

UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 10-Q

(Mark One)

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

FOR THE QUARTERLY PERIOD ENDED APRIL 2, 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:

<u>Title of each class</u>	<u>Trading Symbol</u>	<u>Name of each exchange on which registered</u>
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
Non-accelerated filer

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 April 29, 2022

137,610,858

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 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; 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 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, 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 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	
	April 2, 2022	April 3, 2021
<i>(In thousands, except per share data)</i>		
Revenue	\$ 150,515	\$ 115,716
Cost of revenue	49,748	45,130
Gross margin	100,767	70,586
Operating expenses:		
Research and development	32,555	24,066
Selling, general, and administrative	28,771	25,092
Amortization of acquired intangible assets	1,169	603
Restructuring charges	54	176
Acquisition related charges	455	—
Total operating expenses	63,004	49,937
Income from operations	37,763	20,649
Interest expense	(708)	(718)
Other (expense) income, net	(22)	(162)
Income before income taxes	37,033	19,769
Income tax expense	955	956
Net income	\$ 36,078	\$ 18,813
Net income per share:		
Basic	\$ 0.26	\$ 0.14
Diluted	\$ 0.26	\$ 0.13
Shares used in per share calculations:		
Basic	137,500	136,401
Diluted	141,281	141,674

See Accompanying Notes to Unaudited Consolidated Financial Statements.

LATTICE SEMICONDUCTOR CORPORATION
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME
(unaudited)

	Three Months Ended	
	April 2, 2022	April 3, 2021
<i>(In thousands)</i>		
Net income	\$ 36,078	\$ 18,813
Other comprehensive income (loss):		
Translation adjustment	(253)	(237)
Comprehensive income	<u>\$ 35,825</u>	<u>\$ 18,576</u>

See Accompanying Notes to Unaudited Consolidated Financial Statements.

LATTICE SEMICONDUCTOR CORPORATION
CONSOLIDATED BALANCE SHEETS
(unaudited)

<i>(In thousands, except share and par value data)</i>	April 2, 2022	January 1, 2022
ASSETS		
Current assets:		
Cash and cash equivalents	\$ 122,989	\$ 131,570
Accounts receivable, net of allowance for credit losses	83,055	79,859
Inventories, net	71,773	67,594
Prepaid expenses and other current assets	21,368	22,328
Total current assets	299,185	301,351
Property and equipment, less accumulated depreciation of \$112,401 at April 2, 2022 and \$109,905 at January 1, 2022	39,626	38,094
Operating lease right-of-use assets	22,378	23,818
Intangible assets, net	28,350	29,782
Goodwill	315,358	315,358
Other long-term assets	16,029	18,091
Total assets	<u>\$ 720,926</u>	<u>\$ 726,494</u>
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	\$ 38,491	\$ 34,597
Accrued expenses	27,062	26,444
Accrued payroll obligations	16,328	27,967
Current portion of long-term debt	17,182	17,173
Total current liabilities	99,063	106,181
Long-term debt, net of current portion	136,461	140,760
Long-term operating lease liabilities, net of current portion	17,735	19,248
Other long-term liabilities	46,112	48,672
Total liabilities	299,371	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; 137,597,000 shares issued and outstanding as of April 2, 2022 and 137,239,000 shares issued and outstanding as of January 1, 2022	1,376	1,372
Additional paid-in capital	675,781	701,688
Accumulated deficit	(253,898)	(289,976)
Accumulated other comprehensive loss	(1,704)	(1,451)
Total stockholders' equity	421,555	411,633
Total liabilities and stockholders' equity	<u>\$ 720,926</u>	<u>\$ 726,494</u>

See Accompanying Notes to Unaudited Consolidated Financial Statements.

LATTICE SEMICONDUCTOR CORPORATION
CONSOLIDATED STATEMENTS OF CASH FLOWS
(unaudited)

	Three Months Ended	
	April 2, 2022	April 3, 2021
<i>(In thousands)</i>		
Cash flows from operating activities:		
Net income	\$ 36,078	\$ 18,813
Adjustments to reconcile net income to net cash provided by (used in) operating activities:		
Depreciation and amortization	7,179	5,901
Stock-based compensation expense	14,125	10,454
Amortization of right-of-use assets	1,696	1,628
Other non-cash adjustments	44	51
Changes in assets and liabilities:		
Accounts receivable, net	(3,196)	(6,509)
Inventories, net	(4,179)	5,143
Prepaid expenses and other assets	1,292	780
Accounts payable	3,894	(146)
Accrued expenses	(444)	1,064
Accrued payroll obligations	(11,639)	(6,436)
Operating lease liabilities, current and long-term portions	(1,645)	(1,372)
Net cash provided by (used in) operating activities	43,205	29,371
Cash flows from investing activities:		
Capital expenditures	(4,426)	(1,270)
Cash paid for software and intellectual property licenses	(2,704)	(3,056)
Net cash provided by (used in) investing activities	(7,130)	(4,326)
Cash flows from financing activities:		
Restricted stock unit tax withholdings	(25,629)	(7,981)
Proceeds from issuance of common stock	601	1,111
Repurchase of common stock	(15,000)	(15,002)
Repayment of long-term debt	(4,375)	—
Net cash provided by (used in) financing activities	(44,403)	(21,872)
Effect of exchange rate change on cash	(253)	(237)
Net increase (decrease) in cash and cash equivalents	(8,581)	2,936
Beginning cash and cash equivalents	131,570	182,332
Ending cash and cash equivalents	\$ 122,989	\$ 185,268
Supplemental disclosure of cash flow information and non-cash investing and financing activities:		
Interest paid	\$ 552	\$ 592
Operating lease payments	\$ 1,884	\$ 1,731
Income taxes paid, net of refunds	\$ 761	\$ 675
Accrued purchases of plant and equipment	\$ 963	\$ 1,120
Operating lease right-of-use assets obtained in exchange for lease obligations	\$ 314	\$ 7,440

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 three month period ended April 2, 2022:

	Common Stock (\$.01 par value)		Additional Paid-in Capital	Accumulated Deficit	Accumulated Other Comprehensive Loss	Total
	Shares	Amount				
<i>(In thousands, except par value data)</i>						
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 three months ended April 2, 2022	—	—	—	36,078	—	36,078
Other comprehensive income (loss)	—	—	—	—	(253)	(253)
Total comprehensive income						35,825
Common stock issued in connection with employee equity incentive plans, net of shares withheld for employee taxes	602	6	(25,034)	—	—	(25,028)
Stock-based compensation expense	—	—	14,125	—	—	14,125
Repurchase of common stock	(244)	(2)	(14,998)	—	—	(15,000)
Balances, April 2, 2022	137,597	\$ 1,376	\$ 675,781	\$ (253,898)	\$ (1,704)	\$ 421,555

The following summarizes the changes in total equity for the three month period ended April 3, 2021:

	Common Stock (\$.01 par value)		Additional Paid-in Capital	Accumulated Deficit	Accumulated Other Comprehensive Loss	Total
	Shares	Amount				
<i>(In thousands, except par value data)</i>						
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 three months ended April 3, 2021	—	—	—	18,813	—	18,813
Other comprehensive income (loss)	—	—	—	—	(237)	(237)
Total comprehensive income						18,576
Common stock issued in connection with employee equity incentive plans, net of shares withheld for employee taxes	472	5	(6,875)	—	—	(6,870)
Stock-based compensation expense	—	—	10,454	—	—	10,454
Repurchase of common stock	(307)	(3)	(14,999)	—	—	(15,002)
Balances, April 3, 2021	136,401	\$ 1,364	\$ 759,291	\$ (367,085)	\$ (1,985)	\$ 391,585

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 first quarter of fiscal 2022 and first quarter of fiscal 2021 ended on April 2, 2022 and April 3, 2021, respectively. All references to quarterly financial results are references to the results for the relevant 13-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% and 85% for the first quarter of fiscal 2022 and 2021, respectively. Distributors also account for a substantial portion of our net accounts receivable. Our two largest distributors accounted for 46% and 34% of net accounts receivable at April 2, 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	
	April 2, 2022	April 3, 2021
<i>(in thousands, except per share data)</i>		
Net income	\$ 36,078	\$ 18,813
Shares used in basic Net income per share	137,500	136,401
Dilutive effect of stock options, RSUs, ESPP shares, and equity awards with a market condition or performance condition	3,781	5,273
Shares used in diluted Net income per share	141,281	141,674
Basic Net income per share	\$ 0.26	\$ 0.14
Diluted Net income per share	\$ 0.26	\$ 0.13

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	
	April 2, 2022	April 3, 2021
<i>(in thousands)</i>		
Stock options, RSUs, ESPP shares, and equity awards with a market condition or performance condition excluded as they are antidilutive	268	350

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			
	April 2, 2022		April 3, 2021	
Revenue by Channel				
<i>(In thousands)</i>				
Product revenue - Distributors	\$ 135,413	90%	\$ 98,779	85%
Product revenue - Direct	11,565	8%	12,813	11%
Licensing and services	3,537	2%	4,124	4%
Total revenue	\$ 150,515	100%	\$ 115,716	100%
Revenue by Geographical Market				
<i>(In thousands)</i>				
United States	\$ 17,703	12%	\$ 9,110	8%
Other Americas	3,837	3%	6,733	6%
Americas	21,540	15%	15,843	14%
China	75,431	50%	67,119	58%
Japan	18,903	13%	7,777	7%
Other Asia	14,418	9%	13,494	11%
Asia	108,752	72%	88,390	76%
Europe	20,223	13%	11,483	10%
Total revenue	\$ 150,515	100%	\$ 115,716	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 three months of fiscal 2022:

(In thousands)

Contract assets as of Year Ended January 1, 2022	\$	5,672
Revenues recorded during the period		3,061
Transferred to Accounts receivable or collected		(3,942)
Contract assets as of April 3, 2022	\$	4,791

Contract liabilities are included in Accrued expenses on our Consolidated Balance Sheets. The following table summarizes activity during the first three 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		1,396
Less: Release of accruals for recognized stock rotation and scrap returns		(1,424)
Contract liabilities as of April 3, 2022	\$	4,740

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.

<i>(In thousands)</i>	April 2, 2022	January 1, 2022
Accounts receivable	\$ 83,055	\$ 79,859
Less: Allowance for credit losses	—	—
Accounts receivable, net of allowance for credit losses	\$ 83,055	\$ 79,859

Inventories

<i>(In thousands)</i>	April 2, 2022	January 1, 2022
Work in progress	\$ 47,115	\$ 43,546
Finished goods	24,658	24,048
Total inventories, net	\$ 71,773	\$ 67,594

Accrued Expenses

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

<i>(In thousands)</i>	April 2, 2022	January 1, 2022
Liability for non-cancelable contracts	\$ 9,719	\$ 9,930
Current portion of operating lease liabilities	5,878	5,696
Contract liability under ASC 606	4,740	4,768
Other accrued expenses	6,725	6,050
Total accrued expenses	\$ 27,062	\$ 26,444

Property and Equipment – Geographic Information

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

<i>(In thousands)</i>	April 2, 2022	January 1, 2022
United States	\$ 25,240	\$ 26,509
Taiwan	8,727	6,555
Philippines	3,098	2,498
China	1,546	1,643
Other	1,015	889
Total foreign property and equipment, net	14,386	11,585
Total property and equipment, net	\$ 39,626	\$ 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 three months of fiscal 2022:

<i>(In thousands)</i>		
Cloud based computing implementation costs as of January 1, 2022		\$ 2,380
Costs capitalized		55
Amortization		(206)
Cloud based computing implementation costs as of April 2, 2022		\$ 2,229

Note 5 - Long-Term Debt

On May 17, 2019, we entered into a credit agreement (the "Current Credit Agreement"), which provides for a five-year secured term loan facility in an aggregate principal amount of \$175.0 million and a five-year secured revolving loan facility in an aggregate principal amount of up to \$75.0 million. Details of the term loan and the revolving loan (collectively, "long-term debt"), including the basis for interest, payment terms, and covenants are described in the Current Credit Agreement.

During the first three months of fiscal 2022, we paid required quarterly installments totaling \$4.4 million on our long-term debt. The fair value of our long-term debt approximates the carrying value, which is reflected in our Consolidated Balance Sheets as follows:

<i>(In thousands)</i>	April 2, 2022	January 1, 2022
Principal amount	\$ 154,375	\$ 158,750
Unamortized original issuance discount and debt costs	(732)	(817)
Less: Current portion of long-term debt	(17,182)	(17,173)
Long-term debt, net of current portion and unamortized debt issue costs	\$ 136,461	\$ 140,760

As of April 2, 2022, the effective interest rate on the term loan was 1.92%, and the effective interest rate on the revolving loan was 1.71%. We pay a commitment fee of 0.20% on the unused portion of the revolving loan. Interest expense related to our long-term debt was included in Interest expense on our Consolidated Statements of Operations as follows:

<i>(In thousands)</i>	Three Months Ended	
	April 2, 2022	April 3, 2021
Contractual interest	\$ 562	\$ 598
Amortization of original issuance discount and debt costs	85	92
Total interest expense related to long-term debt	\$ 647	\$ 690

Expected future principal payments are based on the schedule of required quarterly installments. As of April 2, 2022, expected future principal payments on our long-term debt were as follows:

Fiscal year	<i>(in thousands)</i>
2022 (Remaining 3 quarters)	13,125
2023	17,500
2024	123,750
	<u>\$ 154,375</u>

Note 6 - Restructuring

Under the Q1 2020 Plan, which is described in the 2021 10-K, we recorded a credit adjustment of approximately \$0.1 million during the first quarter of fiscal 2022 and we recorded no expense during the first quarter of fiscal 2021. Approximately \$2.1 million of total expense has been incurred through April 2, 2022 under the Q1 2020 Plan. Substantially all actions planned under the Q1 2020 Plan have been implemented.

Under the June 2017 Plan, which is described in the 2021 10-K, we incurred restructuring expense related to our partially vacated facility in San Jose, California of approximately \$0.2 million during the first quarter of both fiscal 2022 and 2021. We have incurred approximately \$21.8 million of total expense through April 2, 2022 under the June 2017 Plan, and all planned actions have been implemented. We expect the total cost of the June 2017 Plan to be approximately \$22.0 million to \$23.5 million as ROU asset amortization expenses related to our partially vacated facility in San Jose, California will be incurred over the remaining lease term.

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:

<i>(In thousands)</i>	Severance & Related (1)	Lease Termination & Fixed Assets	Other (2)	Total
Accrued Restructuring at January 1, 2022	\$ 251	\$ 7,130	\$ —	\$ 7,381
Restructuring charges	(97)	151	—	54
Costs paid or otherwise settled	(138)	(445)	—	(583)
Accrued Restructuring at April 2, 2022	<u>\$ 16</u>	<u>\$ 6,836</u>	<u>\$ —</u>	<u>\$ 6,852</u>
Accrued Restructuring at January 2, 2021	\$ 246	\$ 8,233	\$ 664	\$ 9,143
Restructuring charges	—	176	—	176
Costs paid or otherwise settled	(9)	(439)	(656)	(1,104)
Accrued Restructuring at April 3, 2021	<u>\$ 237</u>	<u>\$ 7,970</u>	<u>\$ 8</u>	<u>\$ 8,215</u>

(1) Includes employee relocation and outplacement costs

(2) Includes termination fees on the cancellation of certain contracts under previous restructuring plans

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 3.9 years and a weighted-average discount rate of 5.4% as of April 2, 2022.

We recorded fixed operating lease expenses of \$2.0 million for the first quarter of both fiscal 2022 and 2021.

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

Operating lease right-of-use assets		<i>(in thousands)</i>
Balance as of January 1, 2022	\$	23,818
Right-of-use assets obtained for new lease contracts during the period		314
Amortization of right-of-use assets during the period		(1,696)
Adjustments for present value and foreign currency effects		(58)
Balance as of April 2, 2022	\$	22,378
Operating lease liabilities		<i>(in thousands)</i>
Balance as of January 1, 2022	\$	24,944
Lease liabilities incurred for new lease contracts during the period		314
Accretion of lease liabilities		302
Operating cash used by payments on lease liabilities		(1,884)
Adjustments for present value and foreign currency effects		(63)
Balance as of April 2, 2022		23,613
Less: Current portion of operating lease liabilities (included in Accrued expenses)		(5,878)
Long-term operating lease liabilities, net of current portion	\$	17,735

Maturities of operating lease liabilities as of April 2, 2022 are as follows:

Fiscal year	<i>(in thousands)</i>
2022 (Remaining 3 quarters)	5,168
2023	7,581
2024	5,405
2025	3,645
2026	2,532
Thereafter	2,081
Total lease payments	26,412
Less: amount representing interest	(2,799)
Total lease liabilities	\$ 23,613

Lease obligations for facilities restructured prior to the adoption of Topic 842 totaled approximately \$6.8 million at April 2, 2022 and continued to be recorded in Other long-term liabilities on our Consolidated Balance Sheets.

Note 8 - Intangible Assets

On our Consolidated Balance Sheets at April 2, 2022 and January 1, 2022, Intangible assets, net are shown net of accumulated amortization of \$136.9 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:

<i>(In thousands)</i>	Three Months Ended	
	April 2, 2022	April 3, 2021
Research and development	\$ 263	\$ 198
Amortization of acquired intangible assets	1,169	603
	\$ 1,432	\$ 801

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	
	April 2, 2022	April 3, 2021
<i>(In thousands)</i>		
Cost of revenue	\$ 935	\$ 666
Research and development	4,845	2,767
Selling, general, and administrative	8,345	7,021
Total stock-based compensation	<u>\$ 14,125</u>	<u>\$ 10,454</u>

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 three 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. As of April 2, 2022, the Company had met the final two adjusted EBITDA performance criteria on a trailing four-quarter basis for two consecutive trailing four-quarter periods, and the fifth and sixth tranches of 40% and 70%, respectively, of the base number of the awards with an EBITDA performance condition qualified for vesting.

For our awards with a market condition or a performance condition, we incurred stock compensation expense of approximately \$6.9 million and \$4.6 million in the first quarter 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:

<i>(Shares in thousands)</i>	Total
Balance, January 1, 2022	1,246
Granted	183
Effect of vesting multiplier	358
Vested	(638)
Balance, April 2, 2022	<u>1,149</u>

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 an additional \$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 first quarter of fiscal 2022, we repurchased 244,063 shares for \$15.0 million, or an average price paid per share of \$61.46. As of April 2, 2022, the remaining portion of the amount authorized for the 2022 Repurchase Program is approximately \$75 million. All repurchases were open market transactions funded from available working capital. All shares repurchased pursuant to the 2022 Repurchase Program were retired by the end of the first quarter of 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 first quarter of both fiscal 2022 and 2021, we recorded income tax expense of approximately \$1.0 million. Income taxes for the three month period ended April 2, 2022 and April 3, 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 months ended April 2, 2022 and for the three months ended April 3, 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 April 2, 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 \$21.3 million and \$21.6 million at April 2, 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 \$138 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 on our Business

The ongoing COVID-19 pandemic has caused, and may continue to cause, a global slowdown of economic activity (including the decrease in demand for certain goods and services), and volatility in and disruption to financial markets, labor markets, and supply chains. The severity, magnitude and duration of the ongoing COVID-19 pandemic and its economic consequences have been and continue to be uncertain, evolving and difficult to predict, and the pandemic's impact on our operations and financial performance, as well as its impact on our ability to successfully execute our business strategy and initiatives, remains uncertain. We continue to take actions to safeguard the health and safety of our employees and our business. Furthermore, we continue to manage our cash position and liquidity needs in light of the evolving COVID-19 pandemic, and we have additional resources available under our Current Credit Agreement, if needed.

The full extent of the effects of the COVID-19 pandemic, including recent variants of the virus, continue to be uncertain. We anticipate that these effects caused by the COVID-19 pandemic may continue to negatively impact business activity across the globe. Demand for our products may be impacted, which could have a negative impact on our revenue, given the global reach and continued economic impact of the virus. We have previously seen and could again see delays or disruptions in our supply chain due to governmental restrictions or voluntary precautionary measures adopted by our suppliers. If our suppliers experience similar impacts, or if rising rates of inflation increase, we may have compounded difficulty sourcing materials necessary to fulfill customer production requirements and transporting completed products to our end customers. It is difficult for us to predict the scope, magnitude, and length of supply chain disruptions and the rising rate of inflation. Supply chain delays and disruptions may also affect the ability of our customers to obtain materials or products from other suppliers which may constrain or delay their demand for our products.

We may take further actions altering our business operations that we determine are in the best interests of our employees, customers, partners, suppliers, and stakeholders, or as required by federal, state, or local authorities. It is not clear what the potential effects of any such alterations or modifications may have on our business, including the effects on our customers, employees, and prospects, or on our financial condition or results of operations. The future impacts of the ongoing COVID-19 pandemic on our business, results of operations and financial position remain uncertain and will depend on many factors that are not within our control, including, but not limited to: the duration and scope of the evolving pandemic; governmental, business and individuals' actions that have been and continue to be taken in response to the pandemic; general economic uncertainty in key global markets and financial market volatility; global economic conditions and levels of economic growth; and the pace of recovery when the COVID-19 pandemic subsides. See the section entitled "Risk Factors" in Item 1A of Part I of our Annual Report on Form 10-K for the fiscal year ended January 1, 2022 for further information about related risks and uncertainties.

Results of Operations

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

(In thousands)	Three Months Ended			
	April 2, 2022		April 3, 2021	
Revenue	\$ 150,515	100.0%	\$ 115,716	100.0%
Gross margin	100,767	66.9	70,586	61.0
Research and development	32,555	21.6	24,066	20.8
Selling, general and, administrative	28,771	19.1	25,092	21.7
Amortization of acquired intangible assets	1,169	0.8	603	0.5
Restructuring charges	54	0.0	176	0.2
Acquisition related charges	455	0.3	—	—
Income from operations	\$ 37,763	25.1%	\$ 20,649	17.8%

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:

<u>Communications and Computing</u>	<u>Industrial and Automotive</u>	<u>Consumer</u>	<u>Licensing and Services</u>
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			
	April 2, 2022		April 3, 2021	
<i>(In thousands)</i>				
Communications and Computing	\$ 62,440	41.5%	\$ 49,328	42.6%
Industrial and Automotive	69,635	46.3	49,745	43.0
Consumer	14,903	9.9	12,519	10.8
Licensing and Services	3,537	2.3	4,124	3.6
Total revenue	\$ 150,515	100.0%	\$ 115,716	100.0%

Revenue from the Communications and Computing end market increased by 27% for the first quarter of fiscal 2022 compared to the first quarter 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 40% for the first quarter of fiscal 2022 compared to the first quarter 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 increased by 19% for the first quarter of fiscal 2022 compared to the first quarter of fiscal 2021 primarily due to increased demand for our products in Consumer end market applications.

Revenue from the Licensing and services end market decreased by 14% for the first quarter of fiscal 2022 compared to the first quarter of fiscal 2021 primarily due to lower 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			
	April 2, 2022		April 3, 2021	
<i>(In thousands)</i>				
Asia	\$ 108,752	72.3%	\$ 88,390	76.4%
Americas	21,540	14.3	15,843	13.7
Europe	20,223	13.4	11,483	9.9
Total revenue	\$ 150,515	100.0%	\$ 115,716	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	
	April 2, 2022	April 3, 2021
Weikeng Group	35.5%	38.9%
Arrow Electronics Inc.	28.5	26.1
Other distributors	26.0	20.4
All distributors	90.0	85.4
Direct customers	7.7	11.0
Licensing and services revenue	2.3	3.6
Total revenue	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	
	April 2, 2022	April 3, 2021
<i>(In thousands)</i>		
Gross margin	\$ 100,767	\$ 70,586
Gross margin percentage	66.9%	61.0%
Product gross margin %	66.2%	59.6%
Licensing and services gross margin %	100.0%	100.0%

Gross margin, as a percentage of revenue, increased 590 basis points in the first quarter of fiscal 2022 compared to the first quarter 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		
	April 2, 2022	April 3, 2021	% change
<i>(In thousands)</i>			
Research and development	\$ 32,555	\$ 24,066	35.3%
Percentage of revenue	21.6%	20.8%	

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 first quarter of fiscal 2022 compared to the first quarter of fiscal 2021 was due primarily to increased headcount-related costs as we continue to invest in the expansion of our product portfolio and the acceleration of our new product introduction cadence. We believe that a continued commitment to Research and development is essential to maintaining product leadership and providing innovative new product offerings and, therefore, we expect to continue to increase our investment in Research and development, particularly with expanded investment in the development of software solutions.

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		
	April 2, 2022	April 3, 2021	% change
<i>(In thousands)</i>			
Selling, general, and administrative	\$ 28,771	\$ 25,092	14.7%
Percentage of revenue	19.1%	21.7%	

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 first quarter of fiscal 2022 compared to the first quarter of fiscal 2021 was due primarily to increased headcount-related costs to support ongoing customer growth.

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		% change
	April 2, 2022	April 3, 2021	
<i>(In thousands)</i>			
Amortization of acquired intangible assets	\$ 1,169	\$ 603	93.9%
Percentage of revenue	0.8%	0.5%	

The increase in Amortization of acquired intangible assets for the first quarter of fiscal 2022 compared to the first quarter 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		% change
	April 2, 2022	April 3, 2021	
<i>(In thousands)</i>			
Restructuring charges	\$ 54	\$ 176	(69.3)%
Percentage of revenue	0.0%	0.2%	

Restructuring charges are comprised of expenses resulting from reductions in our worldwide workforce, consolidation of our facilities, removal of fixed assets from service, and cancellation of software contracts and engineering tools. 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 decreased in the first quarter of fiscal 2022 compared to the first quarter of fiscal 2021, as we had no significant restructuring activity in the current 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		% change
	April 2, 2022	April 3, 2021	
<i>(In thousands)</i>			
Acquisition related charges	\$ 455	\$ —	100.0%
Percentage of revenue	0.3%	—%	

Acquisition related charges include legal and professional fees directly related to acquisitions. For the first quarter 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		% change
	April 2, 2022	April 3, 2021	
<i>(In thousands)</i>			
Interest expense	\$ (708)	\$ (718)	(1.4)%
Percentage of revenue	(0.5)%	(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 decrease in Interest expense for the first quarter of fiscal 2022 compared to the first quarter of fiscal 2021 was driven by the reduction in the principal balance of 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		
	April 2, 2022	April 3, 2021	% change
<i>(In thousands)</i>			
Other (expense) income, net	\$ (22)	\$ (162)	(86.4)%
Percentage of revenue	(0.0)%	(0.1)%	

The decrease in Other (expense) income, net for the first quarter of fiscal 2022 compared to the first quarter of fiscal 2021 was primarily due to lower foreign currency exchange losses.

Income Taxes

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

	Three Months Ended		
	April 2, 2022	April 3, 2021	% change
<i>(In thousands)</i>			
Income tax expense	\$ 955	\$ 956	(0.1)%

Our Income tax expense 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.

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 from the ongoing COVID-19 pandemic, 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. As of April 2, 2022, we did not have significant long-term commitments for capital expenditures. For further information on our cash commitments for operating lease liabilities and required future principal payments on our long-term debt, see [Note 7 - Leases](#) and [Note 5 - Long-Term Debt](#), respectively, 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

<i>(In thousands)</i>	<u>April 2, 2022</u>	<u>January 1, 2022</u>	<u>\$ Change</u>	<u>% Change</u>
Cash and cash equivalents	\$ 122,989	\$ 131,570	\$ (8,581)	(6.5)%

As of April 2, 2022, we had Cash and cash equivalents of \$123.0 million, of which approximately \$49.0 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 April 2, 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 \$8.6 million between January 1, 2022 and April 2, 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 three months of fiscal 2022 was \$43.2 million compared to \$29.4 million for the first three months of fiscal 2021. This increase of \$13.8 million was primarily driven by an increase of \$22.3 million provided by improved operating performance, partially offset by \$8.5 million of net changes in working capital, primarily from cash used by inventories. 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 three months of fiscal 2022 was \$7.1 million compared to \$4.3 million in the first three 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. During the first three months of fiscal 2022, we paid required quarterly installments on our long-term debt totaling \$4.4 million. Payments for tax withholdings on vesting of RSUs partially offset by employee exercises of stock options used net cash flows of \$25.0 million in the first three months of fiscal 2022, an increase of approximately \$18.1 million from the net \$6.9 million used in the first three months of fiscal 2021. During the first three months of fiscal 2022, we also repurchased approximately 0.2 million shares of common stock for \$15.0 million, as further discussed below under "Share Repurchase Program."

Accounts receivable, net

<i>(In thousands)</i>	<u>April 2, 2022</u>	<u>January 1, 2022</u>	<u>Change</u>	<u>% Change</u>
Accounts receivable, net	\$ 83,055	\$ 79,859	\$ 3,196	4.0%
Days sales outstanding - Overall	50	51	(1)	

Accounts receivable, net as of April 2, 2022 increased by approximately \$3.2 million, or 4%, compared to January 1, 2022. This increase resulted primarily from higher revenue shipments in the first 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

<i>(In thousands)</i>	<u>April 2, 2022</u>	<u>January 1, 2022</u>	<u>Change</u>	<u>% Change</u>
Inventories	\$ 71,773	\$ 67,594	\$ 4,179	6.2%
Days of inventory on hand	132	122	10	

Inventories as of April 2, 2022 increased \$4.2 million, or approximately 6%, 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 May 17, 2019, we entered into our Current Credit Agreement with Wells Fargo Bank, National Association, as administrative agent, and other lenders. The details of this arrangement are described in "Note 8 - Long-Term Debt" in the Notes to Consolidated Financial Statements of our 2021 10-K.

As of April 2, 2022, we had no used or unused credit arrangements beyond the secured revolving loan facility described in the Current 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 first 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

The risk factors associated with our business were 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. 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 could materially adversely affect our business, financial condition, or operating results, including related to the ongoing COVID-19 pandemic or the conflict between Russia and Ukraine, which has also affected surrounding countries. 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 an additional \$100.0 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 first quarter of fiscal 2022, we repurchased 244,063 shares for \$15.0 million, or an average price paid per share of \$61.46. All shares repurchased pursuant to the 2022 Repurchase Program were retired by the end of the first quarter of fiscal 2022.

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 first 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)
January 2, 2022 through January 29, 2022	—	\$ —	—	\$ 89.9
January 30, 2022 through February 26, 2022	81,200	\$ 61.58	81,200	\$ 84.9
February 27, 2022 through April 2, 2022	162,863	\$ 61.40	162,863	\$ 74.9
Total	244,063	\$ 61.46	244,063	\$ 74.9

(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.

(b) As of April 2, 2022, this amount consisted of the remaining portion of the \$100.0 million program authorized through the end of December 2022 that was announced November 8, 2021.

ITEM 5. OTHER INFORMATION

Bylaws Revisions

On April 29, 2022, our Board of Directors approved our amended and restated bylaws (the "Amended and Restated Bylaws") to make clear that stockholders may act by written consent subject to certain procedures, clarify our advance notice procedures for bringing business at annual meetings, provide that the federal district courts of the United States of America shall be the exclusive forum for any litigation asserting a claim under the Securities Act, and reflect certain other immaterial updates.

The foregoing description of the Amended and Restated Bylaws does not purport to be complete, and is qualified in its entirety by reference to the full text of the Amended and Restated Bylaws, a copy of which is filed as Exhibit 3.1 to this Quarterly Report on Form 10-Q and is incorporated herein by reference

ITEM 6. EXHIBITS

Exhibit Number	Description
3.1	The Company's Bylaws, as amended as of April 29, 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: May 4, 2022

AMENDED AND RESTATED BYLAWS
OF
LATTICE SEMICONDUCTOR CORPORATION
(As amended as of April 29, 2022)

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AMENDED AND RESTATED BYLAWS
OF
LATTICE SEMICONDUCTOR CORPORATION

ARTICLE I
CORPORATE OFFICES

1.1 REGISTERED OFFICE

The registered office of the corporation shall be fixed in the certificate of incorporation of the corporation.

1.2 OTHER OFFICES

The corporation may at any time establish other offices.

ARTICLE II
MEETINGS OF STOCKHOLDERS

2.1 PLACE OF MEETINGS

Meetings of stockholders shall be held at any place, within or outside the State of Delaware, designated by the board of directors. The board of directors may, in its sole discretion, determine that the meeting shall not be held at any place, but may instead be held solely by means of remote communication in accordance with the General Corporation Law of Delaware. In the absence of any such designation or determination, stockholders' meetings shall be held at the principal executive office of the corporation.

2.2 ANNUAL MEETING

An annual meeting of the stockholders shall be held each year on such date and at such time as designated by the board of directors for the purpose of electing directors and for the transaction of such other business as may properly come before the meeting in accordance with Section 2.17 of these bylaws.

2.3 SPECIAL MEETING

(a) Special meetings of the stockholders, for any purpose or purposes, unless otherwise prescribed by the General Corporation Law of Delaware or by the certificate of incorporation, may be called by a majority of the total number of authorized directors of the board of directors, the chairman of the board of directors or the chief executive officer, but a special meeting may not be called by any other person or persons and any power of stockholders to call a special meeting of stockholders is specifically denied.

(b) The notice of a special meeting shall include the purpose for which the meeting is called. Only such business shall be conducted at a special meeting of stockholders as shall have been brought before the meeting by or at the direction of the board of directors, the chairman of the board of directors or the chief executive officer. Nothing contained in this paragraph (b) shall be construed as limiting, fixing, or affecting the time when a meeting of stockholders called by action of the board of directors may be held.

2.4 NOTICE OF STOCKHOLDERS' MEETINGS

All notices of meetings of stockholders shall be sent or otherwise given in accordance with Section 2.5 or Section 2.6 of these bylaws not less than ten (10) nor more than sixty (60) days before the date of the meeting to each stockholder entitled to vote at such meeting. The notice shall specify the place, if any, date, and hour of the meeting, the means of remote communication, if any, by which stockholders and proxy holders may be deemed to be present in person and vote at such meeting and, in the case of a special meeting, the purpose or purposes for which the meeting is called. Any previously scheduled meeting of the stockholders may be postponed or rescheduled, and (unless the certificate of incorporation otherwise provides) any special meeting of the stockholders may be cancelled, by resolution of the board of directors at any time, before or after notice for such meeting has been sent to the stockholders.

2.5 MANNER OF GIVING NOTICE; AFFIDAVIT OF NOTICE; NOTICE TO STOCKHOLDERS SHARING AN ADDRESS

(a) Notice of any meeting of stockholders shall be given either personally, by mail or, subject to Section 232 of the General Corporation Law of Delaware, by electronic transmission. Notices not personally delivered shall be sent charges prepaid and shall be addressed to the stockholder at the address of that stockholder appearing on the books of the corporation or given by the stockholder to the corporation for the purpose of notice. If no address is known, such notice may be sent to the principal executive office of the corporation. Notice shall be deemed to have been given at the time when delivered personally or deposited in the mail or, if electronically transmitted, as provided in Section 232 of the General Corporation Law of Delaware. An affidavit of the secretary or an assistant secretary or of the transfer agent or other agent of the corporation that the notice has been given shall, in the absence of fraud, be prima facie evidence of the facts stated therein.

(b) Except as otherwise prohibited under the General Corporation Law of Delaware, without limiting the manner by which notice otherwise may be given effectively to stockholders, any notice to stockholders given by the corporation under the provisions of the General Corporation Law of Delaware, the certificate of incorporation or these bylaws shall be effective if given by a single written notice to stockholders who share an address if consented to by the stockholders at that address to whom such notice is given. Any such consent shall be revocable by the stockholder by written notice to the corporation. Any stockholder who fails to object in writing to the corporation, within 60 days of having been given written notice by the corporation of its intention to send the single notice, shall be deemed to have consented to receiving such single written notice. This Section 2.5(b) shall not apply to Sections 164, 296, 311, 312 or 324 of the General Corporation Law of Delaware.

2.6 NOTICE BY ELECTRONIC TRANSMISSION

Without limiting the manner by which notice otherwise may be given effectively to stockholders, any notice to stockholders given by the corporation under any provision of the General Corporation Law of Delaware, the certificate of incorporation or these bylaws shall be effective if given by a form of electronic transmission contemplated by Section 232 of the General Corporation Law of Delaware.

2.7 QUORUM

The holders of a majority of the voting power of the capital stock of the corporation issued and outstanding and entitled to vote thereat, present in person or represented by proxy, shall constitute a quorum at all meetings of the stockholders for the transaction of business except as otherwise provided by the General Corporation Law of Delaware or by the certificate of incorporation. Where a separate vote by a class or series or classes or series is required, a majority of the voting power of the outstanding shares of such class or series or classes or series, present in person or represented by proxy, shall constitute a quorum entitled to take action with respect to that vote on that matter, except as otherwise provided by law, the certificate of incorporation or these bylaws. If, however, such quorum is not present or represented at any meeting of the stockholders, then either (i) the chairman of the meeting or (ii) the stockholders holding a majority of the shares entitled to vote thereat, present in person or represented by proxy, shall have power to adjourn the meeting from time to time, without notice other than announcement at the meeting unless otherwise required by these bylaws, until a quorum is present or represented. At such adjourned meeting at which a quorum is present or represented, any business may be transacted that might have been transacted at the original meeting.

2.8 ADJOURNED MEETING; NOTICE

Any meeting of stockholders, whether annual or special, may be adjourned from time to time either by the chairman of the meeting or by the vote of a majority of the shares casting votes, excluding abstentions, whether or not a quorum is present. Unless these bylaws otherwise require, when a meeting is adjourned to another time or place (including an adjournment taken to address a technical failure to convene or continue a meeting using remote communication), if any, notice need not be given of the adjourned meeting if the time, place, if any, thereof, and the means of remote communications, if any, by which stockholders and proxy holders may be deemed to be present in person and vote at such adjourned meeting, are provided in a manner set forth in Section 222(c) of the General Corporation Law of Delaware. At the adjourned meeting the corporation may transact any business that might have been transacted at the original meeting. If the adjournment is for more than thirty (30) days, or if after the adjournment a new record date is fixed for the adjourned meeting, a notice of the adjourned meeting shall be given to each stockholder of record entitled to vote at the meeting. If after the adjournment a new record date for stockholders entitled to vote is fixed for the adjourned meeting, the board of directors shall fix a new record date for notice of such adjourned meeting in accordance with Section 213 of the General Corporation Law of Delaware and these bylaws, and shall give notice of the adjourned meeting to each stockholder of record entitled to vote at such adjourned meeting as of the record date fixed for notice of such adjourned meeting.

2.9 ORGANIZATION

Meetings of stockholders shall be presided over by: (i) the chairman of the board of directors, if any; (ii) in the absence of the chairman of the board of directors, the chief executive officer, if any; or (iii) in the absence of the foregoing persons, a chairman of the meeting, which chairman must be an officer or director of the corporation, designated by the board of directors. The secretary or in his or her absence an assistant secretary or in the absence of the secretary and all assistant secretaries a person whom the chairman of the meeting shall appoint shall act as secretary of the meeting and keep a record of the proceedings thereof.

The board of directors of the corporation shall be entitled to make such rules or regulations for the conduct of meetings of stockholders as it shall deem necessary, appropriate or convenient. Subject to such rules and regulations of the board of directors, if any, the chairman of the meeting shall have the right and authority to prescribe such rules, regulations and procedures and to do all such acts as, in the judgment of the chairman of the meeting, are necessary, appropriate or convenient for the proper conduct of the meeting, including, without limitation, establishing an agenda or order of business for the meeting, rules and procedures for maintaining order at the meeting and the safety of those present, limitations on participation in such meeting to stockholders of record of the corporation and their duly authorized and constituted proxies, and such other persons as the chairman shall permit, restrictions on entry to the meeting after the time fixed for the commencement thereof, limitations on the time allotted to questions or comments by participants and regulation of the opening and closing of the polls for balloting and matters which are to be voted on by ballot. Unless and to the extent determined by the board of directors or the chairman of the meeting, meetings of stockholders shall not be required to be held in accordance with rules of parliamentary procedure.

2.10 INSPECTORS OF ELECTION

Before any meeting of stockholders, the corporation may appoint an inspector or inspectors of election to act at the meeting or its adjournment. If no inspector of election is so appointed, then the chairman of the meeting may, and on the request of any stockholder or a stockholder's proxy shall, appoint an inspector or inspectors of election to act at the meeting. The number of inspectors shall be either one (1) or three (3), and may include individuals who serve the corporation in other capacities, including without limitation as officers, employees or agents. The corporation may designate one or more persons as alternate inspectors to replace any inspector who fails to act. If any person appointed as inspector fails to appear or fails or refuses to act, and if no alternative inspector has been designated by the board or if so designated fails to appear or fails or refuses to act, then the chairman of the meeting may, and upon the request of any stockholder or a stockholder's proxy shall, appoint a person to fill that vacancy. The inspectors shall have the duties prescribed pursuant to Section 231 of the General Corporation Law of Delaware. The inspectors shall perform their duties impartially, in good faith, to the best of their ability and as expeditiously as is practical. If there are three (3) inspectors, the decision, act or certificate of a majority is effective in all respects as the decision, act or certificate of all.

2.11 VOTING

The stockholders entitled to vote at any meeting of stockholders shall be determined in accordance with the provisions of Section 2.14 of these bylaws, subject to the provisions of Sections 217 and 218 of the General Corporation Law of Delaware (relating to voting rights of fiduciaries, pledgors and joint owners of stock and to voting trusts and other voting agreements).

Except as may be otherwise provided in the certificate of incorporation or by the General Corporation Law of Delaware, each stockholder shall be entitled to one vote for each share of capital stock held by such stockholder.

When a quorum is present at any meeting, in all matters other than the election of directors, the affirmative vote of the holders of a majority of the voting power of the capital stock present in person or represented by proxy shall decide any question properly brought before such meeting, unless the question is one upon which by express provision of the General Corporation Law of Delaware, the certificate of incorporation, or the rules of the stock exchange on which the corporation's securities are listed, a different vote is provided in which case such express provision shall govern and control the decision of the question. Except as otherwise required by law, the certificate of incorporation or these bylaws, directors shall be elected by a plurality of the voting power of the shares present in person or represented by proxy at the meeting and entitled to vote on the election of directors.

2.12 WAIVER OF NOTICE

Whenever notice is required to be given under any provision of the General Corporation Law of Delaware or of the certificate of incorporation or these bylaws, a written waiver thereof, signed by the person entitled to notice, or a waiver by electronic transmission by the person entitled to notice, whether before or after the time stated therein, shall be deemed equivalent to notice. Attendance of a person at a meeting shall constitute a waiver of notice at such meeting, except when the person attends a meeting for the express purpose of objecting, at the beginning of the meeting, to the transaction of any business because the meeting is not lawfully called or convened. Neither the business to be transacted at, nor the purpose of, any regular or special meeting of the stockholders need be specified in any written waiver of notice or any waiver by electronic transmission unless so required by the certificate of incorporation or these bylaws.

2.13 STOCKHOLDER ACTION BY WRITTEN CONSENT WITHOUT A MEETING

Unless otherwise provided in the certificate of incorporation, any action required by statute to be taken at any annual or special meeting of the stockholders, or any action which may be taken at any annual or special meeting of the stockholders, may be taken without a meeting, without prior notice and without a vote, if a consent in writing or by electronic transmission setting forth the action so taken, shall be signed by the holders of outstanding stock having not less than the minimum number of votes that would be necessary to authorize or take such action at a meeting at which all shares entitled to vote thereon were present and voted. Every written consent purporting to take or authorizing the taking of corporate action and/or related revocations (each such written consent and related revocation is referred to in this Section 2.13 as a "Consent") shall bear the date of signature of each stockholder who signs the Consent, and

no Consent shall be effective to take the corporate action referred to therein unless, within 60 days of the earliest dated Consent delivered in the manner required by this Section 2.13, Consents signed by a sufficient number of stockholders to take such action are so delivered to the corporation and not revoked.

A consent shall be delivered to the corporation by delivery to its registered office in the State of Delaware, its principal place of business, or an officer or agent of the corporation having custody of the book in which proceedings of meetings of stockholders are recorded. Delivery to the corporation's registered office shall be made by hand or by certified or registered mail, return receipt requested.

In the event of the delivery to the corporation of a Consent, the secretary shall provide for the safe-keeping of such Consent and shall promptly conduct such ministerial review of the sufficiency of the Consents and of the validity of the action to be taken by stockholder consent as he or she deems necessary or appropriate, including, without limitation, whether the holders of a number of shares having the requisite voting power to authorize or take the action specified in the Consent have given consent; provided, however, that if the corporate action to which the Consent relates is the removal or replacement of one or more members of the board of directors, the secretary shall promptly designate two persons, who shall not be members of the board of directors, to serve as inspectors with respect to such Consent and such inspectors shall discharge the functions of the secretary under this Section 2.13. If after such investigation the secretary or the inspectors (as the case may be) shall determine that the Consent is valid and that the action therein specified has been validly authorized, that fact shall forthwith be certified on the records of the corporation kept for the purpose of recording the proceedings of meetings of stockholders, and the Consent shall be filed in such records, at which time the Consent shall become effective as stockholder action. In conducting the investigation required by this Section 2.13, the secretary or the inspectors (as the case may be) may, at the expense of the corporation, retain special legal counsel and any other necessary or appropriate professional advisors, and such other personnel as they may deem necessary or appropriate to assist them, and shall be fully protected in relying in good faith upon the opinion of such counsel or advisors.

2.14 RECORD DATE FOR STOCKHOLDER NOTICE; VOTING; GIVING CONSENTS

(a) In order that the corporation may determine the stockholders entitled to notice of any meeting of stockholders or any adjournment thereof, the board of directors may fix a record date, which record date shall not precede the date upon which the resolution fixing the record date is adopted by the board of directors and which record date shall not be more than 60 nor less than 10 days before the date of such meeting. If the board of directors so fixes a date, such date shall also be the record date for determining the stockholders entitled to vote at such meeting unless the board of directors determines, at the time it fixes such record date, that a later date on or before the date of the meeting shall be the date for making such determination. If no record date is fixed by the board of directors, the record date for determining stockholders entitled to notice of and to vote at a meeting of stockholders shall be at the close of business on the day next preceding the day on which notice is given, or, if notice is waived, at the close of business on the day next preceding the day on which the meeting is held. A determination of stockholders of record entitled to notice of or to vote at a meeting of stockholders shall apply to any adjournment of the meeting; *provided, however*, that the board of directors may fix a new record date for

determination of stockholders entitled to vote at the adjourned meeting, and in such case shall also fix as the record date for stockholders entitled to notice of such adjourned meeting the same or an earlier date as that fixed for determination of stockholders entitled to vote in accordance with the provisions of Section 213 of the General Corporation Law of Delaware and this Section 2.14 at the adjourned meeting.

(b) In order that the corporation may determine the stockholders entitled to consent to corporate action in writing without a meeting, the board of directors may fix a record date, which record date shall not precede the date upon which the resolution fixing the record date is adopted by the board of directors, and which date shall not be more than ten (10) days after the date upon which the resolution fixing the record date is adopted by the board of directors. Any stockholder of record seeking to have the stockholders authorize or take corporate action by written consent shall, by written notice to the secretary, request the board of directors to fix a record date for such purpose. The board of directors may fix a record date for such purpose which shall be no more than ten (10) days after the date on which the resolution fixing the record date is adopted by the board of directors and shall not precede the date such resolution is adopted. If no record date has been fixed by the board of directors within ten (10) days of the date on which such a request is received, the record date for determining stockholders entitled to consent to corporate action in writing without a meeting, when no prior action by the board of directors is required by applicable law, shall be the first date on which a signed written consent setting forth the action taken or proposed to be taken is delivered to the corporation in the manner described in Section 2.13. If no record date has been fixed by the board of directors and prior action by the board of directors is required by law, the record date for determining stockholders entitled to consent to corporate action in writing without a meeting shall be at the close of business on the day on which the board of directors adopts the resolution taking such prior action.

(c) In order that the corporation may determine the stockholders entitled to receive payment of any dividend or other distribution or allotment of any rights or the stockholders entitled to exercise any rights in respect of any change, conversion or exchange of stock, or for the purpose of any other lawful action, the board of directors may fix a record date, which record date shall not precede the date upon which the resolution fixing the record date is adopted, and which record date shall be not more than 60 days prior to such action. If no record date is fixed, the record date for determining stockholders for any such purpose shall be at the close of business on the day on which the board of directors adopts the resolution relating thereto.

2.15 PROXIES

Each stockholder entitled to vote at a meeting of stockholders or to take corporate action by written consent without a meeting, or such stockholder's authorized officer, director, employee or agent, may authorize another person or persons to act for such stockholder by proxy authorized by a document or by a transmission permitted by law filed in accordance with the procedure established for the meeting or other action, but no such proxy shall be voted or acted upon after three (3) years from its date, unless the proxy provides for a longer period. The authorization of a person to act as a proxy may be documented, signed and delivered in accordance with Section 116 of the General Corporation Law of Delaware; *provided* that such authorization shall set forth, or be delivered with information enabling the corporation to determine, the identity of the stockholder granting such authorization. The revocability of a

proxy that states on its face that it is irrevocable shall be governed by the provisions of Section 212(e) of the General Corporation Law of Delaware.

A proxy is not revoked by the death or incapacity of the maker unless, before the vote is counted, written notice of such death or incapacity is received by the corporation.

2.16 LIST OF STOCKHOLDERS ENTITLED TO VOTE

The corporation shall prepare, in accordance with Section 219 of the General Corporation Law of Delaware, a complete list of the stockholders entitled to vote at the meeting; *provided, however*, if the record date for determining the stockholders entitled to vote is less than ten (10) days before the meeting date, the list shall reflect the stockholders entitled to vote as of the tenth day before the meeting date, arranged in alphabetical order, and showing the address of each stockholder and the number of shares registered in the name of each stockholder. The corporation shall not be required to include electronic mail addresses or other electronic contact information on such list. To the extent required by Section 219 of the General Corporation Law of Delaware, such list shall be open to the examination of any stockholder, for any purpose germane to the meeting, prior to the date thereof (i) on a reasonably accessible electronic network, provided that the information required to gain access to such list is provided with the notice of the meeting, or (ii) during ordinary business hours, at the principal place of business of the corporation. The method by which the corporation makes the list available shall be determined by the corporation in its sole discretion. In the event that the corporation determines to make the list available on an electronic network, the corporation may take reasonable steps to ensure that such information is available only to stockholders of the corporation.

2.17 NOMINATIONS AND STOCKHOLDER BUSINESS

(a) *Annual Meetings of Stockholders.*

(i) Nominations of persons for election to the board of directors or the proposal of other business to be transacted by the stockholders at an annual meeting of stockholders may be made only (1) pursuant to the corporation's notice of meeting (or any supplement thereto); (2) by or at the direction of the board of directors; (3) as may be provided in the certificate of designations for any class or series of preferred stock; or (4) by any stockholder of the corporation who (A) is a stockholder of record at the time of giving of the notice contemplated by Section 2.17(a)(ii); (B) is a stockholder of record on the record date for the determination of stockholders entitled to notice of the annual meeting; (C) is a stockholder of record on the record date for the determination of stockholders entitled to vote at the annual meeting; (D) is a stockholder of record at the time of the annual meeting; and (E) complies with the procedures set forth in this Section 2.17(a).

(ii) For nominations or other business to be properly brought before an annual meeting of stockholders by a stockholder pursuant to clause (4) of Section 2.17(a)(i), the stockholder must have given timely notice in writing to the secretary and any such nomination or proposed business must constitute a proper matter for stockholder action. To be timely, a stockholder's notice must be received by the secretary at the principal executive offices of the corporation no earlier than 8:00 a.m., local time, on the 120th day and no later than 5:00 p.m.,

local time, on the 90th day prior to the day of the first anniversary of the preceding year's annual meeting of stockholders. However, if no annual meeting of stockholders was held in the preceding year, or if the date of the applicable annual meeting has been changed by more than 25 days from the first anniversary of the preceding year's annual meeting, then to be timely such notice must be received by the secretary at the principal executive offices of the corporation no earlier than 8:00 a.m., local time, on the 120th day prior to the day of the annual meeting and no later than 5:00 p.m., local time, on the 10th day following the later of the day on which public announcement of the date of the annual meeting was first made by the corporation and the 120th day prior to the day of the annual meeting. In no event will the adjournment, rescheduling or postponement of any annual meeting, or any announcement thereof, commence a new time period (or extend any time period) for the giving of a stockholder's notice as described above. If the number of directors to be elected to the board of directors is increased and there is no public announcement naming all of the nominees for director or specifying the size of the increased board of directors at least 10 days before the last day that a stockholder may deliver a notice of nomination pursuant to the foregoing provisions, then a stockholder's notice required by this Section 2.17(a)(ii) will also be considered timely, but only with respect to nominees for any new positions created by such increase, if it is received by the secretary at the principal executive offices of the corporation no later than 5:00 p.m., local time, on the 10th day following the day on which such public announcement is first made. "Public announcement" means disclosure in a press release reported by a national news service or in a document publicly filed by the corporation with the Securities and Exchange Commission pursuant to Section 13, 14 or 15(d) of the Securities Exchange Act of 1934 (as amended and inclusive of rules and regulations thereunder, the "1934 Act").

(iii) A stockholder's notice to the secretary must set forth:

(a) as to each person whom the stockholder proposes to nominate for election as a director:

(i) such person's name, age, business address, residence address and principal occupation or employment; the class and number of shares of the corporation that are held of record or are beneficially owned by such person and a description of any Derivative Instruments (defined below) held or beneficially owned thereby or of any other agreement, arrangement or understanding (including any short position or any borrowing or lending of shares), the effect or intent of which is to mitigate loss to, or to manage the risk or benefit of share price changes for, or to increase or decrease the voting power of such person; and all information relating to such person that is required to be disclosed in solicitations of proxies for the contested election of directors, or is otherwise required, in each case pursuant to the Section 14 of the 1934 Act;

(ii) such person's written consent to being named in such stockholder's proxy statement as a nominee of such stockholder and to serving as a director of the corporation if elected;

(iii) a reasonably detailed description of any direct or indirect compensatory, payment, indemnification or other financial agreement, arrangement or understanding that such person has, or has had within the past three years, with any person or

entity other than the corporation (including the amount of any payment or payments received or receivable thereunder), in each case in connection with candidacy or service as a director of the corporation (a “Third-Party Compensation Arrangement”); and

(iv) a description of any other material relationships between such person and such person’s respective affiliates and associates, or others acting in concert with them, on the one hand, and such stockholder giving the notice and the beneficial owner, if any, on whose behalf the nomination is made, and their respective affiliates and associates, or others acting in concert with them, on the other hand;

(b) as to any other business that the stockholder proposes to bring before the annual meeting:

(i) a brief description of the business desired to be brought before the annual meeting;

(ii) the text of the proposal or business (including the text of any resolutions proposed for consideration and, if applicable, the text of any proposed amendment to these bylaws);

(iii) the reasons for conducting such business at the annual meeting;

(iv) any material interest in such business of such stockholder giving the notice and the beneficial owner, if any, on whose behalf the proposal is made, and their respective affiliates and associates, or others acting in concert with them; and

(v) a description of all agreements, arrangements and understandings between such stockholder and the beneficial owner, if any, on whose behalf the proposal is made, and their respective affiliates or associates or others acting in concert with them, and any other person or persons (including their names) in connection with the proposal of such business by such stockholder; and

(c) as to the stockholder giving the notice and the beneficial owner, if any, on whose behalf the nomination or proposal is made:

(i) the name and address of such stockholder (as they appear on the corporation’s books), of such beneficial owner and of their respective affiliates or associates or others acting in concert with them;

(ii) for each class or series, the number of shares of stock of the corporation that are, directly or indirectly, held of record or are beneficially owned by such stockholder, such beneficial owner or their respective affiliates or associates or others acting in concert with them;

(iii) a description of any agreement, arrangement or understanding between such stockholder, such beneficial owner or their respective affiliates or

associates or others acting in concert with them, and any other person or persons (including, in each case, their names) in connection with the proposal of such nomination or other business;

(iv) a description of any agreement, arrangement or understanding (including, regardless of the form of settlement, any derivative, long or short positions, profit interests, forwards, futures, swaps, options, warrants, convertible securities, stock appreciation or similar rights, hedging transactions and borrowed or loaned shares) that has been entered into by or on behalf of such stockholder, such beneficial owner or their respective affiliates or associates or others acting in concert with them, with respect to the corporation's securities (any of the foregoing, a "Derivative Instrument"), or any other agreement, arrangement or understanding that has been made the effect or intent of which is to create or mitigate loss to, manage risk or benefit of share price changes for or increase or decrease the voting power of such stockholder, such beneficial owner or their respective affiliates or associates or others acting in concert with them, with respect to the corporation's securities;

(v) any rights to dividends on the corporation's securities owned beneficially by such stockholder, such beneficial owner or their respective affiliates or associates or others acting in concert with them, that are separated or separable from the underlying security;

(vi) any proportionate interest in the corporation's securities or Derivative Instruments held, directly or indirectly, by a general or limited partnership in which such stockholder, such beneficial owner or their respective affiliates or associates or others acting in concert with them, is a general partner or, directly or indirectly, beneficially owns an interest in a general partner of such general or limited partnership;

(vii) any performance-related fees (other than an asset-based fee) that such stockholder, such beneficial owner or their respective affiliates or associates or others acting in concert with them is entitled to based on any increase or decrease in the value of the corporation's securities or Derivative Instruments, including, without limitation, any such interests held by members of the immediate family of such persons sharing the same household;

(viii) any significant equity interests or any Derivative Instruments in any principal competitor of the corporation that are held by such stockholder, such beneficial owner or their respective affiliates or associates or others acting in concert with them;

(ix) any direct or indirect interest of such stockholder, such beneficial owner or their respective affiliates or associates or others acting in concert with them, in any contract with the corporation, any affiliate of the corporation or any principal competitor of the corporation (in each case, including any employment agreement, collective bargaining agreement or consulting agreement);

(x) a representation and undertaking that the stockholder is a holder of record of stock of the corporation as of the date of submission of the stockholder's notice and intends to appear in person or by proxy at the meeting to bring such nomination or other business before the meeting;

(xi) a representation and undertaking that such stockholder or any such beneficial owner intends, or is part of a group that intends, to (x) deliver a proxy statement or form of proxy to holders of at least the percentage of the voting power of the corporation's then-outstanding stock required to approve or adopt the proposal or to elect each such nominee; or (y) otherwise solicit proxies from stockholders in support of such proposal or nomination;

(xii) any other information relating to such stockholder, such beneficial owner, or their respective affiliates or associates or others acting in concert with them, or director nominee or proposed business that, in each case, would be required to be disclosed in a proxy statement or other filing required to be made in connection with the solicitation of proxies in support of such nominee (in a contested election of directors) or proposal pursuant to Section 14 of the 1934 Act; and

(xiii) such other information relating to any proposed item of business as the corporation may reasonably require to determine whether such proposed item of business is a proper matter for stockholder action.

(iv) In addition to the requirements of this Section 2.17, to be timely, a stockholder's notice (and any additional information submitted to the corporation in connection therewith) must further be updated and supplemented (1) if necessary, so that the information provided or required to be provided in such notice is true and correct as of the record date(s) for determining the stockholders entitled to notice of, and to vote at, the meeting and as of the date that is 10 business days prior to the meeting or any adjournment, rescheduling or postponement thereof and (2) to provide any additional information that the corporation may reasonably request. Such update and supplement or additional information, if applicable, must be received by the secretary at the principal executive offices of the corporation, in the case of a request for additional information, promptly following a request therefor, which response must be delivered not later than such reasonable time as is specified in any such request from the corporation or, in the case of any other update or supplement of any information, not later than five business days after the record date(s) for the meeting (in the case of any update and supplement required to be made as of the record date(s)), and not later than eight business days prior to the date for the meeting or any adjournment, rescheduling or postponement thereof (in the case of the update and supplement required to be made as of 10 business days prior to the meeting or any adjournment, rescheduling or postponement thereof). The failure to timely provide such update, supplement or additional information shall result in the nomination or proposal no longer being eligible for consideration at the meeting.

(b) *Special Meetings of Stockholders.* Except to the extent required by the General Corporation Law of Delaware, and subject to Section 2.3(a), special meetings of stockholders may be called only in accordance with the corporation's certificate of incorporation and these bylaws. Only such business will be conducted at a special meeting of stockholders as has been brought before the special meeting pursuant to the corporation's notice of meeting. If the election of directors is included as business to be brought before a special meeting in the corporation's notice of meeting, then nominations of persons for election to the board of directors at such special meeting may be made by any stockholder who (i) is a stockholder of record at the time of giving of the notice contemplated by this Section 2.17(b); (ii) is a stockholder of record on the

record date for the determination of stockholders entitled to notice of the special meeting; (iii) is a stockholder of record on the record date for the determination of stockholders entitled to vote at the special meeting; (iv) is a stockholder of record at the time of the special meeting; and (v) complies with the procedures set forth in this Section 2.17(b). For nominations to be properly brought by a stockholder before a special meeting pursuant to this Section 2.17(b), the stockholder's notice must be received by the secretary at the principal executive offices of the corporation no earlier than 8:00 a.m., local time, on the 120th day prior to the day of the special meeting and no later than 5:00 p.m., local time, on the 10th day following the day on which public announcement of the date of the special meeting was first made. In no event will any adjournment, rescheduling or postponement of a special meeting or the announcement thereof commence a new time period (or extend any time period) for the giving of a stockholder's notice. A stockholder's notice to the Secretary must comply with the applicable notice requirements of Section 2.17(a)(iii).

(c) *Other Requirements.*

(i) To be eligible to be a nominee of any stockholder for election as a director of the corporation, the proposed nominee must provide to the secretary, in accordance with the applicable time periods prescribed for delivery of notice under Section 2.17(a)(ii) or Section 2.17(b):

(a) a signed and completed written questionnaire (in the form provided by the secretary at the written request of the nominating stockholder, which form will be provided by the secretary within 10 days of receiving such request) containing information regarding such nominee's background and qualifications and such other information as may reasonably be required by the corporation to determine the eligibility of such nominee to serve as a director of the corporation or to serve as an independent director of the corporation;

(b) a written representation and undertaking that, unless previously disclosed to the corporation, such nominee is not, and will not become, a party to any voting agreement, arrangement, commitment, assurance or understanding with any person or entity as to how such nominee, if elected as a director, will vote on any issue;

(c) a written representation and undertaking that, unless previously disclosed to the corporation, such nominee is not, and will not become, a party to any Third-Party Compensation Arrangement;

(d) a written representation and undertaking that, if elected as a director, such nominee would be in compliance, and will continue to comply, with the corporation's corporate governance guidelines as disclosed on the corporation's website, as amended from time to time; and

(e) a written representation and undertaking that such nominee, if elected, intends to serve a full term on the board of directors.

(ii) At the request of the board of directors, any person nominated by the board of directors for election as a director must furnish to the secretary the information that is required to be set forth in a stockholder's notice of nomination that pertains to such nominee.

(iii) No person will be eligible to be nominated by a stockholder for election as a director of the corporation at an annual or special meeting of stockholders unless nominated in accordance with the procedures set forth in this Section 2.17. No business proposed by a stockholder will be conducted at a stockholder meeting except in accordance with this Section 2.17.

(iv) The chairperson of the applicable meeting of stockholders will, if the facts warrant, determine and declare to the meeting that a nomination was not made in accordance with the procedures prescribed by these bylaws or that business was not properly brought before the meeting. If the chairperson of the meeting should so determine, then the chairperson of the meeting will so declare to the meeting and the defective nomination will be disregarded or such business will not be transacted, as the case may be.

(v) Notwithstanding anything to the contrary in this Section 2.17, unless otherwise required by law, if the stockholder (or a qualified representative of the stockholder) does not appear in person at the meeting to present a nomination or other proposed business, such nomination will be disregarded or such proposed business will not be transacted, as the case may be, notwithstanding that proxies in respect of such nomination or business may have been received by the corporation and counted for purposes of determining a quorum. For purposes of this Section 2.17 to be considered a qualified representative of the stockholder, a person must be a duly authorized officer, manager or partner of such stockholder or must be authorized by a writing executed by such stockholder or an electronic transmission delivered by such stockholder to act for such stockholder as proxy at the meeting, and such person must produce such writing or electronic transmission, or a reliable reproduction of the writing or electronic transmission, at the meeting.

(vi) Without limiting this Section 2.17, a stockholder must also comply with all applicable requirements of the 1934 Act with respect to the matters set forth in this Section 2.17, it being understood that (1) any references in these bylaws to the 1934 Act are not intended to, and will not, limit any requirements applicable to nominations or proposals as to any other business to be considered pursuant to this Section 2.17; and (2) compliance with clause (4) of Section 2.17(a)(i) and with Section 2.17(b) are the exclusive means for a stockholder to make nominations or submit other business (other than as provided in Section 2.17(c)(viii)).

Notwithstanding anything to the contrary in this Section 2.17, the notice requirements set forth in these bylaws with respect to the proposal of any business pursuant to this Section 2.17 will be deemed to be satisfied by a stockholder if (1) such stockholder has submitted a proposal to the corporation in compliance with Rule 14a-8 under the 1934 Act; and (2) such stockholder's proposal has been included in a proxy statement that has been prepared by the corporation to solicit proxies for the meeting of stockholders. Subject to Rule 14a-8 and other applicable rules and regulations under the 1934 Act, nothing in these bylaws will be construed to permit any stockholder, or give any stockholder the right, to include or have disseminated or described in the corporation's proxy statement any nomination of a director or any other business proposal.

ARTICLE III

DIRECTORS

3.1 POWERS

Subject to the provisions of the General Corporation Law of Delaware and any limitations in the certificate of incorporation or these bylaws relating to action required to be approved by the stockholders or by the outstanding shares, the business and affairs of the corporation shall be managed and all corporate powers shall be exercised by or under the direction of the board of directors.

3.2 NUMBER OF DIRECTORS

The board of directors shall consist of one or more members, the number thereof to be determined from time to time by resolution of the board of directors. The number of authorized directors also may be modified from time to time by amendment of this Section 3.2 in accordance with the provisions of Article IX hereof. Except as provided in Section 3.3 and Section 3.4 of these bylaws, and subject to the rights of the holders of any outstanding series of preferred stock of the corporation, the directors shall be elected by the stockholders at their annual meeting in each year. If for any cause, the directors shall not have been elected at an annual meeting, they may be elected as soon thereafter as convenient at a special meeting of the stockholders called for that purpose in the manner provided in these bylaws.

No reduction of the authorized number of directors shall have the effect of removing any director before that director's term of office expires.

A majority of the corporation's directors shall be independent, as that term is defined in the corporation's then current Corporate Governance Policies and in the then current rules and regulations of the national securities exchange upon which the corporation's stock is then listed or the national securities association on whose automated quotation system the corporation's stock is then listed; provided that if at the time of determining the independence of one or more directors the corporation does not have Corporate Governance Policies in effect and the corporation's stock is not listed on any national securities exchange or the automated quotation system of a national securities association, then the term independent shall be as defined by applicable rules and regulations of the Securities Exchange Commission or such other method as determined by the board of directors.

3.3 ELECTION, QUALIFICATION AND TERM OF OFFICE OF DIRECTORS

(a) Subject to the rights of the holders of any outstanding series of preferred stock of the corporation, all directors shall be elected to hold office for a one-year term expiring at the next annual meeting of stockholders.

(b) Subject to Section 3.4, each director, including a director elected to fill a vacancy, shall hold office until his or her successor is elected and qualified or until his or her earlier death, retirement, resignation, disqualification or removal.

(c) Elections of directors shall be by written ballot, unless otherwise provided in the certificate of incorporation; if authorized by the board of directors, such requirement of a written ballot shall be satisfied by a ballot submitted by electronic transmission, provided that any such electronic transmission must be either set forth or be submitted with information from which it can be determined that the electronic transmission was authorized by the stockholder or proxy holder.

3.4 RESIGNATION AND VACANCIES

Any director may resign at any time upon notice given in writing or by electronic transmission to the corporation. When one or more directors so resigns and the resignation is effective at a future date, a majority of the directors then in office, including those who have so resigned, shall have power to fill such vacancy or vacancies, the vote thereon to take effect when such resignation or resignations shall become effective, and each director so chosen shall hold office as provided in this section in the filling of other vacancies.

Unless otherwise provided in the certificate of incorporation or these bylaws or permitted in the specific case by resolution of the board of directors, and subject to the rights of holders of preferred stock, vacancies and newly created directorships resulting from any increase in the authorized number of directors elected by all of the stockholders having the right to vote as a single class may be filled by a majority of the directors then in office, although less than a quorum, or by a sole remaining director, and not by stockholders. A director elected to fill a vacancy or a newly created directorship must stand for election at the first annual meeting following the director's initial election, and shall hold office until such annual meeting and until his or her successor shall be duly elected and qualified or until his or her earlier death, retirement, resignation, disqualification or removal.

3.5 PLACE OF MEETINGS; MEETINGS BY TELEPHONE

The board of directors of the corporation may hold meetings, both regular and special, either within or outside the State of Delaware.

Unless otherwise restricted by the certificate of incorporation or these bylaws, members of the board of directors, or any committee designated by the board of directors, may participate in a meeting of the board of directors, or any committee, by means of conference telephone or similar communications equipment by means of which all persons participating in the meeting can hear each other, and such participation in a meeting shall constitute presence in person at the meeting.

3.6 REGULAR MEETINGS

Regular meetings of the board of directors may be held without notice at such time and at such place as shall from time to time be determined by the board of directors.

3.7 SPECIAL MEETINGS; NOTICE

Special meetings of the board of directors may be called for any purpose or purposes at any time by the chairman of the board of directors, the chief executive officer or by one-third or more of the authorized number of directors.

Notice of the time and place of special meetings shall be delivered personally or by telephone to each director or sent by mail or electronic transmission, charges prepaid, addressed to each director at that director's address, facsimile number, electronic mail address or other location as is shown on the records of the corporation or given by the director to the corporation for the purpose of notice. If the notice is mailed, it shall be deposited in the United States mail at least four (4) days before the time of the holding of the meeting. If the notice is delivered personally or by telephone or electronic transmission, it shall be given personally or by telephone or other electronic transmission at least twenty-four (24) hours before the time of the holding of the meeting. All notices given by electronic transmission shall be deemed to have been given when directed to the electronic mail address, facsimile number or other location as is shown on the records of the corporation or given by the director to the corporation for the purpose of notice. Any oral notice given personally or by telephone may be communicated either to the director directly or by voice recording or to a person whom the person giving the notice has reason to believe will promptly communicate it to the director. If the meeting is to be held at the principal executive office of the corporation, the notice need not specify the place of the meeting. Moreover, a notice of special meeting need not state the purpose of such meeting, and, unless indicated in the notice thereof, any and all business may be transacted at a special meeting.

3.8 QUORUM

At all meetings of the board of directors, no less than one-third of the authorized number of directors shall constitute a quorum for the transaction of business and the act of a majority of the directors present at any meeting at which there is a quorum shall be the act of the board of directors, except as may be otherwise specifically provided by the General Corporation Law of Delaware or by the certificate of incorporation. If a quorum is not present at any meeting of the board of directors, then the directors present thereat may adjourn the meeting from time to time, without notice other than announcement at the meeting, until a quorum is present. A meeting at which a quorum is initially present may continue to transact business notwithstanding the withdrawal of directors, if any action taken is approved by at least a majority of the required quorum for that meeting.

3.9 WAIVER OF NOTICE

Whenever notice is required to be given under any provision of the General Corporation Law of Delaware or of the certificate of incorporation or these bylaws, a written waiver thereof, signed by the person entitled to notice, or a waiver by electronic transmission by the person entitled to notice, whether before or after the time stated therein, shall be deemed equivalent to notice. Attendance of a person at a meeting shall constitute a waiver of notice of such meeting, except when the person attends a meeting for the express purpose of objecting, at the beginning of the meeting, to the transaction of any business because the meeting is not lawfully called or convened. Neither the business to be transacted at, nor the purpose of, any regular or special

meeting of the directors, or members of a committee of directors, need be specified in any written waiver of notice or any waiver by electronic transmission unless so required by the certificate of incorporation or these bylaws.

3.10 BOARD ACTION BY WRITTEN CONSENT WITHOUT A MEETING

Unless otherwise restricted by the certificate of incorporation or these bylaws, (a) any action required or permitted to be taken at any meeting of the board of directors, or of any committee thereof, may be taken without a meeting if all members of the board of directors or committee, as the case may be, consent thereto in writing or by electronic transmission and (b) a consent may be documented, signed and delivered in any manner permitted by Section 116 of the General Corporation Law of Delaware. Any person (whether or not then a director) may provide, whether through instruction to an agent or otherwise, that a consent to action will be effective at a future time (including a time determined upon the happening of an event), no later than 60 days after such instruction is given or such provision is made and such consent shall be deemed to have been given for purposes of this Section 3.10 at such effective time so long as such person is then a director and did not revoke the consent prior to such time. Any such consent shall be revocable prior to its becoming effective. After an action is taken, the writing or writings or electronic transmission or transmissions related thereto shall be filed with the minutes of proceedings of the board of directors or committee, as the case may be, in the same paper or electronic form as the minutes are maintained.

3.11 FEES AND COMPENSATION OF DIRECTORS

Unless otherwise restricted by the certificate of incorporation or these bylaws, the board of directors or a committee thereof shall have the authority to fix the compensation of directors. The directors may be paid their expenses, if any, of attendance of each meeting of the board of directors and may be paid a fixed sum for attendance at each meeting of the board of directors or a stated salary as director. No such payment shall preclude any director from serving the corporation in any other capacity and receiving compensation therefor. Members of special or standing committees of the board of directors may be allowed, and the board of directors shall have the authority to fix, like compensation for attending committee meetings.

3.12 APPROVAL OF LOANS TO EMPLOYEES

Subject to the provisions of the Sarbanes-Oxley Act of 2002 and other applicable law, the corporation may lend money to, or guarantee any obligation of, or otherwise assist any employee who is not an officer of the corporation or any of its subsidiaries, including any employee who is a director of the corporation or any of its subsidiaries, whenever, in the judgment of the directors, such loan, guaranty or assistance may reasonably be expected to benefit the corporation. The loan, guaranty or other assistance may be with or without interest and may be unsecured, or secured in such manner as the board of directors shall approve, including, without limitation, a pledge of shares of stock of the corporation.

3.13 REMOVAL OF DIRECTORS

Any director or the entire board of directors may be removed, with or without cause, by stockholders of the corporation in the manner specified in the certificate of incorporation and applicable law.

3.14 EXECUTIVE SESSIONS

At every meeting of the board of directors, the chairman of the board of directors (if a chairman is then in office and is independent, as defined in Section 3.2 above) or the lead independent director (if there is no chairman then in office or the chairman is not independent) will preside over executive sessions at which non-independent directors are not present.

ARTICLE IV

COMMITTEES

4.1 COMMITTEES OF DIRECTORS

The board of directors may designate one or more committees, each committee to consist of one or more of the directors of the corporation. The board of directors may designate one or more directors as alternate members of any committee, who may replace any absent or disqualified member at any meeting of the committee. In the absence or disqualification of a member of a committee, the member or members thereof present at any meeting and not disqualified from voting, whether or not such member or members constitute a quorum, may unanimously appoint another member of the board of directors to act at the meeting in the place of any such absent or disqualified member. Any such committee, to the extent provided in the resolution of the board of directors or in these bylaws, shall have and may exercise all the powers and authority of the board of directors in the management of the business and affairs of the corporation, and may authorize the seal of the corporation to be affixed to all papers that may require it; but no such committee shall have the power or authority to (i) approve or adopt, or recommend to the stockholders, any action or matter (other than the election or removal of directors) expressly required by the General Corporation Law of Delaware to be submitted to stockholders for approval, or (ii) adopt, amend or repeal any bylaw of the corporation.

4.2 MEETINGS AND ACTION OF COMMITTEES

Unless otherwise provided by the board of directors, meetings and actions of committees shall be governed by, and held and taken in accordance with, the following provisions of these bylaws: Section 3.5 (place of meetings and meetings by telephone), Section 3.6 (regular meetings), Section 3.7 (special meetings and notice), Section 3.8 (quorum), Section 3.9 (waiver of notice), and Section 3.10 (action without a meeting), with such changes in the context of those bylaws as are necessary to substitute the committee and its members for the board of directors and its members; provided, however, that the time and place of regular meetings of committees may also be called by resolution of the board of directors and that notice of special meetings of committees shall also be given to all alternate members, if any, who shall have the right to attend all meetings of the committee. The board of directors may adopt other rules for the government of any committee not inconsistent with the provisions of these bylaws.

ARTICLE V

OFFICERS

5.1 OFFICERS

The officers of the corporation shall be a chief executive officer, one or more vice presidents, a secretary, and a chief financial officer. The corporation may also have, at the discretion of the board of directors, a chairman of the board of directors, a president, one or more assistant vice presidents, assistant secretaries, assistant treasurers, and any such other officers as may be appointed in accordance with the provisions of Section 5.3 of these bylaws. Any number of offices may be held by the same person.

5.2 APPOINTMENT OF OFFICERS

The board of directors shall appoint the officers of the corporation, except (i) such officers as may be appointed in accordance with the provisions of Section 5.3 of these bylaws and (ii) if the board of directors determines in its discretion to have a chairman of the board of directors, the chairman of the board of directors shall be appointed by majority vote of the independent directors.

5.3 SUBORDINATE OFFICERS

The board of directors may appoint, or empower the chief executive officer to appoint, such other officers as the business of the corporation may require, each of whom shall hold office for such period, have such authority, and perform such duties as are provided in these bylaws or as the board of directors may from time to time determine.

5.4 REMOVAL AND RESIGNATION OF OFFICERS

Subject to the rights, if any, of an officer under any contract of employment, any officer may be removed, either with or without cause, by the board of directors or, for the avoidance of doubt, by any duly authorized committee or subcommittee thereof or by any officer who has been conferred such power of removal.

Any officer may resign at any time by delivering notice of his or her resignation in writing or by electronic transmission to the corporation. Any resignation shall take effect at the date of the receipt of the notice of resignation or at any later time specified in that notice; and, unless otherwise specified in that notice, the acceptance of the resignation shall not be necessary to make it effective. Any resignation is without prejudice to the rights, if any, of the corporation under any contract to which the officer is a party.

5.5 VACANCIES IN OFFICES

Any vacancy occurring in any office of the corporation shall be filled as provided under Section 5.2 or Section 5.3 of these bylaws.

5.6 CHAIRMAN OF THE BOARD

The chairman of the board of directors, if such an officer be elected, shall, if present, preside at meetings of the board of directors and exercise and perform such other powers and duties as may from time to time be assigned to him or her by the board of directors or as may be prescribed by these bylaws. If there is no chief executive officer, then the chairman of the board shall also be the chief executive officer of the corporation and shall have the powers and duties prescribed in Section 5.7 of these bylaws.

5.7 CHIEF EXECUTIVE OFFICER

Subject to such supervisory powers, if any, as may be given by the board of directors to the chairman of the board of directors, if there be such an officer, the chief executive officer shall, subject to the control of the board of directors, have general supervision, direction, and control of the business and the officers of the corporation. In the absence or nonexistence of a chairman of the board of directors, the chief executive officer shall preside at all meetings of the board of directors. The chief executive officer shall have the general powers and duties of management usually vested in the office of chief executive officer of a corporation and shall have such other powers and duties as may be prescribed by the board of directors or these bylaws.

5.8 PRESIDENT

In the absence or disability of the chief executive officer, the president, if any, shall perform all the duties of the chief executive officer. When acting as the chief executive officer, the president shall have all the powers of, and be subject to all the restrictions upon, the chief executive officer. The president shall have such other powers and perform such other duties as from time to time may be prescribed for him or her by the board of directors, these bylaws, the chief executive officer or the chairman of the board of directors.

5.9 VICE PRESIDENT

In the absence or disability of the president, the vice presidents, if any, in order of their rank as fixed by the board of directors or, if not ranked, a vice president designated by the board of directors, shall perform all the duties of the president and when so acting shall have all the powers of, and be subject to all the restrictions upon, the president. The vice presidents shall have such other powers and perform such other duties as from time to time may be prescribed for them respectively by the board of directors, these bylaws, the chief executive officer, the president or the chairman of the board of directors.

5.10 SECRETARY

The secretary shall keep or cause to be kept, at the principal executive office of the corporation or such other place as the board of directors may direct, a book of minutes of all meetings and actions of directors, committees of directors, and stockholders. The minutes shall show the time and place of each meeting, whether regular or special (and, if special, how authorized and the notice given), the names of those present at directors' meetings or committee

meetings, the number of shares present or represented at stockholders' meetings, and the proceedings thereof.

The secretary shall keep, or cause to be kept, at the principal executive office of the corporation or at the office of the corporation's transfer agent or registrar, as determined by resolution of the board of directors, a stock ledger, or a duplicate stock ledger, showing the names of all stockholders and their addresses, the number and classes of shares held by each, the number and date of certificates evidencing such shares, and the number and date of cancellation of every certificate surrendered for cancellation.

The secretary shall give, or cause to be given, notice of all meetings of the stockholders and of the board of directors required to be given by the General Corporation Law of Delaware or by these bylaws. The secretary shall keep the seal of the corporation, if one be adopted, in safe custody and shall have such other powers and perform such other duties as may be prescribed by the board of directors or by these bylaws.

5.11 CHIEF FINANCIAL OFFICER

The chief financial officer shall be the treasurer of the corporation, and shall keep and maintain, or cause to be kept and maintained, adequate and correct books and records of accounts of the properties and business transactions of the corporation, including accounts of its assets, liabilities, receipts, disbursements, gains, losses, capital, retained earnings, and shares. The books of account shall at all reasonable times be open to inspection by any director.

The chief financial officer shall deposit all money and other valuables in the name and to the credit of the corporation with such depositaries as may be designated by the board of directors. The chief financial officer shall disburse the funds of the corporation as may be ordered by the board of directors, shall render to the chief executive officer and directors, whenever they request it, an account of all of his or her transactions as chief financial officer and of the financial condition of the corporation, and shall have such other powers and perform such other duties as may be prescribed by the board of directors or these bylaws.

5.12 ASSISTANT SECRETARY

The assistant secretary, or, if there is more than one, the assistant secretaries in the order determined by the board of directors (or if there be no such determination, then in the order of their election) shall, in the absence of the secretary or in the event of his or her inability or refusal to act, perform the duties and exercise the powers of the secretary and shall perform such other duties and have such other powers as the board of directors may from time to time prescribe.

5.13 ASSISTANT TREASURER

The assistant treasurer, or, if there is more than one, the assistant treasurers, in the order determined by the board of directors (or if there be no such determination, then in the order of their election), shall, in the absence of the chief financial officer or in the event of his or her inability or refusal to act, perform the duties and exercise the powers of the chief financial officer

and shall perform such other duties and have such other powers as the board of directors may from time to time prescribe.

5.14 AUTHORITY AND DUTIES OF OFFICERS

In addition to the foregoing authority and duties, all officers of the corporation shall respectively have such authority and perform such duties in the management of the business of the corporation as may be designated from time to time by the board of directors and, to the extent not so provided, as generally pertain to such office, subject to the control of the board of directors.

ARTICLE VI

INDEMNITY

6.1 RIGHT TO INDEMNIFICATION

Each person who was or is made a party or is threatened to be made a party to or is otherwise involved in any action, suit or proceeding, whether civil, criminal, administrative or investigative (collectively, a "Proceeding"), by reason of the fact that he or she, or a person of whom he or she is the legal representative, is or was a director of the corporation (or any predecessor), or is or was a director of the corporation serving at the request of the corporation (or any predecessor) as a director of another corporation or of a partnership, joint venture, trust or other enterprise (or any predecessor of such entities), including service with respect to an employee benefit plan maintained or sponsored by the corporation (or any predecessor) (collectively, an "Indemnitee"), whether the basis of such Proceeding is alleged action in an official capacity as a director or in any other capacity while serving as a director, shall be indemnified and held harmless by the corporation to the fullest extent authorized by the General Corporation Law of Delaware as the same exists or may hereafter be amended (but, in the case of any such amendment, only to the extent that such amendment permits the corporation to provide broader indemnification rights than such law permitted the corporation to provide prior to such amendment), against all expense, liability and loss (including attorney's fees, judgments, fines, ERISA excise taxes or penalties and amounts paid in settlement) reasonably incurred or suffered by such Indemnitee in connection therewith and such indemnification shall continue as to an Indemnitee who has ceased to be a director or officer and shall inure to the benefit of the Indemnitee's heirs, executors and administrators; provided, however, that, except as provided in Section 6.3 below with respect to proceedings to enforce rights to indemnification, the corporation shall indemnify any such Indemnitee seeking indemnification in connection with a Proceeding (or part thereof) initiated by such Indemnitee only if such Proceeding (or part thereof) was authorized by the board of directors.

6.2 RIGHT TO ADVANCEMENT OF EXPENSES

In addition to the right to indemnification conferred in Section 6.1, an Indemnitee shall also have the right to be paid by the corporation the expenses incurred in defending against any such Proceeding in advance of its final disposition (an "Advancement of Expenses"), such Advancement to be paid by the corporation within twenty (20) calendar days after the receipt by

the corporation of a statement(s) from the Indemnitee requesting such Advancement of Expenses from time to time; provided, however, that if the General Corporation Law of Delaware requires, the payment of an Advancement of Expenses incurred by a director in his or her capacity as a director in advance of the final disposition of a proceeding, shall be made only upon delivery to the corporation of an undertaking (an "Undertaking"), by or on behalf of such director, to repay all amounts so advanced if it should ultimately be determined that such director is not entitled to be indemnified for such Expenses under this Article VI or otherwise. The rights to indemnification and to the Advancement of Expenses conferred in Sections 6.1 and 6.2 shall be contract rights.

6.3 RIGHT OF INDEMNITEE TO BRING SUIT

To obtain indemnification under this Article VI, an Indemnitee shall submit to the corporation a written request, including such documentation and information as is reasonably available to the Indemnitee and is reasonably necessary to determine whether and to what extent the Indemnitee is entitled to indemnification. Upon such written request, a determination, if required by applicable law, with respect to the Indemnitee's entitlement thereto shall be made as follows: (a) if requested by the Indemnitee, by Independent Counsel (as defined below); or (b) if no request is made by the Indemnitee for a determination by Independent Counsel, (i) by the board of directors by a majority vote of a quorum consisting of Disinterested Directors (as defined below), or (ii) if a quorum of the board of directors consisting of Disinterested Directors is not obtainable or, even if obtainable, such quorum of Disinterested Directors so directs, by Independent Counsel in a written opinion to the board of directors, a copy of which shall be delivered to the Indemnitee; or (c) if a quorum of Disinterested Directors so directs, by the stockholders of the corporation. In the event the determination of entitlement to indemnification is to be made by Independent Counsel at the request of the Indemnitee, the Independent Counsel shall be selected by the board of directors, unless there shall have occurred within two (2) years prior to the date of the commencement of the action, suit or proceeding for which indemnification or Advancement of Expenses is claimed a Change of Control (as defined below), in which case the Independent Counsel shall be selected by the Indemnitee unless the Indemnitee shall request that such selection be made by the board of directors. If it is so determined that the Indemnitee is entitled to indemnification, payment to the Indemnitee shall be made within forty-five (45) calendar days after such determination.

If a claim under Section 6.1 or 6.2 is not paid in full by the corporation within forty-five (45) calendar days after a written claim has been received by the corporation as set forth above, except in the case of a claim for an Advancement of Expenses, in which case the applicable period shall be twenty (20) calendar days, the Indemnitee may at any time thereafter bring suit against the corporation to recover the unpaid amount of the claim and, if successful, the Indemnitee shall be entitled to be paid also the expense of prosecuting such claim. In (a) any suit brought by the Indemnitee to enforce a right to indemnification hereunder (but not in a suit brought by the Indemnitee to enforce a right to an Advancement of Expenses where the required Undertaking, if any is required, has been tendered to the corporation) it shall be a defense that, and (b) in any suit brought by the corporation to recover an Advancement of Expenses pursuant to the terms of an Undertaking, the corporation shall be entitled to recover such Expenses upon a determination that, the Indemnitee has not met any applicable standard for indemnification set forth in the General Corporation Law of Delaware. Neither the failure of the corporation

(including its board of directors, a committee of the board of directors, Independent Counsel or its stockholders) to have made a determination prior to the commencement of such suit that indemnification of the Indemnitee is proper in the circumstances because the Indemnitee has met the applicable standard of conduct set forth in the General Corporate Law of Delaware, nor an actual determination by the corporation (including its board of directors, a committee of the board of directors, Independent Counsel or its stockholders) that the Indemnitee has not met such applicable standard of conduct, shall create a presumption that the Indemnitee has not met the applicable standard of conduct or, in the case of such suit brought by the Indemnitee, be a defense to such suit. In any suit brought by the Indemnitee to enforce a right to indemnification or to an Advancement of Expenses hereunder, or brought by the corporation to recover an Advancement of Expenses pursuant to the terms of an Undertaking, the burden of proving that the Indemnitee is not entitled to be indemnified, or to such Advancement of Expenses, shall be on the corporation.

6.4 NON-EXCLUSIVITY OF RIGHTS

If a determination shall have been made pursuant to this Article VI that the Indemnitee is entitled to indemnification or Advancement of Expenses, the corporation shall be bound by such determination in any judicial proceeding commenced pursuant to Section 6.3 above. The corporation shall be precluded from asserting in any judicial proceeding commenced pursuant to Section 6.3 above that the procedures and presumptions of these bylaws are not valid, binding and enforceable and shall stipulate in such proceeding that the corporation is bound by all the provisions of this Article VI.

The rights to indemnification and to the Advancement of Expenses conferred in this Article VI shall not be exclusive of any other right which any person may have or hereafter acquire under any statute, the certificate of incorporation, these bylaws, agreement, vote of stockholders or Disinterested Directors or otherwise. No repeal or modification of this Article VI shall in any way diminish or adversely affect the rights of any director, officer, employee or agent of the corporation hereunder in respect of any occurrence or matter arising prior to any such repeal or modification.

If any provision(s) of this Article VI of these bylaws shall be held to be invalid, illegal or unenforceable for any reasons whatsoever:

(a) the validity, legality and enforceability of the remaining provisions of this Article VI shall not in any way be affected or impaired thereby; and

(b) to the fullest extent possible, the provisions of this Article VI shall be construed so as to give effect to the intent manifested by the provision held invalid, illegal or unenforceable.

6.5 INSURANCE

The corporation may maintain insurance to protect itself and any director, officer, employee or agent of the corporation or another corporation, partnership, joint venture, trust or other enterprise, against any expense, liability or loss, whether or not the corporation would have

the power to indemnify such person against such expense, liability or loss under the General Corporation Law of Delaware.

6.6 INDEMNIFICATION OF OFFICERS, EMPLOYEES AND AGENTS OF THE CORPORATION

The corporation may, to the maximum extent and in the manner permitted by the General Corporation Law of Delaware and as authorized from time to time by the board of directors, grant rights to indemnification and to the Advancement of Expenses to any officer, employee or agent of the corporation to the fullest extent of the provisions of this Article VI with respect to the indemnification and Advancement of Expenses of directors of the corporation.

6.7 DEFINITIONS

For the purposes of this Article VI:

(a)“ Change of Control” means:

(i) The acquisition by any individual, entity or group (within the meaning of Section 13(d)(3) or 14(d)(2) of the Exchange Act)(a “Person”) of beneficial ownership (within the meaning of Rule 13d-3 promulgated under the Exchange Act) of twenty percent (20%) or more of either (A) the then outstanding shares of common stock of the corporation (the “Outstanding Corporation Common Stock”), or (B) the combined voting power of the then outstanding voting securities of the corporation entitled to vote generally in the election of directors (the “Outstanding Corporation Voting Securities”); provided, however, that for purposes of this subsection (i), the following acquisitions shall not constitute a Change of Control: (I) any acquisition directly from the corporation or any acquisition from other stockholders where (aa) such acquisition was approved in advance by the board of directors, and (bb) such acquisition would not constitute a change of control under subsection (iii) of this definition; (II) any acquisition by the corporation; (III) any acquisition by an employee benefit plan (or related trust) sponsored or maintained by the corporation or any corporation controlled by the corporation; or (IV) any acquisition by any corporation pursuant to a transaction which complies with subsections (A), (B) or (C) of subsection (iii) of this definition; or

(ii) Individuals who, as of the date hereof, constitute the board of directors (the “Incumbent Board of Directors”) cease for any reason to constitute at least a majority of the board of directors; provided, however, that any individual becoming a director subsequent to the date hereof whose election, or nomination for election by the stockholders, was approved by a vote of at least a majority of the directors then comprising the Incumbent Board of Directors shall be considered as though such individual were a member of the Incumbent Board of Directors, but excluding, for this purpose, any such individual whose initial assumption of office occurs as a result of an actual or threatened election contest with respect to the election or removal of directors or other actual or threatened solicitation of proxies by or on behalf of a Person other than the board of directors; or

(iii) Consummation of a reorganization, merger or consolidation or sale or other disposition of all or substantially all of the assets of the corporation (a “Business Combination”), in each case, unless, following such Business Combination, (A) all or

substantially all of the individuals and entities who were the beneficial owners, respectively, of the Outstanding Corporation Common Stock and Outstanding Corporation Voting Securities immediately prior to such Business Combination beneficially own, directly or indirectly, more than fifty percent (50%) of, respectively, the then outstanding shares of common stock and the combined voting power of the then outstanding voting securities entitled to vote generally in the election of directors, as the case may be, of the corporation resulting from such Business Combination (including without limitation a corporation which as a result of such transaction owns the corporation or all or substantially all of the corporation's assets either directly or through one or more subsidiaries) in substantially the same proportions as their ownership immediately prior to such Business Combination of the Outstanding Corporation Common Stock and Outstanding Corporation Voting Securities, as the case may be, (B) no Person (excluding any corporation resulting from such Business Combination or any employee benefit plan (or related trust) of the corporation or such corporation resulting from such Business Combination) beneficially owns, directly or indirectly, twenty percent (20%) or more of, respectively, the then outstanding shares of common stock of the corporation resulting from such Business Combination or the combined voting power of the then outstanding voting securities of such corporation except to the extent that such ownership existed prior to the Business Combination, and (C) at least a majority of the members of the board of directors of the corporation resulting from such Business Combination were members of the Incumbent board of directors at the time of the execution of the initial agreement, or of the action of the board of directors, providing for such Business Combination; or

(iv) Approval by the stockholders of a complete liquidation or dissolution of the corporation.

(b)“ Disinterested Director” means a director of the corporation who is not and was not a party to the matter in respect of which indemnification or Advancement of Expenses is sought by the Indemnitee.

(c)“ Independent Counsel” means a law firm, a member of a law firm or an independent practitioner that is experienced in matters of corporation law and shall include any person who, under the applicable standards of professional conduct then prevailing, would not have a conflict of interest in representing either the corporation or the Indemnitee in an action to determine the Indemnitee's rights under this Article VI.

Any notice, request or other communication required or permitted to be given to the corporation under this Article VI shall be in writing and either delivered in person or sent by telecopy, telex, telegram, overnight mail or courier service, or certified or registered mail, postage prepaid, return receipt requested, to the secretary of the corporation and shall be effective only upon receipt by the secretary of the corporation.

ARTICLE VII

RECORDS AND REPORTS

7.1 MAINTENANCE AND INSPECTION OF RECORDS

The corporation shall, either at its principal executive office or at such place or places as designated by the board of directors, keep a record of its stockholders listing their names and addresses and the number and class of shares held by each stockholder, a copy of these bylaws as amended to date, accounting books, and other records.

Any stockholder of record, in person or by attorney or other agent, shall, upon written demand under oath stating the purpose thereof, have the right during the usual hours for business to inspect for any proper purpose the corporation's stock ledger, a list of its stockholders, and its other books and records and to make copies or extracts therefrom. A proper purpose shall mean a purpose reasonably related to such person's interest as a stockholder. In every instance where an attorney or other agent is the person who seeks the right to inspection, the demand under oath shall be accompanied by a power of attorney or such other writing that authorizes the attorney or agent to so act on behalf of the stockholder. The demand under oath shall be directed to the corporation at its registered office in Delaware or at its principal executive office.

7.2 INSPECTION BY DIRECTORS

Any director shall have the right to examine the corporation's stock ledger, a list of its stockholders, and its other books and records for a purpose reasonably related to his or her position as a director.

7.3 REPRESENTATIONS OF SECURITIES OF OTHER ENTITIES

The chairman of the board, the chief executive officer, any vice president, the chief financial officer, the secretary or any assistant secretary of this corporation, or any other person authorized by the board of directors, the chief executive officer or a vice president, is authorized to vote, represent, and exercise on behalf of this corporation all rights incident to any and all shares or other securities of, or interests in, or issued by, any other entity or entities, and all rights incident to any management authority conferred on the corporation in accordance with the governing documents of any entity or entities, standing in the name of this corporation, including the right to act by written consent. The authority granted herein may be exercised either by such person directly or by any other person authorized to do so by proxy or power of attorney duly executed by such person having the authority.

ARTICLE VIII

GENERAL MATTERS

8.1 CHECKS

From time to time, the board of directors shall determine by resolution which person or persons may sign or endorse all checks, drafts, other orders for payment of money, notes or other

evidences of indebtedness that are issued in the name of or payable to the corporation, and only the persons so authorized shall sign or endorse those instruments.

8.2 EXECUTION OF CORPORATE CONTRACTS AND INSTRUMENTS

The board of directors, except as otherwise provided in these bylaws, may authorize any officer or officers, or agent or agents, to enter into any contract or execute any instrument in the name of and on behalf of the corporation; such authority may be general or confined to specific instances. Unless so authorized or ratified by the board of directors or within the agency power of an officer, no officer, agent or employee shall have any power or authority to bind the corporation by any contract or engagement or to pledge its credit or to render it liable for any purpose or for any amount.

8.3 STOCK CERTIFICATES; PARTLY PAID SHARES

The shares of the corporation shall be represented by certificates, provided that the board of directors may provide by resolution or resolutions that some or all of any or all classes or series of its stock shall be uncertificated shares. Any such resolution shall not apply to shares represented by a certificate until such certificate is surrendered to the corporation. Notwithstanding the adoption of such a resolution by the board of directors, every holder of stock represented by certificates and upon request every holder of uncertificated shares shall be entitled to have a certificate signed by, or in the name of the corporation by the chairman of the board of directors, or the chief executive officer or a vice president, and by the chief financial officer or an assistant treasurer, or the secretary or an assistant secretary of such corporation representing the number of shares registered in certificate form. Any or all of the signatures on the certificate may be a facsimile. In case any officer, transfer agent or registrar who has signed or whose facsimile signature has been placed upon a certificate has ceased to be such officer, transfer agent or registrar before such certificate is issued, it may be issued by the corporation with the same effect as if he or she were such officer, transfer agent or registrar at the date of issue.

The corporation may issue the whole or any part of its shares as partly paid and subject to call for the remainder of the consideration to be paid therefor. Upon the face or back of each stock certificate issued to represent any such partly paid shares, or upon the books and records of the corporation in the case of uncertificated partly paid shares, the total amount of the consideration to be paid therefor and the amount paid thereon shall be stated. Upon the declaration of any dividend on fully paid shares, the corporation shall declare a dividend upon partially paid shares of the same class, but only upon the basis of the percentage of the consideration actually paid thereon.

8.4 SPECIAL DESIGNATION ON CERTIFICATES

If the corporation is authorized to issue more than one class of stock or more than one series of any class, then the powers, the designations, the preferences, and the relative, participating, optional or other special rights of each class of stock or series thereof and the qualifications, limitations or restrictions of such preferences and/or rights shall be set forth in full or summarized on the face or back of the certificate that the corporation shall issue to represent

such class or series of stock; provided, however, that, except as otherwise provided in Section 202 of the General Corporation Law of Delaware, in lieu of the foregoing requirements there may be set forth on the face or back of the certificate that the corporation shall issue to represent such class or series of stock a statement that the corporation will furnish without charge to each stockholder who so requests a statement of the powers, the designations, the preferences, and the relative, participating, optional or other special rights of each class of stock or series thereof and the qualifications, limitations or restrictions of such preferences and/or rights.

8.5 LOST CERTIFICATES

Except as provided in this Section 8.5, no new certificates for shares shall be issued to replace a previously issued certificate unless the latter is surrendered to the corporation and cancelled at the same time. The corporation may issue a new certificate of stock or uncertificated shares in the place of any certificate theretofore issued by it, alleged to have been lost, stolen or destroyed, and the corporation may require the owner of the lost, stolen or destroyed certificate, or such owner's legal representative, to give the corporation a bond sufficient to indemnify it against any claim that may be made against it on account of the alleged loss, theft or destruction of any such certificate or the issuance of such new certificate or uncertificated shares.

8.6 CONSTRUCTION; DEFINITIONS

Unless the context requires otherwise, the general provisions, rules of construction, and definitions in the General Corporation Law of Delaware shall govern the construction of these bylaws. Without limiting the generality of this provision, the singular number includes the plural, the plural number includes the singular, and the term "person" includes both a corporation and a natural person.

8.7 DIVIDENDS

The directors of the corporation, subject to any restrictions contained in the certificate of incorporation, may declare and pay dividends upon the shares of its capital stock pursuant to the General Corporation Law of Delaware. Dividends may be paid in cash, in property, or in shares of the corporation's capital stock.

The directors of the corporation may set apart out of any of the funds of the corporation available for dividends a reserve or reserves for any proper purpose and may abolish any such reserve. Such purposes shall include but not be limited to equalizing dividends, repairing or maintaining any property of the corporation, and meeting contingencies.

8.8 FISCAL YEAR

The fiscal year of the corporation shall be fixed by resolution of the board of directors and may be changed by the board of directors.

8.9 SEAL

The corporate seal shall have inscribed thereon the name of the corporation, the year of its organization and the words "Corporation Seal, Delaware." The seal may be used by causing it or a facsimile thereof to be impressed or affixed or reproduced or otherwise.

8.10 TRANSFER OF STOCK

Upon surrender to the corporation or the transfer agent of the corporation of a certificate for shares duly endorsed or accompanied by proper evidence of succession, assignation or authority to transfer, it shall be the duty of the corporation to issue a new certificate to the person entitled thereto, cancel the old certificate, and record the transaction in its books.

8.11 STOCK TRANSFER AGREEMENTS

The corporation shall have power to enter into and perform any agreement with any number of stockholders of any one or more classes of stock of the corporation to restrict the transfer of shares of stock of the corporation of any one or more classes owned by such stockholders in any manner not prohibited by the General Corporation Law of Delaware.

8.12 REGISTERED STOCKHOLDERS

The corporation shall be entitled to recognize the exclusive right of a person registered on its books as the owner of shares to receive dividends and to vote as such owner, shall be entitled to hold liable for calls and assessments the person registered on its books as the owner of shares, and shall not be bound to recognize any equitable or other claim to or interest in such share or shares on the part of another person, whether or not it shall have express or other notice thereof, except as otherwise provided by the General Corporation Law of Delaware.

ARTICLE IX

AMENDMENTS

These bylaws may be adopted, amended or repealed by the stockholders entitled to vote; provided, however, that the corporation may, in its certificate of incorporation, confer the power to adopt, amend or repeal bylaws upon the board of directors. The fact that such power has been so conferred upon the board of directors shall not divest the stockholders of the power, nor limit their power to adopt, amend or repeal bylaws. Notwithstanding the foregoing, in addition to any vote of the holders of any class or series of stock of the corporation required by the General Corporation Law of Delaware or by the certificate of incorporation, an amendment or repeal of all or any portion of Section 2.3 (Special Meeting), Section 3.2 (Number of Directors), Article VI (Indemnification) or this Article IX (Amendments) by the stockholders shall require the affirmative vote of the holders of at least sixty-six and two-thirds percent (66 2/3%) of the shares of voting stock then entitled to vote generally in the election of directors, voting together as a single class.

ARTICLE X

FORUM FOR ADJUDICATION OF CERTAIN DISPUTES

Section 10.1. Forum for Adjudication of Certain Disputes. Unless the corporation consents in writing to the selection of an alternative forum (an “Alternative Forum Consent”), the Court of Chancery in the State of Delaware shall, to the fullest extent permitted by law, be the sole and exclusive forum for (i) any derivative action or proceeding brought on behalf of the corporation, (ii) any action asserting a claim of breach of a fiduciary duty owed by any current or former director, officer, stockholder, employee or agent of the corporation to the corporation or the corporation’s stockholders, (iii) any action asserting a claim against the corporation or any current or former director, officer, stockholder, employee or agent of the corporation arising out of or relating to any provision of the General Corporation Law of Delaware or the certificate of incorporation or bylaws, or (iv) any action asserting a claim against the corporation or any current or former director, officer, stockholder, employee or agent of the corporation governed by the internal affairs doctrine of the State of Delaware; provided, however, that, in the event that the Court of Chancery in the State of Delaware lacks subject matter jurisdiction over any such action or proceeding, the sole and exclusive forum for such action or proceeding shall be another state or federal court located within the State of Delaware, in each such case, unless the Court of Chancery (or such other state or federal court located within the State of Delaware, as applicable) has dismissed a prior action by the same plaintiff asserting the same claims because such court lacked personal jurisdiction over an indispensable party named as a defendant therein.

Unless the corporation provides an Alternative Forum Consent, the federal district courts of the United States of America shall be the sole and exclusive forum for the resolution of any complaint asserting a cause of action arising under the Securities Act of 1933, as amended, against any person in connection with any offering of the corporation’s securities, including, without limitation, any auditor, underwriter, expert, control person or other defendant.

Failure to enforce the foregoing provisions would cause the corporation irreparable harm and the corporation shall be entitled to equitable relief, including injunctive relief and specific performance, to enforce the foregoing provisions. Any person or entity purchasing or otherwise acquiring any interest in shares of capital stock of the corporation shall be deemed to have notice of and consented to the provisions of this Section 10.1. If any action the subject matter of which is within the scope of this Section 10.1 is filed in a court other than the applicable courts identified in the foregoing paragraphs (a “Foreign Action”) by or in the name of any stockholder, such stockholder shall be deemed to have consented to (i) the personal jurisdiction of the Court of Chancery in the State of Delaware (or such other state or federal court indicated in the foregoing paragraphs, as applicable) in connection with any action brought in any such court to enforce this Section 10.1 and (ii) having service of process made upon such stockholder in any such action by service upon such stockholder’s counsel in the Foreign Action as agent for such stockholder. The existence of any prior Alternative Forum Consent shall not act as a waiver of the corporation’s ongoing consent right as set forth above in this Section 10.1 with respect to any current or future actions or claims.

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: May 4, 2022

/s/ James Anderson

James Anderson
Chief Executive Officer

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: May 4, 2022

/s/ Sherri Luther

Sherri Luther
Chief Financial Officer

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

In connection with the Quarterly Report of Lattice Semiconductor Corporation (the Company) on Form 10-Q for the quarter ended April 2, 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: May 4, 2022

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 April 2, 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: May 4, 2022