UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 10-Q

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

For the Quarterly Period Ended September 30, 2023

OR

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

For the Transition Period From to

Commission file number: 001-34666

MaxLinear, Inc.

(Exact name of registrant as specified in its charter)

Delaware	**14-1896129**
(State or other jurisdiction of incorporation or organization)	**(I.R.S. Employer Identification No.)**

5966 La Place Court, Suite 100, Carlsbad California **92008**

(Address of principal executive offices) **(Zip Code)**

(760) 692-0711

(Registrant's telephone number, including area code)

N/A

(Former name, former address and former fiscal year, if changed since last report)

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

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common stock	MXL	The Nasdaq Stock Market LLC

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ☑ No ☐

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes ☑ No ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer	☑	Accelerated filer	☐	Emerging growth company	☐
Non-accelerated filer	☐	Smaller reporting company	☐		

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

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

As of October 18, 2023, the registrant had 81,560,701 shares of common stock, par value $0.0001, outstanding.

MAXLINEAR, INC.
QUARTERLY REPORT ON FORM 10-Q

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PART I — FINANCIAL INFORMATION

ITEM 1. FINANCIAL STATEMENTS

MAXLINEAR, INC.
CONSOLIDATED BALANCE SHEETS
(in thousands, except par value amounts)

	September 30, 2023 (unaudited)	December 31, 2022
Assets		
Current assets:		
Cash and cash equivalents	$ 187,028	$ 187,353
Short-term restricted cash	1,105	982
Short-term investments	14,612	18,529
Accounts receivable, net	158,232	170,971
Inventory	114,942	160,544
Prepaid expenses and other current assets	32,688	24,745
Total current assets	508,607	563,124
Long-term restricted cash	19	22
Property and equipment, net	69,484	79,018
Leased right-of-use assets	32,647	28,515
Intangible assets, net	82,643	109,316
Goodwill	318,456	306,739
Deferred tax assets	59,121	66,491
Other long-term assets	32,810	26,800
Total assets	$ 1,103,787	$ 1,180,025
Liabilities and stockholders' equity		
Current liabilities:		
Accounts payable	$ 45,203	$ 68,576
Accrued price protection liability	71,643	113,274
Accrued expenses and other current liabilities	86,276	100,155
Accrued compensation	29,788	59,081
Total current liabilities	232,910	341,086
Long-term lease liabilities	28,017	23,353
Long-term debt	122,219	121,757
Other long-term liabilities	17,964	17,444
Total liabilities	401,110	503,640
Commitments and contingencies		
Stockholders' equity:		
Preferred stock, $0.0001 par value; 25,000 shares authorized, no shares issued or outstanding	—	—
Common stock, $0.0001 par value; 550,000 shares authorized; 81,561 shares issued and outstanding at September 30, 2023 and 78,745 shares issued and outstanding December 31, 2022	8	8
Additional paid-in capital	790,634	722,778
Accumulated other comprehensive loss	(7,938)	(1,021)
Accumulated deficit	(80,027)	(45,380)
Total stockholders' equity	702,677	676,385
Total liabilities and stockholders' equity	$ 1,103,787	$ 1,180,025

See accompanying notes.

MAXLINEAR, INC.
CONSOLIDATED STATEMENTS OF OPERATIONS
(unaudited; in thousands, except per share data)

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2023	2022	2023	2022
Net revenue	$ 135,530	$ 285,730	$ 567,910	$ 829,666
Cost of net revenue	61,586	118,242	250,786	343,237
Gross profit	73,944	167,488	317,124	486,429
Operating expenses:				
Research and development	66,306	76,437	204,254	222,718
Selling, general and administrative	25,402	38,472	97,772	123,536
Impairment losses	—	—	2,438	—
Restructuring charges	54	631	9,138	1,093
Total operating expenses	91,762	115,540	313,602	347,347
Income (loss) from operations	(17,818)	51,948	3,522	139,082
Interest income	1,736	62	4,272	175
Interest expense	(2,715)	(2,711)	(7,793)	(7,476)
Other income (expense), net	(22,721)	(4,705)	(21,180)	1,704
Total other income (expense), net	(23,700)	(7,354)	(24,701)	(5,597)
Income (loss) before income taxes	(41,518)	44,594	(21,179)	133,485
Income tax provision (benefit)	(1,689)	16,186	13,468	39,525
Net income (loss)	$ (39,829)	$ 28,408	$ (34,647)	$ 93,960
Net income (loss) per share:				
Basic	$ (0.49)	$ 0.36	$ (0.43)	$ 1.21
Diluted	$ (0.49)	$ 0.35	$ (0.43)	$ 1.17
Shares used to compute net income (loss) per share:				
Basic	81,249	78,436	80,395	77,833
Diluted	81,249	80,060	80,395	80,331

See accompanying notes.

MAXLINEAR, INC.
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME (LOSS)
(unaudited; in thousands)

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2023	2022	2023	2022
Net income (loss)	$ (39,829)	$ 28,408	$ (34,647)	$ 93,960
Other comprehensive loss, net of tax:				
Foreign currency translation adjustments, net of tax benefit of $64 and $229 for the three and nine months ended September 30, 2023, respectively, and net of tax benefit of $187 and $184 for the three and nine months ended September 30, 2022, respectively	(1,855)	(2,378)	(3,125)	(7,441)
Reclassification adjustments of unrealized gain (loss) on pension and other defined benefit plans	(3,792)	—	(3,792)	—
Total comprehensive income (loss)	$ (45,476)	$ 26,030	$ (41,564)	$ 86,519

See accompanying notes.

MAXLINEAR, INC.
CONSOLIDATED STATEMENT OF STOCKHOLDERS' EQUITY
FISCAL QUARTERS ENDED SEPTEMBER 30, 2023
(unaudited; in thousands)

	Common Stock		Additional Paid-In Capital	Accumulated Other Comprehensive Income (Loss)	Accumulated Deficit	Total Stockholders' Equity
	Shares	Amount				
Balance at December 31, 2022	78,745	$ 8	$ 722,778	$ (1,021)	$ (45,380)	$ 676,385
Common stock issued pursuant to equity awards, net	1,236	—	31,926	—	—	31,926
Stock-based compensation	—	—	16,460	—	—	16,460
Other comprehensive loss	—	—	—	(192)	—	(192)
Net income	—	—	—	—	9,533	9,533
Balance at March 31, 2023	79,981	8	771,164	(1,213)	(35,847)	734,112
Common stock issued pursuant to equity awards, net	808	—	(2,752)	—	—	(2,752)
Employee stock purchase plan	141	—	2,989	—	—	2,989
Stock-based compensation	—	—	17,127	—	—	17,127
Other comprehensive loss	—	—	—	(1,078)	—	(1,078)
Net loss	—	—	—	—	(4,351)	(4,351)
Balance at June 30, 2023	80,930	8	788,528	(2,291)	(40,198)	746,047
Common stock issued pursuant to equity awards, net	631	—	(3,017)	—	—	(3,017)
Stock-based compensation	—	—	5,123	—	—	5,123
Other comprehensive loss	—	—	—	(5,647)	—	(5,647)
Net loss	—	—	—	—	(39,829)	(39,829)
Balance at September 30, 2023	81,561	$ 8	$ 790,634	$ (7,938)	$ (80,027)	$ 702,677

MAXLINEAR, INC.
CONSOLIDATED STATEMENT OF STOCKHOLDERS' EQUITY
FISCAL QUARTERS ENDED SEPTEMBER 30, 2022
(unaudited; in thousands)

	Common Stock		Additional Paid-In Capital	Accumulated Other Comprehensive Income (Loss)	Accumulated Deficit	Total Stockholders' Equity
	Shares	Amount				
Balance at December 31, 2021	76,778	$ 8	$ 657,485	$ 2,125	$ (170,420)	$ 489,198
Common stock issued pursuant to equity awards, net	1,037		13,835	—	—	13,835
Repurchase of common stock	(440)	—	(26,297)	—	—	(26,297)
Stock-based compensation	—	—	18,599	—	—	18,599
Other comprehensive loss	—	—	—	(1,075)	—	(1,075)
Net income	—	—	—	—	33,586	33,586
Balance at March 31, 2022	77,375	8	663,622	1,050	(136,834)	527,846
Common stock issued pursuant to equity awards, net	999	—	310	—	—	310
Minimum tax withholding on common stock issued	—	—	(3,698)	—	—	(3,698)
Repurchase of common stock	(124)	—	(5,214)	—	—	(5,214)
Employee stock purchase plan	83	—	2,911	—	—	2,911
Stock-based compensation	—	—	19,464	—	—	19,464
Other comprehensive loss	—	—	—	(3,988)	—	(3,988)
Net income	—	—	—	—	31,966	31,966
Balance at June 30, 2022	78,333	8	677,395	(2,938)	(104,868)	569,597
Common stock issued pursuant to equity awards, net	232	—	(56)	—	—	(56)
Stock-based compensation	—	—	20,310	—	—	20,310
Other comprehensive loss	—	—	—	(2,378)	—	(2,378)
Net income	—	—	—	—	28,408	28,408
Balance at September 30, 2022	78,565	$ 8	$ 697,649	$ (5,316)	$ (76,460)	$ 615,881

See accompanying notes.

MAXLINEAR, INC.
CONSOLIDATED STATEMENTS OF CASH FLOWS
(unaudited; in thousands)

	Nine Months Ended September 30,	
	2023	2022
Operating Activities		
Net income (loss)	$ (34,647)	$ 93,960
Adjustments to reconcile net income (loss) to cash provided by operating activities:		
Amortization and depreciation	54,923	61,906
Impairment losses	2,438	—
Amortization of debt issuance costs and accretion of discounts	1,858	1,462
Stock-based compensation	38,763	58,154
Deferred income taxes	6,502	23,321
Loss on disposal of property and equipment	2,057	167
Unrealized holding loss on investments	3,917	1,418
Impairment of leased right-of-use assets	—	462
(Gain) loss on settlement of pension	(1,008)	—
(Gain) loss on foreign currency	140	(3,245)
Excess tax benefits on stock-based awards	(529)	(9,702)
Changes in operating assets and liabilities:		
Accounts receivable	13,769	(57,976)
Inventory	45,602	(34,267)
Prepaid expenses and other assets	(10,215)	3,957
Accounts payable, accrued expenses and other current liabilities	(17,917)	82,389
Accrued compensation	8,776	32,187
Accrued price protection liability	(45,036)	76,968
Lease liabilities	(8,891)	(8,485)
Other long-term liabilities	(557)	(3,307)
Net cash provided by operating activities	59,945	319,369
Investing Activities		
Purchases of property and equipment	(12,180)	(24,625)
Purchases of intangible assets	(6,198)	(10,440)
Cash used in acquisitions, net of cash acquired	(12,384)	—
Proceeds loaned under notes receivable	—	(10,000)
Purchases of investments	—	(29,325)
Net cash used in investing activities	(30,762)	(74,390)
Financing Activities		
Payment of debt commitment fees	(18,325)	—
Repayment of debt	—	(135,000)
Net proceeds from issuance of common stock	3,168	3,214
Minimum tax withholding paid on behalf of employees for restricted stock units	(12,370)	(28,527)
Repurchase of common stock	—	(31,511)
Net cash used in financing activities	(27,527)	(191,824)
Effect of exchange rate changes on cash and cash equivalents	(1,861)	(2,400)
Increase (decrease) in cash, cash equivalents and restricted cash	(205)	50,755
Cash, cash equivalents and restricted cash at beginning of period	188,357	131,738
Cash, cash equivalents and restricted cash at end of period	$ 188,152	$ 182,493
Supplemental disclosures of cash flow information:		
Cash paid for interest	$ 6,978	$ 6,917
Cash paid for income taxes	$ 25,336	$ 14,076
Supplemental disclosures of non-cash activities:		
Issuance of shares for payment of bonuses	$ 38,348	$ 38,615

See accompanying notes.

1. Organization and Summary of Significant Accounting Policies

Description of Business

MaxLinear, Inc. was incorporated in Delaware in September 2003. MaxLinear, Inc., together with its wholly owned subsidiaries, collectively referred to as MaxLinear, or the Company, is a provider of communications systems-on-chip (SoC) solutions used in broadband, mobile and wireline infrastructure, data center, and industrial and multi-market applications. MaxLinear is a fabless integrated circuit design company whose products integrate all or substantial portions of a high-speed communication system, including radio frequency (RF), high-performance analog, mixed-signal, digital signal processing, security engines, data compression and networking layers, and power management. MaxLinear's customers include electronics distributors, module makers, original equipment manufacturers, or OEMs, and original design manufacturers, or ODMs, who incorporate the Company's products in a wide range of electronic devices, including cable Data Over Cable Service Interface Specifications (DOCSIS), fiber and DSL broadband modems and gateways; Wi-Fi and wireline routers for home networking; radio transceivers and modems for 4G/5G base-station and backhaul infrastructure; fiber-optic modules for data center, metro, and long-haul transport networks; as well as power management and interface products used in these and many other markets.

Basis of Presentation and Principles of Consolidation

The accompanying unaudited consolidated financial statements include the accounts of MaxLinear, Inc. and its wholly owned subsidiaries and have been prepared in accordance with accounting principles generally accepted in the United States of America, or GAAP, for interim financial information and with the instructions to Form 10-Q and Article 10 of Regulation S-X. Accordingly, they do not include all of the information and disclosures required by GAAP for complete financial statements. All intercompany transactions and investments have been eliminated in consolidation.

In the opinion of management, the Company's unaudited consolidated interim financial statements contain adjustments, including normal recurring accruals necessary to present fairly the Company's consolidated financial position, results of operations, comprehensive income, stockholders' equity, and cash flows.

The consolidated balance sheet as of December 31, 2022 was derived from the Company's audited consolidated financial statements at that date. The accompanying unaudited consolidated interim financial statements should be read in conjunction with the audited consolidated financial statements and related notes thereto for the year ended December 31, 2022 included in the Company's Annual Report on Form 10-K filed by the Company with the Securities and Exchange Commission, or the SEC, on February 1, 2023, or the Annual Report. Interim results for the nine months ended September 30, 2023 are not necessarily indicative of the results that may be expected for the fiscal year ending December 31, 2023.

The functional currency of certain foreign subsidiaries is the local currency. Accordingly, assets and liabilities of these foreign subsidiaries are translated at the current exchange rate at the balance sheet date and historical rates for equity. Revenue and expense components are translated at weighted average exchange rates in effect during the period. Gains and losses resulting from foreign currency translation are included as a component of stockholders' equity. Foreign currency transaction gains and losses are included in the results of operations, and to date, have not been material.

Use of Estimates and Significant Risks and Uncertainties

The preparation of consolidated financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the amounts reported in the unaudited consolidated financial statements and accompanying notes of the consolidated financial statements. Actual results could differ from those estimates.

The Company is not aware of any specific event or circumstance that would require an update to its estimates or adjustments to the carrying value of its assets and liabilities as of October 25, 2023, the issuance date of this Quarterly Report on Form 10-Q. Actual results could differ from those estimates.

Summary of Significant Accounting Policies

Refer to the Company's Annual Report for a summary of significant accounting policies. There have been no significant changes to the Company's significant accounting policies during the nine months ended September 30, 2023.

Recently Issued Accounting Pronouncements

In October 2021, the FASB issued ASU No. 2021-08, *Business Combinations (Topic 805): Accounting for Contract Assets and Contract Liabilities from Contracts with Customers*, to provide specific guidance to eliminate diversity in practice on how to recognize and measure acquired contract assets and contract liabilities from revenue contracts from customers in a business combination consistent with revenue contracts with customers not acquired in an acquisition. The amendments in this update provide that the acquirer should consider the terms of the acquired contracts, such as timing of payment, identify each performance obligation in the contracts, and allocate the total transaction price to each identified performance obligation on a relative standalone selling price basis as of contract inception (that is, the date the acquiree entered into the contracts) or contract modification to determine what should be recorded at the acquisition date. These amendments are effective for the Company beginning with fiscal year 2023. The impact of the adoption of the amendments in this update will depend on the magnitude of any customer contracts assumed in a business combination in 2023 and beyond.

2. Net Income Per Share

Basic earnings per share, or EPS, is calculated by dividing net income (loss) by the weighted-average number of common shares outstanding for the period, without consideration for common stock equivalents. Diluted EPS is computed by dividing net income (loss) by the weighted-average number of common shares outstanding for the period and the weighted-average number of dilutive common stock equivalents outstanding for the period determined using the treasury-stock method. For purposes of this calculation, common stock options, restricted stock units and restricted stock awards are considered to be common stock equivalents and are only included in the calculation of diluted EPS when their effect is dilutive. In periods in which the Company has a net loss, dilutive common stock equivalents are excluded from the calculation of diluted EPS.

The table below presents the computation of basic and diluted EPS:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2023	2022	2023	2022
	(in thousands, except per share amounts)			
Numerator:				
Net income (loss)	$ (39,829)	$ 28,408	$ (34,647)	$ 93,960
Denominator:				
Weighted average common shares outstanding—basic	81,249	78,436	80,395	77,833
Dilutive common stock equivalents	—	1,624	—	2,498
Weighted average common shares outstanding—diluted	81,249	80,060	80,395	80,331
Net income (loss) per share:				
Basic	$ (0.49)	$ 0.36	$ (0.43)	$ 1.21
Diluted	$ (0.49)	$ 0.35	$ (0.43)	$ 1.17

For the three months ended September 30, 2023 and 2022, the Company excluded common stock equivalents for outstanding stock-based awards, which represented potentially dilutive securities of 4.9 million and 2.5 million, respectively, from the calculation of diluted net income (loss) per share due to their anti-dilutive nature.

For the nine months ended September 30, 2023 and 2022, the Company excluded common stock equivalents for outstanding stock-based awards, which represented potentially dilutive securities of 4.8 million and 1.5 million, respectively, from the calculation of diluted net income (loss) per share due to their anti-dilutive nature.

3. Business Combinations

Terminated Silicon Motion Merger

On May 5, 2022, MaxLinear entered into an Agreement and Plan of Merger, or the Merger Agreement, with Silicon Motion Technology Corporation, or Silicon Motion, an exempted company with limited liability incorporated under the laws of the Cayman Islands, pursuant to which, among other things and subject to the terms and conditions thereof, MaxLinear agreed to acquire Silicon Motion pursuant to a statutory merger, under the laws of the Cayman Islands, of Shark Merger Sub, a wholly-owned subsidiary of MaxLinear, with and into Silicon Motion, with Silicon Motion surviving the merger as a wholly-owned subsidiary of MaxLinear. Silicon Motion is a provider of NAND flash controllers for solid state drives, or SSDs, and other solid state storage devices.

On July 26, 2023, MaxLinear terminated the Merger Agreement and notified Silicon Motion that MaxLinear was relieved of its obligations to close because, among other reasons, (i) certain conditions to closing set forth in the Merger Agreement were not satisfied and were incapable of being satisfied, (ii) Silicon Motion had suffered a Material Adverse Effect that was continuing, (iii) Silicon Motion was in material breach of representations, warranties, covenants, and agreements in the Merger Agreement that gave rise to the right of the Company to terminate, and (iv) in any event, the First Extended Outside Date had passed and was not automatically extended because certain conditions in Article 6 of the Merger Agreement were not satisfied or waived as of May 5, 2023. For these same reasons, under the terms of the Merger Agreement, MaxLinear was not required to pay a break-up fee or other fee to Silicon Motion as a result of the termination of the Merger Agreement. Undefined capitalized terms in this paragraph have the same meaning as in the Merger Agreement. On August 16, 2023, Silicon Motion delivered to MaxLinear a notice, which Silicon Motion publicly disclosed, that it was purporting to terminate the Merger Agreement and that Silicon Motion would be commencing an arbitration to seek damages from MaxLinear arising from MaxLinear's alleged breaches of the Merger Agreement.

On October 5, 2023, Silicon Motion filed a Notice of Arbitration with the Singapore International Arbitration Centre alleging that MaxLinear breached the Merger Agreement. See Note 15 for more information on legal matters related to the termination of the Merger Agreement.

The second amended and restated commitment letter dated October 24, 2022 with Wells Fargo Bank, N.A., or Wells Fargo Bank, and other lenders, and related financing commitments for the previously pending (now terminated) merger were also terminated upon termination of the Merger Agreement. As a result of the termination of the financing, the Company was required to pay to Wells Fargo Bank a ticking fee of $18.3 million, which is included in other income (expense), net in the three months ended September 30, 2023.

Acquisition of Company Y

On January 17, 2023, the Company completed its acquisition of a business, or Company Y, pursuant to a Purchase and Sale Agreement, or the Purchase Agreement. The transaction consideration included $9.7 million in cash. In addition, Company Y stockholders may receive up to an additional $2.6 million in potential contingent consideration, subject to the acquired business satisfying certain personnel objectives by June 17, 2024.

Company Y is headquartered in Bangalore, India and operates as a provider of engineering design services.

Acquisition Consideration

The following table summarizes the fair value of purchase price consideration to acquire Company Y (in thousands):

Description		Amount
Fair value of purchase consideration:		
Cash	$	9,684
Contingent consideration[(1)]		2,200
Total purchase price	$	11,884

[(1)] The fair value of contingent consideration is based on applying the Monte Carlo simulation method to forecast achievement under various contingent consideration events which may result in up to $2.6 million in payments subject to the acquired business's satisfying certain financial and personnel objectives by June 17, 2024 under the Purchase Agreement. Key inputs in the valuation include forecasted revenue, revenue volatility and discount rate. Underlying forecast mathematics were based on Geometric Brownian Motion in a risk-neutral framework and discounted back to the applicable period in which the accumulative thresholds were achieved at discount rates commensurate with the risk and expected payout term of the contingent consideration.

Purchase Price Allocation

An allocation of purchase price as of the January 17, 2023 acquisition closing date based upon an estimate of the fair value of the assets acquired and the liabilities assumed by the Company in the acquisition primarily includes $0.2 million in net operating assets, with $11.7 million in goodwill.

Assumptions in the Allocations of Purchase Price

Management prepared the purchase price allocations for Company Y and in doing so considered or relied in part upon reports of a third party valuation expert to calculate the fair value of certain acquired assets, which primarily included an acquired workforce and contingent consideration. Certain stockholders that are employees of Company Y were not required to remain employed in order to receive the contingent consideration; accordingly, the fair value of the contingent consideration was accounted for as a portion of the purchase consideration.

Estimates of fair value require management to make significant estimates and assumptions. The goodwill recognized is attributable primarily to the acquired workforce. Certain liabilities included in the purchase price allocations are based on management's best estimates of the amounts to be paid or settled and based on information available at the time the purchase price allocations were prepared.

Goodwill recorded in connection with Company Y was $11.7 million as of September 30, 2023. The Company does not expect to deduct any of the acquired goodwill for tax purposes.

4. Restructuring Activity

During the three months ended March 31, 2023, the Company entered into a plan of restructuring to reduce its workforce as a result of internal resource alignment and cost saving measures. Costs associated with this plan of restructuring for the nine months ended September 30, 2023 are included in the table below.

The following table presents the activity related to restructuring plans, which is included in restructuring charges in the consolidated statements of operations:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2023	2022	2023	2022
	(in thousands)			
Employee separation expenses	$ (13)	$ 631	$ 8,863	$ 631
Lease related charges	—	—	42	462
Other	67	—	233	—
	$ 54	$ 631	$ 9,138	$ 1,093

The following table presents a roll-forward of the Company's restructuring liability for the nine months ended September 30, 2023. The restructuring liability is included in accrued expenses and other current liabilities and other long-term liabilities in the consolidated balance sheets.

	Employee Separation Expenses	Lease Related Charges	Other	Total
	(in thousands)			
Liability as of December 31, 2022	$ 971	$ 103	$ 8	$ 1,082
Restructuring charges	8,863	42	233	9,138
Cash payments	(8,100)	(142)	(219)	(8,461)
Non-cash charges and adjustments	(9)	29	(47)	(27)
Liability as of September 30, 2023	1,725	32	(25)	1,732
Less: current portion as of September 30, 2023	(1,725)	(32)	25	(1,732)
Long-term portion as of September 30, 2023	$ —	$ —	$ —	$ —

5. Goodwill and Intangible Assets

Goodwill

Goodwill arises from the acquisition method of accounting for business combinations and represents the excess of the purchase price over the fair value of the net assets and other identifiable intangible assets acquired. The fair values of net tangible assets and intangible assets acquired are based upon preliminary valuations and the Company's estimates and assumptions are subject to change within the measurement period (potentially up to one year from the acquisition date).

The following table presents the changes in the carrying amount of goodwill for the periods indicated:

	Nine Months Ended September 30,	
	2023	2022
	(in thousands)	
Beginning balance	$ 306,739	$ 306,668
Acquisitions (Note 3)	11,717	—
Adjustments	—	71
Ending balance	$ 318,456	$ 306,739

The Company performs an annual goodwill impairment assessment on October 31st each year, using a quantitative assessment comparing the fair value of each reporting unit, which the Company has determined to be the entity itself, with its carrying amount, including goodwill. If the carrying amount of a reporting unit exceeds its fair value, an impairment loss is recorded.

In addition to its annual review, the Company performs a test of impairment when indicators of impairment are present. During the nine months ended September 30, 2023 and 2022, there wereno indications of impairment of the Company's goodwill balances.

Acquired Intangibles

Finite-lived Intangible Assets

The following table sets forth the Company’s finite-lived intangible assets resulting from business acquisitions and other purchases, which are amortized over their estimated useful lives:

		September 30, 2023			December 31, 2022		
	Weighted Average Useful Life (in Years)	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount	Gross Carrying Value	Accumulated Amortization	Net Carrying Amount
		(in thousands)					
Licensed technology	6.9	$ 19,974	$ (1,184)	$ 18,790	$ 21,764	$ (580)	$ 21,184
Developed technology	6.9	311,261	(255,303)	55,958	311,261	(228,532)	82,729
Trademarks and trade names	6.2	14,800	(14,240)	560	14,800	(13,461)	1,339
Customer relationships	5.0	128,800	(125,962)	2,838	128,800	(124,807)	3,993
Backlog	5.3	500	(500)	—	500	(429)	71
Patents	7.0	4,781	(284)	4,497	—	—	—
	6.1	$ 480,116	$ (397,473)	$ 82,643	$ 477,125	$ (367,809)	$ 109,316

The following table sets forth amortization expense associated with finite-lived intangible assets, which is included in the consolidated statements of operations as follows:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2023	2022	2023	2022
	(in thousands)		(in thousands)	
Cost of net revenue	$ 8,581	$ 9,480	$ 27,372	$ 30,192
Research and development	—	1	2	3
Selling, general and administrative	653	1,541	2,290	10,643
	$ 9,234	$ 11,022	$ 29,664	$ 40,838

Amortization of finite-lived intangible assets in cost of net revenue in the consolidated statements of operations results primarily from acquired developed technology.

The following table sets forth the activity related to finite-lived intangible assets:

	Nine Months Ended September 30,	
	2023	2022
	(in thousands)	
Beginning balance	$ 109,316	$ 149,940
Additions	6,198	10,440
Other disposals	(769)	—
Transfers to developed technology from IPR&D	—	2,600
Amortization	(29,664)	(40,838)
Impairment losses	(2,438)	—
Ending balance	$ 82,643	$ 122,142

The Company regularly reviews the carrying amount of its long-lived assets subject to depreciation and amortization, as well as the related useful lives, to determine whether indicators of impairment may exist that warrant adjustments to carrying values or estimated useful lives. An impairment loss is recognized when the sum of the expected future undiscounted net cash flows is less than the carrying amount of the asset. Should impairment exist, the impairment loss is measured based on the excess of the carrying amount of the asset over the asset’s fair value. During the three months ended September 30, 2023 and 2022, no impairment losses related to finite-lived intangible assets were recognized. During the nine months ended September

30, 2023 and 2022, impairment losses related to finite-lived intangible assets of $2.4 million and $0, respectively, were recognized. The impairment loss was attributable to certain purchased licensed technology.

The following table presents future amortization of the Company's finite-lived intangible assets at September 30, 2023:

	Amount (in thousands)
2023 (3 months)	$ 9,292
2024	24,524
2025	14,839
2026	13,730
2027	9,882
Thereafter	10,376
Total	$ 82,643

6. Financial Instruments

The composition of financial instruments is as follows:

	September 30, 2023			
		Net Unrealized		
	Cost	Gains	Losses	Fair Value
	(in thousands)			
Assets				
Marketable equity investments	$ 20,005	$ —	$ (5,393)	$ 14,612

	December 31, 2022			
		Net Unrealized		
	Cost	Gains	Losses	Fair Value
Assets	(in thousands)			
Marketable equity investments	$ 20,005	$ —	$ (1,476)	$ 18,529

	September 30, 2023	December 31, 2022
	Fair Value	Fair Value
	(in thousands)	
Liabilities		
Contingent consideration (Note 3)	$ 2,690	2,941

At September 30, 2023, the Company held marketable equity investments with an aggregate fair value of $14.6 million that were in an unrealized loss position. The net unrealized loss of $5.4 million as of September 30, 2023 represents stock price fluctuations in the underlying securities held. Unrealized gains and losses on such investments are recorded to other income (expense), net in the consolidated statement of operations.

The Company evaluates securities for other-than-temporary impairment on a quarterly basis. Impairment is evaluated considering numerous factors, and their relative significance varies depending on the situation. Factors considered include the length of time and extent to which fair value has been less than the cost basis, the financial condition and near-term prospects of the issuer; including changes in the financial condition of any underlying collateral of the security; any downgrades of the security by analysts or rating agencies; nonpayment of any scheduled interest, or the reduction or elimination of dividends; as well as our intent and ability to hold the security in order to allow for an anticipated recovery in fair value.

The fair values of the Company's financial instrument is the amount that would be received in an asset sale or paid to transfer a liability in an orderly transaction between unaffiliated market participants and is recorded using a hierarchical disclosure framework based upon the level of subjectivity of the inputs used in measuring assets and liabilities. The levels are described below:

Level 1: Quoted prices (unadjusted) in active markets that are accessible at the measurement date for assets or liabilities.

Level 2: Observable prices that are based on inputs not quoted on active markets, but corroborated by market data.

Level 3: Unobservable inputs are used when little or no market data is available.

The Company classifies its financial instruments that are categorized within Level 1 or Level 2 of the fair value hierarchy on the basis of valuations using quoted market prices or alternate pricing sources and models utilizing market observable inputs, respectively. The marketable equity investments held by the Company have been valued on the basis of quoted market prices and is therefore classified as Level 1.

The contingent consideration liability as of September 30, 2023 is associated with the Company's acquisitions of Company X in December 2021 and Company Y in January 2023 (Note 3) and the contingent consideration liability as of December 31, 2022 is associated with the Company's acquisition of Company X. The contingent consideration liability is classified as a Level 3 financial instrument. The contingent consideration as it relates to Company X was subject to the acquired business's satisfaction of certain financial and personnel objectives by March 31, 2023, while the contingent consideration as it relates to Company Y is subject to the acquired business's satisfaction of certain personnel objectives by June 17, 2024. The financial and personnel objectives of Company X were achieved by March 31, 2023 and contingent consideration for Company X of $2.7 million was paid in April 2023 with the remaining $0.3 million to be paid in December 2023. The fair value of contingent consideration is based on (1) applying the Monte Carlo simulation method, with underlying forecast mathematics based on Geometric Brownian motion in a risk-neutral framework, to forecast achievement of the acquired business' financial objectives, if applicable, under various possible contingent consideration events and (2) a probability based methodology using management's inputs and assumptions to forecast achievement of the acquired business' personnel objectives which included an assumption of total payments up to $3.0 million to Company X and an assumption of total payments up to $2.6 million to Company Y. Key inputs in the valuation include forecasted revenue, revenue volatility, discount rate and discount term as it relates to the financial objectives and probability of achievement, discount term and discount rate as it relates to the personnel objectives.

	Balance at September 30, 2023	Fair Value Measurements at September 30, 2023: Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
	(in thousands)			
Assets				
Marketable equity securities	$ 14,612	$ 14,612	$ —	$ —
Liabilities				
Contingent consideration	$ 2,690	$ —	$ —	$ 2,690

	Balance at December 31, 2022	Fair Value Measurements at December 31, 2022: Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
	(in thousands)			
Assets				
Marketable equity securities	$ 18,529	$ 18,529	$ —	$ —
Liabilities				
Contingent consideration	$ 2,941	$ —	$ —	$ 2,941

The following summarizes the activity in Level 3 financial instruments:

	Nine Months Ended September 30, 2023	2022
Contingent Consideration		
Beginning balance	$ 2,941	$ 2,700
Acquisitions[(1)]	2,200	—
Payments	(2,700)	—
Accretion of discount[(1)]	249	182
Ending balance	$ 2,690	$ 2,882

[(1)] These changes to the balance associated with the estimated fair value of contingent consideration for the nine months ended September 30, 2023 were due to the addition of contingent consideration associated with the acquisition of Company Y and accretion of discounts on contingent consideration.

For the nine months ended September 30, 2023, there were no transfers between Level 1, Level 2, or Level 3 financial instruments.

Financial Instruments Not Recorded at Fair Value on a Recurring Basis

Some of the Company's financial instruments are recorded at amounts that approximate fair value due to their liquid or short-term nature or by election on investments in privately-held entities as described below. Such financial assets and financial liabilities include: cash and cash equivalents, restricted cash, net receivables, investments in privately-held entities, certain other assets, accounts payable, accrued price protection liability, accrued expenses, accrued compensation costs, and other current liabilities.

The Company’s long-term debt is not recorded at fair value on a recurring basis, but is measured at fair value for disclosure purposes (Note 8).

Included in other long-term assets are investments in privately held entities of $11.8 million as of September 30, 2023 and December 31, 2022. The Company does not have the ability to exercise significant influence or control over such entity and has accounted for the investments as financial instruments. Given that fair values for such investments are not readily determinable, the Company is electing to measure these investments at cost, less any impairment, and adjust the carrying value to fair value if any observable price changes for similar investments in the same entity are identified.

7. Balance Sheet Details

Cash, cash equivalents and restricted cash consist of the following:

	September 30, 2023	December 31, 2022
	(in thousands)	
Cash and cash equivalents	$ 187,028	$ 187,353
Short-term restricted cash	1,105	982
Long-term restricted cash	19	22
Total cash, cash equivalents and restricted cash	$ 188,152	$ 188,357

As of September 30, 2023 and December 31, 2022, cash and cash equivalents included money market funds of approximately $77.1 million and $0.4 million, respectively. As of September 30, 2023 and December 31, 2022, the Company had restricted cash of approximately $1.1 million and $1.0 million, respectively. The cash is restricted in connection with guarantees for certain import duties and office leases.

Inventory consists of the following:

	September 30, 2023	December 31, 2022
	(in thousands)	
Work-in-process	$ 63,827	$ 97,840
Finished goods	51,115	62,704
	$ 114,942	$ 160,544

Property and equipment, net consists of the following:

	Useful Life (in Years)	September 30, 2023	December 31, 2022
		(in thousands)	
Furniture and fixtures	5	$ 3,902	$ 3,924
Machinery and equipment	3-5	74,126	74,258
Masks and production equipment	2-5	54,240	50,970
Software	3	11,367	10,111
Leasehold improvements	1-5	34,851	34,236
Construction in progress	N/A	1,168	7,602
		179,654	181,101
Less: accumulated depreciation and amortization		(110,170)	(102,083)
		$ 69,484	$ 79,018

Depreciation expense for the three months ended September 30, 2023 and 2022 was $5.6 million and $5.1 million, respectively. Depreciation expense for the nine months ended September 30, 2023 and 2022 was $18.5 million and $14.7 million, respectively.

In March 2022, the Company entered into a note receivable with a supplier for $10.0 million which is included in other long-term assets as of September 30, 2023 and December 31, 2022, respectively. In September 2023, the terms of this note receivable were renegotiated, and the first initial repayment of $1.5 million is now due by March 31, 2025, and annual repayments of $1.7 million per year are due annually thereafter by March 31, from 2026 through 2030, provided that certain production utilization targets for the prior year are met. Previously, repayments of $2.0 million were due annually by March 31, 2024 through 2027.

Accrued price protection liability consists of the following activity:

	Nine Months Ended September 30, 2023	Nine Months Ended September 30, 2022
	(in thousands)	
Beginning balance	$ 113,274	$ 40,509
Charged as a reduction of revenue	50,092	142,473
Payments	(91,723)	(66,391)
Ending balance	$ 71,643	$ 116,591

Accrued expenses and other current liabilities consist of the following:

	September 30, 2023	December 31, 2022
	(in thousands)	
Accrued technology license payments	$ 4,682	$ 7,402
Accrued professional fees	5,366	4,072
Accrued engineering and production costs	6,304	2,560
Accrued restructuring	1,732	1,082
Accrued royalty	620	1,662
Short-term lease liabilities	8,749	10,489
Accrued customer credits	2,059	304
Income tax liability	802	8,895
Customer contract liabilities	1,397	1,072
Accrued obligations to customers for price adjustments	45,303	52,392
Accrued obligations to customers for stock rotation rights	755	605
Contingent consideration - current portion	2,689	2,941
Other	5,818	6,679
	$ 86,276	$ 100,155

The following table summarizes the change in balances of accumulated other comprehensive income (loss) by component:

	Cumulative Translation Adjustments	Pension and Other Defined Benefit Plan Obligation	Total
		(in thousands)	
Balance at December 31, 2022	$ (5,180)	$ 4,159	$ (1,021)
Other comprehensive loss before reclassifications, net of tax	(3,125)	(3,792)	(6,917)
Balance at September 30, 2023	$ (8,305)	$ 367	$ (7,938)

8. Debt

Debt

The carrying amount of the Company's long-term debt consists of the following:

	September 30, 2023	December 31, 2022
	(in thousands)	
Principal balance:		
Initial term loan under the June 23, 2021 credit agreement	$ 125,000	$ 125,000
Total principal balance	125,000	125,000
Less:		
Unamortized debt discount	(602)	(695)
Unamortized debt issuance costs	(2,179)	(2,548)
Net carrying amount of long-term debt	122,219	121,757
Less: current portion of long-term debt	—	—
Long-term debt, non-current portion	$ 122,219	$ 121,757

As of September 30, 2023 and December 31, 2022, the weighted average effective interest rate on debt was approximately 7.4% and 3.8%, respectively.

During the three months ended September 30, 2023 and 2022, the Company recognized total amortization of debt discount and debt issuance costs of $0.2 million and $0.2 million, respectively, to interest expense.

During the nine months ended September 30, 2023 and 2022, the Company recognized total amortization of debt discount and debt issuance costs of $0.5 million and $0.4 million

The approximate aggregate fair value of the term loans outstanding as of September 30, 2023 and December 31, 2022 was $136.7 million and $137.4 million, respectively, which was estimated on the basis of inputs that are observable in the market and which is considered a Level 2 measurement method in the fair value hierarchy.

As of September 30, 2023, the outstanding principal balance of $125.0 million is due in full on June 23, 2028, upon maturity of the loan.

Initial Term Loan and Revolving Facility under the June 23, 2021 Credit Agreement

On June 23, 2021, the Company entered into a Credit Agreement, or the June 23, 2021 Credit Agreement, by and among the Company, the lenders from time to time party thereto, and Wells Fargo Bank, National Association, as administrative agent and collateral agent, that provides for a senior secured term B loan facility, or the "Initial Term Loan under the June 23, 2021 Credit Agreement," in an aggregate principal amount of $350.0 million and a senior secured revolving credit facility, or the "Revolving Facility," in an aggregate principal amount of up to $100.0 million. The proceeds of the Initial Term Loan under the June 23, 2021 Credit Agreement were used (i) to repay in full all outstanding indebtedness under that certain Credit Agreement dated May 12, 2017, by and among the Company, MUFG Bank Ltd., as administrative agent and MUFG Union Bank, N.A., as collateral agent and the lenders from time to time party thereto (as amended by Amendment No. 1, dated July 31, 2020) and (ii) to pay fees and expenses incurred in connection therewith. The remaining proceeds of the Initial Term Loan under the June 23, 2021 Credit Agreement are available for general corporate purposes and the proceeds of the Revolving Facility may be used to finance the working capital needs and other general corporate purposes of the Company and its subsidiaries. As of September 30, 2023, the Revolving Facility was undrawn. Under the terminated amended and restated commitment letter with Wells Fargo Bank and other lenders entered into in connection with the previously pending (now terminated) merger with Silicon Motion (Note 3), the Company had expected to repay the remaining outstanding term loans under this agreement upon closing of the merger.

The June 23, 2021 Credit Agreement permits the Company to request incremental loans in an aggregate principal amount not to exceed the sum of an amount equal to the greater of (x) $175.0 million and (y) 100% of consolidated EBITDA, plus the amount of certain voluntary prepayments, plus an unlimited amount that is subject to pro forma compliance with certain first lien net leverage ratio, secured net leverage ratio and total net leverage ratio tests. Incremental loans are subject to certain additional conditions, including obtaining additional commitments from the lenders then party to the June 23, 2021 Credit Agreement or new lenders.

Under the June 23, 2021 Credit Agreement, the Initial Term Loan bears interest, at the Company's option, at a per annum rate equal to either (i) a base rate equal to the highest of (x) the federal funds rate, plus 0.50%, (y) the prime rate then in effect and (z) an adjusted Term SOFR rate determined on the basis of a one-month interest period plus 1.00%, in each case, plus an applicable margin of 1.25% or (ii) an adjusted Term SOFR rate, subject to a floor of 0.50%, plus an applicable margin of 2.25%. Loans under the Revolving Facility initially bear interest, at a per annum rate equal to either (i) a base rate (as calculated above) plus an applicable margin of 0.00%, or (ii) an adjusted Term SOFR rate (as calculated above) plus an applicable margin of 1.00%. Following delivery of financial statements for the Company's fiscal quarter ending June 30, 2021, the applicable margin for loans under the Revolving Facility will range from 0.00% to 0.75% in the case of base rate loans and 1.00% to 1.75% in the case of Term SOFR rate loans, in each case, depending on the Company's secured net leverage ratio as of the most recently ended fiscal quarter. The Company is required to pay commitment fees ranging from 0.175% to 0.25% per annum on the daily undrawn commitments under the Revolving Facility, depending on the Company's secured net leverage ratio as of the most recently ended fiscal quarter. Commencing on September 30, 2021, the Initial Term Loan under the June 23, 2021 Credit Agreement will amortize in equal quarterly installments equal to 0.25% of the original principal amount of the Initial Term Loan under the June 23, 2021 Credit Agreement, with the balance payable on the maturity date. The June 23, 2021 Credit Agreement was amended on June 29, 2023 to implement a benchmark replacement.

The Company is required to make mandatory prepayments of the outstanding principal amount of term loans under the June 23, 2021 Credit Agreement with the net cash proceeds from the disposition of certain assets and the receipt of insurance proceeds upon certain casualty and condemnation events, in each case, to the extent not reinvested within a specified time period, from excess cash flow beyond stated threshold amounts, and from the incurrence of certain indebtedness. The Company has the right to prepay its term loans under the June 23, 2021 Credit Agreement, in whole or in part, at any time without premium or penalty, subject to certain limitations and a 1.0% soft call premium applicable during the first six months following the closing date of the June 23, 2021 Credit Agreement. The Initial Term Loan under the June 23, 2021 Credit Agreement will mature on June 23, 2028, at which time all outstanding principal and accrued and unpaid interest on the Initial Term Loan under the June 23, 2021 Credit Agreement must be repaid. The Revolving Facility will mature on June 23, 2026, at which time all outstanding principal and accrued and unpaid interest under the Revolving Facility must be repaid. The Company is also obligated to pay fees customary for a credit facility of this size and type.

The Company's obligations under the June 23, 2021 Credit Agreement are required to be guaranteed by certain of its domestic subsidiaries meeting materiality thresholds set forth in the June 23, 2021 Credit Agreement. Such obligations, including the guaranties, are secured by substantially all of the assets of the Company and the subsidiary guarantors pursuant to a Security Agreement, dated as of June 23, 2021, by and among the Company, the subsidiary guarantors from time to time party thereto, and Wells Fargo Bank, National Association, as collateral agent.

The June 23, 2021 Credit Agreement contains customary affirmative and negative covenants, including covenants limiting the ability of the Company and its restricted subsidiaries to, among other things, incur debt, grant liens, undergo certain fundamental changes, make investments, make certain restricted payments, and sell assets, in each case, subject to limitations and exceptions set forth in the June 23, 2021 Credit Agreement. The Revolving Facility also prohibits the Company from having a secured net leverage ratio in excess of 3.50:1.00 (subject to a temporary increase to 3.75:1.00 following the consummation of certain material permitted acquisitions) as of the last day of any fiscal quarter of the Company (commencing with the fiscal quarter ending September 30, 2021) if the aggregate borrowings under the Revolving Facility exceed 1% of the aggregate commitments thereunder (subject to certain exceptions set forth in the June 23, 2021 Credit Agreement) as of such date. As of September 30, 2023, the Company was in compliance with such covenants. The June 23, 2021 Credit Agreement also contains customary events of default that include, among other things, certain payment defaults, cross defaults to other indebtedness, covenant defaults, change in control defaults, judgment defaults, and bankruptcy and insolvency defaults. If an event of default exists, the lenders may require immediate payment of all obligations under the June 23, 2021 Credit Agreement and may exercise certain other rights and remedies provided for under the June 23, 2021 Credit Agreement, the other loan documents and applicable law.

The debt is carried at its principal amount, net of unamortized debt discount and issuance costs, and is not adjusted to fair value each period. The issuance date fair value of the liability component of the debt in the amount of $350.2 million was determined using a discounted cash flow analysis, in which the projected interest and principal payments were discounted back to the issuance date of the term loan at a market interest rate for nonconvertible debt of 7.4%, which represents a Level 2 fair value measurement. The debt discount of $0.9 million and debt issuance costs of $2.9 million associated with the Initial Term Loan under the June 23, 2021 Credit Agreement are being amortized to interest expense using the effective interest method over its seven-year term. Debt issuance costs of $0.4 million associated with the Revolving Facility are being amortized to interest expense over its five-year term.

9. Stock-Based Compensation

Employee Stock-Based Compensation Plans

At September 30, 2023, the Company had stock-based compensation awards outstanding under the following plans: the 2010 Equity Incentive Plan, as amended, or 2010 Plan, and the 2010 Employee Stock Purchase Plan, or ESPP. Refer to the Company's Annual Report for a summary of its stock-based compensation and equity plans as of December 31, 2022. There have been no material changes to the terms of the Company's equity incentive plans during the nine months ended September 30, 2023.

As of September 30, 2023, the number of shares of common stock available for future issuance under the 2010 Plan was 15,250,925 shares. As of September 30, 2023, the number of shares of common stock available for future issuance under the ESPP was 5,749,724 shares.

Employee Incentive Bonus

The Company mostly settles bonus awards for its employees, including executives, in shares of common stock under the 2010 Equity Incentive Plan. When bonus awards are settled in common stock issued under the 2010 Equity Incentive Plan, the number of shares issuable to plan participants is determined based on the closing price of the Company's common stock as determined in trading on the applicable stock exchange, on a date approved by the Board of Directors. In connection with the Company's bonus programs, in February 2023, the Company issued 0.9 million freely-tradable (subject to certain restrictions for affiliates) shares of the Company's common stock in settlement of bonus awards to employees, including executives, for the 2022 performance period. At September 30, 2023, the Company has an accrual of $8.4 million for bonus awards for employees for year-to-date achievement in the 2023 performance period. The Company's compensation committee retains discretion to effect payment in cash, stock, or a combination of cash and stock.

Stock-Based Compensation

The Company recognizes stock-based compensation in the consolidated statements of operations, based on the department to which the related employee reports, as follows:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2023	2022	2023	2022
	(in thousands)		(in thousands)	
Cost of net revenue	$ 170	$ 188	$ 626	$ 513
Research and development	9,436	10,635	33,128	30,294
Selling, general and administrative	(4,488)	9,308	5,009	27,347
	$ 5,118	$ 20,131	$ 38,763	$ 58,154

The total unrecognized compensation cost related to unvested restricted stock units as of September 30, 2023 was $152.4 million, and the weighted average period over which these equity awards are expected to vest is 2.54 years.

The total unrecognized compensation cost related to unvested performance-based restricted stock units as of September 30, 2023 was $9.1 million, and the weighted average period over which these equity awards are expected to vest is 1.39 years.

There was no unrecognized compensation cost related to unvested stock options as of September 30, 2023.

Restricted Stock Units

A summary of the Company's restricted stock unit activity is as follows:

	Number of Shares (in thousands)	Weighted-Average Grant-Date Fair Value per Share
Outstanding at December 31, 2022	6,080	$ 35.01
Granted	3,045	38.51
Vested	(2,779)	34.24
Canceled	(470)	38.44
Outstanding at September 30, 2023	5,876	$ 36.91

Performance-Based Restricted Stock Units

Performance-based restricted stock units are eligible to vest at the end of each year-long performance period, as defined in the underlying agreement, in a three-year performance period based on the Company's annual growth rate in net sales and non-GAAP diluted earnings per share (subject to certain adjustments) over baseline results relative to the growth rates for a peer group of companies for the same metrics and periods.

For the performance-based restricted stock units granted to date, 60% of each performance-based award is subject to the net sales metric for the performance period and 40% is subject to the non-GAAP diluted earnings per share metric for the performance period. The maximum percentage for a particular metric is 250% of the target number of units subject to the award related to that metric, however, vesting of the performance stock units is capped at 30% and 100%, respectively, of the target number of units subject to the award in years one and two, respectively, of the three-year performance period.

As of September 30, 2023, achievement to date under the performance metrics specified in the respective award agreements are based on its expected revenue and non-GAAP diluted EPS results over the performance periods and calculated growth rates relative to its peers' expected results based on data available, as defined in the respective award agreements. To the extent any prior achievement levels are no longer probable, any compensation expense recorded is adjusted to the revised achievement levels.

A summary of the Company's performance-based restricted stock unit activity is as follows:

	Number of Shares (in thousands)	Weighted-Average Grant-Date Fair Value per Share
Outstanding at December 31, 2022	1,950	$ 34.07
Granted[(1)]	1,039	32.66
Vested	(248)	22.03
Canceled	(88)	41.75
Outstanding at September 30, 2023	2,653	$ 34.38

[(1)] Number of shares granted is based on the maximum percentage achievable in the performance-based restricted stock unit award.

Employee Stock Purchase Rights and Stock Options

Employee Stock Purchase Rights

During the nine months ended September 30, 2023 and 2022, there were 140,631 and 83,404 shares of common stock purchased under the ESPP at a weighted average price of $21.25 and $34.92, respectively.

The fair values of employee stock purchase rights were estimated using the Black-Scholes option pricing model at their respective grant date using the following assumptions:

	Nine Months Ended September 30,	
	2023	2022
Weighted-average grant date fair value per share	$7.56 - $11.97	$14.25 - $18.82
Risk-free interest rate	4.54% - 5.24%	0.06% - 1.54%
Dividend yield	—%	—%
Expected life (in years)	0.50	0.50
Volatility	51.73% - 59.78%	43.83% - 69.74%

The risk-free interest rate assumption was based on rates for United States (U.S.) Treasury zero-coupon bonds with maturities similar to those of the expected term of the award being valued. The assumed dividend yield was based on the Company's expectation of not paying dividends in the foreseeable future. The expected term is the duration of the offering period for each grant date. In addition, the estimated volatility incorporates the historical volatility over the expected term based on the Company's daily closing stock prices.

Stock Options

A summary of the Company's stock options activity is as follows:

	Number of Options (in thousands)	Weighted-Average Exercise Price	Weighted-Average Contractual Term (in years)	Aggregate Intrinsic Value (in thousands)
Outstanding at December 31, 2022	393	$ 17.22		
Exercised	(15)	15.30		
Outstanding at September 30, 2023	378	$ 17.30	1.76	$ 1,781
Vested and expected to vest at September 30, 2023	378	$ 17.30	1.76	$ 1,781
Exercisable at September 30, 2023	378	$ 17.30	1.76	$ 1,781

No stock options were granted by the Company during the nine months ended September 30, 2023.

The intrinsic value of stock options exercised was $47.0 thousand and $0.1 million in the three months ended September 30, 2023 and 2022, respectively.

The intrinsic value of stock options exercised was $0.2 million and $0.9 million in the nine months ended September 30, 2023 and 2022, respectively.

Cash received from exercise of stock options was $0.1 million and $0.1 million during the three months ended September 30, 2023 and 2022, respectively.

Cash received from exercise of stock options was $0.2 million and $0.3 million during the nine months ended September 30, 2023 and 2022, respectively.

The tax benefit from stock options exercised was $0.1 million and $0.2 million during the three months ended September 30, 2023 and 2022, respectively.

The tax benefit from stock options exercised was $0.4 million and $1.2 million during the nine months ended September 30, 2023 and 2022, respectively.

10. Income Taxes

The provision for income taxes primarily relates to projected federal, state, and foreign income taxes. To determine the quarterly provision for income taxes, the Company uses an estimated annual effective tax rate, which is generally based on expected annual income and statutory tax rates in the various jurisdictions in which the Company operates. In addition, the tax effects of certain significant or unusual items are recognized discretely in the quarter during which they occur and can be a source of variability in the effective tax rates from quarter to quarter. For the nine months ended September 30, 2023, the Company's annual effective tax rate results in significant variation in the customary relationship between income tax expense and pre-tax income in interim periods. The Company is using the actual effective tax rate for the nine months ended September 30, 2023 as the best estimate of the annual effective tax rate.

The Company utilizes the asset and liability method of accounting for income taxes, under which deferred taxes are determined based on temporary differences between the financial statement and tax basis of assets and liabilities using tax rates expected to be in effect during the years in which the temporary differences reverse. The Company records a valuation allowance to reduce its deferred taxes to the amount it believes is more likely than not to be realized. In making such determination, the Company considers all available positive and negative evidence quarterly, including scheduled reversals of deferred tax liabilities, projected future taxable income, tax planning strategies, and recent financial performance. Forming a conclusion that a valuation allowance is not required is difficult when there is negative evidence such as cumulative losses in recent years. Based upon the Company's review of all positive and negative evidence, the Company continues to have a valuation allowance on its state deferred tax assets, certain of its federal deferred tax assets, and certain foreign deferred tax assets in jurisdictions where the Company has cumulative losses or otherwise is not expected to utilize certain tax attributes. The Company does not incur expense or benefit in certain tax-free jurisdictions in which it operates.

The Company recorded an income tax benefit of $1.7 million in the three months ended September 30, 2023 and an income tax provision of $16.2 million in the three months ended September 30, 2022.

The Company recorded an income tax provision of $13.5 million in the nine months ended September 30, 2023 and an income tax provision of $39.5 million in the nine months ended September 30, 2022.

The difference between the Company's effective tax rate and the 21.0% U.S. federal statutory rate for the nine months ended September 30, 2023 primarily related to the mix of pre-tax income among jurisdictions, permanent tax items including a tax on global intangible low-taxed income, stock based compensation, excess tax benefits related to stock-based compensation, and release of uncertain tax positions under ASC 740-10. The permanent tax item related to global intangible low-taxed income also reflects recent legislative changes requiring the capitalization of research and experimentation costs, as well as limitations on the creditability of certain foreign income taxes.

The difference between the Company's effective tax rate and the 21.0% U.S. federal statutory rate for the nine months ended September 30, 2022 primarily related to the mix of pre-tax income among jurisdictions, permanent tax items including a tax on global intangible low-taxed income, stock based compensation, excess tax benefits related to stock-based compensation, release of uncertain tax positions under ASC 740-10, and release of the valuation allowance on certain federal research and development credits. The permanent tax item related to global intangible low-taxed income also reflects recent legislative changes requiring the capitalization of research and experimentation costs, as well as limitations on the creditability of certain foreign income taxes.

Income tax positions must meet a more-likely-than-not threshold to be recognized. Income tax positions that previously failed to meet the more-likely-than-not threshold are recognized in the first subsequent financial reporting period in which that threshold is met. Previously recognized tax positions that no longer meet the more-likely-than-not threshold are derecognized in the first financial reporting period in which that threshold is no longer met. The Company records potential penalties and interest accrued related to unrecognized tax benefits within the consolidated statements of operations as income tax expense.

During the nine months ended September 30, 2023, the Company's unrecognized tax benefits increased by $1.2 million. The Company does not expect its unrecognized tax benefits to change significantly over the next 12 months. Accrued interest and penalties associated with uncertain tax positions as of September 30, 2023 were approximately $0.3 million and $0.01 million, respectively.

The Company is subject to federal and state income tax in the United States and is also subject to income tax in certain other foreign tax jurisdictions. At September 30, 2023, the statutes of limitations for the assessment of federal, state, and foreign income taxes are closed for the years before 2019, 2018, and 2017, respectively.

The Company’s subsidiary in Singapore operates under certain tax incentives in Singapore, which are generally effective through March 2027, and are conditional upon meeting certain employment and investment thresholds in Singapore. Under the incentives, qualifying income derived from certain sales of the Company’s integrated circuits is taxed at a concessionary rate over the incentive period, and there are reduced Singapore withholding taxes on certain intercompany royalties during the incentive period. The Company recorded a tax provision in the nine months ended September 30, 2023 and 2022 at the incentive rate.

11. Concentration of Credit Risk, Significant Customers and Geographic Information

Financial instruments, which potentially subject the Company to concentrations of credit risk, consist primarily of cash and cash equivalents and accounts receivable. Collateral is generally not required for customer receivables. The Company limits its exposure to credit loss by placing its cash with high credit quality financial institutions. At times, such deposits may be in excess of insured limits. The Company has not experienced any losses on its deposits of cash and cash equivalents.

Significant Customers

The Company markets its products and services to manufacturers of a wide range of electronic devices (Note 1). The Company sells its products both directly to end-customers and through third-party distributors, both of which are referred to as the Company’s customers (Note 12). The Company makes periodic evaluations of the credit worthiness of its customers.

Customers comprising 10% or greater of net revenues for each of the periods presented are as follows:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2023	2022	2023	2022
Percentage of total net revenue				
Customer A	*	31 %	*	22 %
Customer B	11 %	*	11 %	*

* Represents less than 10% of net revenues for the period presented.

The following table presents balances that are 10% or greater of accounts receivable, based on the Company’s billings to its customers.

	September 30, 2023	December 31, 2022
Percentage of gross accounts receivable		
Customer C	*	11 %
Customer D	26 %	12 %
Customer E	13 %	28 %
Customer F	17 %	*

* Represents less than 10% of the gross accounts receivable as of the respective period end.

Significant Suppliers

Suppliers comprising 10% or greater of total inventory purchases are as follows:

	Three Months Ended September 30, 2023	Three Months Ended September 30, 2022	Nine Months Ended September 30, 2023	Nine Months Ended September 30, 2022
Vendor A	28 %	24 %	21 %	27 %
Vendor B	17 %	26 %	24 %	25 %
Vendor C	14 %	13 %	10 %	13 %
Vendor D	*	*	10 %	*

* Represents less than 10% of total inventory purchases for the period presented.

Geographic Information

The Company's consolidated net revenues by geographic area based on ship-to location are as follows (in thousands):

	Three Months Ended September 30,				Nine Months Ended September 30,			
	2023		2022		2023		2022	
	Amount	% of total net revenue	Amount	% of total net revenue	Amount	% of total net revenue	Amount	% of total net revenue
Asia	$ 98,647	73 %	$ 235,032	82 %	$ 419,478	74 %	$ 674,352	81 %
Europe	24,886	18 %	36,818	13 %	110,058	19 %	113,792	14 %
United States	8,757	7 %	10,991	4 %	29,847	5 %	29,543	4 %
Rest of world	3,240	2 %	2,889	1 %	8,527	2 %	11,979	1 %
Total	$ 135,530	100 %	$ 285,730	100 %	$ 567,910	100 %	$ 829,666	100 %

The products shipped to individual countries or territories representing 10% or greater of net revenue for each of the periods presented are as follows:

	Three Months Ended September 30, 2023	Three Months Ended September 30, 2022	Nine Months Ended September 30, 2023	Nine Months Ended September 30, 2022
Percentage of total net revenue				
Hong Kong	41 %	51 %	34 %	43 %
China	*	14 %	12 %	16 %
Taiwan, ROC	10 %	*	*	*

* Represents less than 10% of net revenues for the period presented.

The determination of which country a particular sale is allocated to is based on the destination of the product shipment. No other individual country accounted for 10% or greater of net revenue during these periods. Although a large percentage of the Company's products is shipped to Asia, and in particular, Hong Kong, mainland China, and Taiwan, the Company believes that a significant number of the systems designed by customers and incorporating the Company's semiconductor products are subsequently sold outside Asia to Europe, Middle East, and Africa markets and North American markets.

Long-lived assets, which consists of property and equipment, net, leased right-of-use assets, intangible assets, net, and goodwill by geographic area are as follows (in thousands):

	September 30, 2023		December 31, 2022	
	Amount	% of total	Amount	% of total
United States	$ 365,607	73 %	$ 368,882	70 %
Singapore	97,926	19 %	109,613	21 %
Rest of world	39,697	8 %	45,093	9 %
Total	$ 503,230	100 %	$ 523,588	100 %

12. Revenue from Contracts with Customers

Revenue by Market

The table below presents disaggregated net revenues by market (in thousands):

	Three Months Ended September 30,				Nine Months Ended September 30,			
	2023		2022		2023		2022	
Broadband	$ 34,416		$ 120,165		$ 169,646		$ 393,819	
% of net revenue	25	%	42	%	30	%	47	%
Connectivity	15,025		82,603		119,232		199,182	
% of net revenue	11	%	29	%	21	%	24	%
Infrastructure	49,985		35,580		145,549		104,650	
% of net revenue	37	%	12	%	26	%	13	%
Industrial and multi-market	36,104		47,382		133,483		132,015	
% of net revenue	27	%	17	%	23	%	16	%
Total net revenue	$ 135,530		$ 285,730		$ 567,910		$ 829,666	

Revenues from sales through the Company’s distributors accounted for46% and 41% of net revenue for the three months ended September 30, 2023 and 2022, respectively.

Revenues from sales through the Company’s distributors accounted for47% and 44% of net revenue for the nine months ended September 30, 2023 and 2022, respectively.

Contract Liabilities

As of September 30, 2023 and December 31, 2022, customer contract liabilities were approximately $1.4 million and $1.1 million, respectively, and consisted primarily of advanced payments received for which performance obligations have not been completed. Revenue recognized in each of the nine months ended September 30, 2023 and 2022 that was included in the contract liability balance as of the beginning of each of those respective periods was immaterial.

There were no material changes in the contract liabilities balance during the nine months ended September 30, 2023 and 2022.

Obligations to Customers for Price Adjustments and Returns and Assets for Right-of-Returns

As of September 30, 2023 and December 31, 2022, obligations to customers consisting of estimates of price protection rights offered to the Company’s end customers totaled $71.6 million and $113.3 million, respectively, and are included in accrued price protection liability in the consolidated balance sheets. For activity in this account, including amounts included in net revenue, refer to Note 7. Other obligations to customers representing estimates of price adjustments to be claimed by distributors upon sell-through of their inventory to their end customer and estimates of stock rotation returns to be claimed by distributors on products sold as of September 30, 2023 were $45.3 million and $0.8 million, respectively, and as of December 31, 2022 were $52.4 million and $0.6 million, respectively, and are included in accrued expenses and other current liabilities in the consolidated balance sheets (Note 7). The increase in revenue in each of the nine months ended September 30, 2023 and 2022 from net changes in transaction prices for amounts included in obligations to customers for price adjustments as of the beginning of those respective periods was not material.

As of September 30, 2023 and December 31, 2022, right of return assets under customer contracts representing the estimates of product inventory the Company expects to receive from customers in stock rotation returns were approximately $0.2 million and $0.2 million, respectively. Right of return assets are included in inventory in the consolidated balance sheets.

As of September 30, 2023 and December 31, 2022, there wereno impairment losses recorded on customer accounts receivable.

13. Leases

Operating Leases

Operating lease arrangements primarily consist of office leases expiring in various years through 2029. These leases have original terms of approximately 2 to 8 years and some contain options to extend the lease up to 5 years or terminate the lease, which are included in right-of-use assets and lease liabilities when the Company is reasonably certain it will renew the underlying leases. Since the implicit rate of such leases is unknown and the Company is not reasonably certain to renew its leases, the Company has elected to apply a collateralized incremental borrowing rate to facility leases on the original lease term in calculating the present value of future lease payments. As of September 30, 2023 and December 31, 2022, the weighted average discount rate for operating leases was 4.6% and 3.4%, respectively, and the weighted average remaining lease term for operating leases was 4.1 years and 3.9 years, respectively, as of the end of each of these periods.

The table below presents aggregate future minimum payments due under leases, reconciled to total lease liabilities included in the consolidated balance sheet as of September 30, 2023:

	Operating Leases (in thousands)
2023 (3 months)	$ 2,791
2024	10,446
2025	10,436
2026	7,882
2027	5,617
Thereafter	4,046
Total minimum payments	41,218
Less: imputed interest	(4,452)
Less: unrealized translation loss	—
Total lease liabilities	36,766
Less: short-term lease liabilities	(8,749)
Long-term lease liabilities	$ 28,017

Operating lease cost was $2.7 million and $2.9 million for the three months ended September 30, 2023 and 2022, respectively.

Operating lease cost was $8.0 million and $7.7 million for the nine months ended September 30, 2023 and 2022, respectively.

Short-term lease costs for the three and nine months ended September 30, 2023 and 2022 were not material.

There were $0 and $0.1 million of right-of-use assets obtained in exchange for new lease liabilities for the three months ended September 30, 2023 and 2022, respectively.

There were $12.2 million and $11.7 million of right-of-use assets obtained in exchange for new lease liabilities for the nine months ended September 30, 2023 and 2022, respectively.

14. Employee Retirement Plans

Defined Contribution Plan

The Company has a 401(k) defined contribution retirement plan (the 401(k) Plan) covering all eligible employees. Participants may voluntarily contribute on a pre-tax basis an amount not to exceed a maximum contribution amount pursuant to Section 401(k) of the Internal Revenue Code. The Company is not required to contribute, nor has it contributed, to the 401(k) Plan for any of the periods presented.

Pension and Other Defined Benefit Retirement Obligations

The Company maintains defined benefit retirement plans, including a pension plan, in certain foreign jurisdictions. During the three months ended September 30, 2023, the Company paid approximately $.2 million to a third party life insurance and pension provider to fund and administer future benefit payments for substantially all of the employees in one of the Company's defined benefit retirement plans and recorded a gain on partial settlement of such pension plan of approximately $1.0 million. As of September 30, 2023, the net defined benefit obligation, primarily related to other defined benefit plans, was $0.9 million. As of December 31, 2022, the net defined benefit obligation was $1.7 million. The benefit is based on a formula applied to eligible employee earnings.

Net periodic benefit costs were $0.1 million and $0.1 million for the three months ended September 30, 2023 and 2022, respectively, and were recorded to research and development expenses in the consolidated statements of operations.

Net periodic benefit costs were $0.2 million and $0.2 million for the nine months ended September 30, 2023 and 2022, respectively, and were recorded to research and development expenses in the consolidated statements of operations.

15. Commitments and Contingencies

Inventory Purchase and Other Contractual Obligations

As of September 30, 2023, future minimum payments under inventory purchase and other obligations are as follows:

	Inventory Purchase Obligations	Other Obligations	Total
2023 (3 months)	$ 23,603	$ 6,051	$ 29,654
2024	7,330	30,601	37,931
2025	10,231	28,954	39,185
2026	—	18,567	18,567
2027	—	3,673	3,673
Total minimum payments	$ 41,164	$ 87,846	$ 129,010

Other obligations consist primarily of contractual payments due for software licenses.

Jointly Funded Research and Development

From time to time, the Company enters into contracts for jointly funded research and development projects to develop technology that may be commercialized into a product in the future. As the Company may be required to repay all or a portion of the funds provided by the other parties under certain conditions, funds of $10.0 million received from the other parties as of September 30, 2023 have been deferred in other long-term liabilities. Additional amounts under the contracts are tied to certain milestones and will also be recorded as a long-term liability as payment due under such milestones are received. The Company de-recognizes the liabilities when the contingencies associated with the repayment conditions have been resolved. During the nine months ended September 30, 2023 and 2022, the Company recognized $0 and $3.8 million, respectively, in previously deferred amounts from other parties due to resolution of such repayment conditions.

Dispute with Silicon Motion

As disclosed in Note 3, on July 26, 2023, MaxLinear terminated the Merger Agreement on multiple grounds. On August 16, 2023, Silicon Motion delivered to MaxLinear a notice, which Silicon Motion publicly disclosed, that it was purporting to terminate the Merger Agreement and that Silicon Motion would be commencing an arbitration before the Singapore International Arbitration Centre to seek damages from MaxLinear arising from MaxLinear's alleged breaches of the Merger Agreement. Silicon Motion's position is that MaxLinear's Willful and Material Breaches (as such term is defined in the Merger Agreement) of the Merger Agreement prevented the Merger from being completed by August 7, 2023 and that MaxLinear is consequently liable for substantial monetary damages in excess of the termination fee as provided in the Merger Agreement.

On October 5, 2023, Silicon Motion filed a Notice of Arbitration with the Singapore International Arbitration Centre alleging that MaxLinear breached the Merger Agreement. Silicon Motion seeks payment of the termination fee, additional damages, fees, and costs. The arbitration will be confidential.

MaxLinear believes that it properly terminated the Merger Agreement and that Silicon Motion's claims to the contrary are without merit. MaxLinear remains confident in its decision and will vigorously defend its right to terminate the Silicon Motion transaction without penalty.

Class Action Complaint

On August 31, 2023, a Silicon Motion stockholder filed a putative class action complaint in the United States District Court for the Southern District of California captioned *Water Island Event-Driven Fund v. MaxLinear, Inc.*, No. 23-cv-01607 (S.D. Cal.), against MaxLinear and certain of its current officers. The complaint includes two claims: (1) an alleged violation of Section 10(b) of the Securities Exchange Act of 1934, or the "Exchange Act", and Rule 10b-5 promulgated thereunder; and (2) an alleged violation of Section 20(a) of the Exchange Act. The complaint alleges that the defendants made false and misleading statements and/or omitted material facts that MaxLinear had a duty to disclose, concerning the Company's ability and intention to timely close the merger with Silicon Motion, including that: (i) MaxLinear had allegedly decided it would not consummate the merger because the economic circumstances surrounding the merger had materially changed, including a material downturn in the semiconductor industry and rising interest rates; (ii) MaxLinear had allegedly determined to unilaterally terminate the merger in the event the merger was approved by SAMR; (iii) MaxLinear had allegedly intended to argue that certain conditions in Article 6 of the Merger Agreement had not been satisfied as required by May 5, 2023 as a basis to terminate the merger; and (iv) as a result, MaxLinear had allegedly materially misrepresented the viability of the merger, the purported benefits of the merger, and the likelihood that the merger would be consummated. The complaint seeks compensatory damages, including interest, costs and expenses and such other equitable or injunctive relief that the court deems appropriate. MaxLinear believes that complaint's claims are without merit and will vigorously defend its position.

Other Matters

From time to time, the Company is subject to threats of litigation or actual litigation in the ordinary course of business as described above and in "*Part II. — Other Information, Item 1. — Legal Proceedings*," some of which may be material. The results of any litigation cannot be predicted with certainty, and regardless of the outcome, litigation can have a material adverse impact on the Company because of defense and settlement costs, diversion of management resources, and other factors. However, as of September 30, 2023, no material loss contingencies have been accrued for such matters in the Company's financial statements.

16. Stock Repurchases

On February 23, 2021, the Company's board of directors authorized a plan to repurchase up to $100 million of the Company's common stock over a period ending on February 16, 2024. The amount and timing of repurchases are subject to a variety of factors including liquidity, share price, market conditions, and legal requirements. Any purchases will be funded from available working capital and may be effected through open market purchases, block transactions, and privately negotiated transactions. The share repurchase program does not obligate the Company to make any repurchases and may be modified, suspended, or terminated by the Company at any time without prior notice. The share repurchase program has been temporarily suspended since July 2022 due to the Company's previously pending (now terminated) merger with Silicon Motion (Note 3).

During the nine months ended September 30, 2023, the Company did not repurchase any shares of its common stock under the repurchase program.

At September 30, 2023, the aggregate value of common stock repurchased under the program was approximately $55.0 million and approximately $45.0 million remained available for repurchase under the program.

17. Subsequent Events

In October 2023, the Company initiated a reduction of its workforce to align its operational needs with the changes in macroeconomic conditions and the demand environment, while continuing to support its long-term business strategy by reducing its operating expenses. The Company's management is currently evaluating the timing and full impact of the workforce reduction on the Company's business, financial condition and results of operations for the year ending December 31, 2023.

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

Forward-Looking Statements

The following discussion and analysis of the financial condition and results of our operations should be read in conjunction with the consolidated financial statements and related notes included elsewhere in this report. This discussion contains forward-looking statements that involve risks and uncertainties. Our actual results could differ materially from those discussed below. Factors that could cause or contribute to such differences include, but are not limited to, those identified below, and those discussed in the section titled "Risk Factors" included in Part II, Item 1A in this report.

Overview

We are a provider of communications systems-on-chip solutions used in broadband, mobile and wireline infrastructure, data center, and industrial and multi-market applications. We are a fabless integrated circuit design company whose products integrate all or substantial portions of a high-speed communication system, including radio frequency, or RF, high-performance analog, mixed-signal, digital signal processing, security engines, data compression and networking layers, and power management. In most cases, these products are designed on a single silicon-die, using standard digital complementary metal oxide semiconductor, or CMOS, processes and conventional packaging technologies. We believe this approach enables our solutions to achieve superior power, performance, and cost relative to our industry competition. Our customers include electronics distributors, module makers, original equipment manufacturers, or OEMs, and original design manufacturers, or ODMs, who incorporate our products in a wide range of electronic devices. Examples of such devices include cable Data Over Cable Service Interface Specifications, or DOCSIS, fiber and DSL broadband modems and gateways; Wi-Fi and wireline routers for home networking; radio transceivers and modems for 4G/5G base-station and backhaul infrastructure; fiber-optic modules for data center, metro, and long-haul transport networks; as well as power management and interface products used in these and many other markets.

Our highly integrated semiconductor devices and platform-level solutions are primarily manufactured using low-cost CMOS process technology. CMOS processes are ideally suited for large digital logic implementations targeting high-volume and low-cost consumer applications. Importantly, our ability to design analog and mixed-signal circuits in CMOS allows us to efficiently combine analog functionality and complex digital signal processing logic in the same integrated circuit. As a result, our solutions have exceptional levels of functional integration and performance, low manufacturing cost, and reduced power consumption. In addition, our proprietary CMOS-based radio and digital system architectures also enable shorter design cycles, significant design flexibility and low system-level cost across a wide range of broadband communications, wired and wireless infrastructure, and industrial and multi-market customer applications.

In the nine months ended September 30, 2023, revenues of $567.9 million were derived in part from sales of RF receivers and RF receiver systems-on-chip and connectivity solutions into broadband operator voice and data modems and gateways and connectivity adapters, global analog and digital RF receiver products, radio and modem solutions into wireless carrier access and backhaul infrastructure platforms, high-speed optical interconnect solutions sold into optical modules for data-center, metro and long-haul networks, and high-performance interface and power management solutions into a broad range of communications, industrial, automotive and multi-market applications. Our ability to achieve revenue growth in the future will depend, among other factors, on our ability to further penetrate existing markets; our ability to expand our target addressable markets by developing new and innovative products; changes in government trade policies; changes in export control regulations; and our ability to obtain design wins with device manufacturers, in particular manufacturers of set-top boxes, data modems, and gateways for the broadband service provider, storage networking market, cable infrastructure market, industrial and automotive markets, and optical module and telecommunications infrastructure markets.

Products shipped to Asia accounted for 73% and 82% of net revenue during the three months ended September 30, 2023 and 2022, respectively, including 41% from products shipped to Hong Kong and 10% from products shipped to Taiwan, ROC during the three months ended September 30, 2023 and 51% from products shipped to Hong Kong and 14% from products shipped to mainland China during three months ended September 30, 2022.

Products shipped to Asia accounted for 74% and 81% of net revenue during the nine months ended September 30, 2023 and 2022, respectively, including 34% from products shipped to Hong Kong and 12% from products shipped to mainland China during the nine months ended September 30, 2023 and 43% from products shipped to Hong Kong and 16% from products shipped to mainland China during the nine months ended September 30, 2022. Although a large percentage of our products is shipped to Asia, we believe that a significant number of the systems designed by these customers and incorporating our semiconductor products are then sold outside Asia. For example, revenue generated from sales of our products during the nine months ended September 30, 2023 and 2022 related principally to sales to Asian ODMs and contract manufacturers delivering products into European and North American markets. To date, all of our sales have been denominated in United States dollars.

A significant portion of our net revenue has historically been generated by a limited number of customers. Sales to customers is comprised of both direct sales to customers and indirect sales through distributors. In the three months ended September 30, 2023, one single customer accounted for 10% or more of our net revenue, and our ten largest customers collectively accounted for 60% of our net revenue, of which distributor customers accounted for 11% of our net revenue. In the nine months ended September 30, 2023, one single customer accounted for 11% of our net revenue, and our ten largest customers collectively accounted for 55% of our net revenue, of which distributor customers accounted for 11% of our net revenue. For certain customers, we sell multiple products into disparate end user applications such as cable modems, PON ODUs, Wi-Fi routers, and broadband gateways.

Our business depends on winning competitive bid selection processes, known as design wins, to develop integrated circuits for use in our customers' products. These selection processes are typically lengthy, and as a result, our sales cycles will vary based on the specific market served, whether the design win is with an existing or a new customer and whether our product being designed in our customer's device is a first generation or subsequent generation product. Our customers' products can be complex and, if our engagement results in a design win, can require significant time to define, design and result in volume production. Because the sales cycle for our products is long, we can incur significant design and development expenditures in circumstances where we do not ultimately recognize any revenue. We do not have any long-term purchase commitments with any of our customers, all of whom purchase our products on a purchase order basis. Once one of our products is incorporated into a customer's design, we believe that our product is likely to remain a component of the customer's product for its life cycle because of the time and expense associated with redesigning the product or substituting an alternative chip. Product life cycles in our target markets will vary by application. For example, in the cable operator modem and gateway sectors, a design-in can have a product life cycle of 24 to 48 months. In the industrial and wired and wireless infrastructure markets, a design-in can have a product life cycle of 24 to 60 months and beyond.

Impact of the Global Economic Uncertainty and Inventory Build

Inflation, and uncertainty in customer demand and the worldwide economy has continued, and we expect to experience continued volatility in our sales and revenues. In particular, we believe an economic slowdown and inventory oversupply will continue to add to volatility in managing the business. In addition, inventory oversupply could potentially lead to more inventory write-downs, including charges for any excess or obsolete inventory which could negatively impact our gross margins. As customer lead times continue to improve, we have seen and expect to continue to see a more normalized demand-planning horizon. While we expect inventory to remain elevated in the near term, we expect channel inventory will continue to decline over the coming quarters.

Terminated Silicon Motion Merger

On May 5, 2022, we entered into an agreement and plan of merger, or the Merger Agreement, with Silicon Motion Technology Corporation, or Silicon Motion, an exempted company with limited liability incorporated under the Law of the Cayman Islands, pursuant to which, subject to the terms and conditions thereof, we agreed to acquire Silicon Motion pursuant to a statutory merger of Shark Merger Sub, a wholly-owned subsidiary of MaxLinear, with and into Silicon Motion, with Silicon Motion surviving the merger as a wholly-owned subsidiary of MaxLinear. Silicon Motion is a provider of NAND flash controllers for solid state drives and other solid state storage devices.

On July 26, 2023, we terminated the Merger Agreement and notified Silicon Motion that we were relieved of our obligations to close because, among other reasons, (i) certain conditions to closing set forth in the Merger Agreement were not satisfied and were incapable of being satisfied, (ii) Silicon Motion had suffered a Material Adverse Effect that was continuing, (iii) Silicon Motion was in material breach of representations, warranties, covenants, and agreements in the Merger Agreement that gave rise to the right of the Company to terminate, and (iv) in any event, the First Extended Outside Date had passed and was not automatically extended because certain conditions in Article 6 of the Merger Agreement were not satisfied or waived as of May 5, 2023. Under the terms of the Merger Agreement, MaxLinear was not required to pay a break-up fee or other fee as a result of the termination of the Merger Agreement. On August 16, 2023, Silicon Motion delivered a notice to us, which Silicon Motion publicly disclosed, that it was purporting to terminate the Merger Agreement and that Silicon Motion would be commencing an arbitration to seek damages from us arising from our alleged breaches of the Merger Agreement. Undefined capitalized terms in this paragraph have the same meaning as in the Merger Agreement.

On October 5, 2023, Silicon Motion filed a Notice of Arbitration with the Singapore International Arbitration Centre alleging that we breached the Merger Agreement. See Part II, Item 1 (Legal Proceedings) of this report for more information on legal proceedings related to the termination of the Merger Agreement.

The second amended and restated commitment letter dated October 24, 2022 with Wells Fargo Bank, N.A., or Wells Fargo Bank, and other lenders, and related financing commitments for the previously pending (now terminated) merger were also terminated upon termination of the Merger Agreement. As a result of the termination of the financing, the Company was required to pay to Wells Fargo Bank a ticking fee of $18.3 million, which is included in other income (expense), net in the three months ended September 30, 2023.

Acquisition of Company Y

On January 17, 2023, the Company completed its acquisition of a business, or Company Y, pursuant to a Purchase and Sale Agreement, or the Purchase Agreement. The transaction consideration included $9.7 million in cash. In addition, Company Y stockholders may receive up to an additional $2.6 million in potential contingent consideration, subject to the acquired business satisfying certain personnel objectives by June 17, 2024.

Company Y is headquartered in Bangalore, India and operates as a provider of engineering design services.

Critical Accounting Policies and Estimates

Management's discussion and analysis of our financial condition and results of operations is based upon our consolidated financial statements which are prepared in accordance with accounting principles that are generally accepted in the United States of America. The preparation of these consolidated financial statements requires us to make estimates and judgments that affect the reported amounts of assets and liabilities, related disclosure of contingent assets and liabilities at the date of the consolidated financial statements, and the reported amounts of revenues and expenses during the reporting period. We continually evaluate our estimates and judgments, the most critical of which are those related to business combinations, revenue recognition, inventory valuation, production masks, goodwill and other intangible assets valuation, and income taxes. We base our estimates and judgments on historical experience and other factors that we believe to be reasonable under the circumstances. Materially different results can occur as circumstances change and additional information becomes known.

We believe that accounting policies we have identified as critical involve a greater degree of judgment and complexity than our other accounting policies. Accordingly, those are the policies we believe are the most critical to understanding and evaluating our consolidated financial condition and results of operations.

For a summary of our critical accounting policies and estimates, refer to Management's Discussion and Analysis section of our Annual Report on Form 10-K for the year ended December 31, 2022, which we filed with the Securities and Exchange Commission, or SEC, on February 1, 2023, or our Annual Report. There have been no material changes to our critical accounting policies and estimates during the nine months ended September 30, 2023.

Recently Issued Accounting Pronouncements

See Note 1 to our consolidated financial statements included elsewhere in this Quarterly Report on Form 10-Q for recently issued accounting pronouncements not yet adopted as of the date of this report.

Results of Operations

The following describes the line items set forth in our unaudited consolidated statements of operations.

Net Revenue. Net revenue is generated from sales of radio-frequency, analog, digital, and mixed-signal integrated circuits for access and connectivity, wired and wireless infrastructure, and industrial and multi-market applications. A significant portion of our sales are to distributors, who then resell our products.

Cost of Net Revenue. Cost of net revenue includes the cost of finished silicon wafers processed by third-party foundries; costs associated with our outsourced packaging and assembly, test and shipping; costs of personnel, including stock-based compensation, and equipment associated with manufacturing support, logistics and quality assurance; amortization of acquired developed technology intangible assets and certain purchased licensed technology intangible assets; amortization of certain production mask costs and computer-aided design software license costs; cost of production load boards and sockets; and an allocated portion of our occupancy costs.

Research and Development. Research and development expense includes personnel-related expenses, including salaries and benefits and stock-based compensation, new product engineering mask costs, prototype integrated circuit packaging and test costs, computer-aided design software license costs, intellectual property license costs, reference design development costs, development testing and evaluation costs, depreciation expense and allocated occupancy costs. Research and development activities include the design of new products, refinement of existing products and design of test methodologies to ensure compliance with required specifications. All research and development costs are expensed as incurred.

Selling, General and Administrative. Selling, general and administrative expense includes personnel-related expenses, including salaries and benefits and stock-based compensation, amortization of certain acquired intangible assets, merger, acquisition and integration costs, third-party sales commissions, field application engineering support, travel costs, professional and consulting fees, legal fees, depreciation expense and allocated occupancy costs.

Impairment Losses. Impairment losses consist of charges resulting from the impairment of intangible assets.

Restructuring Charges. Restructuring charges consist of severance, lease and leasehold impairment charges, and other charges related to restructuring plans.

Interest and Other Income (Expense), Net. Interest and other income (expense), net includes interest income, interest expense and other income (expense). Interest income consists of interest earned on our cash, cash equivalents and restricted cash balances. Interest expense consists of interest accrued on debt and amortization of discounts on debt and other liabilities. Other income (expense) consists of income (expense) generated from non-operating transactions, including a ticking fee paid to lenders following the termination of the Silicon Motion merger and unrealized holding gains (losses) from certain investments required to be marked to market value.

Income Tax Provision (Benefit). We make certain estimates and judgments in determining income taxes for financial statement purposes. These estimates and judgments occur in the calculation of certain tax assets and liabilities, which arise from differences in the timing of recognition of revenue and expenses for tax and financial statement purposes and the realizability of assets in future years.

The following table sets forth our consolidated statement of operations data as a percentage of net revenue for the periods indicated:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2023	2022	2023	2022
Net revenue	100 %	100 %	100 %	100 %
Cost of net revenue	45	41	44	41
Gross profit	55	59	56	59
Operating expenses:				
Research and development	49	27	36	27
Selling, general and administrative	19	13	17	15
Impairment losses	—	—	—	—
Restructuring charges	—	—	2	—
Total operating expenses	68	40	55	42
Income (loss) from operations	(13)	18	1	17
Interest income	1	—	1	—
Interest expense	(2)	(1)	(1)	(1)
Other income (expense), net	(17)	(2)	—	—
Total other income (expense), net	(17)	(3)	(4)	(1)
Income (loss) before income taxes	(31)	16	(4)	16
Income tax provision (benefit)	(1)	6	2	5
Net income (loss)	(29) %	10 %	(6) %	11 %

Net Revenue

	Three Months Ended September 30,				Nine Months Ended September 30,			
	2023	2022	$ Change	% Change	2023	2022	$ Change	% Change
	(dollars in thousands)				(dollars in thousands)			
Broadband	$ 34,416	$ 120,165	$ (85,749)	(71) %	$ 169,646	$ 393,819	$ (224,173)	(57) %
% of net revenue	25 %	42 %			30 %	47 %		
Connectivity	15,025	82,603	(67,578)	(82) %	119,232	199,182	(79,950)	(40) %
% of net revenue	11 %	29 %			21 %	24 %		
Infrastructure	49,985	35,580	14,405	40 %	145,549	104,650	40,899	39 %
% of net revenue	37 %	12 %			26 %	13 %		
Industrial and multi-market	36,104	47,382	(11,278)	(24) %	133,483	132,015	1,468	1 %
% of net revenue	27 %	17 %			23 %	16 %		
Total net revenue	$ 135,530	$ 285,730	$ (150,200)	(53 %)	$ 567,910	$ 829,666	$ (261,756)	(32) %

Net revenue decreased $150.2 million to $135.5 million for the three months ended September 30, 2023, as compared to $285.7 million for the three months ended September 30, 2022, primarily as a result of macroeconomic conditions impacting customer demand, including excess inventory in the channel built up following the supply shortages in the prior year. The decrease in broadband net revenue of $85.7 million was primarily from gateway revenues, and to a lesser extent, cable. The decrease in connectivity revenue of $67.6 million was driven by declines in Wi-Fi, ethernet and MoCA revenues. The increase in infrastructure revenues of $14.4 million was primarily driven by an increase in wireless backhaul product shipments. The decrease in industrial and multi-market revenue of $11.3 million was related to decreased shipments of high-performance analog and component products.

Net revenue decreased $261.8 million to $567.9 million for the nine months ended September 30, 2023, as compared to $829.7 million for the nine months ended September 30, 2022, primarily as a result of macroeconomic conditions impacting customer demand, including excess inventory in the channel built up following the supply shortages in the prior year. The decrease in broadband net revenue of $224.2 million was primarily from gateway revenues, and to a lesser extent, cable, tuners and satellite. The decrease in connectivity revenue of $80.0 million was primarily driven by declines in Wi-Fi, MoCA and ethernet revenues. The increase in infrastructure revenues of $40.9 million was primarily driven by an increase in wireless backhaul product shipments. The increase in industrial and multi-market revenue of $1.5 million was related to increased shipments of component products, partially offset by decreased shipments of high-performance analog products.

We currently expect that revenue will fluctuate in the future, from period-to-period, consistent with the cyclical nature of our industry, and we may experience further decline in revenue due to current macroeconomic conditions impacting customer demand for various products.

Cost of Net Revenue and Gross Profit

	Three Months Ended September 30,		$ Change	% Change	Nine Months Ended September 30,		$ Change	% Change
	2023	2022			2023	2022		
	(dollars in thousands)				(dollars in thousands)			
Cost of net revenue	$ 61,586	$ 118,242	$ (56,656)	(48) %	$ 250,786	$ 343,237	$ (92,451)	(27) %
% of net revenue	45 %	41 %			44 %	41 %		
Gross profit	73,944	167,488	(93,544)	(56) %	317,124	486,429	(169,305)	(35) %
% of net revenue	55 %	59 %			56 %	59 %		

Cost of net revenue decreased $56.7 million to $61.6 million for the three months ended September 30, 2023, as compared to $118.2 million for the three months ended September 30, 2022. The decrease was primarily driven by lower sales and expenses. Gross profit percentage declined for the three months ended September 30, 2023, as compared to the three months ended September 30, 2022, due primarily to revenue mix and decreased absorption of amortization of intangible assets.

Cost of net revenue decreased $92.5 million to $250.8 million for the nine months ended September 30, 2023, as compared to $343.2 million for the nine months ended September 30, 2022. The decrease was primarily driven by lower sales and expenses. Gross profit percentage declined for the nine months ended September 30, 2023, as compared to the nine months ended September 30, 2022, due primarily to revenue mix and decreased absorption of amortization of intangible assets.

We currently expect that gross profit percentage will fluctuate in the future, from period-to-period, based on changes in product mix, average selling prices, and average manufacturing costs.

Research and Development

	Three Months Ended September 30,		$ Change	% Change	Nine Months Ended September 30,		$ Change	% Change
	2023	2022			2023	2022		
	(dollars in thousands)				(dollars in thousands)			
Research and development	$ 66,306	$ 76,437	$ (10,131)	(13) %	$ 204,254	$ 222,718	$ (18,464)	(8) %
% of net revenue	49 %	27 %			36 %	27 %		

Research and development expense decreased $10.1 million to $66.3 million for the three months ended September 30, 2023, as compared to $76.4 million for the three months ended September 30, 2022. The decrease was primarily driven by the impact from the decrease in headcount from a reduction in force.

Research and development expense decreased $18.5 million to $204.3 million for the nine months ended September 30, 2023, as compared to $222.7 million for the nine months ended September 30, 2022. The decrease was primarily driven by the impact from the decrease in headcount from a reduction in force.

We are closely managing our research and development expenses to meet evolving demand; however, we expect our research and development expenses to increase in future years when we return to expanding our product portfolio and enhancing existing products.

Selling, General and Administrative

	Three Months Ended September 30,		$ Change	% Change	Nine Months Ended September 30,		$ Change	% Change
	2023	2022			2023	2022		
	(dollars in thousands)				(dollars in thousands)			
Selling, general and administrative	$ 25,402	$ 38,472	$ (13,070)	(34) %	$ 97,772	$ 123,536	$ (25,764)	(21) %
% of net revenue	19 %	13 %			17 %	15 %		

Selling, general and administrative expense decreased $13.1 million to $25.4 million for the three months ended September 30, 2023, as compared to $38.5 million for the three months ended September 30, 2022. The decrease was primarily due to decreased amortization of intangibles and stock based-compensation expenses.

Selling, general and administrative expense decreased $25.8 million to $97.8 million for the nine months ended September 30, 2023, as compared to $123.5 million for the nine months ended September 30, 2022. The decrease was primarily due to decreased amortization of intangibles and stock based-compensation expenses.

We are closely managing our selling, general and administrative expenses; however, we expect selling, general and administrative expenses to increase in future years when we return to growing our sales and marketing organization to expand into existing and new markets.

Impairment losses

	Three Months Ended September 30,		$ Change	% Change	Nine Months Ended September 30,		$ Change	% Change
	2023	2022			2023	2022		
	(dollars in thousands)				(dollars in thousands)			
Impairment losses	$ —	$ —	$ —	N/A	$ 2,438	$ —	$ 2,438	N/A
% of net revenue	— %	— %			— %	— %		

Impairment losses in the nine months ended September 30, 2023 related to abandonment of certain intellectual property licenses.

Restructuring Charges

	Three Months Ended September 30,		$ Change	% Change	Nine Months Ended September 30,		$ Change	% Change
	2023	2022			2023	2022		
	(dollars in thousands)				(dollars in thousands)			
Restructuring charges	$ 54	$ 631	$ (577)	(91) %	$ 9,138	$ 1,093	$8,045	736 %
% of net revenue	— %	— %			2 %	— %		

Restructuring charges decreased $0.6 million to $0.1 million for the three months ended September 30, 2023, compared to $0.6 million for the three months ended September 30, 2022.

Restructuring charges increased $8.0 million to $9.1 million for the nine months ended September 30, 2023, compared to $1.1 million for the nine months ended September 30, 2022. Restructuring charges in the nine months ended September 30, 2023 consisted primarily of $8.9 million of employee severance-related charges from a reduction in force.

Interest and Other Income (Expense)

	Three Months Ended September 30,				Nine Months Ended September 30,			
	2023	2022	$ Change	% Change	2023	2022	$ Change	% Change
	(dollars in thousands)				(dollars in thousands)			
Interest and other income (expense), net	$ (23,700)	$ (7,354)	$ (16,346)	222 %	$ (24,701)	$ (5,597)	$ (19,104)	341 %
% of net revenue	(17)%	(3)%			(4)%	(1)%		

Interest and other income (expense), net changed by $16.3 million from expense of $7.4 million in the three months ended September 30, 2022 to expense of $23.7 million for the three months ended September 30, 2023. The change in interest and other income (expense), net was primarily due to a loan ticking fee of approximately $18.3 million paid to lenders following the termination of the Silicon Motion merger, partially offset by an increase in interest income of $1.7 million on interest-bearing cash equivalents.

Interest and other income (expense), net changed by $19.1 million from expense of $5.6 million in the nine months ended September 30, 2022 to expense of $24.7 million for the nine months ended September 30, 2023. The change in interest and other income (expense), net was primarily due to a $22.9 million change in other income (expense), net, from income of $1.7 million in the 2022 period to expense of $21.2 million in the 2023 period, partially offset by the impact of a $4.1 million increase in interest income.

The $22.9 million change in other income (expense), net primarily related to a loan ticking fee of approximately $18.3 million paid to lenders following the termination of the Silicon Motion merger, $2.5 million impact of change from $1.4 million in net unrealized holding loss in the 2022 period to net unrealized holding loss of $3.9 million recognized on equity securities that are marked to market value in other income (expense), net, and $3.4 million impact from foreign currency fluctuations, partially offset by a gain of $1.0 million related to partial curtailment of defined benefit pension obligations. The $4.1 million increase in interest income is from interest-bearing cash equivalents.

Income Tax Provision (Benefit)

	Three Months Ended September 30,				Nine Months Ended September 30,			
	2023	2022	$ Change	% Change	2023	2022	$ Change	% Change
	(dollars in thousands)				(dollars in thousands)			
Income tax provision (benefit)	$ (1,689)	$ 16,186	$ (17,875)	(110)%	$ 13,468	$ 39,525	$ (26,057)	(66) %

The income tax benefit for the three months ended September 30, 2023 was $1.7 million compared to an income tax provision of $16.2 million for the three months ended September 30, 2022.

The income tax provision for the nine months ended September 30, 2023 was $13.5 million compared to an income tax provision of $39.5 million for the nine months ended September 30, 2022.

The difference between our effective tax rate and the 21.0% U.S. federal statutory rate for the nine months ended September 30, 2023 primarily related to the mix of pre-tax income among jurisdictions, permanent tax items including a tax on global intangible low-taxed income, stock based compensation, excess tax benefits related to stock-based compensation, release of uncertain tax positions under ASC 740-10, and release of the valuation allowance on certain federal R&D credits. The permanent tax item related to global intangible low-taxed income also reflects legislative changes requiring the capitalization of research and experimentation costs, as well as limitations on the creditability of certain foreign income taxes.

The difference between our effective tax rate and the 21.0% U.S. federal statutory rate for the nine months ended September 30, 2022 primarily related to the mix of pre-tax income among jurisdictions, permanent tax items including the tax on global intangible low-taxed income, stock based compensation, excess tax benefits related to stock-based compensation, release of certain reserves for uncertain tax positions under ASC 740-10, and release of the valuation allowance on certain federal R&D credits. The permanent tax item related to global intangible low-taxed income also reflects legislative changes requiring the capitalization of research and experimentation costs, as well as limitations on the creditability of certain foreign income taxes.

We continue to maintain a valuation allowance to offset state and certain federal and foreign deferred tax assets, as realization of such assets does not meet the more-likely-than-not threshold required under accounting guidelines. In making such determination, we consider all available positive and negative evidence quarterly, including scheduled reversals of deferred tax liabilities, projected future taxable income, tax planning strategies, and recent financial performance. Based upon our review of all positive and negative evidence, we continue to have a valuation allowance on state deferred tax assets, certain federal deferred tax assets, and certain foreign deferred tax assets in jurisdictions where we have cumulative losses or otherwise are not expected to utilize certain tax attributes. We do not incur income tax expense or benefit in certain tax-free jurisdictions in which we operate.

Our subsidiary in Singapore operates under certain tax incentives in Singapore, which are effective through March 2027. Under these incentives, qualifying income derived from certain sales of our integrated circuits is taxed at a concessionary rate over the incentive period. We also receive a reduced withholding tax rate on certain intercompany royalty payments made by our Singapore subsidiary during the incentive period. We recorded a tax provision in the nine months ended September 30, 2023 and 2022 at the incentive rate. The incentives are conditional upon our meeting certain minimum employment and investment thresholds within Singapore over time, and we may be required to return certain tax benefits in the event we do not achieve compliance related to that incentive period. We currently believe that we will be able to satisfy these conditions without material risk.

Liquidity and Capital Resources

As of September 30, 2023, we had cash and cash equivalents of $187.0 million, restricted cash of $1.1 million and net accounts receivable of $158.2 million. Additionally, as of September 30, 2023, our working capital was $275.7 million.

Our primary uses of cash are to fund operating expenses and purchases of inventory, property and equipment, and from time to time, the acquisition of businesses. In May 2022, we entered into the Merger Agreement to acquire Silicon Motion. However, on July 26, 2023, we terminated the Merger Agreement and were relieved of our obligations to close.

We also use cash to pay down outstanding debt, and from time to time, make investments. As of September 30, 2023, $125.0 million of principal was outstanding under a senior secured term B loan facility or the “Initial Term Loan under the June 23, 2021 Credit Agreement.” The Company also has available a senior secured revolving credit facility, in an aggregate principal amount of up to $100.0 million which remained undrawn as of September 30, 2023. The proceeds of the revolving facility may be used to finance the working capital needs and other general corporate purposes of the Company and its subsidiaries.

Commencing on September 30, 2021, the Initial Term Loan under the June 23, 2021 Credit Agreement has amortized in equal quarterly installments equal to 0.25% of the original principal amount of the Initial Term Loan under the June 23, 2021 Credit Agreement, with the balance payable on June 23, 2028. We could be subject to substantial variable interest rate risk because our interest rate under term loans typically vary based on a fixed margin over an indexed rate or an adjusted base rate. While we had been mitigating the impact of rising interest rates with large amounts of prepayments on our outstanding debt, if interest rates were to further increase substantially, it would have a material adverse effect our operating results and could affect our ability to service the indebtedness. Please refer to the Risk Factor entitled “*As of September 30, 2023, our aggregate indebtedness was $125.0 million, and we are subject to a variable amount of interest on the principal balance of our credit agreements and could continue to be adversely impacted by rising interest rates in the future. Such indebtedness adversely affects our operating results and cash-flows as we satisfy our underlying interest and principal payment obligations and contains financial and operational covenants that could adversely affect our operational freedom or ability to pursue strategic transactions that we would otherwise consider to be in the best interest of stockholders, including obtaining additional indebtedness to finance such transactions. In addition, rising interest rates may make it more difficult for us, our customers, and our distributors to obtain financing and service their interest and debt obligations, which in turn has an impact on customer demand for our products and our distributors' business*” for a discussion of how our indebtedness could have a material adverse effect on our liquidity and capital resources.

Our future capital requirements will depend on many factors, including changes in revenue, the expansion of our engineering, sales and marketing activities, the timing and extent of our expansion into new territories, the timing of introductions of new products and enhancements to existing products, the continuing market acceptance of our products, any damages from legal proceedings related to the termination of the Merger Agreement with Silicon Motion or any alleged breaches of the Merger Agreement that we are required to pay, or any amounts we agree to pay in any settlement and any other potential material investments in, or acquisitions of, complementary businesses, services or technologies. Additional funds may not be available on terms favorable to us or at all. If we are unable to raise additional funds when needed, we may not be able to sustain our operations or execute our strategic plans.

Our cash and cash equivalents are impacted by the timing of when we pay expenses as reflected in the change in our outstanding accounts payable and accrued expenses. Cash used to fund operating expenses in our consolidated statements of cash flows excludes the impact of non-cash items such as amortization and depreciation of acquired intangible assets and leased right-of-use assets and property and equipment, stock-based compensation, impairment of intangible assets and unrealized holding gains or losses on marketable equity securities. Cash used to fund capital purchases and acquisitions of businesses and investments are included in investing activities in our consolidated statements of cash flows. Cash proceeds from issuance of common stock and debt and cash used to pay down outstanding debt are included in financing activities in our consolidated statements of cash flows.

As of September 30, 2023, our material cash requirements include long-term debt, non-cancelable operating leases, inventory purchase obligations and other obligations, which primarily consist of contractual payments due for computer-aided design software, as follows:

	Payments due				
	Total	Less than 1 year	2-3 years	4-5 years	More than 5 years
	(in thousands)				
Long-term debt obligations	$ 125,000	$ —	$ —	$ 125,000	$ —
Operating lease obligations	41,218	2,791	20,882	13,499	4,046
Inventory purchase obligations	41,164	23,603	17,561	—	—
Other obligations	87,846	6,051	59,555	22,240	—
Total	$ 295,228	$ 32,445	$ 97,998	$ 160,739	$ 4,046

Our planned capital expenditures as of September 30, 2023 were not material. Our consolidated balance sheet at September 30, 2023 included $5.2 million in other long-term liabilities for uncertain tax positions, some of which may result in cash payment. The future payments related to uncertain tax positions recorded as other long-term liabilities have not been presented in the table above due to the uncertainty of the amounts and timing of cash settlement with the taxing authorities.

Our primary sources of cash are cash receipts on accounts receivable from our shipment of products to distributors and direct customers. Aside from the amounts billed to our customers, net cash collections of accounts receivable are impacted by the efficiency of our cash collections process, which can vary from period to period depending on the payment cycles of our major distributor customers, and relative linearity of shipments period-to-period. The June 23, 2021 Credit Agreement, under which we entered into a senior secured term B loan facility and a revolving credit facility, permits us to request incremental loans in an aggregate principal amount not to exceed the sum of an amount equal to the greater of (x) $175.0 million and (y) 100% of “Consolidated EBITDA” (as defined in such agreement), plus the amount of certain voluntary prepayments, plus an unlimited amount that is subject to pro forma compliance with certain first lien net leverage ratio, secured net leverage ratio and total net leverage ratio tests.

Following is a summary of our working capital, cash and cash equivalents, and restricted cash for the periods indicated:

	September 30, 2023	December 31, 2022
	(in thousands)	
Working capital	$ 275,697	$ 222,038
Cash and cash equivalents	$ 187,028	$ 187,353
Short-term restricted cash	1,105	982
Long-term restricted cash	19	22
Total cash, cash equivalents, and restricted cash	$ 188,152	$ 188,357

Following is a summary of our cash flows provided by (used in) operating activities, investing activities and financing activities for the periods indicated:

	Nine Months Ended September 30,	
	2023	2022
	(in thousands)	
Net cash provided by operating activities	$ 59,945	$ 319,369
Net cash used in investing activities	(30,762)	(74,390)
Net cash used in financing activities	(27,527)	(191,824)
Effect of exchange rate changes on cash, cash equivalents and restricted cash	(1,861)	(2,400)
Increase (decrease) in cash, cash equivalents and restricted cash	$ (205)	$ 50,755

Cash Flows from Operating Activities

Net cash provided by operating activities was $59.9 million for the nine months ended September 30, 2023. Net cash provided by operating activities consisted of non-cash items of $103.1 million, and excess tax benefits and deferred income taxes totaling $6.0 million, partially offset by net loss of $34.6 million and changes in operating assets and liabilities of $14.5 million. Non-cash items included in net loss for the nine months ended September 30, 2023 primarily consisted of depreciation and amortization of property, equipment, acquired intangible assets and leased right-of-use assets of $54.9 million, stock-based compensation of $38.8 million, unrealized holding loss on investments of $3.9 million, impairment losses of $2.4 million, and loss on disposal of property and equipment of $2.1 million.

Net cash provided by operating activities was $319.4 million for the nine months ended September 30, 2022. Net cash provided by operating activities consisted of positive impact of net income of $94.0 million, non-cash items of $120.3 million, and changes in operating assets and liabilities of $91.5 million, partially offset by excess tax benefits and deferred income taxes totaling $13.6 million. Non-cash items included in net income for the nine months ended September 30, 2022 primarily consisted of depreciation and amortization of property, equipment, acquired intangible assets and leased right-of-use assets of $61.9 million and stock-based compensation of $58.2 million.

Cash Flows from Investing Activities

Net cash used in investing activities was $30.8 million for the nine months ended September 30, 2023 and consisted of cash used in acquisitions of Company X and Y of $12.4 million (including $2.7 million contingent consideration paid to shareholders of Company X), purchases of property and equipment of $12.2 million, and purchases of intangible assets of $6.2 million.

Net cash used in investing activities was $74.4 million for the nine months ended September 30, 2022 and consisted of purchases of long-term investments of $29.3 million, purchases of property and equipment of $24.6 million, purchases of intangible assets of $10.4 million, and proceeds loaned under notes receivable of $10.0 million.

Cash Flows from Financing Activities

Net cash used in financing activities was $27.5 million for the nine months ended September 30, 2023. Net cash used in financing activities consisted primarily of payment of debt commitment, or ticking fees, of $18.3 million in connection with the termination of the merger with Silicon Motion and minimum tax withholding paid on behalf of employees for restricted stock units of $12.4 million, partially offset by net proceeds from issuance of our common stock upon exercise of stock options and purchases made under our ESPP of $3.2 million.

Net cash used in financing activities was $191.8 million for the nine months ended September 30, 2022. Net cash used in financing activities consisted primarily of repayments of debt of $135.0 million, common stock repurchases of $31.5 million, and minimum tax withholding paid on behalf of employees for restricted stock units of $28.5 million, partially offset by $3.2 million in net proceeds from issuance of our common stock upon exercise of stock options and purchases made under our ESPP.

We believe that our $187.0 million of cash and cash equivalents at September 30, 2023 will be sufficient to fund our projected operating requirements for at least the next twelve months. As of September 30, 2023, our indebtedness totaled $125.0 million, which consists of outstanding principal under the Initial Term Loan under the June 23, 2021 Credit Agreement. The June 23, 2021 Credit Agreement also provides the Company with the Revolving Facility in an aggregate principal amount of up to $100.0 million, which remained undrawn as of September 30, 2023. The Initial Term Loan under the June 23, 2021 Credit Agreement has a seven-year term expiring in June 2028 and bears interest, at the Company's option, at a per annum rate equal to either (i) a base rate equal to the highest of (x) the federal funds rate, plus 0.50%, (y) the prime rate then in effect and (z) an adjusted LIBOR rate determined on the basis of a one-month interest period plus 1.00%, in each case, plus an applicable margin of 1.25% or (ii) an adjusted LIBOR rate, subject to a floor of 0.50%, plus an applicable margin of 2.25%. Loans under the Revolving Facility initially bear interest, at a per annum rate equal to either (i) a base rate (as calculated above) plus an applicable margin of 0.00%, or (ii) an adjusted LIBOR rate (as calculated above) plus an applicable margin of 1.00%. Following delivery of financial statements for the Company's fiscal quarter ending June 30, 2021, the applicable margin for loans under the Revolving Facility will range from 0.00% to 0.75% in the case of base rate loans and 1.00% to 1.75% in the case of LIBOR rate loans, in each case, depending on the Company's secured net leverage ratio as of the most recently ended fiscal quarter. The Company is required to pay commitment fees ranging from 0.175% to 0.25% per annum on the daily undrawn commitments under the Revolving Facility, depending on the Company's secured net leverage ratio as of the most recently ended fiscal quarter. Commencing on September 30, 2021, the Initial Term Loan under the June 23, 2021 Credit Agreement amortizes in equal quarterly installments equal to 0.25% of the original principal amount, with the balance payable at maturity on June 23, 2028. The June 23, 2021 Credit Agreement contains customary provisions specifying alternative interest rate calculations to be employed at such time as LIBOR ceases to be available as a benchmark for establishing the interest rate on floating interest rate borrowings.

Our cash and cash equivalents in recent years have been favorably affected by our implementation of an equity-based bonus program for our employees, including executives. In connection with that bonus program, in February 2023, we issued 0.9 million freely-tradable (subject to restrictions for affiliates) shares of our common stock in settlement of bonus awards for the 2022 performance period. We expect to implement a similar equity-based plan for fiscal 2023, but our compensation committee retains discretion to effect payment in cash, stock, or a combination of cash and stock.

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.

Foreign Currency Risk

To date, our international customer and vendor agreements have been denominated mostly in United States dollars. Accordingly, we have limited exposure to foreign currency exchange rates and do not enter into foreign currency hedging transactions. The functional currency of certain foreign subsidiaries is the local currency. Accordingly, the effects of exchange rate fluctuations on the net assets of these foreign subsidiaries' operations are accounted for as translation gains or losses in accumulated other comprehensive income (loss) within stockholders' equity. A hypothetical change of 100 basis points in such foreign currency exchange rates during the nine months ended September 30, 2023 would result in a change to translation gain in accumulated other comprehensive income (loss) of approximately $1.0 million.

Interest Rate Risk

We are subject to a variable amount of interest on the principal balance of our credit agreements described above and could be adversely impacted by rising interest rates in the future. If LIBOR interest rates had increased by 10% during the three and nine months ended September 30, 2023, the rate increase would have resulted in an immaterial increase to interest expense. We currently believe our operating cash held primarily for working capital purpose is sufficient to cover our interest obligations, but we are monitoring the impact of rising interest rates on our ability to service our interest and debt obligations, obtain financing, and on our business in general.

ITEM 4. CONTROLS AND PROCEDURES

Evaluation of Disclosure and Procedures

We maintain disclosure controls and procedures that are designed to ensure that information required to be disclosed in our periodic reports filed with the SEC is recorded, processed, summarized and reported within the time periods specified in the rules and forms of the SEC and that such information is accumulated and communicated to our management, including our principal executive officer and principal financial officer, as appropriate, to allow for timely decisions regarding required disclosure. In designing and evaluating the disclosure controls and procedures, management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving the desired control objectives, and no evaluation of controls and procedures can provide absolute assurance that all control issues and instances of fraud, if any, within a company have been detected. Management is required to apply its judgment in evaluating the cost-benefit relationship of possible controls and procedures.

As required by Rule 13a-15(b) of the Securities Exchange Act of 1934, as amended, or the Exchange Act, prior to filing this Quarterly Report, we carried out an evaluation, under the supervision and with the participation of our management, including our principal executive officer and principal financial officer, of the effectiveness of the design and operation of our disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) of the Exchange Act) as of the end of the period covered by this Quarterly Report. Based on their evaluation, our principal executive officer and principal financial officer concluded that our disclosure controls and procedures were effective as of the end of the period covered by this Quarterly Report to provide reasonable assurance that information we are required to disclose in reports that we file or submit under the Exchange Act is recorded, processed, summarized, and reported within the time periods specified in SEC rules and forms, and that such information is accumulated and communicated to our management, including our CEO and CFO, as appropriate, to allow timely decisions regarding required disclosure.

Changes in Internal Control over Financial Reporting

An evaluation was performed under the supervision and with the participation of our management, including our principal executive officer and principal financial officer, to determine whether any change in our internal control over financial reporting occurred during the fiscal quarter ended September 30, 2023 that materially affected, or is reasonably likely to materially affect, our internal control over financial reporting. There were no changes in our internal control over financial reporting identified in connection with the evaluation required by paragraph (d) of Rule 13a-15 or Rule 15d-15 of the Securities Exchange Act of 1934, as amended, that occurred during the fiscal quarter ended September 30, 2023 that materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

PART II — OTHER INFORMATION

ITEM 1. LEGAL PROCEEDINGS

Dispute with Silicon Motion

As previously disclosed, on July 26, 2023, MaxLinear terminated the Merger Agreement on multiple grounds. On August 16, 2023, Silicon Motion delivered to MaxLinear a notice, which Silicon Motion publicly disclosed, that it was purporting to terminate the Merger Agreement and that Silicon Motion would be commencing an arbitration before the Singapore International Arbitration Centre to seek damages from MaxLinear arising from MaxLinear's alleged breaches of the Merger Agreement. Silicon Motion's position is that MaxLinear's Willful and Material Breaches (as such term is defined in the Merger Agreement) of the Merger Agreement prevented the Merger from being completed by August 7, 2023 and that MaxLinear is consequently liable for substantial monetary damages in excess of the termination fee as provided in the Merger Agreement.

On October 5, 2023, Silicon Motion filed a Notice of Arbitration with the Singapore International Arbitration Centre alleging that MaxLinear breached the Merger Agreement. Silicon Motion seeks payment of the termination fee, additional damages, fees, and costs. The arbitration will be confidential.

MaxLinear believes that it properly terminated the Merger Agreement and thatSilicon Motion's claims to the contrary are without merit. MaxLinear remains confident in its decision and will vigorously defend its right to terminate the Silicon Motion transaction without penalty.

Class Action Complaint

On August 31, 2023, a Silicon Motion stockholder filed a putative class action complaint in the United States District Court for the Southern District of California captioned*Water Island Event-Driven Fund v. MaxLinear, Inc*., No. 23-cv-01607 (S.D. Cal.), against MaxLinear and certain of its current officers. The complaint includes two claims: (1) an alleged violation of Section 10(b) of the Exchange Act and Rule 10b-5 promulgated thereunder; and (2) an alleged violation of Section 20(a) of the Exchange Act. The complaint alleges that the defendants made false and misleading statements and/or omitted material facts that MaxLinear had a duty to disclose, concerning the Company's ability and intention to timely close the merger with Silicon Motion, including that: (i) MaxLinear had allegedly decided it would not consummate the merger because the economic circumstances surrounding the merger had materially changed, including a material downturn in the semiconductor industry and rising interest rates; (ii) MaxLinear had allegedly determined to unilaterally terminate the merger in the event the merger was approved by SAMR; (iii) MaxLinear had allegedly intended to argue that certain conditions in Article 6 of the Merger Agreement had not been satisfied as required by May 5, 2023 as a basis to terminate the merger; and (iv) as a result, MaxLinear had allegedly materially misrepresented the viability of the merger, the purported benefits of the merger, and the likelihood that the merger would be consummated. The complaint seeks compensatory damages, including interest, costs and expenses and such other equitable or injunctive relief that the court deems appropriate. MaxLinear believes that complaint's claims are without merit and will vigorously defend its position.

Other Matters

From time to time, the Company is subject to threats of litigation or actual litigation in the ordinary course of business as described above, some of which may be material. The results of any litigation cannot be predicted with certainty, and regardless of the outcome, litigation can have a material adverse impact on the Company because of defense and settlement costs, diversion of management resources, and other factors. However, as of September 30, 2023, no material loss contingencies have been accrued for such matters in the Company's financial statements.

ITEM 1A. RISK FACTORS

This Quarterly Report on Form 10-Q, or Form 10-Q, including any information that may be incorporated by reference herein, contains forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, referred to as the Securities Act, and Section 21E of the Securities Exchange Act of 1934, as amended, referred to as the Exchange Act. In some cases, you can identify forward-looking statements by terms such as "may," "will," "should," "expect," "plan," "intend," "forecast," "anticipate," "believe," "estimate," "predict," "potential," "continue" or the negative of these terms or other comparable terminology. The forward-looking statements contained in this Form 10-Q involve known and unknown risks, uncertainties and situations that may cause our or our industry's actual results, level of activity, performance or achievements to be materially different from any future results, levels of activity, performance or achievements expressed or implied by these statements. These factors include those listed below in this Part II, Item 1A and those discussed elsewhere in this Form 10-Q. We encourage investors to review these factors carefully. We may from time to time make additional written and oral forward-looking statements, including statements contained in our filings with the SEC. However, we do not undertake to update any forward-looking statement that may be made from time to time by or on behalf of us, whether as a result of new information, future events, or otherwise, except as required by law.

The following discussion provides information concerning the material risks and uncertainties that we have identified and believe may adversely affect our business, our financial condition and our results of operations. Before you decide whether to invest in our securities, you should carefully consider these risk factors together with all of the other information included in this Quarterly Report on Form 10-Q, and in our other public filings, which could materially affect our business, financial condition or future results. Our risk factors are not guarantees that no such conditions exist as of the date of this report and should not be interpreted as an affirmative statement that such risks or conditions have not materialized, in whole or in part.

For the risks relating to our terminated merger with Silicon Motion, please refer to the section of these risk factors captioned "Risks Relating to the Terminated Merger with Silicon Motion."

Risk Factor Summary

Risks Relating to the Terminated Merger with Silicon Motion

- The termination of the Merger Agreement and any arbitration or other dispute with Silicon Motion in connection with the Merger Agreement could cause us to incur substantial costs, may divert management's attention from our business and could otherwise adversely affect our business, financial results and operations.
- If we are required to pay any damages from legal proceedings related to the termination of the Merger Agreement with Silicon Motion or any alleged breaches of the Merger Agreement that we are required to pay, or any amounts we agree to pay in any settlement, the amount could be significant and require us to draw down on all our existing lines of credit and use our cash resources, which may not be sufficient to cover any payments to Silicon Motion and could have a material adverse effect on our business, operating results, and financial condition. We expect that we may not be able to obtain financing on favorable terms if at all or raise additional capital for any such payments.

Risks Related to Our Business

- Intense and increasing competition could have a material adverse effect on our revenue, any revenue growth rate and market share.
- Global economic conditions, including factors such as high inflation or a recession, could continue to adversely affect our business, financial condition and operating results.
- We are subject to the cyclical nature of the semiconductor industry.
- A significant variance in our operating results or rates of growth, if any, could lead to substantial volatility in our stock price. We may not sustain our current level of revenue, which has declined, and/or manage future growth effectively. The impact of excess inventory in the channel has continued to influence our customers' expected demand for certain of our products.
- Our business, financial condition and results of operations could continue to be adversely affected by geopolitical and economic tensions among countries in which we conduct business, including between the United States and China, among other countries. For example, as more entities are added to restricted export control lists, or as semiconductor technology exports to other countries are further controlled, our need to seek authorization from the U.S. government may impact our ability to do business.
- Increased tariffs, export controls, or the imposition of additional trade barriers could have a material adverse effect on our revenues and operating results.

- Increasing geopolitical tensions between the United States and China may lead to additional export controls or restrictions with respect to customers and business partners located in China or other jurisdictions. We will lose sales if we are unable to obtain or retain government authorization to export certain of our products or technology or if export licenses are delayed, denied, or revoked, and we will be subject to legal and regulatory consequences for any noncompliance with applicable laws.
- We also are subject to risks associated with international geopolitical conflicts involving the U.S. and other governments such as China and Russia.
- The loss of, or a significant reduction in orders from major customers has had and could continue to have a material adverse effect on our revenue and operating results.
- Average selling prices of our products could decrease rapidly, which could have a material adverse effect on our profit.
- If we fail to penetrate new applications and markets, our revenue, revenue growth rate, if any, and financial condition could be materially and adversely affected.
- Development delays and consolidation trends in our industry could adversely affect our future revenues and results.
- We may be unable to make the substantial R&D investments that are required to remain competitive.
- Unforeseen delays or expenses caused by undetected defects or bugs in our products could reduce the market acceptance of our new products, damage our reputation and adversely affect our operating costs.
- We must be able to attract, train and retain qualified personnel and senior management, or our business, financial conditions, results of operations and prospects could suffer.
- If we fail to timely develop and introduce new or enhanced products, our ability to attract and retain customers and compete could be harmed.
- We are subject to order and shipment uncertainties, and differences between our estimates of customer demand and product mix and our actual results could continue to negatively affect our inventory levels, sales and operating results.
- We may have difficulty accurately predicting our future revenue and appropriately budgeting our expenses particularly as we seek to enter new markets where we may not have prior experience.
- Customers require us to undergo a lengthy and expensive qualification process which does not assure product sales.
- We incur significant expenditures to win business and customer product plan cancellations may adversely affect our results of operations.
- Our operating results are subject to substantial quarterly and annual fluctuations and have fluctuated in the past and may fluctuate significantly due to a number of factors that could adversely affect our business and our stock price.
- A failure to maintain compliance with governmental regulations could have a material adverse effect on our business.
- We have been and may be subject to future information technology failures, including security breaches and cyber-attacks, that could disrupt our operations and adversely affect our business, operations, and financial results.
- We are subject to a variable amount of interest on the principal balance of our credit agreements and could continue to be adversely impacted by rising interest rates in the future as we satisfy our underlying interest and principal payment obligations. Our loan agreements contain financial and operational covenants that could adversely affect our operational freedom or ability to pursue strategic transactions that we would otherwise consider to be in the best interests of stockholders, including obtaining additional indebtedness to finance such transactions. In addition, rising interest rates may make it more difficult for us, our customers, and our distributors to obtain financing and service their interest and debt obligations, which in turn has an impact on customer demand for our products and our distributors' business.

Risks Relating to Intellectual Property

- We have settled in the past intellectual property litigation, and are currently facing and may in the future face claims of intellectual property infringement, which could be time-consuming, costly to defend or settle and result in the loss of significant rights.
- If we are unable to protect our significant amount of intellectual property, our business could be adversely affected.
- We face risks related to security vulnerabilities in our products.
- The use of open source software in our products, processes and technology may expose us to additional risks and harm our intellectual property.

Risks Relating to Reliance on Third Parties

- Failure to manage our relationships with, or negative impacts from, third parties could adversely affect our ability to market and sell our products.
- Should any of our distributors cease or be forced to stop distributing our products, our business would suffer.
- A lack of long-term supply contracts, and any supply disruption, including as a result of government restrictions, could have a material adverse effect on our business.

- Any failure of third parties to provide services and technology could have a material adverse effect on our business.

Risks Relating to Our Common Stock

- Our senior management team may use our available cash and cash equivalents in ways with which you may not agree or in ways which may not yield a return.
- Anti-takeover provisions in our charter and under Delaware law could make an acquisition of us more difficult.
- Our share price may be volatile as a result of various factors.

Risks Relating to our Terminated Merger with Silicon Motion

The termination of the Merger Agreement and any arbitration or other dispute with Silicon Motion in connection with the Merger Agreement could cause us to incur substantial costs, may divert management's attention from our business and could otherwise adversely affect our business, financial results and operations.

We terminated the Merger Agreement on July 26, 2023. Silicon Motion has challenged the validity of that termination. On August 16, 2023, Silicon Motion delivered to a notice to us, which Silicon Motion publicly disclosed, that it was purporting to terminate the Merger Agreement and that Silicon Motion would be commencing an arbitration before the Singapore International Arbitration Centre to seek damages from us arising from our alleged breaches of the Merger Agreement. On October 5, 2023, Silicon Motion filed a Notice of Arbitration with the Singapore International Arbitration Centre alleging that we breached the Merger Agreement. Additionally, a class action lawsuit has been filed against us and certain of our current officers, and potential plaintiffs may file additional lawsuits related to the previously contemplated merger. See Part II, Item 1 (Legal Proceedings) of this report for more information on the Silicon Motion arbitration and the class action lawsuit. We intend to vigorously defend against any legal proceedings related to the merger and the termination of the Merger Agreement and any alleged breaches of the Merger Agreement, but due to the uncertainties inherent in any legal proceedings, we cannot predict the outcome of any legal proceedings. Legal proceedings are time-consuming, and may divert management's attention from our business. Legal proceedings are also expensive and could result in substantial costs to us, including any damages we are required to pay and costs associated with the indemnification of directors and officers. Please refer to the Risk Factor entitled *"If we are required to pay any damages from legal proceedings related to the termination of the Merger Agreement with Silicon Motion or any alleged breaches of the Merger Agreement that we are required to pay, or any amounts we agree to pay in any settlement, the amount could be significant and require us to draw down on all our existing lines of credit and use our cash resources, which may not be sufficient to cover any payments to Silicon Motion and could have a material adverse effect on our business, operating results, and financial condition. We expect that we may not be able to obtain financing on favorable terms if at all or raise additional capital for any such payments. Even if we are able to finance such payments through the incurrence of additional indebtedness, any material increase in our indebtedness would adversely affect our operating results and cash-flows as we satisfy our underlying interest and principal payment obligations. Issuing additional shares of our common stock, if material, will result in dilution of existing shares outstanding. Any loan agreement is also expected to contain financial and operational covenants that would adversely affect our operational freedom or ability to pursue strategic transactions that we would otherwise consider to be in the best interests of stockholders, including obtaining additional indebtedness to finance such transactions.*"

We have already incurred, and expect to continue to incur, substantial costs in connection with the previously pending merger and the termination of the Merger Agreement and the dispute with Silicon Motion. Aside from any damages or settlement amounts we may be required to pay, these costs are primarily associated with the fees of our financial advisors, accountants, lenders, and legal counsel and, with limited exceptions relating to a portion of our financial advisor fees. Since the merger has been terminated, we will have received little or no benefit in respect of such costs incurred. Since the merger has been terminated, we may experience negative reactions from the financial markets and our suppliers, customers, customer prospects, and employees. Any of these factors could have a material adverse effect on our business, operating results, and financial condition or on the trading price of our common stock.

If we are required to pay any damages from legal proceedings related to the termination of the Merger Agreement with Silicon Motion or any alleged breaches of the Merger Agreement that we are required to pay, or any amounts we agree to pay in any settlement, the amount could be significant and require us to draw down on all our existing lines of credit and use our cash resources, which may not be sufficient to cover any payments to Silicon Motion and could have a material adverse effect on our business, operating results, and financial condition. We expect that we may not be able to obtain financing on favorable terms if at all or raise additional capital for any such payments. Even if we are able to finance such payments through the incurrence of additional indebtedness, any material increase in our indebtedness will adversely affect our operating results and cash-flows as we satisfy our underlying interest and principal payment obligations. Issuing additional shares of our common stock, if material, will result in dilution of existing shares outstanding. Any loan agreement is also expected to contain financial and operational covenants that would adversely affect our operational freedom or ability to pursue strategic transactions that we would otherwise consider to be in the best interests of stockholders, including obtaining additional indebtedness to finance such transactions.

If we are required to pay damages from legal proceedings related to the termination of the Merger Agreement or alleged breaches of the Merger Agreement, or we agree to pay amounts in settlement, the amount could be significant and require us to draw down on all our existing lines of credit and use our cash resources, which may not be sufficient to cover any payments to Silicon Motion and could have a material adverse effect on our business, operating results, and financial condition. We expect that we may not be able to obtain financing on favorable terms if at all or raise additional capital for any such payments.

However, if we finance all or a portion of the payment of damages or settlement amounts through the incurrence of additional indebtedness, any material payment and increase in our indebtedness would adversely affect our ability to use cash generated from operations as we repay interest and principal under the term loans and revolving credit facility, as applicable. Issuing additional shares of common stock, if material, would result in dilution of existing shares outstanding. In addition, our current credit agreement, and any new loan agreements, contain and would likely contain financial and operational covenants that may adversely affect our ability to engage in certain activities, including certain financing and acquisition transactions, stock repurchases, guarantees, and similar transactions, without obtaining the consent of the lenders, which may or may not be forthcoming. Such financial and operational covenants include compliance with a secured net leverage ratio test. Accordingly, outstanding indebtedness could adversely affect our operational freedom or ability to pursue strategic transactions that we would otherwise consider to be in the best interests of stockholders.

Specifically, if we are required to pay damages from legal proceedings related to the termination of the Merger Agreement or alleged breaches of the Merger Agreement, or we agree to pay amounts in settlement, and we finance all or a portion of the payment of damages through the incurrence of additional indebtedness, any materially increased indebtedness could have important consequences to investors in our common stock, including the following:

- our ability to obtain any necessary financing in the future for working capital, capital expenditures, debt service requirements, or other purposes may be limited or financing may be unavailable;
- rising interest rates may make it more difficult for us, our customers, and our distributors to obtain financing and service our respective interest and debt obligations, which in turn has an impact on customer demand for our products as well as the business of our distributors;
- we could be subject to substantial variable interest rate risk because our interest rate under term loans typically vary based on a fixed margin over an indexed rate (such as for the Initial Term Loan under the June 23, 2021 Credit Agreement) or an adjusted base rate. If interest rates were to continue to increase substantially, and we incur additional indebtedness, it would adversely affect our operating results and could affect our ability to service the indebtedness;
- a portion of our cash flows is dedicated to the payment of interest and when applicable, principal, on our indebtedness and other obligations and will not be available for use in our business;
- our level of indebtedness, combined with rising interest rates, could limit our flexibility in planning for, or reacting to, changes in our business and the markets in which we operate, including limiting our future investments or ability to enter into acquisitions and strategic partnerships, and obtain financing for such transactions; and
- our high degree of indebtedness may make us more vulnerable to changes in general economic conditions and/or a downturn in our business, thereby making it more difficult for us to satisfy our obligations.

If we fail to make required debt payments, or if we fail to comply with other covenants in our debt service agreements, we would be in default under the terms of these agreements. Subject to customary cure rights, any default would permit the holders of the indebtedness to accelerate repayment of this debt and could cause defaults under other indebtedness that we have, any of which could have a material adverse effect on the trading price of our common stock.

Risks Related to Our Business

We face intense competition and expect competition to increase in the future, which could have a material adverse effect on our revenue, revenue growth rate, if any, and market share.

The global semiconductor market in general, and the broadband, wired and wireless infrastructure, and broader industrial and communications analog and mixed-signal markets in particular, are highly competitive. We compete in different target markets to various degrees on the basis of a number of principal competitive factors, including our products' performance, features and functionality, energy efficiency, size, ease of system design, customer support, product roadmap, reputation, reliability and price. We expect competition to increase and intensify as a result of industry consolidation and the resulting creation of larger semiconductor companies. Large semiconductor companies resulting from industry consolidation could enjoy substantial market power, which they could exert through, among other things, aggressive pricing that could adversely affect our customer relationships, revenues, margins and profitability. In addition, we expect the internal resources of large, integrated original equipment manufacturers, or OEMs, may continue to enter our markets. Increased competition could result in price pressure, reduced profitability and loss of market share, any of which could materially and adversely affect our business, revenue, revenue growth rates, if any, and operating results.

As our products are integrated into a variety of communications and industrial platforms, our competitors range from large, international merchant semiconductor companies offering a wide range of semiconductor products to smaller companies specializing in narrow markets, to internal or vertically integrated engineering groups within certain of our customers. Our primary merchant semiconductor competitors include Broadcom Inc., Qualcomm Incorporated, Realtek Semiconductor Corp., Nokia Corp., Skyworks Solutions, Inc., Altera Corporation, Credo Semiconductor Inc., MediaTek, Inc., Marvell Technology Group Ltd., MACOM Technology Solutions Holdings, Inc., Texas Instruments Incorporated, Analog Devices, Inc., Renesas Electronics Corporation, and Microchip Technology Inc. It is quite likely that competition in the markets in which we participate will increase in the future as existing competitors improve or expand their product offerings. In addition, other companies are in the process of developing competing products for our current and target markets. Because our products often are building block semiconductors which provide functions that in some cases can be integrated into more complex integrated circuits, we also face competition from manufacturers of integrated circuits, some of which may be existing customers or platform partners that develop their own integrated circuit products. If we cannot offer an attractive solution for applications where our competitors offer more fully integrated products, we may lose significant market share to our competitors. Some of our targeted customers for our optical interconnect solutions are module makers who are vertically integrated, where we compete with internally supplied components, and we compete with much larger analog and mixed-signal catalog competitors in the multi-market high-performance analog markets.

Our ability to compete successfully depends on factors both within and outside of our control, including industry and general economic trends. During past periods of downturns in our industry, competition in the markets in which we operate intensified as manufacturers of semiconductors reduced prices in order to combat production overcapacity and high inventory levels. Many of our competitors have substantially greater financial and other resources with which to withstand similar adverse economic or market conditions in the future. Moreover, the competitive landscape is changing as a result of intense consolidation within our industry as some of our competitors have merged with or been acquired by other competitors, and other competitors have begun to collaborate with each other, which could result in significant changes to the competitive landscape. In addition, changes in government trade policies, including the imposition of tariffs and export restrictions, could limit our ability to sell our products to certain customers and adversely affect our ability to compete successfully. These developments may materially and adversely affect our current and future target markets and our ability to compete successfully in those markets.

Global economic conditions, including factors such as high inflation or a recession, could continue to adversely affect our business, financial condition, and results of operations.

Inflation and uncertainty in customer demand and the worldwide economy has continued, and we expect to experience continued volatility in our sales and revenues. In particular, we believe an economic slowdown and inventory oversupply will continue to add volatility in managing the business. In addition, inventory oversupply could potentially lead to more inventory write-downs, including charges for any excess or obsolete inventory which could negatively impact our gross margins. Our products are incorporated in numerous consumer devices, and demand for such products will ultimately be driven by consumer demand for products such as televisions, personal computers, automobiles, cable modems, and set-top boxes. Many of these purchases are discretionary. Global economic volatility and economic volatility in the specific markets in which the devices that incorporate our products are ultimately sold, including the impacts of current high rates of inflation and recession, can cause extreme difficulties for our customers and third-party vendors in accurately forecasting and planning future business activities. If banks and financial institutions with whom we have banking relationships enter receivership or become insolvent in the future, we may be unable to access, and we may lose, some or all of our existing cash, cash equivalents and investments to the extent those funds are not insured or otherwise protected by the FDIC. This unpredictability could cause our customers to delay or reduce their capital expenditures and spending on our products, which would delay and lengthen sales cycles and negatively affect the overall demand for our products. Worsening economic instability could continue to result in a cancellation of such orders or otherwise adversely affect spending for information technology and limit our ability to forecast future demand for our products, which could reduce expected revenues or result in a write-down of any excess or obsolete inventory. Furthermore, during challenging economic times, our customers may face challenges in gaining timely access to sufficient credit, which could impact their ability to make timely payments to us. These events, together with economic volatility that may face the broader economy and, in particular, the semiconductor and communications industries, may adversely affect, our business, particularly to the extent that consumers decrease their discretionary spending for devices deploying our products. However, the magnitude of such volatility on our business and its duration is uncertain and cannot be reasonably estimated at this time.

Other areas of our business which could be disrupted or subject to negative impacts of negative global economic conditions may include, but may not be limited to, the following:

- Reduced ability to accurately predict our future revenue and budget future expenses;

- Inefficiencies, delays and additional costs in design win, product development, production and fulfillment;
- Accounts receivable collection issues should any of our limited and significant customers experience liquidity concerns;
- Material impacts to the value of our common stock, which may result in impairment of our goodwill;
- Material impairment of our assets, if recoverability thereof becomes a concern; and
- Decreased availability of capital or access thereto in the United States and from other jurisdictions in which we operate.

We are subject to the cyclical nature of the semiconductor industry.

The semiconductor industry is highly cyclical and is characterized by constant and rapid technological change, rapid product obsolescence and price erosion, evolving standards, short product life cycles and wide fluctuations in product supply and demand. The current downturn, or any future downturns, has and may in the future result in diminished product demand, production overcapacity, high inventory levels and accelerated erosion of our average selling prices. Furthermore, any future upturn in the semiconductor industry could result in increased competition for access to third-party foundry and assembly capacity. We are dependent on the availability of this capacity to manufacture and assemble all of our products. None of our third-party foundry or assembly contractors has provided assurances that adequate capacity will be available to us in the future. A significant downturn or upturn could have a material adverse effect on our business and operating results.

A significant variance in our operating results or rates of growth, if any, could continue to lead to substantial volatility in our stock price. Our revenue has declined, and we may not sustain our current level of revenue, which has declined, and/or manage future growth effectively. The impact of excess inventory in the channel has continued to influence our customers' expected demand for certain of our products.

Our net revenue decreased from $829.7 million in the nine months ended September 30, 2022 to $567.9 million in the nine months ended September 30, 2023 and the decline in net revenue could continue in future periods. Among other factors, the decrease is as a result of macroeconomic conditions impacting customer demand. Prior to 2023, our net revenues grew to $1.1 billion for the year ended December 31, 2022. We currently expect that revenue will fluctuate in the future, from period-to-period, consistent with the cyclical nature of our industry, and we may experience further decline in revenue due to current macroeconomic conditions impacting customer demand for various products. Further, the impact of excess inventory in the channel has continued to influence our customers' expected demand for certain of our products. You should not rely on our operating results for any prior quarterly or annual periods as an indication of our future operating performance. Please refer to the Risk Factor entitled "*Our operating results are subject to substantial quarterly and annual fluctuations and have fluctuated in the past and may fluctuate significantly due to a number of factors that could adversely affect our business and our stock price*" for a discussion of factors contributing to variances in our operating results or rates of growth, if any. If we are unable to resume adequate revenue growth and manage our operating expenses, our financial results could suffer and our stock price could decline.

To manage any future growth successfully, we believe we must effectively, among other things:

- successfully develop new products and penetrate new applications and markets;
- recruit, hire, train and manage additional qualified engineers for our research and development activities, especially in the positions of design engineering, product and test engineering and applications engineering;
- add sales personnel and expand customer engineering support offices;
- implement and improve our administrative, financial and operational systems, procedures and controls; and
- enhance our information technology support for enterprise resource planning and design engineering by adapting and expanding our systems and tool capabilities, and properly training new hires as to their use.

If we are unable to resume and manage our growth effectively, we may not be able to take advantage of market opportunities or develop new products and we may fail to satisfy customer requirements, maintain product quality, execute our business plan, or respond to competitive pressures.

Our business, financial condition and results of operations could continue to be adversely affected by the geopolitical and economic tensions among countries in which we conduct business, including between the United States and China, among other countries. For example, as more entities are added to restricted export control lists, or as semiconductor technology exports to other countries are further controlled, our need to seek authorization from the U.S. government may impact our ability to do business.

We sell our products throughout the world. Products shipped to Asia accounted for 74% of our net revenue in the nine months ended September 30, 2023. In addition, as of September 30, 2023, approximately 79% of our employees are located outside of the United States. The majority of our products are manufactured, assembled and tested in Asia, and our major distributors are located in Asia. Multiple factors relating to our international operations and to particular countries in which we operate could have a material adverse effect on our business, financial condition and results of operations. These factors include:

- changes in political, regulatory, legal or economic conditions;
- geopolitical conflicts and tensions, especially as between the United States and China, that could destabilize trading relationships and economic activity;
- restrictive governmental actions, such as restrictions on the transfer or repatriation of funds and foreign investments and trade protection measures, including export controls and restrictions, duties and quotas and customs duties and tariffs;
- disruptions of capital and trading markets;
- changes in import or export licensing requirements, including as a result of ongoing armed conflict and geopolitical tensions among the United States, China, Russia, Ukraine and other countries;
- transportation delays;
- civil disturbances or political instability;
- other unpredictable geopolitical turmoil, including terrorism, war or political or military coups, including the current conflict in Israel and any obligations of our Israeli employees to perform military service;
- public health emergencies, such as an outbreak of COVID-19;
- differing employment practices and labor standards;
- limitations on our ability under local laws to protect our intellectual property;
- local business and cultural factors that differ from our customary standards and practices;
- nationalization and expropriation;
- changes in tax laws;
- currency fluctuations relating to our international operating activities; and
- difficulty in obtaining distribution and support.

In addition to a significant portion of our wafer supply coming from Taiwan, Singapore, and China, substantially all of our products undergo packaging and final testing in Taiwan, Singapore, China, South Korea, and Thailand. Any conflict or uncertainty in these countries, including due to natural disaster, public health or safety concerns, could have a material adverse effect on our business, financial condition and results of operations. In addition, if the government of any country in which our products are manufactured or sold sets technical standards for products manufactured in or imported into their country that are not widely shared, it may lead some of our customers to suspend imports of their products into that country, require manufacturers in that country to manufacture products with different technical standards and disrupt cross-border manufacturing relationships which, in each case, could have a material adverse effect on our business, financial condition and results of operations.

Changes in trade policies among the United States and other countries, in particular the imposition of new or higher tariffs, could place pressure on our average selling prices as our customers seek to offset the impact of increased tariffs on their own products. Increased tariffs or the imposition of other barriers to international trade could decrease demand and have a material adverse effect on our revenues and operating results.

The United States has imposed or proposed new or higher tariffs on certain products exported by a number of U.S. trading partners, including China, Europe, Canada, and Mexico. In response, many of those trading partners, including China, have imposed or proposed new or higher tariffs on American products. We have experienced weakening demand in China, and continuing changes in government trade policies create a heightened risk of further increased tariffs that impose barriers to international trade and could further decrease international demand. Our business and operating results are substantially dependent on international trade. Many of our manufacturers sell products incorporating our integrated circuits into international markets.

Tariffs on our customers' products may adversely affect our gross profit margins in the future due to the potential for increased pressure on our selling prices by customers seeking to offset the impact of tariffs on their own products. In addition, tariffs could make our OEM and ODM customers' products less attractive relative to products offered by their competitors, which may not be subject to similar tariffs. Some OEM and ODMs in our industry have already implemented short-term price adjustments to offset such tariffs and transitioned their production and supply chain to locations outside of China. We believe that increases in tariffs on imported goods or the failure to resolve current international trade disputes could further decrease demand and have a material adverse effect on our business and operating results.

Furthermore, compliance with export controls and implementation of additional tariffs can increase compliance costs and further affect our business and operating results.

We will lose sales if we are unable to obtain or retain government authorization to export certain of our products or technology related to the development or production of our products or if such authorizations are revoked, and we will be subject to legal and regulatory consequences if we do not comply with applicable export control laws and regulations.

Certain of our products and technologies are subject to export and/or import controls imposed by countries in which we do business, including the United States Export Administration Regulations, or EAR, administered by the U.S. Department of Commerce's Bureau of Industry and Security, or BIS. Certain of our products and technologies are subject to the EAR, which may require a license authorization from BIS prior to the shipment or sharing of certain products and technologies with certain end users or destinations. Such approval may be delayed, denied, or even revoked after initially being granted, depending on one or more factors including the type of product or technology at issue, the intended end use, the identity of the end user, the identity of other companies involved in the production process, and whether a license exception might apply. We are subject to similar export controls regulations in other jurisdictions where we operate, including the European Union, Singapore, and Taiwan, among others.

Export control laws, regulations, and orders are complex, change frequently and with limited or no notice, have generally become more stringent over time and have intensified as U.S.-China geopolitical tensions worsen. Since October 2022, the United States has announced export control restrictions on a number of entities based in China due to national security concerns and additional, potentially more severe, restrictions may be possible. The addition of new entities to restricted party lists can further increase the scope of export restrictions applicable to our business. Failure to obtain required export licenses for our products or the placement of one or more of our customers on any restricted parties lists could significantly reduce our revenue and harm our business.

Obtaining export licenses can be difficult, costly and time-consuming and we may not always be successful in obtaining necessary export licenses. Our failure to obtain required import or export approval for our products may adversely affect our business, and other limitations imposed on our ability to export or sell our products may also harm our international and domestic revenue. In addition, it is possible that BIS can revoke licenses that have been granted or decline to re-issue such licenses upon their expiration. Although our policies, procedures, and controls are designed to detect and prevent potential violations and maintain ongoing compliance with applicable export controls laws, we cannot assure you that we have been or will be at all times in complete compliance with such laws and regulations. For example, our products could be diverted to bad actors. In addition, if our customers or business partners fail to comply with applicable regulations and laws, we may be subject to liability and may be required to suspend sales or take other action which could damage our reputation and negatively impact our results of operations. If we violate or fail to comply with any of them, a range of consequences could result, including fines, import/export restrictions, sales limitations, criminal and civil liabilities or other sanctions. The absence of comparable restrictions imposed on competitors based in other countries may adversely affect our competitive position.

To the extent that we do business with parties on the Entity List under approved export licenses, our business could be affected if the government delays, denies, or otherwise does not grant or renew required licenses. We currently have licenses from BIS that permit certain of our transactions with two restricted parties, but those licenses may be revoked at any time or denied for renewal when the license expires. One of the Company's third party foundry partners, Semiconductor Manufacturing International Corporation, or SMIC, was added to the BIS Entity list in December 2020. As a result of that Entity List listing, we must obtain export licenses from BIS for the export or reexport to SMIC of any technology for the development or production (fabrication) of the Company's products. Although we have obtained export licenses in order to have SMIC manufacture certain products for us, those export licenses could be revoked at any time. Revocation of any of those export licenses could significantly disrupt our ability to obtain the products in question and fulfill customer requirements. Moreover, the issuance of export licenses for other technology transfers to SMIC is a matter of discretion with the U.S. government, and it is uncertain whether we will be able to obtain export licenses, in a timely manner, for the transfer of technology required by SMIC to produce semiconductor wafers for us. If we are unable to obtain those export licenses, it may be necessary to have the products fabricated by other semiconductor foundries, which may be more costly alternatives to SMIC, and which may have limited capacity to fabricate sufficient products to meet our requirements.

Additionally, current and future business with parties subject to significant export restrictions, including those named on the Entity List may be limited in scope or suspended entirely in order to comply with the EAR or other applicable laws or regulations and, as a result, our revenue could be adversely impacted until a license is granted or renewed. It is possible that the U.S. government may not grant licenses or renew licenses to transact business with entities on the Entity List.

In September 2022, we self-identified a potential violation of the EAR related to certain transactions with one of our foundry partners in China on the Entity List in which limited technology was furnished to our Specific Foundry Partner without authorization under the EAR. Upon discovery, we took immediate action to remediate, including by implementing additional measures to prevent recurrence. Our Audit Committee engaged outside counsel to conduct a privileged investigation. On March 3, 2023, we submitted a comprehensive voluntary self-disclosure to BIS regarding the potential EAR violation described above and other potential export control violations. On June 8, 2023, BIS closed out its review of our voluntary self-disclosure without monetary or other penalties and with the issuance of a “warning letter.”

We also are subject to risks associated with international geopolitical conflicts involving the U.S. and other governments such as China and Russia.

Our business has been impacted and may continue to be impacted by geopolitical conditions such as international trade wars (including between the United States and China), the conflict in Israel, the Russia-Ukraine conflict, and increased political tensions in Russia, Europe and Asia. Currently, significant uncertainty surrounds the future trade relationships among the United States, China, and Russia. The U.S. government continues to make significant changes in U.S. trade policies that could negatively affect our business. Additionally, policies made by other countries, such as China and Russia, could also negatively impact our business. In a number of cases, compliance with these policies has required us to take actions adverse to our business.

Beginning in May 2019, we ceased normal business operations with entities affiliated with Huawei Technologies Co., Ltd., and certain other entities following an amendment to the EAR which added these entities to the Entity List for acting contrary to the national security or foreign policy of the United States. We obtained export licenses for certain transactions with these entities. As noted above, export licenses can be revoked or BIS could choose not to renew such licenses, which would halt the currently-approved licensed activities.

In September 2020, we further restricted business operations with additional entities affiliated with Huawei when the BIS again amended the EAR to add such entities to the Entity List.

Since October 2022, the United States government has taken steps to restrict the export of certain advanced semiconductor products and technology to the People’s Republic of China and/or certain companies located in China due to national security and human rights concerns. In October 2022, BIS announced additional restrictions on products and/or technology destined for use in the People’s Republic of China, including additional export controls and/or requirements on (1) certain advanced computing integrated circuits (ICs), computer commodities that contain such ICs and certain semiconductor manufacturing items; (2) products and/or technologies that may be destined for facilities capable of producing certain advanced node ICs; and (3) transactions involving items for supercomputer and semiconductor manufacturing end uses. In October 2023, BIS announced additional restrictions on the export of certain advanced semiconductors and semiconductor manufacturing technology to China, primarily focused on ICs with military, data center, or artificial intelligence (AI) applications. Pursuant to those October 2023 export control amendments, which become effective on November 17, 2023, various categories of integrated circuits, which were not covered by the October 2022 amendments, are now subject to export licensing and export control restrictions for export or reexport to China and certain other countries. We are currently analyzing whether any of our products may be subject to those new export control restrictions and requirements. BIS also announced restrictions on exports to (1) companies headquartered in China or Macau, and (2) end users in certain countries of concern, in order to prevent diversion of controlled products or technology to China. The United States government has also continued to add Chinese entities to the Entity List, most recently on October 18, 2023 when BIS added 13 Chinese entities to the Entity List. We regularly monitor changes to applicable export control regulations to assess the impact to our business, if any. To date, no material customer of MaxLinear located in China has been added to the Entity List or other restricted party list.

The BIS continues to add many new entities to the Entity List and Unverified List. As noted above, our ability to sell or distribute products or technology will be limited if BIS further amends the EAR to add restrictions against parties who are or may be our customers.

We are required to obtain special licenses to conduct business with entities on the Entity List and to conduct additional diligence and recordkeeping, including obtaining user statements from entities on the Unverified List. Failure to obtain any required license would likely result in a loss of business and a corresponding negative impact on our financial position and results of operations.

We cannot predict what actions may ultimately be taken with respect to trade relations between the United States and China or other countries, which products may be subject to such actions or what actions may be taken by other countries in retaliation. In response to the United States tightening export controls on China, China has instituted restrictions of its own that affect U.S. companies and may impact MaxLinear and related entities. We have experienced weakening demand in China, and such future developments related to U.S.-China relations may also have an impact on our supply chain. Additionally, the geopolitical developments in relations between Taiwan and China could affect the supply of our products from Taiwan, including from Taiwan Semiconductor Manufacturing Company, Limited, or TSMC.

We believe direct impacts of the economic sanctions against Russia and the military conflict in Ukraine are currently limited to volatility in the prices of metals used by our outsourced semiconductor assembly and test, or OSAT, supply chain, in particular around the supply of palladium, for which Russia is the top producer in the world, as well as increased fuel costs, which has global impact on transportation costs, including the shipping and delivery of our products. However, the magnitude of such price volatility on our business and its duration is uncertain and cannot be reasonably estimated at this time. The Company does not currently sell product in Russia, or sell product to distributors for resale in Russia.

We cannot provide assurances that similar disruptions of distribution arrangements in the future, the imposition of governmental prohibitions on selling our products to particular customers, further sanctions on Russia or other countries, and/or increases in costs of certain raw materials and transportation will not also adversely affect our revenues and operating results. Loss of a key distributor or customer under similar circumstances could have a material adverse effect on our business, revenues and operating results.

We depend on a limited number of customers for a substantial portion of our revenue, and the loss of, or a significant reduction in orders from one or more of our major customers has had and could continue to have a material adverse effect on our revenue and operating results.

In the nine months ended September 30, 2023, one customer accounted for 11% of our net revenue, and our ten largest customers collectively accounted for 55% of our net revenue, of which distributor customers accounted for 11% of our net revenue. In the nine months ended September 30, 2023, we have experienced a decrease in customer demand, and consequently a reduction in orders, primarily due to macroeconomic factors and excess inventory in the channel following the industry-wide supply shortage in 2021 and 2022. We expect that our operating results for the foreseeable future will continue to show a substantial percentage of sales dependent on a relatively small number of customers. In the future, these customers may decide not to purchase our products at all, may purchase fewer products than they did in the past, or may defer or cancel purchases or otherwise alter their purchasing patterns. Factors that could affect our revenue from these large customers include the following:

- substantially all of our sales to date have been made on a purchase order basis, which permits our customers to cancel, change or delay product purchase commitments with little or no notice to us and without penalty;
- some of our customers have sought or are seeking relationships with current or potential competitors which may affect their purchasing decisions;

- service provider and OEM consolidation across cable, satellite, and fiber markets could result in significant changes to our customers' technology development and deployment priorities and roadmaps, which could affect our ability to forecast demand accurately and could lead to increased volatility in our business; and
- technological changes in our markets could lead to substantial volatility in our revenues based on product transitions, and particularly in our broadband markets, we face risks based on changes in the way consumers are accessing and using broadband and cable services, which could affect operator demand for our products.

In addition, delays in development could impair our relationships with our strategic customers and negatively impact sales of the products under development. Moreover, it is possible that our customers may develop their own products or adopt a competitor's solution for products that they currently buy from us. If that happens, our sales would decline and our business, financial condition and results of operations could be materially and adversely affected.

Our relationship with customers could also be impaired by our sale of patents. For example, our customers could be subject to patent infringement based on patents we divested to the extent that our customers also source components from our competitors.

Our relationships with some customers may deter other potential customers who compete with these customers from buying our products. To attract new customers or retain existing customers, we sometimes offer customers favorable prices on our products which results in a decline in our average selling prices and, if material, a decline in our gross margins. The loss of a key customer, a reduction in sales to any key customer or our inability to attract new significant customers could seriously impact our revenue and materially and adversely affect our results of operations.

A significant portion of our revenues are from sales of product to distributors, who then resell our product. Our agreements with certain of these distributors provide protection against price reduction on their inventories of our products. The loss of certain distributors could have a material adverse effect on our business and results of operations, and price reductions associated with their inventories of our products could have a material adverse effect on our operating results in the event of a dramatic decline in selling prices for these products.

In addition, the current situation relating to trade with China and governmental and regulatory concerns relating to specific Chinese companies continue to remain fluid and unpredictable. Products shipped to mainland China accounted for 12% of our net revenue during the nine months ended September 30, 2023 compared to 16% during the nine months ended September 30, 2023. Our current and future operating results could be materially and adversely affected by limitations on our ability to sell to one or more Chinese customers, as described in the section "Risks Related to Our Business" under the risk factor "*We are also subject to risks associated with international geopolitical conflicts involving the U.S. and other governments such as China and Russia*", and by tariffs and other trade barriers that may be implemented by governmental authorities.

Average selling prices of our products could decrease rapidly, which would have a material adverse effect on our revenue and gross margins.

We may experience substantial period-to-period fluctuations in future operating results due to the erosion of our average selling prices. From time to time, we have reduced the average unit price of our products due to competitive pricing pressures, new product introductions by us or our competitors, and for other reasons, and we expect that we will have to do so again in the future. In particular, we believe that industry consolidation has provided a number of larger semiconductor companies with substantial market power, which has had a material adverse impact on selling prices in some of our markets. If we are unable to offset any reductions in our average selling prices by increasing our sales volumes or introducing new products with higher margins, our revenue and gross margins will suffer. To support our gross margins, we must develop and introduce new products and product enhancements on a timely basis and continually reduce our and our customers' costs. Our inability to do so would cause our revenue and gross margins to decline. In addition, under certain of our agreements with key distributors, we provide protection for reductions in selling prices of the distributors' inventory, which could have a material adverse effect on our operating results if the selling prices for those products fell dramatically.

If we fail to penetrate new applications and markets, our revenue, revenue growth rate, if any, and financial condition could be materially and adversely affected.

We sell a significant portion of our products to manufacturers of cable broadband voice and data modems and gateways, Pay-TV set-top boxes and gateways into cable and satellite operator markets, satellite outdoor units or LNB's, optical modules for long-haul and metro telecommunications markets, and RF transceivers and modem solutions for wireless infrastructure markets. Our product offerings also include broadband data access, power management and interface technologies which are ubiquitous functions in new and existing markets such as wireless and wireline communications infrastructure, broadband access, industrial, enterprise network, and automotive applications. We have further expanded our product offerings to include Wi-Fi, ethernet and broadband gateway processor systems-on-chip, or SoCs, and intellectual property that utilizes patented machine learning techniques to improve signal integrity and power efficiency in SoCs, ASICs, and field-programmable gate arrays, or FPGAs, used in next-generation communication and artificial intelligence systems. Our future revenue growth, if any, will depend in part on our ability to further penetrate into, and expand beyond, these markets with analog, digital and mixed-signal solutions targeting the markets for Wi-Fi and broadband, high-speed optical interconnects for data center, metro, and long-haul optical modules, telecommunications wireless infrastructure, and cable DOCSIS 3.1 network infrastructure products. Each of these markets presents distinct and substantial risks. If any of these markets do not develop as we currently anticipate, or if we are unable to penetrate them successfully, it could materially and adversely affect our revenue and revenue growth rate, if any.

Broadband data modems and gateways and Pay-TV and satellite set-top boxes and video gateways continue to represent a significant North American and European revenue generator. The North American and European Pay-TV market is dominated by only a few OEMs, including Technicolor SA, Commscope Holding Company, Inc., Hitron Technologies, Inc., Compal Broadband Networks Inc., Humax Co., Ltd., and Samsung Electronics Co., Ltd. These OEMs are large multinational corporations with substantial negotiating power relative to us and are undergoing significant consolidation. Securing design wins with any of these companies requires a substantial investment of our time and resources. Even if we succeed, additional testing and operational certifications will be required by the OEMs' customers, which include large Pay-TV television companies such as Comcast Corporation, Liberty Global plc, Charter Communications, Inc., Sky UK Limited, AT&T Inc. and EchoStar Corporation. In addition, our products will need to be compatible with other components in our customers' designs, including components produced by our competitors or potential competitors. There can be no assurance that these other companies will support or continue to support our products.

If we fail to penetrate these or other new markets upon which we target our resources, our revenue and revenue growth rate, if any, likely will decrease over time and our financial condition could suffer.

A significant portion of our revenue is attributable to demand for our products in markets for broadband solutions, and development delays and consolidation trends among cable and satellite Pay-TV and broadband operators could adversely affect our future revenues and operating results.

For the nine months ended September 30, 2023 and 2022, revenue directly attributable to broadband applications accounted for approximately 30% and 47% of our net revenue, respectively. We have experienced a decrease in broadband net revenue of $224.2 million for the nine months ended September 30, 2023, as compared to the nine months ended September 30, 2022, and the decline in revenue could continue in future periods. Delays in the development of, or unexpected developments in, the broadband markets, including international macroeconomic headwinds, could have an adverse effect on order activity by original equipment manufacturers in these markets and, as a result, on our business, revenue, operating results and financial condition. In addition, consolidation trends among Pay-TV and broadband operators may continue, which could delay or lead to cancellations of major spending programs and have a material adverse effect on our future operating results and financial condition.

We may be unable to make the substantial and productive research and development investments that are required to remain competitive in our business.

The semiconductor industry requires substantial investment in research and development in order to develop and bring to market new and enhanced technologies and products. Many of our products originated with our research and development efforts, which we believe have provided us with a significant competitive advantage. For nine months ended September 30, 2023 and 2022, our research and development expense was $204.3 million and $222.7 million, respectively. While we are closely monitoring our current research and development expenses, we expect our research and development expenses to increase in future years when we return to expanding our product portfolio and enhancing existing products. We monitor such expenditures as part of our strategy of devoting focused research and development efforts on the development of innovative and sustainable product platforms. We are committed to investing in new product development internally in order to stay competitive in our markets and plan to maintain research and development and design capabilities for new solutions in advanced semiconductor process nodes such as 16nm and 5nm and beyond. However, we do not know whether we will have sufficient resources to maintain the level of investment in research and development required to remain competitive as semiconductor process nodes continue to shrink and become increasingly complex. In addition, we cannot assure you that the technologies that are the focus of our research and development expenditures will become commercially successful.

The complexity of our products could result in unforeseen delays or expenses caused by undetected defects or bugs, which could reduce the market acceptance of our new products, damage our reputation with current or prospective customers and adversely affect our operating costs.

Highly complex products like our Wi-Fi and broadband RF receivers and RF receiver SoCs, physical medium devices for optical modules, RF transceiver and modem solutions for wireless infrastructure markets, and high-performance analog solutions may contain defects and bugs when they are first introduced or as new versions are released. Where any of our products, including legacy acquired products, contain defects or bugs, or have reliability, quality or compatibility problems, we may not be able to successfully correct these problems. Consequently, our reputation may be damaged and customers may be reluctant to buy our products, which could materially and adversely affect our ability to retain existing customers and attract new customers, and our financial results. In addition, these defects or bugs could interrupt or delay sales to our customers. If any of these problems are not found until after we have commenced commercial production of a new product, we may be required to incur additional development costs and product recall, repair or replacement costs, and our operating costs could be adversely affected. These problems may also result in warranty or product liability claims against us by our customers or others that may require us to make significant expenditures to defend these claims or pay damage awards. In the event of a warranty claim, we may also incur costs if we compensate the affected customer. We maintain product liability insurance, but this insurance is limited in amount and subject to significant deductibles. There is no guarantee that our insurance will be available or adequate to protect against all claims. We also may incur costs and expenses relating to a recall of one of our customers' products containing one of our devices. The process of identifying a recalled product in devices that have been widely distributed may be lengthy and require significant resources, and we may incur significant replacement costs, contract damage claims from our customers and reputational harm. Costs or payments made in connection with warranty and product liability claims and product recalls could materially affect our financial condition and results of operations, and ability to obtain future coverage. Although we purchase insurance to mitigate certain losses, any uninsured losses could negatively affect our operating results. Although we maintain reserves for reasonably estimable liabilities and purchase product liability insurance, if a catastrophic product liability claim were to occur, our reserves may be inadequate to cover the uninsured portion of such claims. Further, our business liability insurance may be inadequate, may not cover the claims, and future coverage may be unavailable on acceptable terms, which could adversely impact our financial results.

If we are unable to attract, train and retain qualified personnel and senior management, our business, financial condition, results of operations and prospects could suffer.

Our future success depends on our ability to retain, attract and motivate qualified personnel, including our management, sales and marketing and finance teams, and especially our design and technical staff. We do not know whether we will be able to attract and retain the required and desirable personnel as we continue to pursue our business strategy. Historically, we have encountered difficulties in hiring and retaining qualified engineers because there is a limited pool of engineers with the expertise required in our field. Competition for these personnel is intense in the semiconductor industry. As the source of our technological and product innovations, our design and technical personnel represent a significant asset. In addition, in making employment decisions, particularly in the high-technology industry, job candidates often consider the value of the stock-based compensation they are to receive in connection with their employment. We have experienced fluctuations, including declines, in the market price of our stock, and reductions in force which could adversely affect our ability to attract, motivate or retain key employees. In addition, our future performance also depends on the continued services and continuing contributions of our senior management to execute our business plan and to identify and pursue new opportunities and product innovations. Our employment arrangements with our employees do not generally require that they continue to work for us for any specified period, and therefore, they could terminate their employment with us at any time. The loss of the services of one or more of our key employees, especially our management and key design and technical personnel, or our inability to retain, attract and motivate qualified design and technical and other personnel, could have a material adverse effect on our business, financial condition and results of operations.

Our future success also depends on the continued contributions of our senior management team and other key personnel. None of our senior management team or other key personnel is bound by written employment contracts to remain with us for a specified period. In addition, we have not entered into non-compete agreements with members of our senior management team or other key personnel, except in limited circumstances (e.g., in connection with the acquisition of other companies). We are fortunate that many members of our senior management team have long tenures with us, but from time to time we also have been required to recruit new members of senior management. With respect to recruitment and retention of senior management, we need to ensure that our compensation programs provide sufficient recruitment and retention incentives as well as incentives to achieve our long-term strategic business and financial objectives. We expect competition for individuals with our required skill sets, particularly technical and engineering skills, to remain intense even in weak global macroeconomic environments.

The loss of any member of our senior management team or other key personnel could harm our ability to implement our business strategy and respond to the rapidly changing market conditions in which we operate.

If we fail to develop and introduce new or enhanced products on a timely basis, our ability to attract and retain customers could be impaired and our competitive position could be harmed.

We operate in a dynamic environment characterized by rapidly changing technologies and industry standards and technological obsolescence. To compete successfully, we must design, develop, market and sell new or enhanced products that provide increasingly higher levels of performance and reliability and meet the cost expectations of our customers. The introduction of new products by our competitors, the market acceptance of products based on new or alternative technologies, or the emergence of new industry standards could render our existing or future products obsolete. Our failure to anticipate or timely develop new or enhanced products or technologies in response to technological shifts has resulted, and could in the future, result in decreased revenue and our competitors winning more competitive bid processes, known as “design wins.” In particular, we may experience difficulties with product design, manufacturing, marketing or certification that could delay or prevent our development, introduction or marketing of new or enhanced products. If we fail to introduce new or enhanced products that meet the needs of our customers or penetrate new markets in a timely fashion, we will lose market share and our operating results will be adversely affected.

In particular, we believe that we will need to develop new products in part to respond to changing dynamics and trends in our end user markets, including (among other trends) consolidation among cable and satellite operators, potential industry shifts away from the hardware devices and other technologies that incorporate certain of our products, advances in artificial intelligence, and changes in consumer television viewing habits and how consumers access and receive broadcast content and digital broadband services. We cannot predict how these trends will continue to develop or how or to what extent they may affect our future revenues and operating results. We believe that we will need to continue to make substantial investments in research and development in an attempt to ensure a product roadmap that anticipates these types of changes; however, we cannot provide any assurances that we will accurately predict the direction in which our markets will evolve or that we will be able to develop, market, or sell new products that respond to such changes successfully or in a timely manner, if at all.

We are subject to order and shipment uncertainties, and differences between our estimates of customer demand and product mix and our actual results has negatively affected our inventory levels, sales and operating results.

Our revenue is generated on the basis of shipments of products under purchase orders with our customers rather than long-term purchase commitments. In addition, our customers can cancel purchase orders or defer the shipments of our products under certain circumstances. Our products are manufactured using a silicon foundry according to our estimates of customer demand, which requires us to make separate demand forecast assumptions for every customer, each of which may introduce significant variability into our aggregate estimate. We have limited visibility into future customer demand and the product mix that our customers will require, which has in the past affected and could in the future adversely affect our revenue forecasts and operating margins. Also, as customer lead times continue to improve, we have seen and expect to continue to see a more normalized demand-planning horizon. While we expect inventory to remain elevated in the near term, we expect that channel inventory will continue to decline over the coming quarters. Moreover, because our target markets are relatively new, many of our customers have difficulty accurately forecasting their product requirements and estimating the timing of their new product introductions, which ultimately affects their demand for our products. Historically, because of this limited visibility, actual results have been different from our forecasts of customer demand. Some of these differences have been material which has led to and could continue to lead to excess inventory or product shortages and revenue and margin forecasts above those we were actually able to achieve. These differences may occur in the future, and the adverse impact of these differences between forecasts and actual results could grow if we are successful in selling in and expanding the customer base for our products. In addition, the rapid pace of innovation in our industry could render significant portions of our inventory obsolete. Excess or obsolete inventory levels could result in unexpected expenses or increases in our reserves that could adversely affect our business, operating results and financial condition. Conversely, if we were to underestimate customer demand or if sufficient manufacturing capacity were unavailable, we could forego revenue opportunities, potentially lose market share and damage our customer relationships. In addition, any significant future cancellations or deferrals of product orders or the return of previously sold products due to manufacturing defects could materially and adversely impact our profit margins, increase our write-offs due to product obsolescence and restrict our ability to fund our operations.

We may have difficulty accurately predicting our future revenue and appropriately budgeting our expenses particularly as we seek to enter new markets where we may not have prior experience.

Our operating history had historically focused on developing integrated circuits for specific applications and more recently, the wired whole-home broadband connectivity market and markets for wireless telecommunications infrastructure and power management and interface technologies which are ubiquitous functions in wireless and wireline communications infrastructure, broadband access, industrial, enterprise network, and automotive applications. As part of our growth strategy, we seek to expand our addressable market into new product categories. For example, we expanded into the markets for Wi-Fi, Ethernet and Broadband Gateway Processor SoCs and intellectual property that utilizes patented machine learning techniques to improve signal integrity and power efficiency in SoCs, ASICs, and FPGAs used in next-generation communication and artificial intelligence systems. Our limited operating experience in new markets or potential markets we may enter, combined with the rapidly evolving nature of our markets in general, substantial uncertainty concerning how these markets may develop and other factors beyond our control reduces our ability to accurately forecast quarterly or annual revenue. If our revenue does not increase as anticipated, we could incur significant losses due to our higher expense levels if we are not able to decrease our expenses in a timely manner to offset any shortfall in future revenue.

Our customers require our products and our third-party contractors to undergo a lengthy and expensive qualification process which does not assure product sales.

Prior to purchasing our products, our customers require that both our products and our third-party contractors undergo extensive qualification processes, which involve testing of the products in the customer's system and rigorous reliability testing. This qualification process may continue for six months or more. However, qualification of a product by a customer does not assure any sales of the product to that customer. Even after successful qualification and sales of a product to a customer, a subsequent revision to our solutions, or changes in our customer's manufacturing process or our selection of a new supplier may require a new qualification process, which may result in delays and in us holding excess or obsolete inventory. After our products are qualified, it can take six months or more before the customer commences volume production of components or devices that incorporate our products. Despite these uncertainties, we devote substantial resources, including design, engineering, sales, marketing and management efforts, to qualifying our products with customers in anticipation of sales. If we are unsuccessful or delayed in qualifying any of our products with a customer, sales of this product to the customer may be precluded or delayed, which may result in a decrease in our revenue and cause our business to suffer.

Winning business is subject to lengthy competitive selection processes that require us to incur significant expenditures. Even if we begin a product design, customers may decide to cancel or change their product plans, which could cause us to generate no revenue from a product and adversely affect our results of operations.

We are focused on securing design wins to develop RF receivers and RF receiver SoCs, MoCA and G.hn SoCs, DBS-ODU SoCs, physical medium devices for optical modules, interface and power management devices, and SoC solutions targeting infrastructure opportunities within the telecommunications, wireless, industrial and multimarket and Wi-Fi and broadband operator markets for use in our customers' products. These selection processes typically are lengthy and can require us to incur significant design and development expenditures and dedicate scarce engineering resources in pursuit of a single customer opportunity. We may not win the competitive selection process and may never generate any revenue despite incurring significant design and development expenditures. These risks are exacerbated by the fact that some of our customers' products likely will have short life cycles. Although this has not occurred to date, failure to obtain a design win could prevent us from offering an entire generation of a product. This could cause us to lose revenue and require us to write off obsolete inventory, and could weaken our position in future competitive selection processes. After securing a design win, we may experience delays in generating revenue from our products as a result of the lengthy development cycle typically required. Our customers generally take a considerable amount of time to evaluate our products. The typical time from early engagement by our sales force to actual product introduction runs from nine to twelve months for the consumer market, to as much as 18 to 24 months for the satellite markets, and 36 months or longer for industrial, wired and wireless infrastructure markets. The delays inherent in these lengthy sales cycles increase the risk that a customer will decide to cancel, curtail, reduce or delay its product plans, causing us to lose anticipated sales. In addition, any delay or cancellation of a customer's plans could materially and adversely affect our financial results, as we may have incurred significant expense and generated no revenue. Finally, our customers' failure to successfully market and sell their products could reduce demand for our products and materially and adversely affect our business, financial condition and results of operations. If we were unable to generate revenue after incurring substantial expenses to develop any of our products, our business would suffer.

Our operating results are subject to substantial quarterly and annual fluctuations and have fluctuated in the past and may fluctuate significantly due to a number of factors that could adversely affect our business and our stock price.

Our revenue and operating results have fluctuated in the past and are likely to fluctuate in the future. These fluctuations may occur on a quarterly and on an annual basis and are due to a number of factors, many of which are beyond our control. These factors include, among others:

- seasonality or cyclical fluctuations in our markets;
- changes in end-user demand for the products manufactured and sold by our customers;
- the receipt, reduction or cancellation of significant orders by customers;
- fluctuations in the levels of component inventories held by our customers;
- the gain or loss of significant customers;
- market acceptance of our products and our customers' products;
- our ability to develop, introduce, and market new products and technologies on a timely basis;
- the timing and extent of operating expenses, including product development costs;
- new product announcements and introductions by us or our competitors;
- incurrence of research and development and related new product expenditures;
- government actions, by the United States, China or other countries, that impose barriers or restrictions that would impact our ability to sell or ship products to customers;
- currency fluctuations;
- fluctuations in IC manufacturing yields;
- significant warranty claims, including those not covered by our suppliers;
- changes in our product mix or customer mix;
- potential indemnification claims, including those arising as a result of our contractual arrangements or intellectual property disputes;
- intellectual property disputes;
- loss of key personnel or inability to attract, retain and motivate qualified skilled workers;
- impairment of long-lived assets, including masks and production equipment; and
- the effects of competitive pricing pressures, including decreases in average selling prices of our products.

These factors are difficult to forecast, and these, as well as other factors, could materially adversely affect our quarterly or annual operating results. We typically are required to incur substantial development costs in advance of a prospective sale with no certainty that we will ever recover these costs. A substantial amount of time may pass between a design win and the generation of revenue related to the expenses previously incurred, which can potentially cause our operating results to fluctuate significantly from period to period. In addition, a significant amount of our operating expenses are relatively fixed in nature due to our significant sales, research and development costs. Any failure to adjust spending or our operations quickly enough to compensate for a revenue shortfall could magnify its adverse impact on our results of operations.

Our business is subject to various international and U.S. laws and governmental regulations, and compliance with these laws and regulations may cause us to incur significant expenses. A failure to maintain compliance with applicable laws and regulations could result in a material adverse effect on our business and operating results, and we could be subject to civil or criminal penalties.

Our business is subject to various laws and regulations in the United States and other jurisdictions where we do business, including but not limited to laws, regulations and other legal requirements related to packaging; product content; labor and employment; import and customs; export controls; anti-corruption; personal and data privacy; cybersecurity; human rights; conflict minerals; environment, health and safety; competition and antitrust; and intellectual property ownership and infringement. These laws and regulations are complex, change frequently and with little or no notice, occasionally are conflicting or ambiguous, and have generally become more stringent over time. Complying with these laws and regulations can be costly and we may be required to incur significant costs to remedy any potential gaps or violations that are identified. In addition, because many of our products are regulated or sold into regulated industries, we must comply with additional regulations in marketing our products. Although our policies, procedures, and controls are designed to detect and prevent potential violations and maintain ongoing compliance with applicable laws, we cannot assure you that we have been or will be at all times in compliance with such laws and regulations. If we violate or fail to comply with any of them, a range of consequences could result, including fines, import/export restrictions, sales limitations, criminal and civil liabilities or other sanctions. The costs of complying with these laws (including the costs of any investigations, remediation, auditing and monitoring) could adversely affect our current or future business.

As indicated elsewhere in this report, we do a substantial portion of our business in Asia and particularly in China. Since October 2022, the United States has taken steps to restrict the export of certain advanced semiconductor products and technology to the People's Republic of China as well as a number of specific Chinese companies, due to national security and human rights concerns. There has also been a substantial focus by regulators in the United States and Europe on the business practices of certain major Chinese technology companies. Complying with changing export control laws may require us to develop additional policies, procedures, and controls, or incur additional costs, including in connection with the development or performance of additional due diligence in order to prevent diversion of restricted products or technology to China, Russia, or other destinations. Compliance with these laws and regulations may also result in the loss of revenue. In October 2022, we restricted shipments and exports to certain major Chinese technology companies, including a semiconductor foundry and OSAT providers. While we intend to continue to conduct our businesses in compliance with all applicable laws, including laws relating to export controls and anti-corruption, it is possible that the nature of our business and customers could result in a review of our relationships and practices by regulatory authorities. At times, we may discover issues that we bring to the attention of the relevant government agencies, as we did on March 3, 2023, when we submitted a comprehensive voluntary self-disclosure to BIS regarding the potential EAR violation described above and other potential export control violations. We could incur increased administrative and legal costs in order to remediate any potential compliance gaps or violations, to respond to any inquiries, or in connection with the preparation and submission of any voluntary self-disclosures to the government agencies, as appropriate. Any failure to comply with applicable laws could adversely affect our business and operating results. We have implemented policies and procedures, including adoption of an anti-corruption policy and procedures with respect to applicable export control laws, but there can be no assurance that our policies and procedures will prove effective.

Our products and operations are also subject to the rules of industrial standards bodies, like the International Standards Organization, as well as regulation by other agencies, such as the U.S. Federal Communications Commission. If we fail to adequately address any of these rules or regulations, our business could be harmed.

We must conform the manufacture and distribution of our semiconductors to various laws and adapt to regulatory requirements in all countries as these requirements change. If we fail to comply with these requirements in the manufacture or distribution of our products, we could be required to pay civil penalties, face criminal prosecution and, in some cases, be prohibited from distributing our products in commerce until the products or component substances are brought into compliance.

We have been and may in the future be subject to information technology failures, including security breaches, cyber-attacks, design defects or system failures, that could disrupt our operations, damage our reputation and adversely affect our business, operations, and financial results.

We rely on our information technology systems for the effective operation of our business and for the secure maintenance and storage of confidential data relating to our business and third-party businesses. In June 2020, we announced a security incident resulting from a Maze ransomware attack affecting certain but not all operational systems within our information technology infrastructure. Because we did not satisfy the attacker’s monetary demands, on June 15, 2020, the attacker released online certain proprietary information obtained from our network. Since that time, our internal information technology team, supplemented by a leading cyber defense firm, took steps aimed at containing and assessing this incident, including implementing enhanced security controls aimed at protecting our information technology systems. Since that event, security breaches and incidents, computer malware and computer hacking attacks have continued to become more prevalent and sophisticated. These threats are constantly evolving, making it increasingly difficult to successfully defend against or implement adequate preventive measures. We experience cyber-attacks of varying degrees on our technology infrastructure and systems and notwithstanding our defensive measures, experienced programmers, hackers or state actors may be able to penetrate our security controls through attacks such as phishing, impersonating authorized users, ransomware, viruses, worms and other malicious software programs, software supply chain attacks, exploitation of design flaws, bugs and other security weaknesses and vulnerabilities, covert introduction of malware to computers and networks, including those using techniques that change frequently or may be disguised or difficult to detect, or designed to remain dormant until a triggering event or that may continue undetected for an extended period of time. Geopolitical tensions or conflicts may create heightened risk of cyber-attacks and attackers have used artificial intelligence and machine learning to launch more automated, targeted and coordinated attacks against targets. Businesses we acquire may increase the scope and complexity of our information technology systems, and this may increase our risk exposure to cyber-attack when there are difficulties integrating diverse legacy systems that support operations for the acquired businesses. Our information technology infrastructure also includes products and services provided by third parties, and these providers can experience breaches of their systems and products, or provide inadequate updates or support, which can impact the security of our systems and our proprietary or confidential information.

A cybersecurity incident or other compromise of our information technology systems could result in unauthorized publication of confidential business or proprietary information belonging to us, a customer, supplier, employee or other third party, including personal data, result in violations of privacy or other laws, expose us to a risk of litigation, cause us to incur direct losses if attackers initiate wire transfers or access our bank or investment accounts, or damage our reputation. More generally, any theft, loss, misuse, or other unauthorized processing of any confidential business or proprietary information, including personal data, collected, used, stored, transferred, or otherwise processed by us or on our behalf could result in significantly increased costs, expenses, damage to our reputation, and claims, litigation, demands, and regulatory investigations or other proceedings. The cost and operational consequences of implementing further data protection measures either as a response to specific breaches or incidents or as a result of evolving risks could be significant. In addition, our inability to use or access our information systems at critical points in time could adversely affect the timely and efficient operation of our business. Any delayed sales, significant costs or lost customers resulting from these technology failures could adversely affect our business, operations and financial results. We also may face difficulties or delays in identifying and remediating and otherwise responding to any security breach or incident.

From time-to-time, we upgrade software that we use in our business, including our enterprise resource planning, or ERP, system. Our business may be disrupted if our software does not work as planned or if we experience issues relating to any implementation, or accessing our software as has happened in a previous cybersecurity attack, in which case we may be unable to timely or accurately prepare financial reports, make payments to our suppliers and employees, or ship to, invoice and collect from our customers.

We may be subject to supply chain attacks where threat actors attempt to inject malicious code into our products thus infecting our products and the systems of our customers. Any such supply chain attack could have magnified damages to our business as a direct result of the attack as well as due to a loss of credibility or reputation with our customers. Such attempts are increasing in number and in technical sophistication, and if successful, expose us and the affected parties to risk of loss or misuse of proprietary or confidential information or disruptions of our business operations, including our manufacturing operations.

Third parties with which we conduct business, such as foundries, assembly and test contractors, and distributors, have access to certain portions of our sensitive data, and we rely on third parties to store and otherwise process data for us. We are dependent on the information security systems of these third parties and they face substantial security risks similar to those outlined above. Any security breaches or incidents or other unauthorized access by third parties to the systems of our suppliers, service providers, or other third parties with access to our sensitive data, or the existence of computer viruses, ransomware or other malicious code in their data, software, or hardware, could result in disruptions or failures of systems used in our business, payments to fraudulent bank accounts, and expose us to a risk of loss, misappropriation, unavailability and other unauthorized processing of information. Any of the foregoing, or the perception any of them has occurred, could have a material adverse impact on our business, operations and financial results.

Additionally, we cannot be certain that our insurance coverage will be adequate or otherwise protect us with respect to claims, expenses, fines, penalties, business loss, data loss, litigation, regulatory actions, or other impacts arising from any of the security breaches or incidents outlined above, or that such coverage will continue to be available on acceptable terms or at all. Any of these results could adversely affect our business, operations and financial results, potentially in a material manner.

As of September 30, 2023, our aggregate indebtedness was $125.0 million, and we are subject to a variable amount of interest on the principal balance of our credit agreements and could continue to be adversely impacted by rising interest rates in the future. Such indebtedness adversely affects our operating results and cash-flows as we satisfy our underlying interest and principal payment obligations and contains financial and operational covenants that could adversely affect our operational freedom or ability to pursue strategic transactions that we would otherwise consider to be in the best interests of stockholders, including obtaining additional indebtedness to finance such transactions. In addition, rising interest rates may make it more difficult for us, our customers, and our distributors to obtain financing and service our respective interest and debt obligations, which in turn has an impact on customer demand for our products and our distributors' business.

As of September 30, 2023, our aggregate indebtedness was $125.0 million from an initial secured term B loan facility, or the Initial Term Loan under the June 23, 2021 Credit Agreement. The June 23, 2021 Credit Agreement also provides for a revolving credit facility of up to $100.0 million, or the Revolving Facility, which remains undrawn as of September 30, 2023. The credit agreement also permits us to request incremental loans in an aggregate principal amount not to exceed the sum of an amount equal to the greater of (x) $175.0 million and (y) 100% of “Consolidated EBITDA” (as defined in such agreement), plus the amount of certain voluntary prepayments, plus an unlimited amount that is subject to pro forma compliance with certain first lien net leverage ratio, secured net leverage ratio and total net leverage ratio tests. The June 23, 2021 Credit Agreement was amended on June 29, 2023 to implement a benchmark replacement.

The Initial Term Loan under the June 23, 2021 Credit Agreement has a seven-year term expiring in June 2028 and bears interest at either an Adjusted Term SOFR plus a fixed applicable margin of 2.25% or an Adjusted Base Rate plus a fixed applicable margin of 1.25%, at our option. Commencing on September 30, 2021, the Initial Term Loan under the June 23, 2021 Credit Agreement will amortize in equal quarterly installments equal to 0.25% of the original principal amount, with the balance payable on June 23, 2028. We are subject to commitment fees ranging from 0.175% to 0.25% on the undrawn portion of the Revolving Facility, and any outstanding loans under the Revolving Facility will bear interest at either an Adjusted Term SOFR plus a margin of 1.00% to 1.75% or an Adjusted Base Rate plus a margin of 0% to 0.75%. Our obligations under the June 23, 2021 Credit Agreement are required to be guaranteed by certain of our domestic subsidiaries meeting materiality thresholds set forth in the credit agreement. Such obligations, including the guaranties, are secured by substantially all of our assets and those of the subsidiary guarantors.

Our material indebtedness adversely affects our operating expenses through increased interest payment obligations and adversely affects our ability to use cash generated from operations as we repay interest at a variable rate, which has been increasing, and principal under the term loans. In addition, the Revolving Facility provisions under the June 23, 2021 Credit Agreement include financial covenants such as an initial maximum secured net leverage ratio of 3.5 to 1, which temporarily increases to 3.75 to 1 following the consummation of certain material permitted acquisitions, and operational covenants that may adversely affect our ability to engage in certain activities, including obtaining additional financing, granting liens, undergoing certain fundamental changes, or making investments or certain restricted payments, and selling assets, and similar transactions, without obtaining the consent of the lenders, which may or may not be forthcoming. The Initial Term Loan under the June 23, 2021 Credit Agreement is only subject to operational covenants. Lastly, our borrowing costs can be affected by periodic credit ratings from independent rating agencies. Such ratings are largely based on our performance, which may be measured by credit metrics such as leverage and interest coverage ratios. Accordingly, outstanding indebtedness could adversely affect our operational freedom or ability to pursue strategic transactions that we would otherwise consider to be in the best interests of stockholders, including obtaining additional indebtedness to finance such transactions.

Specifically, our indebtedness and rising interest rates have important consequences to investors in our common stock, including the following:

- rising interest rates may make it more difficult for us, our customers, and our distributors to obtain financing and service our respective interest and debt obligations, which in turn has an impact on customer demand for our products as well as the business of our distributors;
- we are subject to variable interest rate risk because our interest rate under the Initial Term Loan under the June 23, 2021 Credit Agreement varies based on a fixed margin of 2.25% per annum over an adjusted Term SOFR rate or 1.25% per annum over an adjusted base rate and our interest rate for any outstanding principal under the revolving credit facility varies based a margin of 0% to 0.75% over adjusted base rate or a margin of 1.00% to 1.75% over an adjusted Term SOFR rate, and we are also subject to commitment fees ranging from 0.175% to 0.25% on the

undrawn portion of the Revolving Facility. If interest rates were to continue to increase substantially, it would adversely affect our operating results and could affect our ability to service our indebtedness;

- a portion of our cash flows is dedicated to the payment of interest and when applicable, principal, on our indebtedness and other obligations and will not be available for use in our business;
- our level of indebtedness, combined with rising interest rates, could limit our flexibility in planning for, or reacting to, changes in our business and the markets in which we operate, including limiting our future investments or ability to enter into acquisitions and strategic partnerships, and obtain financing for such transactions; and
- our high degree of indebtedness may make us more vulnerable to changes in general economic conditions and/or a downturn in our business, thereby making it more difficult for us to satisfy our obligations.

If we fail to make required debt payments, or if we fail to comply with financial or other covenants in our debt service agreements, which include a maximum leverage ratio, we would be in default under the terms of these agreements. Subject to customary cure rights, any default would permit the holders of the indebtedness to accelerate repayment of this debt and could cause defaults under other indebtedness that we have, any of which could have a material adverse effect on the trading price of our common stock.

We and our subsidiaries may, subject to any limitations in the terms of our existing loan facilities, incur additional debt, secure existing or future debt, recapitalize our debt or take a number of other actions that are not limited by the terms of our term loans that could have the effect of diminishing our ability to make payments under the indebtedness when due. If we incur any additional debt, the related risks that we and our subsidiaries face could intensify. Please refer to the Risk Factor entitled "*If we are required to pay any damages from legal proceedings related to the termination of the Merger Agreement with Silicon Motion or any alleged breaches of the Merger Agreement that we are required to pay, or any amounts we agree to pay in any settlement the amount could be significant and require us to draw down on all our existing lines of credit and use our cash resources, which may not be sufficient to cover any payments to Silicon Motion and could have a material adverse effect on our business, operating results, and financial condition. We expect that we may not be able to obtain financing on favorable terms if at all or raise additional capital for any such payments. Even if we are able to finance such payments through the incurrence of additional indebtedness, any material increase in our indebtedness will adversely affect our operating results and cash-flows as we satisfy our underlying interest and principal payment obligations. Issuing additional shares of our common stock, if material, will result in dilution of existing shares outstanding. Any loan agreement is also expected to contain financial and operational covenants that would adversely affect our operational freedom or ability to pursue strategic transactions that we would otherwise consider to be in the best interests of stockholders, including obtaining additional indebtedness to finance such transactions*".

We are subject to governmental laws, regulations and other legal obligations related to privacy, data protection, and cybersecurity.

The legislative, enforcement policy and regulatory framework for privacy, data protection and cybersecurity issues worldwide is rapidly evolving and complex and is likely to remain uncertain for the foreseeable future. We collect and otherwise process data, including personal data and other regulated or sensitive data, as part of our business processes and activities. This data is subject to a variety of U.S. and international laws and regulations, including oversight by various regulatory or other governmental bodies. Many foreign countries and governmental bodies, including China, the European Union and other relevant jurisdictions where we conduct business, have laws and regulations concerning the collection and use of personal data, and other data obtained from their residents or by businesses operating within their jurisdictions that are currently more restrictive than those in the U.S. These laws may require that our overall information technology security environment meet certain standards and/or be certified. For example, effective May 2018, the European Union adopted the General Data Protection Regulation, or GDPR, that imposed stringent data protection requirements and provided for greater penalties for noncompliance. The United Kingdom has adopted legislation that substantially implements the GDPR and provides for a similar penalty structure. Similarly, California has adopted the California Consumer Privacy Act of 2018, or CCPA, which took effect in 2020. The CCPA gives California residents the right to access, delete and opt out of certain sharing of their information, and imposes penalties for failure to comply. California has adopted a new law, the California Privacy Rights Act of 2020, or CPRA, that substantially expands the CCPA and was effective as of January 1, 2023. Additionally, other U.S. states continue to propose privacy-focused legislation, and such legislation has recently been adopted in Colorado, Virginia, Utah, Connecticut, Iowa and Texas. In 2021, the National People's Congress passed the Data Security Law of the People's Republic of China, or the Data Security Law. The Data Security Law is the first comprehensive data security legislation in the People's Republic of China, or China, and aims to regulate a wide range of issues in relation to the collection, storage, processing, use, provision, transaction and publication of any kind of data. There is significant uncertainty in how regulators will interpret and enforce the law, but it contains provisions that allow substantial government oversight and include fines for failure to obtain required approval from China’s cyber and data protection regulators for cross-border personal data-related data transfers.

The laws outlined above are only a sample of the governmental laws, regulations and other legal obligations related to privacy, data protection, and cybersecurity to which we are subject. Various aspects of these laws, including their interpretation and enforcement, remain unclear, resulting in further uncertainty and potentially requiring us to modify our data practices and policies and to incur substantial additional costs and expenses in an effort to comply. Because the interpretation and application of many such laws and regulations, remain uncertain and continue to evolve, it is possible that these laws and regulations may be interpreted and applied in a manner that is inconsistent with our data management practices or the features of our products or solutions, and we could face fines, lawsuits, regulatory investigations, and other claims and penalties, and we could be required to fundamentally change our products or our business practices, all of which could have a material adverse effect on our business. Any inability, or perceived inability, to adequately address privacy and data protection concerns, or to comply with applicable laws, regulations, policies, industry standards, contractual obligations or other legal obligations, even if unfounded, could result in additional cost and liability to us, damage our reputation, inhibit sales and have a material adverse effect on our business, results of operations, and financial condition.

Our products must conform to industry standards in order to be accepted by end users in our markets.

Generally, our products comprise only a part or parts of a communications device. All components of these devices must uniformly comply with industry standards in order to operate efficiently together. We depend on companies that provide other components of the devices to support prevailing industry standards. Many of these companies are significantly larger and more influential in driving industry standards than we are. Some industry standards may not be widely adopted or implemented uniformly, and competing standards may emerge that may be preferred by our customers or end users. If larger companies do not support the same industry standards that we do, or if competing standards emerge, market acceptance of our products could be adversely affected, which would harm our business.

Products for communications applications are based on industry standards that are continually evolving. Our ability to compete in the future will depend on our ability to identify and ensure compliance with these evolving industry standards. The emergence of new industry standards could render our products incompatible with products developed by other suppliers. As a result, we could be required to invest significant time and effort and to incur significant expense to redesign our products to ensure compliance with relevant standards. If our products are not in compliance with prevailing industry standards for a significant period of time, we could miss opportunities to achieve crucial design wins. We may not be successful in developing or using new technologies or in developing new products or product enhancements that achieve market acceptance. Our pursuit of necessary technological advances may require substantial time and expense.

We may, from time to time, make additional business acquisitions or investments, which involve significant risks.

We have completed multiple acquisitions in the past eight years. We may also enter into alliances or make investments in other businesses to complement our existing product offerings, augment our market coverage or enhance our technological capabilities. Any such transactions has resulted and could result in:

- issuances of equity securities dilutive to our existing stockholders;
- substantial cash payments;
- the incurrence of substantial debt and assumption of unknown liabilities;
- large one-time write-offs;
- amortization expenses related to intangible assets;
- a limitation on our ability to use our net operating loss carryforwards;
- the diversion of management's time and attention from operating our business to acquisition integration challenges;
- stockholder or other litigation relating to the transaction;
- adverse tax consequences;

- costs and expenses associated with any undisclosed or potential liabilities; and
- the potential loss of, or ability to attract, key personnel, customers and suppliers of the acquired businesses.

To the extent we pay the purchase price of any acquisition or investment in cash or through borrowings under our Revolving Facility, it would reduce our cash balances and/or result in indebtedness we must service, which may have a material adverse effect on our business and financial condition. If the purchase price is paid with our stock, it would be dilutive to our stockholders. In addition, we may assume liabilities associated with a business acquisition or investment, including unrecorded liabilities that are not discovered at the time of the transaction, and the repayment of those liabilities may have a material adverse effect on our financial condition.

Integrating acquired organizations and their products and services, including the integration of completed acquisitions, may be expensive, time-consuming and a strain on our resources and our relationships with employees, customers, distributors and suppliers, and ultimately may not be successful. The benefits or synergies we may expect from the acquisition of complementary or supplementary businesses may not be realized to the extent or in the time frame we initially anticipate. Some of the risks that may affect our ability to successfully integrate acquired businesses include those associated with:

- failure to successfully further develop the acquired products or technology;
- conforming the acquired company’s standards, policies, processes, procedures and controls with our operations;
- coordinating new product and process development, especially with respect to highly complex technologies;
- loss of key employees or customers of the acquired business;
- hiring additional management and other key personnel;
- in the case of foreign acquisitions, the need to integrate operations across different cultures and languages and to address the particular economic, currency, political and regulatory risks associated with specific countries;
- increasing the scope, geographic diversity and complexity of our operations;
- consolidation of facilities, integration of the acquired businesses' accounting, human resource and other administrative functions and coordination of product, engineering and sales and marketing functions;
- the geographic distance between the businesses;
- liability for activities of the acquired businesses before the acquisition, including patent and trademark infringement claims, violations of laws, commercial disputes, tax liabilities and other known and unknown liabilities; and
- litigation or other claims in connection with the acquired businesses, including claims for terminated employees, customers, former stockholders or other third parties.

We may not be able to identify suitable acquisition or investment candidates, or even if we do identify suitable candidates, they may be difficult to finance, expensive to fund and there is no guarantee that we can obtain any necessary antitrust approvals or complete such transactions on terms that are favorable to us.

We have in the past been and may in the future be party to ligation related to acquisitions. Any adverse determination in litigation resulting from acquisitions could have a material adverse effect on our business and operating results.

Any legal proceedings or claims against us could be costly and time-consuming to defend and could harm our reputation regardless of the outcome.

In addition to the legal proceedings related to the termination of the Merger Agreement with Silicon Motion or alleged breaches of the Merger Agreement (see Part II, Item 1 (Legal Proceedings) of this report for more information on these proceedings), we are subject to legal proceedings and claims that arise in the ordinary course of business, including intellectual property, product liability, employment, class action, customer claims, whistleblower and other litigation claims, and governmental and other regulatory investigations and proceedings. In addition, we have implemented a reduction in force and the attendant layoffs has resulted and could result in the risk of claims being made by or on behalf of affected employees. Such matters can be time-consuming, divert management's attention and resources, cause us to incur significant expenses or liability, or require us to change our business practices. In addition, the expense of litigation and the timing of this expense from period to period are difficult to estimate, subject to change, and could adversely affect our financial condition and results of operations. Because of the potential risks, expenses, and uncertainties of litigation, we may, from time to time, settle disputes, even where we have meritorious claims or defenses, by agreeing to settlement agreements. Any of the foregoing could adversely affect our business, financial condition, and results of operations.

Risks Relating to Intellectual Property

We have settled in the past intellectual property litigation, are currently facing, and may in the future face additional claims of intellectual property infringement. Any current or future litigation could be time-consuming, costly to defend or settle and result in the loss of significant rights.

The semiconductor industry is characterized by companies that hold large numbers of patents and other intellectual property rights and that vigorously pursue, protect and enforce intellectual property rights. Third parties have in the past and may in the future assert against us and our customers and distributors their patent and other intellectual property rights to technologies that are important to our business. For example, we were recently involved in a litigation with Bell Semiconductor, which has since been settled pursuant to a Settlement and Patent License Agreement. In addition, from time to time, we receive correspondence from competitors and other third parties seeking to engage us in discussions concerning potential claims against us, and we receive correspondence from customers seeking indemnification for potential claims related to infringement claims asserted against down-stream users of our products. We investigate these requests and claims as received and could be required to enter license agreements with respect to third party intellectual property rights or indemnify third parties, either of which could have a material adverse effect on our future operating results.

Claims that our products, processes or technology infringe third-party intellectual property rights, regardless of their merit or resolution are costly to defend or settle and could divert the efforts and attention of our management and technical personnel. In addition, many of our customer and distributor agreements require us to indemnify and defend our customers or distributors from third-party infringement claims and pay damages and attorneys' fees in the case of adverse rulings. Claims of this sort also could harm our relationships with our customers or distributors and might deter future customers from doing business with us. In order to maintain our relationships with existing customers and secure business from new customers, we have been required from time to time to provide additional assurances beyond our standard terms. If any of our current or future proceedings result in an adverse outcome, we could be required to:

- cease the manufacture, use or sale of the infringing products, processes or technology;
- pay substantial damages, indemnification expenses and attorneys' fees;
- expend significant resources to develop non-infringing products, processes or technology;
- license technology from the third-party claiming infringement, which license may not be available on commercially reasonable terms, or at all;
- cross-license our technology to a competitor to resolve an infringement claim, which could weaken our ability to compete with that competitor; or
- pay substantial damages to our customers or end users to discontinue their use of or to replace infringing technology sold to them with non-infringing technology.

Any of the foregoing results could have a material adverse effect on our business, financial condition, and results of operations.

We utilize a significant amount of intellectual property in our business. If we are unable to protect our intellectual property, our business could be adversely affected.

Our success depends in part upon our ability to protect our intellectual property. To accomplish this, we rely on a combination of intellectual property rights, including patents, copyrights, trademarks and trade secrets in the United States and in selected foreign countries where we believe filing for such protection is appropriate. Effective patent, copyright, trademark and trade secret protection may be unavailable, limited or not applied for in some countries. Some of our products and technologies are not covered by any patent or patent application. We cannot guarantee that:

- any of our present or future patents or patent claims will not lapse or be invalidated, circumvented, challenged or abandoned;
- our intellectual property rights will provide competitive advantages to us;
- our ability to assert our intellectual property rights against potential competitors or to settle current or future disputes will not be limited by our agreements with third parties;
- any of our pending or future patent applications will be issued or have the coverage originally sought;
- our intellectual property rights will be enforced in jurisdictions where competition may be intense or where legal protection may be weak;
- any of the trademarks, copyrights, trade secrets or other intellectual property rights that we presently employ in our business will not lapse or be invalidated, circumvented, challenged or abandoned; or
- we will not lose the ability to assert our intellectual property rights against or to license our technology to others and collect royalties or other payments.

In addition, our competitors or others may design around our protected patents or technologies. Effective intellectual property protection may be unavailable or more limited in one or more relevant jurisdictions relative to those protections available in the United States, or may not be applied for in one or more relevant jurisdictions. If we pursue litigation to assert our intellectual property rights, an adverse decision in any of these legal actions could limit our ability to assert our intellectual property rights, limit the value of our technology or otherwise negatively impact our business, financial condition and results of operations.

Monitoring unauthorized use of our intellectual property is difficult and costly. Unauthorized use of our intellectual property may have occurred or may occur in the future. Although we have taken steps to minimize the risk of this occurring, any such failure to identify unauthorized use and otherwise adequately protect our intellectual property would adversely affect our business. Moreover, if we are required to commence litigation, whether as a plaintiff or defendant as has occurred in the past, not only will this be time-consuming, but we will also be forced to incur significant costs and divert our attention and efforts of our employees, which could, in turn, result in lower revenue and higher expenses.

We also rely on customary contractual protections with our customers, suppliers, distributors, employees and consultants, and we implement security measures to protect our trade secrets. We cannot assure you that these contractual protections and security measures will not be breached, that we will have adequate remedies for any such breach or that our suppliers, employees or consultants will not assert rights to intellectual property arising out of such contracts.

In addition, we have a number of third-party patent and intellectual property license agreements. Some of these license agreements require us to make one-time payments or ongoing royalty payments. Also, a few of our license agreements contain most-favored nation clauses or other price restriction clauses which may affect the amount we may charge for our products, processes or technology. We cannot guarantee that the third-party patents and technology we license will not be licensed to our competitors or others in the semiconductor industry. In the future, we may need to obtain additional licenses, renew existing license agreements or otherwise replace existing technology. We are unable to predict whether these license agreements can be obtained or renewed or the technology can be replaced on acceptable terms, or at all.

When we originally settled a trademark dispute with Analog Devices International Unlimited Company (ADIUC) and its predecessor, Linear Technology Corporation, we agreed not to register the “MAXLINEAR” mark or any other marks containing the term “LINEAR”. Pursuant to the original settlement agreement, we agreed not to use the “MAXLINEAR” mark on our products. We recently entered into another settlement agreement with ADIUC that now allows us to use and register the “MAXLINEAR” mark on our products, in addition to continuing to use “MAXLINEAR” as a corporate identifier, including to advertise our products and services. We intend to register the "MAXLINEAR" mark, but prior to registration, our ability to effectively prevent third parties from using the "MAXLINEAR" mark in connection with similar products or technology will be based on our common law rights in the mark, which may make enforcement challenging. If we are unable to protect our trademarks in certain jurisdictions, we may experience difficulties in achieving and maintaining brand recognition and customer loyalty in such jurisdictions.

We face risks related to security vulnerabilities in our products.

We regularly are subject to security vulnerabilities with respect to our products as well as intellectual property that we purchase or license from third parties for use in our products. Our products are used in application areas that create new or increased cybersecurity and privacy risks, including applications that gather and process large amounts of data, such as the cloud or Internet of Things, and critical infrastructure, payment card applications, and automotive applications. Security features in our products cannot make our products entirely secure, and security vulnerabilities identified in our products have resulted in, and are expected to continue to result in, attempts by third parties to identify and exploit additional vulnerabilities. Vulnerabilities are not always mitigated before they become known. We, our customers, and the users of our products do not always promptly learn of or have the ability to fully assess the magnitude or effects of a vulnerability, including the extent, if any, to which a vulnerability has been exploited.

Mitigation techniques designed to address security vulnerabilities, including software and firmware updates or other preventative measures, are not always available on a timely basis, or at all, and at times do not operate as intended or effectively resolve vulnerabilities for all applications. In addition, we are often required to rely on third parties, including hardware, software, and services vendors, as well as our customers and end users, to develop and/or deploy mitigation techniques, and the availability, effectiveness, and performance impact of mitigation techniques can depend solely or in part on the actions of these third parties in determining whether, when, and how to develop and deploy mitigations. We and such third parties make prioritization decisions about which vulnerabilities to address, which can delay, limit, or prevent development or deployment of a mitigation and harm our reputation. Subsequent events or new information can develop that changes our assessment of the impact of a security vulnerability, which can cause certain claims or customer satisfaction considerations, as well as result in litigation or regulatory inquiries or actions over these matters.

Security vulnerabilities and/or mitigation techniques can result in adverse performance or power effects, reboots, system instability or unavailability, loss of functionality, non-compliance with standards, data loss or corruption, unpredictable system behavior, decisions by customers, regulators and end users to limit or change the applications in which they use our products or product features, and/or the misappropriation of data by third parties. Security vulnerabilities and any limitations or adverse effects of mitigation techniques can adversely affect our results of operations, financial condition, customer relationships, prospects, and reputation in a number of ways, any of which may be material.

The use of open source software in our products, processes and technology may expose us to additional risks and harm our intellectual property.

Our products, processes and technology sometimes utilize and incorporate software that is subject to an open source license. Open source software is typically freely accessible, usable and modifiable. Certain open source software licenses require a user who intends to distribute the open source software as a component of the user's software to disclose publicly part or all of the source code to the user's software. In addition, certain open source software licenses require the user of such software to make any derivative works of the open source code available to others on unfavorable terms or at no cost. This can subject previously proprietary software to open source license terms.

While we monitor the use of all open source software in our products, processes and technology and try to ensure that no open source software is used in such a way as to require us to disclose the source code to the related product, processes or technology when we do not wish to do so, such use could inadvertently occur. Additionally, if a third party software provider has incorporated certain types of open source software into software we license from such third party for our products, processes or technology, we could, under certain circumstances, be required to disclose the source code to our products, processes or technology. This could harm our intellectual property position and have a material adverse effect on our business, results of operations and financial condition.

Risks Relating to Reliance on Third-Parties

We do not have our own manufacturing facilities and rely on a limited number of third parties to manufacture, assemble, and test our products. The failure to manage our relationships with our third-party contractors successfully, or impacts from volatility in global supply, natural disasters, public health crises, or other labor stoppages in the regions where such contractors operate, could adversely affect our ability to market and sell our products.

We operate an outsourced manufacturing business model that utilizes third-party foundry and assembly and test capabilities. As a result, we rely on third-party foundry wafer fabrication, including sole sourcing for many components or products. Currently, a large portion of our products are manufactured by Advanced Semiconductor Engineering, or ASE, TSMC, and United Microelectronics Corporation, or UMC, at foundries located in Taiwan, Singapore, and China. We also rely on Intel Corporation, or Intel, for certain products on a turnkey basis under a supply agreement with an initial term of five years. We also use third-party contractors for all of our assembly and test operations.

Relying on third party manufacturing, assembly and testing presents significant risks to us, including the following:

- capacity shortages during periods of high demand or from events beyond our control or inventory oversupply during periods of decreased demand. For example, we have experienced and could continue to experience inventory oversupply in certain of our products due to changes in customer demand which has added to volatility in managing the business. Inventory oversupply has also led and could continue to lead to inventory write-downs, including charges for any excess or obsolete inventory, which could negatively impact our gross margins;
- failure by us, our customers, or their end customers to qualify a selected supplier;
- reduced control over delivery schedules and quality;
- shortages of materials;
- misappropriation of our intellectual property;
- limited warranties on wafers or products supplied to us;
- potential increases in prices; and
- our use of foundry partners who are currently subject to BIS restrictions, to manufacture certain of our products may be impaired if one or more of the following were to occur: (1) we are unable to obtain U.S. export licenses authorizing its interactions and technology exchanges with these foundry partners, or (2) if BIS increases export control restrictions to Chinese foundries without the ability for us to obtain a U.S. export license, or (3) U.S. providers of semiconductor manufacturer equipment are unable to export such equipment or related spare or replacement parts used in the manufacture of our products, or obtain a license to export such equipment and parts, to current or future Chinese foundry partners.

The ability and willingness of our third-party contractors to perform is largely outside our control. If one or more of our contract manufacturers or other outsourcers fails to perform its obligations in a timely manner or at satisfactory quality levels, our ability to bring products to market and our reputation could suffer. For example, in the event that manufacturing capacity is reduced or eliminated at one or more facilities, manufacturing could be disrupted, we could have difficulties fulfilling our customer orders and our net revenue could decline. In addition, if these third parties fail to deliver quality products and components on time and at reasonable prices, we could have difficulties fulfilling our customer orders, our net revenue could decline and our business, financial condition and results of operations would be adversely affected.

Additionally, our product shipment and manufacturing capacity may be similarly reduced or eliminated at one or more facilities due to the fact that the majority of our fabrication and assembly and test contractors are all located in the Pacific Rim region, principally in China, Taiwan, and Singapore. The risk of earthquakes in these geographies is significant due to the proximity of major earthquake fault lines, and Taiwan in particular is also subject to typhoons and other Pacific storms, and more recently, a drought impacting the water supply which chip manufacturers rely upon to fabricate chip products. Earthquakes, fire, flooding, drought, or other natural disasters in Taiwan or the Pacific Rim region, or political unrest, war, labor strikes, work stoppages or public health crises, such as the outbreak of COVID-19, in countries where our contractors' facilities are located could result in the disruption of our product shipments, foundry, assembly, or test capacity. If such disruption were to recur over a prolonged period, it could have a material impact on our revenues and our business. Any disruption resulting from similar events on a larger scale or over a prolonged period could cause significant delays in shipments of our products until we are able to resume such shipments, or shift our manufacturing, assembly, or test from the affected contractor to another third-party vendor, if needed. If such disruption were to recur over a prolonged period, it could have a material impact on our revenue and business. There can be no assurance that alternative capacity could be obtained on favorable terms, if at all.

We are subject to risks associated with our distributors' product inventories and product sell-through. Should any of our distributors cease or be forced to stop distributing our products, our business would suffer.

We currently sell a large portion of our products to customers through our distributors, who maintain their own inventories of our products. Sales to distributors accounted for approximately 47% and 44% of our net revenue in the nine months ended September 30, 2023 and 2022, respectively. Upon shipment of product to these distributors, title to the inventory transfers to the distributor and the distributor is invoiced, generally with 30 to 60 day terms. Distributor sales are also recognized upon shipment to the distributor and estimates of future pricing credits and/or stock rotation rights reduce revenue recognized to the net amount before the actual amounts are known. If our estimates of such credits and rights are materially understated it could cause subsequent adjustments that negatively impact our revenues and gross profits in a future period.

If our distributors are unable to sell an adequate amount of their inventories of our products in a given quarter to manufacturers and end users or if they decide to decrease their inventories of our products for any reason, our sales through these distributors and our revenue may decline. In addition, if some distributors decide to purchase more of our products than are required to satisfy end customer demand in any particular quarter, inventories at these distributors would grow in that quarter. These distributors could then reduce future orders until inventory levels realign with end customer demand, which has in the past and could in the future adversely affect our product revenue.

Our reserve estimates with respect to the products stocked by our distributors are based principally on reports provided to us by our distributors, typically on a weekly basis. To the extent that this resale and channel inventory data is inaccurate or not received in a timely manner, we may not be able to make reserve estimates accurately or at all.

We do not have any long-term supply contracts with our contract manufacturers or suppliers, and any disruption in our supply of products or materials could have a material adverse effect on our business, revenue and operating results.

While certain products are supplied to us by Intel on a turnkey basis under the terms of a supply agreement with an initial term of five years, currently we do not have long-term supply contracts with any other third-party vendors, including but, not limited to ASE, TSMC, and UMC. We make substantially all of our purchases on a purchase order basis, and our contract manufacturers are not required to supply us products for any specific period or in any specific quantity. Foundry capacity may not be available when we need it or at reasonable prices. Availability of foundry capacity has in the past been reduced from time to time due to strong demand. Foundries can allocate capacity to the production of other companies' products and reduce deliveries to us on short notice. It is possible that foundry customers that are larger and better financed than we are, or that have long-term agreements with our foundry, may induce our foundry to reallocate capacity to them. This reallocation could impair our ability to secure the supply of components that we need. We generally place orders for products with some of our suppliers approximately four to five months prior to the anticipated delivery date, with order volumes based on our forecasts of demand from our customers. Accordingly, if we inaccurately forecast demand for our products, we may be unable to obtain adequate and cost-effective foundry or assembly capacity from our third-party contractors to meet our customers' delivery requirements, which could harm our reputation and customer relationships, or we may accumulate excess inventories. On occasion, we have been unable to adequately respond to unexpected increases in customer purchase orders and therefore were unable to benefit from this incremental demand. None of our third-party contractors has provided any assurance to us that adequate capacity will be available to us within the time required to meet additional demand for our products.

We rely on third parties to provide services and technology necessary for the operation of our business. Any failure of one or more of our partners, vendors, suppliers or licensors to provide these services or technology could have a material adverse effect on our business.

We rely on third-party vendors to provide critical services, including, among other things, services related to accounting, billing, human resources, information technology, network development, network monitoring, in-licensing and intellectual property that we cannot or do not create or provide ourselves. We depend on these vendors to ensure that our corporate infrastructure will consistently meet our business requirements. The ability of these third-party vendors to successfully provide reliable and high quality services is subject to technical and operational uncertainties that are beyond our control. While we may be entitled to damages if our vendors fail to perform under their agreements with us, our agreements with these vendors limit the amount of damages we may receive. In addition, we do not know whether we will be able to collect on any award of damages or that these damages would be sufficient to cover the actual costs we would incur as a result of any vendor's failure to perform under its agreement with us. Any failure of our corporate infrastructure could have a material adverse effect on our business, financial condition and results of operations. Upon expiration or termination of any of our agreements with third-party vendors, we may not be able to replace the services provided to us in a timely manner or on terms and conditions, including service levels and cost, that are favorable to us and a transition from one vendor to another vendor could subject us to operational delays and inefficiencies until the transition is complete.

Additionally, we incorporate third-party technology into and with some of our products, and we may do so in future products. The operation of our products could be impaired if errors occur in the third-party technology we use. It may be more difficult for us to correct any errors in a timely manner if at all because the development and maintenance of the technology is not within our control. There can be no assurance that these third parties will continue to make their technology, or improvements to the technology, available to us, or that they will continue to support and maintain their technology. Further, due to the limited number of vendors of some types of technology, it may be difficult to obtain new licenses or replace existing technology. Any impairment of the technology or our relationship with these third parties could have a material adverse effect on our business.

Risks Relating to Our Common Stock

Our management team may use our available cash and cash equivalents in ways with which you may not agree or in ways which may not yield a return.

We use our cash and cash equivalents for general corporate purposes, including working capital and for repayment of outstanding long-term debt. We may also, in the future, use a portion of our assets to acquire other complementary businesses, products, services or technologies. Our management has considerable discretion in the application of our cash and cash equivalents, and resources, and you will not have the opportunity to assess whether these liquid assets are being used in a manner that you deem best to maximize your return. We may use our available cash and cash equivalents and resources for corporate purposes that do not increase our operating results or market value. In addition, in the future our cash and cash equivalents, and resources may be placed in investments that do not produce significant income or that may lose value.

Anti-takeover provisions in our charter documents and under Delaware law could make an acquisition of us more difficult, limit attempts by our stockholders to replace or remove our current management and limit the market price of our common stock.

Provisions in our certificate of incorporation and bylaws, as amended and restated, may have the effect of delaying or preventing a change of control or changes in our management. These provisions provide for the following:

- authorize our Board of Directors to issue, without further action by the stockholders, up to 25,000,000 shares of undesignated preferred stock;
- require that any action to be taken by our stockholders be effected at a duly called annual or special meeting and not by written consent;
- specify that special meetings of our stockholders can be called only by our Board of Directors, our Chairman of the Board of Directors, or our President;
- establish an advance notice procedure for stockholder approvals to be brought before an annual meeting of our stockholders, including proposed nominations of persons for election to our Board of Directors;
- establish that our Board of Directors is divided into three classes, Class I, Class II and Class III, with each class serving staggered terms;
- provide that our directors may be removed only for cause;
- provide that vacancies on our Board of Directors may be filled only by a majority of directors then in office, even though less than a quorum;
- specify that no stockholder is permitted to cumulate votes at any election of directors; and
- require supermajority votes of the holders of our common stock to amend specified provisions of our charter documents.

These provisions may frustrate or prevent any attempts by our stockholders to replace or remove our current management by making it more difficult for stockholders to replace members of our Board of Directors, which is responsible for appointing the members of our management. In addition, because we are incorporated in Delaware, we are governed by the provisions of Section 203 of the Delaware General Corporation Law, which generally restricts a Delaware corporation from engaging in any of a broad range of business combinations with any "interested" stockholder for a period of three years following the date on which the stockholder became an "interested" stockholder.

Our share price may be volatile as a result of various factors.

The trading price of our common stock is highly volatile and could be subject to wide fluctuations in response to various factors, some of which are beyond our control. For example, in the nine months ended September 30, 2023, the trading price of our common stock ranged from a low of $21.17 to a high of $43.66. These factors include those discussed in this "Risk Factors" section of the Quarterly Report on Form 10-Q and others such as:

- any developments related to our terminated merger with Silicon Motion;
- actual or anticipated fluctuations in our financial condition and operating results;
- overall conditions in the semiconductor market;
- addition or loss of significant customers;
- changes in laws or regulations applicable to our products, including export controls;
- geopolitical changes impacting our business, including with respect to China and Taiwan;
- actual or anticipated changes in our growth rate relative to our competitors;
- announcements of technological innovations by us or our competitors;
- announcements by us or our competitors of significant acquisitions, strategic partnerships, joint ventures, or capital commitments;
- departures of, and inability to attract, qualified key personnel;
- competition from existing products or new products that may emerge;
- issuance of new or updated research or reports by securities analysts;
- fluctuations in the valuation of companies perceived by investors to be comparable to us;
- disputes or other developments related to proprietary rights, including patents, litigation matters, and our ability to obtain intellectual property protection for our technologies;
- acquisitions may not be accretive and may cause dilution to our earnings per share;
- announcement or expectation of additional financing efforts;
- sales of our common stock by us or our stockholders; and
- general economic and market conditions, including the impacts from sanctions against Russia and the military conflict in Ukraine and Israel, increased inflationary pressures, interest rate changes, and the global COVID-19 pandemic.

Furthermore, the stock markets have experienced extreme price and volume fluctuations that have affected the market prices of equity securities of many companies. These fluctuations often have been unrelated or disproportionate to the operating performance of those companies. These broad market and industry fluctuations, as well as general economic, political, and market conditions such as recessions, interest rate changes or international currency fluctuations, may negatively impact the market price of our common stock. In the past, companies that have experienced volatility in the market price of their stock have been subject to securities class action litigation. We have been and may continue to be the target of this type of litigation in the future. Securities litigation against us could result in substantial costs and divert our management's attention from other business concerns, which could seriously harm our business.

We have adopted a stock repurchase program to repurchase shares of our common stock; however, any future decisions to reduce or discontinue purchasing our common stock pursuant to our stock repurchase programs could cause the market price for our common stock to decline.

Our share repurchase program has been temporarily suspended since July 2022 due to our previously pending (now terminated) merger with Silicon Motion.Although our board of directors has authorized a stock repurchase program, any determination to resume our stock repurchase program and execute our stock repurchase program will be subject to, among other things, our financial position and results of operations, available cash and cash flow, capital requirements, and other factors, as well as our board of director's continuing determination that the repurchase program are in the best interests of our shareholders and is in compliance with all laws and agreements applicable to the repurchase program. Our stock repurchase program does not obligate us to acquire any common stock. If we fail to meet any expectations related to stock repurchases, the market price of our common stock could decline, and could have a material adverse impact on investor confidence. Additionally, price volatility of our common stock over a given period may cause the average price at which we repurchase our common stock to exceed the stock's market price at a given point in time.

We may further increase or decrease the amount of repurchases of our common stock in the future. Any reduction or discontinuance by us of repurchases of our common stock pursuant to our current stock repurchase program could cause the market price of our common stock to decline. Moreover, in the event repurchases of our common stock are reduced or discontinued, our failure or inability to resume repurchasing common stock at historical levels could result in a lower market valuation of our common stock.

If securities or industry analysts do not publish research or reports about our business, or publish negative reports about our business, our share price and trading volume could decline.

The trading market for our common stock depends in part on the research and reports that securities or industry analysts publish about us or our business. We do not have any control over these analysts. If one or more of the analysts who cover us downgrade our shares or change their opinion of our shares, our share price would likely decline. If one or more of these analysts cease coverage of us or fails to regularly publish reports on us, we could lose visibility in the financial markets, which could cause our share price or trading volume to decline.

Future sales of our common stock in the public market could cause our share price to decline.

Sales of a substantial number of shares of our common stock in the public market, or the perception that these sales might occur, could depress the market price of our common stock and could impair our ability to raise capital through the sale of additional equity securities. As of September 30, 2023, we had approximately 81.6 million shares of common stock outstanding.

All shares of our common stock are freely tradable without restrictions or further registration under the Securities Act unless held by our "affiliates," as that term is defined under Rule 144 of the Securities Act.

Our Executive Incentive Bonus Plan permits the settlement of awards under the plan in the form of shares of our common stock. We have issued shares of our common stock to settle such bonus awards for our employees, including executives, for the 2014 to 2022 performance periods, and we intend to continue this practice in the foreseeable future. We issued 0.9 million shares of our common stock for the 2022 performance period in February 2023. If we issue additional shares of our common stock to settle bonus awards in the future, such shares may be freely sold in the public market immediately following the issuance of such shares, subject to the applicable conditions of Rule 144 and our insider trading policy, and the issuance of such shares may have a material adverse effect on our share price once they are issued.

We do not intend to pay dividends for the foreseeable future.

We have never declared or paid any cash dividends on our common stock and do not intend to pay any cash dividends in the foreseeable future. We anticipate that we will retain all of our future earnings for use in the development of our business and for general corporate purposes. Any determination to pay dividends in the future will be at the discretion of our Board of Directors. Accordingly, investors must rely on sales of their common stock after price appreciation, which may never occur, as the only way to realize any future gains on their investments.

General Risk Factors

If we suffer losses to our facilities or distribution system due to catastrophe, our operations could be seriously harmed.

Our facilities and distribution system, and those of our third-party contractors, are subject to risk of catastrophic loss due to fire, flood, drought or other natural or man-made disasters. A number of our facilities and those of our contract manufacturers are located in areas with above average seismic activity. The risk of an earthquake in the Pacific Rim region or Southern California is significant due to the proximity of major earthquake fault lines, and Taiwan in particular is also subject to typhoons and other Pacific storms, and more recently, a drought impacting the water supply which chip manufacturers rely upon to fabricate chip products. Any catastrophic loss to any of these facilities would likely disrupt our operations, delay production, shipments and revenue and result in significant expenses to repair or replace the facility. The majority of the factories we use for foundry, assembly and test, and warehousing services, are located in Asia, principally in China, Taiwan, and Singapore. Our corporate headquarters is located in Southern California. Our operations and financial condition could be seriously harmed in the event of a major earthquake, fire, flooding, drought, or other natural disasters in Taiwan or the Pacific Rim region, or political unrest, war, labor strikes, work stoppages or public health crises, such as the outbreak of COVID-19, or other natural or man-made disaster in countries where our contractors' facilities are located. Such catastrophes could result in the disruption of our product shipments, foundry, assembly, or test capacity.

We have recorded goodwill and other intangible assets in connection with business acquisitions. Goodwill and other acquired intangible assets could become impaired and adversely affect our future operating results.

We account for business acquisitions as business combinations under the acquisition method of accounting in accordance with accounting principles generally accepted in the United States. Under the acquisition method of accounting, the total purchase price is allocated to net tangible assets and identifiable intangible assets of acquired businesses based on their fair values as of the date of completion of the acquisition. The excess of the purchase price over those fair values is recorded as goodwill. Our acquisitions have resulted in the creation of goodwill and recording of a large amount of intangible assets based upon the application of the acquisition method of accounting. To the extent the value of goodwill or other intangible assets become impaired, we may be required to incur material charges relating to such impairment. We conduct our annual goodwill and indefinite-lived intangible asset impairment analysis on October 31 each year, or more frequently if we believe indicators of impairment exist. Our reported financial condition and results of operations reflect the balances and results of the acquired businesses but are not restated retroactively to reflect the historical financial position or results of operations of acquired businesses for periods prior to the acquisitions. As a result, comparisons of future results against prior period results will be more difficult for investors. In addition, there can be no guarantee that acquired intangible assets, particularly in-process research and development, will generate revenues or profits that we include in our forecast that is the basis for their fair values as of the acquisition date. Any such impairment charges relating to goodwill or other intangible assets could have a material impact on our operating results in future periods, and the announcement of a material impairment could have a material adverse effect on the trading price and trading volume of our common stock. As of September 30, 2023, our balance sheet reflected goodwill of $318.5 million and other intangible assets of $82.6 million. Consequently, we could recognize material impairment charges in the future.

Unanticipated changes in our tax rates or unanticipated tax obligations could affect our future results.

We are subject to income taxes in the United States, Singapore and various other foreign jurisdictions.The amount of income taxes we pay is subject to our interpretation and application of tax laws in jurisdictions in which we file. Changes in current or future laws or regulations, the imposition of new or changed tax laws or regulations or new interpretations by taxing authorities or courts could affect our results of operations and lead to volatility with respect to tax expenses and liabilities from period to period. For example, beginning in 2022, the Tax Cuts and Jobs Act, or the Tax Act, eliminated the option to deduct research and development expenditures currently and requires taxpayers to capitalize and amortize them over five or fifteen years pursuant to Internal Revenue Code Section 174. This has increased our effective tax rate and our cash tax payable in 2022. If the requirement to capitalize Section 174 expenditures is not modified, it may also impact our effective tax rate and our cash tax liability in future years. On August 9, 2022, the CHIPS and Science Act of 2022, or the CHIPS Act, was enacted in the United States. The CHIPS Act will provide financial incentives to the semiconductor industry which are primarily directed at manufacturing activities within the United States for qualifying property placed in service after December 31, 2022. As the Company currently outsources its manufacturing, the CHIPS Act is not expected to have a material impact to the Company's consolidated tax provision for the year ending December 31, 2023. The Inflation Reduction Act of 2022, or IRA, was signed into law on August 16, 2022. The bill was meant to address the high inflation rate in the United States through various climate, energy, healthcare, and other incentives. These incentives are meant to be paid for by the tax provisions included in the IRA, such as a new 15 percent corporate minimum tax, a 1 percent new excise tax on stock buybacks, additional IRS funding to improve taxpayer compliance, and others. The IRA provisions are effective for tax years beginning after December 31, 2022. At this time, none of the IRA tax provisions are expected to have a material impact to our consolidated tax provision for the year ending December 31, 2023. The application of tax laws and related regulations is subject to legal and factual interpretation, judgment and uncertainty. We cannot determine whether any legislative proposals may be enacted into law or what, if any, changes may be made to such proposals prior to their being enacted into law. If U.S. or international tax laws change in a manner that increases our tax obligation, it could result in a material adverse impact on our results of operations and our financial position.

Our income tax provision is subject to volatility and our ability to use our deferred tax assets to offset future taxable income may be limited since we are subject to tax examinations, which may adversely impact our future effective tax rate and operating results.

Excess tax benefits associated with employee stock-based compensation are included in income tax expense. However, since the amount of such excess tax benefits and deficiencies depend on the fair market value of our common stock, our income tax provision is subject to volatility in our stock price and in the future, could unfavorably affect our future effective tax rate.

Our future effective tax rate could be unfavorably affected by unanticipated changes in the valuation of our deferred tax assets and liabilities, and the ultimate use and depletion of these various tax credits and net operating loss carryforwards. Changes in our effective tax rate could have a material adverse impact on our results of operations. We record a valuation allowance to reduce our net deferred tax assets to the amount that we believe is more likely than not to be realized. In making such determination, we consider all available positive and negative evidence quarterly, including scheduled reversals of deferred tax liabilities, projected future taxable income, tax planning strategies, and recent financial performance. To the extent we believe it is more likely than not that some portion of our deferred tax assets will not be realized, we record a valuation allowance against the deferred tax asset. Realization of our deferred tax assets is dependent primarily upon future taxable income in the applicable jurisdiction. On a periodic basis we evaluate our deferred tax assets for realizability. Based upon our review of all positive and negative evidence, as of September 30, 2023, we continue to have a valuation allowance on state deferred tax assets, certain federal deferred tax assets, and certain foreign deferred tax assets in jurisdictions where we have cumulative losses or otherwise are not expected to utilize certain tax attributes. The impact of releasing some or all of such valuation allowance in a future period could be material in the period in which such release occurs.

Our corporate income tax liability could materially increase if tax incentives we have negotiated in Singapore cease to be effective or applicable or if we are challenged on our use of such incentives.

We operate under certain favorable tax incentives in Singapore which are effective through March 2027, and generally are dependent on our meeting certain headcount and investment thresholds. Such incentives allow certain qualifying income earned in Singapore to be taxed at reduced rates and are conditional upon our meeting certain employment and investment thresholds over time. If we fail to satisfy the conditions for receipt of these tax incentives, or to the extent U.S. or other tax authorities challenge our operation under these favorable tax incentive programs or our intercompany transfer pricing agreements, our taxable income could be taxed at higher federal or foreign statutory rates and our income tax liability and expense could materially increase beyond our projections. Each of our Singapore tax incentives is separate and distinct from the others, and may be granted, withheld, extended, modified, truncated, complied with or terminated independently without any effect on the other incentives. Absent these tax incentives, our corporate income tax rate in Singapore would generally be the 17% statutory tax rate. We are also subject to operating and other compliance requirements to maintain our favorable tax incentives. If we fail to comply with such requirements, we could lose the tax benefits and could possibly be required to refund previously realized material tax benefits. Additionally, in the future, we may fail to qualify for renewal of our favorable tax incentives or such incentives may not be available to us, which could also cause our future taxable income to increase and be taxed at higher statutory rates. Loss of one more of our tax incentives could cause us to modify our tax strategies and our operational structure, which could cause disruption in our business and have a material adverse impact on our results of operations. Further, there can be no guarantee that such modification in our tax strategy will yield tax incentives as favorable as those we have negotiated with Singapore. Our interpretations and conclusions regarding the tax incentives are not binding on any taxing authority, and if our assumptions about tax and other laws are incorrect or if these tax incentives are substantially modified or rescinded we could suffer material adverse tax and other financial consequences, which would increase our expenses, reduce our profitability and adversely affect our cash flows.

Investor confidence may be adversely impacted if we are unable to comply with Section 404 of the Sarbanes-Oxley Act of 2002, and as a result, our stock price could decline.

We are subject to rules adopted by the SEC pursuant to Section 404 of the Sarbanes-Oxley Act of 2002, or Sarbanes-Oxley Act, which require us to include in our Annual Report on Form 10-K our management's report on, and assessment of the effectiveness of, our internal controls over financial reporting.

If we fail to maintain the adequacy of our internal controls, there is a risk that we will not comply with all of the requirements imposed by Section 404. Moreover, effective internal controls, particularly those related to revenue recognition, are necessary for us to produce reliable financial reports and are important to helping prevent financial fraud. Any of these possible outcomes could result in an adverse reaction in the financial marketplace due to a loss of investor confidence in the reliability of our consolidated financial statements and could result in investigations or sanctions by the SEC, the Nasdaq Stock Market LLC, or Nasdaq, or other regulatory authorities or in stockholder litigation. Any of these factors ultimately could harm our business and could negatively impact the market price of our securities. Ineffective control over financial reporting could also cause investors to lose confidence in our reported financial information, which could adversely affect the trading price of our common stock.

Our disclosure controls and procedures are designed to provide reasonable assurance of achieving their objectives. However, our management, including our principal executive officer and principal financial officer, does not expect that our disclosure controls and procedures will prevent all error 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.

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

Recent Sales of Unregistered Securities

None.

Recent Repurchases of Equity Securities

None.

ITEM 3. DEFAULTS UPON SENIOR SECURITIES

None.

ITEM 4. MINE SAFETY DISCLOSURES

Not applicable.

ITEM 5. OTHER INFORMATION

Securities Trading Plans of Directors and Executive Officers

During our last fiscal quarter, no director or officer, as defined in Rule 16a-1(f),adopted or terminated a “Rule 10b5-1 trading arrangement” or a “non-Rule 10b5-1 trading arrangement,” each as defined in Regulation S-K Item 408.

Workforce Reduction

In October 2023, we initiated a reduction of our workforce to align our operational needs with the changes in macroeconomic conditions and the demand environment, while continuing to support our long-term business strategy by reducing our operating expenses. We are currently evaluating the timing and full impact of the workforce reduction on our business, financial condition and results of operations for the year ending December 31, 2023. To the extent the amount of such reduction is material to the year ending December 31, 2023, we would file additional information regarding such workforce reduction on Form 8-K.

ITEM 6. EXHIBITS

Exhibit Number	Exhibit Title
31.1	Certification of Principal Executive Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
31.2	Certification of Principal Financial Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
32.1(*)	Certification pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
101.INS	Inline XBRL Instance Document - the instance document does not appear in the interactive data file because its XBRL tags are embedded within the inline XBRL document.
101.SCH	Inline XBRL Taxonomy Extension Schema 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	XBRL Taxonomy Extension Presentation Linkbase Document
104	Cover Page Interactive Data File (formatted as Inline XBRL and contained in Exhibit 101)

(*) In accordance with Item 601(b)(32)(ii) of Regulation S-K and SEC Release No. 33-8238 and 34-47986, Final Rule: Management's Reports on Internal Control Over Financial Reporting and Certification of Disclosure in Exchange Act Periodic Reports, the certifications furnished pursuant to this item will not be deemed "filed" for purposes of Section 18 of the Exchange Act (15 U.S.C. 78r), or otherwise subject to the liability of that section. Such certification will not be deemed to be incorporated by reference into any filing under the Securities Act or the Exchange Act, except to the extent that the registrant specifically incorporates it by reference.

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.

MAXLINEAR, INC.

(Registrant)

Date:	October 25, 2023	By:	/s/ Steven G. Litchfield
			Steven G. Litchfield Chief Financial Officer and Chief Corporate Strategy Officer (Principal Financial Officer and Duly Authorized Officer)

EXHIBIT 31.1

Certification of Principal Executive Officer Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002

I, Kishore Seendripu, Ph.D., certify that:

1. I have reviewed this Form 10-Q of MaxLinear, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

   a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

   a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

   b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: October 25, 2023

/s/ Kishore Seendripu, Ph.D.
Kishore Seendripu, Ph.D.
President and Chief Executive Officer
(Principal Executive Officer)

EXHIBIT 31.2

Certification of Principal Financial Officer Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002

I, Steven G. Litchfield, certify that:

1. I have reviewed this Form 10-Q of MaxLinear, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

   a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

   a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

   b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: October 25, 2023

/s/ Steven G. Litchfield

Steven G. Litchfield
Chief Financial Officer and Chief Corporate Strategy Officer
(Principal Financial Officer)

EXHIBIT 32.1

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

I, Kishore Seendripu, Ph.D., certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that the Quarterly Report of MaxLinear, Inc. on Form 10-Q for the fiscal quarter ended September 30, 2023 fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934 and that information contained in such Quarterly Report on Form 10-Q fairly presents in all material respects the financial condition and results of operations of MaxLinear, Inc.

Date:	October 25, 2023	By:	/s/ Kishore Seendripu, Ph.D.
		Name:	Kishore Seendripu, Ph.D.
		Title:	President and Chief Executive Officer

I, Steven G. Litchfield, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that the Quarterly Report of MaxLinear, Inc. on Form 10-Q for the fiscal quarter ended September 30, 2023 fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934 and that information contained in such Quarterly Report on Form 10-Q fairly presents in all material respects the financial condition and results of operations of MaxLinear, Inc.

Date:	October 25, 2023	By:	/s/ Steven G. Litchfield
		Name:	Steven G. Litchfield
		Title:	Chief Financial Officer and Chief Corporate Strategy Officer