

**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION**

Washington, D.C. 20549

Form 10-K/A

(Mark One)

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

For the fiscal year ended December 31, 2022

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

Commission File No. 000-25826

HARMONIC INC.

(Exact name of registrant as specified in its charter)

Delaware
(State or other jurisdiction of
incorporation or organization)

77-0201147
(I.R.S. Employer
Identification No.)

**2590 Orchard Parkway
San Jose, CA 95131
(408) 542-2500**

(Address, including zip code, and telephone number, including area code, of registrant's principal executive offices)

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

<u>Title of each class</u>	<u>Trading Symbol</u>	<u>Name of each exchange on which registered</u>
Common Stock, par value \$0.001 per share	HLIT	The NASDAQ Global Select Market

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

None

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. **Yes** **No**

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or 15(d) of the Exchange Act. **Yes** **No**

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 and post 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	<input type="checkbox"/>	Accelerated filer	<input checked="" type="checkbox"/>
Non-accelerated filer	<input type="checkbox"/>	Smaller reporting company	<input type="checkbox"/>
Emerging growth company	<input type="checkbox"/>		

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 has filed a report on and attestation to its management's assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C. 7262(b)) by the registered public accounting firm that prepared or issued its audit report.

If securities are registered pursuant to Section 12(b) of the Act, indicate by check mark whether the financial statements of the registrant included in the filing reflect the correction of an error to previously issued financial statements.

Indicate by check mark whether any of those error corrections are restatements that required a recovery analysis of incentive-based compensation received by any of the registrant's executive officers during the relevant recovery period pursuant to §240.10D-1(b).

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

Based on the reported closing sale price of the Common Stock on The NASDAQ Global Select Market on July 1, 2022, the aggregate market value of the voting Common Stock held by non-affiliates of the registrant was approximately \$398.6 million. Shares of Common Stock held by each executive officer and director and by each person who owns 5% or more of the outstanding Common Stock have been excluded in that such persons may be deemed to be affiliates. This determination of affiliate status is not necessarily a conclusive determination for other purposes.

As of February 22, 2023, there were 111,070,678 shares of the Registrant's Common Stock, \$0.001 par value, outstanding.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the Proxy Statement for the Registrant's 2023 Annual Meeting of Stockholders (which will be filed with the Securities and Exchange Commission within 120 days of the end of the fiscal year ended December 31, 2022) are incorporated by reference in Part III of this Annual Report on Form 10-K.

EXPLANATORY NOTE

Harmonic, Inc. (the "Company") is filing this Amendment No. 1 (this "Amendment") to its Annual Report on Form 10-K for the fiscal year ended December 31, 2022 (the "Form 10-K") solely to include Armanino LLP's Report of Independent Registered Public Accounting Firm for the consolidated financial statements for the fiscal year ended December 31, 2020, which was inadvertently omitted in the as-filed version. The signed report was received by us prior to the original filing. No other changes have been made to the Form 10-K. Updated consents from each of Armanino LLP and Ernst & Young LLP dated as of the date of this Amendment are filed herewith as exhibits to this Amendment.

This Amendment does not reflect events occurring after the filing of the Form 10-K, does not update disclosures contained in the Form 10-K and does not modify or amend the Form 10-K except as specifically described above. Pursuant to Rule 12b-15 of the Securities Exchange Act of 1934, as amended, this Amendment contains the complete text of Item 8. Financial Statements and certifications of the Company's Principal Executive Officer and Principal Financial Officer required under Items 302 and 906 of the Sarbanes-Oxley Act of 2002, as amended, dated as of the date of this Amendment, as well as updated inline XBRL exhibits.

PART II

Item 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

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REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Stockholders and the Board of Directors of Harmonic, Inc.

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheet of Harmonic, Inc. (the Company) as of December 31, 2022 and 2021, the related consolidated statements of operations, comprehensive income, stockholders' equity and cash flows for each of the two years in the period ended December 31, 2022, and the related notes (collectively referred to as the "consolidated financial statements"). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company at December 31, 2022 and 2021, and the results of its operations and its cash flows for each of the two years in the period ended December 31, 2022, in conformity with U.S. generally accepted accounting principles.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the Company's internal control over financial reporting as of December 31, 2022, based on criteria established in Internal Control-Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) and our report dated February 28, 2023, expressed an unqualified opinion thereon.

Basis for Opinion

These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's financial statements based on our audits. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

Critical Audit Matter

The critical audit matter communicated below is a matter arising from the current period audit of the financial statements that was communicated or required to be communicated to the audit committee and that: (1) relates to accounts or disclosures that are material to the financial statements and (2) involved our especially challenging, subjective or complex judgments. The communication of the critical audit matter does not alter in any way our opinion on the consolidated financial statements, taken as a whole, and we are not, by communicating the critical audit matter below, providing a separate opinion on the critical audit matter or on the accounts or disclosures to which it relates.

Inventory Valuation

Description of the Matter

The Company's net inventory totaled \$121 million as of December 31, 2022. As explained in "Note 2: Accounting Policies" within the consolidated financial statements, inventory is stated at the lower of cost (determined on a first-in, first-out basis) or net realizable value. The Company establishes a provision for excess and obsolete inventory to reduce such inventory to its estimated net realizable value.

Auditing management's estimates for excess and obsolete inventory involved auditor judgment due to the assessment of management's estimates of whether a provision for excess and obsolete inventory is required. The measurement of any excess of cost over net realizable value is judgmental and is impacted by a number of factors that are affected by general economic and market conditions outside the Company's control. Specifically, excess and obsolete inventory calculations are sensitive to assumptions that relate to future customer demand for the Company's products.

How We Addressed the Matter in Our Audit

We obtained an understanding, evaluated the design and tested the operating effectiveness of internal controls over the Company's excess and obsolete inventory reserve process. This included controls over management's determination of inventory valuation, including the evaluation of future demand of the Company's products and the completeness and accuracy of the data underlying the excess and obsolete inventory valuation.

We performed audit procedures that included, among others, assessing the Company's methodology over the computation of the provision for excess and obsolete inventory, testing the significant assumptions and the underlying inputs used by the Company in its analysis including historical sales trends, expectations regarding future demand, changes in the Company's business, customer base, product life cycles and other relevant factors. We evaluated current inventory levels compared to future demand and historical sales.

We have served as the Company's auditor since 2021.

San Jose, California
February 28, 2023

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Stockholders and the Board of Directors of Harmonic, Inc.

Opinion on Internal Control Over Financial Reporting

We have audited Harmonic, Inc.'s internal control over financial reporting as of December 31, 2022, based on criteria established in Internal Control—Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) (the COSO criteria). In our opinion, Harmonic, Inc. (the Company) maintained, in all material respects, effective internal control over financial reporting as of December 31, 2022, based on the COSO criteria.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the 2022 Consolidated Financial Statements of the Company and our report dated February 28, 2023 expressed an unqualified opinion thereon.

Basis for Opinion

The Company's management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting included in the accompanying Management's Report on Internal Control over Financial Reporting. Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects.

Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

Definition and Limitations of Internal Control over Financial Reporting

A company's internal control over financial reporting is a process designed 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. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

/s/ Ernst & Young LLP

San Jose, California
February 28, 2023

Report of Independent Registered Public Accounting Firm

To the Board of Directors and Stockholders of Harmonic Inc.

Opinion on the Consolidated Financial Statements

We have audited the accompanying consolidated balance sheets of Harmonic Inc. and its subsidiaries (the Company) as of December 31, 2020 and the related consolidated statements of operations, comprehensive loss, stockholders' equity, and cash flows for the year then ended, and the related notes (collectively referred to as the consolidated financial statements).

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of the Company as of December 31, 2020, and the results of its operations and its cash flows for the year ended December 31, 2020 in conformity with accounting principles generally accepted in the United States of America.

Basis for Opinion

The Company's management is responsible for these consolidated financial statements. Our responsibility is to express an opinion on the Company's consolidated financial statements. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud.

Our audit of the consolidated financial statements included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audit also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. Our audit also included performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

Critical Audit Matters

The critical audit matters communicated below are matters arising from the 2020 audit of the consolidated financial statements that were communicated or required to be communicated to the audit committee and that (i) relate to accounts or disclosures that are material to the consolidated financial statements and (ii) involved especially challenging, subjective, or complex judgments. The communication of critical audit matters does not alter in any way our opinion on the consolidated financial statements, taken as a whole, and we are not, by communicating the critical audit matter below, providing separate opinions on the critical audit matter or on the accounts or disclosures to which it relates.

Revenue Recognition — Refer to Note 2 and 3 to the Consolidated Financial Statements

Critical Audit Matter Description

The Company recognizes revenue upon transfer of control of promised products and services to customers in an amount that reflects the consideration the Company expects to receive in exchange for those products or services. The Company's contract may contain one or more performance obligations, including hardware, software, professional services and support and maintenance.

Significant judgment is exercised by the Company in determining revenue recognition for these customer agreements, and includes the following:

- Determination of whether products and services are considered distinct performance obligations that should be accounted for separately versus together
- Determination of stand-alone selling prices for each distinct performance obligation and for products and services that are not sold separately
- Determination of the pattern of delivery (i.e., timing of when revenue is recognized) for each distinct performance obligation

- Estimation of variable consideration when determining the amount of revenue to recognize (e.g., customer credits, incentives, and in certain instances, determination and estimation of material rights)

Given these factors, the related audit effort in evaluating management's judgments in determining revenue recognition for these customer agreements was extensive and required a high degree of auditor judgment.

How the Critical Audit Matter Was Addressed in the Audit

Our principal audit procedures related to the Company's revenue recognition for these customer agreements included the following:

- We tested the effectiveness of internal controls related to the identification of distinct performance obligations, determination of the timing of revenue recognition, and the estimation of variable consideration.
- We selected a sample of customer agreements and performed the following procedures:
 - Obtained and read contract source documents for each selection, including master agreements, and other documents that were part of the agreement to identify significant terms
 - Tested management's identification of significant terms for completeness, including the identification of distinct performance obligations and variable consideration
 - Tested the mathematical accuracy of management's calculations of revenue and the associated timing of recognizing the related revenue subject to any constraints in the consolidated financial statements
 - Assessed the terms in the customer agreement and evaluated the appropriateness of management's application of their accounting policies, along with their use of estimates, in the determination of revenue recognition conclusions
- We evaluated the reasonableness of management's estimate of stand-alone selling prices for products and services that are not sold separately.
- We evaluated the reasonableness and accuracy of management's judgments and estimates used in accounting for discounts and credits for future purchases ("material rights") which include estimating the stand-alone selling price of a material right. This included testing management's estimate of calculating discounts offered to customers, assessing management's probability of customer exercising the material right and verifying future sales forecast with the operations team.

Inventory Valuation— Refer to Note 2 to the Consolidated Financial Statements

Critical Audit Matter Description

The Company computes inventory cost on a first-in, first-out basis and applies judgment in determining forecast for products and the valuation of inventories. The Company assesses inventory at each reporting date in order to assert that it is recorded at net realizable value, giving consideration to, among other factors: whether the product is valued at the lower-of-cost or net realizable value; and the estimation of excess and obsolete inventory or that which is not of saleable quality. Most of the Company's inventory provisions are based on the Company's inventory levels and future product purchase commitments compared to assumptions about future demand and market conditions.

Significant judgment is exercised by the Company to determine inventory carrying value adjustments, specifically the provisions for excess or obsolete inventories, and includes:

- Developing assumptions such as forecasts of future sales quantities and the selling prices, which are sensitive to the competitiveness of product offerings, customer requirements, and product life cycles.

Given these factors and assumptions are forward-looking and could be affected by future economic and market conditions, the related audit effort to evaluate management's inventory valuation adjustments was extensive and required a high degree of auditor judgment.

How the Critical Audit Matter Was Addressed in the Audit

Our principal audit procedures related to the Company's inventory valuation methodology included the following:

- We tested the effectiveness of internal controls related to inventory carrying value adjustment determination process, including management's assumptions related to future demand and market conditions.
- We selected a sample of inventory items and performed the following procedures:
 - Tested the mathematical accuracy of the Company's inventory schedule by comparing the quantities and carrying value of on-hand inventories to related unit sales, both historical and forecasted
 - Assessed and tested the reasonableness of the significant assumptions (e.g. sales and marketing forecast, build plans, usage and open sales-order)
 - Inquired with the Operations team and evaluated the adequacy of management's adjustments to sales forecasts by analyzing potential technological changes in line with product life cycles and/or identified alternative customer uses
 - Assessed whether there were any potential sources of contrary information, including historical forecast accuracy or history of significant revisions to previously recorded inventory valuation adjustments, and performed sensitivity analyses over significant assumptions to evaluate the changes in inventory valuation that would result from changes in the assumptions.

/s/Armanino^{LLP}
San Ramon, California

March 2, 2021

We served as the Company's auditor from 2018 to 2020.

HARMONIC INC.
CONSOLIDATED BALANCE SHEETS
(In thousands, except per share data)

	December 31,	
	2022	2021
ASSETS		
Current assets:		
Cash and cash equivalents	\$ 89,586	\$ 133,431
Accounts receivable, net	108,427	88,529
Inventories	120,949	71,195
Prepaid expenses and other current assets	26,337	29,972
Total current assets	345,299	323,127
Property and equipment, net	39,814	42,721
Operating lease right-of-use assets	25,469	30,968
Goodwill	237,739	240,213
Other non-current assets	61,697	56,657
Total assets	\$ 710,018	\$ 693,686
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Convertible debt, current	\$ 113,981	\$ 36,824
Other debts, current	4,756	4,992
Accounts payable	67,455	64,429
Deferred revenue	62,383	57,226
Operating lease liabilities, current	6,773	7,346
Other current liabilities	66,724	53,644
Total current liabilities	322,072	224,461
Convertible debt, non-current	—	98,941
Other debts, non-current	11,161	12,989
Operating lease liabilities, non-current	24,110	29,120
Other non-current liabilities	28,169	31,379
Total liabilities	385,512	396,890
Commitments and contingencies (Note 18)		
Convertible debt (Note 12)	—	883
Stockholders' equity:		
Preferred stock, \$0.001 par value, 5,000 shares authorized; no shares issued or outstanding	—	—
Common stock, \$0.001 par value, 150,000 shares authorized; 109,871 and 102,959 shares issued and outstanding at December 31, 2022 and 2021, respectively	110	103
Additional paid-in capital	2,380,651	2,387,039
Accumulated deficit	(2,046,569)	(2,087,957)
Accumulated other comprehensive loss	(9,686)	(3,272)
Total stockholders' equity	324,506	295,913
Total liabilities and stockholders' equity	\$ 710,018	\$ 693,686

The accompanying notes are an integral part of these consolidated financial statements.

HARMONIC INC.
CONSOLIDATED STATEMENTS OF OPERATIONS
(In thousands, except per share data)

	Year ended December 31,		
	2022	2021	2020
Revenue:			
Appliance and integration	\$ 473,806	\$ 369,767	\$ 252,014
SaaS and service	151,151	137,382	126,817
Total net revenue	624,957	507,149	378,831
Cost of revenue:			
Appliance and integration	259,027	195,445	126,948
SaaS and service	50,046	51,962	56,886
Total cost of revenue	309,073	247,407	183,834
Total gross profit	315,884	259,742	194,997
Operating expenses:			
Research and development	120,307	102,231	82,494
Selling, general and administrative	146,717	138,085	119,611
Amortization of intangibles	—	507	3,019
Restructuring and related charges	3,341	110	2,322
Total operating expenses	270,365	240,933	207,446
Income (loss) from operations	45,519	18,809	(12,449)
Interest expense, net	(5,040)	(10,625)	(11,509)
Loss on convertible debt extinguishment	—	—	(1,362)
Other income (expense), net	4,006	687	(897)
Income (loss) before income taxes	44,485	8,871	(26,217)
Provision for (benefit from) income taxes	16,303	(4,383)	3,054
Net income (loss)	\$ 28,182	\$ 13,254	\$ (29,271)
Net income (loss) per share:			
Basic	\$ 0.27	\$ 0.13	\$ (0.30)
Diluted	\$ 0.25	\$ 0.12	\$ (0.30)
Weighted average common shares:			
Basic	105,080	101,484	96,971
Diluted	112,378	106,171	96,971

The accompanying notes are an integral part of these consolidated financial statements.

HARMONIC INC.
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME (LOSS)
(In thousands)

	Year ended December 31,		
	2022	2021	2020
Net income (loss)	\$ 28,182	\$ 13,254	\$ (29,271)
Other comprehensive income (loss):			
Defined benefit plan	626	(233)	(159)
Translation gain (loss)	(6,956)	(8,022)	8,279
Other comprehensive income (loss) before tax	(6,330)	(8,255)	8,120
Provision for (benefit from) income taxes	84	873	(801)
Other comprehensive income (loss), net of tax	(6,414)	(9,128)	8,921
Total comprehensive income (loss)	<u>\$ 21,768</u>	<u>\$ 4,126</u>	<u>\$ (20,350)</u>

The accompanying notes are an integral part of these consolidated financial statements.

HARMONIC INC.
CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY
(In thousands)

	Common Stock		Additional Paid-in Capital	Accumulated Deficit	Accumulated Other Comprehensive Income (Loss)	Total Stockholders' Equity
	Shares	Amount				
Balance at December 31, 2019	91,875	\$ 92	\$ 2,327,359	\$ (2,071,940)	\$ (3,065)	\$ 252,446
Net loss	—	—	—	(29,271)	—	(29,271)
Other comprehensive income, net of tax	—	—	—	—	8,921	8,921
Issuance of common stock under stock option, award and purchase plans	3,822	3	3,807	—	—	3,810
Stock-based compensation	—	—	18,034	—	—	18,034
Exercise of warrant	2,413	2	(2)	—	—	—
Reclassification from mezzanine equity to equity for 2020 Notes	—	—	2,410	—	—	2,410
Conversion feature of 2022 Notes	—	—	8,254	—	—	8,254
Conversion feature of exchanged portion of 2020 Notes	—	—	(6,909)	—	—	(6,909)
Issuance of common stock upon conversion of 2020 Notes	94	1	606	—	—	607
Balance at December 31, 2020	98,204	\$ 98	\$ 2,353,559	\$ (2,101,211)	\$ 5,856	\$ 258,302
Net income	—	—	—	13,254	—	13,254
Other comprehensive loss, net of tax	—	—	—	—	(9,128)	(9,128)
Issuance of common stock under stock option, award and purchase plans	4,755	5	10,244	—	—	10,249
Stock-based compensation	—	—	24,119	—	—	24,119
Reclassification from equity to mezzanine equity for 2022 Notes	—	—	(883)	—	—	(883)
Balance at December 31, 2021	102,959	\$ 103	\$ 2,387,039	\$ (2,087,957)	\$ (3,272)	\$ 295,913
Cumulative effect of ASU 2020-06 adoption	—	—	(32,249)	18,339	—	(13,910)
Balance at January 1, 2022	102,959	103	2,354,790	(2,069,618)	(3,272)	282,003
Net income	—	—	—	28,182	—	28,182
Other comprehensive loss, net of tax	—	—	—	—	(6,414)	(6,414)
Issuance of common stock under stock option, award and purchase plans, net	3,601	4	787	—	—	791
Repurchase of common stock	(571)	(1)	—	(5,133)	—	(5,134)
Stock-based compensation	—	—	25,078	—	—	25,078
Issuance of common stock upon conversion of 2022 Notes	3,882	4	(4)	—	—	—
Balance at December 31, 2022	109,871	\$ 110	\$ 2,380,651	\$ (2,046,569)	\$ (9,686)	\$ 324,506

The accompanying notes are an integral part of these consolidated financial statements.

HARMONIC INC.
CONSOLIDATED STATEMENTS OF CASH FLOWS
(In thousands)

	Year ended December 31,		
	2022	2021	2020
Cash flows from operating activities:			
Net income (loss)	\$ 28,182	\$ 13,254	\$ (29,271)
Adjustments to reconcile net income to net cash provided by operating activities:			
Depreciation	12,260	12,546	11,737
Amortization of intangibles	—	507	3,970
Stock-based compensation	25,212	24,056	18,040
Amortization of convertible debt discount	1,171	6,308	7,058
Amortization of warrant	1,734	1,741	1,746
Foreign currency remeasurement	(2,685)	(5,126)	6,391
Loss on convertible debt extinguishment	—	—	1,362
Deferred income taxes, net	4,894	(6,197)	(105)
Provision for expected credit losses and returns	1,954	4,142	1,666
Provision for excess and obsolete inventories	5,988	3,460	1,847
Gain on sale of investment in equity securities	(4,370)	—	—
Other adjustments	513	181	409
Changes in operating assets and liabilities:			
Accounts receivable	(23,136)	(26,722)	21,186
Inventories	(54,431)	(39,338)	(8,195)
Other assets	(8,402)	(3,096)	11,556
Accounts payable	5,837	42,303	(18,173)
Deferred revenues	2,610	15,014	19,751
Other liabilities	8,145	(2,016)	(11,812)
Net cash provided by operating activities	5,476	41,017	39,163
Cash flows from investing activities:			
Proceeds from sale of investment	7,962	—	—
Purchases of property and equipment	(9,250)	(12,975)	(32,205)
Net cash used in investing activities	(1,288)	(12,975)	(32,205)
Cash flows from financing activities:			
Payment of convertible debt	(37,707)	—	(7,999)
Payment of convertible debt issuance costs	—	—	(672)
Proceeds from other debts	3,499	3,861	9,398
Repayment of other debts	(4,583)	(6,169)	(6,646)
Repurchase of common stock	(5,133)	—	—
Proceeds from common stock issued to employees	7,092	12,311	5,472
Taxes paid related to net share settlement of equity awards	(6,301)	(2,064)	(1,662)
Net cash provided by (used in) financing activities	(43,133)	7,939	(2,109)
Effect of exchange rate changes on cash and cash equivalents	(4,900)	(1,195)	738
Net increase (decrease) in cash and cash equivalents	(43,845)	34,786	5,587
Cash and cash equivalents, beginning of the year	133,431	98,645	93,058
Cash and cash equivalents, end of the year	\$ 89,586	\$ 133,431	\$ 98,645
Supplemental disclosure of cash flow information:			
Income tax payments (refunds), net	\$ 9,036	\$ 2,525	\$ (17)
Interest payments, net	\$ 3,796	\$ 4,095	\$ 4,221
Supplemental schedule of non-cash investing and financing activities:			
Capital expenditures incurred but not yet paid	\$ 1,075	\$ 751	\$ 1,155
Fair value of 2022 Notes used to settle 2020 Notes	\$ —	\$ —	\$ 44,357

The accompanying notes are an integral part of these consolidated financial statements.

HARMONIC INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

NOTE 1: DESCRIPTION OF BUSINESS

Harmonic Inc. (“Harmonic” or the “Company”) is a leading global provider of (i) versatile and high performance video delivery software, products, system solutions and services that enable our customers to efficiently create, prepare, store, playout and deliver a full range of high-quality broadcast and streaming video services to consumer devices, including televisions, personal computers, laptops, tablets and smart phones and (ii) broadband access solutions that enable broadband operators to more efficiently and effectively deploy high-speed internet, for data, voice and video services to consumers’ homes.

The Company operates in two segments, Video and Broadband. The Video business sells video processing and production and playout solutions and services worldwide to broadband operators and satellite and telecommunications (“telco”) pay-TV service providers, which are collectively referred to as “service providers,” and to broadcast and media companies, including streaming media companies. The Video business infrastructure solutions are delivered either through shipment of our products, software licenses or as software-as-a-service (“SaaS”) subscriptions. The Broadband business sells broadband access solutions and related services, including our CableOS software-based broadband access solution, to broadband operators globally.

NOTE 2: SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Basis of Presentation

The accompanying consolidated financial statements of Harmonic include the accounts of the Company and its wholly-owned subsidiaries. All intercompany transactions and balances have been eliminated in consolidation. The Company’s fiscal quarters are based on 13-week periods, except for the fourth quarter which ends on December 31.

Use of Estimates

The preparation of consolidated financial statements in conformity with U.S. generally accepted accounting principles (“US 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. The Company’s reported financial positions or results of operations may be materially different under changed conditions or when using different estimates and assumptions, particularly with respect to significant accounting policies. If estimates or assumptions differ from actual results, subsequent periods are adjusted to reflect more current information.

Cash and Cash Equivalents

All highly liquid investments with an original maturity of three months or less at the date of purchase are considered cash equivalents. The carrying amount of cash and cash equivalents approximates fair value because of the short maturity of those instruments.

Credit Risk and Major Customers/Supplier Concentration

Financial instruments which subject the Company to concentrations of credit risk consist primarily of cash, cash equivalents, and accounts receivable. Cash and cash equivalents are invested in short-term, highly liquid, investment-grade instruments, in accordance with the Company’s investment policy. The investment policy limits the amount of credit exposure to any one financial institution, commercial or governmental issuer.

The Company’s accounts receivable are derived from sales to worldwide cable, satellite, telco, and broadcast and media companies. The Company generally does not require collateral from its customers, and performs ongoing credit evaluations of its customers and provides for expected losses. The Company maintains an allowance for doubtful accounts based upon the expected collectability of its accounts receivable. One customer had a balance greater than 10% of the Company’s net accounts receivable balance as of December 31, 2022 and 2021. During the year ended December 31, 2022, 2021 and 2020, Comcast is the only customer accounted for more than 10% of the Company’s revenue.

Certain of the components and subassemblies included in the Company’s products are obtained from a single source or a limited group of suppliers. Although the Company seeks to reduce dependence on those sole source and limited source suppliers, the partial or complete loss of certain of these sources could have at least a temporary adverse effect on the Company’s results of operations and damage customer relationships.

Revenue Recognition

The Company's principal sources of revenue are from the sale of hardware, software, hardware and software maintenance contracts, and end-to-end solutions, encompassing design, manufacture, test, integration and installation of products. The Company also derives recurring revenue from subscriptions, which are comprised of subscription fees from customers utilizing the Company's cloud-based video processing solutions.

Revenue from contracts with customers is recognized using the following five steps:

- a) Identify the contract(s) with a customer;
- b) Identify the performance obligations in the contract;
- c) Determine the transaction price;
- d) Allocate the transaction price to the performance obligations in the contract; and
- e) Recognize revenue when (or as) the Company satisfies a performance obligation.

A contract contains a promise (or promises) to transfer goods or services to a customer. A performance obligation is a promise (or a group of promises) that is distinct. The transaction price is the amount of consideration a Company expects to be entitled to from a customer in exchange for providing the goods or services.

The unit of account for revenue recognition is a performance obligation. A contract may contain one or more performance obligations, including hardware, software, professional services and support and maintenance. Performance obligations are accounted for separately if they are distinct. A good or service is distinct if the customer can benefit from the good or service either on its own or together with other resources that are readily available to the customer, and the good or service is distinct in the context of the contract. Otherwise performance obligations will be combined with other promised goods or services until the Company identifies a bundle of goods or services that is distinct.

The transaction price is allocated to all the separate performance obligations in an arrangement. It reflects the amount of consideration to which the Company expects to be entitled to in exchange for transferring goods or services, which may include an estimate of variable consideration to the extent that it is probable of not being subject to significant reversals in the future based on the Company's experience with similar arrangements. The transaction price also reflects the impact of the time value of money if there is a significant financing component present in an arrangement. The transaction price excludes amounts collected on behalf of third parties, such as sales taxes.

Revenue is recognized when the Company satisfies each performance obligation by transferring control of the promised goods or services to the customer. Goods or services can transfer at a point in time or over time depending on the nature of the arrangement.

Inventories

Inventories are stated at the lower of cost (determined on first-in, first-out basis) or net realizable value. The cost of inventories is comprised of material and manufacturing labor and overheads. The Company establishes provisions for excess and obsolete inventories to reduce such inventories to their estimated net realizable value after evaluation of historical sales, future demand and market conditions, expected product life cycles and current inventory levels. Such provisions are charged to cost of revenue in the Company's Consolidated Statements of Operations.

Property and Equipment

Property and equipment are recorded at cost. Depreciation is computed using the straight-line method over the estimated useful lives of the assets. Estimated useful lives are generally five years for furniture and fixtures, three years for software and four years for machinery and equipment. Depreciation for leasehold improvements are computed using the shorter of estimated useful lives or the terms of the related leases.

Long-Lived Assets including Purchased Intangible Assets

The Company reviews property and equipment, intangible assets and other long-lived assets for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset (or asset group) may not be recoverable. Recoverability is measured by comparing the carrying amount to the future undiscounted cash flows that the asset is expected to generate. If the asset is not recoverable, its carrying amount would be adjusted down to its fair value. For the years ended December 31, 2022, 2021 and 2020, there were no impairment charges for long-lived assets.

Goodwill

Goodwill is assigned to one or more reporting segments on the date of acquisition. We review our goodwill for impairment annually during our fourth quarter of each fiscal year and between annual tests if an event occurs or circumstances change that would more likely than not reduce the fair value of any one of our reporting units below its respective carrying amount. In performing our goodwill impairment test, we first perform a qualitative assessment, which requires that we consider events or circumstances including macroeconomic conditions, industry and market considerations, cost factors, overall financial performance, changes in management or key personnel, changes in strategy, changes in customers, changes in the composition or carrying amount of a reporting segment's net assets and changes in our stock price. If, after assessing the totality of events or circumstances, we determine that it is more likely than not that the fair values of our reporting segments are greater than the carrying amounts, then the quantitative goodwill impairment test is not performed.

If the qualitative assessment indicates that the quantitative analysis should be performed, we then evaluate goodwill for impairment by comparing the fair value of each of our reporting segments to its carrying value, including the associated goodwill. To determine the fair values, we use the equal weighting of the market approach based on comparable publicly traded companies in similar lines of businesses and the income approach based on estimated discounted future cash flows. Our cash flow assumptions consider historical and forecasted revenue, operating costs and other relevant factors.

We completed our annual goodwill impairment test in the fourth quarter of fiscal 2022. We determined, after performing a qualitative review of each reporting segment, that it is more likely than not that the fair value of each of our reporting segments substantially exceeds the respective carrying amounts. Accordingly, there was no indication of impairment and the quantitative goodwill impairment test was not performed. For the years ended December 31, 2022, 2021 and 2020, there were no impairment charges for goodwill.

Leases

The Company determines if an arrangement is a lease at inception. Operating lease liabilities are recognized at the lease commencement date based on the present value of lease payments over the lease term. The Company's lease contracts do not provide an implicit borrowing rate; hence the Company determined the incremental borrowing rate based on information available at lease commencement to determine the present value of lease liability. ROU assets related to our operating lease liabilities are measured at lease inception based on the initial measurement of the lease liability, plus any prepaid lease payments and less any lease incentives. As of December 31, 2022, the Company has operating leases primarily consisting of facilities with remaining lease terms of 1 year to 10 years, some of which included the option to extend the term. Optional periods to extend the lease, including by not exercising a termination option, are included in the lease term when it is reasonably certain that the option will be exercised. The Company amortizes ROU assets as operating lease expense generally on a straight-line basis over the lease term. Operating leases are included in "Operating lease right-of-use assets", "Operating lease liabilities, current", and "operating lease liabilities, non-current" in the Consolidated Balance Sheets.

Foreign Currency

The functional currency of the Company's Israeli and Swiss subsidiaries is the U.S. dollar. All other foreign subsidiaries use the respective local currency as the functional currency. When the local currency is the functional currency, gains and losses from translation of these foreign currency financial statements into U.S. dollars are recorded as a separate component of other comprehensive income (loss) in stockholders' equity.

The Company's foreign currency exposure is also related to its net position of monetary assets and monetary liabilities held by its foreign subsidiaries in their nonfunctional currencies. These monetary assets and liabilities are being remeasured into the subsidiaries' respective functional currencies using exchange rates as of the balance sheet date. Such remeasurement gains and losses are included in "Other income (expense), net" in the Company's Consolidated Statements of Operations. During the years ended December 31, 2022, and 2020, the Company recorded remeasurement loss of approximately \$0.3 million and \$1.0 million, respectively. During the year ended December 31, 2021, the Company recorded remeasurement gain of \$0.6 million.

Derivative Instruments

The Company enters into derivative instruments, primarily foreign currency forward contracts, to minimize the short-term impact of foreign currency exchange rate fluctuations on certain foreign currency denominated assets and liabilities as well as certain foreign currencies denominated expenses. The Company does not enter into derivative instruments for trading purposes and these derivatives generally have maturities within three months.

The derivative instruments are recorded at fair value in prepaid expenses and other current assets or accrued and other current liabilities in the Company's Consolidated Balance Sheets. The Company enters into derivative instruments to hedge existing foreign currency denominated assets or liabilities, the gains or losses on these hedges are recorded immediately in earnings to offset the changes in the fair value of the assets or liabilities being hedged.

Research and Development

Research and development (“R&D”) costs are expensed as incurred and consists primarily of employee salaries and related expenses, contractors and outside consultants, supplies and materials, equipment depreciation and facilities costs, all associated with the design and development of new products and enhancements of existing products.

The Company’s French subsidiary participates in the French Crédit d’Impôt Recherche (“CIR”) program which allows companies to monetize eligible research expenses. The R&D credits receivable from the French government for spending on innovative R&D under the CIR program is recorded as an offset to R&D expenses. In the years ended December 31, 2022, 2021 and 2020, the Company had R&D credits of \$5.4 million, \$5.7 million and \$4.5 million, respectively.

Restructuring and Related Charges

The Company’s restructuring charges consist primarily of employee severance, one-time termination benefits related to the reduction of its workforce, and other costs. Liabilities for costs associated with a restructuring activity are recognized when the liability is incurred and are measured at fair value. One-time termination benefits are expensed at the date the entity notifies the employee, unless the employee must provide future service, in which case the benefits are expensed ratably over the future service period. Termination benefits are calculated based on regional benefit practices and local statutory requirements.

Warranty

The Company accrues for estimated warranty costs at the time of revenue recognition and records such accrued liabilities as part of cost of revenue. Management periodically reviews its warranty liability and adjusts the accrued liability based on the terms of warranties provided to customers, historical and anticipated warranty claims experience, and estimates of the timing and cost of warranty claims.

Advertising Expenses

All advertising costs are expensed as incurred and included in “Selling, general and administrative expenses” in the Company’s Consolidated Statements of Operations. Advertising expense was \$0.7 million, \$1.0 million and \$1.1 million for the years ended December 31, 2022, 2021 and 2020, respectively.

Stock-based Compensation

The Company measures and recognizes compensation expense for all stock-based compensation awards made to employees, including stock options, restricted stock units (“RSUs”) and stock purchase rights under the Company’s Employee Stock Purchase Plan (“ESPP”), based upon the grant-date fair value of those awards. The Company recognizes the impact of forfeitures as they occur.

The fair value of the Company’s stock options and stock purchase rights under ESPP is estimated at grant date using the Black-Scholes option pricing model. The fair value of the Company’s RSUs and performance-based RSUs (“PRSUs”) is calculated based on the market value of the Company’s stock at the grant date. The fair value of the Company’s market-based RSUs (“MRSUs”) is estimated using the Monte-Carlo valuation model with market vesting conditions.

The Company recognizes the stock-based compensation for options, RSUs, MRSUs and stock purchase rights under ESPP on straight-line basis over the requisite service period, which is generally the vesting period. The Company recognizes the stock-based compensation for PRSUs based on the probability of achieving performance criteria defined in the PRSU agreements. The Company estimates the number of PRSUs ultimately expected to vest and recognizes expense using the graded vesting attribution method over the requisite service period. Changes in the estimates related to probability of achieving certain performance criteria and number of PRSUs expected to vest could significantly affect the related stock-based compensation expense from one period to the next.

Pension Plan

Under French law, the Company's subsidiary in France is obligated to provide for a defined benefit plan to its employees upon their retirement from the Company. The Company's defined benefit pension plan in France is unfunded.

The Company records its obligations relating to the pension plans based on calculations which include various actuarial assumptions including employees' age and period of service with the company; projected mortality rates, mobility rates and increases in salaries; and a discount rate. The Company reviews its actuarial assumptions on an annual basis as of December 31 (or more frequently if a significant event requiring remeasurement occurs) and modifies the assumptions based on current rates and trends when it is appropriate to do so. The effect of modifications to those assumptions is recorded in other comprehensive income (loss) and amortized to net periodic benefit cost over the expected remaining period of service of the covered employees using the corridor method. The Company believes that the assumptions utilized in recording its obligations under its pension plan are reasonable based on its experience, market conditions and input from its actuaries.

Income Taxes

The Company accounts for income taxes using the asset and liability method of accounting for income taxes. The Company calculates and provides for income taxes in each of the tax jurisdictions in which it operates. The deferred tax assets and liabilities are recognized for future tax consequences attributable to temporary differences between the financial statement carrying values of existing assets and liabilities and their respective tax bases and all operating losses carried forward, if any. Deferred tax assets and liabilities are measured using tax rates expected to apply to taxable income in the years in which the applicable temporary differences are expected to be recovered or settled. The effect on deferred tax assets and liabilities of a change in tax rates or tax status is recognized in the statements of income in the period in which the change is identified. Deferred tax assets are reduced by a valuation allowance if, based on available evidence, it is more likely than not that some portion or all of the deferred tax assets will not be realized.

The Company is subject to examination of its income tax returns by various tax authorities on a periodic basis. The Company regularly assesses the likelihood of adverse outcomes resulting from such examinations to determine the adequacy of its provision for income taxes. The Company has applied the provisions of the applicable accounting guidance on accounting for uncertainty in income taxes, which requires application of a more-likely-than-not threshold to the recognition and de-recognition of uncertain tax positions. If the recognition threshold is met, the applicable accounting guidance permits the Company to recognize a tax benefit measured at the largest amount of tax benefit that, in the Company's judgment, is more than 50% likely to be realized upon settlement. It further requires that a change in judgment related to the expected ultimate resolution of uncertain tax positions be recognized in earnings in the period of such change.

The Company files annual income tax returns in multiple taxing jurisdictions around the world. A number of years may elapse before an uncertain tax position is audited and finally resolved. While it is often difficult to predict the final outcome or the timing of resolution of any particular uncertain tax position, the Company believes that its reserves for income taxes reflect the most likely outcome. The Company adjusts these reserves and penalties, as well as the related interest, in light of changing facts and circumstances. Changes in the Company's assessment of its uncertain tax positions or settlement of any particular position could materially and adversely impact the Company's income tax rate, operating results, financial position and cash flows.

Recently Adopted Accounting Pronouncements

In August 2020, the Financial Accounting Standards Board ("FASB") issued ASU No. 2020-06, Accounting for Convertible Instruments in an Entity's Own Equity, which simplifies the accounting for convertible instruments and contracts on an entity's own equity. The Company adopted ASU 2020-06 effective on January 1, 2022, using the modified retrospective method. Among other changes, ASU 2020-06 removes from U.S. GAAP the liability and equity separation model for convertible instruments with a cash conversion feature. As a result, the Company no longer separately presents in equity an embedded conversion feature for such debt. Similarly, the embedded conversion feature is no longer amortized into consolidated statement of operations as interest expense over the life of the instrument. The cumulative effect of the ASU adoption was as follows:

<i>(in thousands)</i>	Balance at December 31, 2021	Adjustments from Adoption of ASU 2020-06	Balance at January 1, 2022
Liabilities			
Convertible debt, current	\$ 36,824	\$ 626	\$ 37,450
Convertible debt, non-current	98,941	14,167	113,108
Mezzanine equity			
Convertible debt	883	(883)	—
Equity			
Additional paid-capital	2,387,039	(32,249)	2,354,790
Accumulated deficit	(2,087,957)	18,339	(2,069,618)

The impact of ASU adoption on the consolidated statement of operations for the fiscal year ended December 31, 2022 was to decrease net interest expense by \$5.6 million. This had the effect of increasing the basic and diluted net income per share for the fiscal year ended December 31, 2022 by approximately \$0.05. The required use of if-converted method to calculate the impact of convertible notes on diluted earnings per share does not have a material impact. The Company was contractually required to settle the principal amount of the 2022 Notes, and is contractually required to settle the principal amount of the 2024 Notes, in cash, and the 2022 Notes were settled in December 2022 upon maturity. Accordingly, the dilutive effect of the Company's 2022 Notes was, and the diluted effect of the 2024 Notes will be, limited to the conversion premium. The adoption of this ASU does not have any impact on the consolidated statement of cash flows.

From time to time, new accounting pronouncements are issued by the FASB, or other standards setting bodies, that are adopted by the Company as of the specified effective date. Unless otherwise discussed, the Company believes the impact of recently issued standards that are not yet effective will not have a material impact on its consolidated financial position, results of operations and cash flows upon adoption.

NOTE 3: INVESTMENTS IN EQUITY SECURITIES

In May 2022, the Company sold its investment in Encoding.com, Inc. for total consideration of up to approximately \$10.7 million. The Company received \$7.8 million in May 2022 and recognized a gain of \$4.2 million. The balance of the consideration of up to approximately \$2.9 million will be payable to the Company within 18 months from the date of sale, subject to certain conditions and indemnity obligations, and will be recorded upon receipt by the Company.

NOTE 4: REVENUE

Hardware and Software. Revenue from the sale of hardware and software products is recognized when the control is transferred. For most of the Company's product sales (including sales to distributors and system integrators), the control is transferred at the time the product is shipped or delivery has occurred because the customer has significant risks and rewards of ownership of the asset and the Company has a present right to payment at that time. The Company's agreements with the distributors and system integrators have terms which are generally consistent with the standard terms and conditions for the sale of the Company's equipment to end users, and do not provide for product rotation or pricing allowances, as are typically found in agreements with stocking distributors. The Company offers return rights which are specifically identified and accrued for as sales returns at the end of the period.

Shipping and handling costs are accounted for as a fulfillment cost and are recorded in "Cost of revenue" in the Company's Consolidated Statements of Operations. Sales tax and other amounts collected on behalf of third parties are excluded from the transaction price.

Arrangements with Multiple Performance Obligations. The Company has revenue arrangements that include multiple performance obligations. The Company allocates transaction price to all separate performance obligations based on their relative standalone selling prices ("SSP"). The Company may exercise judgment when determining whether products and services are considered distinct performance obligations that should be accounted for separately versus together. To determine the standalone selling price, the Company first looks to establish the standalone selling price through an observable price when the good or service is sold separately in similar circumstances. If the standalone selling price cannot be established through an observable standalone price, we make an estimate which considers multiple factors including, but not limited to, major product groupings, geographies, gross margin objectives and pricing practices. Pricing practices taken into consideration include contractually stated prices, discounts offered and applicable price lists.

If the Company has not yet established a selling price because the good or service has not previously been sold on a standalone basis, SSP for such good and service in a contract with multiple performance obligations is determined by applying a residual approach whereby all other performance obligations within a contract are first allocated a portion of the transaction price based upon their respective SSP, using observable prices, with any residual amount of the transaction price allocated to the good or service for which the price has not yet been established.

Solution Sales. Solution sales for the design, manufacture, test, integration and installation of products, including equipment acquired from third parties to be integrated with Harmonic’s products, that are customized to meet the customer’s specifications are accounted for based on the percentage-of-completion basis, using the input method. Some of our arrangements may include acceptance provisions that require testing of the solution against specific performance criteria. The Company performs a detailed evaluation to determine whether the arrangement involves performance criteria based on our standard performance criteria. The Company has a long-standing history of entering into contractual arrangements to deliver the solution sales based on standard performance criteria. For this type of arrangement, we consider the customer acceptance clause not substantive and recognize product revenue when the customer takes possession of the product and recognize service on a percentage-of-completion basis using the input method. However, if the solution results in significant production, modification or customization, we consider the arrangement as a single performance obligation and recognize the revenue at a point in time, or as a percentage of completion, depending on the complexity of the solution and nature of acceptance.

The use of the input method requires the Company to make reasonably dependable estimates. We use the input method based on labor hours, where revenue is calculated based on the percentage of total hours incurred in relation to total estimated hours at completion of the contract. The input method is reasonable because the hours best reflect the Company’s efforts toward satisfying the performance obligation over time. As circumstances change over time, the Company updates its measure of progress to reflect any changes in the outcome of the performance obligation. Such changes to an entity’s measure of progress are accounted for as a change in accounting estimates.

Professional services. Revenue from professional services is recognized over time as the services are performed or on the percentage-of-completion basis using the input method.

Support and maintenance. Support and maintenance services are satisfied ratably over time as the customer simultaneously receives and consumes the benefits of the services.

Contract Balances. Deferred revenue represents the Company’s obligation to transfer goods or services to a customer for which the Company has received consideration (or an amount of consideration is due) from the customer. The Company’s payment terms vary by the type and location of its customer and the products or services offered. The term between invoicing and when payment is due is not significant. For certain products or services and customer types, the Company requires payment before the products or services are delivered to the customer.

Revenue recognized during the year ended December 31, 2022 that was included in the deferred revenue balance at January 1, 2022 was \$47.9 million. Revenue recognized during the year ended December 31, 2021 that was included within the deferred revenue balance at January 1, 2021 was \$52.2 million.

Contract assets exist when the Company has satisfied a performance obligation but does not have an unconditional right to consideration (e.g., because the entity first must satisfy another performance obligation in the contract before it is entitled to invoice the customer).

Contract assets and deferred revenue consisted of the following:

<i>(in thousands)</i>	As of December 31,	
	2022	2021
Contract assets	\$ 5,580	\$ 8,101
Deferred revenue	\$ 80,471	\$ 78,167

Contract assets and the non-current portion of Deferred revenue are reported as components of “Prepaid expenses and other current assets” and “Other non-current liabilities”, respectively, on the Consolidated Balance Sheets.

Remaining performance obligations represent contracted revenues that had not yet been recognized and future revenue recognition is expected. The aggregate balance of the Company’s remaining performance obligations as of December 31, 2022, was \$473.4 million, of which approximately 80% is expected to be recognized as revenue over the next 12 months and the remainder thereafter.

Contract costs. The incremental costs of obtaining a contract are capitalized if the costs are expected to be recovered. Costs that are recognized as assets are amortized on a straight-line basis over the period during which the related goods or services transfer to the customer. Costs incurred to fulfill a contract are capitalized if they are not covered by other relevant guidance, relate directly to a contract, will be used to satisfy future performance obligations, and are expected to be recovered.

The balances of net capitalized contract costs included in the Company's Consolidated Balance Sheets were as follows:

<i>(in thousands)</i> Balance Sheet Location	As of December 31,	
	2022	2021
Prepaid expenses and other current assets	\$ 1,766	\$ 1,907
Other non-current assets	1,337	1,636
Total net capitalized contract costs	\$ 3,103	\$ 3,543

The amortization of the capitalized contract costs for the years ended December 31, 2022, 2021 and 2020 was \$2.2 million, \$2.3 million and \$1.6 million.

Refer to Note 17, "Segment Information, Geographic Information and Customer Concentration" for disaggregated revenue information.

NOTE 5. LEASES

During the fiscal year ended December 31, 2022, the Company entered into new or modified lease agreements which were assessed under Topic 842 to be operating leases. The new or modified lease agreements resulted in the balance sheet recognition of \$0.9 million in "Operating lease right-of use assets," \$0.7 million in "Operating lease liabilities, long-term," and \$0.2 million in "Operating lease liabilities, current."

The components of lease expense are as follows:

<i>(in thousands)</i>	Year ended December 31,	
	2022	2021
Operating lease cost	\$ 7,636	\$ 7,550
Variable lease cost	1,780	1,986
Total lease cost	\$ 9,416	\$ 9,536

Supplemental cash flow information related to leases are as follows:

<i>(in thousands)</i>	Year ended December 31,	
	2022	2021
Cash paid for amounts included in the measurement of operating lease liabilities	\$ 7,528	\$ 7,644
ROU assets obtained in exchange for operating lease obligations	\$ 862	\$ 8,837

Other information related to leases are as follows:

	Year ended December 31,	
	2022	2021
Operating leases		
Weighted-average remaining lease term (years)	6.2	6.8
Weighted-average discount rate	6.3 %	6.3 %

Future minimum lease payments under non-cancelable operating leases as of December 31, 2022 are as follows (in thousands):

Years ending December 31,	
2023	\$ 7,106
2024	7,066
2025	5,884
2026	4,847
2027	3,770
Thereafter	8,877
Total future minimum lease payments	\$ 37,550
Less: imputed interest	(6,667)
Total lease liability balance	\$ 30,883

NOTE 6: DERIVATIVES AND HEDGING ACTIVITIES

Derivatives Not Designated as Hedging Instruments (Balance Sheet Hedges)

The Company's balance sheet hedges consist of foreign currency forward contracts, which mature generally within three months. These forward contracts are carried at fair value and they are used to minimize the short-term impact of foreign currency exchange rate fluctuation on cash and certain trade and intercompany receivables and payables. Changes in the fair value of these foreign currency forward contracts are recognized in "Other expense, net" in the Consolidated Statements of Operations and are largely offset by the changes in the fair value of the assets or liabilities being hedged. Foreign currency forward contracts' gains recognized during the years ended December 31, 2022, 2021 and 2020, were \$0.3 million, \$0.7 million and \$2.2 million, respectively.

The U.S. dollar equivalents of all outstanding notional amounts of foreign currency forward contracts were as follows:

<i>(in thousands)</i>	As of December 31,	
	2022	2021
Purchase	\$ 7,971	\$ 2,926
Sell	\$ —	\$ 5,175

While the Company's arrangements with its counterparties allow for net settlement, which is designed to reduce credit risk by permitting net settlement with the same counterparty, the Company recognizes all derivative instruments in the Consolidated Balance Sheets on a gross basis. As of December 31, 2022 and 2021, gross fair values of derivative assets and liabilities, recorded as components of "Prepaid expenses and other current assets" and "Other current liabilities", respectively, in the Consolidated Balance Sheets, were immaterial.

In connection with foreign currency derivatives entered in Israel, the Company's subsidiaries in Israel are required to maintain a compensating balance with their bank at the end of each month. The compensating balance arrangements do not legally restrict the use of cash. As of December 31, 2022 and 2021, the total compensating balance maintained was \$1.0 million.

NOTE 7: FAIR VALUE MEASUREMENTS

The applicable accounting guidance establishes a framework for measuring fair value and requires disclosure about the fair value measurements of assets and liabilities. This guidance defines fair value as the exchange price that would be received for an asset or paid to transfer a liability, in the principal or most advantageous market for the asset or liability, in an orderly transaction between market participants on the measurement date. Valuation techniques used to measure fair value must maximize the use of observable inputs and minimize the use of unobservable inputs. This guidance requires the Company to classify and disclose assets and liabilities measured at fair value on a recurring basis, as well as fair value measurements of assets and liabilities measured on a nonrecurring basis in periods subsequent to initial measurement, in a three-tier fair value hierarchy as follows:

- Level 1 - Observable inputs that reflect quoted prices for identical assets or liabilities in active markets.
- Level 2 - Observable inputs other than Level 1 prices, such as quoted prices for similar assets or liabilities, quoted prices in markets that are not active, or other inputs that are observable or can be corroborated by observable market data for substantially the full term of the assets or liabilities.
- Level 3 - Unobservable inputs that are supported by little or no market activity and that are significant to the fair value of the assets or liabilities.

The carrying value of the Company's financial instruments, including cash equivalents, restricted cash, accounts receivable, accounts payable and accrued liabilities, approximate fair value due to their short maturities.

The Company's financial instruments not measured at fair value on a recurring basis were as follows:

<i>(in thousands)</i>	December 31, 2022				December 31, 2021			
	Carrying Value	Fair Value			Carrying Value	Fair Value		
		Level 1	Level 2	Level 3		Level 1	Level 2	Level 3
2022 Notes	\$ —	\$ —	\$ —	\$ —	\$ 36,824	\$ —	\$ 78,619	\$ —
2024 Notes	\$ 113,981	\$ —	\$ 181,139	\$ —	\$ 98,941	\$ —	\$ 173,419	\$ —
French and other loans	\$ 11,161	\$ —	\$ 11,161	\$ —	\$ 17,981	\$ —	\$ 17,981	\$ —

The fair value of the Company's Notes is influenced by interest rates, the Company's stock price and stock market volatility. The difference between the carrying value and the fair value is primarily due to the spread between the conversion price and the market value of the shares underlying the conversion as of each respective balance sheet date. The Company's French and other loans are classified within Level 2 because these borrowings are not actively traded and the majority of them have a variable interest rate structure based upon market rates currently available to the Company for debt with similar terms and maturities; therefore, the carrying value of these debts approximate its fair value. Refer to Note 12, "Convertible Notes and Other Debts," for additional information.

During the years ended December 31, 2022, 2021, and 2020, there were no nonrecurring fair value measurements of assets and liabilities subsequent to initial recognition.

NOTE 8: GOODWILL

The changes in the Company's carrying amount of goodwill are as follows:

<i>(in thousands)</i>	Video	Broadband	Total
Balance as of December 31, 2020	\$ 182,855	\$ 60,819	\$ 243,674
Foreign currency translation adjustment	(3,457)	(4)	(3,461)
Balance as of December 31, 2021	\$ 179,398	\$ 60,815	\$ 240,213
Foreign currency translation adjustment	(2,409)	(65)	(2,474)
Balance as of December 31, 2022	\$ 176,989	\$ 60,750	\$ 237,739

NOTE 9: ACCOUNTS RECEIVABLE

Accounts receivable, net of allowances, consisted of the following:

<i>(in thousands)</i>	As of December 31,	
	2022	2021
Accounts receivable	\$ 110,576	\$ 91,382
Less: allowance for expected credit losses and sales returns	(2,149)	(2,853)
Total	\$ 108,427	\$ 88,529

Trade accounts receivable are recorded at invoiced amounts and do not bear interest. The Company generally does not require collateral and performs ongoing credit evaluations of its customers and provides for expected losses. The Company maintains an allowance for expected credit losses based upon the expected collectability of its accounts receivable. The expectation of collectability is based on the Company's review of credit profiles of customers, contractual terms and conditions, current economic trends and historical payment experience. The Company offers return rights which are specifically identified and accrued for as sales returns at the end of the period.

The following table is a summary of activities in allowances for expected credit losses and sales returns:

<i>(in thousands)</i>	Balance at Beginning of Period	Charges to Revenue	Charges (Credits) to Expense	Deductions from Reserves	Balance at End of Period
Year ended December 31,					
2022	\$ 2,853	\$ 1,118	\$ 836	\$ (2,658)	\$ 2,149
2021	\$ 2,068	\$ 2,609	\$ 1,533	\$ (3,357)	\$ 2,853
2020	\$ 3,013	\$ 1,367	\$ 299	\$ (2,611)	\$ 2,068

NOTE 10: CERTAIN BALANCE SHEET COMPONENTS

Inventories:

<i>(in thousands)</i>	December 31,	
	2022	2021
Finished goods	\$ 65,308	\$ 37,545
Raw materials	46,081	22,245
Work-in-process	3,251	3,993
Service-related spares	6,309	7,412
Total	\$ 120,949	\$ 71,195

Prepaid expenses and other current assets:

<i>(in thousands)</i>	December 31,	
	2022	2021
Prepaid expenses	\$ 5,558	\$ 8,074
Contract assets ⁽¹⁾	5,583	8,101
Other current assets	15,196	13,797
Total	<u>\$ 26,337</u>	<u>\$ 29,972</u>

(1) Contract assets reflect the satisfied performance obligations for which the Company does not yet have an unconditional right to consideration.

Property and equipment, net:

<i>(in thousands)</i>	December 31,	
	2022	2021
Machinery and equipment	\$ 75,589	\$ 78,461
Capitalized software	30,588	38,306
Leasehold improvements	39,199	40,658
Furniture and fixtures	2,739	2,820
Construction-in-progress	2,691	1,892
Property and equipment, gross	150,806	162,137
Less: accumulated depreciation and amortization	(110,992)	(119,416)
Total	<u>\$ 39,814</u>	<u>\$ 42,721</u>

Other current liabilities:

<i>(in thousands)</i>	December 31,	
	2022	2021
Accrued employee compensation and related expenses	\$ 29,675	\$ 26,820
Other	37,049	26,824
Total	<u>\$ 66,724</u>	<u>\$ 53,644</u>

NOTE 11: RESTRUCTURING AND RELATED CHARGES

The Company has implemented several restructuring plans in the past few years. The goal of these plans was to bring operational expenses to appropriate levels relative to the Company's net revenue, while simultaneously implementing extensive company-wide expense control programs. The restructuring plans have primarily been comprised of severance payments and termination benefits related to headcount reductions. The Company accounts for its restructuring plans under the authoritative guidance for exit or disposal activities.

The following table summarizes the activities related to the Company's restructuring plans accrual, reported as components of "Other current liabilities" on the Consolidated Balance Sheets:

<i>(in thousands)</i>	Severance and Benefits
Balance at December 31, 2021	\$ 2,092
Charges for current period	3,739
Cash payments	(4,438)
Other	(349)
Balance at December 31, 2022	<u>\$ 1,044</u>

For the year ended December 31, 2022, \$0.5 million and \$3.3 million of restructuring and related charges are included in "Cost of revenue" and "Operating expenses - Restructuring and related charges", respectively, in the Consolidated Statements of Operations.

NOTE 12: CONVERTIBLE NOTES AND OTHER DEBTS

4.375% Convertible Senior Notes due 2022 (the “2022 Notes”)

In June 2020, the Company issued the 2022 Notes with an aggregate principal amount of \$37.7 million in a non-cash exchange for its 2020 Notes with an equal principal amount pursuant to an indenture, dated June 2, 2020 (the “2022 Notes Indenture”), by and between the Company and U.S. Bank Trust Company, National Association (as successor in interest to U.S. Bank National Association), as trustee. The 2022 Notes bore interest at a rate of 4.375% per year, payable in cash on June 1 and December 1 of each year. The 2022 Notes matured on December 1, 2022.

The 2022 Notes were initially convertible into cash, shares of the Company’s common stock, or a combination thereof, at the Company’s election, at an initial conversion rate of 173.9978 shares of the Company’s common stock per \$1,000 principal amount of the 2022 Notes (which is equivalent to an initial conversion price of approximately \$5.75 per share). Pursuant to the supplemental indenture entered into by the Company and the trustee during the fourth quarter of fiscal 2021, the Company made an irrevocable election to settle the principal amounts of the 2022 Notes solely with cash and may pay or deliver, as the case may be, any conversion value greater than the principal amount in cash, shares of the Company’s common stock or a combination thereof, at the Company’s election. The conversion rate, and thus the effective conversion price, was adjustable under certain circumstances, including in connection with conversions made following certain fundamental changes and under other circumstances as set forth in the 2022 Notes Indenture.

As discussed in the Note 2. “Recent Accounting Pronouncements”, effective January 1, 2022, the Company adopted ASU 2020-06 using the modified retrospective method and, as a result, accounted for the Convertible debt as a single liability measured at amortized cost.

On or after September 1, 2022, until the close of business on the scheduled trading day immediately preceding the maturity date, holders of the 2022 Notes were able to convert all or a portion of their 2022 Notes regardless of any conditions. Prior to maturity date, the entire principal balance of \$37.7 million was converted by holders of the 2022 Notes. In accordance with provisions of the 2022 Notes Indenture and the aforementioned supplemental indenture, conversions were settled in a combination of cash and the Company’s common Stock. The principal amount of \$37.7 million that matured on December 1, 2022 was paid in cash. The conversion value greater than the principal amount was delivered in 3.9 million shares of the Company’s common stock.

The following table presents interest expense recognized for the 2022 Notes:

(in thousands)

	Year ended December 31,		
	2022	2021	2020
Contractual interest expense	\$ 1,511	\$ 1,648	\$ 953
Amortization of debt discount	—	685	373
Amortization of debt issuance costs	257	214	117
Total interest expense recognized	<u>\$ 1,768</u>	<u>\$ 2,547</u>	<u>\$ 1,443</u>

2.00% Convertible Senior Notes due 2024 (the “2024 Notes”)

In September 2019, the Company issued \$115.5 million of the 2024 Notes pursuant to an indenture (the “2024 Notes Indenture”), dated September 13, 2019, by and between the Company and U.S. Bank Trust Company, National Association (as successor in interest to U.S. Bank National Association), as trustee. The 2024 Notes bear interest at a rate of 2.00% per year, payable semi-annually on March 1 and September 1 of each year, beginning March 1, 2020. The 2024 Notes will mature on September 1, 2024, unless earlier repurchased by the Company, redeemed by the Company or converted pursuant to their terms.

The 2024 Notes were initially convertible into cash, shares of the Company’s common stock, or a combination thereof, at the Company’s election, at an initial conversion rate of 115.5001 shares of the Company’s common stock per \$1,000 principal amount of the 2024 Notes (which is equivalent to an initial conversion price of approximately \$8.66 per share). Pursuant to the supplemental indenture entered into by the Company and the trustee during the fourth quarter of fiscal 2021, the Company made an irrevocable election to settle the principal amounts of the 2024 Notes solely with cash and may pay or deliver, as the case may be, any conversion value greater than the principal amount in cash, shares of the Company’s common stock or a combination thereof, at the Company’s election. The conversion rate, and thus the effective conversion price, may be adjusted under certain circumstances, including in connection with conversions made following certain fundamental changes or a notice of redemption and under other circumstances, in each case, as set forth in the 2024 Notes Indenture.

The 2024 Notes will be convertible at certain times and upon the occurrence of certain events in the future, in each case, specified in the 2024 Notes Indenture. Further, on or after June 1, 2024, until the close of business on the scheduled trading day immediately preceding the maturity date, holders of the 2024 Notes may convert all or a portion of their 2024 Notes regardless of these conditions.

In accordance with the accounting guidance on embedded conversion features, the conversion feature associated with the 2024 Notes was valued at \$24.9 million and bifurcated from the host debt instrument and recorded in “Additional paid-in capital.” The resulting debt discount on the 2024 Notes was being amortized, prior to adoption of ASU 2020-06, to interest expense at the effective interest rate over the contractual term of the 2024 Notes.

As discussed in the Note 2. “Recent Accounting Pronouncements”, effective January 1, 2022, the Company adopted ASU 2020-06 using the modified retrospective method and, as a result, accounted for the Convertible debt as a single liability measured at amortized cost.

The 2024 Notes became convertible as of December 31, 2022, as the last reported sale price of the Company’s common stock for at least 20 trading days during a period of 30 consecutive trading days ending on the last trading day of the immediately preceding fiscal quarter was greater than or equal to 130% of the conversion price of the 2024 Notes on each applicable trading day. All \$114.0 million of the net carrying amount of the 2024 Notes outstanding as of December 31, 2022 was classified as a current liability as of that date.

The following table presents the components of the 2024 Notes:

<i>(in thousands, except for years and percentages)</i>	As of December 31,	
	2022	2021
Liability:		
Principal amount	\$ 115,500	\$ 115,500
Less: Debt discount, net of amortization	—	(14,576)
Less: Debt issuance costs, net of amortization	(1,519)	(1,983)
Carrying amount	<u>\$ 113,981</u>	<u>\$ 98,941</u>
Remaining amortization period (years)	n/a	2.7
Effective interest rate on liability component	n/a	7.95 %

The following table presents interest expense recognized for the 2024 Notes:

<i>(in thousands)</i>	Year ended December 31,		
	2022	2021	2020
Contractual interest expense	\$ 2,312	\$ 2,312	\$ 2,310
Amortization of debt discount	—	4,718	4,358
Amortization of debt issuance costs	874	641	595
Total interest expense recognized	<u>\$ 3,186</u>	<u>\$ 7,671</u>	<u>\$ 7,263</u>

Other Debts

The Company has a variety of debt and credit facilities primarily in France to satisfy the financing requirements of the operations of its French subsidiary. These arrangements are summarized in the table below:

<i>(in thousands)</i>	December 31,	
	2022	2021
Financing from French government agencies related to various government incentive programs ⁽¹⁾	\$ 10,580	\$ 12,259
Relief loans ⁽²⁾	5,337	5,651
Term loans	—	71
Total debt obligations	15,917	17,981
Less: current portion	(4,756)	(4,992)
Long-term portion	<u>\$ 11,161</u>	<u>\$ 12,989</u>

(1) These loans bear variable interest rate at EURIBOR 1 month plus 1.9% and mature between 2023 through 2025.

(2) Refer to the below section “Relief Loans” for the description of these loans.

The table below presents the future minimum repayments of other debts as of December 31, 2022 (in thousands):

Year ending December 31,		
2023	\$	4,756
2024		4,756
2025		5,065
2026		1,340
Total	\$	15,917

Relief Loans

In June 2020, Harmonic France was granted a loan from Société Générale S.A. (the “SG Loan”) in the aggregate amount of 5 million Euros, pursuant to a state guarantee program introduced in March 2020 to provide relief to companies from the financial consequences of the COVID-19 pandemic. The SG Loan was initially maturing in June 2021. During 2021, SG Loan maturity was extended to June 2026. The SG loan bears an effective interest rate of 0.51% per annum payable annually and may be repaid at any time prior to maturity with no repayment penalties. There are no restrictions on the use of funds from the SG Loan. The purpose of the funds from the SG Loan is to allow the preservation of activity and employment in France. As of December 31, 2022, there was \$5.3 million outstanding under the loan, of which \$1.3 million was recorded in “Other debts, current” and \$4.0 million was recorded in “Other debts, non-current” in the Consolidated Balance Sheets.

Line of Credit

On December 19, 2019, the Company entered into a Credit Agreement with JPMorgan Chase Bank, N.A. as lender, and Harmonic International GmbH, as co-borrower (the “Credit Agreement”). The Credit Agreement provides for a secured revolving loan facility in an aggregate principal amount of up to \$25.0 million, based on a borrowing base of eligible accounts receivable and inventory. The Company may use availability under the revolving loan facility for the issuance of letters of credit. The proceeds of the revolving loans may be used for general corporate purposes.

On October 28, 2022, the Company amended the Credit Agreement to (i) extend the Credit Agreement maturity date to October 28, 2025 or subject to certain exceptions, the date that is 90 days prior to the maturity date of the 2024 Notes (to the extent the 2024 Notes remain outstanding as of such date) and (ii) amend the interest rate provisions to LIBOR with SOFR as the interest rate benchmark for the revolving loans. As amended, the revolving loans bear interest, at the Company’s election, at a floating rate per annum equal to either (1) 2.00% plus the greater of (i) 2.50% and (ii) the prime rate as reported in the Wall Street Journal from time to time or (2) 3.00% plus adjusted term SOFR for an interest period of one, three or six months. Except in cases of default, prepayment or conversion, interest on the revolving loans is payable monthly in arrears, in the case of prime rate loans, and at the end of the applicable interest period, in the case of SOFR loans.

The Credit Agreement contains customary affirmative and negative covenants, including covenants limiting the ability of the Company, among other things, incur debt, grant liens, undergo certain fundamental changes, make investments, make certain restricted payments, dispose of assets, enter into transactions with affiliates, and enter into burdensome agreements, in each case, subject to limitations and exceptions set forth in the Credit Agreement. The Company is also required to maintain compliance with an adjusted quick ratio, a minimum EBITDA covenant (tested quarterly) and a minimum liquidity covenant, in each case, determined in accordance with the terms of the Credit Agreement. As of December 31, 2022, the Company was in compliance with the covenants under the Credit Agreement.

There were no borrowings under the Credit Agreement outstanding as of December 31, 2022.

NOTE 13: EMPLOYEE BENEFIT PLANS

Equity Award Plans

1995 Stock Plan

The 1995 Stock Plan provides for the grant of incentive stock options, non-statutory stock options and restricted stock units (“RSUs”). Incentive stock options may be granted only to employees. All other awards may be granted to employees and non-employees. Under the terms of the 1995 Stock Plan, no incentive stock option or non-statutory stock option may be granted in the ordinary course of business with a per share exercise price that is less than 100% of the fair value of the Company’s common stock on the date of grant. RSUs have no exercise price. Both options and RSUs vest over a period of time as determined by the Company’s Board of Directors (the “Board”), generally two to four years, and options expire seven years from the date of grant. Some of the RSUs granted by the Company have performance-based vesting terms, where vesting is dependent on achievement of certain financial and non-financial operating goals of the Company (performance-based RSUs, or “PRSUs”), or where vesting is dependent on performance of the Company’s total shareholder return (“TSR”) relative to the TSR of the NASDAQ Telecommunication Index (market-based RSUs, or “MRSUs”). The Company’s stockholders approved an amendment to the 1995 Stock Plan at the 2022 annual meeting of stockholders (the “2022 Annual Meeting”) to increase the number of shares of common stock reserved for issuance thereunder by 7,000,000 shares. As of December 31, 2022, an aggregate of 10,984,093 shares of common stock were reserved for issuance under the 1995 Stock Plan, of which 7,667,045 shares remained available for future grants.

2002 Director Plan

The 2002 Director Plan provides for the grant of non-statutory stock options and RSUs to non-employee directors of the Company. Under the terms of the 2002 Director Plan, no non-statutory stock option may be granted with a per share exercise price that is less than 100% of the fair value of the Company’s common stock on the date of grant. RSUs have no exercise price. Both options and RSUs vest over a period of time as determined by the Board, generally one year for RSUs and three years for options, and options expire seven years from the date of grant. As of December 31, 2022, an aggregate of 706,377 shares of common stock were reserved for issuance under the 2002 Director Plan, of which 524,199 shares remained available for future grants.

Employee Stock Purchase Plan

The 2002 Employee Stock Purchase Plan (“ESPP”) provides for the issuance of share purchase rights to employees of the Company. The ESPP is intended to qualify as an “employee stock purchase plan” under Section 423 of the Internal Revenue Code. The ESPP enables employees to purchase shares at 85% of the fair market value of the Common Stock at the beginning or end of the offering period, whichever is lower. Offering periods generally begin on the first trading day on or after January 1 and July 1 of each year. Employees may participate through payroll deductions of 1% to 10% of their earnings. In the event that there are insufficient shares in the plan to fully fund the issuance, the available shares will be allocated across all participants based on their contributions relative to the total contributions received for the offering period. The Company’s stockholders approved an amendment to the ESPP Plan at the 2022 Annual Meeting to increase the number of shares of common stock reserved for issuance thereunder by 1,000,000 shares. As of December 31, 2022, 1,366,962 shares were reserved for future purchases by eligible employees. Under the ESPP, 817,243, 1,024,244 and 1,036,543 shares were issued during fiscal 2022, 2021 and 2020, respectively, representing \$5.9 million, \$5.1 million and \$4.5 million in contributions.

Stock Options

<i>(in thousands, except per share amounts)</i>	Number of Shares	Weighted-Average Exercise Price (per share)
Balance at December 31, 2021	388	\$ 3.15
Exercised	(388)	3.15
Canceled	—	—
Balance at December 31, 2022	—	\$ —

All stock options are fully vested and exercised as of December 31, 2022. Aggregate intrinsic value represents the difference between the exercise price of the stock options and the fair value of the Company’s common stock as of December 31, 2022. The intrinsic value of stock options exercised during the years ended December 31, 2022, 2021 and 2020 was \$3.9 million, \$2.1 million and \$0.2 million, respectively.

No stock options were granted nor vested during the years ended December 31, 2022, 2021 and 2020.

The Company realized income tax benefit of \$0.3 million from stock option exercises for the year ended December 31, 2022. The Company realized no income tax benefit from stock option exercises for the years ended December 31, 2021 and 2020 due to recurring tax losses and valuation allowances.

Restricted Stock Units

<i>(in thousands, except per share amounts)</i>	Number of Shares	Weighted Average Grant-Date Fair Value Per Share
Balance at December 31, 2021	3,878	\$ 7.31
Granted	2,767	9.47
Vested	(2,990)	7.50
Forfeited	(156)	8.27
Balance at December 31, 2022	3,499	\$ 8.93

The fair value of RSUs vested during the years ended December 31, 2022, 2021 and 2020 was \$22.4 million, \$18.3 million and \$15.5 million, respectively.

Share-based Compensation Cost

The following table sets forth the detailed allocation of the share-based compensation expense which was included in the Company's Consolidated Statements of Operations:

<i>(in thousands)</i>	Year ended December 31,		
	2022	2021	2020
Share-based compensation expense included in:			
Cost of revenue	\$ 2,233	\$ 2,345	\$ 1,712
Research and development expense	7,519	7,164	4,850
Selling, general and administrative expense	15,460	14,547	11,478
Total	\$ 25,212	\$ 24,056	\$ 18,040
Share-based compensation expense by type of award:			
RSUs	17,786	14,573	11,522
PRsUs	3,865	6,231	4,022
MRSUs	1,558	1,304	711
Employee stock purchase rights under ESPP	2,003	1,948	1,785
Total	\$ 25,212	\$ 24,056	\$ 18,040

As of December 31, 2022, total unrecognized share-based compensation cost related to unvested RSUs was \$19.7 million and is expected to be recognized over a weighted-average period of approximately 1.4 years.

French Pension Plan

Under French law, the Company's subsidiaries in France are obligated to make certain payments to their employees upon their retirement from the Company. These payments are based on the retiring employee's salary for a number of months that varies according to the employee's period of service and position. Salary used in the calculation is the employee's average monthly salary for the twelve months prior to retirement. The payments are made in one lump-sum at the time of retirement. The French pension plan is unfunded and there are no contributions to the plan required by related laws or funding regulations. No required contributions are expected in fiscal 2023, but the Company, at its discretion, may make contributions to the defined benefit plan.

The Company's defined benefit pension obligations are measured annually as of December 31. The present value of these lump-sum payments is determined on an actuarial basis and the actuarial valuation considers the employees' age and period of service with the Company, projected mortality rates, mobility rates, increases in salaries and a discount rate.

The Company's pension obligations as of December 31, 2022 and 2021, and the changes to the Company's pension obligations for each of those years, were as follows:

<i>(in thousands)</i>	2022	2021
Projected benefit obligation:		
Balance at January 1	\$ 6,003	\$ 6,057
Service cost	259	272
Interest cost	50	20
Actuarial (gains) losses	(626)	233
Benefits paid	(107)	(94)
Foreign currency translation adjustment	(296)	(485)
Balance at December 31	<u>\$ 5,283</u>	<u>\$ 6,003</u>
Presented on the Consolidated Balance Sheets as:		
Current portion (included in "Accrued and other current liabilities")	\$ 242	\$ 32
Long-term portion (included in "Other non-current liabilities")	\$ 5,041	\$ 5,971

The table below presents the components of net periodic benefit costs:

<i>(in thousands)</i>	Year ended December 31,		
	2022	2021	2020
Service cost	\$ 259	\$ 272	\$ 227
Interest cost	50	20	78
Net periodic benefit cost included in result of operations	<u>\$ 309</u>	<u>\$ 292</u>	<u>\$ 305</u>

The following assumptions were used in determining the Company's pension obligation:

	As of December 31,	
	2022	2021
Discount rate	3.3 %	0.9 %
Mobility rate	6.6 %	4.7 %
Salary progression rate	3.0 %	2.5 %

The Company evaluates the discount rate assumption annually. The discount rate is determined using the average yields on high-quality fixed-income securities that have maturities consistent with the timing of benefit payments.

The Company also evaluates other assumptions related to demographic factors, such as retirement age, mortality rates and turnover periodically, updating them to reflect experience and expectations for the future. The mortality assumption related to the Company's defined benefit pension plan used the most current mortality tables published by the French National Institute of Statistics and Economic Studies.

As of December 31, 2022, future benefits expected to be paid in each of the next five years, and in the aggregate for the five-year period thereafter are as follows (in thousands):

Year ending December 31,	
2023	\$ 242
2024	255
2025	395
2026	683
2027	534
2028 – 2032	3,436
Total	<u>\$ 5,545</u>

Valuation Assumptions

The Company estimates the fair value of stock purchase rights under the ESPP using a Black-Scholes option valuation model. The value of the stock purchase rights under the ESPP consists of: (1) the 15% discount on the purchase of the stock; (2) 85% of the fair value of the call option; and (3) 15% of the fair value of the put option. The call option and put option were valued using the Black-Scholes option pricing model. At the date of grant, the Company estimated the fair value of each stock purchase right granted under the ESPP using the following weighted average assumptions:

	Year ended December 31,		
	2022	2021	2020
Expected term (in years)	0.50	0.50	0.50
Volatility	47 %	45 %	56 %
Risk-free interest rate	1.4 %	0.1 %	0.9 %
Expected dividends	0.0 %	0.0 %	0.0 %

The expected term of the stock purchase right under ESPP represents the period of time from the beginning of the offering period to the purchase date. The Company uses its historical volatility for a period equivalent to the expected term to estimate the expected volatility. The risk-free interest rate that the Company uses in the Black-Scholes option valuation model is based on U.S. Treasury zero-coupon issues with remaining terms similar to the expected term. The Company has not paid and does not plan to pay any cash dividends in the foreseeable future.

The estimated weighted-average fair value per share of stock purchase rights under the ESPP, granted for the years ended December 31, 2022, 2021 and 2020 was \$2.91, \$2.24 and \$1.80, respectively.

NOTE 14: STOCKHOLDERS' EQUITY

Share Repurchase Program

On February 3, 2022, the Board of Directors authorized the Company to repurchase up to \$100 million of the Company's outstanding shares of common stock through February 2025. The Company is authorized to repurchase, from time-to-time, shares of its outstanding common stock through open market purchases and 10b5-1 trading plans, in accordance with applicable rules and regulations, at such time and such prices as management may decide. The program does not obligate the Company to repurchase any specific number of shares and may be discontinued at any time. The actual timing and amount of repurchases are subject to business and market conditions, corporate and regulatory requirements, stock price, acquisition opportunities and other factors.

During the fiscal year ended December 31, 2022, the company repurchased and retired approximately 0.6 million shares of the Company's common stock for an aggregate amount of \$5.1 million. As of December 31, 2022, approximately \$94.9 million of the share repurchase authorization remained available for repurchases under this program. There were no share repurchases authorized during fiscal year 2021 and 2020.

NOTE 15: INCOME TAXES

Income (loss) before income tax:

(in thousands)	Year ended December 31,		
	2022	2021	2020
Domestic	\$ 24,680	\$ (5,688)	\$ (42,905)
Foreign	19,805	14,559	16,688
Income (loss) before income taxes	\$ 44,485	\$ 8,871	\$ (26,217)

Provision for (benefit from) income taxes:

(in thousands)	Year ended December 31,		
	2022	2021	2020
Current:			
Federal	\$ 4,443	\$ 4	\$ 124
State	3,236	85	93
Foreign	3,730	2,469	2,103
Deferred:			
Foreign	4,894	(6,941)	734
Total provision for (benefit from) income taxes	\$ 16,303	\$ (4,383)	\$ 3,054

The difference between the tax provision at the statutory federal income tax rate and the provision for (benefit from) income tax as a percentage of income (loss) before income taxes (effective tax rate) for each period was as follows:

	Year ended December 31,		
	2022	2021	2020
Statutory U.S. federal income tax rate	21 %	21 %	21 %
Increase (reduction) in rate resulting from:			
State Taxes	7 %	— %	— %
Differential in rates on foreign earnings	1 %	42 %	(11)%
Change in valuation allowance	15 %	(113)%	(16)%
Change in liabilities for uncertain tax positions	— %	(2)%	— %
Non-deductible stock-based compensation	4 %	11 %	(2)%
Permanent differences	(1)%	— %	(2)%
Adjustments related to tax positions taken during prior years	(8)%	(3)%	— %
Research and development credits	(2)%	(10)%	— %
Other	— %	3 %	(2)%
Effective tax rate	37 %	(49)%	(12)%

The Company operates in multiple jurisdictions and its profits are taxed pursuant to the tax laws of these jurisdictions. The Company's effective income tax rate differs from the U.S. federal statutory rate primarily due to geographical mix of income and losses, full valuation allowance against U.S. federal and state deferred tax assets, foreign withholding taxes and income taxes on earnings from operations in foreign tax jurisdictions. The Company's effective income tax rate may be affected by changes in its interpretations of tax laws and tax agreements in any given jurisdiction, utilization of net operating loss and tax credit carry forwards, changes in geographical mix of income and expense, and changes in management's assessment of matters such as the ability to realize deferred tax assets, as well as one-time discrete items. During fiscal 2022, the Company recorded current tax expense in the United States, primarily due to mandatory capitalization and amortization of research and development expenses in the United States starting January 1, 2022, as required by the Tax Cuts and Jobs Act. During fiscal 2021, the Company recorded a one-time benefit of approximately \$8.6 million due to the release of valuation allowance on deferred tax assets in foreign jurisdictions due to its improved earnings in recent years and increasing future projected earnings.

The components of deferred taxes are as follows:

(in thousands)	As of December 31,	
	2022	2021
Deferred tax assets:		
Reserves and accruals	\$ 27,376	\$ 24,833
Net operating loss carryforwards	16,032	33,070
Research and development credit carryforwards	28,952	39,730
Deferred stock-based compensation	1,376	1,354
Intangibles	6,384	7,321
Operating lease liabilities	7,423	8,697
Capitalized research and development expenses	36,210	9,681
Other	1,139	31
Gross deferred tax assets	124,892	124,717
Valuation allowance	(101,020)	(90,247)
Gross deferred tax assets after valuation allowance	23,872	34,470
Deferred tax liabilities:		
Depreciation	(5,971)	(6,597)
Convertible notes	—	(3,652)
Operating lease right-of-use assets	(6,125)	(7,402)
Gross deferred tax liabilities	(12,096)	(17,651)
Net deferred tax assets	\$ 11,776	\$ 16,819

The following table summarizes the activities related to the Company's valuation allowance:

<i>(in thousands)</i>	Year ended December 31,		
	2022	2021	2020
Balance at beginning of period	\$ 90,247	\$ 99,585	\$ 95,518
Additions	10,773	310	6,690
Deductions	—	(9,648)	(2,623)
Balance at end of period	<u>\$ 101,020</u>	<u>\$ 90,247</u>	<u>\$ 99,585</u>

Management regularly assesses the ability to realize deferred tax assets recorded based upon the weight of available evidence, including such factors as recent earnings history and expected future taxable income on a jurisdiction by jurisdiction basis. In the event that the Company changes its determination as to the amount of realizable deferred tax assets, the Company will adjust its valuation allowance with a corresponding impact to the provision for income taxes in the period in which such determination is made.

As of December 31, 2022, the Company had \$83.1 million, \$0.0 million, \$34.7 million of foreign, U.S. federal and state net operating loss ("NOL") carryforwards, respectively. Certain foreign NOLs expire beginning in 2026, if not utilized, while the majority of the foreign NOLs carryforward indefinitely. Certain U.S. states NOL carryforward expires at various dates beginning in 2029, if not utilized.

As of December 31, 2022, the Company had U.S. federal and California state tax credit carryforwards of \$3.4 million and \$35.5 million, respectively. If not utilized, the U.S. federal tax credit carryforwards will begin to expire in 2031, while the California tax credit carryforward will not expire.

In the event the Company experiences an ownership change within the meaning of Section 382 of the Internal Revenue Code ("IRC"), the Company's ability to utilize net operating losses, tax credits and other tax attributes may be limited.

The Company has not provided U.S. state income taxes and foreign withholding taxes, on approximately \$50.4 million of cumulative earnings for certain non-U.S. subsidiaries, because such earnings are intended to be indefinitely reinvested. Determination of the amount of unrecognized deferred tax liability for temporary differences related to investments in these non-U.S. subsidiaries that are essentially permanently in duration is not practicable.

The Company applies the provisions of the applicable accounting guidance regarding accounting for uncertainty in income taxes, which require application of a more-likely-than-not threshold to the recognition and derecognition of uncertain tax positions. If the recognition threshold is met, the applicable accounting guidance permits the recognition of a tax benefit measured at the largest amount of such tax benefit that, in the Company's judgment, is more than fifty percent likely to be realized upon settlement. It further requires that a change in judgment related to the expected ultimate resolution of uncertain tax positions to be recognized in earnings in the period in which such determination is made. The Company will continue to review its tax positions and provide for, or reverse, unrecognized tax benefits as issues arise. As of December 31, 2022, the Company had \$9.8 million of unrecognized future tax benefits that will have no or minimal impact on the effective tax rate in future periods if recognized due to a valuation allowance on such unrecognized tax benefits.

The following table summarizes the activities related to the Company's gross unrecognized tax benefits:

<i>(in millions)</i>	Year ended December 31,		
	2022	2021	2020
Balance at beginning of period	\$ 13.8	\$ 17.6	\$ 17.0
Increase in balance related to tax positions taken during current year	0.3	0.3	0.3
Decrease in balance as a result of a lapse of the applicable statutes of limitations	—	(0.2)	—
Increase in balance related to tax positions taken during prior years	—	—	0.3
Decrease in balance related to tax positions taken during prior years	(3.0)	(3.9)	—
Balance at end of period	<u>\$ 11.1</u>	<u>\$ 13.8</u>	<u>\$ 17.6</u>

The Company recognizes interest and penalties related to unrecognized tax positions in income tax expense on the Consolidated Statements of Operations. The net interest and penalties charges recorded for the years ended December 31, 2020 through 2022, were not material.

The 2018 through 2021 tax years generally remain subject to examination by U.S. federal and most state tax authorities. Net operating losses generated on a tax return basis by the Company for the 2016 to 2021 tax years and research and development credits for 2011 to 2021 tax years remain open to examination. In addition, the Company remains subject to income tax examination for several other jurisdictions, including in Switzerland for years after 2017, Israel for years after 2019, and France for years after 2016.

NOTE 16: EARNINGS PER SHARE

Basic net income (loss) per share is computed by dividing the net income (loss) attributable to common stockholders for the applicable period by the weighted average number of common shares outstanding during the period. Potentially dilutive shares, consisting of outstanding stock options, RSUs, ESPP awards, and the Company's Notes, are included in calculation of diluted net income (loss) per share when their effect is dilutive.

The following table sets forth the computation of the basic and diluted net income (loss) per share:

<i>(in thousands, except per share amounts)</i>	Year ended December 31,		
	2022	2021	2020
Numerator:			
Net income (loss)	\$ 28,182	\$ 13,254	\$ (29,271)
Denominator:			
Weighted average number of shares outstanding:			
Basic	105,080	101,484	96,971
2022 Notes	2,681	2,175	—
2024 Notes	2,441	653	—
Stock options	213	292	—
Restricted stock units	1,884	1,525	—
Stock purchase rights under ESPP	79	42	—
Diluted	<u>112,378</u>	<u>106,171</u>	<u>96,971</u>
Net income (loss) per share:			
Basic	\$ 0.27	\$ 0.13	\$ (0.30)
Diluted	<u>\$ 0.25</u>	<u>\$ 0.12</u>	<u>\$ (0.30)</u>

The following table presents the potentially dilutive shares that were excluded from the computation of diluted net income (loss) per share, because their effect was anti-dilutive:

<i>(in thousands)</i>	Year ended December 31,		
	2022	2021	2020
2020 Notes	—	—	312
2022 Notes	—	—	192
Stock options	—	8	1,603
Restricted stock units	38	27	3,041
Stock purchase rights under the ESPP	—	390	531
Total	<u>38</u>	<u>425</u>	<u>5,679</u>

The Company applies the treasury stock method to determine the potential dilutive effect of its convertible debt on earnings per share. The 2020 Notes, 2022 Notes, and 2024 Notes are excluded from the calculation of diluted earnings per share under the treasury stock method for the periods when their respective conversion prices exceeded the average market price for the Company's common stock. Under the if-converted method, the 2022 Notes and 2024 Notes have potential dilutive effect of 6.6 million shares and 13.3 million shares, respectively.

NOTE 17: SEGMENT INFORMATION, GEOGRAPHIC INFORMATION AND CUSTOMER CONCENTRATION**Segment Information**

Operating segments are defined as components of an enterprise that engage in business activities for which separate financial information is available and evaluated by the Company's CODM, which for the Company is its Chief Executive Officer, in deciding how to allocate resources and assess performance. Based on the internal reporting structure, the Company consists of two operating segments: Video and Broadband. During the third quarter of fiscal 2022, the Company's Cable Access segment was renamed the Broadband segment to reflect a broader strategic view of the category. There has been no change to the composition of the segment; therefore, no prior periods were restated. The operating segments were determined based on the nature of the products offered. The Video segment provides video processing and production and playout solutions and services worldwide to broadcast and media companies, streaming new media companies, broadband operators, and satellite and telco Pay-TV service providers. The Broadband segment provides CableOS broadband access solutions and related services to broadband operators globally. A measure of assets by segment is not applicable as segment assets are not included in the discrete financial information provided to the CODM.

The following table provides summary financial information by reportable segment:

<i>(in thousands)</i>	Year ended December 31,		
	2022	2021	2020
Video			
Revenue	\$ 274,189	\$ 288,507	\$ 242,510
Gross profit	165,618	169,468	132,092
Operating income	22,322	28,460	1,326
Broadband			
Revenue	\$ 350,768	\$ 218,642	\$ 136,321
Gross profit	153,031	93,191	66,661
Operating income	52,283	15,599	11,651
Total			
Revenue	\$ 624,957	\$ 507,149	\$ 378,831
Gross profit	\$ 318,649	\$ 262,659	\$ 198,753
Operating income	\$ 74,605	\$ 44,059	\$ 12,977

A reconciliation of the Company's total segment operating income to income (loss) before income taxes is as follows:

<i>(in thousands)</i>	Year ended December 31,		
	2022	2021	2020
Total segment operating income	\$ 74,605	\$ 44,059	\$ 12,977
Unallocated corporate expenses ⁽¹⁾	(3,874)	(681)	(3,416)
Stock-based compensation	(25,212)	(24,062)	(18,040)
Amortization of intangibles	—	(507)	(3,970)
Income (loss) from operations	45,519	18,809	(12,449)
Loss on convertible debt extinguishment	—	—	(1,362)
Non-operating expense, net	(1,034)	(9,938)	(12,406)
Income (loss) before income taxes	\$ 44,485	\$ 8,871	\$ (26,217)

(1) Together with amortization of intangibles and stock-based compensation, the Company does not allocate restructuring and related charges and certain other non-recurring charges to the operating income for each segment because management does not include this information in the measurement of the performance of the operating segments.

Geographic Information

Net revenue ⁽¹⁾: (in thousands)

	Year ended December 31,		
	2022	2021	2020
United States	\$ 393,991	\$ 282,912	\$ 191,854
Other countries	230,966	224,237	186,977
Total	<u>\$ 624,957</u>	<u>\$ 507,149</u>	<u>\$ 378,831</u>

(1) Revenue is attributed to countries based on the location of the customer.

Other than the United States, no single country accounted for 10% or more of the Company's net revenues for the years ended December 31, 2022, 2021 and 2020.

Property and equipment, net: (in thousands)

	As of December 31,	
	2022	2021
United States	\$ 25,395	\$ 29,740
Israel	10,621	8,715
France	3,372	3,656
Other countries	426	610
Total	<u>\$ 39,814</u>	<u>\$ 42,721</u>

Customer Concentration

One customer, Comcast, accounted for 39%, 26% and 20% of the Company's total net revenues during the years ended December 31, 2022, 2021 and 2020, respectively.

NOTE 18: COMMITMENTS AND CONTINGENCIES

Bank Guarantees and Standby Letters of Credit

As of December 31, 2022 and 2021, the Company has outstanding bank guarantees and standby letters of credit in aggregate of \$2.1 million and \$2.4 million, respectively, consisting of building leases and performance bonds issued to customers.

During 2017, one of the Company's subsidiaries entered into a \$2.0 million credit facility with a foreign bank for the purpose of issuing performance guarantees. The credit facility is secured by a \$2.2 million indemnity issued by the parent company. There were no amounts outstanding under this credit facility as of December 31, 2022 and 2021.

Indemnification

The Company is obligated to indemnify its officers and its directors pursuant to its bylaws and contractual indemnity agreements. The Company also indemnifies some of its suppliers and most of its customers for specified intellectual property matters pursuant to certain contractual arrangements, subject to certain limitations. The scope of these indemnities varies, but, in some instances, includes indemnification for damages and expenses (including reasonable attorneys' fees). There have been no amounts accrued in respect of the indemnification provisions through December 31, 2022.

Purchase Commitments

As of December 31, 2022, the Company had approximately \$143.4 million of commitments to purchase goods and services.

NOTE 19: LEGAL PROCEEDINGS

From time to time, the Company is involved in lawsuits as well as subject to various legal proceedings, claims, threats of litigation, and investigations in the ordinary course of business, including claims of alleged infringement of third-party patents and other intellectual property rights, commercial, employment, and other matters. The Company assesses potential liabilities in connection with each lawsuit and threatened lawsuits and accrues an estimated loss for these loss contingencies if both of the following conditions are met: information available prior to issuance of the financial statements indicates that it is probable that a liability has been incurred at the date of the financial statements and the amount of loss can be reasonably estimated. While certain matters to which the Company is a party specify the damages claimed, such claims may not represent reasonably probable losses. Given the inherent uncertainties of litigation, the ultimate outcome of these matters cannot be predicted at this time, nor can the amount of possible loss or range of loss, if any, be reasonably estimated.

Item 9A. CONTROLS AND PROCEDURES

Evaluation of Disclosure Controls and Procedures

We maintain “disclosure controls and procedures,” as such term is defined in Rule 13a-15(e) under the Exchange Act, that are designed to ensure that information required to be disclosed by us in reports that we file or submit under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in SEC rules and forms, and that such information is accumulated and communicated to our management, including our Chief Executive Officer and Chief Financial Officer, as appropriate to allow timely decisions regarding required disclosure. In designing and evaluating our disclosure controls and procedures, management recognized that disclosure controls and procedures, no matter how well conceived and operated, can provide only reasonable, not absolute, assurance that the objectives of the disclosure controls and procedures are met. Additionally, in designing disclosure controls and procedures, our management necessarily was required to apply its judgment in evaluating the cost-benefit relationship of possible disclosure controls and procedures. The design of any disclosure controls and procedures also is based in part upon certain assumptions about the likelihood of future events, and there can be no assurance that any design will succeed in achieving its stated goals under all potential future conditions.

Based on their evaluation as of the end of the period covered by this Annual Report on Form 10-K, our Chief Executive Officer and Chief Financial Officer have concluded that our disclosure controls and procedures were effective.

Management’s Report on Internal Control over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting (as defined in Rule 13a-15(f) under the Exchange Act). Management conducted an assessment of the effectiveness of the Company’s internal control over financial reporting based on the criteria set forth in Internal Control - Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission. Based on the Company’s assessment, management concluded that its internal control over financial reporting was effective as of December 31, 2022.

The Company’s independent registered public accounting firm, Ernst & Young LLP, has audited the effectiveness of the Company’s internal control over financial reporting, as stated in their report which appears in Part II, Item 8 of this Form 10-K.

Changes in Internal Control over Financial Reporting

There were no changes in our internal control over financial reporting during our fourth quarter of fiscal year 2022, which were identified in connection with management’s evaluation required by paragraph (d) of rules 13a-15 and 15d-15 under the Exchange Act, that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

PART IV

Item 15. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES

1. *Financial Statements.* See Index to Consolidated Financial Statements in Item 8 on page 1 of this Annual Report on Form 10-K.

2. *Financial Statement Schedules.* Financial statement schedules have been omitted because the information is not required to be set forth herein, is not applicable or is included in the financial statements or the notes thereto.

3. *Exhibits.* The documents listed in the Exhibit Index of this Annual Report on Form 10-K are filed herewith or are incorporated by reference in this Annual Report on Form 10-K, in each case as indicated therein.

Exhibit Number	Description
3.1 (i)	Certificate of Incorporation of Harmonic Inc., as amended
3.2 (ii)	Amended and Restated Bylaws of Harmonic Inc.
4.1 (iii)	Form of Common Stock Certificate
4.2 (iv)	Certificate of Designation of Rights, Preferences and Privileges of Series A Participating Preferred Stock of Harmonic Inc.
4.3 (v)	Indenture, dated September 13, 2019, between the Company and U.S. Bank National Association
4.4 (vi)	Supplemental Indenture, dated November 15, 2021 by and between the Company and U.S. Bank National Association
4.5 (v)	Form of 2.00% Convertible Senior Note due 2024 (included in Exhibit 4.1)
4.6 (vii)	Description of Common Stock
4.7 (viii)	Indenture, dated June 2, 2020, by and between the Company and U.S. Bank National Association
4.8 (vi)	Supplemental Indenture, dated November 25, 2021 by and between the Company and U.S. Bank National Association
4.9 (viii)	Form of 4.375% Convertible Senior Note due 2022 (included in Exhibit 4.1)
10.1 (iii)*	Form of Indemnification Agreement
10.2 (ix)*	1995 Stock Plan, as amended and restated on June 9, 2022
10.3 (x)*	2002 Director Stock Plan, as amended and restated on June 8, 2021
10.4 (ix)*	2002 Employee Stock Purchase Plan, as amended and restated on June 9, 2022
10.5 (xi)*	Amended and Restated Change of Control Severance Agreement between Harmonic Inc. and Patrick Harshman, effective March 20, 2018
10.6 (xi)*	Form of Control Severance Agreement between Harmonic Inc. and each of Sanjay Kalra, Nimrod Ben-Natan, Ian Graham and Neven Haltmayer
10.7 (xii)*	Harmonic Inc. 2002 Director Stock Plan Restricted Stock Unit Agreement
10.8 (xiii)	Professional Service Agreement between Harmonic Inc. and Plexus Services Corp., dated September 22, 2003
10.9 (xiii)	Amendment, dated January 6, 2006, to the Professional Services Agreement for Manufacturing between Harmonic Inc. and Plexus Services Corp., dated September 22, 2003
10.10 (xiii)	Addendum 1, dated November 26, 2007, to the Professional Services Agreement between Harmonic Inc. and Plexus Services Corp., dated September 22, 2003
10.11 (xii)	Harmonic Inc. 1995 Stock Plan Restricted Stock Unit Agreement
10.12 (xiv)	Credit Agreement, dated as of December 19, 2019, by and among Harmonic Inc. and Harmonic International GmbH, as co-borrowers, certain subsidiaries of Harmonic Inc. from time to time party thereto, as guarantors, and JPMorgan Chase Bank, N.A., as lender.
10.13 (viii)	First Amendment to Credit Agreement, dated as of May 28, 2020, by and among Harmonic Inc., Harmonic International GmbH and JPMorgan Chase Bank, N.A.
10.14 (xv)	Second Amendment to Credit Agreement, dated as of October 30, 2020, by and among Harmonic Inc., Harmonic International GmbH and JP Morgan Chase Bank, N.A.

10.15 (xvi)	<u>Third Amendment to Credit Agreement, dated as of November 10, 2020, by and among Harmonic Inc., Harmonic International GmbH and JP Morgan Chase Bank, N.A.</u>
10.16 (xvi)	<u>Fourth Amendment to Credit Agreement, dated as of October 28, 2022, by and among Harmonic Inc., Harmonic International GmbH and JP Morgan Chase Bank, N.A.</u>
10.17 (xvi)	<u>Draft Purchase Agreement, dated as of November 10, 2020, by and between Harmonic Inc., and Commerzbank AG, Luxembourg Branch</u>
10.18 (xviii)	<u>Cooperation Agreement, dated as of April 9, 2021, by and between Harmonic Inc. And Scopia Capital Management LP.</u>
10.19 (xix)	<u>Amendment to Cooperation Agreement, dated as of March 24, 2022, by and between Harmonic Inc. and Scopia Capital Management L.P.</u>
16.1 (xx)	<u>Letter dated March 4, 2021 from Armanino LLP to the Securities and Exchange Commission regarding a change in certifying accountant.</u>
21.1 (ii)	<u>Subsidiaries of Harmonic Inc.</u>
23.1	<u>Consent of Independent Registered Public Accounting Firm</u>
23.2	<u>Consent of Armanino LLP - Independent Registered Accounting Firm</u>
31.1	<u>Certification of Principal Executive Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002</u>
31.2	<u>Certification of Principal Financial Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002</u>
32.1	<u>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</u>
32.2	<u>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</u>
101	The following materials from Registrant’s Annual Report on Form 10-K for the year ended December 31, 2022, formatted in Inline Extensible Business Reporting Language (XBRL) includes: Consolidated Balance Sheets at December 31, 2022 and December 31, 2021; (ii) Consolidated Statements of Operations for the Years Ended December 31, 2022, December 31, 2021 and December 31, 2020; (iii) Consolidated Statements of Comprehensive Income (loss) for the Years Ended December 31, 2022, December 31, 2021 and December 31, 2020; (iv) Consolidated Statements of Stockholders’ Equity for the Years Ended December 31, 2022, December 31, 2021 and December 31, 2020; (v) Consolidated Statements of Cash Flows for the Years Ended December 31, 2022, December 31, 2021 and December 31, 2020; and (vi) Notes to Consolidated Financial Statements.
104	Cover Page Interactive Data File (formatted as inline XBRL and contained in Exhibit 101)

* Indicates a management contract or compensatory plan or arrangement relating to executive officers or directors of the Company.

† Registrant has omitted portions of this exhibit and filed such exhibit separately with the Securities and Exchange Commission pursuant to a grant of confidential treatment under Rule 406 promulgated under the Securities Act.

- (i) Previously filed as an exhibit to the Company’s Annual Report on Form 10-K for the year ended December 31, 2001.
- (ii) Previously filed as an exhibit to the Company’s Annual Report on Form 10-K for the year ended December 31, 2022.
- (iii) Previously filed as an exhibit to the Company’s Registration Statement on Form S-1 No. 33-90752.
- (iv) Previously filed as an exhibit to the Company’s Current Report on Form 8-K dated July 25, 2002.
- (v) Previously filed as an exhibit to the Company’s Current Report on Form 8-K filed on September 16, 2019.
- (vi) Previously filed as an exhibit to the Company’s Annual Report on Form 10-K for the year ended December 31, 2022.
- (vii) Previously filed as an exhibit to the Company’s Annual Report on Form 10-K for the year ended December 31, 2020.
- (viii) Previously filed as an exhibit to the Company’s Current Report on Form 8-K filed on June 2, 2020.
- (ix) Previously filed as an exhibit to the Company’s Registration Statement on Form S-8, dated August 20, 2022.
- (x) Previously filed as an exhibit to the Company’s Registration Statement on Form S-8, dated August 20, 2021.
- (xi) Previously filed as an exhibit to the Company’s Current Report on Form 8-K filed on March 26, 2018.
- (xii) Previously filed as an exhibit to the Company’s Annual Report on Form 10-K for the year ended December 31, 2022.

- (xiii) Previously filed as an exhibit to the Company's Current Annual Report on Form 10-K for the year ended December 31, 2008.
- (xiv) Previously filed as an exhibit to the Company's Current Report on Form 8-K, filed on December 26, 2019.
- (xv) Previously filed as an exhibit to the Company's Periodic Report on Form 10-Q, dated November 2, 2020.
- (xvi) Previously filed as an exhibit to the Company's Current Report on Form 8-K, filed on November 2, 2022.
- (xvii) Previously filed as an exhibit to the Company's Current Report on Form 8-K filed November 17, 2020.
- (xviii) Previously filed as an exhibit to the Company's Current Report on Form 8-K filed on April 12, 2021.
- (xix) Previously filed as an exhibit to the Company's Current Report on Form 8-K filed on March 29, 2022.
- (xx) Previously filed as an exhibit to the Company's Current Report on Form 8-K filed on March 5, 2021.

SIGNATURES

Pursuant to the requirements of Section 13 or 15 (d) of the Securities Exchange Act of 1934, the Registrant, Harmonic Inc., a Delaware corporation, has duly caused this Annual Report on Form 10-K/A to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of San Jose, State of California, on September 29, 2023.

<u>Signature</u>	<u>Title</u>	<u>Date</u>
<u>/s/ PATRICK J. HARSHMAN</u> (Patrick J. Harshman)	President & Chief Executive Officer (Principal Executive Officer)	September 29, 2023
<u>/s/ WALTER JANKOVIC</u> (Walter Jankovic)	Chief Financial Officer (Principal Financial and Accounting Officer)	September 29, 2023
<u>/s/ PATRICK GALLAGHER</u> (Patrick Gallagher)	Chairperson	September 29, 2023
<u>/s/ SUSAN G. SWENSON</u> (Susan G. Swenson)	Director	September 29, 2023
<u>/s/ MITZI REAUGH</u> (Mitzi Reaugh)	Director	September 29, 2023
<u>/s/ DAVID KRALL</u> (David Krall)	Director	September 29, 2023
<u>/s/ DEBORAH L. CLIFFORD</u> (Deborah L. Clifford)	Director	September 29, 2023
<u>/s/ SOPHIA KIM</u> (Sophia Kim)	Director	September 29, 2023

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the incorporation by reference in the following Registration Statements (Form S-8 Nos. 333-38025, 333-65051, 333-86649, 333-84720, 333-91464, 333-116467, 333-136425, 333-154715, 333-159877, 333-167197, 333-176211, 333-182931, 333-192089, 333-200032, 333-207866, 333-212242, 333-218902, 333-225874, 333-232431, 333-244390, 333-258980, and 333-267002) of Harmonic, Inc. of our reports dated February 28, 2023, with respect to the consolidated financial statements of Harmonic, Inc. and the effectiveness of internal control over financial reporting of Harmonic, Inc. included in this Form 10-K/A of Harmonic, Inc. for the year ended December 31, 2022.

/s/ Ernst & Young LLP

San Jose, California
September 29, 2023

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We hereby consent to the incorporation by reference in the Registration Statements on Form S-8 (Nos. 333-38025, 333-65051, 333-86649, 333-84720, 333-91464, 333-116467, 333-136425, 333-154715, 333-159877, 333-167197, 333-176211, 333-182931, 333-192089, 333-200032, 333-207866, 333-212242, 333-218902, 333-225874, 333-232431, 333-244390, 333-258980 and 333-267002) of our report dated March 2, 2021, relating to the consolidated financial statements of Harmonic Inc. (the "Company"), and the effectiveness of the Company's internal control over financial reporting, appearing in this Annual Report on Form 10-K/A for the year ended December 31, 2022.

/s/ Armanino LLP
San Ramon, California

September 29, 2023

HARMONIC INC.
CERTIFICATION

I, Patrick J. Harshman, certify that:

1. I have reviewed this Annual Report on Form 10-K/A of Harmonic 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 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.
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: September 29, 2023

By: /s/ Patrick J. Harshman
Patrick J. Harshman
President and Chief Executive Officer
(Principal Executive Officer)

HARMONIC INC.
CERTIFICATION

I, Walter Jankovic, certify that:

1. I have reviewed this Annual Report on Form 10-K/A of Harmonic 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 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.
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: September 29, 2023

By: /s/ Walter Jankovic
Walter Jankovic
Chief Financial Officer

HARMONIC INC.
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

As of the date hereof, I, Patrick J. Harshman, President and Chief Executive Officer of Harmonic Inc. (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 the annual report of the Company on Form 10-K/A for the fiscal year ended December 31, 2022, as filed with the Securities and Exchange Commission (the “Report”), fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934 and that information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company. This written statement is being furnished to the Securities and Exchange Commission as an exhibit accompanying such Report and shall not be deemed filed pursuant to the Securities Exchange Act of 1934, as amended.

Date: September 29, 2023

/s/ Patrick J. Harshman

Patrick J. Harshman
President and Chief Executive Officer

HARMONIC INC.
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

As of the date hereof, I, Walter Jankovic, Chief Financial Officer of Harmonic Inc. (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 the annual report of the Company on Form 10-K/A for the fiscal year ended December 31, 2022, as filed with the Securities and Exchange Commission (the “Report”), fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934 and that information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company. This written statement is being furnished to the Securities and Exchange Commission as an exhibit accompanying such Report and shall not be deemed filed pursuant to the Securities Exchange Act of 1934, as amended.

Date: September 29, 2023

/s/ Walter Jankovic

Walter Jankovic
Chief Financial Officer