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

FORM 10-Q

(Mark One)

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

For the quarterly period ended September 30, 2022

OR

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

For the transition period from ___________________to ___________________

Commission file number: 001-38703

VELODYNE LIDAR, INC.
(Exact name of registrant as specified in its charter)

Delaware	**83-1138508**
(State or Other Jurisdiction of Incorporation or Organization)	**(I.R.S. Employer Identification Number)**
5521 Hellyer Avenue	
San Jose, CA	**95138**
(Address of principal executive offices)	**(Zip Code)**

Registrant's telephone number, including area code: (669) 275-2251

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, par value $0.0001 per share	**VLDR**	**The Nasdaq Stock Market LLC**
Warrants, each exercisable for three-quarters of one share of common stock	**VLDRW**	**The Nasdaq Stock Market LLC**

Securities Registered Pursuant to Section 12(g) of the Act: None

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

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

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

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

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

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

As of November 4, 2022, the registrant had 237,590,372 shares of common stock, $0.0001 par value per share, outstanding.

VELODYNE LIDAR, INC. AND SUBSIDIARIES

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CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

This Quarterly Report on Form 10-Q contains forward-looking statements within the meaning of the federal securities laws and particularly in Item 2: "Management's Discussion and Analysis of Financial Condition and Results of Operations". These statements are based on the expectations and beliefs of management of Velodyne Lidar, Inc. ("Velodyne", "Velodyne Lidar" or the "Company") in light of historical results and trends, current conditions and potential future developments, and are subject to a number of factors and uncertainties that could cause actual results to differ materially from forward-looking statements. These forward-looking statements include statements about the future performance and opportunities of Velodyne; statements of the plans, strategies and objectives of management for future operations of Velodyne; and statements regarding future market opportunities, economic conditions or performance. Forward-looking statements may contain words such as "will be," "will," "expect," "anticipate," "continue," "project," "believe," "plan," "could," "estimate," "forecast," "guidance," "intend," "may," "possible," "potential," "predict," "pursue," "should," "target," "likely" or similar expressions, and include the assumptions that underlie such statements.

The following factors, among others, could cause actual results to differ materially from forward-looking statements:

- Velodyne's future performance, including Velodyne's revenue, costs of revenue, gross profit or gross margin, and operating expenses;
- the sufficiency of Velodyne's cash and cash equivalents to meet its operating requirements;
- the impact of adverse or changing economic conditions;
- Velodyne's ability to sell its products to new customers;
- supply chain constraints in the semiconductor industry;
- the success of Velodyne's customers in developing and commercializing products using Velodyne's solutions, and the market acceptance of those products;
- the amount and timing of future sales;
- Velodyne's ability to meet technical and quality specifications;
- Velodyne's future market share;
- competition from existing or future businesses and technologies;
- the impact of the COVID-19 pandemic on Velodyne's business and the business of its customers;
- the market for and adoption of lidar and related technology;
- Velodyne's ability to effectively manage its growth and future expenses;
- Velodyne's ability to compete in a market that is rapidly evolving and subject to technological developments;
- Velodyne's ability to maintain, protect, and enhance its intellectual property;
- Velodyne's ability to comply with modified or new laws and regulations applying to its business;
- the attraction and retention of qualified employees and key personnel;
- Velodyne's ability to introduce new products that meet its customers' requirements and to continue successfully transitioning the manufacturing of its products to third-party manufacturers;
- Velodyne's anticipated investments in and results from sales and marketing and research and development; and
- the increased expenses associated with Velodyne being a public company.

The foregoing list of important factors should not be construed as exhaustive and should be read in conjunction with the other risk factors herein discussed under Item 1A: "Risk Factors." Forward-looking statements reflect current views about Velodyne's plans, strategies and prospects, which are based on information available as of the date of this Quarterly Report on Form 10-Q. Except to the extent required by applicable law, Velodyne undertakes no obligation (and expressly disclaims any such obligation) to update or revise any forward-looking statements whether as a result of new information, future events or otherwise.

Forward-looking statements are subject to risks and uncertainties, many of which are outside our control, which could cause actual results to differ materially from these statements. Therefore, you should not place undue reliance on those statements, which speak only as of the date of this Quarterly Report on Form 10-Q.

PART I. Financial Information

Item 1. Financial Statements

VELODYNE LIDAR, INC. AND SUBSIDIARIES
Condensed Consolidated Balance Sheets
(In thousands, except share and per share data)
(Unaudited)

	September 30, 2022	December 31, 2021
Assets		
Current assets:		
Cash and cash equivalents	$ 51,487	$ 24,064
Short-term investments	168,570	270,357
Accounts receivable, net	6,129	8,881
Inventories, net	11,498	9,299
Prepaid and other current assets	8,201	14,822
Total current assets	245,885	327,423
Property, plant and equipment, net	11,684	14,710
Operating lease right-of-use (“ROU”) assets	16,727	16,891
Goodwill	1,189	1,189
Intangible assets, net	402	724
Contract assets	9,182	12,962
Other assets	851	1,522
Total assets	$ 285,920	$ 375,421
Liabilities and Stockholders’ Equity		
Current liabilities:		
Accounts payable	$ 5,001	$ 5,105
Accrued expense and other current liabilities	31,074	33,028
Operating lease liabilities, current	3,062	2,623
Contract liabilities, current	5,456	6,348
Total current liabilities	44,593	47,104
Operating lease liabilities, non-current	14,674	15,210
Contract liabilities, non-current	9,841	12,740
Long-term tax liabilities	459	443
Other long-term liabilities	814	661
Total liabilities	70,381	76,158
Commitments and contingencies (Note 14)		
Stockholders’ equity:		
Preferred stock: $0.0001 par value; 25,000,000 shares authorized; none issued and outstanding as of September 30, 2022 and December 31, 2021	—	—
Common stock: $0.0001 par value; 2,250,000,000 shares authorized; 232,677,318 and 197,346,675 shares issued and outstanding as of September 30, 2022 and December 31, 2021, respectively	23	20
Additional paid-in capital	877,935	825,988
Accumulated other comprehensive loss	(1,103)	(412)
Accumulated deficit	(661,316)	(526,333)
Total stockholders’ equity	215,539	299,263
Total liabilities and stockholders’ equity	$ 285,920	$ 375,421

See accompanying notes to condensed consolidated financial statements.

VELODYNE LIDAR, INC. AND SUBSIDIARIES
Condensed Consolidated Statements of Operations
(In thousands, except share and per share data)
(Unaudited)

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2022	2021	2022	2021
Revenue:				
Product	$ 7,442	$ 11,782	$ 21,456	$ 34,345
License and services	2,199	1,278	5,872	10,037
Total revenue	9,641	13,060	27,328	44,382
Cost of revenue:				
Product	20,353	17,716	53,896	52,555
License and services	165	84	689	433
Total cost of revenue	20,518	17,800	54,585	52,988
Gross loss	(10,877)	(4,740)	(27,257)	(8,606)
Operating expenses:				
Research and development	16,918	20,221	56,972	55,608
Sales and marketing	4,878	6,547	16,223	60,798
General and administrative	9,583	23,271	35,330	59,440
Total operating expenses	31,379	50,039	108,525	175,846
Operating loss	(42,256)	(54,779)	(135,782)	(184,452)
Interest income	732	109	1,253	321
Interest expense	—	(6)	(3)	(83)
Other income (expense), net	2	(22)	(104)	10,097
Loss before income taxes	(41,522)	(54,698)	(134,636)	(174,117)
Provision for (benefit from) income taxes	41	14	347	649
Net loss	$ (41,563)	$ (54,712)	$ (134,983)	$ (174,766)
Net loss per share:				
Basic and diluted	$ (0.19)	$ (0.28)	$ (0.66)	$ (0.91)
Weighted-average shares used in computing net loss per share:				
Basic and diluted	213,518,699	196,204,671	203,504,556	192,835,674

See accompanying notes to condensed consolidated financial statements.

VELODYNE LIDAR, INC. AND SUBSIDIARIES
Condensed Consolidated Statements of Comprehensive Loss
(In thousands)
(Unaudited)

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2022	2021	2022	2021
Net loss	$ (41,563)	$ (54,712)	$ (134,983)	$ (174,766)
Other comprehensive loss, net of tax:				
Changes in unrealized gain (loss) on available for sale securities	165	(5)	(534)	6
Foreign currency translation adjustments	(65)	(12)	(157)	(9)
Total other comprehensive loss, net of tax	100	(17)	(691)	(3)
Comprehensive loss	$ (41,463)	$ (54,729)	$ (135,674)	$ (174,769)

See accompanying notes to condensed consolidated financial statements.

VELODYNE LIDAR, INC. AND SUBSIDIARIES
Condensed Consolidated Statements of Stockholders' Equity
(In thousands, except share data)
(Unaudited)

	Common Stock		Additional Paid in Capital	Accumulated Other Comprehensive Loss	Accumulated Deficit	Total Stockholders' Equity
	Shares	Amount				
Balance at December 31, 2021	197,346,675	$ 20	$ 825,988	$ (412)	$ (526,333)	$ 299,263
Common stock warrants issuable to customer	—	—	5,303	—	—	5,303
Issuance of common stock under employee stock award plans	916,819	—	—	—	—	—
Stock-based compensation	—	—	4,938	—	—	4,938
Other comprehensive loss, net of tax	—	—	—	(729)	—	(729)
Net loss	—	—	—	—	(49,121)	(49,121)
Balance at March 31, 2022	198,263,494	20	836,229	(1,141)	(575,454)	259,654
Issuance of common stock under at the market ("ATM") offering, net of issuance costs of $741	6,471,048	1	6,845	—	—	6,846
Common stock warrants issuable to customer	—	—	942	—	—	942
Issuance of common stock under employee stock award plans	11,428,168	1	809	—	—	810
Stock-based compensation	—	—	6,307	—	—	6,307
Other comprehensive loss, net of tax	—	—	—	(62)	—	(62)
Net loss	—	—	—	—	(44,299)	(44,299)
Balance at June 30, 2022	216,162,710	$ 22	$ 851,132	$ (1,203)	$ (619,753)	$ 230,198
Issuance of common stock under at the market ("ATM") offering, net of issuance costs of $574	16,907,260	1	19,080	—	—	19,081
Common stock warrants issuable to customer	—	—	2,817	—	—	2,817
Issuance of common stock under employee stock award plans	690,289	—	—	—	—	—
Forfeiture of restricted stock awards	(1,082,941)	—	—	—	—	—
Stock-based compensation	—	—	4,906	—	—	4,906
Other comprehensive loss, net of tax	—	—	—	100	—	100
Net loss	—	—	—	—	(41,563)	(41,563)
Balance at September 30, 2022	232,677,318	$ 23	$ 877,935	$ (1,103)	$ (661,316)	$ 215,539

	Common Stock		Additional Paid in Capital	Accumulated Other Comprehensive Loss	Accumulated Deficit	Total Stockholders' Equity
	Shares	Amount				
Balance at December 31, 2020	175,912,194	$ 18	$ 656,717	$ (230)	$ (315,682)	$ 340,823
Issuance of common stock under public warrant exercises	6,973,882	1	80,199	—	—	80,200
Issuance of common stock under employee stock award plans	6,798,504	—	(37)	—	—	(37)
Stock-based compensation	—	—	11,530	—	—	11,530
Other comprehensive loss, net of tax	—	—	—	(22)	—	(22)
Prior year adjustment on warrant liability (Note 9)	—	—	(1,585)	—	1,585	—
Net loss	—	—	—	—	(40,817)	(40,817)
Balance at March 31, 2021	189,684,580	19	746,824	(252)	(354,914)	391,677
Issuance of common stock under public warrant exercises	1,929	—	22	—	—	22
Issuance of common stock under employee stock award plans	5,541,305	1	(1)	—	—	—
Stock-based compensation	—	—	53,195	—	—	53,195
Other comprehensive income, net of tax	—	—	—	36	—	36
Net loss	—	—	—	—	(79,237)	(79,237)
Balance at June 30, 2021	195,227,814	$ 20	$ 800,040	$ (216)	$ (434,151)	$ 365,693
Issuance of common stock under public warrant exercises	2,250	—	25	—	—	25
Issuance of common stock under employee stock award plans	692,575	—	—	—	—	—
Stock-based compensation	—	—	16,645	—	—	16,645
Other comprehensive income, net of tax	—	—	—	(17)	—	(17)
Net loss	—	—	—	—	(54,712)	(54,712)
Balance at September 30, 2021	195,922,639	$ 20	$ 816,710	$ (233)	$ (488,863)	$ 327,634

See accompanying notes to condensed consolidated financial statements.

VELODYNE LIDAR, INC. AND SUBSIDIARIES

Condensed Consolidated Statements of Cash Flows
(In thousands)
(Unaudited)

	Nine Months Ended September 30, 2022	Nine Months Ended September 30, 2021
Cash flows from operating activities:		
Net loss	$ (134,983)	$ (174,766)
Adjustments to reconcile net loss to cash used in operating activities:		
Depreciation and amortization	6,071	6,208
Reduction of operating lease ROU assets	2,124	2,288
Stock-based compensation	16,151	81,370
Reduction of revenue related to stock warrant issued to customer	9,062	—
Provision for doubtful accounts	—	2,070
Gain from forgiveness of PPP loan	—	(10,124)
Amortization of investment premium or discount, net	350	1,075
Other	(38)	(27)
Changes in operating assets and liabilities:		
Accounts receivable	2,751	2,072
Inventories, net	(2,199)	6,273
Prepaid and other current assets	7,954	2,882
Contract assets	3,262	(2,209)
Other assets	(79)	67
Accounts payable	325	(3,352)
Accrued expenses and other liabilities	(583)	(18)
Operating lease liabilities	(2,056)	(2,305)
Contract liabilities	(3,791)	(1,740)
Net cash used in operating activities	(95,679)	(90,236)
Cash flows from investing activities:		
Purchase of property, plant and equipment and intangibles	(2,884)	(3,213)
Proceeds from sales of short-term investments	14,500	12,207
Proceeds from maturities of short-term investments	197,345	115,223
Purchase of short-term investments	(110,941)	(249,957)
Investment in notes receivable	—	(750)
Net cash provided by (used in) investing activities	98,020	(126,490)
Cash flows from financing activities:		
Proceeds from issuance of ATM shares, net of transaction costs	26,560	—
Payment of issuance costs related to ATM shares	(603)	—
Payment of transaction costs related to Business Combination	(1,500)	(20,005)
Proceeds from warrant exercises, net of issuance costs	—	89,270
Proceeds from common stock issuance under equity incentive plans	810	—
Tax withholding payment for vested equity awards	—	(37)
Net cash provided by financing activities	25,267	69,228
Effect of exchange rate fluctuations on cash and cash equivalents	(185)	(6)
Net increase (decrease) in cash and cash equivalents	27,423	(147,504)
Beginning cash and cash equivalents	24,064	204,648

	Nine Months Ended September 30,	
	2022	2021
Ending cash and cash equivalents	$ 51,487	$ 57,144
Supplemental disclosures of cash flow information:		
Cash paid for interest	$ 3	$ 83
Cash paid for income taxes, net	394	721
Cash paid for operating leases	2,779	3,382
Supplemental disclosure of noncash investing and financing activities:		
Changes in accrued purchases of property, plant and equipment, and intangibles	$ 310	$ 2
ROU assets obtained in exchange for operating lease liabilities	1,959	498
Transaction costs included in accrued liabilities	30	5,000
Receipt of equity shares from customer in satisfaction of accounts receivable	—	297

See accompanying notes to condensed consolidated financial statements.

Notes to Condensed Consolidated Financial Statements
(Unaudited)

Note 1. Description of Business and Summary of Significant Accounting Policies

Description of Business, Background and Nature of Operations

Velodyne Lidar, Inc. (the “Company”, “Velodyne” or “Velodyne Lidar”) provides smart vision solutions that are advancing the development of safe automated systems throughout the world. The Company’s technology, which is used in various automotive and non-automotive applications, is empowering the autonomous revolution by allowing machines to see their surroundings in real-time and in 3D.

The Company’s predecessor, Graf Industrial Corp. (“Graf”), was originally incorporated in Delaware as a special purpose acquisition company (“SPAC”). On September 29, 2020 (the “Closing Date”), Graf consummated a business combination (the “Business Combination”) with Velodyne Lidar, Inc. (the “pre-combination Velodyne”). Immediately upon the consummation of the Business Combination, Graf merged into the pre-combination Velodyne, with the pre-combination Velodyne surviving as a wholly-owned subsidiary of the Company. Graf changed its name to Velodyne Lidar, Inc. and the pre-combination Velodyne changed its name to Velodyne Lidar USA, Inc. Refer to Note 2. “Business Combination and Related Transactions” for further discussion of the Business Combination.

On September 30, 2020, Velodyne Lidar’s common stock and warrants began trading on the Nasdaq Global Select Market under the symbol “VLDR” and “VLDRW,” respectively.

The Company has evaluated how it is organized and managed and has identified only one operating segment.

Basis of Presentation

The consolidated financial statements are prepared in accordance with accounting principles generally accepted in the United States of America (“U.S. GAAP”). The consolidated financial statements include the accounts of the Company’s wholly owned subsidiaries. All intercompany balances and transactions have been eliminated in consolidation.

Reclassification

Certain prior year amounts have been reclassified for consistency with the current year presentation. Specifically, operating lease ROU assets, current and non-current lease liabilities and non-current contract liabilities are now presented as separate line items on the consolidated balance sheets and were previously included within other assets, current liabilities and other long-term liabilities, respectively. In addition, operating lease liabilities are now presented as separate line items on the consolidated statements of cash flows and were previously included within accrued and other liabilities.

Liquidity

The Company has funded its operations primarily through proceeds realized from the Business Combination, issuances of stock, and sales to customers. As of September 30, 2022, the Company’s existing sources of liquidity included cash, cash equivalents and short-term investments of $220.1 million, continuing sale of its stocks under the ATM offering, available borrowing capacity of $3.6 million under a revolving credit facility. The Company has incurred losses and negative cash flows from operations. If the Company incurs additional losses in the future, it may need to raise additional capital through issuances of equity and debt. There can be no assurance that the Company would be able to raise such capital. However, management believes that the Company’s existing sources of liquidity are adequate to fund its operations for at least twelve months from the date the unaudited condensed consolidated financial statements for the quarter ended September 30, 2022 were available for issuance.

Concentration of Risk

Financial instruments that subject the Company to concentrations of credit risk consist primarily of cash and cash equivalents, short-term investments, and accounts receivable. The Company maintains its cash and cash equivalents, and short-term investments with high-quality financial institution with investment-grade ratings. A majority of the cash balances are with U.S. banks and are insured to the extent defined by the Federal Deposit Insurance Corporation.

The Company's accounts receivable are derived from customers located both inside and outside the U.S. The Company mitigates its credit risks by performing ongoing credit evaluations of its customers' financial conditions and requires customer advance payments in certain circumstances. The Company does not require collateral.

The Company's concentration of risk related to accounts receivable and accounts payable was as follows:

	September 30, 2022	December 31, 2021
Customers accounted for 10% or more of accounts receivable:		
Customer A	16 %	16 %
Customer B	*	14 %
Customer C	*	11 %
Vendors accounted for 10% or more of accounts payable:		
Vendor A	39 %	28 %
Vendor B	18 %	*

* Less than 10%.

Use of Estimates

The preparation of consolidated financial statements in conformity with U.S. GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the consolidated financial statements and the reported amounts of revenues and expenses during the reporting period. Significant items subject to such estimates and assumptions include standalone selling price ("SSP") for each distinct performance obligation in customer contracts, total estimated future patents and their corresponding estimated development costs, total estimated costs and related progress towards complete satisfaction of performance obligations in certain services arrangements, allowances for doubtful accounts, inventory reserves, warranty reserves, valuation allowance for deferred tax assets, stock-based compensation, common stock warrant valuation, useful lives of property, plant, and equipment and intangible assets, assessment of the recoverability of long-lived assets, goodwill impairment, income tax uncertainties, and other loss contingencies. The Company bases its estimates on historical experience and also on assumptions that it believes are reasonable. Actual results could differ from those estimates, and such differences could be material to the Company's consolidated financial condition and results of operations.

Significant Accounting Policies

Except for the change in certain policies described below, there have been no material changes to the Company's significant accounting policies, compared to the accounting policies described in Note 1, Description of Business and Summary of Significant Accounting Policies, in Notes to Consolidated Financial Statements in Item 8 of Part II of the Annual Report on Form 10-K for the year ended December 31, 2021.

Amazon Warrant

The Amazon Warrant (as defined in Note 9) is accounted for as an equity instrument and measured in accordance with Accounting Standards Codification ("ASC") 718, Compensation – Stock Compensation. To determine the fair value of the Amazon Warrant, the Company used the Black-Scholes option pricing model, which is based in part on assumptions that require management to use judgment.

For awards granted to a customer, which are not in exchange for distinct goods or services, the fair value of the awards earned based on service or performance conditions is recorded as a reduction of the transaction price in accordance with ASC 606, Revenue from Contracts with Customers. Accordingly, when Amazon makes payments and vesting conditions become probable of being achieved, the Company will record a non-cash stock-based reduction to revenue associated with the Amazon Warrant, which is calculated based on the grant date fair value of the Amazon Warrant shares.

Recent Accounting Pronouncements

Recently Issued Accounting Pronouncements

In June 2016, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update ("ASU") 2016-13, Measurement of Credit Losses on Financial Instruments, which has subsequently been amended by ASU No. 2018-19, ASU No. 2019-04, ASU No. 2019-05, ASU No. 2019-11, ASU 2020-02 and ASU 2020-03 to provide additional guidance on the credit losses standard. The objective of the guidance in ASU 2016-13 is to allow entities to recognize estimated credit losses in the period that the change in valuation occurs. ASU 2016-13 requires an entity to present financial assets measured on an amortized cost basis on the balance sheet, net of an allowance for credit losses. Available for sale and held to maturity debt securities are also required to be held net of an allowance for credit losses. The standard is effective for the Company for fiscal years beginning after December 15, 2022, including interim periods within those fiscal years. The Company will adopt the new standard in the first quarter of 2023 and does not expect a significant impact to its consolidated financial statements and related footnote disclosures.

Recently Adopted Accounting Pronouncements

In October 2021, FASB issued ASU No. 2021-08, Accounting for Contract Assets and Contract Liabilities from Contracts with Customers (ASU 2021-08). This new guidance requires that an entity (acquirer) recognize and measure contract assets and contract liabilities acquired in a business combination in accordance with Topic 606. At the acquisition date, an acquirer should account for the related revenue contracts in accordance with Topic 606 as if it had originated the contracts. ASU 2021-08 will be effective for fiscal years beginning after December 15, 2022, including interim periods within these fiscal years, with early adoption permitted. The provisions of ASU 2021-08 should be applied prospectively to business combinations occurring on or after the effective date of the amendments. The Company has adopted ASU 2021-08 effective January 1, 2022. As of September 30, 2022, the adoption of this new standard had had no impact on the Company's consolidated financial statements and related footnote disclosures.

In October 2020, the FASB issued ASU 2020-10, Codification Improvements, which updates various codification topics by clarifying or improving disclosure requirements to align with the SEC's regulations. ASU 2020-10 is effective for public companies, other than smaller reporting companies, for fiscal years beginning after December 15, 2020. For all other entities, ASU 2020-10 is effective for fiscal years beginning after December 15, 2021, and interim periods beginning after December 15, 2022. The Company adopted ASU 2020-10 on January 1, 2022. The adoption of this new standard did not have a significant impact on the Company's consolidated financial statements and related footnote disclosures.

Note 2. Business Combination and Related Transactions

On September 29, 2020, the Company consummated a business combination with the pre-combination Velodyne. Pursuant to ASC 805, for financial accounting and reporting purposes, the pre-combination Velodyne was deemed the accounting acquirer and the Company was treated as the accounting acquiree, and the Business Combination was accounted for as a reverse recapitalization. Accordingly, the Business Combination was treated as the equivalent of the pre-combination Velodyne issuing stock for the net assets of Graf, accompanied by a recapitalization. Under this method of accounting, the consolidated financial statements of the Company are the historical financial statements of the pre-combination Velodyne. The net assets of Graf were stated at historical costs, with no goodwill or other intangible assets recorded, and are consolidated with the pre-combination Velodyne's financial statements on the Closing date. The shares and net loss per share for periods prior to the Business Combination have been retroactively restated as shares reflecting the exchange ratio established in the merger agreement.

The aggregate consideration for the Business Combination and related transactions was approximately $1.8 billion, consisting of (i) $222.1 million in cash at the closing of the Business Combination, net of transaction expenses, and (ii) 150,277,532 shares of common stock valued at $10.25 per share, totaling approximately $1.5 billion. The Company used approximately $1.8 million of the proceeds to repurchase and retire 175,744 shares of Company common stock from certain stockholders in the pre-closing tender offer.

In connection with the Business Combination, the Company incurred direct and incremental costs of approximately $29.1 million related to the equity issuance, consisting primarily of investment banking, legal, accounting and other professional fees, which were recorded to additional paid-in capital as a reduction of proceeds. As of September 30, 2022, the Company had $3.5 million of accrued transaction costs, consisting primarily of investment banking fees, in accrued expenses on the condensed consolidated balance sheet after payment of $1.5 million.

On October 3, 2022, the Company completed its acquisition of Bluecity Technology, Inc. ("Bluecity"). The acquisition is expected to be accounted for as a business combination. For additional information regarding the Bluecity acquisition, see Note 17. "Subsequent Events" herein.

Note 3. Revenue

Disaggregation of Revenues

The Company disaggregates its revenue from contracts with customers by geographic region based on the shipping location of the customer, type of good or service and timing of transfer of goods or services to customers (point-in-time or over time), as it believes it best depicts how the nature, amount, timing and uncertainty of its revenue and cash flows are affected by economic factors.

Total revenue based on the disaggregation criteria described above is as follows (dollar in thousands, percentage may not foot due to rounding difference):

	Three Months Ended			
	September 30, 2022		September 30, 2021	
	Revenue	% of Revenue	Revenue	% of Revenue
Revenue by geography:				
North America[1]	$ 1,992	21 %	$ 5,526	42 %
Asia Pacific[2]	4,062	42 %	3,813	29 %
Europe, Middle East and Africa	3,587	37 %	3,721	28 %
Total	$ 9,641	100 %	$ 13,060	100 %
Revenue by products and services:				
Products[1]	$ 7,442	77 %	$ 11,782	90 %
License and services[2]	2,199	23 %	1,278	10 %
Total	$ 9,641	100 %	$ 13,060	100 %
Revenue by timing of recognition:				
Goods transferred at a point in time[1]	$ 8,351	87 %	$ 11,738	90 %
Goods and services transferred over time[2]	1,290	13 %	1,322	10 %
Total	$ 9,641	100 %	$ 13,060	100 %

	Nine Months Ended			
	September 30, 2022		September 30, 2021	
	Revenue	% of Revenue	Revenue	% of Revenue
Revenue by geography:				
North America[1]	$ 4,980	18 %	$ 15,841	36 %
Asia Pacific[2]	12,613	46 %	18,574	42 %
Europe, Middle East and Africa	9,735	36 %	9,967	22 %
Total	$ 27,328	100 %	$ 44,382	100 %
Revenue by products and services:				
Products[1]	$ 21,456	79 %	$ 34,345	77 %
License and services[2]	5,872	21 %	10,037	23 %
Total	$ 27,328	100 %	$ 44,382	100 %
Revenue by timing of recognition:				
Goods transferred at a point in time[1]	$ 23,184	85 %	$ 40,680	92 %
Goods and services transferred over time[2]	4,144	15 %	3,702	8 %
Total	$ 27,328	100 %	$ 44,382	100 %

(1) Includes a non-cash stock-based reduction of revenue of $2.8 million and $9.1 million, respectively, for the three and nine months ended September 30, 2022 associated with the Amazon Warrant agreement entered into in February 2022. See Note 9 for more information.

(2) Includes license revenue of $1.4 million and $3.3 million, respectively, related to patent cross-license agreements for the three and nine months ended September 30, 2022, and $0.7 million and $8.0 million, respectively, for the three and nine months ended September 30, 2021. In June 2020, the Company entered into a patent cross-license agreement related to its litigation settlement with a customer in Asia Pacific. Under the terms of the arrangement, the customer agreed to make a one-time license payment upon settlement, will make annual fixed royalty payments through 2024, and thereafter, will make product sales royalty payments through February 2030. In September 2020, Velodyne entered into another patent cross-license agreement related to its litigation with a different customer in Asia Pacific. As of September 30, 2022 and December 31, 2021, the Company had $3.8 million and $3.8 million, respectively, of current deferred revenue, and $9.1 million and $11.9 million, respectively, of long-term deferred revenue associated with the rights granted as part of these patent cross-license agreements to receive future patents as they represent stand ready obligations. As of September 30, 2022 and December 31, 2021, the Company also had $13.0 million and $16.3 million, respectively, of contract assets related to these patent cross-license agreements.

Contract Assets and Contract Liabilities

Contract assets primarily relate to unbilled accounts receivable. Unbilled amounts arise when the timing of billing differs from the timing of revenue recognized, such as when revenue is recognized on guaranteed minimums at the inception of the contract when there is not yet a right to invoice in accordance with contract terms. Unbilled amounts are recorded as a contract asset when the revenue associated with the contract is recognized prior to billing and reclassified to accounts receivable when billed in accordance with the terms of the contract.

Contract liabilities consist of deferred revenue, customer advanced payments and customer deposits. Deferred revenue includes billings in excess of revenue recognized related to product sales, licenses, extended warranty and other services revenue, and is recognized as revenue when the Company performs under the contract. The long-term portion of deferred revenue, mostly related to obligations under license arrangements and extended warranty, is classified as non-current contract liabilities and is included in other long-term liabilities in the Company's consolidated balance sheets. Customer advanced payments represent required customer payments in advance of product shipments according to customer's payment term. Customer advance payments are recognized as revenue when control of the performance obligation is transferred to the customer. Customer deposits represent consideration received from a customer which can be applied to future product or service purchases, or refunded.

Contract assets and contract liabilities consisted of the following as of September 30, 2022 and December 31, 2021 (in thousands):

	September 30, 2022	December 31, 2021
Contract assets, current		
Unbilled accounts receivable	$ 3,830	$ 3,313
Contract assets, long-term		
Unbilled accounts receivable	9,182	12,962
Total contract assets	$ 13,012	$ 16,275
Contract liabilities, current		
Deferred revenue, current	$ 5,109	$ 6,209
Customer advance payment	347	139
Total	5,456	6,348
Contract liabilities, long-term		
Deferred revenue, long-term	9,841	12,740
Total contract liabilities	$ 15,297	$ 19,088

The following table shows the significant changes in contract assets and contract liabilities balances (in thousands):

	Nine Months Ended September 30,	
	2022	2021
Contract assets:		
Beginning balance	$ 16,275	$ 11,253
Transferred to receivables from contract assets recognized at the beginning of the period	(3,313)	(2,813)
Increase due to unbilled and recognized as revenue in excess of billings during the period, net of amounts transferred to receivables	50	5,021
Ending balance	$ 13,012	$ 13,461
Contract liabilities:		
Beginning balance	$ 19,088	$ 22,055
Revenue recognized that was included in the contract liabilities beginning balance	(7,584)	(9,729)
Increase due to cash received and not recognized as revenue and billings in excess of revenue recognized during the period	3,793	7,989
Ending balance	$ 15,297	$ 20,315

Note 4. Fair Value Measurement

The Company categorizes assets and liabilities recorded at fair value on the consolidated balance sheet based on the level of judgment associated with inputs used to measure their fair value. For assets and liabilities measured at fair value, fair value is the price that would be received from selling an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. When determining fair value, the Company considers the principal or most advantageous market in which the Company would transact, and the Company considers assumptions that market participants would use when pricing the asset or liability.

The three levels of inputs that may be used to measure fair value are:

- Level 1 — Quoted prices in active markets for identical assets or liabilities.
- Level 2 — Observable inputs other than Level 1 prices, such as quoted prices for similar assets and liabilities in active markets or quoted prices in less active market. All significant inputs used in the valuations are observable or can be directly or indirectly through market corroboration, for substantially the full term of the assets or liabilities.
- Level 3 — Unobservable inputs are based on assumptions used to measure assets and liabilities at fair value. The inputs require significant management judgment or estimation. The Company monitors and review the inputs to ensure the fair value measurements are reasonable and consistent with market experience in similar asset classes.

The following table summarize the Company’s assets measured at fair value on a recurring basis, by level, within the fair value hierarchy (in thousands):

	September 30, 2022			
	Level 1	Level 2	Level 3	Total
Cash equivalents:				
Money market fund	$ 35,958	$ —	$ —	$ 35,958
Total cash equivalents	35,958	—	—	35,958
Short-term investments:				
Money market fund	6	—	—	6
Commercial paper	—	130,325	—	130,325
Corporate debt securities	—	38,239	—	38,239
Total short-term investments	6	168,564	—	168,570
Total assets measured at fair value	$ 35,964	$ 168,564	$ —	$ 204,528

	December 31, 2021			
	Level 1	Level 2	Level 3	Total
Cash equivalents:				
Money market fund	$ 391	$ —	$ —	$ 391
Total cash equivalents	391	—	—	391
Short-term investments:				
Money market fund	7	—	—	7
Commercial paper	—	130,983	—	130,983
Corporate debt securities	—	139,367	—	139,367
Total short-term investments	7	270,350	—	270,357
Total assets measured at fair value	$ 398	$ 270,350	$ —	$ 270,748

Cash equivalents consist primarily of money market funds with original maturities of three months or less at the time of purchase, and the carrying amount is a reasonable estimate of fair value. Short-term investments represent highly liquid commercial paper and corporate debt securities with maturities greater than 90 days at the date of purchase. Unrealized gains and losses on the Company's short-term investments were not significant as of September 30, 2022 and December 31, 2021 and therefore, the amortized cost of the Company's short-term investments approximated their fair value.

Note 5. Balance Sheet Components

Accounts Receivable, Net

Accounts receivable, net consist of the following (in thousands):

	September 30, 2022	December 31, 2021
Accounts receivable	$ 8,906	$ 12,088
Allowance for doubtful accounts	(2,777)	(3,207)
Accounts receivable, net	$ 6,129	$ 8,881

Inventories, Net

Inventories, net of reserve, consist of the following (in thousands):

	September 30, 2022	December 31, 2021
Raw materials	$ 5,626	$ 6,585
Work-in-process	1,376	1,883
Finished goods	4,496	831
Total inventories	$ 11,498	$ 9,299

The raw materials inventory included net consigned inventory of $2.0 million and $1.5 million, respectively, as of September 30, 2022 and December 31, 2021.

Prepaid and Other Current Assets

Prepaid and other current assets consist of the following (in thousands):

	September 30, 2022	December 31, 2021
Prepaid expenses and deposits	$ 1,178	$ 7,883
Due from contract manufacturers and vendors	1,252	1,302
Prepaid taxes	603	1,223
Contract assets	3,830	3,313
Other	1,338	1,101
Total prepaid and other current assets	$ 8,201	$ 14,822

Property, Plant and Equipment, Net

Property, plant and equipment, at cost, consist of the following (in thousands):

	September 30, 2022	December 31, 2021
Machinery and equipment	$ 37,584	$ 36,264
Leasehold improvements	5,999	6,752
Furniture and fixtures	1,493	1,497
Vehicles	119	359
Software	1,393	1,337
Assets under construction	1,021	1,900
	47,609	48,109
Less: accumulated depreciation and amortization	(35,925)	(33,399)
Property, plant and equipment, net	$ 11,684	$ 14,710

The Company purchased all finance lease equipment during the first quarter of 2022. The aggregate depreciation and amortization related to property, plant and equipment was as follows (in thousands):

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2022	2021	2022	2021
Depreciation and amortization on property, plant and equipment	$ 1,662	$ 1,998	$ 5,749	$ 5,919

Intangible Assets, Net

Intangible assets, net, consist of the following (in thousands):

	Gross Carrying Amount	Accumulated Amortization	Net Book Value
As of September 30, 2022:			
Developed technology	$ 1,696	$ 1,294	$ 402
As of December 31, 2021:			
Developed technology	$ 1,696	$ 972	$ 724

Amortization of intangible assets is as follows (in thousands):

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2022	2021	2022	2021
Amortization of intangible assets	$ 46	$ 96	$ 322	$ 289

Other Assets

Other assets, non-current, consist of the following (in thousands):

	September 30, 2022	December 31, 2021
Notes receivable	—	750
Deposits and other	851	772
Total other assets	$ 851	$ 1,522

In May 2021, the Company entered into a convertible note receivable agreement (the "Note") with a borrower wherein Velodyne agreed to lend $0.8 million at an interest rate of 0% per annum as a nonrecourse investment. The Note is convertible into equity at the election of the borrower or the Company upon occurrence of certain new financing or corporate transactions. The maturity date of the Note is May 11, 2024. At September 30, 2022, the Company reclassified the Note from Other assets, to Prepaid and other current assets because it was redeemed in connection with the Bluecity acquisition consummated in October 2022. For additional information regarding the Bluecity acquisition, see Note 17. "Subsequent Events" herein.

Accrued Expenses and Other Current Liabilities

Accrued expenses and other current liabilities consisted of the following (in thousands):

	September 30, 2022	December 31, 2021
Accrued payroll expenses	$ 10,718	$ 13,550
Accrued manufacturing costs (1)	9,279	3,925
Accrued transaction costs	3,500	5,000
Accrued professional and consulting fees	3,860	3,411
Accrued warranty costs	1,106	1,934
Accrued taxes	1,384	1,017
Legal proceedings accrual	—	825
Other	1,227	3,366
Total accrued expense and other current liabilities	$ 31,074	$ 33,028

(1) Accrued manufacturing costs at September 30, 2022, includes $3.5 million of contract termination fees and $2.9 million of accrued losses on firm purchase commitments.

Note 6. Leases

The Company leases real estate, equipment and automobiles in the U.S. and internationally. The Company leases office facilities under non-cancelable operating leases that expire on various dates through December 2027, including office and manufacturing space in San Jose, California used as its corporate headquarters. The leases do not contain any material residual value guarantees or restrictive covenants.

Lease cost, which consisted primarily of operating lease cost, was $1.0 million and $3.0 million, respectively, for the three and nine months ended September 30, 2022, and $1.1 million and $3.2 million, respectively, for the three and nine months ended September 30, 2021.

Other information related to leases were as follows:

	September 30, 2022	December 31, 2021
Weighted average remaining lease term (years)	5.03	5.91
Weighted average discount rate	6.67 %	6.37 %

As of September 30, 2022, maturities of lease liabilities were as follows:

Years Ending December 31,	Operating Leases
2022 (remaining three months)	$ 1,017
2023	4,046
2024	4,139
2025	3,986
2026	3,891
Thereafter	3,779
Total lease payments	$ 20,858
Less amount representing interest	(3,122)
Present value of lease liabilities	$ 17,736

Note 7. Accumulated Other Comprehensive Loss

Accumulated other comprehensive loss was comprised of the following (in thousands):

	September 30, 2022	December 31, 2021
Foreign currency translation loss	$ (341)	$ (184)
Unrealized loss on investments	(762)	(228)
Total accumulated other comprehensive loss	$ (1,103)	$ (412)

During the nine months ended September 30, 2022 and 2021, there were no significant amounts related to foreign currency translation loss or realized gains or loss on investments reclassified to net loss from accumulated other comprehensive loss.

Note 8. Credit Facilities and Notes Payable

The Company has a loan and security agreement with a financial institution that expires on February 24, 2023. The credit agreement, which was entered into in September 2020 and last amended in February 2022, provides a $25.0 million revolving line of credit, with a $5.0 million letter of credit sublimit. The advances under the credit facility bear interest at a rate per annum equal to the prime rate plus an applicable margin of 1.5% for prime rate advances, or the SOFR rate plus an applicable margin of 2.5% for SOFR advances. The revolving line of credit is secured by certain assets of the Company. As of September 30, 2022, there were no amounts outstanding under this credit facility and the Company was in compliance with all associated covenants in the agreement. As of September 30, 2022, the credit facility had $3.6 million available for borrowing.

On April 8, 2020, the Company received loan proceeds of $10.0 million under the Coronavirus Aid, Relief, and Economic Security Act (“CARES Act”) Paycheck Protection Program (“PPP”). The Company filed for the forgiveness of the PPP loan and was approved for forgiveness of such loan and interest on June 30, 2021. The Company recorded a $10.1 million gain from the forgiveness of the PPP loan and related interest in other income for the nine months ended September 30, 2021.

Note 9. Stockholders' Equity

Common Stock

On September 29, 2020, the Company consummated a business combination with the pre-combination Velodyne. On September 30, 2020, Velodyne Lidar's common stock and warrants began trading on the Nasdaq Global Select Market under the symbol "VLDR" and "VLDRW," respectively. In connection with the Business Combination, outstanding common stock and preferred stock of the pre-combination Velodyne were converted into common stock of the Company. As discussed in Note 2, "Business Combination and Related Transactions", the Company has retroactively adjusted the pre-combination common and preferred shares issued and outstanding prior to September 29, 2020, to give effect to the exchange ratio established in the Merger Agreement to determine the number of shares of common stock into which they were converted.

The Company is authorized to issue up to 2,250,000,000 shares of common stock, each with a par value of $0.0001 per share.

ATM Offering

On June 15, 2022, the Company entered into an Equity Distribution Agreement (the "ATM Agreement") with Oppenheimer & Co. Inc. ("Oppenheimer"), pursuant to which, from time to time, the Company may raise up to $100 million by selling shares of its common stock, par value $0.0001 per share ("the ATM Shares"). The ATM Shares will be issued pursuant to its shelf registration statement on Form S-3 that became effective on May 11, 2022.

Subject to the terms and conditions of the ATM Agreement, Oppenheimer will use commercially reasonable efforts consistent with its normal trading and sales practices to sell the shares from time to time, based upon the Company's instructions, and is entitled to a commission at a rate equal to 2.5% of the gross price of any ATM Shares sold through Oppenheimer. The ATM offering will terminate upon the earlier of (i) the sale of all common stock subject to the ATM Agreement or (ii) termination of the ATM Agreement in accordance with its terms. The Company is not required to sell any shares at any time during the term of the ATM Agreement. Net proceeds from the sale of ATM shares will be used for general corporate purposes.

The Company records the sale of its ATM Shares on a settlement date basis. For the three months ended September 30, 2022, the Company received net proceeds of approximately $19.1 million (after deducting $0.6 million in commissions and expenses) from sales of 16,907,260 ATM Shares at an average price of $1.16 per share pursuant to the ATM Agreement. Since its inception in the nine months ended September 30, 2022, the Company received net proceeds of approximately $25.9 million (after deducting $1.3 million in commissions and expenses) from sales of 23,378,308 ATM shares at an average price of $1.17 per share.

Preferred Stock

The Company is authorized to issue up to 25,000,000 shares of preferred stock, each with a par value of $0.0001 per share. As of September 30, 2022, no shares of preferred stock were issued and outstanding.

Dividends

The Company has not paid any cash dividends on the common stock to date. The Company may retain future earnings, if any, for future operations, expansion and debt repayment and has no current plans to pay cash dividends for the foreseeable future. Any decision to declare and pay dividends in the future will be made at the discretion of the Board and will depend on, among other things, the Company's results of operations, financial condition, cash requirements, contractual restrictions and other factors that the Board may deem relevant. In addition, the Company's ability to pay dividends may be limited by covenants of any existing and future outstanding indebtedness the Company or its subsidiaries incur.

Public Warrants

Upon the closing of the Business Combination, there were 24,876,512 outstanding warrants to purchase shares of the Company's common stock that were issued by Graf prior to the Business Combination. Each whole warrant entitles the holder to purchase three-quarters of one share of the Company's common stock at a price of $11.50 per share, subject to adjustments. The warrants are exercisable at any time commencing 30 days after the completion of the Business Combination and expire five years after the completion of the Business Combination. The Company may redeem the outstanding warrants in whole and not in part at a price of $0.01 per warrant at any time after they become exercisable, provided that the last sale price of the Company’s common stock equals or exceeds $18.00 per share, subject to adjustments, for any 20-trading days within a 30-trading day period ending three business days prior to the date on which the Company sends the notice of redemption to the warrant holders.

In connection with the Business Combination, on October 19, 2020, the Company registered the issuance of an aggregate of up to 18,657,384 shares of its common stock that are issuable upon the exercise of its warrants, including up to 375,000 shares of its common stock issuable upon exercise of its working capital warrants issued to Graf LLC. The following summarizes the Company’s outstanding warrants and common stock issuance related to the warrant exercises:

	September 30, 2022	December 31, 2021
Warrants outstanding upon Closing	24,876,512	24,876,512
Warrants exercised to date	18,902,642	18,902,642
Warrants outstanding	5,973,870	5,973,870
Aggregated common shares issuable upon exercise of warrants	18,657,384	18,657,384
Common shares issued upon exercise of warrants	14,176,959	14,176,959
Remaining common shares issuable upon exercise of warrants	4,480,425	4,480,425

On April 12, 2021, the Acting Director of the Division of Corporation Finance and Acting Chief Accountant of the Securities and Exchange Commission (the “SEC”) issued a statement regarding accounting and reporting considerations for warrants issued by SPACs. In light of the issues raised by the SEC, the Company re-evaluated its accounting position for the warrants and concluded that certain warrants should have been classified as a liability measured at fair value for the 30-day period from September 29, 2020 to October 29, 2020. Accounting for these warrants as a liability instead of equity would have reduced non-operating expense and net loss by $1.6 million for 2020. Additionally, a corresponding $1.6 million adjustment would have been made to reduce its accumulated deficit with an offsetting adjustment to additional paid in capital in its equity accounts at December 31, 2020. The Company has concluded that the effects of accounting for the warrants as a liability instead of equity were immaterial to its previously issued financial statements and, accordingly, made an adjustment to its equity accounts for the effects of the accounting for the warrants in its consolidated statement of stockholders’ equity and balance sheet at December 31, 2021 by decreasing its accumulated deficit by $1.6 million with an offsetting decrease to its additional paid in capital.

Amazon Warrant

In February 2022, the Company and Amazon.com (“Amazon”) entered into a warrant agreement and a transaction agreement, pursuant to which Velodyne agreed to issue to Amazon.com NV Investment Holdings LLC, a wholly-owned subsidiary of Amazon, a warrant (“Amazon Warrant”) to acquire up to an aggregate of 39,594,032 shares of the Company’s common stock at an exercise price of $4.18 per share. The exercise price and the warrant shares issuable upon exercise of the warrant are subject to customary antidilution adjustments. Following stock sales under the Company’s ATM offering, as of September 30, 2022, the antidilution adjustments provided Amazon with warrants to acquire an additional 190,181 shares, for an aggregate of 39,784,213 shares at an adjusted exercise price of $4.16 per share. The right to exercise the warrants and receive the warrant shares that have vested expires February 4, 2030. The warrant agreement also contains customary change-in-control provisions.

The Amazon Warrant shares vest in multiple tranches over time based on payments of up to $200 million by Amazon or its affiliates (directly or indirectly through third parties) to the Company in connection with Amazon’s purchase of goods and services from the Company. Upon entry into an additional commercial agreement, certain warrant shares will vest, and the number of shares that vest in connection with future payments by Amazon to Velodyne will be reduced pro rata. As of September 30, 2022, zero of the Amazon Warrant shares are vested.

When Amazon makes payments, and vesting conditions become probable of being achieved, the Company records a non-cash stock-based reduction to revenue associated with the Amazon Warrant, which is calculated based on the grant date fair value of the Amazon Warrant shares. The fair value of the Amazon Warrant shares was measured on the grant date using the Black-Scholes option pricing model with assumptions of a six-year expected term, 50% expected volatility, 1.84% risk-free interest rate and a 0% expected dividend yield.

For the three and nine months ended September 30, 2022, the Company recognized a reduction to revenues of $2.8 million and $9.1 million, respectively, associated with a portion of Amazon Warrant shares that are probable of being vested.

Note 10. Stock-Based Compensation

Equity Incentive Plans

2020 Equity Incentive Plan

In connection with the Business Combination, on September 29, 2020, the Company's stockholders approved the 2020 Equity Incentive Plan (the “2020 Plan”), which provides for the grant of stock options, stock appreciation rights, restricted stock awards and units (“RSAs” and “RSUs”), and other stock or cash-based awards to the Company’s employees, directors and consultants. The Board approved cancelling and converting all outstanding equity-awards granted under the pre-combination Velodyne’s stock plans into equity-based awards under the 2020 Plan effective upon the consummation of the Business Combination, based on exchange ratios established in the Merger Agreement with the same general terms and conditions corresponding to the original awards. The shares under the pre-combination Velodyne’s stock plans have been retroactively restated as shares reflecting the exchange ratio established in the Merger Agreement.

The Company had an initial authorized reserve of 27,733,888 shares of its common stock for issuance under the 2020 Plan. Beginning on January 1, 2021, an additional number of shares will be reserved annually on the first day of each fiscal year for a period of no more than ten years in an amount equal to the least of (a) 5% of the total number of common shares actually issued and outstanding on the last day of the preceding fiscal year, (b) 10,000,000 common shares, or (c) a number of common shares determined by the Board. This limit is subject to adjustment in the event of a stock split, stock dividend or other change in the Company’s capitalization. The number of shares reserved was 46,606,012 and the remaining shares available for issuance under the 2020 Equity Plan was 12,271,692 as of September 30, 2022.

The Company uses primarily the sell-to-cover method as the tax withholding method for stock awards upon settlement, pursuant to which shares with a market value equivalent to the tax withholding obligation are sold on behalf of the holder of the awards to cover the tax withholding liability and the cash proceeds from such sales are remitted by the Company to taxing authorities.

2020 Employee Stock Purchase Plan

On September 29, 2020, the Company's stockholders approved the 2020 Employee Stock Purchase Plan (the “ESPP”). The Company had an initial authorized reserve of 3,492,097 shares of common stock for issuance under the ESPP. Beginning on January 1, 2021, an additional number of shares will be reserved annually on the first day of each fiscal year for a period of no more than 20 years in an amount equal to the least of (i) 1% of the outstanding shares of the Company’s common stock on such date, (ii) 2,500,000 shares of the Company’s common stock or (iii) a lesser amount determined by the Compensation Committee or the Board. The ESPP may be amended from time to time. As of September 30, 2022, 785,205 shares have been issued and 6,481,317 shares remained available for future issuance under the ESPP.

The ESPP permits eligible employees to purchase shares of the Company’s common stock through payroll deductions at a price equal to 85% of the lower of the fair market value of the stock at the beginning or the end of the applicable purchase period, in an amount not to exceed 15% of their compensation, subject to certain individual purchase limits of 15,000 shares in any purchase period or $25,000 worth of shares, determined at the fair market value of the shares at the first day of an offering period, in any calendar year. The current offering period and the base purchase period will have the same duration and coincide with the length of the offering period.

2020 Phantom Stock Incentive Plan

In March 2021, the Board adopted the 2020 Phantom Stock Incentive Plan (the “2020 Phantom Stock Plan”), which provides for the granting of up to 7,635,000 phantom stock units to certain employees that settle, or are expected to settle, with cash payments upon vesting. Like equity-settled awards, phantom stock units are awarded with vesting conditions and are subject to certain forfeiture provisions prior to vesting. Phantom stock unit activity for the year ended September 30, 2022 was not significant.

Stock Incentive Awards

As of September 30, 2022, the Company's outstanding incentive awards primarily included RSUs, RSAs, performance RSUs ("PRSUs"), performance RSAs ("PRSAs") and phantom stock units under its stock incentive plans. The RSUs and RSAs typically vest on a quarterly basis over four years, or 25 percent upon the one-year anniversary date from initial vesting date, with the remainder vesting quarterly over the following three years. Certain RSUs also contain performance conditions related to the Company's product development and business performance for the performance periods specified in the RSU agreements. In April and June 2022, the Company granted PRSAs that contain service, Company performance and market conditions to vest in the underlying common stock. The PRSAs vest on an annual basis over three years. The number of shares that vests is ultimately dependent on the Company's operating results and value of the Company's stock at the date specified in the PRSA agreements.

A summary of the Company's stock award activities during 2022 is as follows (in thousands except share and per share amounts):

	Shares	Weighted Average Grant Date Fair Value per Share	Fair Value of RSU/RSA Released
RSA:			
RSAs outstanding as of December 31, 2021	211,298	$6.63	
Granted	1,392,254	$2.21	
Released	(101,992)	$2.20	$152
Canceled	(321,417)	$2.20	
RSAs outstanding as of September 30, 2022	1,180,143	$3.01	
RSU:			
RSUs outstanding as of December 31, 2021	5,126,896	$10.51	
Granted	8,985,452	$1.95	
Released	(1,804,376)	$8.61	$1,804
Forfeited	(3,606,993)	$6.30	
RSUs outstanding as of September 30, 2022	8,700,979	$3.81	
PRSU:			
PRSUs outstanding as of December 31, 2021	330,505	$6.72	
Released	(330,505)	$6.72	$1,292
PRSUs outstanding as of September 30, 2022	—		
PRSA:			
PRSAs outstanding as of December 31, 2021	—		
Granted	9,781,722	$2.12	
Canceled	(1,599,928)	$2.20	
PRSAs outstanding as of September 30, 2022	8,181,794	$2.11	

Stock-Based Compensation Expense

The Company measures stock-based compensation expenses based on grant date fair value of the stock awards. The Company recognizes stock-based compensation expenses for service-condition awards that are expected to vest on a straight-line basis over the requisite service period. For performance-based awards, expense is recognized using an accelerated attribution method from the time it is deemed probable that the performance goal will be achieved through the time the service-based condition has been achieved. The probability of restricted share awards granted with future performance conditions is evaluated at each reporting period and share awards are updated and compensation expense is adjusted based on updated information. The Company recognizes forfeitures as they occur.

The following table presents stock-based compensation expense, which includes expense for phantom stock units accounted for as liabilities, included in the Company’s consolidated statements of operations (in thousands):

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2022	2021	2022	2021
Cost of revenue	561	$ 541	$ 1,841	$ 1,508
Research and development	2,336	2,794	7,523	10,458
Sales and marketing	366	1,177	2,225	44,779
General and administrative	1,646	12,135	4,566	24,637
Total stock-based compensation expense	$ 4,909	$ 16,647	$ 16,155	$ 81,382

As of September 30, 2022, unrecognized compensation cost related to RSUs, RSAs, PRSAs and the ESPP was $29.2 million, $3.1 million, $5.4 million and $0.6 million, respectively, which is expected to be recognized over a weighted average period of 2.95 years, 3.39 years, 1.41 years and 0.33 years, respectively.

Phantom stock units are recorded as a liability at their current market value and are included in other current liabilities. These grants remain subject to vesting 25% upon the one-year anniversary date from initial vesting date, with the remainder vesting quarterly over the following three years. Based on the trading price of the Company's common stock, the amount of liability recorded related to phantom stock units was not significant at September 30, 2022.

Note 11. Net Loss Per Share

Basic net income (loss) per share is computed based on the weighted average number of shares of common stock outstanding during the period. Diluted net income (loss) per share is computed based on the weighted average number of common shares outstanding plus the effect of dilutive potential common shares outstanding during the period using the treasury stock method. During the periods when there is a net loss, potentially dilutive common stock equivalents have been excluded from the calculation of diluted net loss per share as their effect is anti-dilutive. The Company follows the two-class method when computing net income (loss) per share when shares are issued that meet the definition of participating securities. The Company considers its the RSAs and PRSAs to be participating securities as holders of such securities have non-forfeitable dividend rights in the event of the declaration of a dividend for shares of common stock. During the periods when the Company is in a net loss position, the net loss attributable to common stockholders was not allocated to the RSAs and PRSAs under the two-class method as these securities do not have a contractual obligation to share in losses.

The following common stock equivalents have also been excluded from the computation of diluted net loss per share for the periods presented because including them would have been antidilutive (in thousands):

	As of September 30,	
	2022	2021
Stock options	10	597
RSAs and PRSAs	9,362	—
RSUs (non-vested)	8,701	4,488
Public warrant shares	4,480	4,480
Amazon warrant shares	39,784	—
Total	62,337	9,565

Note 12. Retirement Plan

The Company has a 401(k) savings and profit-sharing plan (the “401(k) Plan”), which is intended to be a tax-qualified defined contribution plan that covers all eligible employees, as defined in the applicable plan documents. Under the 401(k) Plan, eligible employees may elect salary deferral contributions, not to exceed limitations established annually by the Internal Revenue Service (“IRS”). The Company matches 25% of employees’ eligible contributions up to a maximum amount determined by the Company. The Company’s matching contributions vest 25% per year over the employee’s first four-year period of service. The Company’s matching contributions were $0.2 million and $0.8 million, respectively, for the three and nine months ended September 30, 2022, and $0.2 million and $0.7 million, respectively, for the three and nine months ended September 30, 2021.

Note 13. Income Taxes

The following table summarizes the Company’s loss before income taxes and provision for income taxes (in thousands):

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2022	2021	2022	2021
Loss before income taxes	$ (41,522)	$ (54,698)	$ (134,636)	$ (174,117)
Provision for (benefit from) income taxes	41	14	347	649
Effective tax rate	(0.1)%	— %	(0.3)%	(0.4)%

The quarterly income tax provision reflects an estimate of the corresponding year’s annual effective tax rate and includes, when applicable, adjustments for discrete items. The tax provision for the periods presented primarily relates to income taxes of non-U.S. operations as the U.S. operations were in a loss position and the Company maintains a full valuation allowance against its U.S. deferred tax assets.

The Company is subject to income taxes in the United States, China, Germany and India. The Company’s effective tax rate changed from (0.4)% in the nine months ended September 30, 2021 to (0.3)% in the nine months ended September 30, 2022. This change was primarily due to a combination of permanent tax items, mainly related to the valuation allowance recorded on U.S. deferred tax assets, foreign withholding taxes and state taxes.

The Inflation Reduction Act of 2022 (the “IRA”) was enacted into U.S. law on August 16, 2022. The IRA includes various tax provisions, including an excise tax on stock repurchases, expanded tax credits for clean energy incentives, and a 15 percent corporate alternative minimum tax on profits that generally applies to U.S. corporations with average adjusted financial statement income over a three year period in excess of $1.0 billion. The Company is currently in the process of evaluating the provisions of the IRA, but does not expect the IRA to materially impact its financial statements.

Note 14. Commitments and Contingencies

Purchase and Other Commitments

The Company had a total of $30.3 million in purchase commitments as of September 30, 2022. Purchase commitments represent outstanding purchase orders or non-cancelable commitments for goods or services with contract manufacturers and vendors that range mostly from one month up to a year. The Company uses several contract manufacturers to manufacture components, subassemblies and products. The Company provides these contract manufacturers with demand information and they use this information to acquire components and build products. Contract manufacturer commitments consist of obligations for on-hand inventories and non-cancelable purchase orders with contract manufactures. If the Company cancels all or part of the orders, it may still be liable to the contract manufacturers for the cost of the materials and components purchased by the subcontractors to manufacture the Company’s products. The Company also obtains individual components for its products from a wide variety of individual suppliers. In addition, the Company had a total of $0.6 million in other contractual obligations for goods or services associated with its ordinary course of business as of September 30, 2022.

Product Warranties

The following table summarizes the activity related to product warranty liabilities and their balances as included in accrued expenses and other current liabilities (in thousands):

	Nine Months Ended September 30,	
	2022	**2021**
Balance as of the beginning of the period	$ 1,934	$ 2,204
Warranty provision	2,327	1,448
Consumption	(813)	(1,689)
Changes in provision estimates	(2,342)	(449)
Balance as of the end of the period	$ 1,106	$ 1,514

Indemnifications

The Company has entered into agreements with its directors and officers that may require the Company to indemnify its directors and officers against liabilities that may arise by reason of their status or service as directors or officers to the fullest extent permitted by Delaware corporate law. The maximum potential amount of future payments the Company could be required to make under these provisions is not determinable. The Company currently has directors' and officers' insurance.

Legal Proceedings

From time to time, the Company is involved in actions, claims, suits and other proceedings in the ordinary course of business, including assertions by third parties relating to intellectual property infringement, breaches of contract or warranties or employment-related matters. The Company is defending all current litigation matters. Although there can be no assurances and the outcome of these matters is currently not determinable (except as specifically described below), the Company currently believes that none of these claims or proceedings are likely to have a material adverse effect on the Company's financial position.

Ouster Litigation

On June 15, 2022, the Company filed complaint with the U.S. International Trade Commission ("ITC") against Ouster, Inc. and its contract manufacturer, and a lawsuit in the Northern District of California. The complaint and lawsuit each allege infringement of U.S. Patent Nos. 7,969,558 (the "'558 patent") and 9,983,297 and respectively seek relief including an exclusion importation of infringing Ouster products and monetary damages. On July 22, 2022, the ITC instituted a formal investigation into the Company's claims. In connection with the merger agreement dated November 4, 2022, between the Company and Ouster (the "Merger Agreement"), the Company will dismiss the lawsuit in the Northern District of California without prejudice and move to terminate the ITC investigation.

On July 8, 2022 Ouster filed a complaint in the Superior Court of California, Santa Clara County, against the Company and two employees of the Company, alleging trade secret misappropriation against all defendants, breach of contract against one of the individuals, violation of the unfair business practices act against the Company, and violation of false advertising laws against the Company. In connection with the Merger Agreement, Ouster will dismiss the lawsuit without prejudice.

Arbitration Proceeding Against David Hall

On June 9, 2021, the Company initiated an arbitration proceeding against David Hall, alleging breach of contract and misappropriation of the Company's confidential, proprietary, and trade secret information. To protect its intellectual property and in aid of the arbitration process, on July 2, 2021 the Company filed an application with the Santa Clara County Superior Court for a temporary restraining order and preliminary injunction to prohibit Mr. Hall from any further copying, disclosure or use of the Company's intellectual property and to require him to return all such property to the Company.

On September 7, 2021, the arbitrator issued a preliminary injunction against Mr. Hall, ordering that: 1) Mr. Hall is enjoined from retrieving or accessing three devices to which he copied Velodyne materials and must transfer those devices to a discovery special master, who will review Mr. Hall's retention and usage of Velodyne information and prepare reports on such retention and use; 2) Mr. Hall must provide an under-oath inventory of any and all of his personal electronic devices in his possession or control upon which Velodyne information currently resides and, upon Velodyne's request, must provide Velodyne with access to those devices upon request to retrieve, destroy, or ensure the permanent deletion of Velodyne information from those devices; 3) Mr. Hall is enjoined from using anything he created or worked on for Velodyne during the time of his employment; and 4) In light of the preliminary injunctive relief granted under its breach of contract claim, Velodyne's requests for relief under the California Uniform Trade Secrets Act and for a deposition were denied at this juncture, but the arbitrator expressly held that Velodyne could reinstate those demands following the special master's report on Mr. Hall's retention and usage of Velodyne's materials. Mr. Hall subsequently provided an under-oath inventory pursuant to that order, which identified seventy-one personal devices that may contain Velodyne information. Because Mr. Hall did not consent to the special master conditionally appointed by the arbitrator, Velodyne and Mr. Hall are negotiating on protocol by which to preliminarily review and inspect those personal devices. On October 26, 2021, Mr. Hall filed a motion for a protective order seeking to require the Company to segregate and return his allegedly personal, private, privileged, and confidential information from his Company-issued laptop. On November 30, 2021, the judge denied Mr. Hall's protective order, noting that Mr. Hall has no expectation of privacy as to the contents of his laptop and that he waived his right to assert privilege over the contents of the laptop. In the same ruling, the judge compelled Mr. Hall to respond to interrogatories issued by Velodyne. On December 16, 2021, the judge ruled that Velodyne sufficiently identified 2,740 allegedly-misappropriated trade secrets. On February 17, 2022, the judge imposed sanctions on Mr. Hall for discovery abuse, and ordered Mr. Hall to pay Velodyne $5,000 as sanctions. The parties engaged in mediation on August 30, 2022. On October 11, 2022, The Company and Mr. Hall entered into a settlement agreement, (the "Hall Settlement Agreement"). Mr. Hall paid Velodyne $1.95 million under the Hall Settlement Agreement. For additional information regarding the Hall Settlement Agreement, see Note 17. "Subsequent Events" herein.

Discrimination Proceedings by Marta Hall

On August 2, 2021, the Company received a Charge of Discrimination dated July 27, 2021 ("Charge"), indicating that former Chief Marketing Officer, Marta Hall, has filed a charge of employment discrimination under Title VII of the Civil Rights Act, alleging sexual discrimination and retaliation. On February 15, 2022, the Equal Employment Opportunity Commission (EEOC) issued a determination that it will not proceed with an investigation of Ms. Hall's claim. On September 27, 2021, the Occupational Safety and Health Administration ("OSHA") informed the Company that it dismissed a complaint brought by Ms. Hall alleging retaliation in violation of the Sarbanes-Oxley Act ("SOX"). OSHA found that Ms. Hall failed to show that she engaged in a protected activity under SOX. On October 21, 2021, Ms. Hall submitted an objection to the findings and requested a hearing before an administrative law judge. The Office of Administrative Law Judges docketed the above referenced case. It is not yet assigned to a presiding administrative law judge. Pursuant to the Hall Settlement Agreement, Ms. Hall will be dismissing her appeal. For additional information regarding the Hall Settlement Agreement, see Note 17. "Subsequent Events" herein.

Hall Proceeding Against Individuals

On January 18, 2022, David Hall and Marta Hall filed a complaint against various current and former officers and directors of Velodyne and other individuals in the Superior Court of California, Alameda County, entitled Hall v. Vetter, No. 22-cv-005713. The complaint alleges conspiracy to defraud, breach of fiduciary duty, aiding and abetting breach of fiduciary duty, intentional misrepresentation, negligent misrepresentation, and securities fraud. The complaint alleges David and Marta Hall have suffered damages and seeks, among other things, compensatory and punitive damages. On May 3, 2022, certain defendants filed motions to compel arbitration and other defendants filed motions to quash service of process for lack of personal jurisdiction. The court conducted a hearing on the motions on July 20, 2022. On August 30, 2022, the court granted the motion to quash service with respect the out of state defendants. On October 3, 2022, the court granted the motion to compel Mr. Hall to arbitrate his claims, and stayed proceedings on Ms. Hall's claims pending arbitration of Mr. Hall's claims. On October 20, 2022, David and Marta voluntarily dismissed the action without prejudice.

Quanergy Litigation

In September 2016, Quanergy Systems, Inc. ("Quanergy") filed a complaint against the Company and one of its customers in the Northern District of California (the District Court litigation), seeking a declaratory judgment of non-infringement of one of the '558 patent and asserting state and federal trade secret misappropriation claims against the Company and its customer and breach of contract and constructive fraud claims against its customer. In November 2016, Quanergy filed an amended complaint, removing its trade secret misappropriation claims against the Company, dropping its customer from the suit and dropping the related claims of breach and constructive fraud. The amended complaint maintained only the declaratory judgment of non-infringement action against the Company. In December 2016, the Company filed an answer generally denying the allegations and relief requested in Quanergy's amended complaint. The Company's answer also included counterclaims against Quanergy asserting direct, indirect, and willful infringement of the ‘558 patent. In January 2017, Quanergy filed an answer generally denying the allegations in the Company’s patent infringement counterclaims and requesting relief. The court held a claim construction hearing on September 13, 2017 and issued a claim construction order on October 4, 2017, which adopted the majority of the Company’s proposed constructions. In June 2018, the district court entered an order granting a joint stipulation to stay the litigation.

Quanergy filed two petitions for inter partes review with the U.S. Patent Office’s Patent Trials and Appeal Board (“PTAB”) in November 2017, challenging all claims of the ‘558 patent that the Company asserted. The Company filed its Patent Owner Preliminary Response to Quanergy’s petitions on March 7, 2018. The PTAB issued an institution decision on May 25, 2018, instituting review of all challenged claims. The Company subsequently filed its Patent Owner Response and a Contingent Motion to amend the claims. The PTAB held oral argument on February 27, 2019. On May 23, 2019, the PTAB issued a Final Written Decision upholding the validity of all the challenged claims, finding that Quanergy did not prove by a preponderance of the evidence that any of the challenged claims of the ‘558 patent were unpatentable, and denying the Company’s contingent motion as moot. In June 2019, Quanergy filed a request for rehearing. On July 21, 2020, Quanergy filed a Notice of Appeal, appealing the PTAB decision to the U.S. Court of Appeals for the Federal Circuit. Quanergy’s opening appeal brief was filed on January 22, 2021. On February 4, 2022, the Federal Circuit of Appeals issued a ruling upholding the validity of the Company’s ‘558 patent. In view of that ruling, on February 18, 2022, the district court lifted the stay. On April 18, 2022, the district court issued a scheduling order for the remainder of the proceedings. On October 21, 2022, the Company filed a motion to enforce a settlement with Quanergy.

Employment Matters

On June 8, 2020, a former employee filed a class action lawsuit in the Santa Clara County Superior Court of the State of California. The complaint alleges that, among other things, the Company failed to pay minimum and overtime wages, final wages at termination, and other claims based on meal periods and rest breaks. The plaintiff is bringing this lawsuit on behalf of herself and other similarly situated plaintiffs who have not been identified and is seeking to certify the action as a class action. The plaintiff has now filed a First Amended Complaint that adds a claim pursuant to California’s Private Attorneys General Act. The First Amended Complaint does not specify the amount the plaintiff seeks to recover. Velodyne’s response to the First Amended Complaint was filed on November 16, 2020. On August 5, 2021, the parties reached a tentative settlement. On September 14, 2022, the Court approved the settlement, and the Company paid $0.8 million in settlement of the claims.

Securities Litigation Matters

On March 3, 2021, a purported shareholder of Velodyne filed a complaint for a putative class action against Velodyne, Anand Gopalan and Andrew Hamer in the United States District Court, Northern District of California, entitled Moradpour v. Velodyne Lidar, Inc., et al., No. 3:21-cv-01486-SI. The complaint alleged purported violations of the federal securities laws and that, among other things, the defendants made materially false and/or misleading statements and failed to disclose material facts about the Company’s business, operations and prospects, including with respect to David Hall’s role with the Company and removal as Chairman of the Company’s Board of Directors. The complaint alleged that purported class members have suffered losses and sought, among other things, an award of compensatory damages on behalf of a putative class of persons who purchased or otherwise acquired the Company’s securities between November 9, 2020 and February 19, 2021. On March 12, 2021, a putative class action entitled Reese v. Velodyne Lidar, Inc., et al., No. 3:21-cv-01736-VC, was filed against the Company, Mr. Gopalan and Mr. Hamer in the United States District Court for the Northern District of California, based on allegations similar to those in the earlier class action and seeking recovery on behalf of the same putative class. On March 19, 2021, another putative class action entitled Nick v. Velodyne Lidar, Inc., et al., No. 4:21-cv-01950-JST, was filed in the United States District Court for the Northern District of California, against the Company, Mr. Gopalan, Mr. Hamer, two current or former directors, and three other entities. The complaint was based on allegations similar to those in the earlier class actions and sought, among other things, an award of compensatory damages on behalf of a putative class of persons who purchased or otherwise acquired the Company’s securities between July 2, 2020 and March 17, 2021. The class actions have been consolidated, lead plaintiffs have been appointed and an amended consolidated complaint was filed on September 1, 2021, based on allegations similar to those in the earlier class actions. The Company filed a motion to dismiss the amended and consolidated complaint on November 1, 2021. The plaintiffs filed a first amended complaint on February 11, 2022. The Company filed a motion to dismiss on March 4, 2022. On July 1, 2022, the court denied the motion to dismiss as it relates to the claims related to David Hall’s role with the Company, but granted the motion to dismiss as to all other claims. The Company intends to defend the actions vigorously.

On March 12, 2021, a putative shareholder derivative lawsuit entitled D’Arcy v. Gopalan, et al., No. 1:21-cv-00369-MN, was filed in the United States District Court for the District of Delaware against current and former directors and/or officers Anand Gopalan, Andrew Hamer, David S. Hall, Marta Thoma Hall, Joseph B. Culkin, Michael E. Dee, James A. Graf, Barbara Samardzich, and Christopher A. Thomas, and names the Company as a nominal defendant. The complaint asserted claims for breach of fiduciary duty, unjust enrichment, abuse of control, gross mismanagement, and waste of corporate assets against all of the individual defendants, and asserted a contribution claim under the federal securities laws against Mr. Gopalan and Mr. Hamer. On March 16, 2021, a second shareholder derivative lawsuit entitled Kondner, et al. v. Culkin, et al., No. 1:21-cv-00391-MN, was filed in the United States District Court for the District of Delaware against most of the same defendants named in the earlier derivative complaint, and asserted claims against the individual defendants for alleged breaches of fiduciary duty and waste of corporate assets. Both derivative actions are based on allegations similar to those in the class actions discussed above, and have now been consolidated. On January 3, 2022, the plaintiffs filed an amended complaint.

Contingency Assessment

The Company records accruals for outstanding legal proceedings, investigations or claims when it is probable that a liability will be incurred and the amount of loss can be reasonably estimated. The Company evaluated developments in legal proceedings, investigations or claims that could affect the amount of any accrual, as well as any developments that would result in a loss contingency to become both probable and reasonably estimable. As of September 30, 2022, the Company had paid a total of $0.8 million, which was accrued for as of December 31, 2021, for loss contingencies associated with the legal claims or litigation discussed above. As of September 30, 2022, no amounts have been accrued because the Company's management does not presently believe that any loss is probable and it is not possible to reasonably estimate the loss, or range of losses, if any, that may result from any of the ongoing litigation. The Company's legal costs incurred in its defense against these claims are expensed as incurred.

Note 15. Segment, Geographic and Customer Concentration Information

The Company conducts its business in one operating segment that develops and produces Lidar sensors for use in industrial, 3D mapping, drones and auto applications. The Company's Chief Executive Officer ("CEO") is the chief operating decision maker ("CODM"). The CODM allocates resources and makes operating decisions based on financial information presented on a consolidated basis, accompanied by disaggregated information about sales and gross margin by product group. The profitability of the Company's product group is not a determining factor in allocating resources and the CODM does not evaluate profitability below the level of the consolidated company.

The Company reports revenue by region and country based on the location where its customers accept delivery of its products and services. Revenue by country and number of customers that accounted for more than 10% of revenue was as follows:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2022	2021	2022	2021
Countries over 10% of revenue:				
U.S.	16 %	39 %	14 %	33 %
China	20 %	17 %	21 %	30 %
Sweden	12 %	16 %	15 %	15 %
Germany	18 %	*	13 %	*
Japan	— %	*	11 %	*
Number of customers that accounted for over 10% of revenue:	2	2	3	2

* Less than 10%.

For the three and nine months ended September 30, 2022, revenue in the U.S. included a reduction to product revenues of $2.8 million and $9.1 million, respectively, in respect of the Amazon Warrant. Refer to Note 9 for more information.

The Company's long-lived assets, consisting primarily of property, plant and equipment, were primarily located in the United States and, to a lesser extent, Thailand as of September 30, 2022 and December 31, 2021.

Note 16. Related Party Transactions

Certain holders of the pre-combination Velodyne's convertible preferred stock (which converted into common stock of the Company upon the Business Combination) purchased products and services, directly or through a third party, from the Company. Revenue and accounts receivable for a stockholder who owned over 5% of the Company's common stock as of September 30, 2022 and December 31, 2021 were as follows (in thousands):

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2022	2021	2022	2021
Revenue:				
Stockholder A	$ 7	$ 43	$ 302	$ 126

	September 30, 2022	December 31, 2021
Accounts receivable:		
Stockholder A	$ —	$ 219

The Company leases its corporate headquarters facility in San Jose, California. The property was previously owned by a company that was owned by a stockholder who was a former officer of the Company. The lease was executed in January 2017 and expires in December 2027, as amended. In May 2021, the property was sold to a third-party but the lease terms remain unchanged. Lease cost under this lease was $0.6 million and $1.4 million for the two and five months ended May 31, 2021, respectively.

Note 17. Subsequent Events

Ouster Merger Agreement

On November 4, 2022, the Company, Ouster, Inc. ("Ouster"), Oban Merger Sub, Inc., a Delaware corporation and a direct, wholly owned subsidiary of Ouster ("Merger Sub I"), and Oban Merger Sub II LLC, a Delaware limited liability company and a direct, wholly owned subsidiary of Ouster ("Merger Sub II"), entered into an Agreement and Plan of Merger (the "Merger Agreement"). Pursuant to the Merger Agreement, and subject to the satisfaction or waiver of the conditions specified therein, Merger Sub I will be merged with and into Velodyne (the "First Merger"), with Velodyne surviving the First Merger as a direct, wholly owned subsidiary of Ouster (the "Surviving Corporation"), and as soon as practicable following the First Merger, the Surviving Corporation will be merged with and into Merger Sub II with Merger Sub II surviving as a direct, wholly owned subsidiary of Ouster (the "Second Merger", and together with the First Merger, the "Mergers"). Upon the consummation of the First Merger, each share of the Company's common stock issued and outstanding immediately prior to the effective time of the First Merger will be converted into and represent the right to receive 0.8204 validly issued, fully paid and non-assessable shares of Ouster common stock, par value $0.0001 per share. Consummation of the Mergers is subject to customary closing conditions, including, among others, the approval by the Company's stockholders of the Merger, approval by Ouster's stockholders of the issuance of shares of Ouster common stock in connection with the First Merger, and certain regulatory approvals.

Blue City Acquisition

On October 3, 2022, the Company completed the acquisition of Bluecity, an AI software company. Bluecity offers solutions that combine artificial intelligence and lidar to provide real-time multimodal traffic analytics. By acquiring Bluecity, the Company has secured the offering of the intelligent infrastructure solution to customers in the infrastructure space. The addition of Bluecity's technology also expands the Company's software product portfolio that can provide more robust solutions to customers. The acquisition was provisionally valued at $15.0 million based on the 30-day average closing price of the Company's common stock prior to October 3, 2022, of $1.1516, paid for by the redemption of a Note from the Company valued at $1.0 million, the issuance of approximately 1.1 million shares of the Company's common stock to Bluecity stockholders, and the reserve of approximately 10.9 million shares of its common stock for issuance upon exchange, at the holder's option on a one-for-one basis, of non-voting exchangeable shares of the Company's Canadian subsidiary issued to Bluecity stockholders (collectively "Merger Shares"), including approximately 0.7 million shares of the Company's common stock held back for a period of 12 months to satisfy potential indemnification obligations. The Merger Shares were issued in a private placement. The acquisition will be accounted for as a business combination. The Company is currently in the process of evaluating the impact of the business combination on its consolidated financial statements.

Hall Settlement
On October 11, 2022, the Company entered into a legal settlement agreement with David Hall and Marta Hall. Under the terms of the settlement agreement, Mr. Hall paid the Company $1.95 million in October 2022, and the Company retains possession and control over physical laptops and other media containing the Company's information. The settlement agreement also contains a mutual release of each other from all known and unknown claims that each party has made or could have made against the other prior to the date of the settlement agreement. The Company agreed to submit a request for dismissal of all claims in its ongoing arbitration with Mr. Hall, and Ms. Hall agreed to dismiss her complaint submitted to the Occupational Safety and Hazard Administration, which together constitute all currently outstanding litigation between the Halls and the Company. The parties also agreed to a customary mutual non-disparagement provision.

Under this settlement agreement, the Halls did not release their claims against current and former officers and directors of the Company and other individuals asserted in a lawsuit filed in the Superior Court of California, Alameda County, entitled Hall v. Vetter, No. 22-cv-005713, except that the Halls agreed not to add the Company as a party to any such claims.

Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations

The following discussion of Velodyne's results of operations and financial condition should be read in conjunction with the information set forth in Velodyne's financial statements and the notes thereto included elsewhere in this Quarterly Report on Form 10-Q. This discussion contains forward-looking statements based upon our current expectations, estimates and projections that involve risks and uncertainties. Actual results could differ materially from those anticipated in these forward-looking statements due to, among other considerations, the matters discussed under "Cautionary Note Regarding Forward-Looking Statements" and Item 1A: "Risk Factors."

Overview

We are a global leader in lidar technology providing smart, powerful lidar solutions for autonomous vehicles, advanced driver assistance systems (ADAS), delivery solutions, robotics, industrial, infrastructure, navigation, mapping, and more.
Our broad range of high-performance sensor and software solutions provide flexibility, quality and performance to meet the needs of a wide range of industries, including robotics, industrial, intelligent infrastructure, autonomous vehicles and ADAS. Our lidar-based smart vision solutions are deployed in many non-automotive applications, including autonomous mobile robots, UAVs, drones, last-mile delivery, precision agriculture, advanced security systems, and smart city initiatives.

Through our direct sales team as well as through distributors, we sell to both automotive customers, including top automotive OEMs, system integrators, and last-mile delivery providers, as well as to non-automotive customers, who are providing an array of applications, including industrial, drone, and security applications. We also license our technology and provide development services to customers and business partners.

Impact of COVID-19

The extensive impact of the COVID-19 pandemic has resulted and will likely continue to result in significant disruptions to the global economy, as well as businesses and capital markets around the world, despite the reports of declines in severity. The pandemic has resulted in government authorities implementing numerous measures to try to contain the virus, such as travel bans and restrictions, quarantines, stay-at-home orders, and business shutdowns.

The ongoing COVID-19 pandemic has disrupted and affected our operations, supply chain, customer demand, and our results of operations. For example, the timing of customer orders and our ability to fulfill orders we received were impacted by various COVID-19 related government mandates across our worldwide operations. Certain current and prospective customers delayed purchases based on budget constraints or project delays related to COVID-19. Our offices and R&D and manufacturing facilities have been, and from time-to-time may continue to be, impacted due to national and regional government declarations requiring closures, quarantines and travel restrictions. We also experienced an increase in raw materials and assembly costs.

On March 27, 2020, the U.S. government enacted the CARES Act administered by the Small Business Administration (the "SBA"). In the nine months ended September 30, 2021, we benefited from a $10.0 million PPP loan from and forgiven by the SBA.

The continued impact of the COVID-19 pandemic on our operational and financial performance will depend on various future developments, including the duration and spread of the outbreak and impact on our customers, suppliers, and employees, all of which are uncertain at this time. We expect the COVID-19 pandemic may adversely impact our future revenue and results of operations, but we are unable to predict at this time the size and duration of this adverse impact. At the same time, we have seen some signs of positive effects for our long-term business prospects and partnerships during the pandemic. For more information on our operations and risks related to COVID-19, please see the section of this Quarterly Report on Form 10-Q entitled "Risk Factors."

Russia and Ukraine Conflict

The current conflict between Russia and Ukraine and the related sanctions and other penalties imposed by countries across the globe against Russia are creating substantial uncertainty in the global economy. While we do not have operations in Russia or Ukraine and do not have significant direct exposure to customers and vendors in those countries, we are unable to predict the impact that these actions will have on the global economy or on our financial condition, results of operations, and cash flows as of the date of these financial statements.

Recent Developments

Ouster Merger Agreement

On November 4, 2022, Velodyne, Ouster, Inc. ("Ouster"), Oban Merger Sub, Inc., a Delaware corporation and a direct, wholly owned subsidiary of Ouster ("Merger Sub I"), and Oban Merger Sub II LLC, a Delaware limited liability company and a direct, wholly owned subsidiary of Ouster ("Merger Sub II"), entered into an Agreement and Plan of Merger (the "Merger Agreement"). Pursuant to the Merger Agreement, and subject to the satisfaction or waiver of the conditions specified therein, Merger Sub I will be merged with and into Velodyne (the "First Merger"), with Velodyne surviving the First Merger as a direct, wholly owned subsidiary of Ouster (the "Surviving Corporation"), and as soon as practicable following the First Merger, the Surviving Corporation will be merged with and into Merger Sub II with Merger Sub II surviving as a direct, wholly owned subsidiary of Ouster (the "Second Merger", and together with the First Merger, the "Mergers"). Upon the consummation of the First Merger, each share of the Company's common stock issued and outstanding immediately prior to the effective time of the First Merger will be converted into and represent the right to receive 0.8204 validly issued, fully paid and non-assessable shares of Ouster common stock, par value $0.0001 per share. Consummation of the Mergers is subject to customary closing conditions, including, among others, the approval by the Company's stockholders of the Merger, approval by Ouster's stockholders of the issuance of shares of Ouster common stock in connection with the First Merger, and certain regulatory approvals.

Acquisition of Bluecity

On October 3, 2022, we completed the acquisition of Bluecity Technology, Inc., an AI software company ("Bluecity"). Bluecity offers solutions that combine artificial intelligence and lidar to provide real-time multimodal traffic analytics. By acquiring Bluecity, we have secured the offering of the intelligent infrastructure solution to customers in the infrastructure space. The addition of Bluecity's technology also expands our software product portfolio that can provide more robust solutions to customers. We issued approximately 1.1 million shares of our common stock to Bluecity stockholders, and reserved approximately 10.9 million shares of our common stock for issuance upon exchange, at the holder's option on a one-for-one basis, of non-voting exchangeable shares of our Canadian subsidiary issued to Bluecity stockholders (collectively "Merger Shares"), including approximately 0.7 million shares of our common stock held back for a period of 12 months to satisfy potential indemnification obligations. The acquisition will be accounted for as a business combination. We are currently in the process of evaluating the impact of the business combination on our consolidated financial statements.

ATM Offering

On June 15, 2022, we entered into an Equity Distribution Agreement, or ATM Agreement, with Oppenheimer, pursuant to which, from time to time, we may raise up to $100 million by selling shares of our common stock. The ATM Shares will be issued pursuant to our shelf registration statement on Form S-3 that became effective on May 11, 2022.

Subject to the terms and conditions of the ATM Agreement, Oppenheimer will use commercially reasonable efforts consistent with its normal trading and sales practices to sell the shares from time to time, based upon our instructions, and is entitled to a commission at a rate equal to 2.5% of the gross price of any ATM Shares sold through Oppenheimer. The ATM offering will terminate upon the earlier of (i) the sale of all common stock subject to the ATM Agreement or (ii) termination of the ATM Agreement in accordance with its terms. We are not required to sell any shares at any time during the term of the ATM Agreement. Net proceeds from the sale of ATM Shares will be used for our general corporate purposes.

We record the sale of our ATM Shares on a settlement date basis. For the three and nine months ended September 30, 2022, we received net proceeds of approximately $19.1 million and $25.9 million (after deducting $0.6 million and $1.3 million in commissions and expenses), respectively. For the three and nine months ended September 30, 2022, we sold 16,907,260 and 23,378,308 shares at an average price of $1.16 and $1.17 per share, respectively, pursuant to the ATM Agreement.

Amazon Warrant Agreement

In February 2022, we entered into a warrant agreement and a transaction agreement with Amazon.com (“Amazon”), pursuant to which we agreed to issue to Amazon.com NV Investment Holdings LLC, a wholly-owned subsidiary of Amazon, a warrant (“Amazon Warrant”) to acquire up to an aggregate of 39,594,032 shares of Velodyne’s common stock at an exercise price of $4.18 per share. The exercise price and the warrant shares issuable upon exercise of the warrant are subject to customary antidilution adjustments. Following stock sales under our ATM offering, as of September 30, 2022, the antidilution adjustments provided Amazon with warrants to acquire an additional 190,181 shares, for an aggregate of 39,784,213 shares. The right to exercise the warrants and receive the warrant shares that have vested expires February 4, 2030. The warrant agreement also contains customary change-in-control provisions.

The Amazon Warrant shares vest in multiple tranches over time based on payments of up to $200.0 million by Amazon or its affiliates (directly or indirectly through third parties) to Velodyne in connection with Amazon’s purchase of goods and services from us. Upon entry into a certain additional commercial agreement, certain warrant shares will vest, and the number of shares that vest in connection with future payments by Amazon to Velodyne will be reduced pro rata. As of September 30, 2022, none of the Amazon Warrant shares are vested.

For the nine months ended September 30, 2022, we recognized a reduction to revenues of $9.1 million associated with a portion of Amazon Warrant shares that are probable of being vested.

Factors Affecting Our Performance

Design wins. We are developing our smart vision solutions as a key enabling technology for OEMs in a wide range of industries, including robotics, industrial, intelligent infrastructure, autonomous vehicles and ADAS. Because our solutions must be integrated into a broader platform by the OEM, it is critical that we achieve design wins with these customers. The time necessary to achieve design wins varies based on the market and application. The design cycle in the automotive market tends to be substantially longer and more onerous than in other markets. Even within the automotive market, achieving a design win with an automotive OEM takes considerably longer than a design cycle for an aftermarket application. We consider design wins to be critical to our future success, although the revenue generated by each design win and the time necessary to achieve such a win can vary significantly, making it difficult to predict our future financial performance.

Pricing, product cost and margins. Our pricing and margins will depend on the volumes and the features of the solutions we provide to our customers. In general, solutions incorporated into development-phase products require more complex configurations, have higher prices and higher gross margins. As our markets reach maturity and commercialization, we expect prices and margins will generally decrease. Our commercial-stage customers will require that our smart vision solutions be manufactured and sold at per-unit prices that enable mass market adoption. To meet the technological and pricing needs of customers reaching commercial scale, we are making significant investments in new solutions for both cost improvements and new features. In addition, we are working on redesigning our sensors to help alleviate supply chain shortages. Our ability to compete in key markets will depend on the success of these investments and our efforts to efficiently and reliably produce cost-effective smart vision solutions for our commercial-stage customers. We have customers with technologies in various stages of development. We anticipate that our prices will vary by market and application due to market-specific supply and demand dynamics and product lifecycles.

Commercialization of lidar-based applications. Our revenue has been subject to significant fluctuations. Our customers in the pre-commercial development phase may have purchased their requirements of our products in earlier periods and we do not expect them to begin purchasing again in volume unless and until they reach commercial deployments. As a number of our target markets reach commercialization, we expect there to be a shift towards higher unit volume at lower per-unit prices, with more predictable customer demand. We expect that our results of operations, including revenue and gross margins, will continue to fluctuate on a quarterly basis for the foreseeable future as our customers continue research and development projects and begin to commercialize autonomous solutions that rely on lidar technology. As more customers reach the commercialization phase and as the market for lidar solutions matures, these fluctuations in our operating results may become less pronounced. However, in the near term, our revenue may not grow as we expect until more customers commercialize their products.

End market demand. We sell our products to customers in a number of end markets. We believe our entry into new markets will continue to facilitate revenue growth and customer diversification. While we will continue to expand the end markets we serve, we anticipate that sales to a limited number of end markets will continue to account for a significant portion of our total revenue for the foreseeable future. Success in an end market, or commercialization, is uncertain and may develop differently in each case, with unique pricing, volume and cost dynamics. Additionally, as production scales in order to meet the demands of commercialization, pricing pressure increases and the amount of that pressure is expected to vary by market.

Sales volume. A typical design win can generate a wide range of sales volumes for our solutions, depending on the end market demand for our customers' products. This can depend on several factors, including the reputation of the end customer, market penetration, product capabilities, size of the end market that the product addresses and our end customers' ability to sell their products. In addition to end market demand, sales volumes also depend on whether our customer is in the development, commercialization or production phase. In certain cases, we may provide volume discounts on sales of our solutions, which may or may not be offset by lower manufacturing costs related to higher volumes.

Continued investment and innovation. We believe that we are an industry-leading lidar provider with proven designs, extensive product offerings and advanced manufacturing capabilities. Our financial performance is significantly dependent on our ability to maintain this leading position. This is further dependent on the investments we make in research and development. We must continually identify and respond to rapidly evolving customer requirements, develop and introduce innovative new products, enhance and service existing products and generate active market demand for our products. If we fail to do this, our leading market position and revenue may be adversely affected, and our investments in that area will not be recovered.

Critical Accounting Estimates

We prepare our consolidated financial statements in accordance with U.S. generally accepted accounting principles ("U.S. GAAP"). The preparation of these consolidated financial statements requires us to make estimates, assumptions and judgments that can significantly impact the amounts we report as assets, liabilities, revenue, costs and expenses and the related disclosures. We base our estimates on historical experience and other assumptions that we believe are reasonable under the circumstances. Our actual results could differ significantly from these estimates under different assumptions and conditions. We believe that the accounting estimates discussed below are critical to understanding our historical and future performance as these estimates involve a greater degree of judgment and complexity.

Revenue Recognition

Revenue is recognized upon transfer of control of promised products and to a small extent services to customers in an amount that reflects the consideration that we expect to receive in exchange for those products and services.

We enter into contracts that can include various combinations of products and services, which are generally capable of being distinct and accounted for as separate performance obligations; however, determining whether products or services are considered distinct performance obligations that should be accounted for separately versus together may sometimes require significant judgment.

Transaction price is allocated to each performance obligation on a relative standalone selling price (SSP) basis. Judgment is required to determine SSP for each distinct performance obligation. We use a range of amounts to estimate SSP when products and services are sold separately. In instances where SSP is not directly observable, we determine SSP using information that may include other observable inputs available to us.

Accounting for contracts recognized over time involves the use of various techniques to estimate total contract revenue and costs. Due to uncertainties inherent in the estimation process, it is possible that estimates of costs to complete a performance obligation will be revised in the near-term. We review and update our contract-related estimates regularly, and record adjustments as needed. For those performance obligations for which revenue is recognized using a cost-to-cost input method, changes in total estimated costs, and related progress towards complete satisfaction of the performance obligation, are recognized in the period in which the revisions to the estimates are made.

Changes in judgments with respect to these assumptions and estimates could impact the timing or amount of revenue recognition.

The reductions of revenue associated with Amazon Warrant are determined based on the grant date fair value of the award and recognized as the customer makes payments and vesting conditions become probable of being achieved. The grant date fair value of the Amazon Warrant was determined using a Black-Scholes option pricing model, which is based in part on assumptions that require management to use significant judgment. See Note 9 to our Condensed Consolidated Financial Statements in Item 1 of Part I of this Report for additional information.

Inventory Valuation

Inventories are stated at the lower of cost or estimated net realizable value. Costs are computed under the standard cost method, which approximates actual costs determined on the first in, first out basis. We record write-downs of inventories which are obsolete or in excess of anticipated demand. Significant judgment is used in establishing our forecasts of future demand and obsolete material exposures. We consider marketability and product life cycle stage, product development plans, component cost trends, demand forecasts, historical revenue, and assumptions about future demand and market conditions in establishing our estimates. If the actual component usage and product demand are significantly lower than forecast, which may be caused by factors within and outside of our control, or if there were a higher incidence of inventory obsolescence because of rapidly changing technology and our customer requirements, we may be required to increase our inventory writedowns. A change in our estimates could have a significant impact on the value of our inventory and our results of operations.

Results of Operations

The results of operations presented below should be reviewed in conjunction with the consolidated financial statements and notes included elsewhere in this Quarterly Report on Form 10-Q. The following table sets forth our consolidated results of operations data for the periods presented (in thousands):

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2022	2021	2022	2021
Revenue:				
Product[1]	$ 7,442	$ 11,782	$ 21,456	$ 34,345
License and services	2,199	1,278	5,872	10,037
Total revenue	9,641	13,060	27,328	44,382
Cost of revenue:				
Product[2]	20,353	17,716	53,896	52,555
License and services	165	84	689	433
Total cost of revenue[2]	20,518	17,800	54,585	52,988
Gross loss	(10,877)	(4,740)	(27,257)	(8,606)
Operating expenses[2]:				
Research and Development	16,918	20,221	56,972	55,608
Sales and Marketing	4,878	6,547	16,223	60,798
General and administrative	9,583	23,271	35,330	59,440
Total operating expenses	31,379	50,039	108,525	175,846
Operating loss	(42,256)	(54,779)	(135,782)	(184,452)
Interest income	732	109	1,253	321
Interest expense	—	(6)	(3)	(83)
Other income (expense), net	2	(22)	(104)	10,097
Loss before income taxes	(41,522)	(54,698)	(134,636)	(174,117)
Provision for income taxes	41	14	347	649
Net loss	$ (41,563)	$ (54,712)	$ (134,983)	$ (174,766)

The following table sets forth the components of our consolidated statements of operations data as a percentage of total revenue for the periods presented (the table may not foot due to rounding difference):

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2022	2021	2022	2021
Revenue:				
Product[(1)]	77 %	90 %	79 %	77 %
License and services	23	10	21	23
Total revenue	100	100	100	100
Cost of revenue:				
Product[(2)]	211	136	197	118
License and services	2	1	3	1
Total cost of revenue[(2)]	213	136	200	119
Gross loss	(113)	(36)	(100)	(19)
Operating expenses:[(2)]				
Research and Development	175	155	208	125
Sales and Marketing	51	50	59	137
General and administrative	99	178	129	134
Gain on sale of assets held-for-sale	—	—	—	—
Total operating expenses	325	383	397	396
Operating loss	(438)	(419)	(497)	(416)
Interest income	8	1	5	1
Interest expense	—	—	—	—
Other income (expense), net	—	—	—	23
Loss before income taxes	(430)	(419)	(493)	(392)
Provision for income taxes	—	—	1	1
Net loss	(430)%	(419)%	(494)%	(393)%

(1) Includes non-cash reductions of revenue of $2.8 million and $9.1 million, respectively, for the three and nine months ended September 30, 2022 associated with the Amazon Warrant agreement entered into in February 2022. See Note 9 to our Condensed Consolidated Financial Statements for more information.

(2) Includes stock-based compensation expense as follows (in thousands):

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2022	2021	2022	2021
Cost of revenue	$ 561	$ 541	$ 1,841	$ 1,508
Research and development	2,336	2,794	7,523	10,458
Sales and marketing	366	1,177	2,225	44,779
General and administrative	1,646	12,135	4,566	24,637
Total stock-based compensation expense	$ 4,909	$ 16,647	$ 16,155	$ 81,382

Prior to the Business Combination, compensation expense related to RSAs and RSUs granted under the pre-combination Velodyne's stock incentive plans remained unrecognized because the performance vesting condition, which is (i) an initial public offering, or (ii) a Company sale event, was not probable of being met. In connection with the Business Combination, the Board waived the liquidity event vesting condition applicable to the pre-combination Velodyne's RSUs and RSAs on October 30, 2020 and May 18, 2021, respectively. As such, the outstanding RSUs and RSAs vested to the extent the applicable service condition was satisfied as of such dates. The vesting of the RSAs resulted in approximately $45.1 million of incremental stock-based compensation expense in the second quarter of 2021.

Comparison of the Three and Nine Months Ended September 30, 2022 and 2021

Revenue

The majority of our revenue comes from the sale of our lidar sensors directly to end users and through our network of U.S. and international distributors. Product revenue is recognized when control of the products is transferred to the customer, which is generally upon shipment. For custom products that require engineering and development based on customer requirements, revenue is recognized over time using an output method based on units of product shipped to date relative to total production units under the contract.

Our customers in the pre-commercial development phase may have purchased their requirements of our products in earlier periods and are not expected to begin purchasing again in volume unless and until they reach commercial deployments. As our target markets reach commercialization, we expect there to be a shift towards higher unit volume at lower per-unit prices, with more predictable customer demand.

We also generate a portion of our revenue from intellectual property licensing, royalties and the sale of services related to product development, validation, extended warranty and product repair services. License revenue is recognized upon delivery of the intellectual property if there are no substantive future obligations to perform under the arrangement. Royalties are recognized at the later of the period the sales occur or the satisfaction of the performance obligation to which some or all of the royalties have been allocated. As our manufacturing partners to whom we have licensed our technology start selling to customers, we expect royalty revenue to increase. Service revenue is recognized as the services are performed.

	Three Months Ended September 30,			
($ in thousands)	**2022**	**2021**	**$ Change**	**% Change**
Revenue:				
Products	$ 7,442	$ 11,782	$ (4,340)	(37)%
License and services	2,199	1,278	921	72
Total	$ 9,641	$ 13,060	$ (3,419)	(26)
Revenue by geographic location:				
North America	$ 1,992	$ 5,526	$ (3,534)	(64)%
Asia and Pacific	4,062	3,813	249	7
Europe, Middle East and Africa	3,587	3,721	(134)	(4)
Total	$ 9,641	$ 13,060	$ (3,419)	(26)

	Nine Months Ended September 30,			
($ in thousands)	**2022**	**2021**	**$ Change**	**% Change**
Revenue:				
Products	$ 21,456	$ 34,345	$ (12,889)	(38)%
License and services	5,872	10,037	(4,165)	(41)
Total	$ 27,328	$ 44,382	$ (17,054)	(38)
Revenue by geographic location:				
North America	$ 4,980	$ 15,841	$ (10,861)	(69)%
Asia and Pacific	12,613	18,574	(5,961)	(32)
Europe, Middle East and Africa	9,735	9,967	(232)	(2)
Total	$ 27,328	$ 44,382	$ (17,054)	(38)

Product Revenue

Product revenue decreased by $4.3 million, or 37%, for the three months ended September 30, 2022 compared to the same period in 2021. The decrease in product revenue reflected a $2.8 million non-cash contra revenue associated with our warrant agreement with Amazon and a decrease in the sales volume of our established products due primarily to supply chain constraints, partially offset by increases in the average selling price for lidar sensors sold. We expect these supply chain constraints to persist for the next several quarters.

Product revenue decreased by $12.9 million, or 38%, for the nine months ended September 30, 2022 compared to the same period in 2021. The decrease in product revenue reflected a $9.1 million non-cash contra revenue associated with our warrant agreement with Amazon and a decrease in the sales volume of our established products due primarily to supply chain constraints, partially offset by increases in the average selling price for lidar sensors sold.

License and Services Revenue

License and services revenue increased by $0.9 million, or 72%, for the three months ended September 30, 2022 compared to the same period in 2021.

License and services revenue decreased by $4.2 million, or 41%, for the nine months ended September 30, 2022 compared to the same period in 2021, primarily due to a reduction in license revenues associated with our patent cross license agreements.

Revenue by Geographic Location

Our North America revenue decreased by $3.5 million and $10.9 million, respectively, for the three and nine months ended September 30, 2022 compared to the same periods in 2021. The decreases were due primarily to non-cash contra revenue of $2.8 million for the three months ended September 30, 2022, associated with our warrant agreement with Amazon, and supply chain constraints. The decrease in our North America revenue for the nine months ended September 30, 2022 was primarily due to non-cash contra revenue of $9.1 million, associated with our warrant agreement with Amazon and supply chain constraints.

Our Asia-Pacific revenue increased by $0.2 million and decreased by $6.0 million, respectively, for the three and nine months ended September 30, 2022 compared to the same periods in 2021. The decrease in our Asia-Pacific revenue for the nine months ended September 30, 2022 was due to a $4.7 million decrease in license revenue from our patent cross license agreements and a reduction in the sales volume of our established products due primarily to supply chain constraints, partially offset by increases in average selling price for our lidar sensors sold.

Our Europe, Middle East and Africa revenue decreased by $0.1 million and $0.2 million for the three and nine months ended September 30, 2022 compared to the same period in 2021.

Cost of Revenue and Gross Margin

Cost of revenue includes the manufacturing cost of our lidar sensors, which primarily consists of personnel-related costs directly associated with our manufacturing organization and amounts paid to our third-party contract manufacturers and vendors. Our cost of revenue also includes depreciation, cost of component inventory, product testing costs, outside services, an allocated portion of overhead, facility and IT costs, warranty costs, excess and obsolete inventory and shipping costs. We are transitioning to outsourcing our production to contract manufacturing partners with the objective of reducing manufacturing labor and overhead costs and the per unit cost of goods sold.

Our gross margin varies by product and depends on a variety of factors, including market conditions that may impact our pricing, including our desire to broaden customer adoption of lidar across multiple industries and markets; product mix changes between established products and new products and licenses; excess and obsolete inventories; our cost structure for manufacturing operations, including supply constraints for certain components, third-party manufacturers, relative to volume; and product support obligations. We are transitioning to an outsourced manufacturing model and believe that the use of third-party manufacturers will favorably impact our gross margin over time. But in the near term, while we are beginning manufacturing with new partners and consolidating our contract manufacturing, we may incur increased costs that result in lower gross margin.

Our license revenue has lower cost, and therefore it contributes to higher gross margin. We expect our gross margins to fluctuate over time, depending on the factors described above.

($ in thousands)	Three Months Ended September 30, 2022	2021	$ Change	% Change
Cost of revenue:				
Product	$ 20,353	$ 17,716	$ 2,637	15 %
License and services	165	84	81	96
Total cost of revenue	$ 20,518	$ 17,800	$ 2,718	15
Gross margin	(113)%	(36)%		

($ in thousands)	Nine Months Ended September 30, 2022	2021	$ Change	% Change
Cost of revenue:				
Product	$ 53,896	$ 52,555	$ 1,341	3 %
License and services	689	433	256	59
Total cost of revenue	$ 54,585	$ 52,988	$ 1,597	3
Gross margin	(100)%	(19)%		

Cost of product revenue increased by $2.6 million, or 15%, for the three months ended September 30, 2022 compared to the same period in 2021. The product cost increase was primarily driven by a $4.6 million one-time charge related to a excess inventory reserve and losses on product transition, $2.5 million of termination of contract manufacturer fees and $2.0 million cost increase resulting from component price increases driven by supply constraints, offset by a decrease of $3.6 million cost related to volume and mix of units sold, $2.1 million in warranty reserve, and $0.8 million in other cost reduction.

Cost of product revenue increased by $1.3 million, or 3%, for the nine months ended September 30, 2022 compared to the same period in 2021. The product cost increase was primarily driven by a $8.4 million cost increase resulting from component price increases driven by supply constraints, $6.8 million one-time charge related to a discontinued product line, excess inventory reserve and losses on product transition, and $2.5 million of termination of contract manufacturer fees, partially offset by a decrease of $9.3 million in cost due to decreased product sales volume, $6.0 million of reduction in manufacturing cost, $1.1 million in related to reduction in warranty reserve.

Gross margin decreased to (113)% and (100)%, respectively, for the three and nine months ended September 30, 2022 from (36)% and (19)%, respectively, for the same periods of 2021. The decreases primarily reflected the timing of high margin license revenues, the impact of the contra revenue associated with the Amazon warrant agreement, a one-time charge related to a discontinued product line, and component price increases as a result of supply constraints, partially offset by increased average selling price of our lidar sensors sold. We expect higher component costs as a result of supply constraints to impact margins at least through the fourth quarter of 2022.

Operating Expenses

Our research and development expenses consist primarily of personnel-related costs directly associated with our research and development organization, prototype expenses, third-party engineering and contractor costs, an allocated portion of facility and IT costs and depreciation. Our research and development efforts are focused on enhancing and developing additional functionality for our existing products and on new product development, including new releases and upgrades to our lidar sensors.

Our sales and marketing expenses consist primarily of personnel-related costs directly associated with our sales and marketing organization, sales commissions, marketing programs, trade shows, consulting services, promotional materials, demonstration equipment, an allocated portion of facility and IT costs and depreciation.

Our general and administrative expenses primarily consist of personnel-related expenses associated with our general and administrative organization, professional fees for legal, accounting, and other consulting services, public company related expenses, insurances, an allocated portion of facility and IT costs and depreciation.

($ in thousands)	Three Months Ended September 30, 2022	2021	$ Change	% Change
Operating Expenses:				
Research and development	$ 16,918	$ 20,221	$ (3,303)	(16)%
Sales and marketing	4,878	6,547	(1,669)	(25)
General and administrative	9,583	23,271	(13,688)	(59)
Total operating expenses	$ 31,379	$ 50,039	$ (18,660)	(37)

($ in thousands)	Nine Months Ended September 30, 2022	2021	$ Change	% Change
Operating Expenses:				
Research and development	$ 56,972	$ 55,608	$ 1,364	2 %
Sales and marketing	16,223	60,798	(44,575)	(73)
General and administrative	35,330	59,440	(24,110)	(41)
Total operating expenses	$ 108,525	$ 175,846	$ (67,321)	(38)

Research and Development

Research and development expenses decreased by $3.3 million, or 16%, for the three months ended September 30, 2022 compared to the same period in 2021. The decrease was primarily due to a decrease of $3.4 million in program spend on discontinued product line and $0.6 million in stock-based compensation expense and personnel related costs, partially offset by an increase of $0.7 million in outside services.

Research and development expenses increased by $1.4 million, or 2%, for the nine months ended September 30, 2022 compared to the same period in 2021. The increase was primarily due to increases of $2.4 million in allocated facility and IT expenses and $1.0 million of other services and expenses, $0.7 million in stock-based compensation expense and personnel related costs, partially offset by a decrease of $2.8 million in prototype expenses.

Sales and Marketing

Sales and marketing expenses decreased by $1.7 million, or 25%, for the three months ended September 30, 2022 compared to the same period in 2021. The decrease was primarily attributable to decreases of $0.7 million of trade show and travel expenses, $0.6 million in stock-based compensation expense and personnel related costs, and $0.4 million in outside services.

Sales and marketing expenses decreased by $44.6 million, or 73%, for the nine months ended September 30, 2022 compared to the same period in 2021. The decrease was primarily attributable to decreases of $42.6 million in stock-based compensation expense, $0.6 million in personnel related costs, $0.8 million in outside services and $0.6 million in trade show and travel expenses.

General and Administrative

General and administrative expenses decreased by $13.7 million, or 59%, for the three months ended September 30, 2022 compared to the same period in 2021. The decrease was primarily attributable to decreases of $10.5 million in stock-based compensation expense, $1.9 million in personnel related costs, $1.4 million in legal and professional fees and $0.7 million in outside services, partially offset by an increase of $0.8 million in insurance expense.

General and administrative expenses decreased by $24.1 million, or 41%, for the nine months ended September 30, 2022 compared to the same period in 2021. The decrease was primarily attributable to decreases of $20.1 million in stock-based compensation expense, $2.8 million in legal and professional fees, $2.3 million in bad debt reserves, $1.5 million in allocated facility and IT expenses and $1.0 million in personnel related costs, partially offset by an increase of $2.2 million in insurance expense, $0.8 million in property tax and $0.6 million in outside services and supplies.

Interest Income, Interest Expense and Other Income (Expense), Net

Interest income consists primarily of income earned on our cash equivalents and investments in marketable securities. These amounts will vary based on our cash, cash equivalents and short-term investment balances, and also with market rates. Interest expense consists primarily of interest on our equipment financing leases and credit facility.

Other income (expense), net includes exchange gain or loss resulting from foreign currency exchange rate fluctuations.

	Three Months Ended September 30,			
($ in thousands)	2022	2021	$ Change	% Change
Interest income	$ 732	$ 109	$ 623	572 %
Interest expense	—	(6)	6	(100)
Other income (expense), net	2	(22)	24	(109)

	Nine Months Ended September 30,			
($ in thousands)	2022	2021	$ Change	% Change
Interest income	$ 1,253	$ 321	$ 932	290 %
Interest expense	(3)	(83)	80	(96)
Other income (expense), net	(104)	10,097	(10,201)	(101)

Interest income increased for the three and nine months ended September 30, 2022 compared to the same period in 2021 primarily due to higher interest rates on our cash equivalent and short-term investment balances in 2022.

Interest expense was primarily related to our finance leases and was insignificant for all periods presented.

Other income (expense), net for the nine months ended September 30, 2021 was primarily related to the $10.1 million gain from forgiveness of our PPP loan and related interest under the CARES Act. Other changes were primarily related to foreign exchange gain or loss resulting from foreign currency exchange rate fluctuations during the three and nine months ended September 30, 2022 and 2021.

Income Taxes

Our provision for income taxes consists of federal, state and foreign current and deferred income taxes. As we expand the scale and scope of our international business activities, any changes in the United States and foreign taxation of such activities may increase our overall provision for income taxes in the future.

We have a full valuation allowance for our net deferred tax assets, including federal and state net operating loss carryforwards and research and development credit carryforwards. We expect to maintain this valuation allowance until it becomes more likely than not that the benefit of our federal and state deferred tax assets will be realized by way of expected future taxable income.

We believe that we have adequately reserved for our uncertain tax positions, although we can provide no assurance that the final outcome of these matters will not be materially different. To the extent that the final outcome of these matters is different than the amounts recorded, such differences will affect the provision for income taxes in the period in which such determination is made and could have a material impact on our financial condition and results of operations.

($ in thousands)	Three Months Ended September 30, 2022	2021	$ Change	% Change
Income Taxes:				
Loss before income taxes	$ (41,522)	$ (54,698)	$ 13,176	(24)%
Provision for income taxes	41	14	27	193
Effective tax rate	(0.1)%	— %		

($ in thousands)	Nine Months Ended September 30, 2022	2021	$ Change	% Change
Income Taxes:				
Loss before income taxes	$ (134,636)	$ (174,117)	$ 39,481	(23)%
Provision for income taxes	347	649	(302)	(47)
Effective tax rate	(0.3)%	(0.4)%		

We are subject to income taxes in the United States, China, Germany and India. The changes in income taxes for the three and nine months ended September 30, 2022 compared to the same periods in 2021 were primarily due to a combination of permanent tax items, mainly related to the valuation allowance recorded on U.S. deferred tax assets, foreign withholding taxes and state taxes.

The Inflation Reduction Act of 2022 (the “IRA”) was enacted into U.S. law on August 16, 2022. The IRA includes various tax provisions, including an excise tax on stock repurchases, expanded tax credits for clean energy incentives, and a 15 percent corporate alternative minimum tax on profits that generally applies to U.S. corporations with average adjusted financial statement income over a three year period in excess of $1.0 billion. The Company is currently in the process of evaluating the provisions of the IRA, but does not expect the IRA to materially impact its financial statements.

Liquidity and Capital Resources

Sources of Liquidity

As of September 30, 2022, we had cash, cash equivalents and short-term investments totaling $220.1 million, which were held for working capital purposes. Our cash equivalents and short-term investments are comprised of money market funds, U.S. government and agency securities, corporate debt securities and commercial paper. To date, our principal sources of liquidity have been payments received from sales to customers and the net proceeds we received through the completion of the Business Combination and issuances of stock. As of September 30, 2022, we had received an aggregate of $225.5 million in net proceeds from the Business Combination and the related private placement pursuant to subscription agreements with certain investors, or PIPE offering, and an aggregate of $163.0 million in net proceeds from the exercises of our public warrants.

On June 15, 2022, we entered into an ATM Agreement with Oppenheimer, pursuant to which, from time to time, we may raise up to $100 million by selling shares of our common stock. Oppenheimer will use commercially reasonable efforts consistent with its normal trading and sales practices to sell the shares from time to time, based upon our instructions, and is entitled to a commission at a rate equal to 2.5% of the gross price of any ATM Shares sold. Net proceeds from the sale of ATM Shares will be used for our general corporate purposes. For the nine months ended September 30, 2022, we received net proceeds of approximately $25.9 million (after deducting $1.3 million in commissions and expenses) from sales of 23,378,308 ATM Shares pursuant to the ATM Agreement.

We have a loan and security agreement with a financial institution that expires on February 24, 2023. The credit agreement, which was entered into in September 2020 and last amended in February 2022, provides a $25.0 million revolving line of credit, with a $5.0 million letter of credit sublimit. The advances under the credit facility bear interest at a rate per annum equal to the prime rate plus an applicable margin of 1.5% for prime rate advances, or the SOFR rate plus an applicable margin of 2.5% for SOFR advances. The revolving line of credit is secured by certain assets of the Company. As of September 30, 2022, there were no amounts outstanding under this credit facility and we were in compliance with all associated covenants in the agreement. Also as of September 30, 2022, the credit facility had $3.6 million available for borrowing.

We have incurred negative cash flows from operating activities and significant losses from operations in the past as reflected in our accumulated deficit of $661.3 million as of September 30, 2022. We expect to continue to incur operating losses at least for the next 12 months and may require additional capital resources to grow our business. We believe that current cash, cash equivalents, short-term investments and available borrowing capacity under the revolving credit facility will be sufficient to fund our operations, including capital expenditures and purchase commitments, for at least the next 12 months. For additional information regarding our cash requirements from lease obligations and contractual obligations, see Note 6. “Leases” and Note 14. “Commitments and Contingencies” in the Notes to the Condensed Consolidated Financial Statements in this Quarterly Report on Form 10-Q.

Our future capital requirements, however, will depend on many factors, including our lidar sales volume, the timing and extent of spending to support our research and development efforts in smart vision technology, the expansion of sales and marketing activities, and market adoption of new and enhanced products and features. We may in the future enter into arrangements to acquire or invest in complementary businesses, services, and technologies, including intellectual property rights. From time to time, we may seek to raise additional funds through equity and debt. If we are unable to raise additional capital when desired and on reasonable terms, our business, results of operations, and financial condition may be adversely affected.

Cash Flow Summary

The following table summarizes our cash flows for the periods presented:

	Nine Months Ended September 30,	
	2022	2021
	(In thousands)	
Net cash provided by (used in):		
Operating activities	$ (95,679)	$ (90,236)
Investing activities	98,020	(126,490)
Financing activities	25,267	69,228

Operating Activities

During the nine months ended September 30, 2022, operating activities used $95.7 million in cash. The primary factors affecting our operating cash flows during this period were our net loss of $135.0 million, impacted by our non-cash net adjustments of $33.7 million primarily consisting of stock-based compensation of $16.2 million, provision for common stock warrants issued to a customer of $9.1 million, depreciation and amortization of $6.1 million, reduction in carrying amount of the ROU assets of $2.1 million and net amortization of investment premium or discount of $0.4 million. The cash used in changes in our operating assets and liabilities of $8.7 million was primarily due to a decrease of $3.8 million in contract liabilities due to the timing of billings and cash received in advance of revenue, an increase of $2.2 million in inventory primarily due to increases in inventory purchases, a decrease in operating lease liabilities of $2.1 million and a decrease of $0.6 million in accrued expenses and other liabilities due to timing of payments. These amounts were partially offset by cash provided from changes in our operating assets and liabilities of $14.3 million which primarily consists of a decrease of $8.0 million in prepaid expenses, a decrease of $3.3 million in contract assets and an increase of $0.3 million in accounts payable.

During the nine months ended September 30, 2021, operating activities used $90.2 million in cash. The primary factors affecting our operating cash flows during this period were our net loss of $174.8 million, impacted by our non-cash charges of $82.9 million primarily consisting of stock-based compensation of $81.4 million, depreciation and amortization of $6.2 million, provision for doubtful accounts of $2.1 million, reduction in carrying amount of the ROU assets of $2.3 million, gain on extinguishment of PPP loan of $10.1 million and accretion on short-term investments of $1.1 million. The cash used in changes in our operating assets and liabilities of $9.6 million was primarily due to an increase of $2.2 million in contract assets, a decrease of $3.4 million in accounts payable and a decrease of $2.3 million in accrued expenses and other liabilities due to timing of payments, and a decrease of $1.7 million in contract liabilities due to the timing of billings and cash received in advance of revenue. These amounts were partially offset by cash provided from changes in our operating assets and liabilities of $11.3 million which primarily consists of a decrease of $2.9 million in prepaid expenses, a decrease of $6.3 million in inventory primarily due to timing of inventories received and increased sales volume of certain products, and a decrease of $2.1 million in accounts receivable due to the timing of billings and cash received.

Investing Activities

During the nine months ended September 30, 2022, cash from investing activities was $98.0 million, which consisted primarily of $211.8 million proceeds from sales and maturities of short-term investments, partially offset by cash used to purchase short-term investments of $110.9 million and property, plant and equipment of $2.9 million.

During the nine months ended September 30, 2021, cash used in investing activities was $126.5 million, which was primarily used to purchase short-term investments of $250.0 million, purchase property, plant and equipment of $3.2 million and invest in notes receivable of $0.8 million, partially offset by proceeds from sales and maturities of short-term investments of $127.4 million.

Financing Activities

During the nine months ended September 30, 2022, cash flow provided by financing activities was $25.3 million, which consisted primarily of net proceeds of $26.0 million and $0.8 million, respectively, from sales of our common stock under the ATM offering and ESPP and a $1.5 million payment of transaction costs related to the Business Combination.

During the nine months ended September 30, 2021, cash provided by financing activities was $69.2 million, consisting primarily of net proceeds of $89.3 million from exercises of public warrants, partially offset by $20.0 million cash paid for transaction costs related to the Business Combination.

Item 3. Quantitative and Qualitative Disclosures About Market Risk

We are exposed to market risks in the ordinary course of our business. 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 the result of fluctuations in interest rates and foreign currency exchange rates.

We do not believe that inflation has had a material effect on our business, results of operations or financial condition. Nonetheless, if our costs were to become subject to significant inflationary pressures, we may not be able to fully offset such higher costs. Our inability or failure to do so could harm our business, results of operations or financial condition.

Interest Rate Risk

As of September 30, 2022, we had cash, cash equivalents and short-term investments of approximately $220.1 million, which are comprised of money market funds, corporate debt securities and commercial paper, which carries a degree of interest rate risk. A hypothetical 10% change in interest rates would not have a material impact on our financial condition or results of operations due to the short-term nature of our investment portfolio.

Foreign Currency Exchange Risk

Our results of operations and cash flows are subject to fluctuations due to changes in foreign currency exchange rates. Substantially all of our revenue is generated in U.S. dollars. Our expenses are generally denominated in the currencies of the jurisdictions in which we conduct our operations, which are primarily in the U.S. and to a lesser extent in Asia and Europe. Our results of operations and cash flows are, therefore, subject to fluctuations due to changes in foreign currency exchange rates and may be adversely affected in the future due to changes in foreign exchange rates. The effect of a hypothetical 10% change in foreign currency exchange rates applicable to our business would not have a material impact on our historical consolidated financial statements. To date, we have not engaged in any hedging strategies. As our international operations grow, we will continue to reassess our approach to manage our risk relating to fluctuations in currency rates.

Item 4. Controls and Procedures

Evaluation of Disclosure Controls and Procedures

Our management, with the participation of our Chief Executive Officer and our Chief Financial Officer, has evaluated the effectiveness of the design and operation of our disclosure controls and procedures pursuant to Rule 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended (the "Exchange Act"), as of the end of the period covered by this Quarterly Report on Form 10-Q.

Based on this evaluation, our management concluded that, as of September 30, 2022, our disclosure controls and procedures are effective 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 the Securities and Exchange Commission's rules and forms, and that such information is accumulated and communicated to our management, including our Chief Executive Officer and Chief Financial Officer, as appropriate, to allow timely decisions regarding required disclosure.

Changes in Internal Control over Financial Reporting

There have been no changes in our internal control over financial reporting identified in connection with the evaluation required by Rule 13a-15(d) and 15d-15(d) of the Exchange Act that occurred during the three months ended September 30, 2022, that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

Limitations on Effectiveness of Controls and Procedures

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. In addition, the design of disclosure controls and procedures must reflect the fact that there are resource constraints and that management is required to apply its judgment in evaluating the benefits of possible controls and procedures relative to their costs.

PART II. Other Information

Item 1. Legal Proceedings

The information set forth under the "Legal Proceedings" section in Note 14, Commitments and Contingencies, in Notes to Condensed Consolidated Financial Statements in Item 1 of Part I of this Report, is incorporated herein by reference.

Item 1A. Risk Factors

You should carefully consider the risks described below in addition to the other information set forth in this Quarterly Report on Form 10-Q, including Item 2: Management's Discussion and Analysis of Financial Conditions and Results of Operations section and the consolidated financial statements and related notes. Our business, prospects, financial condition, operating results or the trading price of our securities could be harmed by any of these risks, as well as other risks not known to us or that we consider immaterial.

Summary of Principal Risk Factors

- We face risks related to our proposed acquisition by Ouster, Inc., including the possibility that the merger agreement will be terminated prior to the completion of the acquisition, diversion of management's attention, disruption of our relationships with third parties and employees, restrictions on our business activities and potential litigation related to the mergers.
- Since many of the markets in which we compete are new and rapidly evolving, it is difficult to forecast long-term end-customer adoption rates and demand for our products.
- We depend on our ability to attract and retain key management and technical personnel.
- Our products must meet demanding technical and quality specifications.
- Our transition to an outsourced manufacturing business model may not be successful, which could harm our ability to deliver products and recognize revenue.
- Current supply chain constraints, including in the semiconductor market, could adversely affect our growth, increase costs, and adversely affect our financial results.
- We continue to implement strategic initiatives designed to grow our business. These initiatives may prove more costly than anticipated and we may not succeed in increasing our revenue in an amount sufficient to offset the costs of these initiatives and to achieve and maintain profitability.
- Our business could be materially and adversely affected by the current global COVID-19 pandemic.
- Because our sales have been primarily to customers making purchases for research and development projects and our orders are project-based, we expect our results of operations to fluctuate on a quarterly and annual basis, which could cause our stock price to fluctuate or decline.
- Adverse conditions in the automotive industry or the global economy more generally could have adverse effects on our results of operations.
- Although we believe that lidar is the industry standard for autonomous vehicles and other emerging markets, market adoption of lidar is uncertain. If market adoption of lidar does not continue to develop, or develops more slowly than we expect, our business will be adversely affected.
- Our investments in educating our customers and potential customers about the advantages of lidar and our applications may not result in sales of our products.

- Despite the actions we are taking to defend and protect our intellectual property, we may not be able to adequately protect or enforce our intellectual property rights or prevent unauthorized parties from copying or reverse engineering our solutions. Our efforts to protect and enforce our intellectual property rights and prevent third parties from violating our rights may be costly.

- The failure to maintain effective internal control over financial reporting could harm our business and negatively impact the market price of our common stock.

Risks Related to Our Proposed Acquisition by Ouster

Our proposed acquisition may be delayed or not occur at all for a variety of reasons, including the possibility that the Merger Agreement is terminated prior to the consummation of the acquisition, which could result in a termination fee being payable by us.

On November 4, 2022, the Company, Ouster, Inc. ("Ouster"), Oban Merger Sub, Inc., a Delaware corporation and a direct, wholly owned subsidiary of Ouster ("Merger Sub I"), and Oban Merger Sub II LLC, a Delaware limited liability company and a direct, wholly owned subsidiary of Ouster ("Merger Sub II"), entered into an Agreement and Plan of Merger (the "Merger Agreement"). Pursuant to the Merger Agreement, and subject to the satisfaction or waiver of the conditions specified therein, Merger Sub I will be merged with and into Velodyne (the "First Merger"), with Velodyne surviving the First Merger as a direct, wholly owned subsidiary of Ouster (the "Surviving Corporation"), and as soon as practicable following the First Merger, the Surviving Corporation will be merged with and into Merger Sub II with Merger Sub II surviving as a direct, wholly owned subsidiary of Ouster (the "Second Merger", and together with the First Merger, the "Mergers"). Upon the consummation of the First Merger, each share of the Company's common stock issued and outstanding immediately prior to the effective time of the First Merger will be converted into and represent the right to receive 0.8204 validly issued, fully paid and non-assessable shares of Ouster common stock, par value $0.0001 per share. Consummation of the Mergers is subject to customary closing conditions, including, among others, the approval by the Company's stockholders of the Merger, approval by Ouster's stockholders of the issuance of shares of Ouster common stock in connection with the First Merger, and certain regulatory approvals.

Completion of the Mergers is subject to customary closing conditions, including (i) the absence of certain legal impediments, (ii) the expiration or termination of the required waiting periods under the Hart-Scott-Rodino Antitrust Improvements Act of 1976, as amended (if applicable), (iii) the effectiveness of a registration statement on Form S-4 registering the shares of Ouster common stock to be issued in connection with the Mergers, (iv) the receipt of requisite stockholder approvals, (v) the shares of Ouster common stock issuable to the stockholders of the Company in connection with the First Merger being approved for listing on the New York Stock Exchange, and (vi) the receipt by each party of a closing tax opinion. Many of the conditions to completion of the Mergers are not within either our or Ouster's control, and we cannot predict when or if these conditions will be satisfied (or waived, as applicable). The Merger Agreement contains customary mutual termination rights for us and Ouster, including if the Merger is not completed by May 4, 2023 (subject to automatic extension to August 3, 2023 to the extent the regulatory closing conditions remain outstanding).

The Merger Agreement also contains customary termination rights for the benefit of each party, including (i) if the board of directors of the other party changes its recommendation, (ii) if the board of directors of the other party authorizes entry into a definitive agreement relating to a superior proposal, and (iii) if the other party breaches its representations, warranties or covenants under the Merger Agreement in a way that would result in a failure of the other party's condition to closing being satisfied (subject to certain procedures and cure periods).

In light of the foregoing, the Mergers may not be completed or may not be completed as quickly as expected.

Failure to complete the Mergers could adversely affect our business and the market price of our common stock in a number of ways, including:

- the market price of our common stock may decline to the extent that the current market price reflects an assumption that the Mergers will be consummated;

- if the Merger Agreement is terminated under certain circumstances specified in the Merger Agreement (including termination by us to accept a superior proposal), we would be required to pay Ouster a termination fee of $7.0 million;

- The customer sales process (including design wins) may be disrupted by customer and sales person uncertainty over when or if the merger will be consummated;

- Our customers and suppliers may seek to modify or terminate existing agreements, or prospective customers may delay entering into new agreements or purchasing our products as a result of the announcement of the merger;

- some costs related to the Mergers must be paid whether or not the Mergers are completed, and we have incurred, and will continue to incur, significant costs, expenses and fees for professional services and other transaction costs in connection with the proposed transaction, as well as the diversion of management's attention and other resources towards the Mergers, for which we will have received little or no benefit if completion of the Mergers does not occur; and

- failure to consummate the Mergers may result in negative publicity and/or give a negative impression of us in the investment community or business community generally.

The announcement and pendency of the Mergers may result in disruptions to our business, and the Mergers could divert management's attention, disrupt our relationships with third parties and employees and result in negative publicity or legal proceedings, any of which could negatively impact our operating results and ongoing business.

We have expended, and continue to expend, significant management time and resources in an effort to complete the Mergers, which may have a negative impact on our ongoing business. Uncertainty regarding the outcome of the Mergers and our future could disrupt our business relationships with our existing and potential customers, suppliers, vendors, landlords and other business partners, who may attempt to negotiate changes in existing business relationships or consider entering into business relationships with parties other than us. Uncertainty regarding the outcome of the Mergers could also adversely affect our ability to recruit and retain key personnel and other employees. The pendency of the Mergers may also result in negative publicity and a negative impression of us in the financial markets, and may result in potential litigation against us and our directors and officers. Such litigation may be distracting to management, may require us to incur significant costs and could result in the Mergers being delayed and/or enjoined by a court of competent jurisdiction, which could prevent the Mergers from becoming effective. The pursuit of the Mergers may place a significant burden on management and internal resources, which may have a negative impact on our ongoing business. It may divert management's time and attention from the day to day operations of our business and ethe execution of our other strategic initiatives, which could adversely affect our financial results. The occurrence of any of these events individually or in combination could have a material and adverse effect on our business, financial condition and results of operations.

While the Merger Agreement is in effect, we are subject to certain interim covenants regarding the operation of our business.

The Merger Agreement generally requires us to operate our business in the ordinary course, subject to certain exceptions, including as required by applicable law, pending consummation of the First Merger. The Merger Agreement also subjects us to customary interim operating covenants that restrict us, without Ouster's approval (such approval not to be unreasonably conditioned, withheld or delayed), from taking certain specified actions pending the consummation of the First Merger or the Merger Agreement is terminated in accordance with its terms. These restrictions could prevent us from pursuing certain business opportunities that may arise prior to the consummation of the First Merger and may affect our ability to execute our business strategies and attain financial and other goals and may impact our financial condition.

After the First Merger, our stockholders will have a significantly lower ownership and voting interest in Ouster than they currently have in the Company and will exercise less influence over management of Ouster.

The Company and Ouster estimate that, as of immediately following completion of the First Merger, holders of Company common stock immediately prior to the completion of the First Merger will hold approximately 50% of the combined company. Consequently, former Company stockholders will have less influence over the management and policies of Ouster than they currently have over the management and policies of the Company.

After completion of the Mergers, the combined company may fail to realize the anticipated benefits and cost savings of the Mergers, which could adversely affect the value of the combined company's common stock.

The success of the Mergers will depend, in part, on Ouster's ability to realize the anticipated benefits and cost savings from combining the businesses of Ouster and the Company. The anticipated benefits and cost savings of the Mergers may not be realized fully or at all, may take longer to realize than expected or could have other adverse effects that we do not currently foresee. The integration process may, for us and Ouster, result in the loss of key employees, the disruption of ongoing businesses or inconsistencies in standards, controls, procedures and policies. There could be potential unknown liabilities and unforeseen expenses associated with the Mergers that were not discovered in the course of performing due diligence.

Additionally, the integration will require significant time and focus from management following the acquisition which may disrupt the business and operations of the combined company.

Risks Related to Our Business

Since many of the markets in which we compete are new and rapidly evolving, it is difficult to forecast long-term end-customer adoption rates and demand for our products.

We are pursuing opportunities in markets that are undergoing rapid changes, including technological and regulatory changes, and it is difficult to predict the timing and size of the opportunities. For example, autonomous driving and lidar-based ADAS applications require complex technology and long lead times for development. Because these automotive systems depend on technology from many companies, commercialization of autonomous driving or ADAS products could be delayed or impaired on account of certain technological components of Velodyne or others not being ready to be deployed in vehicles. Although some companies have released systems and vehicles using our products, others may not be able to commercialize this technology in the near future, or at all. Regulatory, safety or reliability developments, many of which are outside of our control, could also cause delays or otherwise impair commercial adoption of these new technologies, which will adversely affect our growth. Our future financial performance will depend on our ability to make timely investments in the correct market opportunities. If one or more of these markets experience a shift in customer or prospective customer demand, our products may not compete as effectively, if at all, and they may not be designed into commercialized products. Given the evolving nature of the markets in which we operate, it is difficult to predict customer demand or adoption rates for our products or the future growth of the markets in which we operate. This also creates supply issues, as we have had difficulty meeting demand for certain products due to constrained manufacturing capacity. As a result, the financial projections we have made or may in the future make necessarily reflect various estimates and assumptions that may not prove accurate. If demand does not develop or if we cannot accurately forecast customer demand, the size of our markets, inventory requirements or our future financial results, our business, results of operations and financial condition will be adversely affected.

We depend on our ability to attract and retain key management and technical personnel.

For our business to be successful, we need to attract and retain highly qualified key management and technical personnel. Competition for highly-skilled personnel is often intense, especially in the San Francisco Bay Area where we are located, and we may incur significant costs to attract them.

We may not be successful in attracting, integrating, or retaining qualified personnel to fulfill our current or future needs. We also have, from time to time, experienced, and we expect to continue to experience, difficulty in hiring and retaining highly skilled employees with appropriate qualifications. In addition, job candidates and existing employees often consider the value of the equity awards they receive in connection with their employment. If the perceived value of our equity is not higher than other companies with which we compete for employees, it may adversely affect our ability to retain highly skilled employees. If we fail to attract new personnel or fail to retain and motivate our current personnel, our business and future growth prospects could be adversely affected.

We continue to implement strategic initiatives designed to grow our business. These initiatives may prove more costly than we currently anticipate and we may not succeed in increasing our revenue in an amount sufficient to offset the costs of these initiatives and to achieve and maintain profitability.

We continue to make investments and implement initiatives designed to grow our business, including:

- investing in research and development;
- expanding our sales and marketing efforts to attract new customers across industries;
- improving our manufacturing processes, including through partnerships with contract manufacturers;
- investing in new applications and markets for our products;
- pursuing litigation to protect our intellectual property; and
- investing in legal, accounting, and other administrative functions necessary to support our operations as a public company.

These initiatives may prove more expensive than we currently anticipate, and we may not succeed in increasing our revenue, if at all, in an amount sufficient to offset these higher expenses and to achieve and maintain profitability. Although we generated net income of $15.8 million for 2017, we have incurred net losses in the past, including net losses of $135.0 million for the nine months ended September 30, 2022, $212.2 million for 2021 and $149.9 million for 2020. The market opportunities we are pursuing are at an early stage of development, and it may be many years before the end markets we expect to serve generate demand for our products at scale, if at all. Our revenue may be adversely affected for a number of reasons, including the development and/or market acceptance of new technology that competes with our lidar products, if certain automotive OEMs or other market participants change their autonomous vehicle technology, failure of our customers to commercialize autonomous systems that include our smart vision solutions, our inability to effectively manage our inventory or manufacture products at scale, our inability to enter new markets or help our customers adapt our products for new applications or our failure to attract new customers or expand orders from existing customers or increasing competition. Furthermore, it is difficult to predict the size and growth rate of our target markets, customer demand for our products, commercialization timelines, developments in autonomous sensing and related technology, the entry of competitive products, or the success of existing competitive products and services. For these reasons, we do not expect to achieve profitability over the near term. If our revenue does not grow over the long term, our ability to achieve and maintain profitability may be adversely affected, and the value of our business may significantly decrease.

Current supply chain constraints, including in the semiconductor market, could adversely affect our growth, increase costs, and adversely affect our financial results.

We have been informed that certain field-programmable gate arrays, or FPGAs, and discrete components used in our products are being discontinued by the manufacturers. We also rely on third-party manufacturers to produce our custom ASICs. We have made considerable investments to develop our proprietary ASICs and our smart vision solutions depend on them. Other discrete components, especially those from the semiconductor sector, may continue to create supply chain challenges in the near term. While we are working with our third-party manufacturers to minimize the impact of shortages, we expect that these supply chain shortages will have a near-term impact on our ability to meet increased demand for certain products and have a negative impact on our operating results if we are not successful in locating alternate supplies, particularly for the discontinued FPGAs, or if the shortages continue. If third-party manufacturers of FPGAs or of our custom ASICs experience interruptions, delays, or disruptions in supplying these components or if there are work stoppages, production delays or facility closures due to the COVID-19 pandemic, our ability to ship our smart vision solutions will continue to be delayed and we may be unable to continue to meet customer demand.

Our products must meet demanding technical and quality specifications. Defects, errors or interoperability issues with our products, the failure of our products to operate as expected, or undue difficulty in deploying our products in actual operations could affect our reputation, result in significant costs to us and impair our ability to sell our products.

Our products must meet demanding customer specifications for quality, reliability and performance. Our customers may discover errors, defects or incompatibilities in our products, including after deploying them. We also may have difficulty identifying and correcting the problems when third parties are combining, incorporating or assembling our products.

If we are unable to fix errors or other problems, we could experience:

- loss of customers;
- loss of market share;

- damage to our brand and reputation;
- increased service costs;
- replacement costs;
- increased insurance costs; and
- inability to achieve market acceptance.

Given the technical and business requirements against which end users evaluate our products, our business results and prospects could suffer if we are unable to produce our products with consistent quality and reliability. Although our agreements typically contain provisions that purport to limit our liability for damages resulting from defects in our products, such limitations and disclaimers may not be enforceable or otherwise effectively protect us from claims. We may be required to indemnify our customers against liabilities arising from defects in our products or in their solutions that incorporate our products. These liabilities may also include costs incurred by our channel partners or end users to correct problems or replace our products.

The costs we incur correcting product defects or errors may be substantial and could adversely affect our operating results. Although we test our products for defects or errors prior to product release and during production, our customers still occasionally catch defects or errors that we miss. Such defects or errors have occurred in the past and may occur in the future. To the extent product failures are material, they could adversely affect our business, operating results, customer relationships, reputation and prospects. Compatibility issues between our products and the protocol, or among different products that nominally conform to the protocol, could disrupt our customers' operations, hurt our customer relations and materially adversely affect our business and prospects.

Our transition to an outsourced manufacturing business model may not be successful or may encounter delays, which could cause us to incur additional costs, harm our ability to deliver products and recognize revenue.

We are transitioning from a manufacturing model in which we primarily manufactured and assembled our products at our California location, to one where we will work with a low-cost manufacturing partner in Thailand, which we currently expect to complete by mid-2023. If we are unable to meet this timeline, we will incur additional costs and potential delays in delivering products.

Our ASICs may have defects or other issues if our third-party manufacturers have quality control or other problems in their operations. These defects may delay our ability to fulfill customer orders, which would have a negative effect on our brand and operating results. If we need to change manufacturers of our ASICs for any reason, we cannot guarantee that we will be able to find a replacement manufacturer willing to produce our custom ASICs at a price it deems appropriate, or at all.

Reliance on third-party manufacturers reduces our control over the manufacturing process, including reduced control over quality, product costs and product supply and timing. For example, we have experienced capacity constraints as we worked with our third-party manufacturers to overcome component constraints in the supply chain and increase production, and as a result of the semiconductor shortage, we expect this trend to continue in the near term. We may experience delays in shipments or issues concerning product quality from our third-party manufacturers. If any of our third-party manufacturers experience interruptions, delays or disruptions in supplying our products, including by natural disasters, the global COVID-19 pandemic or work stoppages or capacity constraints, our ability to ship products to distributors and customers would be delayed. The COVID-19 pandemic has caused interruptions in our manufacturing operations and production delays. For example, our personnel have been delayed in travel to Thailand to meet with a key manufacturing partner. Additionally, if any of our third-party manufacturers experience quality control problems in their manufacturing operations and our products do not meet customer or regulatory requirements, we could be required to cover the cost of repair or replacement of any defective products. These delays or product quality issues could have an immediate and material adverse effect on our ability to fulfill orders and could have a negative effect on our operating results. In addition, such delays or issues with product quality could adversely affect our reputation and our relationship with our channel partners. If third-party manufacturers experience financial, operational, manufacturing capacity or other difficulties, or experience shortages in required components, or if they are otherwise unable or unwilling to continue to manufacture our products in required volumes or at all, our supply may be disrupted, we may be required to seek alternate manufacturers and we may be required to re-design our products. It would be time-consuming, and could be costly and impracticable, to begin to use new manufacturers and designs and such changes could cause significant interruptions in supply and could have an adverse effect on our ability to meet our scheduled product deliveries and may subsequently lead to the loss of sales. While we take measures to protect our trade secrets, the use of third-party manufacturers may also risk disclosure of our innovative and proprietary manufacturing methodologies, which could adversely affect our business.

We operate in a highly competitive market and some market participants have substantially greater resources. We compete against a large number of both established competitors and new market entrants.

The markets for sensing technology applicable to autonomous and other solutions across numerous industries are highly competitive. We compete against a large number of companies, including established competitors and new market entrants, in all of the markets we serve. Our future success will depend on our ability to continue to develop and protect from infringement of our advanced lidar technology in a timely manner and to stay ahead of existing and new competitors. Our competitors are numerous and they compete with us directly by offering lidar products and indirectly by attempting to solve some of the same challenges with different technology. We face competition from camera and radar companies, other developers of lidar products, Tier 1 suppliers and other technology and automotive supply companies, some of which have significantly greater resources than we do. Today, we believe there are more than 50 such companies including Luminar, Innoviz, Ouster, Aeva, AEye, Valeo, Hesai, Robosense, Quanergy, Cepton and others, as well as from many lower-end lidar offerings. In the automotive market, our competitors have commercialized non-lidar-based ADAS technology which has achieved market adoption, strong brand recognition and may continue to improve. Other competitors are working towards commercializing autonomous driving technology and either by themselves, or with a publicly announced partner, have substantial financial, marketing, research and development and other resources. Some of our customers in the autonomous vehicle and ADAS markets have announced development efforts or made acquisitions directed at creating their own lidar-based or other sensing technologies, which would compete with our smart vision solutions. We do not know how close these competitors are to commercializing autonomous driving systems or novel ADAS applications. In markets outside of the automotive industry, we and our competitors seek to develop new sensing applications across industries. Even in these emerging markets, we face substantial competition from numerous competitors seeking to prove the value of their technology. Additionally, increased competition may result in pricing pressure and reduced margins and may impede our ability to increase the sales of our products or cause us to lose market share, any of which will adversely affect our business, results of operations and financial condition.

Because our sales have been primarily to customers making purchases for research and development projects and our orders are project-based, we expect our results of operations to fluctuate on a quarterly and annual basis, which could cause our stock price to fluctuate or decline.

Our quarterly results of operations have fluctuated in the past and may vary significantly in the future, and our revenue has declined in three consecutive fiscal years. As such, historical comparisons of our operating results may not be meaningful. In particular, because our sales to date have primarily been to customers making purchases for research and development, sales in any given quarter can fluctuate based on the timing and success of our customers' development projects. Accordingly, the results of any one quarter should not be relied upon as an indication of future performance. Our quarterly financial results may fluctuate as a result of a variety of factors, many of which are outside of our control and may not fully reflect the underlying performance of our business. These fluctuations could adversely affect our ability to meet our expectations or those of securities analysts or investors. If we do not meet these expectations for any period, the value of our business and our stock price could fluctuate or decline significantly. Factors that may cause these quarterly fluctuations include, without limitation, those listed below:

- The timing and magnitude of orders and shipments of our products in any quarter.
- Pricing changes we may implement to drive market adoption or in response to competitive pressure.
- Our ability to retain our existing customers and attract new customers.
- The duration of the global COVID-19 pandemic and the time it takes for economic recovery.
- Our ability to develop, introduce, manufacture and ship in a timely manner products that meet customer requirements.
- Disruptions in our sales channels or termination of our relationship with important channel partners.
- Delays in customers' purchasing cycles or deferments of customers' purchases in anticipation of new products or updates from us or our competitors.
- Fluctuations in demand for our products.
- The mix of products sold in any quarter.

- The timing and rate of broader market adoption of autonomous systems utilizing our smart vision solutions across the automotive and other market sectors.
- Market acceptance of lidar and further technological advancements by our competitors and other market participants.
- The ability of our customers to commercialize systems that incorporate our products.
- Any change in the competitive dynamics of our markets, including consolidation of competitors, regulatory developments and new market entrants.
- Our ability to effectively manage our inventory.
- Changes in the source, cost, availability of and regulations pertaining to materials we use.
- Adverse litigation, judgments, settlements or other litigation-related costs, or claims that may give rise to such costs.
- General economic, industry and market conditions, including trade disputes.

Our business could be materially and adversely affected by the current global COVID-19 pandemic.

The COVID-19 pandemic has disrupted and affected our business. We have a global customer base operating in a wide range of industries that has been impacted in different ways by the pandemic. We also depend on suppliers and manufacturers worldwide. Depending upon the duration of the pandemic, the associated business interruptions and the recovery, our customers, suppliers, manufacturers and partners may suspend or delay their engagement with us. If the pandemic worsens, if the economic recovery is delayed or if there are further business interruptions or changes in customer purchasing behavior, our business, results of operations and ability to raise capital may be materially and adversely affected. Our response to the COVID-19 pandemic may prove to be inadequate and we may be unable to continue our operations in the manner it had prior to the outbreak, and may endure further interruptions, reputational harm, delays in our product development and shipments, all of which could have an adverse effect on our business, operating results, and financial condition. In addition, when the pandemic subsides, we cannot assure you as to the timing of any economic recovery, which could continue to have a material adverse effect on our target markets and our business.

Adverse conditions in the global economy could have adverse effects on our results of operations.

While we make our strategic planning decisions based on the assumption that the markets we are targeting will grow, our business is dependent, in large part on, and directly affected by, business cycles and other factors affecting the industries in which we do business and global economy generally. Downturns in the global economy, due to inflation, conflicts, public health crises, or other factors may impact our business. For example, we have seen a deterioration in the creditworthiness of some of our customers, which may harm our ability to collect receivables from them. Spending in the industries in which we do business, including for example the automotive business, is highly cyclical and depend on general economic conditions and other factors, including consumer spending and preferences, changes in interest rates and credit availability, consumer confidence, fuel costs, fuel availability, environmental impact, governmental incentives and regulatory requirements, and political volatility, especially in energy-producing countries and growth markets. In addition, automotive production and sales can be affected by our automotive OEM customers' ability to continue operating in response to challenging economic conditions and in response to labor relations issues, regulatory requirements, trade agreements and other factors. Any significant adverse change in any of these factors have a material adverse effect on our business, results of operations and financial condition.

Although we believe that lidar is the industry standard for autonomous vehicles and other emerging markets, market adoption of lidar is uncertain. If market adoption of lidar does not continue to develop, or develops more slowly than we expect, our business will be adversely affected.

While our lidar-based smart vision solutions can be applied to different use cases across end markets, approximately 38% of our revenue during the nine months ended September 30, 2022, 34% and 57% of our revenue for 2021 and 2020, respectively, was generated from automotive applications. Despite the fact that the automotive industry has engaged in considerable effort to research and test lidar products for ADAS and autonomous driving applications, the automotive industry may not introduce lidar products in commercially available vehicles. We continually study emerging and competing sensing technologies and methodologies and we may add new sensing technologies such as radar and cameras to our offering to, for example, address lidar's relative deficiencies in detecting colors and low reflectivity objects and performing in extreme weather conditions. However, lidar products remain relatively new and it is possible that other sensing modalities, or a new disruptive modality based on new or existing technology, including a combination of technology, will achieve acceptance or leadership in the ADAS and autonomous driving industries. Even if lidar products are used in initial generations of autonomous driving technology and certain ADAS products, we cannot guarantee that lidar products will be designed into or included in subsequent generations of such commercialized technology. In addition, we expect that initial generations of autonomous vehicles will be focused on limited applications, such as robo-taxis, and that mass market adoption of autonomous technology may lag behind these initial applications significantly. The speed of market growth for ADAS or autonomous vehicles is difficult if not impossible to predict, and it is more difficult to predict this market's future growth in light of the economic consequences of the COVID-19 pandemic. By the time mass market adoption of autonomous vehicle technology is achieved, we expect competition among providers of sensing technology based on lidar and other modalities to increase substantially. If commercialization of lidar products is not successful, or not as successful as we or the market expects, or if other sensing modalities gain acceptance by developers of autonomous driving systems or ADAS, automotive OEMs, regulators and safety organizations or other market participants by the time autonomous vehicle technology achieves mass market adoption, our business, results of operations and financial condition will be materially and adversely affected.

We are investing in and pursuing market opportunities outside of the automotive markets, including in UAVs, self-driving rovers, industrial and security robots, mapping applications for topography and surveying and smart city initiatives. We believe that our future revenue growth, if any, will depend in part on our ability to expand within new markets such as these and to enter new markets as they emerge. Each of these markets presents distinct risks and, in many cases, requires us to address the particular requirements of that market.

Addressing these requirements can be time-consuming and costly. The market for lidar technology outside of automotive applications is relatively new, rapidly developing and unproven in many markets or industries. Many of our customers outside of the automotive industry are still in the testing and development phases and it cannot be certain that they will commercialize products or systems with our lidar products or at all. We cannot be certain that lidar will be sold into these markets, or any market outside of automotive market, at scale. Adoption of lidar products, including our products, outside of the automotive industry will depend on numerous factors, including: whether the technological capabilities of lidar and lidar- based products meet users' current or anticipated needs, whether the benefits of designing lidar into larger sensing systems outweigh the costs, complexity and time needed to deploy such technology or replace or modify existing systems that may have used other modalities such as cameras and radar, whether users in other applications can move beyond the testing and development phases and proceed to commercializing systems supported by lidar technology and whether lidar developers such as Velodyne can keep pace with rapid technological change in certain developing markets and the global response to the COVID-19 pandemic and the length of any associated work stoppages. If lidar technology does not achieve commercial success outside of the automotive industry, or if the market develops at a pace slower than we expect, our business, results of operation and financial condition will be materially and adversely affected.

Our investments in educating our customers and potential customers about the advantages of lidar and our applications may not result in sales of our products.

Educating our prospective customers, and to a lesser extent, our existing customers, about lidar, our advantages over other sensing technologies and lidar's ability to convey value in different industries and deployments is an integral part of developing new business and the lidar market generally. If prospective customers have a negative perception of, or experience with, lidar or a competitor's lidar products they may be reluctant to adopt lidar in general or specifically our products. Adverse statements about lidar by influential market participants may also deter adoption. Some of our competitors have significant financial or marketing resources that may allow them to engage in public marketing campaigns about their alternative technology, lidar or our solutions. Our efforts to educate potential customers and the market generally and to counter any adverse statements made by competitors or other market participants will require significant financial and personnel resources. These educational efforts may not be successful and we may not offset the costs of such efforts with revenue from the new customers. If we are unable to acquire new customers to offset these expenses or if the market accepts such adverse statements, our financial condition will be adversely affected.

The markets in which we compete are characterized by rapid technological change, which requires us to continue to develop new products and product innovations, and could adversely affect market adoption of our products.

While we intend to invest substantial resources to remain on the forefront of technological development, continuing technological changes in sensing technology, lidar and the markets for these products, including the ADAS and autonomous driving industries, could adversely affect adoption of lidar and/or our products, either generally or for particular applications.

Our future success will depend upon our ability to develop and introduce a variety of new capabilities and innovations to our existing product offerings, as well as introduce a variety of new product offerings, to address the changing needs of the markets in which we offer our products. For example, we are currently working on developing our Vella software, which is a data curation software platform, as well as several other new lidar products. We cannot guarantee that the Vella software or the new products will be released in a timely manner, or at all, or achieve market acceptance. For example, in 2019 we experienced delays in acceptance of certain of our new lidar products as we worked with our customers to identify, define and meet product requirements, and we may be unable to sell these or future products at scale until these issues are resolved. Delays in delivering new products that meet customer requirements could damage our relationships with customers and lead them to seek alternative sources of supply. In addition, our success to date has been based on the delivery of our smart vision solutions to research and development programs in which developers are investing substantial capital to develop new systems. Our continued success relies on the success of the research and development phase of these customers as they expand into commercialized projects. While some customers already have achieved commercialization, most of our automotive customers are just beginning on the path to commercialization. As autonomous technology reaches the stage of large scale commercialization we will be required to develop and deliver smart vision solutions at price points that enable wider and ultimately mass-market adoption. Delays in introducing products and innovations, the failure to choose correctly among technical alternatives or the failure to offer innovative products or configurations at competitive prices may cause existing and potential customers to purchase our competitors' products or turn to alternative sensing technology.

If we are unable to devote adequate resources to develop products or cannot otherwise successfully develop products or system configurations that meet customer requirements on a timely basis or that remain competitive with technological alternatives, our products could lose market share, our revenue will decline, we may experience operating losses and our business and prospects will be adversely affected.

We expect to incur substantial research and development costs and devote significant resources to identifying and commercializing new products, which could significantly reduce our profitability and may never result in revenue to us.

Our future growth depends on penetrating new markets, adapting existing products to new applications and customer requirements, and introducing new products that achieve market acceptance. We plan to incur substantial and potentially increasing, research and development costs as part of our efforts to design, develop, manufacture and commercialize new products and enhance existing products. Our research and development expenses were $57.0 million during the nine months ended September 30, 2022, $77.9 million and $88.1 million during 2021 and 2020, respectively, and are likely to grow in the future. Because we account for research and development as an operating expense, these expenditures will adversely affect our results to operations in the future. Further, our research and development program may not produce successful results, and our new products may not achieve market acceptance, create additional revenue or become profitable.

As part of growing our business, we may make acquisitions. If we fail to successfully select, execute or integrate our acquisitions, then our business, results of operations and financial condition could be materially adversely affected and our stock price could decline.

From time to time, we may undertake acquisitions to add new products and technologies, acquire talent, gain new sales channels or enter into new markets or sales territories. Acquisitions involve numerous risks and challenges, including relating to the successful integration of the acquired business and our key personnel, entering into new territories or markets with which we have limited or no prior experience, establishing or maintaining business relationships with new customers, channel partners, vendors and suppliers, unexpected liabilities and potential post-closing disputes.

To date, we have limited experience with acquisitions and the integration of acquired technology and personnel. Failure to successfully identify, complete, manage and integrate acquisitions could materially and adversely affect our business, financial condition and results of operations and could cause our stock price to decline.

We may need to raise additional capital in the future in order to execute our business plan, which may not be available on terms acceptable to us, or at all.

In the future, we may require additional capital to respond to technological advancements, competitive dynamics or technologies, customer demands, business opportunities, challenges, acquisitions or unforeseen circumstances and we may determine to engage in equity or debt financings or enter into credit facilities for other reasons. In order to further business relationships with current or potential customers or partners, we may issue equity or equity-linked securities to such current or potential customers or partners. We may not be able to timely secure additional debt or equity financing on favorable terms, or at all. If we raise additional funds through the issuance of equity or convertible debt or other equity- linked securities or if it issues equity or equity-linked securities to current or potential customers to further business relationships, our existing stockholders could experience significant dilution. Any debt financing obtained by us in the future could involve restrictive covenants relating to our capital raising activities and other financial and operational matters, which may make it more difficult for us to obtain additional capital and to pursue business opportunities, including potential acquisitions. If we are unable to obtain adequate financing or financing on terms satisfactory to us, when we require it, our ability to continue to grow or support our business and to respond to business challenges could be significantly limited.

We currently have and target many customers that are large corporations with substantial negotiating power, exacting product standards and potentially competitive internal solutions. If we are unable to sell our products to these customers, our prospects and results of operations will be adversely affected.

Many of our customers and potential customers are large, multinational corporations with substantial negotiating power relative to us and, in some instances, may have internal solutions that are competitive to our products. These large, multinational corporations also have significant development resources, which may allow them to acquire or develop independently, or in partnership with others, competitive technologies. Meeting the technical requirements and securing design wins with any of these companies will require a substantial investment of our time and resources. We cannot assure you that our products will secure design wins from these or other companies or that we will generate meaningful revenue from the sales of our products to these key potential customers. If our products are not selected by these large corporations or if these corporations develop or acquire competitive technology, it will have an adverse effect on our business.

If our lidar products are not selected for inclusion in autonomous driving systems or ADAS by automotive OEMs or their suppliers, our business will be materially and adversely affected.

Automotive OEMs and their suppliers design and develop autonomous driving and ADAS technology over several years. These automotive OEMs and suppliers undertake extensive testing or qualification processes prior to placing orders for large quantities of products because our lidar products will function as part of a larger system or platform and must meet certain other specifications. We spend significant time and resources to have our products selected by automotive OEMs and their suppliers, which is known as a design win. In the case of autonomous driving and ADAS technology, a design win means our lidar product has been selected for use in a particular vehicle model. If we do not achieve a design win with respect to a particular vehicle model, we may not have an opportunity to supply our products to the automotive OEM for that vehicle model for a period of many years. In many cases, this period can be as long as five to seven or more years. If our products are not selected by an automotive OEM or our suppliers for one vehicle model or if our products are not successful in that vehicle model, it is unlikely that our product will be deployed in other vehicle models of that OEM. If we fail to win a significant number of vehicle models from one or more of automotive OEMs or their suppliers, our business, results of operations and financial condition will be materially and adversely affected.

The discontinuation, lack of commercial success, or loss of business with respect to a particular vehicle model or technology package for which we are a significant supplier could reduce our sales and adversely affect our profitability.

If we are able to secure design wins and our smart vision solutions are included in these autonomous driving and ADAS products, we expect to enter into supply agreements with the relevant customer. Market practice dictates that these supply agreements typically require us to supply a customer’s requirements for a particular vehicle model or autonomous driving or ADAS product, rather than supply a set number of products. These contracts can have short terms and/or can be subject to renegotiation, sometimes as frequently as annually, all of which may affect product pricing, and may be terminated by our customers at any time. Therefore, even if we are successful in obtaining design wins and the systems into which our products are built are commercialized, the discontinuation of, the loss of business with respect to, or a lack of commercial success of a particular vehicle model or technology package for which we are a significant supplier could mean that the expected sales of our products will not materialize, materially and adversely affecting our business.

Continued pricing pressures, automotive OEM cost reduction initiatives and the ability of automotive OEMs to re-source or cancel vehicle or technology programs may result in lower than anticipated margins, or losses, which may adversely affect our business.

Cost-cutting initiatives adopted by our customers often result in increased downward pressure on pricing. We expect that our agreements with automotive OEMs may require step-downs in pricing over the term of the agreement or, if commercialized, over the period of production. In addition, our automotive OEM customers often reserve the right to terminate their supply contracts for convenience, which enhances their ability to obtain price reductions. Automotive OEMs also possess significant leverage over their suppliers, including us, because the automotive component supply industry is highly competitive, serves a limited number of customers and has a high fixed cost base. Accordingly, we expect to be subject to substantial continuing pressure from automotive OEMs and Tier 1 suppliers to reduce the price of our products. It is possible that pricing pressures beyond our expectations could intensify as automotive OEMs pursue restructuring, consolidation and cost- cutting initiatives. If we are unable to generate sufficient production cost savings in the future to offset price reductions, our gross margin and profitability would be adversely affected.

Our business could be materially and adversely affected if we lost any of our largest customers or if they were unable to pay their invoices.

Although we have and continue to pursue a broad customer base, we are dependent on a collection of large customers with strong purchasing power. In the nine months ended September 30, 2022, year 2021 and 2020, our top 20 customers represented 100%, 79% and 81% of our revenue, respectively. There were three, two and two customers that each accounted for more than 10% of our revenue in the nine months ended September 30, 2022, year 2021 and 2020, respectively. The loss of business from any of our major customers (whether by lower overall demand for our products, cancellation of existing contracts or product orders or the failure to design in our products or award us new business) could have a material adverse effect on our business.

To the extent autonomous vehicle and ADAS systems become accepted by major automotive OEMs, we expect that we will rely increasingly for our revenue on Tier 1 suppliers through which automotive OEMs procure components. We expect that these Tier 1 suppliers will be responsible for certain hardpoint and software configuration activities specific to each OEM, and they may not exclusively carry our smart vision solutions.

There is also a risk that one or more of our major customers could be unable to pay our invoices as they become due or that a customer will simply refuse to make such payments if it experiences financial difficulties. If a major customer were to enter into bankruptcy proceedings or similar proceedings whereby contractual commitments are subject to stay of execution and the possibility of legal or other modification, we could be forced to record a substantial loss.

The period of time from a design win to implementation is long and we are subject to the risks of cancellation or postponement of the contract or unsuccessful implementation.

Prospective customers, including those in the automotive industry, generally must make significant commitments of resources to test and validate our products and confirm that they can integrate with other technologies before including them in any particular system, product or model. The development cycles of our products with new customers varies widely depending on the application, market, customer and the complexity of the product. In the automotive market, for example, this development cycle can be five to seven or more years. The development cycle in certain other markets can be months to one or two years. These development cycles result in us investing our resources prior to realizing any revenue from the commercialization. Further, we are subject to the risk that customers cancel or postpone implementation of our technology, as well as that we will not be able to integrate our technology successfully into a larger system with other sensing modalities. Further, our revenue could be less than forecasted if the system, product or vehicle model that includes our lidar products is unsuccessful, including for reasons unrelated to our technology. Long development cycles and product cancellations or postponements may adversely affect our business, results of operations and financial condition.

The complexity of our products could result in unforeseen delays or expenses from undetected defects, errors or bugs in hardware or software which could reduce the market adoption of our new products, damage our reputation with current or prospective customers, result in product returns or expose us to product liability and other claims and adversely affect our operating costs.

Our products are highly technical and very complex and require high standards to manufacture. These products have in the past and will likely in the future experience defects, errors or bugs at various stages of development. We may be unable to timely release new products, manufacture existing products, correct problems that have arisen or correct such problems to our customers' satisfaction. Additionally, undetected errors, defects or security vulnerabilities, especially as new products are introduced or as new versions are released, could result in serious injury to the end users of technology incorporating our products, or those in the surrounding area; our customers never being able to commercialize technology incorporating our products; litigation against us; negative publicity and other consequences. These risks are particularly prevalent in the highly competitive autonomous driving and ADAS markets. Some errors or defects in our products may only be discovered after they have been tested, commercialized and deployed by customers. If that is the case, we may incur significant additional development costs and product recall, repair or replacement costs. Furthermore, we could also experience higher levels of product returns in such cases, which could adversely affect our financial results in a particular quarter. These problems may also result in claims against us by our customers or others. Our reputation or brand may be damaged as a result of these problems and customers may be reluctant to buy our products, which could adversely affect our ability to retain existing customers and attract new customers, and could adversely affect our financial results.

In addition, we could face material legal claims for breach of contract, product liability, tort or breach of warranty as a result of these problems. Defending a lawsuit, regardless of its merit, could be costly and may divert management's attention and adversely affect the market's perception of Velodyne and our products. In addition, our business liability insurance coverage could prove inadequate with respect to a claim and future coverage may be unavailable on acceptable terms or at all. These product-related issues could result in claims against us and our business could be adversely affected.

If we do not maintain sufficient inventory or if we do not adequately manage our inventory, we could lose sales or incur higher inventory-related expenses, which could negatively affect our operating results.

To ensure adequate inventory supply, we must forecast inventory needs and expenses, place orders sufficiently in advance with our suppliers and manufacturing partners and manufacture products based on our estimates of future demand for particular products. Fluctuations in the adoption of lidar products may affect our ability to forecast our future operating results, including revenue, gross margins, cash flows and profitability. Our ability to accurately forecast demand for our products could be affected by many factors, including the rapidly changing nature of the markets in which we operate, including the autonomous driving, ADAS and mapping markets, the uncertainty surrounding the market acceptance and commercialization of lidar technology, the emergence of new markets, an increase or decrease in customer demand for our products or for products and services of our competitors, product introductions by competitors, the COVID-19 pandemic and any associated work stoppages or interruptions, unanticipated changes in general market conditions and the weakening of economic conditions or consumer confidence in future economic conditions. If our lidar products are commercialized in autonomous driving, ADAS or other applications experiencing rapid growth in demand, we may face challenges acquiring adequate supplies to manufacture our products and/or we and our manufacturing partners may not be able to manufacture our products at a rate necessary to satisfy the levels of demand, which would negatively affect our revenue. This risk may be exacerbated by the fact that we may not carry or be able to obtain for our manufacturers a significant amount of inventory to satisfy short-term demand increases. If we fail to accurately forecast customer demand, we may experience excess inventory levels or a shortage of products available for sale.

Inventory levels in excess of customer demand may result in inventory write-downs or write-offs and the sale of excess inventory at discounted prices, which would adversely affect our financial results, including our gross margin, and have a negative effect on our brand. Conversely, if we underestimate customer demand for our products, we, or our manufacturing partners, may not be able to deliver products to meet our requirements, and this could result in damage to our brand and customer relationships and adversely affect our revenue and operating results.

We rely on third-party suppliers and because some of the raw materials and key components in our products come from limited or sole sources of supply, we are susceptible to supply shortages, long lead times for components, and supply changes, any of which could disrupt our supply chain and could delay deliveries of our products to customers.

All of the components that go into the manufacture of our smart vision solutions are sourced from third-party suppliers. To date, we have produced our products in relatively limited quantities for use in research and development programs. We do not have any experience in managing our supply chain to manufacture and deliver our products at scale. Some of the key components used to manufacture our products come from limited or sole sources of supply. We are therefore subject to the risk of shortages and long lead times in the supply of these components and the risk that our suppliers discontinue or modify components used in our products. We have a global supply chain and the COVID-19 pandemic may adversely affect our ability to source components in a timely or cost effective manner from our third-party suppliers due to, among other things, work stoppages or interruptions. For example, our products depend on lasers and we currently consume a substantial portion of the available market. Any shortage of these lasers could materially and adversely affect our ability to manufacture our smart vision solutions. In addition, the lead times associated with certain components are lengthy and preclude rapid changes in quantities and delivery schedules. We have in the past experienced and may in the future experience component shortages and price fluctuations of certain key components and materials, and the predictability of the availability and pricing of these components may be limited. Component shortages or pricing fluctuations could be material in the future. In the event of a component shortage, supply interruption or material pricing change from suppliers of these components, we may not be able to develop alternate sources in a timely manner or at all in the case of sole or limited sources. Developing alternate sources of supply for these components may be time-consuming, difficult, and costly and we may not be able to source these components on terms that are acceptable to us, or at all, which may undermine our ability to meet our requirements or to fill customer orders in a timely manner. Any interruption or delay in the supply of any of these parts or components, or the inability to obtain these parts or components from alternate sources at acceptable prices and within a reasonable amount of time, would adversely affect our ability to meet our scheduled product deliveries to our customers. This could adversely affect our relationships with our customers and channel partners and could cause delays in shipment of our products and adversely affect our operating results. In addition, increased component costs could result in lower gross margins. Even where we are able to pass increased component costs along to our customers, there may be a lapse of time before we are able to do so such that we must absorb the increased cost. If we are unable to buy these components in quantities sufficient to meet our requirements on a timely basis, we will not be able to deliver products to our customers, which may result in such customers using competitive products instead of Velodyne's.

The average selling prices of our products could decrease rapidly over the life of the product, which may negatively affect our revenue and gross margin.

We have substantially reduced the price of certain of our products to accelerate market adoption and solidify our position as a market leader. We expect the average selling prices of our products generally to continue to decline as our customers seek to commercialize autonomous systems at prices low enough to achieve market acceptance. In order to sell products that have a falling average unit selling price and maintain margins at the same time, we will need to continually reduce product and manufacturing costs. To manage manufacturing costs, we must engineer the most cost-effective design for our products. In addition, we continuously drive initiatives to reduce labor cost, improve worker efficiency, reduce the cost of materials, use fewer materials and further lower overall product costs by carefully managing component prices, inventory and shipping cost.

We also need to continually introduce new products with higher sales prices and gross margin in order to maintain our overall gross margin. If we are unable to manage the cost of older products or successfully introduce new products with higher gross margin, our revenue and overall gross margin would likely decline.

Changes in our product mix may impact our financial performance.

Our financial performance can be affected by the mix of products we sell during a given period. If our sales include more of the lower gross margin products than higher gross margin products, our results of operations and financial condition may be adversely affected. There can be no guarantees that we will be able to successfully alter our product mix so that we are selling more of our high gross margin products. If actual results vary from this projected product mix of sales, our results of operations and financial condition could be adversely affected.

Any projections we may provide about our business or expected future results may differ significantly from actual results.

From time to time we have shared our views in press releases or SEC filings, on public conference calls and in other contexts about current business conditions and our expectations as to our future results of operations, including our previously announced projected revenues. Correctly identifying the key factors affecting business conditions and predicting future events is inherently an uncertain process. Given the complexity and volatility of our business, the impact of the ongoing COVID-19 pandemic on our business and that of our customers and partners, uncertainty overall global economic conditions, it is likely that our prior forecasts will prove to be incorrect. We offer no assurance that such predictions or analysis will ultimately be accurate, and investors should treat any such predictions or analysis with appropriate caution. If any analysis or forecast that we make ultimately proves to be inaccurate, our stock price may be adversely affected.

Any financial projections we have provided, including projections related to our future revenues, reflect numerous qualitative estimates and assumptions including assumptions with respect to general business, economic, market, regulatory and financial conditions and various other factors, all of which are difficult to predict and many of which are beyond our control. The projections are not predictive of our actual future results and should not be construed as financial guidance for any future period. In addition, any projections should be read in conjunction with the accounting policies included in Note 1. "Description of Business and Summary of Significant Accounting Policies" in the Notes to Condensed Consolidated Financial Statements in Item 1 of Part I of this Quarterly Report on Form 10-Q and with these risk factors.

We may experience difficulties in managing our growth and expanding our operations.

We expect to experience significant growth in the scope and nature of our operations. Our ability to manage our operations and future growth will require us to continue to improve our operational, financial and management controls, compliance programs and reporting systems. We are currently in the process of strengthening our compliance programs, including our compliance programs related to export controls, privacy and cybersecurity and anti-corruption, as well as controls related to human resources. We may not be able to implement improvements in an efficient or timely manner and may discover deficiencies in existing controls, programs, systems and procedures, which could have an adverse effect on our business, reputation and financial results.

Our sales and operations in international markets expose us to operational, financial and regulatory risks.

International sales comprise a significant amount of our overall revenue. Sales to international customers accounted for 86%, 65% and 66% of our revenue during the nine months ended September 30, 2022, year 2021 and 2020, respectively. We are committed to growing our international sales, and while we have committed resources to expanding our international operations and sales channels, these efforts may not be successful. International operations are subject to a number of other risks, including:

- Exchange rate fluctuations.
- Political and economic instability (including an outbreak or escalation of a regional conflict, such as the current situation in Ukraine), international terrorism and anti-American sentiment, particularly in emerging markets.
- Global or regional health crises, such as the COVID-19 pandemic.
- Potential for violations of anti-corruption laws and regulations, such as those related to bribery and fraud.
- Preference for locally branded products, and laws and business practices favoring local competition.
- Potential consequences of, and uncertainty related to, the “Brexit” process in the United Kingdom, which could lead to additional expense and complexity in doing business there.
- Increased difficulty in managing inventory.
- Delayed revenue recognition.
- Less effective protection of intellectual property.
- Stringent regulation of the autonomous or other systems or products using our products and stringent consumer protection and product compliance regulations, including but not limited to General Data Protection Regulation in the European Union, European competition law, the Restriction of Hazardous Substances directive, the Waste Electrical and Electronic Equipment directive and the European Ecodesign directive that are costly to comply with and may vary from country to country.
- Difficulties and costs of staffing and managing foreign operations.
- Import and export laws and the impact of tariffs.
- Changes in local tax and customs duty laws or changes in the enforcement, application or interpretation of such laws.

The occurrence of any of these risks could negatively affect our international business and consequently our business, operating results and financial condition.

Our business is subject to the risks of earthquakes, fire, floods and other natural catastrophic events, global pandemics, and interruptions by man-made problems, such as network security breaches, computer viruses or terrorism. Material disruptions of our business or information systems resulting from these events could adversely affect our operating results.

A significant natural disaster, such as an earthquake, fire, flood or significant power outage or other similar events, such as infectious disease outbreaks or pandemic events, including the COVID-19 pandemic, could have an adverse effect on our business and operating results. The COVID-19 pandemic has produced meaningful operational challenges and we expect to continue to experience disruptions in our business during 2022. COVID-19 has heightened many of the other risks described herein, such as the demand for our products, our ability to achieve or maintain profitability and our ability to raise additional capital in the future. Despite the implementation of network security measures, our networks and lidar products also may be vulnerable to computer viruses, break-ins and similar disruptions from unauthorized tampering with our solutions. Both our corporate headquarters and manufacturing facility are located in the San Francisco Bay Area, a region known for seismic activity. In addition, natural disasters, acts of terrorism or war could cause disruptions in our remaining manufacturing operations, our or our customers' or channel partners' businesses, our suppliers' or the economy as a whole. We also rely on information technology systems to communicate among our workforce and with third parties. Any disruption to our communications, whether caused by a natural disaster or by manmade problems, such as power disruptions, could adversely affect our business. We do not have a formal disaster recovery plan or policy in place and we do not currently require that our suppliers' partners have such plans or policies in place. To the extent that any such disruptions result in delays or cancellations of orders or impede our suppliers' ability to timely deliver product components, or the deployment of our products, our business, operating results and financial condition would be adversely affected.

Risks Related to Legal and Regulatory Matters

Changes to trade policy, tariffs and import/export regulations may have a material adverse effect on our business, financial condition and results of operations.

Changes in global political, regulatory and economic conditions or in laws and policies governing foreign trade, manufacturing, development and investment in the territories or countries where we currently purchase our components, sell our products or conduct our business could adversely affect our business. The U.S. has recently instituted or proposed changes in trade policies that include the negotiation or termination of trade agreements, the imposition of higher tariffs on imports into the U.S., economic sanctions on individuals, corporations or countries, and other government regulations affecting trade between the United States and other countries where we conduct our business. A number of other nations have proposed or instituted similar measures directed at trade with the U.S. in response. As a result of these developments, there may be greater restrictions and economic disincentives on international trade that could adversely affect our business. For example, such changes could adversely affect the automotive market, our ability to access key components or raw materials needed to manufacture our products (including, but not limited to, rare-earth metals), our ability to sell our products to customers outside of the U.S. and the demand for our products. It may be time-consuming and expensive for us to alter our business operations to adapt to or comply with any such changes, and any failure to do so could have a material adverse effect on our business, financial condition and results of operations.

We have in the past and may become involved in legal and regulatory proceedings and commercial or contractual disputes, which could have an adverse effect on our profitability and consolidated financial position.

We may be, from time to time, involved in litigation, regulatory proceedings and commercial or contractual disputes that may be significant. These matters may include, without limitation, disputes with our suppliers and customers, intellectual property claims, stockholder litigation, government investigations, class action lawsuits, personal injury claims, environmental issues, customs and VAT disputes and employment and tax issues. In addition, we have in the past and could face in the future a variety of labor and employment claims against it, which could include but is not limited to general discrimination, wage and hour, privacy, ERISA or disability claims. In such matters, government agencies or private parties may seek to recover from us very large, indeterminate amounts in penalties or monetary damages (including, in some cases, treble or punitive damages) or seek to limit our operations in some way. These types of lawsuits could require significant management time and attention or could involve substantial legal liability, adverse regulatory outcomes, and/or substantial expenses to defend. Often these cases raise complex factual and legal issues and create risks and uncertainties. No assurances can be given that any proceedings and claims will not have a material adverse impact on our operating results and consolidated financial position or that our established reserves or our available insurance will mitigate this impact.

We are subject to, and must remain in compliance with, numerous laws and governmental regulations concerning the manufacturing, use, distribution and sale of our products. Some of our customers also require that we comply with their own unique requirements relating to these matters.

We manufacture and sell products that contain electronic components, and such components may contain materials that are subject to government regulation in both the locations where we manufacture and assemble our products, as well as the locations where we sell our products. For example, certain regulations limit the use of lead in electronic components. Since we operate on a global basis, this is a complex process which requires continual monitoring of regulations and an ongoing compliance process to ensure that we and our suppliers are in compliance with all existing regulations. If there is an unanticipated new regulation that significantly impacts our use of various components or requires more expensive components, that regulation could materially adversely affect our business, results of operations and financial condition.

Our products are also used for autonomous driving and ADAS applications, which are subject to complicated regulatory schemes that vary from jurisdiction to jurisdiction. These are rapidly evolving areas where new regulations could impose limitations on the use of lidar generally or our products specifically. If we fail to adhere to these new regulations or fail to continually monitor the updates, we may be subject to litigation, loss of customers or negative publicity and our business, results of operations and financial condition will be adversely affected.

Concerns over environmental pollution and climate change have produced significant legislative and regulatory efforts on a global basis, and we believe this will continue both in scope and in the number of countries participating. These changes could directly increase the cost of energy, which may have an effect on the way we manufacture products or utilize energy to produce our products. In addition, any new regulations or laws in the environmental area might increase the cost of raw materials or key components we use in our products. Environmental regulations require us to reduce product energy usage, monitor and exclude an expanding list of restricted substances and to participate in required recovery and recycling of our products. We are unable to predict how any future changes will impact it and if such impacts will be material to our business.

We are subject to, and must maintain compliance with, the regulatory requirements under the Federal Food, Drug, and Cosmetic Act or the Food and Drug Administration (FDA).

As a lidar technology company, we are subject to the Electronic Product Radiation Control Provisions of the Federal Food, Drug, and Cosmetic Act. These requirements are enforced by the FDA. Electronic product radiation includes laser technology. Regulations governing these products are intended to protect the public from hazardous or unnecessary exposure, including eye safety. Manufacturers are required to certify in product labeling and in reports to the FDA that their products comply with applicable performance standards as well as maintain manufacturing, testing, and distribution records for their products. Failure to comply with these requirements could result in enforcement action by the FDA, which could require us to cease distribution of our products, recall or remediate products already distributed to customers, or subject us to FDA enforcement.

Our business may be adversely affected by changes in automotive safety regulations or concerns that drive further regulation of the automobile safety market.

Government vehicle safety regulations are an important factor for our business. Historically, these regulations have imposed ever-more stringent safety regulations for vehicles. These safety regulations often require, or customers demand that, vehicles have more safety features per vehicle and more advanced safety products.

While we believe increasing automotive safety standards may present a market opportunity for our products, government safety regulations are subject to change based on a number of factors that are not within our control, including new scientific or technological data, adverse publicity regarding the industry recalls and safety risks of autonomous driving and ADAS, accidents involving our products, domestic and foreign political developments or considerations, and litigation relating to our products and our competitors' products. Changes in government regulations, especially in the autonomous driving and ADAS industries could adversely affect our business. If government priorities shift and we are unable to adapt to changing regulations, our business may be materially and adversely affected.

Federal and local regulators impose more stringent compliance and reporting requirements in response to product recalls and safety issues in the automotive industry. As the cars that carry our sensors go into production, we are subject to existing stringent requirements under the National Traffic and Motor Vehicle Safety Act of 1966, or the Vehicle Safety Act, including a duty to report, subject to strict timing requirements, safety defects with our products. The Vehicle Safety Act imposes potentially significant civil penalties for violations including the failure to comply with such reporting actions. We are also subject to the existing U.S. Transportation Recall Enhancement, Accountability and Documentation Act, or TREAD, which requires equipment manufacturers, such as Velodyne, to comply with "Early Warning" requirements by reporting certain information to the NHTSA, such as information related to defects or reports of injury related to our products. TREAD imposes criminal liability for violating such requirements if a defect subsequently causes death or bodily injury. In addition, the National Traffic and Motor Vehicle Safety Act authorizes NHTSA to require a manufacturer to recall and repair vehicles that contain safety defects or fail to comply with U.S. federal motor vehicle safety standards. Sales into foreign countries may be subject to similar regulations. If we cannot rapidly address any safety concerns or defects with our products, our business, results of operations and financial condition may be adversely affected.

The U.S. Department of Transportation issued regulations in 2016 that require manufacturers of certain autonomous vehicles to provide documentation covering specific topics to regulators, such as how automated systems detect objects on the road, how information is displayed to drivers, what cybersecurity measures are in place and the methods used to test the design and validation of autonomous driving systems. As cars that carry our sensors go into production, the obligations of complying with safety regulations could increase and it could require increased resources and adversely affect our business.

Failures, or perceived failures, to comply with privacy, data protection, and information security requirements in the variety of jurisdictions in which we operate may adversely impact our business, and such legal requirements are evolving, uncertain and may require improvements in, or changes to, our policies and operations.

Our current and potential future operations and sales subject us to laws and regulations addressing privacy and the collection, use, storage, disclosure, transfer and protection of a variety of types of data. For example, the European Commission has adopted the General Data Protection Regulation and California recently enacted the California Consumer Privacy Act of 2018, both of which provide for potentially material penalties for non-compliance. These regimes may, among other things, impose data security requirements, disclosure requirements, and restrictions on data collection, uses, and sharing that may impact our operations and the development of our business. While, generally, we do not have access to, collect, store, process, or share information collected by our solutions unless our customers choose to proactively provide such information to us, our products may evolve both to address potential customer requirements and to add new features and functionality. Therefore, the full impact of these privacy regimes on our business is rapidly evolving across jurisdictions and remains uncertain at this time.

We may also be affected by cyber attacks and other means of gaining unauthorized access to our products, systems, and data. For instance, cyber criminals or insiders may target us or third-parties with which we have business relationships in an effort to obtain data, or in a manner that disrupts our operations or compromises our products or the systems into which our products are integrated.

We are assessing the continually evolving privacy and data security regimes and measures it believes are appropriate in response. Since these data security regimes are evolving, uncertain and complex, especially for a global business like ours, we may need to update or enhance our compliance measures as our products, markets and customer demands further develop and these updates or enhancements may require implementation costs. The compliance measures we do adopt may prove ineffective. Any failure, or perceived failure, by us to comply with current and future regulatory or customer-driven privacy, data protection, and information security requirements, or to prevent or mitigate security breaches, cyber attacks, or improper access to, use of, or disclosure of data, or any security issues or cyber attacks affecting us, could result in significant liability, costs (including the costs of mitigation and recovery), and a material loss of revenue resulting from the adverse impact on our reputation and brand, loss of proprietary information and data, disruption to our business and relationships, and diminished ability to retain or attract customers and business partners. Such events may result in governmental enforcement actions and prosecutions, private litigation, fines and penalties or adverse publicity, and could cause customers and business partners to lose trust in us, which could have an adverse effect on our reputation and business.

Regulations related to conflict minerals may cause us to incur additional expenses and could limit the supply and increase the costs of certain metals used in the manufacturing of our products.

We are subject to the requirements under the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010, or the Dodd-Frank Act, that will require it to determine, disclose and report whether our products contain conflict minerals. The implementation of these requirements could adversely affect the sourcing, availability and pricing of the materials used in the manufacture of components used in our products. In addition, we will incur additional costs to comply with the disclosure requirements, including costs related to conducting diligence procedures to determine the sources of conflict minerals that may be used in or necessary to the production of our products and, if applicable, potential changes to products, processes or sources of supply as a consequence of such verification activities. It is also possible that our reputation may be adversely affected if we determine that certain of our products contain minerals not determined to be conflict-free or if we are unable to alter our products, processes or sources of supply to avoid use of such materials.

We may be subject to product liability or warranty claims that could result in significant direct or indirect costs, which could adversely affect our business and operating results.

Our customers use our smart vision solutions in autonomous driving, ADAS and other applications that present the risk of significant injury, including fatalities. We may be subject to claims if a product using our lidar technology is involved in an accident and persons are injured or purport to be injured. Any insurance that we carry may not be sufficient or it may not apply to all situations. Similarly, our customers could be subjected to claims as a result of such accidents and bring legal claims against us to attempt to hold it liable. In addition, if lawmakers or governmental agencies were to determine that the use of our products or autonomous driving or certain ADAS increased the risk of injury to all or a subset of our customers, they may pass laws or adopt regulations that limit the use of our products or increase our liability associated with the use of our products or that regulate the use of or delay the deployment of autonomous driving and ADAS technology. Any of these events could adversely affect our brand, relationships with customers, operating results or financial condition.

We typically provide a limited-time warranty on our products. The occurrence of any material defects in our products could make us liable for damages and warranty claims. In addition, we could incur significant costs to correct any defects, warranty claims or other problems, including costs related to product recalls. Any negative publicity related to the perceived quality of our products could affect our brand image, partner and customer demand, and adversely affect our operating results and financial condition. Also, warranty, recall and product liability claims may result in litigation, the occurrence of which could be costly, lengthy and distracting and adversely affect our business and operating results.

Risks Related to Intellectual Property

Despite the actions we are taking to defend and protect our intellectual property, we may not be able to adequately protect or enforce our intellectual property rights or prevent unauthorized parties from copying or reverse engineering our solutions. Our efforts to protect and enforce our intellectual property rights and prevent third parties from violating our rights may be costly.

The success of our products and our business depends in part on our ability to obtain patents and other intellectual property rights and maintain adequate legal protection for our products in the United States and other international jurisdictions. We rely on a combination of patent, copyright, service mark, trademark and trade secret laws, as well as confidentiality procedures and contractual restrictions, to establish and protect our proprietary rights, all of which provide only limited protection. We cannot assure you that any patents will be issued with respect to our currently pending patent applications or that any trademarks will be registered with respect to our currently pending applications in a manner that gives us adequate defensive protection or competitive advantages, if at all, or that any patents issued to us or any trademarks registered by us will not be challenged, invalidated or circumvented. We have filed for patents and trademarks in the United States and in certain international jurisdictions, but such protections may not be available in all countries in which we operate or in which we seek to enforce our intellectual property rights, or may be difficult to enforce in practice. Our currently issued patents and trademarks and any patents and trademarks that may be issued or registered, as applicable, in the future with respect to pending or future applications may not provide sufficiently broad protection or may not prove to be enforceable in actions against alleged infringers. We cannot be certain that the steps we have taken will prevent unauthorized use of our technology or the reverse engineering of our technology. Moreover, others may independently develop technologies that are competitive to us or infringe our intellectual property.

Protecting against the unauthorized use of our intellectual property, products and other proprietary rights is expensive and difficult, particularly internationally. We believe that our patents are foundational in the area of lidar products and intends to enforce the intellectual property portfolio we have built over the years. Unauthorized parties may attempt to copy or reverse engineer our smart vision solutions or certain aspects of our solutions that it considers proprietary. Litigation may be necessary in the future to enforce or defend our intellectual property rights, to prevent unauthorized parties from copying or reverse engineering our solutions, to determine the validity and scope of the proprietary rights of others or to block the importation of infringing products into the U.S.

For example, we recently achieved a favorable result in two proceedings before the U.S. Patent Trial and Appeal Board (“PTAB”) where the PTAB upheld the validity of our patent claims that were being challenged as unpatentable by one of our competitors. That decision was appealed to the Federal Circuit court, who upheld the validity of the patent. There is also litigation pending in the U.S. District Court for the Northern District of California, and we cannot guarantee a favorable outcome in the litigation.

Additionally, to protect our intellectual property, we filed patent infringement cases in August 2019 with the U.S. International Trade Commission ("ITC") and the U.S. District Court for the Northern District of California against Hesai Photonics Technology Co., Ltd. ("Hesai") and Suteng Innovation Technology Co., Ltd. ("RoboSense"). We resolved our disputes with Hesai in June 2020 and resolved our disputes with RoboSense in September 2020.

Any such litigation, whether initiated by us or a third party, could result in substantial costs and diversion of management resources, either of which could adversely affect our business, operating results and financial condition. Even if it obtains favorable outcomes in litigation, we may not be able to obtain adequate remedies, especially in the context of unauthorized parties copying or reverse engineering our smart vision solutions or certain aspects of our solutions that we consider proprietary. Further, many of our current and potential competitors have the ability to dedicate substantially greater resources to defending intellectual property infringement claims and to enforcing their intellectual property rights than we have. Attempts to enforce our rights against third parties could also provoke these third parties to assert their own intellectual property or other rights against us, or result in a holding that invalidates or narrows the scope of our rights, in whole or in part. Effective patent, trademark, service mark, copyright and trade secret protection may not be available in every country in which our products are available and competitors based in other countries may sell infringing products in one or more markets. An inability to adequately protect and enforce our intellectual property and other proprietary rights or an inability to prevent authorized parties from copying or reverse engineering our smart vision solutions or certain aspects of our solutions that we consider proprietary could seriously adversely affect our business, operating results, financial condition and prospects.

In addition to patented technology, we rely on our unpatented proprietary technology, trade secrets, processes and know-how.

We rely on proprietary information (such as trade secrets, know-how and confidential information) to protect intellectual property that may not be patentable or subject to copyright, trademark, trade dress or service mark protection, or that we believe is best protected by means that do not require public disclosure. We generally seek to protect this proprietary information by entering into confidentiality agreements, or consulting, services or employment agreements that contain non-disclosure and non-use provisions with our employees, consultants, contractors and third parties. However, we may fail to enter into the necessary agreements, and even if entered into, these agreements may be breached or may otherwise fail to prevent disclosure, third-party infringement or misappropriation of our proprietary information, may be limited as to their term and may not provide an adequate remedy in the event of unauthorized disclosure or use of proprietary information. We have limited control over the protection of trade secrets used by our current or future manufacturing partners and suppliers and could lose future trade secret protection if any unauthorized disclosure of such information occurs. In addition, our proprietary information may otherwise become known or be independently developed by our competitors or other third parties. To the extent that our employees, consultants, contractors, advisors and other third parties use intellectual property owned by others in their work for Velodyne, disputes may arise as to the rights in related or resulting know-how and inventions. Costly and time-consuming litigation could be necessary to enforce and determine the scope of our proprietary rights, and failure to obtain or maintain protection for our proprietary information could adversely affect our competitive business position. Furthermore, laws regarding trade secret rights in certain markets where we operate may afford little or no protection to our trade secrets. We also rely on physical and electronic security measures to protect our proprietary information, but it cannot provide assurance that these security measures will not be breached or provide adequate protection for our property. There is a risk that third parties may obtain and improperly utilize our proprietary information to our competitive disadvantage. We may not be able to detect or prevent the unauthorized use of such information or take appropriate and timely steps to enforce our intellectual property rights.

Third-party claims that we are infringing intellectual property, whether successful or not, could subject us to costly and time-consuming litigation or expensive licenses, and our business could be adversely affected.

Although we hold key patents related to our products, a number of companies, both within and outside of the lidar industry, hold other patents covering aspects of lidar products. In addition to these patents, participants in this industry typically also protect their technology, especially embedded software, through copyrights and trade secrets. As a result, there is frequent litigation based on allegations of infringement, misappropriation or other violations of intellectual property rights. We have received, and in the future may receive, inquiries from other intellectual property holders and may become subject to claims that it infringes their intellectual property rights, particularly as we expand our presence in the market, expands to new use cases and faces increasing competition. In addition, parties may claim that the names and branding of our products infringe their trademark rights in certain countries or territories. If such a claim were to prevail, we may have to change the names and branding of our products in the affected territories and we could incur other costs.

We currently have a number of agreements in effect pursuant to which we have agreed to defend, indemnify and hold harmless our customers, suppliers, and channel partners and other partners from damages and costs which may arise from the infringement by our products of third-party patents or other intellectual property rights. The scope of these indemnity obligations varies, but may, in some instances, include indemnification for damages and expenses, including attorneys' fees. Our insurance may not cover all intellectual property infringement claims and our indemnity obligations. A claim that our products infringe a third party's intellectual property rights, even if untrue, could adversely affect our relationships with our customers, may deter future customers from purchasing our products and could expose us to costly litigation and settlement expenses. Even if we are not a party to any litigation between a customer and a third party relating to infringement by our products, an adverse outcome in any such litigation could make it more difficult for us to defend our products against intellectual property infringement claims in any subsequent litigation in which we are a named party. Any of these results could adversely affect our brand and operating results.

Our defense of intellectual property rights claims brought against Velodyne or our customers, suppliers and channel partners, with or without merit, could be time-consuming, expensive to litigate or settle, divert management resources and attention and force us to acquire intellectual property rights and licenses, which may involve substantial royalty or other payments and may not be available on acceptable terms or at all. Further, a party making such a claim, if successful, could secure a judgment that requires us to pay substantial damages or obtain an injunction. An adverse determination also could invalidate our intellectual property rights and adversely affect our ability to offer our products to our customers and may require that we procure or develop substitute products that do not infringe, which could require significant effort and expense. Any of these events could adversely affect our business, operating results, financial condition and prospects.

Risks Related to Tax and Accounting Matters

Changes in tax laws or exposure to additional income tax liabilities could affect our future profitability.

Factors that could materially affect our future effective tax rates include but are not limited to:

- Changes in tax laws or the regulatory environment.
- Changes in accounting and tax standards or practices.
- Changes in the composition of operating income by tax jurisdiction.
- Our operating results before taxes.

Because we do not have a long history of operating at our present scale and we have significant expansion plans, our effective tax rate may fluctuate in the future. Future effective tax rates could be affected by operating losses in jurisdictions where no tax benefit can be recorded under GAAP, changes in the composition of earnings in countries with differing tax rates, changes in deferred tax assets and liabilities, or changes in tax laws.

Our ability to use our net operating loss carryforwards and certain other tax attributes may be limited.

As of December 31, 2021, we had $367.3 million of U.S. federal and $107.2 million of state net operating loss carryforwards available to reduce future taxable income, which will be carried forward indefinitely for U.S. federal tax purposes and will expire beginning in 2028 through 2039 for state tax purposes. It is possible that we will not generate taxable income in time to use these net operating loss carryforwards before their expiration or at all. In addition, the federal and state net operating loss carryforwards and certain tax credits may be subject to significant limitations under Section 382 and Section 383 of the Internal Revenue Code of 1986, as amended (the "Code"), respectively, and similar provisions of state law. Under those sections of the Code, if a corporation undergoes an "ownership change," the corporation's ability to use our pre-change net operating loss carryforwards and other pre-change attributes, such as research tax credits, to offset our post-change income or tax may be limited. In general, an "ownership change" will occur if there is a cumulative change in our ownership by "5% shareholders" that exceeds 50 percentage points over a rolling three-year period. Similar rules may apply under state tax laws. We completed an analysis and determined that the Business Combination did not result in an "ownership change" for purposes of Section 382 and Section 383 of the Code. We adopted a tax benefits preservation plan in the period ended September 30, 2022. However, we cannot make assurances that the plan will be successful in delaying or preventing an "ownership" change from occurring in the future.

Unanticipated changes in effective tax rates or adverse outcomes resulting from examination of our income or other tax returns could adversely affect our financial condition and results of operations.

We are subject to income taxes in the United States and other jurisdictions, and our tax liabilities will be subject to the allocation of expenses in differing jurisdictions. Our future effective tax rates could be subject to volatility or adversely affected by a number of factors, including:

- changes in the valuation of our deferred tax assets and liabilities;
- expected timing and amount of the release of any tax valuation allowances;
- tax effects of stock-based compensation;
- costs related to intercompany restructurings;
- changes in tax laws, regulations or interpretations thereof; or
- lower than anticipated future earnings in jurisdictions where we have lower statutory tax rates and higher than anticipated future earnings in jurisdictions where we have higher statutory tax rates.

In addition, we may be subject to audits of our income, sales and other transaction taxes by taxing authorities. Outcomes from these audits could have an adverse effect on our financial condition and results of operations.

We previously identified material weaknesses in our internal control over financial reporting, and the failure to maintain effective internal control over financial reporting could harm our business and negatively impact the market price of our common stock.

On April 12, 2021, the Acting Director of the Division of Corporation Finance and Acting Chief Accountant of the SEC together issued a statement regarding the accounting and reporting considerations for warrants issued by SPACs entitled “Staff Statement on Accounting and Reporting Considerations for Warrants Issued by Special Purpose Acquisition Companies” (the “SEC Statement”). As a result of the SEC Statement, we re-evaluated the accounting treatment of our warrants and concluded that certain warrants should have been classified as a liability measured at fair value, for the 30-day period from September 29, 2020 to October 29, 2020. As part of the re-evaluation process, we identified a material weakness in our internal control over financial reporting related to the accounting for certain of our warrants. Accounting for these warrants as a liability instead of equity would have reduced non-operating expense and net loss by $1.6 million for 2020. Additionally, a corresponding $1.6 million adjustment would have been made to reduce our accumulated deficit with an offsetting adjustment to additional paid in capital in our equity accounts at December 31, 2020. Accounting for these warrants as a liability instead of equity would not have any effect on Velodyne’s previously reported revenues, assets, liabilities, total equity, or cash flows for the year ended December 31, 2020. We have concluded the effects of accounting for the warrants as a liability instead of equity were immaterial to the previously issued financial statements. We have made an immaterial adjustment to our equity accounts for the effects of the accounting for the warrants in our consolidated statement of stockholders’ equity and balance sheet at December 31, 2021 by decreasing our accumulated deficit by $1.6 million with an offsetting decrease to our additional paid in capital.

As of December 31, 2020, our management determined that we did not maintain effective internal control over financial reporting as a result of identifying a material weakness related to our process and controls over tracking and reporting whistleblower complaints and litigation matters, which was remediated in the fourth quarter of 2020. In addition, management identified a material weakness in connection with our failure to adequately review revenue schedules associated with non-standard revenue arrangements, which resulted in misstatements of revenue and deferred revenue for the three months ended December 31, 2020. These misstatements have been corrected as of the end of 2021.

A material weakness is a deficiency, or a combination of deficiencies, in internal control over financial reporting such that there is a reasonable possibility that a material misstatement of annual or interim financial statements will not be prevented, or detected and corrected on a timely basis.

The material weaknesses identified above have been remediated as of December 31, 2021. We have incurred significant costs to remediate these weaknesses, primarily personnel costs and external consulting and legal fees. However, completion of remediation does not provide assurance that our controls will operate properly or that our financial statements will be free from error, which may undermine our ability to provide accurate, timely and reliable reports on our financial and operating results. There may be additional undetected material weaknesses in our internal control over financial reporting, as a result of which we may not detect financial statement errors on a timely basis. Further, to the extent we identify additional material weaknesses, we will not be able to fully assess whether corrective measures will remediate the material weakness in our internal control over financial reporting until we have completed our implementation efforts and sufficient time passes in order to evaluate their effectiveness. In addition, if we identify additional errors that result in material weaknesses in our internal control over financial reporting, we may not detect errors on a timely basis and our financial statements may be materially misstated. Moreover, in the future we may engage in business transactions, such as acquisitions, reorganizations or implementation of new information systems that could negatively affect our internal control over financial reporting and result in material weaknesses.

If we identify additional material weaknesses in our internal control over financial reporting, we may be late with the filing of our periodic reports, investors may lose confidence in the accuracy and completeness of our financial reports and the market price of our common stock could be negatively affected. This could cause investors to lose confidence in the accuracy and completeness of our financial reports and the market price of our common stock could be negatively affected, and we could become subject to investigations by the SEC or other regulatory authorities.

We may face litigation and other risks as a result of prior material weaknesses in our internal control over financial reporting.

Following the issuance of the SEC Statement and after consultation with our independent registered public accounting firm, we concluded that it was appropriate to re-evaluate certain of our warrants as liability measured at fair value, for the 30-day period from September 29, 2020 to October 29, 2020. As part of the re-evaluation process, we identified a material weakness in our internal control over financial reporting related to the accounting for certain of our warrants. As of December 31, 2020, our management determined that we did not maintain effective internal control over financial reporting as a result of identifying a material weakness related to our process and controls over tracking and reporting whistleblower complaints and litigation matters, which was remediated in the fourth quarter of 2020. In addition, management identified a material weakness in connection with our failure to adequately review revenue schedules associated with non-standard revenue arrangements, which resulted in misstatements of revenue and deferred revenue for the three months ended December 31, 2020. These misstatements have been corrected as of the end of 2020.

As a result of such material weaknesses, the change in accounting for our warrants, the failure to adequately review revenue schedules associated with non-standard revenue arrangements, the failure to track and report whistleblower complaints and litigation and other matters raised or that may in the future be raised by the SEC, we face the potential for litigation or other disputes which may include, among others, claims invoking federal and state securities laws, contractual claims or other claims arising from the re-evaluation of our warrants, the material weaknesses in our internal control over financial reporting and the preparation of our financial statements. We can provide no assurance that such litigation or dispute will not arise in the future. Any such litigation or dispute, whether successful or not, could have a material adverse effect on our business, results of operations and financial condition.

If we fail to maintain an effective system of internal controls, our ability to produce timely and accurate financial statements or comply with applicable regulations could be adversely affected.

We are subject to the reporting requirements of the Securities Exchange Act of 1934, as amended (the “Exchange Act”), the Sarbanes-Oxley Act (“SOX”), and the rules and regulations of Nasdaq. We expect that the requirements of these rules and regulations will continue to increase our legal, accounting and financial compliance costs, make some activities more difficult, time-consuming and costly, and place significant strain on our personnel, systems and resources.

The Sarbanes-Oxley Act requires, among other things, that we maintain effective disclosure controls and procedures and internal control over financial reporting. We are continuing to develop and refine our disclosure controls, internal control over financial reporting and other procedures that are designed to ensure that information required to be disclosed by us in the reports that we file with the SEC is recorded, processed, summarized and reported within the time periods specified in SEC rules and forms, and that information required to be disclosed in reports under the Exchange Act is accumulated and communicated to our principal executive and financial officers.

Our current controls and any new controls that we develop may become inadequate because of changes in conditions in our business. Further, we have previously identified material weaknesses in our internal control over financial reporting, and additional such weaknesses may be discovered in the future. See “—We previously identified material weaknesses in our internal control over financial reporting, and the failure to maintain effective internal control over financial reporting could harm our business and negatively impact the market price of our common stock." Any failure to develop or maintain effective controls, or any difficulties encountered in their implementation or improvement, could adversely affect our operating results or cause us to fail to meet our reporting obligations and may result in a restatement of our financial statements for prior periods. Any failure to implement and maintain effective internal controls also could adversely affect the results of periodic management evaluations and annual independent registered public accounting firm attestation reports regarding the effectiveness of our internal control over financial reporting that we are required to include in our periodic reports we will file with the SEC under Section 404 of the Sarbanes-Oxley Act. Ineffective disclosure controls and procedures and internal control over financial reporting could also cause investors to lose confidence in our reported financial and other information.

In order to maintain and improve the effectiveness of our disclosure controls and procedures and internal control over financial reporting, we have expended and anticipate that we will continue to expend significant resources, including accounting-related costs, and provide significant management oversight. Any failure to maintain the adequacy of our internal controls, or consequent inability to produce accurate financial statements on a timely basis, could increase our operating costs and could materially and adversely affect our ability to operate our business. In the event that our internal controls are perceived as inadequate or that we are unable to produce timely or accurate financial statements, investors may lose confidence in our operating results and our stock price could decline. In addition, if we are unable to continue to meet these requirements, we may not be able to maintain our listing on Nasdaq.

Risks Related to Ownership of our Common Stock

Resales of the shares of common stock could depress the market price of our common stock.

We had approximately 232.7 million shares of common stock outstanding as of September 30, 2022, and there may be a large number of shares of common stock sold in the market. The shares held by our public stockholders are freely tradable, and the shares of common stock held by other investors are also freely tradable, subject to compliance with Rule 144 under the Securities Act. In addition, from March 3, 2022 through March 11, 2022, David Hall sold 45.8 million shares of common stock and then from June 9 through July 1, 2022, David Hall and Marta Hall collectively sold 19.1 million shares of common stock, in each instance, creating significant downward pressure on our stock. Also there are an additional up to 39,594,032 shares issuable upon exercise of a warrant held by Amazon, which will be registered for resale. Such sales of shares of common stock or the perception of such sales may depress the market price of our common stock. If the market price of our common stock declines for any reason, including due to resales of shares of our common stock in the open market, it is possible that we may become subject to securities class action litigation. 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.

Amazon controls warrants to purchase a significant portion of our outstanding common stock, and they may in the future be able to influence the Company's corporate decisions, including a change of control.

We have agreed to issue to Amazon.com NV Investment Holdings LLC, a wholly-owned subsidiary of Amazon, a warrant ("Amazon Warrant") to acquire, following customary antidilution adjustments, up to an aggregate of 39,784,213 shares of our common stock at an exercise price of $4.16 per share, representing 17.1% of our outstanding common stock as of September 30, 2022, none of which are currently vested. The exercise price and the warrant shares issuable upon exercise of the warrant are subject to further antidilution adjustments.

If Amazon were to exercise the Amazon Warrant to purchase significant amounts of our common stock, they may be able to exercise significant control of us. They also may have interests that differ from other stockholders and may vote or otherwise act in ways with which we or other stockholders disagree or that may be adverse to your interests. A concentration of stock ownership may also have the effect of delaying, preventing or deterring a change of control, which could deprive our stockholders of an opportunity to receive a premium for their shares of our common stock as part of a sale of our Company and could affect the market price of our common stock. Conversely, such a concentration of stock ownership may facilitate a change of control under terms other stockholders may not find favorable or at a time when other stockholders may prefer not to sell.

Our only significant asset is our ownership interest in our Velodyne Lidar USA, Inc. subsidiary and such ownership may not be sufficient to pay dividends or make distributions or loans to enable us to pay any dividends on our common stock.

We are a holding company with no direct operations and no significant assets other than our ownership of Velodyne Lidar USA, Inc. We will depend on Velodyne Lidar USA, Inc. for distributions, loans and other payments to generate the funds necessary to meet our financial obligations, including our expenses as a publicly traded company and pay any dividends with respect to our common stock. The financial condition and operating requirements of Velodyne Lidar USA, Inc. may limit our ability to obtain cash from Velodyne Lidar USA, Inc. The earnings from, or other available assets of, Velodyne Lidar USA, Inc. may not be sufficient to pay dividends or make distributions or loans to enable us to pay any dividends on our common stock or satisfy our other financial obligations.

The ability of Velodyne Lidar USA, Inc. to make distributions, loans and other payments to us for the purposes described above and for any other purpose may be limited by credit agreements to which Velodyne Lidar USA, Inc. is party from time to time, including the existing loan and security agreement described in Item 7: “Management’s Discussion and Analysis of Financial Condition and Results of Operations”, and will be subject to the negative covenants set forth therein. Any loans or other extensions of credit to us from Velodyne Lidar USA, Inc. will be permitted only to the extent there is an applicable exception to the investment covenants under these credit agreements. Similarly, any dividends, distributions or similar payments to us from Velodyne Lidar USA, Inc. will be permitted only to the extent there is an applicable exception to the dividends and distributions covenants under these credit agreements.

A market for our securities may not continue, which would adversely affect the liquidity and price of our securities.

The price of our securities may fluctuate significantly due to the market’s reaction to the developments in our business and general market and economic conditions. An active trading market for our securities may not be sustained. In addition, the price of our securities can vary due to general economic conditions and forecasts, our general business condition and the release of our financial reports. You may be unable to sell your securities when desired or at an acceptable price unless an active trading market can be sustained.

If we do not meet the expectations of investors, stockholders or financial analysts, the market price of our securities may decline.

If we do not meet the expectations of investors or securities analysts, the market price of our securities may decline. In addition, fluctuations in the price of our securities could contribute to the loss of all or part of your investment. If an active market for our securities develops and continues, the trading price of our securities could be volatile and subject to wide fluctuations in response to various factors, some of which are beyond our control. Any of the factors listed below could have a material adverse effect on your investment in our securities and our securities may trade at prices significantly below the price you paid for them. In such circumstances, the trading price of our securities may not recover and may experience a further decline.

Factors affecting the trading price of our securities may include:

- actual or anticipated fluctuations in our quarterly financial results or the quarterly financial results of companies perceived to be similar to us;
- changes in the market’s expectations about our operating results;
- the public’s reaction to our press releases, our other public announcements and our filings with the SEC;
- speculation in the press or investment community;
- announcements of technological innovation, new products, acquisitions, strategic alliances, significant agreements by us or competitors;
- success of competitors;
- our operating results failing to meet the expectation of securities analysts or investors in a particular period;
- changes in financial estimates and recommendations by securities analysts concerning us or the market in general;
- operating and stock price performance of other companies that investors deem comparable to us;

- our ability to market new and enhanced products on a timely basis;
- changes in laws and regulations affecting our business;
- commencement of, or involvement in, litigation;
- changes in our capital structure, such as future issuances of securities or the incurrence of additional debt;
- the volume of shares of our common stock available for public sale;
- any major change in our Board or management;
- sales of substantial amounts of common stock by our directors, officers or significant stockholders or the perception that such sales could occur;
- the expiration of existing market stand-off or contractual lock-up agreements;
- the realization of any of the risk factors presented in this Quarterly Report on Form 10-Q;
- additions or departures of key personnel;
- failure to comply with the requirements of Nasdaq;
- failure to comply with SOX or other laws or regulations;
- actual, potential or perceived control, accounting or reporting problems;
- changes in accounting principles, policies and guidelines; and
- general economic and political conditions such as recessions, COVID-19, interest rates, fuel prices, international currency fluctuations and acts of war or terrorism.

Broad market and industry factors may materially harm the market price of our securities irrespective of our operating performance. The stock market in general and Nasdaq have experienced price and volume fluctuations that have often been unrelated or disproportionate to the operating performance of the particular companies affected. The trading prices and valuations of these stocks, and of our securities, may not be predictable. A loss of investor confidence in the market for the stocks of other companies which investors perceive to be similar to us could depress our stock price regardless of our business, prospects, financial conditions or results of operations. A decline in the market price of our securities also could adversely affect our ability to issue additional securities and our ability to obtain additional financing in the future.

In the past, securities class action litigation has often been initiated against companies following periods of volatility in their stock price. This type of litigation could result in substantial costs and divert our management’s attention and resources, and could also require us to make substantial payments to satisfy judgments or to settle litigation.

If securities or industry analysts do not publish or cease publishing research or reports about us, our business, or our market, or if they change their recommendations regarding our common stock adversely, then the price and trading volume of our common stock could decline.

The trading market for our common stock will be influenced by the research and reports that industry or securities analysts may publish about us, our business, our market, or our competitors. Securities and industry analysts do not currently, and may never, publish research on Velodyne. If no securities or industry analysts commence coverage of Velodyne, our stock price and trading volume would likely be negatively impacted. If any of the analysts who may cover us change their recommendation regarding our stock adversely, or provide more favorable relative recommendations about our competitors, the price of our common stock would likely decline. If any analyst who may cover us were to cease coverage or fail to regularly publish reports on us, we could lose visibility in the financial markets, which could cause our stock price or trading volume to decline.

If the price of our common stock exceeds $18.00 per share for a specified period of time, we may redeem unexpired Warrants prior to their exercise at a time that is disadvantageous to warrant holders, thereby making their public warrants worthless.

We have the ability to redeem outstanding public warrants at any time after they become exercisable and prior to their expiration, at a price of $0.01 per public warrant; provided that the last reported sales price of our common stock equals or exceeds $18.00 per share (as adjusted for stock splits, stock dividends, reorganizations, recapitalizations and the like) for any

20 trading days within a 30 trading-day period ending on the third trading day prior to the date on which we give notice of such redemption to the warrant holders. Redemption of the outstanding Warrants could force the Warrant holders: (i) to exercise their Warrants and pay the exercise price therefor at a time when it may be disadvantageous for them to do so; (ii) to sell their Warrants at the then-current market price when they might otherwise wish to hold their Warrants; or (iii) to accept the nominal redemption price which, at the time the outstanding Warrants are called for redemption, is likely to be substantially less than the market value of their Warrants.

Warrants and other shares underlying equity awards could increase the number of shares eligible for future resale in the public market and result in dilution to our stockholders.

As of September 30, 2022, we had outstanding publicly traded warrants exercisable for 4,480,425 shares of common stock at $11.50 per share. In addition, as of September 30, 2022, Amazon had an outstanding warrant exercisable for up to 39,784,213 shares of common stock at $4.16 per share, none of which are currently vested. To the extent the trading price of our common stock exceeds the exercise price, the shares of our common stock issued upon exercise of any of our warrants will result in dilution to the then existing holders of common stock and increase the number of shares eligible for resale in the public market. Sales of substantial numbers of such shares in the public market could adversely affect the market price of our common stock.

Anti-takeover provisions contained in our Amended and Restated Certificate of Incorporation and bylaws, as well as provisions of Delaware law, could impair a takeover attempt.

Our Amended and Restated Certificate of Incorporation contains provisions that may discourage unsolicited takeover proposals that stockholders may consider to be in their best interests. We are also subject to anti-takeover provisions under Delaware law, which could delay or prevent a change of control. Together, these provisions may make more difficult the removal of management and may discourage transactions that otherwise could involve payment of a premium over prevailing market prices for our securities. These provisions include:

- no cumulative voting in the election of directors, which limits the ability of minority stockholders to elect director candidates;
- a classified board of directors with three-year staggered terms, which could delay the ability of stockholders to change the membership of a majority of the Board;
- the requirement that directors may only be removed from the Board for cause;
- the right of our Board to elect a director to fill a vacancy created by the expansion of our Board or the resignation, death or removal of a director in certain circumstances, which prevents stockholders from being able to fill vacancies on our Board;
- a prohibition on stockholder action by written consent, which forces stockholder action to be taken at an annual or special meeting of our stockholders;
- a prohibition on stockholders calling a special meeting and the requirement that a meeting of stockholders may only be called by a majority of the Board, the chairman of the Board or the chief executive office and may not be called by any other person, which may delay the ability of our stockholders to force consideration of a proposal or to take action, including the removal of directors;
- the requirement that changes or amendments to certain provisions of our Amended and Restated Certificate of Incorporation must be approved by holders of at least two-thirds of our common stock;
- advance notice procedures that stockholders must comply with in order to nominate candidates to our Board or to propose matters to be acted upon at a meeting of stockholders, which may discourage or deter a potential acquirer from conducting a solicitation of proxies to elect the acquirer's own slate of directors or otherwise attempting to obtain control of Velodyne; and
- an opt out from Section 203 of the General Corporation Law of the State of Delaware (the DGCL) and, instead, inclusion of a provision in the Amended and Restated Certificate of Incorporation that is substantially similar to Section 203 of the DGCL.

Activist shareholders, including David Hall, could negatively impact our business and cause disruptions.

On April 11, 2022, David Hall, our former Chairman and CEO, filed a preliminary proxy statement to solicit proxies in favor of the election of three director candidates, including Mr. Hall and his wife, Marta Hall, to our board of directors at our 2022 annual meeting of stockholders. On April 21, 2022, Ms. Hall resigned from our Board, and on April 25, 2022, Mr. Hall withdrew from the proxy contest. Furthermore, as of July 1, 2022, Mr. Hall and Ms. Hall reported that they had sold substantially all of their shares in the Company. Responding to these actions by Mr. Hall was, and responding to similar actions by other activist stockholders in the future will be, costly and time-consuming, disruptive to our operations and diverts the attention of management, our board of directors and our employees. Any contested election with respect to the Company's directors will require us to incur substantial legal, public relations and other advisory fees and proxy solicitation expenses. Further, we may choose to initiate, or may become subject to, litigation as a result of proposals by activist shareholders or proxy contests or matters relating thereto, which would serve as a further distraction to our board of directors and management and could require us to incur significant additional costs.

Compliance obligations under the Sarbanes-Oxley Act may require substantial financial and management resources.

As a public company, we are required to comply with the SEC’s rules implementing Sections 302 and 404 of SOX, which require management to certify financial and other information in our quarterly and annual reports and provide an annual management report on the effectiveness of internal control over financial reporting. To comply with the requirements of being a public company, we have undertaken and expect to continue to undertake various actions, such as implementing additional internal controls and procedures and hiring additional accounting or internal audit staff. Additionally, we have previously identified material weaknesses in our internal control over financial reporting. We remediated one material weakness in the fourth quarter of 2020 and the remaining material weaknesses were remediated in 2021. See “—We previously identified material weaknesses in our internal control over financial reporting, and the failure to maintain effective internal control over financial reporting could harm our business and negatively impact the market price of our common stock.” Our management has devoted significant time, attention and resources to these remedial efforts and intends to hire additional personnel as part of our remediation plan.

Testing and maintaining these controls can divert our management’s attention from other matters that are important to the operation of our business. If our independent registered public accounting firm is unable to express an opinion as to the effectiveness of our internal controls over financial reporting, investors may lose confidence in the accuracy and completeness of our financial reports and the market price of our common stock could be negatively affected, and we could become subject to investigations by the SEC or other regulatory authorities, which could require additional financial and management resources.

We must comply Nasdaq’s listing requirements for the continued listing of our common stock on Nasdaq.

Our common stock is currently listed on the Nasdaq Global Select Market, which has qualitative and quantitative listing criteria. However, we cannot assure you that our common stock will continue to be listed on Nasdaq in the future. In order to continue listing our common stock on Nasdaq, we must maintain certain financial, distribution and stock price levels. Generally, we must maintain a minimum amount in stockholders’ equity and a minimum number of holders of our common stock.

The continued listing requirements in Nasdaq Marketplace Rule 5550(a)(2) requires issuers to maintain a minimum bid price of at least $1.00 per share. If we fail to maintain a minimum closing bid price of $1.00 for 30 consecutive trading days, Nasdaq will issue a noncompliance notice. The trading price of our common stock has closed below $1.00 for 21 days in a row as of November 4, 2022.

Failure to maintain our Nasdaq listing could negatively impact us and our stockholders by reducing the willingness of investors to hold our common stock because of the resulting decreased price, liquidity and trading of our common stock, limited availability of price quotations, and reduced news and analyst coverage. These developments may also require brokers trading in our common stock to adhere to more stringent rules and may limit our ability to raise capital by issuing additional shares in the future. Delisting may adversely impact the perception of our financial condition, and cause reputational harm with investors and parties conducting business with us.

Our Amended and Restated Certificate of Incorporation designates the Court of Chancery of the State of Delaware and federal court within the State of Delaware as the exclusive forum for certain types of actions and proceedings that stockholders may initiate, which could limit a stockholder's ability to obtain a favorable judicial forum for disputes with us or our directors, officers or employees.

Our Amended and Restated Certificate of Incorporation provides that, subject to limited exceptions, the Court of Chancery of the State of Delaware and federal court within the State of Delaware will be exclusive forums for any:

- derivative action or proceeding brought on our behalf;
- action asserting a claim of breach of a fiduciary duty owed by any of our directors, officers or other employees to Velodyne or our stockholders;
- action asserting a claim against Velodyne arising pursuant to any provision of the DGCL, our Amended and Restated Certificate of Incorporation or bylaws; or
- other action asserting a claim against Velodyne that is governed by the internal affairs doctrine.

This choice of forum provision does not apply to actions brought to enforce a duty or liability created under the Exchange Act. Our Amended and Restated Certificate of Incorporation also provides that the federal district courts of the United States are the exclusive forum for the resolution of any complaint asserting a cause of action arising under the Securities Act. We intend for this provision to apply to any complaints asserting a cause of action under the Securities Act despite the fact that Section 22 of the Securities Act creates concurrent jurisdiction for the federal and state courts over all actions brought to enforce any duty or liability created by the Securities Act or the rules and regulations promulgated thereunder. There is uncertainty as to whether a court would enforce such a provision with respect to claims under the Securities Act, and stockholders will not be deemed to have waived compliance with the federal securities laws and the rules and regulations thereunder. Any person or entity purchasing or otherwise acquiring any interest in shares of capital stock shall be deemed to have notice of and to have consented to the provisions of the Amended and Restated Certificate of Incorporation described above.

These choice of forum provisions may limit a stockholder's ability to bring a claim in a judicial forum that it finds favorable for disputes with us or our directors, officers or other employees, which may discourage such lawsuits against us and our directors, officers and employees. Alternatively, if a court were to find these provisions of our Amended and Restated Certificate of Incorporation inapplicable to, or unenforceable in respect of, one or more of the specified types of actions or proceedings, we may incur additional costs associated with resolving such matters in other jurisdictions, which could adversely affect our business and financial condition.

Item 2. Unregistered Sales of Equity Securities and Use of Proceeds

As disclosed in our Current Report on Form 8-K dated February 4, 2022, we have agreed to issue to Amazon.com NV Investment Holdings LLC, a wholly-owned subsidiary of Amazon, a warrant to acquire up to an aggregate of 39,594,032 shares of our common stock at an exercise price of $4.18 per share. The exercise price and the warrant shares issuable upon exercise of the warrant are subject to customary antidilution adjustments. Following stock sales under our ATM offering, during the quarter ended September 30, 2022, the antidilution adjustments provided Amazon with warrants to acquire an additional 190,181 shares, for an aggregate of 39,784,213 shares at an exercise price of $4.16 per share.

Item 3. Default Upon Senior Securities

None.

Item 4. Mine Safety Disclosures

None.

Item 5. Other Information

None.

Item 6. Exhibits

(a) *Exhibits*.

Exhibit No.	Description
10.1*	Executive Employment Agreement by and between Velodyne, Inc. and Mark Weinswig, dated May 3, 2022.
10.2*	Executive Severance Agreement by and between Velodyne, Inc. and Mark Weinswig, dated May 3, 2022.
31.1	Certification of Principal Executive Officer Pursuant to Rules 13a-14(a) and 15d-14(a) under the Securities Exchange Act of 1934, as Adopted Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
31.2	Certification of Principal Financial Officer Pursuant to Rules 13a-14(a) and 15d-14(a) under the Securities Exchange Act of 1934, as Adopted Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
32.1^	Certification of Principal Executive Officer Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
32.2^	Certification of Principal Financial Officer Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
101.INS	XBRL Instance Document
101.SCH	XBRL Taxonomy Extension Schema Document
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document
101.LAB	XBRL Taxonomy Extension Label Linkbase Document
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document
104	Cover Page Interactive Data File - The cover page from this Quarterly Report on Form 10-Q is formatted in iXBRL.

* Indicates a management contract or compensatory plan or arrangement.

(^) In accordance with Item 601(b)(32)(ii) of Regulation S-K and SEC Release No. 34-47986, the certifications furnished in Exhibits 32.1 and 32.2 hereto are deemed to accompany this Quarterly Report on Form 10-Q and will not be deemed “filed” for purposes of Section 18 of the Exchange Act or deemed to be incorporated by reference into any filing under the Exchange Act or the Securities 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.

Date:	November 8, 2022	VELODYNE LIDAR, INC.
		/s/ Theodore L. Tewksbury
		Theodore L. Tewksbury Chief Executive Officer and Director (Principal Executive Officer)
		/s/ Mark Weinswig
		Mark Weinswig Chief Financial Officer (Principal Financial and Accounting Officer)

May 3, 2022

Mark Weinswig

Dear Mark,

Velodyne Lidar USA, Inc. (“Velodyne”), a wholly owned subsidiary of Velodyne Lidar, Inc. (“Parent”), is pleased to offer you employment with the company on the terms described below.

Position. You will start in a full-time position as Chief Financial Officer. You will report to Ted Tewksbury, CEO. Your target start date will be on May 16, 2022.

Compensation. You will be paid a starting salary at the rate of **$370,000** per year, payable on Velodyne’s regular payroll dates and subject to all withholdings and deductions as required by law.

You will be eligible to participate in Velodyne’s annual bonus plan. Your target bonus opportunity will be **70%** to be paid annually and prorated based on your start date. The bonus, if any, will be based on individual objectives established by your manager. You must be continuously employed through the bonus payment date to be eligible to receive an annual bonus payment for the particular calendar year. The bonus amount is subject to applicable taxes and withholdings.

Sign-on Bonus. You will be paid a sign-on bonus of **$30,000** in the next regularly scheduled payroll after the 3-month anniversary of your starting as an employee of Velodyne, subject to all withholdings and deductions as required by law, provided you are continuously employed by Velodyne on the anniversary date.

Employee Benefits. As a full-time employee of Velodyne you will be eligible to participate in the Velodyne-sponsored benefits. The Velodyne-sponsored benefits are described in the employee benefit summary that I have enclosed with this letter. You will start with 15 Days of PTO.

Equity Awards. The Company shall grant you the following equity awards with a vesting commencement date as of your start date with the Company:

- an award of time-based Restricted Stock (the “RS Award”) under the Velodyne Lidar, Inc. 2020 Equity Incentive Plan (the “Plan”), having a value of **$480,000** (Four hundred eighty thousand dollars), as determined in accordance with our equity-grant policy. The number of shares shall be determined by taking the value of the award and dividing it by the average closing price of Velodyne common stock for the thirty (30) days immediately preceding the last day of the calendar month of your hire date. The RS Award will be subject to the terms and conditions of the Plan and a notice of restricted stock award and restricted stock agreement (the “Award Agreement”). As will be more fully described in the Award Agreement, the RS Award will vest over 4 years, with 25% of the RS Award vesting on the first anniversary of the vesting commencement date, and the remainder ratably, on a quarterly basis, over the subsequent 3 years if you remain in continuous service with Velodyne through each installment vesting date.

- an award of performance-based restricted stock (the "PS Award") under the Plan, having a value at target performance level of **$1,120,000** (one million one hundred twenty thousand dollars), as determined in accordance with our equity-grant policy. The PS Award will be subject to the terms and conditions of the Plan and a notice of restricted stock award and restricted stock agreement (collectively, "PS Award Agreement"). As will be more fully described in the PS Award Agreement and the continuous Service requirements described in the following sentence, the vesting and non-forfeitability of the PS Awards will be subject to satisfaction of certain performance criteria that the Board will determine, in good faith consultation with you, prior to the PS Award grant date.

Proprietary Information and Inventions Agreement. As a condition of your employment, you will be required to sign Velodyne's standard At-Will Employment, Confidential Information, Invention Assignment, and Arbitration Agreement ("Employment Agreement"), which is attached.

Employment Relationship. You may terminate your employment with Velodyne at any time and for any reason whatsoever simply by notifying Velodyne. Likewise, Velodyne may terminate your employment at any time and for any reason whatsoever, with or without cause or advance notice. Any contrary representations which may have been made to you are superseded by this offer. This is the full and complete agreement between you and Velodyne on this term. Although your job duties, title, compensation and benefits, as well as Velodyne's personnel policies and procedures, may change from time to time, the "at will" nature of your employment may only be changed in an express written agreement signed by you and Velodyne's Chief Executive Officer or President.

Outside Activities. While you render services to Velodyne, you agree that you will devote your full business time and best efforts to the performance of your duties and to the furtherance of Velodyne's interests. In addition, while you render services to Velodyne, you will not assist any person or entity in competing with Velodyne, in preparing to compete with Velodyne or in hiring any employees or consultants of Velodyne.

Current/Former Employer. By signing this letter, you confirm that you are under no contractual or other legal obligations that would prohibit you from performing your duties with Velodyne. You further confirm that you will inform Velodyne about any such restrictions and provide Velodyne with as much information about them as possible, including any agreements between you and your current or former employer describing such restrictions on your activities. You further confirm that you will not remove or take any documents or proprietary data or materials of any kind, electronic or otherwise, with you from your current or former employer to Velodyne without written authorization from your current or former employer.

Contingencies. This offer of employment is contingent upon the following, and we reserve the right to withdraw this offer should the results of any of the below not be successful:

a) Your ability to provide and maintain the proper and necessary documentation required for you and Velodyne to comply with all applicable United States immigration laws and regulations. Please be prepared on your first day of employment to show specific documentation to certify your legal right to work in the United States.

b) Your execution (signature) of the Velodyne Employee Agreement which protects the intellectual property and confidential information of Velodyne, and prohibits the unauthorized use of the intellectual property and confidential information of any other company.

c) The satisfactory review and/or verification of background information, including, but not limited to, prior employment, reference checks, education, Department of Motor Vehicles, Social Security, and criminal records.

Entire Agreement. This letter supersedes and replaces any prior understandings or agreements, whether oral, written or implied, between you and Velodyne regarding the matters described in this letter.

If you wish to accept this offer, please sign, date, and return this letter and the enclosed Employment Agreement.

This offer, if not accepted, will expire at the close of business on May 4, 2022.

Very truly yours,

/s/ Kathy McBeath

Velodyne Lidar USA, Inc. By: Kathy McBeath, Chief People Officer

I have read and accept this employment offer:

/s/ Mark Weinswig

Mark Weinswig

Date Signed: 5/4/2022

Attachment(s)

Confidentiality and Invention Assignment Agreement Employee Benefits Summary

VELODYNE LIDAR, INC.

SEVERANCE AND CHANGE IN CONTROL AGREEMENT

This Severance and Change in Control Agreement (the "***Agreement***") is made and entered into by and between Mark Weinswig ("***Executive***") and Velodyne Lidar, Inc., a Delaware corporation ("***Velodyne***"), as of May 3, 2022 (the "***Effective Date***").

This Agreement provides severance and acceleration benefits in connection with certain qualifying terminations of Executive's employment with Velodyne and its subsidiaries, as applicable (referred to collectively herein as the "***Velodyne Group***"). Certain capitalized terms are defined in Section 8. Velodyne and Executive agree as follows:

1. Term. This Agreement shall become effective on the date on which it is signed by Executive (the "***Effective Date***").

2. Certain Involuntary Termination Benefits.

(a) Involuntary Termination Outside of a Change in Control Period. If Executive is subject to an Involuntary Termination that occurs outside of a Change in Control Period and Executive satisfies the conditions described in Section 2(c) below, then:

(i) Velodyne or another member of the Velodyne Group, as applicable, shall continue to pay such Executive's Base Salary for a period of twelve (12) months following such Executive's Separation, which will be paid in accordance with Velodyne's or, if applicable, such other member of the Velodyne Group's standard payroll procedures; and

(ii) If Executive timely elects continued coverage under COBRA, Velodyne or another member of the Velodyne Group, as applicable, shall pay the same portion of the monthly premium under COBRA as it pays for active employees and their eligible dependents until the earliest of (a) the last day of the period ending on the date that is twelve (12) months following such Executive's Separation, (b) the expiration of Executive's continuation coverage under COBRA or (c) the date when Executive becomes eligible for substantially equivalent health insurance coverage in connection with new employment. Notwithstanding the foregoing, if Velodyne or, if applicable, another member of the Velodyne Group, determines in its sole discretion that it cannot provide the foregoing subsidy of COBRA coverage without potentially violating or causing Velodyne or any other member of the Velodyne Group to incur additional expense as a result of noncompliance with applicable law (including, without limitation, Section 2716 of the Public Health Service Act), Velodyne or another member of the Velodyne Group, as applicable, instead will pay Executive a taxable monthly payment in an amount equal to the monthly COBRA premium that Executive would be required to pay to continue the group health coverage in effect on the date of Executive's Separation for Executive and Executive's eligible dependents pursuant to the health insurance plans of the Velodyne Group in which Executive or Executive's eligible dependents participated as of the day of Executive's Separation (which amount shall be based on the premium for the first month of

COBRA coverage), which payments shall be made regardless of whether Executive elects COBRA continuation coverage.

(b) Involuntary Termination Within a Change in Control Period. If Executive is subject to an Involuntary Termination that occurs within a Change in Control Period and Executive satisfies the conditions described in Section 2(c) below, then:

(iii) Velodyne or another member of the Velodyne Group, as applicable, shall continue to pay such Executive's Base Salary for a period of twelve (12) months following such Executive's Separation, which will be paid in accordance with Velodyne's or, if applicable, such other member of the Velodyne Group's standard payroll procedures;

(iv) Velodyne or another member of the Velodyne Group, as applicable, shall pay the Executive a lump-sum cash amount equal to Executive's annual target bonus established by Velodyne or, as applicable, by such other member of the Velodyne Group, for the fiscal year in which Executive's Separation occurs; and

(v) If Executive timely elects continued coverage under COBRA, Velodyne or another member of the Velodyne Group, as applicable, shall pay the same portion of the monthly premium under COBRA as it pays for active employees and their eligible dependents until the earliest of (a) the last day of the period ending on the date that is twelve (12) months following such Executive's Separation, (b) the expiration of Executive's continuation coverage under COBRA or (c) the date when Executive becomes eligible for substantially equivalent health insurance coverage in connection with new employment. Notwithstanding the foregoing, if Velodyne or, if applicable, such other member of the Velodyne Group, determines in its sole discretion that it cannot provide the foregoing subsidy of COBRA coverage without potentially violating or causing Velodyne or any other member of the Velodyne Group to incur additional expense as a result of noncompliance with applicable law (including, without limitation, Section 2716 of the Public Health Service Act), Velodyne or such other member of the Velodyne Group, as applicable, instead will pay Executive a taxable monthly payment in an amount equal to the monthly COBRA premium that Executive would be required to pay to continue the group health coverage in effect on the date of Executive's Separation for Executive and Executive's eligible dependents pursuant to the health insurance plans of the Velodyne Group in which Executive or Executive's eligible dependents participated as of the day of Executive's Separation (which amount shall be based on the premium for the first month of COBRA coverage), which payments shall be made regardless of whether Executive elects COBRA continuation coverage;

(vi) One hundred percent (100%) of the shares subject to each of Executive's then-outstanding equity awards subject to time-based vesting shall become fully vested. In the case of equity awards with performance-based vesting, the level of achievement of the applicable performance goals will be deemed to equal the greater of (a) the target level of achievement of the performance goals or (ii) the actual level of achievement of the performance goals (to the extent then reasonably determinable). For the avoidance of doubt, if Executive's Involuntary Termination occurs prior to a Change in Control, then any unvested portion of Executive's then-outstanding equity awards will remain outstanding until the earlier of (a) three
(3) months after the Involuntary Termination or (b) the occurrence of a Change in Control so that

any additional benefits due on an Involuntary Termination Within a Change in Control Period can be provided if a Change in Control occurs within 3 months following such Involuntary Termination (provided that in no event will Executive's stock options or similar equity awards remain outstanding beyond the equity award's maximum term to expiration). In such case, if no Change in Control occurs within 3 months following an Involuntary Termination, any then- unvested portion of Executive's equity awards will automatically be forfeited on the 3-month anniversary of the Involuntary Termination.

(c) Preconditions to Severance and Vesting Acceleration Benefits / Timing of Benefits. As a condition to Executive's receipt of any benefits described in Section 2(a) or 2(b), Executive shall execute, and allow to become effective, a general release of claims provided by Velodyne or such other member of the Velodyne Group, as applicable, consistent with past practice and promptly after such Involuntary Termination and, if requested by Velodyne's Board of Directors, must immediately resign as an officer and member of the Velodyne's Board of Directors and as an officer and member of the board of directors of any subsidiaries of Velodyne. Executive must execute and return the release on or before the date specified by Velodyne or such other member of the Velodyne Group, as applicable, in the release, which will in no event be later than 50 days after Executive's employment terminates. If Executive fails to return the release by the deadline or if Executive revokes the release, then Executive will not be entitled to the benefits described in this Section 2. All such benefits will be provided, paid or commence in all events within 60 days after Executive's Involuntary Termination (and, where applicable, will include at such time any amounts accrued from the date of Executive's Separation). If such 60- day period spans two calendar years, then such benefit will in any event be provided, paid or commence in the second calendar year; *provided that* where such 60-day period does not span two calendar years, then the benefits will be provided, paid or commence within 30 days after execution of such general release of claims (without revocation).

(d) Death of the Executive. If the Executive dies before all payments or benefits the Executive is entitled to receive under the Agreement have been paid, such unpaid amounts will be paid to the Executive's designated beneficiary, if living, or otherwise to the Executive's personal representative in a lump-sum payment as soon as possible following the Executive's death.

3. Section 409A. Velodyne intends that all payments and benefits provided under this Agreement or otherwise are exempt from, or comply with, with the requirements of Section 409A of the Internal Revenue Code of 1986, as amended (the "**Code**") so that none of the payments or benefits will be subject to the additional tax imposed under Code Section 409A, and any ambiguities herein will be interpreted in accordance with such intent. For purposes of Code Section 409A, each payment, installment or benefit payable under this Agreement is hereby designated as a separate payment. In addition, if Velodyne determines that Executive is a "specified employee" under Code Section 409A(a)(2)(B)(i) at the time of Executive's Separation, then (i) any severance payments or benefits, to the extent that they are subject to Code Section 409A, will not be paid or otherwise provided until the first business day following the earlier of (A) expiration of the six-month period measured from Executive's Separation or
(B) the date of Executive's death and (ii) any installments that otherwise would have been paid or provided prior to such date will be paid or provided in a lump sum when the severance payments or benefits commence.

4. <u>Section 280G</u>.

(e) Notwithstanding anything contained in this Agreement to the contrary, in the event that the payments and benefits provided pursuant to this Agreement, together with all other payments and benefits received or to be received by Executive ("**Payments**"), constitute "parachute payments" within the meaning of Code Section 280G, and, but for this Section 4, would be subject to the excise tax imposed by Code Section 4999 (the "**Excise Tax**"), then the Payments shall be made to Executive either (i) in full or (ii) as to such lesser amount as would result in no portion of the Payments being subject to the Excise Tax (a "**Reduced Payment**"), whichever of the foregoing amounts, taking into account applicable federal, state and local income taxes and the Excise Tax, results in Executive's receipt on an after-tax basis, of the greatest amount of benefits, notwithstanding that all or some portion of the Payments may be subject to the Excise Tax. For the avoidance of doubt, the Payments shall include acceleration of vesting of equity awards granted by Velodyne that vest based on service to Velodyne or any other member of the Velodyne Group and that accelerate in connection with a Change in Control of Velodyne, but only to the extent such acceleration of vesting is deemed a parachute payment with respect to a Change in Control of Velodyne.

(f) For purposes of determining whether to make a Reduced Payment, if applicable, Velodyne shall cause to be taken into account all federal, state and local income and employment taxes and excise taxes applicable to the Executive (including the Excise Tax). If a Reduced Payment is made, Velodyne, and as applicable, all other members of the Velodyne Group, shall reduce or eliminate the Payments in the following order, unless (to the extent permitted by Section 409A of the Code) Executive elects to have the reduction in payments applied in a different order: (1) cancellation of accelerated vesting of options with no intrinsic value, (2) reduction of cash payments, (3) cancellation of accelerated vesting of equity awards other than options, (4) cancellation of accelerated vesting of options with intrinsic value and (5) reduction of other benefits paid to the Executive. In the event that acceleration of vesting is reduced, such acceleration of vesting shall be cancelled in the reverse order of the date of grant of the Executive's equity awards. In the event that cash payments or other benefits are reduced, such reduction shall occur in reverse order beginning with payments or benefits which are to be paid farthest in time from the date of the determination. For avoidance of doubt, an option will be considered to have no intrinsic value if the exercise price of the shares subject to the option exceeds the fair market value of such shares.

(g) All determinations required to be made under this Section 4 (including whether any of the Payments are parachute payments and whether to make a Reduced Payment) will be made by a nationally recognized independent accounting firm selected by Velodyne. For purposes of making the calculations required by this section, the accounting firm may make reasonable assumptions and approximations concerning applicable taxes and may rely on reasonably, good faith interpretations concerning the application of Code Sections 280G and 4999. Velodyne will bear the costs that the accounting firm may reasonably incur in connection with the calculations contemplated by this Section 4. The accounting firm's determination will be binding on both Executive and Velodyne and the other members of the Velodyne Group, as applicable, absent manifest error.

(h) As a result of uncertainty in the application of Sections 4999 and 280G of the Code at the time of the initial determination by the accounting firm hereunder, it is possible that payments will have been made by Velodyne or another member of the Velodyne Group which should not have been made (an "***Overpayment***") or that additional payments which will not have been made by Velodyne or another member of the Velodyne Group could have been made (an "***Underpayment***"), consistent in each case with the calculation of whether and to what extent a Reduced Payment shall be made hereunder. In either event, the accounting firm shall determine the amount of the Underpayment or Overpayment that has occurred. In the event that the accounting firm determines that an Overpayment has occurred, the Executive shall promptly repay, or transfer, to Velodyne or such other member of the Velodyne Group, as applicable, the amount of any such Overpayment; provided, however, that no amount shall be payable, or transferable, by the Executive to Velodyne or any other member of the Velodyne Group if and to the extent that such payment or transfer would not reduce the amount that is subject to taxation under Section 4999 of the Code. In the event that the accounting firm determines that an Underpayment has occurred, such Underpayment shall promptly be paid or transferred by Velodyne or such other member of the Velodyne Group, as applicable, to or for the benefit of the Executive, together with interest at the applicable federal rate provided in Section 7872(f)(2) of the Code.

(i) If this Section 4 is applicable with respect to an Executive's receipt of a Reduced Payment, it shall supersede any contrary provision of any plan, arrangement or agreement governing the Executive's rights to the Payments.

5. Velodyne's Successors. Any successor to Velodyne or to all or substantially all of Velodyne's business and/or assets shall assume Velodyne's obligations under this Agreement and agree expressly to perform Velodyne's obligations under this Agreement in the same manner and to the same extent as Velodyne would be required to perform such obligations in the absence of a succession.

6. Miscellaneous Provisions.

(j) Modification or Waiver. No provision of this Agreement may be modified, waived or discharged unless the modification, waiver or discharge is agreed to in writing and signed by Executive and by an authorized officer of Velodyne (other than Executive). No waiver by either party of any breach of, or of compliance with, any condition or provision of this Agreement by the other party shall be considered a waiver of any other condition or provision or of the same condition or provision at another time.

(k) Integration. This Agreement represents the entire agreement and understanding between the parties as to the subject matter herein and supersedes all prior or contemporaneous agreements, whether written or oral, with respect to the subject matter of this Agreement.

(l) Choice of Law. The validity, interpretation, construction and performance of this Agreement shall be governed by the internal substantive laws, but not the conflicts of law rules, of the State of California.

(m) Tax Withholding. Any payments provided for hereunder are subject to reduction to reflect applicable withholding and payroll taxes and other reductions required under federal, state or local law.

(n) Notices. Any notice required by the terms of this Agreement shall be given in writing. It shall be deemed effective upon (i) personal delivery, (ii) deposit with the United States Postal Service, by registered or certified mail, with postage and fees prepaid or
(iii) deposit with nationally recognized overnight courier, with shipping charges prepaid. Notice shall be addressed to Velodyne at its principal executive office (attention: [Chief People Officer/General Counsel]) and to Executive at the address that he or she most recently provided to Veloydne in accordance with this Subsection (e).

(o) Severability. The invalidity or unenforceability of any provision or provisions of this Agreement shall not affect the validity or enforceability of any other provision hereof, which shall remain in full force and effect.

(p) Counterparts. This Agreement may be executed in counterparts, each of which shall be deemed an original, but all of which together will constitute one and the same instrument.

7. At-Will Employment. Nothing contained in this Agreement shall (a) confer upon Executive any right to continue in the employ of Velodyne or any other member of the Velodyne Group, (b) constitute any contract or agreement of employment, or (c) interfere in any way with the at-will nature of Executive's employment with Velodyne or, as applicable, such other member of the Velodyne Group.

8. Definitions. The following terms referred to in this Agreement shall have the following meanings:

(q) "**Base Salary**" means Executive's base salary as in effect immediately prior to an Involuntary Termination; provided, however, that in the event of a Resignation for Good Reason due to a material reduction in Executive's base salary, "Base Salary" means Executive's base salary as in effect immediately prior to such reduction.

(r) "**Cause**" means Executive's (i) unauthorized use or disclosure of the confidential information or trade secrets of Velodyne or any other member of the Velodyne Group, (ii) material breach of any agreement with Velodyne or any other member of the Velodyne Group, (iii) material failure to comply with the written policies or rules of Velodyne or any other member of the Velodyne Group, (iv) conviction of, or plea of "guilty" or "no contest" to, a felony under the laws of the United States or any State involving fraud, embezzlement or any other act of moral turpitude, (v) gross negligence or willful misconduct related to the business of Velodyne or any other member of the Velodyne Group, (vi) willful and repeated failure to perform reasonably assigned and essential duties, or (vii) failure to cooperate in good faith with a governmental or internal investigation of Velodyne, any other member of the Velodyne Group, or any of its or their respective directors, officers or employees, if Velodyne or any other member of the Velodyne Group has requested such cooperation. For purposes of this definition, Cause shall not exist unless Velodyne or any other member of the Velodyne Group delivers written notice to Executive specifically identifying the conduct, events or circumstances that may provide grounds for Cause, in reasonable detail. To the extent curable, Executive shall have ten (10) business days following receipt of the notice to cure or remedy such conduct, events or circumstances before any Termination for Cause is finalized.

(s) "**Change in Control**" means (i) a sale, conveyance or other disposition of all or substantially all of the assets, property or business of Velodyne, except where such sale, conveyance or other disposition is to a wholly owned subsidiary of Velodyne, (ii) a merger or consolidation of Velodyne with or into another corporation, entity or person, other than any such transaction in which the holders of voting capital stock of Velodyne outstanding immediately prior to the transaction continue to hold a majority of the voting capital stock of Velodyne (or the surviving or acquiring entity) outstanding immediately after the transaction (taking into account only stock of Velodyne held by such stockholders immediately prior to the transaction and stock issued on account of such stock in the transaction), or (iii) the direct or indirect acquisition (including by way of a tender or exchange offer) by any person, or persons acting as a group, of beneficial ownership or a right to acquire beneficial ownership of shares representing a majority of the voting power of the then outstanding shares of capital stock of Velodyne; provided, however, that a Change in Control shall not include any transaction or series of related transactions (1) principally for *bona fide* equity financing purposes or (2) effected exclusively for the purpose of changing the domicile of Velodyne. A series of related transactions shall be deemed to constitute a single transaction for purposes of determining whether a Change in Control has occurred. In addition, if a Change in Control constitutes a payment event with respect to any amount that is subject to Code Section 409A, then the transaction must also constitute a "change in control event" as defined in Treasury Regulation Section 1.409A-3(i)(5) to the extent required by Code Section 409A.

(t) "**Change in Control Period**" means the period commencing on the date that is three (3) months prior to the date on which the Change in Control occurs and ending on the date that is twelve (12) months after the date of such Change in Control.

(u) "**COBRA**" means the Consolidated Omnibus Budget Reconciliation Act of 1985, as amended.

(v) "**Involuntary Termination**" means either Executive's (i) Termination Without Cause, or (ii) Resignation for Good Reason.

(w) "**Resignation for Good Reason**" means a Separation as a result of Executive's resignation from employment within 12 months after one of the following conditions has come into existence without Executive's express written consent: (i) a reduction in Executive's total target annual cash compensation by more than 10%, other than a general reduction that is part of a cost-reduction program that affects all similarly situated employees in substantially the same proportions, (ii) a relocation of Executive's principal workplace by more than 25 miles from its location prior to such Change in Control or (iii) a material reduction of Executive's responsibilities, authority or duties; provided, that a reduction in Executive's authorities, duties or responsibilities solely by virtue of Velodyne being acquired and made part of a larger entity, whether as a subsidiary, business unit or otherwise (as, for example, when the Chief Executive Officer of Velodyne or another member of the Velodyne Group remains the

Chief Executive Officer of Velodyne or such other member of the Velodyne Group following a Change of Control where Velodyne or such other member of the Velodyne Group becomes a wholly owned subsidiary of the acquiror, but is not made the Chief Executive Officer of the acquiring corporation) will not, by itself, constitute grounds for a Resignation for Good Reason. A Resignation for Good Reason will not be deemed to have occurred unless Executive gives Velodyne written notice of the condition within 90 days after the condition comes into existence and Velodyne or any other member of the Velodyne Group fails to remedy the condition within 30 days after receiving such written notice; provided, however, that Velodyne will be deemed to have waived such cure period if Velodyne has communicated that it does not intend to cure such condition.

(x) "**Separation**" means a "separation from service" as defined in the regulations under Code Section 409A.

(y) "**Termination Without Cause**" means a Separation as a result of the termination of Executive's employment by Velodyne and all other members of the Velodyne Group, as applicable, without Cause, provided the individual is willing and able to continue performing services within the meaning of Treasury Regulation 1.409A-1(n)(1).

IN WITNESS WHEREOF, each of the parties has executed this Agreement, in the case of Velodyne by its duly authorized officer, as of the day and year indicated below.

VELODYNE LIDAR, INC.

Signature: */s/ Kathy McBeath* Print Name: Kathy McBeath

Title: Chief People Officer Date: May 3, 2022

EXECUTIVE

Signature: */s/ Mark Weinswig*

Print Name: Mark Weinswig

Date: May 3, 2022

Exhibit 31.1

CERTIFICATION PURSUANT TO
RULES 13a-14(a) AND 15d-14(a) UNDER THE SECURITIES EXCHANGE ACT OF 1934,
AS ADOPTED PURSUANT TO
SECTION 302 OF THE SARBANES-OXLEY ACT of 2002

I, Theodore L. Tewksbury, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Velodyne Lidar, 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: November 8, 2022	/s/ Theodore L. Tewksbury
	Theodore L. Tewksbury Chief Executive Officer and Director (Principal Executive Officer)

Exhibit 31.2

CERTIFICATION PURSUANT TO
RULES 13a-14(a) AND 15d-14(a) UNDER THE SECURITIES EXCHANGE ACT OF 1934,
AS ADOPTED PURSUANT TO
SECTION 302 OF THE SARBANES-OXLEY ACT of 2002

I, Mark Weinswig, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Velodyne Lidar, 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:	November 8, 2022	/s/ Mark Weinswig
		Mark Weinswig Chief Financial Officer (Principal Financial and Accounting Officer)

Exhibit 32.1

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

In connection with the Quarterly Report on Form 10-Q of Velodyne Lidar, Inc., a Delaware corporation (the “Company”), for the fiscal quarter ended September 30, 2022, as filed with the Securities and Exchange Commission on the date hereof (the “Form 10-Q”), I, Theodore L. Tewksbury, Chief Executive Officer of the Company, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that to the best of my knowledge:

(i) the Form 10-Q fully complies, in all material respects, with the requirements of Section 13(a) or Section 15(d) of the Securities Exchange Act of 1934, as amended; and

(ii) the information contained in the Form 10-Q fairly presents, in all material respects, the financial condition and result of operations of the Company.

Date:	November 8, 2022	/s/ Theodore L. Tewksbury
		Theodore L. Tewksbury Chief Executive Officer and Director (Principal Executive Officer)

Exhibit 32.2

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

In connection with the Quarterly Report on Form 10-Q of Velodyne Lidar, Inc., a Delaware corporation (the “Company”), for the fiscal quarter ended September 30, 2022, as filed with the Securities and Exchange Commission on the date hereof (the “Form 10-Q”), I, Mark Weinswig, Chief Financial Officer of the Company, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that to the best of my knowledge:

(i) the Form 10-Q fully complies, in all material respects, with the requirements of Section 13(a) or Section 15(d) of the Securities Exchange Act of 1934, as amended; and

(ii) the information contained in the Form 10-Q fairly presents, in all material respects, the financial condition and result of operations of the Company.

Date:	November 8, 2022	/s/ Mark Weinswig
		Mark Weinswig Chief Financial Officer (Principal Financial and Accounting Officer)