to Research and development expense over their estimated useful lives.

We recorded amortization expense related to intangible assets on the Consolidated Statements of Operations as presented in the following table:

	Three Months Ended		Nine Months Ended	
(In thousands)	October 1, 2022	October 2, 2021	October 1, 2022	October 2, 2021
Research and development	$ 264	$ 223	$ 789	$ 644
Amortization of acquired intangible assets	869	603	2,908	1,809
	$ 1,133	$ 826	$ 3,697	$ 2,453

Note 9 - Stock-Based Compensation

Total stock-based compensation expense included in our Consolidated Statements of Operations is presented in the following table:

	Three Months Ended		Nine Months Ended	
(In thousands)	October 1, 2022	October 2, 2021	October 1, 2022	October 2, 2021
Cost of revenue	$ 880	$ 653	$ 2,705	$ 2,144
Research and development	4,925	3,463	14,461	10,199
Selling, general, and administrative	8,153	6,134	24,041	20,281
Total stock-based compensation	$ 13,958	$ 10,250	$ 41,207	$ 32,624

Market-Based and Performance-Based Stock Compensation

In the first quarter of fiscal 2022, we granted awards of RSUs with a market condition to certain executives. Under the terms of these grants, the RSUs with a market condition vest over a three-year period based on the Company’s total shareholder return ("TSR") relative to the Russell 2000 index, which condition is measured for the grants on the third anniversary of the grant date. The awards may vest at 250% or 200%, depending upon the executive, if the 75th percentile of the market condition is achieved, with 100% of the units vesting at the 55th percentile, zero vesting if relative TSR is below the 25th percentile, and vesting scaling for achievement between the 25th and 75th percentile.

In the first nine months of fiscal 2022, certain awards with a market condition or performance condition granted in prior fiscal years have vested. During the first quarter of fiscal 2022, the market condition for awards granted to certain executives in the first quarter of fiscal 2019 exceeded the 75th percentile of their TSR condition, and the third tranche of these awards vested at 200%. During the first quarter of fiscal 2022, the market condition for awards granted to certain executives in the first quarter of fiscal 2020 exceeded the 75th percentile of their TSR condition, and the first tranche of these awards vested at 250% or 200%, as applicable for the respective executive. During the first quarter of fiscal 2022, the fourth tranche of 40% of the base number of the awards with an EBITDA performance condition vested, as the Company had met the adjusted EBITDA performance criteria on a trailing four-quarter basis for two consecutive trailing four-quarter periods as of the end of the previous quarter. During the second quarter of fiscal 2022, the fifth and sixth tranches of 40% and 70%, respectively, of the base number of the awards with an EBITDA performance condition vested, as the Company had met the final two adjusted EBITDA performance criteria on a trailing four-quarter basis for two consecutive trailing four-quarter periods as of the end of the previous quarter. During the third quarter of fiscal 2022, the market condition for awards granted to certain executives in the third quarter of fiscal 2019 exceeded the 75th percentile of their TSR condition, and the third tranche of these awards vested at 250% or 200%, as applicable for the respective executive.

For our awards with a market condition or a performance condition, we incurred stock compensation expense of approximately $5.5 million and $4.0 million in the third quarter of fiscal 2022 and 2021, respectively, and of approximately $18.4 million and $15.3 million in the first nine months of fiscal 2022 and 2021, respectively, which is recorded as a component of total stock-based compensation.

The following table summarizes the activity for our awards with a market condition or performance condition:

(Shares in thousands)	Total
Balance, January 1, 2022	1,246
Granted	183
Effect of vesting multiplier	642
Vested	(1,083)
Balance, October 1, 2022	988

Note 10 - Common Stock Repurchase Program

On November 8, 2021, we announced that our Board of Directors had approved a stock repurchase program pursuant to which up to $100 million of outstanding common stock could be repurchased from time to time (the "2022 Repurchase Program"). The duration of the 2022 Repurchase Program is through the end of December 2022. Under the 2022 Repurchase Program during the third quarter of fiscal 2022, we repurchased 680,098 shares for $39.7 million, or an average price paid per share of $58.40. As of October 1, 2022, the amount authorized for the 2022 Repurchase Program had been fully utilized.

On August 8, 2022, we announced that our Board of Directors had approved a stock repurchase program pursuant to which up to an additional $150 million of outstanding common stock could be repurchased from time to time (the "2023 Repurchase Program"). The duration of the 2023 Repurchase Program is through the end of December 2023. Under the 2023 Repurchase Program during the third quarter of fiscal 2022, we repurchased 4,829 shares for $0.3 million, or an average price paid per share of $54.08. As of October 1, 2022, the remaining portion of the amount authorized for the 2023 Repurchase Program is approximately $149.7 million.

Under these plans during the first nine months of fiscal 2022, we have repurchased a total of 1,663,282 shares for $90.1 million, or an average price paid per share of $54.19. All repurchases were open market transactions funded from available working capital. All shares repurchased pursuant to the 2022 and 2023 Repurchase Programs were retired by the end of the third quarter of fiscal 2022.

Note 11 - Income Taxes

We are subject to federal and state income tax as well as income tax in the foreign jurisdictions in which we operate. For the third quarter of fiscal 2022 and 2021, we recorded income tax expense of approximately $0.4 million and an income tax benefit of approximately $0.5 million, respectively. For the first nine months of fiscal 2022 and 2021, we recorded income tax expense of approximately $2.4 million and $1.1 million, respectively. Income taxes for the three and nine-month periods ended October 1, 2022 and October 2, 2021 represent tax at the federal, state, and foreign statutory tax rates in addition to withholding taxes, changes in uncertain tax positions, as well as other non-deductible items in foreign jurisdictions. The difference between the U.S. federal statutory tax rate of 21% and our effective tax rates for the three and nine months ended October 1, 2022 and for the three and nine months ended October 2, 2021 resulted primarily from U.S. valuation allowance, foreign withholding taxes, foreign rate differentials, and the discrete impacts of uncertain tax positions due to lapsing of the statute of limitations.

We updated our evaluation of the valuation allowance position in the United States through October 1, 2022 and concluded that we should continue to maintain a full valuation allowance against the net federal and state deferred tax assets. In making this evaluation, we exercised significant judgment and considered estimates about our ability to generate revenue and taxable profits sufficient to offset expenditures in future periods within the U.S. We will continue to evaluate both positive and negative evidence in future periods to determine if we will realize the net deferred tax assets. We do not have a valuation allowance in any foreign jurisdictions as we have concluded it is more likely than not that we will realize the net deferred tax assets in future periods.

Our liability recorded for uncertain tax positions (including penalties and interest) was $21.2 million and $21.6 million at October 1, 2022 and January 1, 2022, respectively, and is included as a component of Other long-term liabilities on our Consolidated Balance Sheets.

Note 12 - Contingencies

Legal Matters

On or about December 19, 2018, Steven A.W. De Jaray, Perienne De Jaray and Darrell R. Oswald (collectively, the “Plaintiffs”) commenced an action against the Company and several unnamed defendants in the Multnomah County Circuit Court of the State of Oregon, in connection with the sale of certain products by the Company to the Plaintiffs in or around 2008. The Plaintiffs allege that we violated The Lanham Act, engaged in negligence and fraud by failing to disclose to the Plaintiffs the export-controlled status of the subject parts. The Plaintiffs seek damages of $155 million to $268 million, treble damages, and other remedies. In January 2019, we removed the action to the United States District Court for the District of Oregon. At this stage of the proceedings, we do not have an estimate of the likelihood or the amount of any potential exposure to the Company; however, we believe that these claims are without merit and intend to vigorously defend the action.

From time to time, we are exposed to certain additional asserted and unasserted potential claims. We review the status of each significant matter and assess its potential financial exposure. If the potential loss from any claim or legal proceeding is considered probable and a range of possible losses can be estimated, we then accrue a liability for the estimated loss. Legal proceedings are subject to uncertainties, and the outcomes are difficult to predict. Because of such uncertainties, accruals are based only on the best information available at the time. As additional information becomes available, we reassess the potential liability related to pending claims and litigation and may revise estimates.

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

The following discussion should be read along with the unaudited consolidated financial statements and notes thereto included in Part I, Item 1 of this Quarterly Report on Form 10-Q, as well as the audited consolidated financial statements and notes thereto and Management’s Discussion and Analysis of Financial Condition and Results of Operations in our 2021 10-K.

Overview

Lattice Semiconductor Corporation and its subsidiaries (“Lattice,” the “Company,” “we,” “us,” or “our”) develop technologies that we monetize through differentiated programmable logic semiconductor products, silicon-enabling products, system solutions, design services, and licenses. Lattice is the low power programmable leader. We solve customer problems across the network, from the Edge to the Cloud, in the growing communications, computing, industrial, automotive, and consumer markets. Our technology, long-standing relationships, and commitment to world-class support helps our customers quickly and easily unleash their innovation to create a smart, secure, and connected world.

Lattice has focused its strategy on delivering programmable logic products and related solutions based on low power, small size, and ease of use. We also serve our customers with intellectual property ("IP") licensing and various other services. Our product development activities include new proprietary products, advanced packaging, existing product enhancements, software development tools, soft IP, and system solutions for high-growth applications such as Edge Artificial Intelligence, 5G infrastructure, platform security, and factory automation.

Critical Accounting Policies and Use of Estimates

Critical accounting policies are those that are both most important to the portrayal of a company's financial condition and results of operations, and that require management's most difficult, subjective, and complex judgments, often as a result of the need to make estimates about the effect of matters that are inherently uncertain. There have been no significant changes to the items that we disclosed as our critical accounting policies and estimates in Management's Discussion and Analysis of Financial Condition and Results of Operations in our 2021 10-K.

The preparation of financial statements in conformity with U.S. GAAP requires management to make estimates and judgments affecting the amounts reported in our consolidated condensed financial statements and the accompanying notes. We base our estimates and judgments on historical experience, knowledge of current conditions, and our beliefs of what could occur in the future considering available information. While we believe that our estimates, assumptions, and judgments are reasonable, they are based on information available when made, and because of the uncertainty inherent in these matters, actual results may differ materially from these estimates under different assumptions or conditions. We evaluate our estimates and judgments on an ongoing basis.

Impact of COVID-19 and Global Economic Activity on our Business

The ongoing COVID-19 pandemic, increasing market volatility, inflationary pressure, and geopolitical tension continue to impact business globally and may impact our operations on an ongoing basis by causing disruption to our labor markets and supply chains. The COVID-19 pandemic, including the resurgence of cases relating to the spread of new variants, has and continues to impact worldwide economic activity and poses the risk that our employees, contractors, suppliers and other partners may be prevented from conducting business activities. The extent to which the COVID-19 pandemic, increasing financial market volatility, inflationary pressure and related uncertainty will impact our business activities will depend on future developments that are highly uncertain and cannot be predicted at this time.

Results of Operations

Key elements of our Consolidated Statements of Operations, including as a percentage of revenue, are presented in the following table:

	Three Months Ended				Nine Months Ended			
(In thousands)	October 1, 2022		October 2, 2021		October 1, 2022		October 2, 2021	
Revenue	$ 172,509	100.0%	$ 131,911	100.0%	$ 484,396	100.0%	$ 373,532	100.0%
Gross margin	118,732	68.8	82,825	62.8	329,984	68.1	230,595	61.7
Research and development	34,820	20.2	28,769	21.8	100,988	20.8	80,289	21.5
Selling, general and, administrative	31,926	18.5	26,272	19.9	89,721	18.5	76,971	20.6
Amortization of acquired intangible assets	869	0.5	603	0.5	2,908	0.6	1,809	0.5
Restructuring charges	2,315	1.3	166	0.1	2,505	0.5	546	0.1
Acquisition related charges	—	—	—	—	511	0.1	—	—
Income from operations	$ 48,802	28.3%	$ 27,015	20.5%	$ 133,351	27.5%	$ 70,980	19.0%

Revenue by End Market

We sell our products globally to a broad base of customers in three primary end market groups: Communications and Computing, Industrial and Automotive, and Consumer. We also provide IP licensing and services to these end markets.

Within these end markets, there are multiple segment drivers, including:
- Communications and computing: 5G infrastructure deployments, client computing platforms, and cloud and enterprise servers,
- Industrial and automotive: industrial Internet of Things ("IoT"), factory automation, robotics, and automotive electronics,
- Consumer: smart home, and prosumer.

We also generate revenue from the licensing of our IP, the collection of certain royalties, patent sales, the revenue related to our participation in consortia and standard-setting activities, and services. While these activities may be associated with multiple markets, Licensing and services revenue is reported as a separate end market as it has characteristics that differ from other categories, most notably a higher gross margin.

The end market data below is derived from data provided to us by our customers. With a diverse base of customers who may manufacture end products spanning multiple end markets, the assignment of revenue to a specific end market requires the use of judgment. We also recognize certain revenue for which end customers and end markets are not yet known. We assign this revenue first to a specific end market using historical and anticipated usage of the specific products, if possible, and allocate the remainder to the end markets based on either historical usage for each product family or industry application data for certain product types.

The following are examples of end market applications for the periods presented:

Communications and Computing	Industrial and Automotive	Consumer	Licensing and Services
Wireless	Security and Surveillance	Cameras	IP Royalties
Wireline	Machine Vision	Displays	Adopter Fees
Data Backhaul	Industrial Automation	Wearables	IP Licenses
Server Computing	Robotics	Televisions	Patent Sales
Client Computing	Automotive	Home Theater	
Data Storage	Drones		

The composition of our revenue by end market is presented in the following table:

	Three Months Ended				Nine Months Ended			
	October 1, 2022		October 2, 2021		October 1, 2022		October 2, 2021	
(In thousands)								
Communications and Computing	$ 70,522	40.9%	$ 55,827	42.3%	$ 203,723	42.1%	$ 157,732	42.2%
Industrial and Automotive	85,730	49.7	58,953	44.7	229,820	47.4	166,137	44.5
Consumer	10,968	6.3	12,637	9.6	38,255	7.9	37,676	10.1
Licensing and Services	5,289	3.1	4,494	3.4	12,598	2.6	11,987	3.2
Total revenue	$ 172,509	100.0%	$ 131,911	100.0%	$ 484,396	100.0%	$ 373,532	100.0%

Revenue from the Communications and Computing end market increased by 26% for the third quarter of fiscal 2022 compared to the third quarter of fiscal 2021 and increased by 29% for the first nine months of fiscal 2022 compared to the first nine months of fiscal 2021 primarily due to our key growth drivers in data center servers, client computing and 5G infrastructure.

Revenue from the Industrial and Automotive end market increased by 45% for the third quarter of fiscal 2022 compared to the third quarter of fiscal 2021 and increased by 38% for the first nine months of fiscal 2022 compared to the first nine months of fiscal 2021 primarily due to strong customer adoption in a broad range of applications, including industrial automation and robotics. Growth in Automotive was driven by the adoption of new designs in advanced driver assistance ("ADAS") and infotainment applications.

Revenue from the Consumer end market decreased by 13% for the third quarter of fiscal 2022 compared to the third quarter of fiscal 2021 primarily due to macroeconomic weakness in Consumer, and increased by 2% for the first nine months of fiscal 2022 compared to the first nine months of fiscal 2021 primarily due to increased demand for our products in Consumer end market applications over the year-to-date periods.

Revenue from the Licensing and services end market increased by 18% for the third quarter of fiscal 2022 compared to the third quarter of fiscal 2021 and increased by 5% for the first nine months of fiscal 2022 compared to the first nine months of fiscal 2021 primarily due to increased royalties.

Revenue by Geography

We assign revenue to geographies based on ship-to location of the customer.

The composition of our revenue by geography is presented in the following table:

	Three Months Ended				Nine Months Ended			
	October 1, 2022		October 2, 2021		October 1, 2022		October 2, 2021	
(In thousands)								
Asia	$ 122,860	71.2%	$ 98,897	75.0%	$ 350,332	72.3%	$ 283,742	76.0%
Americas	23,154	13.4	20,261	15.4	66,976	13.8	53,930	14.4
Europe	26,495	15.4	12,753	9.6	67,088	13.9	35,860	9.6
Total revenue	$ 172,509	100.0%	$ 131,911	100.0%	$ 484,396	100.0%	$ 373,532	100.0%

Revenue from Customers

We sell our products to independent distributors and directly to customers. Distributors have historically accounted for a significant portion of our total revenue, and the two distributor groups noted below individually accounted for more than 10% of our total revenue in the periods covered by this report.

The composition of our revenue by customer is presented in the following table:

	% of Total Revenue Three Months Ended		% of Total Revenue Nine Months Ended	
	October 1, 2022	October 2, 2021	October 1, 2022	October 2, 2021
Weikeng Group	31.1%	44.0%	32.9%	39.1%
Arrow Electronics Inc.	24.7	30.0	27.2	26.9
Other distributors	33.7	15.6	29.4	21.9
All distributors	89.5	89.6	89.5	87.9
Direct customers	7.4	7.0	7.9	8.9
Licensing and services revenue	3.1	3.4	2.6	3.2
Total revenue	100.0%	100.0%	100.0%	100.0%

Gross Margin

The composition of our Gross margin, including as a percentage of revenue, is presented in the following table:

	Three Months Ended		Nine Months Ended	
(In thousands)	October 1, 2022	October 2, 2021	October 1, 2022	October 2, 2021
Gross margin	$ 118,732	$ 82,825	$ 329,984	$ 230,595
Gross margin percentage	68.8%	62.8%	68.1%	61.7%
Product gross margin %	67.8%	61.5%	67.3%	60.5%
Licensing and services gross margin %	100.0%	100.0%	100.0%	100.0%

Gross margin, as a percentage of revenue, increased 600 basis points in the third quarter of fiscal 2022 compared to the third quarter of fiscal 2021 and increased by 640 basis points in the first nine months of fiscal 2022 compared to the first nine months of fiscal 2021. Improved margins were driven by benefits from our pricing optimization and gross margin expansion strategy.

Because of its higher margin, the licensing and services portion of our overall revenue can have a disproportionate impact on Gross margin.

Operating Expenses

Research and Development Expense

The composition of our Research and development expense, including as a percentage of revenue, is presented in the following table:

	Three Months Ended			Nine Months Ended		
(In thousands)	October 1, 2022	October 2, 2021	% change	October 1, 2022	October 2, 2021	% change
Research and development	$ 34,820	$ 28,769	21.0%	$ 100,988	$ 80,289	25.8%
Percentage of revenue	20.2%	21.8%		20.8%	21.5%	

Research and development expense includes costs for compensation and benefits, stock compensation, engineering wafers, depreciation, licenses, and outside engineering services. These expenditures are for the design of new products, IP cores, processes, packaging, and software solutions. The increase in Research and development expense for the third quarter and first nine months of fiscal 2022 compared to the third quarter and first nine months of fiscal 2021 was due primarily to increased headcount-related costs as we continue to invest in our long-term product roadmap. We believe that investing in research and development is important to delivering innovative products to our customers and, therefore, we expect to continue to increase our investment in research and development.

Selling, General, and Administrative Expense

The composition of our Selling, general, and administrative expense, including as a percentage of revenue, is presented in the following table:

	Three Months Ended			Nine Months Ended		
(In thousands)	October 1, 2022	October 2, 2021	% change	October 1, 2022	October 2, 2021	% change
Selling, general, and administrative	$ 31,926	$ 26,272	21.5%	$ 89,721	$ 76,971	16.6%
Percentage of revenue	18.5%	19.9%		18.5%	20.6%	

Selling, general, and administrative expense includes costs for compensation and benefits related to selling, general, and administrative employees, commissions, depreciation, professional and outside services, trade show, and travel expenses. The increase in Selling, general, and administrative expense for the third quarter and first nine months of fiscal 2022 compared to the third quarter and first nine months of fiscal 2021 was due primarily to increased headcount-related costs to support ongoing customer growth, and to increased legal expenses primarily related to the defense of claims outside the ordinary course of business.

Amortization of Acquired Intangible Assets

The composition of our Amortization of acquired intangible assets, including as a percentage of revenue, is presented in the following table:

	Three Months Ended			Nine Months Ended		
(In thousands)	October 1, 2022	October 2, 2021	% change	October 1, 2022	October 2, 2021	% change
Amortization of acquired intangible assets	$ 869	$ 603	44.1%	$ 2,908	$ 1,809	60.8%
Percentage of revenue	0.5%	0.5%		0.6%	0.5%	

The increase in Amortization of acquired intangible assets for the third quarter and first nine months of fiscal 2022 compared to the third quarter and first nine months of fiscal 2021 is due to the amortization expense for new intangible assets added in the fourth quarter of fiscal 2021 through the acquisition of Mirametrix, Inc., partially offset by end of the amortization period during the first quarter of fiscal 2022 for acquired intangible assets from previous acquisitions.

Restructuring Charges

The composition of our Restructuring charges, including as a percentage of revenue, is presented in the following table:

	Three Months Ended			Nine Months Ended		
(In thousands)	October 1, 2022	October 2, 2021	% change	October 1, 2022	October 2, 2021	% change
Restructuring charges	$ 2,315	$ 166	100+%	$ 2,505	$ 546	100+%
Percentage of revenue	1.3%	0.1%		0.5%	0.1%	

Restructuring charges are comprised of expenses resulting from consolidation of our facilities, cancellation of contracts, and headcount reductions. Details of our restructuring plans and expenses incurred under them are discussed in "Note 6 - Restructuring" to our Consolidated Financial Statements in Part I, Item 1 of this Quarterly Report on Form 10-Q. Restructuring charges increased in the third quarter and first nine months of fiscal 2022 compared to the third quarter and first nine months of fiscal 2021 primarily due to lease right-of-use impairment and contract termination fees in the current year periods, as compared to minimal activity in the prior year.

Acquisition Related Charges

The composition of our Acquisition related charges, including as a percentage of revenue, is presented in the following table:

	Three Months Ended			Nine Months Ended		
(In thousands)	October 1, 2022	October 2, 2021	% change	October 1, 2022	October 2, 2021	% change
Acquisition related charges	$ —	$ —	—%	$ 511	$ —	100.0%
Percentage of revenue	—%	—%		0.1%	—%	

For the first nine months of fiscal 2022, Acquisition related charges were attributable to our acquisition of Mirametrix in November 2021 and were comprised primarily of professional services including legal and accounting fees.

Interest Expense

The composition of our Interest expense, including as a percentage of revenue, is presented in the following table:

	Three Months Ended			Nine Months Ended		
(In thousands)	October 1, 2022	October 2, 2021	% change	October 1, 2022	October 2, 2021	% change
Interest expense	$ (1,267)	$ (661)	91.7%	$ (2,866)	$ (2,081)	37.7%
Percentage of revenue	(0.7)%	(0.5)%		(0.6)%	(0.6)%	

Interest expense is primarily related to our long-term debt. This interest expense is comprised of contractual interest and amortization of original issue discount and debt issuance costs based on the effective interest method. The increase in Interest expense for the third quarter and first nine months of fiscal 2022 compared to the third quarter and first nine months of fiscal 2021 was driven by the increase in the effective interest rate on our long-term debt.

Other (Expense) Income, net

The composition of our Other (expense) income, net, including as a percentage of revenue, is presented in the following table:

	Three Months Ended			Nine Months Ended		
(In thousands)	October 1, 2022	October 2, 2021	% change	October 1, 2022	October 2, 2021	% change
Other (expense) income, net	$ (820)	$ (87)	100+%	$ (1,085)	$ (384)	100+%
Percentage of revenue	(0.5)%	(0.1)%		(0.2)%	(0.1)%	

The changes in Other (expense) income, net for the third quarter and first nine months of fiscal 2022 compared to the third quarter and first nine months of fiscal 2021 were primarily due to the $0.7 million loss on refinancing of our long-term debt during the period.

Income Taxes

The composition of our Income tax expense (benefit) is presented in the following table:

	Three Months Ended			Nine Months Ended		
(In thousands)	October 1, 2022	October 2, 2021	% change	October 1, 2022	October 2, 2021	% change
Income tax expense (benefit)	$ 356	$ (472)	100+%	$ 2,431	$ 1,125	100+%

Our Income tax expense (benefit) is composed primarily of foreign income and withholding taxes, partially offset by benefits resulting from the release of uncertain tax positions due to statute of limitation expirations that occurred in the respective periods. The increase in tax expense in the third quarter and first nine months of fiscal 2022 as compared to the third quarter and first nine months of fiscal 2021 is primarily due to increased worldwide income and changes in uncertain tax positions.

Liquidity and Capital Resources

The following sections discuss material changes in our financial condition from the end of fiscal 2021, including the effects of changes in our Consolidated Balance Sheets, and the effects of our credit arrangements and contractual obligations on our liquidity and capital resources. There continues to be uncertainty around the extent and duration of the disruption to our business, including from the effects of the ongoing COVID-19 pandemic, market volatility, and the rising rate of inflation, which may impact our liquidity and working capital needs in future periods.

We have historically financed our operating and capital resource requirements through cash flows from operations, and from the issuance of long-term debt to fund acquisitions. Cash provided by or used in operating activities will fluctuate from period to period due to fluctuations in operating results, the timing and collection of accounts receivable, and required inventory levels, among other things.

We believe that our financial resources, including current cash and cash equivalents, cash flow from operating activities, and our credit facilities, will be sufficient to meet our liquidity and working capital needs through at least the next 12 months. On September 1, 2022, we entered into our 2022 Credit Agreement, as described in "Note 5 - Long-Term Debt" under Part I, Item 1 of this report. As of October 1, 2022, we did not have significant long-term commitments for capital expenditures. For further information on our cash commitments for operating lease liabilities, see Note 7 - Leases under Part I, Item 1 of this report.

In the future, we may continue to consider acquisition opportunities to further extend our product or technology portfolios and further expand our product offerings. In connection with funding capital expenditures, acquisitions, securing additional wafer supply, increasing our working capital, or other operations, we may seek to obtain equity or additional debt financing. We may also seek to obtain equity or additional debt financing if we experience downturns or cyclical fluctuations in our business that are more severe or longer than we anticipated when determining our current working capital needs.

Cash and cash equivalents

(In thousands)	October 1, 2022	January 1, 2022	$ Change	% Change
Cash and cash equivalents	$ 118,766	$ 131,570	$ (12,804)	(9.7)%

As of October 1, 2022, we had Cash and cash equivalents of $118.8 million, of which approximately $21.1 million was held by our foreign subsidiaries. We manage our global cash requirements considering, among other things, (i) available funds among our subsidiaries through which we conduct business, (ii) the geographic location of our liquidity needs, and (iii) the cost to access international cash balances. The repatriation of non-US earnings may require us to withhold and pay foreign income tax on dividends. This should not result in our recording significant additional tax expense as we have accrued expense based on current withholding rates. As of October 1, 2022, we could access all cash held by our foreign subsidiaries without incurring significant additional expense.

The net decrease in Cash and cash equivalents of $12.8 million between January 1, 2022 and October 1, 2022 was primarily driven by cash flows from the following activities:

Operating activities — Cash provided by operating activities results from net income adjusted for certain non-cash items and changes in assets and liabilities. Cash provided by operating activities for the first nine months of fiscal 2022 was $156.8 million compared to $116.1 million for the first nine months of fiscal 2021. This increase of $40.8 million was primarily driven by an increase of $73.7 million provided by improved operating performance, partially offset by $32.9 million of net changes in working capital, primarily from cash used by inventories and accounts receivable. We are using cash provided by operating activities to fund our operations.

Investing activities — Investing cash flows consist primarily of transactions related to capital expenditures and payments for software and intellectual property licenses. Net cash used by investing activities in the first nine months of fiscal 2022 was $21.4 million compared to $16.7 million in the first nine months of fiscal 2021.

Financing activities — Financing cash flows consist primarily of activity on our long-term debt, proceeds from the exercise of options to acquire common stock, tax payments related to the net share settlement of restricted stock units, and repurchases of common stock. In September 2022, we entered into our 2022 Credit Agreement and drew down an initial $150.0 million revolving loan at closing, which we used to pay off the $150.0 million outstanding balance on our previous term and revolving loans. In connection with the 2022 Credit Agreement, we paid $1.4 million in debt issuance costs. During the first nine months of fiscal 2022, we paid required quarterly installments on our previous long-term debt totaling $8.8 million. Payments for tax withholdings on vesting of RSUs partially offset by employee exercises of stock options used net cash flows of $45.7 million in the first nine months of fiscal 2022, an increase of approximately $9.4 million from the net $36.3 million used in the first nine months of fiscal 2021. During the first nine months of fiscal 2022, we also repurchased approximately 1.7 million shares of common stock for $90.1 million, as further discussed below under "Share Repurchase Program."

Accounts receivable, net

(In thousands)	October 1, 2022	January 1, 2022	Change	% Change
Accounts receivable, net	$ 100,446	$ 79,859	$ 20,587	25.8%
Days sales outstanding - Overall	53	51	2	

Accounts receivable, net as of October 1, 2022 increased by approximately $20.6 million, or 26%, compared to January 1, 2022. This increase resulted primarily from higher revenue shipments in the third quarter of fiscal 2022 compared to the year-end period. We calculate Days Sales Outstanding on the basis of a 365-day year as Accounts receivable, net at the end of the quarter divided by sales during the quarter annualized and then multiplied by 365.

Inventories

(In thousands)	October 1, 2022	January 1, 2022	Change	% Change
Inventories	$ 93,964	$ 67,594	$ 26,370	39.0%
Days of inventory on hand	159	122	37	

Inventories as of October 1, 2022 increased $26.4 million, or approximately 39%, compared to January 1, 2022 primarily to meet the increased demands of our customers.

The Days of inventory on hand ratio compares the inventory balance at the end of a quarter to the cost of sales in that quarter. We calculate Days of inventory on hand on the basis of a 365-day year as Inventories at the end of the quarter divided by Cost of sales during the quarter annualized and then multiplied by 365.

Credit Arrangements

On September 1, 2022, we entered into our 2022 Credit Agreement. The details of this arrangement are described in "Note 5 - Long-Term Debt" in the Notes to Consolidated Financial Statements of this Quarterly Report on Form 10-Q.

As of October 1, 2022, we had no used or unused credit arrangements beyond the secured revolving loan facility described in the 2022 Credit Agreement.

Share Repurchase Program

See Part II, Item 2, “Unregistered Sales of Equity Securities and Use of Proceeds,” of this Quarterly Report on Form 10-Q for more information about the share repurchase program.

ITEM 3. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Market risk represents the risk of loss that may impact our financial position due to adverse changes in financial market prices and rates. Our market risk exposure is primarily a result of fluctuations in foreign currency exchange rates and interest rates. We assess these risks on a regular basis and have established policies that are designed to protect against the adverse effects of these and other potential exposures. There have been no material changes to either the foreign currency exchange rate risk or interest rate risk previously disclosed in Part II, Item 7A, "Quantitative and Qualitative Disclosures About Market Risk," of our Annual Report on Form 10-K for the fiscal year ended January 1, 2022.

ITEM 4. CONTROLS AND PROCEDURES

Conclusion Regarding the Effectiveness of Disclosure Controls and Procedures

In connection with the filing of this Quarterly Report on Form 10-Q, our management, including our Chief Executive Officer and Chief Financial Officer, evaluated the effectiveness of the design and operation of our disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended (the “Exchange Act”)) as of the end of the period covered by this report. Based on this evaluation, our Chief Executive Officer and Chief Financial Officer have concluded that our disclosure controls were effective as of the end of the period covered by this report.

Changes in Internal Control over Financial Reporting

There were no changes in our internal controls over financial reporting (as defined in Rules 13a-15(f) under the Exchange Act) that occurred during the third quarter of fiscal 2022 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting. We do not believe there has been any material impact to our internal controls over financial reporting notwithstanding that most of our employees are working remotely due to the COVID-19 pandemic. We continue to monitor and assess any potential impact of the COVID-19 pandemic on the design and operating effectiveness of our internal controls.

Inherent Limitations on Effectiveness of Controls

We do not expect that our disclosure controls and procedures or our internal control over financial reporting will prevent all errors and all fraud. A control system, no matter how well conceived and operated, can provide only reasonable, not absolute, assurance that the objectives of the control system are met. Further, the design of a control system must reflect the fact that there are resource constraints, and the benefits of controls must be considered relative to their costs. Because of the inherent limitations in all control systems, no evaluation of controls can provide absolute assurance that all control issues and instances of fraud, if any, have been detected. These inherent limitations include the realities that judgments in decision-making can be faulty, and that breakdowns can occur because of a simple error or mistake. Additionally, controls can be circumvented by the individual acts of some persons, by collusion of two or more people or by management override of the controls. The design of any system of controls also is based in part upon certain assumptions about the likelihood of future events, and there can be no assurance that any design will succeed in achieving its stated goals under all potential future conditions; over time, controls may become inadequate because of changes in conditions, or the degree of compliance with policies or procedures may deteriorate. Because of the inherent limitations in a cost-effective control system, misstatements due to error or fraud may occur and not be detected.

PART II. OTHER INFORMATION

ITEM 1. LEGAL PROCEEDINGS

The information set forth above under "Note 12 - Contingencies - Legal Matters" contained in the Notes to Consolidated Financial Statements is incorporated herein by reference.

ITEM 1A. RISK FACTORS

In addition to the other information set forth in this Quarterly Report on Form 10-Q, you should carefully consider the risk factors associated with our business previously described in Part I, Item 1A, “Risk Factors,” in our Annual Report on Form 10-K for the fiscal year ended January 1, 2022 ("2021 10-K"). There have been no material changes in the risk factors included in our 2021 10-K, and this report should be read in conjunction with the risk factors set forth in our 2021 10-K. The additional risks described below supplement the risk factors described in our 2021 10-K based on information currently known to us and recent developments since the filing date of that report. If any of these risks occur, our business, financial condition, operating results, and cash flows could be materially adversely affected, and the trading price of our common stock could decline. These risk factors are not the only risks facing our company. Additional risks and uncertainties not presently known to us or that we may currently deem to be immaterial, including those discussed below, could materially adversely affect our business, financial condition, or operating results.

Worldwide political and economic conditions may create uncertainties that could adversely affect our business. For example, the continuing military conflict between Ukraine and Russia, as well as the financial and trade-related restrictions associated with Russia and Belarus and economic sanctions on certain individuals and entities in Russia and Belarus, may further disrupt global supply chains and could result in shortages of key materials that our suppliers and foundry partners require to satisfy our needs. Furthermore, any deterioration in the relations between Taiwan and China, and other factors affecting military, political or economic conditions in Taiwan, could adversely impact our third-party manufacturing partners and suppliers located in Taiwan, which could disrupt our business operations. Geopolitical tensions or conflicts may also create a heightened risk of cyberattacks. The ongoing COVID-19 pandemic and adverse macroeconomic conditions, such as rising inflation and labor shortages, may affect demand for our products or increase our product or labor costs, negatively impacting our revenues, gross margins, and overall financial results. Additionally, the U.S. government recently announced new controls regarding semiconductor- and supercomputer-related products and new restrictions affecting U.S. persons’ ability to send certain chips and chip-related technology and software to China without an export license which may impact the global supply chain. We also may be impacted by changes in the tax laws of the United States and foreign jurisdictions. President Biden signed into law the Inflation Reduction act of 2022 (“IRA”) on August 16, 2022 and the CHIPS and Science Act of 2022 on August 9, 2022. These laws implement new tax provisions and provide for various incentives and tax credits, including a 1% excise tax on certain stock repurchases made by publicly traded US corporations after December 31, 2022. Although such events have not significantly affected our business or operations, the ultimate impact is unknown and future developments could adversely affect our operating results and financial condition.

These factors, together with all of the other information in this Quarterly Report on Form 10-Q, including our unaudited condensed consolidated financial statements and related notes included elsewhere in this Quarterly Report on Form 10-Q, should be carefully considered before making an investment decision relating to our common stock.

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

Issuer Purchases of Equity Securities

On November 8, 2021, we announced that our Board of Directors had approved a stock repurchase program pursuant to which up to $100 million of outstanding common stock could be repurchased from time to time (the "2022 Repurchase Program"). The duration of the 2022 Repurchase Program is through the end of December 2022. Under the 2022 Repurchase Program during the third quarter of fiscal 2022, we repurchased 680,098 shares for $39.7 million, or an average price paid per share of $58.40.

On August 8, 2022, we announced that our Board of Directors had approved a stock repurchase program pursuant to which up to an additional $150 million of outstanding common stock could be repurchased from time to time (the "2023 Repurchase Program"). The duration of the 2023 Repurchase Program is through the end of December 2023. Under the 2023 Repurchase Program during the third quarter of fiscal 2022, we repurchased 4,829 shares for $0.3 million, or an average price paid per share of $54.08.

Under these plans during the first nine months of fiscal 2022, we have repurchased a total of 1,663,282 shares for $90.1 million, or an average price paid per share of $54.19. All repurchases were open market transactions funded from available working capital. All shares repurchased pursuant to the 2022 and 2023 Repurchase Programs were retired by the end of the third quarter of fiscal 2022.

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The following table contains information regarding our repurchases of our common stock that is registered pursuant to Section 12 of the Securities Exchange Act of 1934 during the third quarter of fiscal 2022.

Period	Total Number of Shares Purchased	Average Price Paid per Share	Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs (a)	Approximate Dollar Value of Shares That May Yet Be Purchased Under the Plans or Programs ($M) (b)
July 3, 2022 through July 30, 2022	—	$ —	—	$ 39.7
July 31, 2022 through August 27, 2022	487,535	$ 59.78	487,535	$ 160.6
August 28, 2022 through October 1, 2022	197,392	$ 54.86	197,392	$ 149.7
Total	684,927	$ 58.36	684,927	$ 149.7

(a) All repurchases during the quarter were open-market transactions funded from available working capital made under the authorization from our board of directors to purchase up to $100.0 million of our common stock announced November 8, 2021 and under the authorization from our board of directors to purchase up to $150.0 million of our common stock announced August 8, 2022.

(b) As of October 1, 2022, this amount consisted of the remaining portion of the $150.0 million program authorized through the end of December 2023 that was announced August 8, 2022. We do not plan to make further repurchases pursuant to the 2022 Repurchase Program, which was due to expire at the end of December 2022, because as of August 31, 2022 we had repurchased the maximum dollar value of shares authorized under the 2022 Repurchase Program.

ITEM 6. EXHIBITS

Exhibit Number	Description
10.1	Amended and Restated Credit Agreement, dated as of September 1, 2022, by and among Lattice Semiconductor Corporation, as borrower, the lenders from time to time party thereto, and Wells Fargo Bank, National Association, as administrative agent. (Incorporated by reference to Exhibit 10.1 filed with the Company's Current Report on Form 8-K filed September 2, 2022).
31.1	Certification of Chief Executive Officer pursuant to the Securities Exchange Act of 1934 Rule 13a-14(a) and 15d-14(a), as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
31.2	Certification of Chief Financial Officer pursuant to the Securities Exchange Act of 1934 Rule 13a-14(a) and 15d-14(a), as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
32.1	Certification of Chief Executive Officer pursuant to 18 U.S.C. 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
32.2	Certification of Chief Financial Officer pursuant to 18 U.S.C. 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
101.INS	Inline XBRL Instance Document (the Instance Document does not appear in the Interactive Data File because its XBRL tags are embedded within the Inline XBRL document)
101.SCH	Inline XBRL Taxonomy Extension Schema Document
101.CAL	Inline XBRL Taxonomy Extension Calculation Linkbase Document
101.DEF	Inline XBRL Taxonomy Extension Definition Linkbase Document
101.LAB	Inline XBRL Taxonomy Extension Label Linkbase Document
101.PRE	Inline XBRL Taxonomy Extension Presentation Linkbase Document
104	Cover Page Interactive Data File - formatted in Inline XBRL and included in Exhibit 101

SIGNATURES

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

LATTICE SEMICONDUCTOR CORPORATION
(Registrant)

/s/ Sherri Luther
Sherri Luther
Chief Financial Officer
(Principal Financial and Accounting Officer)

Date: November 1, 2022

Exhibit 31.1

CERTIFICATION

I, James Anderson, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Lattice Semiconductor Corporation;

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: November 1, 2022

/s/ James Anderson
James Anderson
Chief Executive Officer

Exhibit 31.2

CERTIFICATION

I, Sherri Luther, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Lattice Semiconductor Corporation;

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: November 1, 2022

/s/ Sherri Luther
Sherri Luther
Chief Financial Officer

Exhibit 32.1

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

In connection with the Quarterly Report of Lattice Semiconductor Corporation (the Company) on Form 10-Q for the quarter ended October 1, 2022 (the Report), I, James Anderson, Chief Executive Officer of the Company, certify, pursuant to 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.

A signed original of this written statement has been provided to the Company and will be retained by the Company and furnished to the SEC or its staff upon request.

/s/ James Anderson
James Anderson
Chief Executive Officer

Date: November 1, 2022

Exhibit 32.2

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

In connection with the Quarterly Report of Lattice Semiconductor Corporation (the Company) on Form 10-Q for the quarter ended October 1, 2022 (the Report), I, Sherri Luther, Chief Financial Officer of the Company, certify, pursuant to 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.

A signed original of this written statement has been provided to the Company and will be retained by the Company and furnished to the SEC or its staff upon request.

/s/ Sherri Luther
Sherri Luther
Chief Financial Officer

Date: November 1, 2022