

HARMONIC INC  
Form 424B5  
October 16, 2003

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The information in this prospectus supplement and the accompanying prospectus is not complete and may be changed. This prospectus supplement and the accompanying prospectus is not an offer to sell these securities and we are not soliciting an offer to buy these securities in any state where the offer or sale is not permitted.

Filed Pursuant to Rule 424(b)(5)  
Registration No. 333-84430

PRELIMINARY PROSPECTUS  
SUPPLEMENT

Subject to Completion

October 16, 2003

(To Prospectus dated April 18, 2002)

**7,500,000 Shares**

**Common Stock**

We are offering all 7,500,000 shares of common stock to be sold in this offering.

Our common stock is traded on the Nasdaq National Market under the symbol HLIT. On October 15, 2003, the last reported sale price of our common stock on the Nasdaq National Market was \$8.15 per share.

**Investing in our common stock involves a high degree of risk. Before buying any shares, you should carefully read the discussion of material risks of investing in our common stock under the heading Risk factors beginning on page S-8 of this prospectus supplement and on page 7 of the accompanying prospectus.**

**Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or determined if this prospectus supplement or the accompanying prospectus is truthful or complete. Any representation to the contrary is a criminal offense.**

	Per share	Total
Public offering price	\$	\$
Underwriting discounts and commissions	\$	\$
Proceeds, before expenses, to us	\$	\$

The underwriters may also purchase up to an additional 1,125,000 shares of common stock from us at the public offering price, less the underwriting discounts and commissions payable by us, to cover over-allotments, if any, within 30 days from the date of this prospectus supplement. If the underwriters exercise the option in full, the total underwriting discounts and commissions payable by us will be \$ , and the total proceeds, before expenses, to us will be \$ .

The underwriters are offering the shares of our common stock as described in Underwriting. Delivery of the shares will be made on or about November , 2003.

*Sole Book-Running Manager*

**UBS Investment Bank**

**SoundView Technology Group**

**Needham & Company, Inc.**

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You should rely only on the information contained or incorporated by reference in this prospectus supplement and the accompanying prospectus. We have not authorized anyone to provide information different from that contained or incorporated by reference in this prospectus supplement or the accompanying prospectus. Neither the delivery of this prospectus supplement nor the sale of shares of common stock means that information contained or incorporated by reference in this prospectus supplement or the accompanying prospectus is correct after the date of this prospectus supplement. These documents do not constitute an offer to sell or solicitation of an offer to buy these shares of common stock in any circumstance under which the offer or solicitation is unlawful.

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Unless stated otherwise, references in this prospectus supplement to Harmonic, we, us, its or our refer to Harmonic Inc., a Delaware corporation and its subsidiaries. Each trademark, trade name or service mark of any other company appearing in this prospectus supplement or the accompanying prospectus belongs to its holder.

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## Forward-looking statements

This prospectus supplement, the accompanying prospectus and the documents incorporated herein by reference contain forward-looking statements within the meaning of Section 27A of the Securities Act and Section 21E of the Exchange Act. Words such as anticipates, expects, intends, may, will, should, potential, continue, further, plans, believes, seeks, estimates, variations of such words and similar are intended to identify such forward-looking statements. These statements are not guarantees of future performance and are subject to certain risks, uncertainties and assumptions that are difficult to predict. Therefore, actual results could differ materially from those expressed or forecasted in any such forward-looking statements as a result of certain factors, including those set forth in Risk factors, as well as those noted in similar sections of the documents incorporated herein by reference. In connection with forward-looking statements that appear in these disclosures, investors should carefully review the factors set forth in this prospectus supplement and the accompanying prospectus under Risk factors.

The cautionary statements contained under the caption Risk factors and other similar statements contained elsewhere in this prospectus supplement and the accompanying prospectus, including the documents that are incorporated by reference, identify important factors with respect to such forward-looking statements, including certain risks and uncertainties that could cause our actual results, performance or achievements expressed or implied by such forward-looking statements.

Although we believe that the expectations reflected in such forward-looking statements are based upon reasonable assumptions, no assurance can be given that such expectations will be attained or that any deviations will not be material. We disclaim any obligation or undertaking to disseminate any updates or revision to any forward-looking statement contained herein to reflect any change in our expectations with regard thereto or any change in events, conditions or circumstances on which any such statement is based.

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**Prospectus supplement summary**

*This summary highlights information contained in this prospectus supplement and the accompanying prospectus. Because it is a summary, it does not contain all the information you should consider before investing in our common shares. You should read this entire prospectus supplement and the accompanying prospectus carefully, including the Risk factors section and the information incorporated by reference, before making an investment decision.*

**OUR COMPANY**

We design, manufacture and sell digital video systems and fiber optic systems that enable network operators to provide a range of interactive and advanced digital services that include digital video, video-on-demand, high definition television, high-speed Internet access and telephony. Historically, most of our sales have been derived from sales of digital headend products and fiber optic transmission systems to cable television and satellite operators. We also derive a small portion of our sales from telephone companies that offer video services to their customers.

Our business is organized into two principal operating segments: Convergent Systems, or CS, for digital video systems, and Broadband Access Networks, or BAN, for fiber optic systems. Our CS digital video products include encoders, multiplexers and modulators that allow our customers to convert analog video to digital, as well as edge gateway products that enable operators to deliver customized broadcast or narrowcast on-demand services, such as video-on-demand, to their subscribers. Our BAN products include optical transmitters, amplifiers, dense-wave-division-multiplexing, or DWDM, systems, and nodes designed to allow operators to efficiently transmit and distribute broadband content by increasing and segmenting the bandwidth available on their networks.

**KEY INDUSTRY DYNAMICS AFFECTING OUR BUSINESS**

We participate in the worldwide market for equipment sold to communications service providers such as cable, satellite and telephone companies. Our business is influenced by the significant change occurring in our industry, including the following key issues:

- **Growth and competition in the cable and satellite markets.** We expect to benefit from the expected growth and competition in the cable and satellite industries by providing the network equipment required to offer advanced, video services. The competitive dynamics in the multi-channel video industry have been partly driven by the rivalry between direct broadcast satellite, or DBS, operators and the cable television industry. In the 1990s, DBS operators offered several hundred channels of high quality digital video before the cable television operators were able to upgrade their analog networks to offer comparable services, and the number of DBS subscribers increased significantly. More recently, cable operators began to upgrade their networks to offer comparable digital video services, as well as two-way services such as video-on-demand, high-speed data and voice services, all of which could not be effectively offered by DBS operators. In order to continue to offer a competitive service, satellite operators responded by upgrading their networks to provide additional service features to their customers, such as local programming and, more recently, high definition television, or HDTV. We expect DBS and cable television operators to continue to upgrade their networks to offer multiple, advanced services to their customers.
- **Growing demand for triple play broadband services including voice, video and data.** In the United States, cable television operators have been more successful than traditional telephone companies in attracting high-speed broadband customers for data services. According to the National Cable and Telecommunications Association, as of June 30, 2003, there were 13.8 million broadband data customers in the United States using cable modem service, compared to only 7.6 million customers using DSL, the broadband data service offered by telephone companies. Within the last few years, certain cable television operators have begun to offer telephony service to their customers, including a triple play bundle of services that includes voice, video and data, over a single network, with the objective

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of capturing higher average revenues per customer. In addition, recent advancements in Voice over Internet Protocol technology, or VoIP, are expected to accelerate the introduction of telephony service by cable companies. Telephone companies are responding to the competitive threat of high-speed broadband cable service and cable triple play service, as well as the loss of telephone lines to wireless operators, by building networks to offer more compelling broadband services to their customers, including multi-channel video. Telephone companies are pursuing multiple strategies to offer video services to their customers including partnering with DBS operators, offering video services over DSL networks, and constructing fiber networks to the customer premises, otherwise known as fiber-to-the-premises, or FTTP.

We believe that we are well positioned to benefit from the growing trend of communications service providers to offer their customers a combination of voice, video and data services over a single, converged network.

- **Financial recovery of the communications industry and stabilized communications equipment spending.** Beginning in 2001, the communications industry in general experienced a severe downturn, which resulted in a significant reduction in capital spending on communications equipment. Many of our core customers were constrained by excessive debt and, in a few cases, were forced into bankruptcy. In addition, consolidation in the cable television and satellite industries, including merger activity involving our core customers such as DIRECTV, EchoStar, Comcast and AT&T Broadband, resulted in a temporary reduction in capital spending. We believe that the recent resolution of mergers involving some of our customers and emergence from bankruptcy by other customers helps to position them to invest more capital in their networks.
- **International growth of broadband services.** We believe that the competition among communications service providers to win broadband customers is also increasing in many international markets. International market dynamics vary from country to country as a result of factors such as regulation, incumbent service provider standing, population density and cultural usage patterns. In many regions, telephone companies have significantly higher broadband data penetration than cable. In addition, telephone companies in Korea, Japan and select European markets have already deployed digital video over DSL or FTTP. Cable and satellite providers are responding in many of these regions by upgrading their networks to provide improved services. For example, a large Japanese cable operator is now delivering data services at 30 Mbps to its customers. We believe that we are well positioned to deliver our digital video and fiber optic systems to service providers in many international markets to enable them to compete more effectively.

## **OUR STRATEGY**

We believe that we are able to compete effectively with larger competitors due to our differentiated strategy, which includes the following elements:

- **Focus on open standards.** In contrast with the proprietary systems of some of our larger competitors, our solutions can provide our customers with reduced cost and flexibility by operating on standards-based, open platforms.
- **Offer a focused portfolio of leading products.** Rather than offering an end-to-end portfolio of products, which is the strategy of some of our larger competitors, we have concentrated our research and development efforts on a focused portfolio of products which provides us with a distinct competitive advantage.
- **Closely collaborate with our customers to develop new services.** Our long-standing relationships with customers have allowed us to collaborate in the development of new services and thereby establish leadership in key technologies such as digital video encoding, compression and fiber optic transmission.
- **Leverage innovative broadband technologies and standards.** We believe that our extensive expertise in compression efficiency, optics, radio frequency signal processing and system level design provides us with significant competitive advantages. For example, our core expertise in compression technology



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allows us to offer support for existing and emerging standards, such as MPEG-2, MPEG-4/ H.264 and Microsoft Windows Media 9.

**OUR PRODUCTS**

**Convergent Systems products**

Our digital video products enable service providers to offer their customers digital video services and also allow those operators to increase the efficiency of their broadband networks. Our compression products, which include our DiviCom encoders, provide compression of video and audio channels, which allows operators to provide high quality video and audio at low data rates, including the delivery of HDTV service. Our edge devices include our Narrowcast Services Gateway, which incorporates core functionality such as, routing, multiplexing and modulation, and allows operators to offer video-on-demand services. Our stream processing products, which include multiplexers, broadcast network gateways, and digital turnaround systems, are designed to allow operators to combine, multiplex, and manage various sources of video, audio, and data streams for efficient distribution over their networks. Our control and automation products include a full range of products, such as our NMX Digital Service Manager, that give service providers the ability to control and monitor their digital video infrastructure at an aggregate level, rather than just discrete pieces of hardware, reducing their operational costs.

**Broadband Access Networks products**

Our optical transmission products, node platforms, return path products and element management systems allow cable operators to deliver traditional broadcast video services while supporting the roll-out of emerging interactive services and managing the network. Our broad portfolio of optical transmitters enable cable operators to design network architectures which address the service and technical requirements of their systems. Our DWDM systems allow operators to efficiently transmit and distribute broadband content by increasing and segmenting the bandwidth available on their networks. In addition, our optical nodes are designed to incorporate a variety of modules which provide the operator with network flexibility and scalability to support increases in subscribers and the introduction of new services. In addition, we provide installation, systems integration and technical support services to our customers worldwide.

**OUR CUSTOMERS AND DISTRIBUTION CHANNELS**

Our customers include Cablevision, Comcast, Cox, DIRECTV, EchoStar and Time Warner Cable in the United States, and Canal Plus, Hong Kong Cable Television and NTL outside the United States. Our end customers also include telephone companies such as Saskatchewan Telecom and Telefónica. For the six months ended June 27, 2003, our top ten customers accounted for 69% of our net sales.

In the United States, we sell our products principally through our own direct sales force, which is organized geographically and by major customers. Our direct sales force and distributors are supported by a trained technical staff including application engineers who work closely with operators to develop technical proposals and design systems that optimize system performance and economic benefits to operators. Technical support provides a customized set of services for ongoing maintenance, support-on-demand and training for our customers and distributors both in our facilities and on-site.

We sell to international customers through our own direct sales force as well as through independent distributors such as such as Siemens and Sumitomo.

**Table of Contents****RECENT DEVELOPMENTS**

On October 16, 2003, we announced results for the quarter ended September 27, 2003. Net sales were \$47.3 million and net loss was (\$7.5) million.

**Net sales and net loss**

	Three months ended		
	September 27, 2002	June 27, 2003	September 26, 2003
	(unaudited, in thousands)		
Harmonic			
Net sales	\$ 37,019	\$ 41,653	\$47,253
Net loss	(38,030)	(11,682)	(7,454)
Convergent Systems			
Net sales	23,838	27,106	28,956
Broadband Access Networks			
Net sales	13,181	14,547	18,297

In the three months ended September 26, 2003, we experienced increased bookings activity relative to previous quarters. We believe that this increased activity was due in general to the financial recovery of the industry and stabilized communications industry spending, and in particular to the roll-out by our customers of new services such as video-on-demand and HDTV. During this period, we also introduced our new NSG 9000 series Edge Device, which increases the performance of our VOD system; our MV450, which is a more advanced encoder than our existing encoder products; and our MV 100 encoder platform, which is capable of further increasing the compression efficiency of MPEG-2 and supporting next-generation MPEG-4/H.264 and Windows Media 9 compression standards.

**Balance sheet**

Our current assets were \$91.9 million as of September 26, 2003, compared to \$96.3 million as of June 27, 2003. Our current liabilities were \$74.1 million as of September 26, 2003, compared to \$77.7 million as of June 27, 2003. Our net current assets were \$17.8 million as of September 26, 2003, compared to \$18.6 million as of June 27, 2003. Our long-term debt was \$0.5 million as of September 26, 2003 and June 27, 2003. Our capital stock was \$1.965 billion as of September 26, 2003, compared to \$1.964 billion as of June 27, 2003. Our stockholders' equity was \$33.2 million as of September 26, 2003, compared to \$39.9 million as of June 27, 2003.

**OUR CORPORATE INFORMATION**

We are incorporated in Delaware and our principal executive offices are located at 549 Baltic Way, Sunnyvale, California 94089. Our telephone number is (408) 542-2500. As of September 26, 2003, Harmonic employed a total of 558 people.

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The offering

Common stock we are offering            7,500,000 shares

Common stock outstanding immediately after this offering    68,325,835 shares

Nasdaq National Market symbol        HLIT

Use of proceeds                            We expect to use the net proceeds from this offering for general corporate purposes, including the payment of existing liabilities, research and development, the development or acquisition of new products or technologies, equipment acquisitions, general working capital and operating expenses. See Use of proceeds.

The number of shares of common stock outstanding immediately after this offering in the table above is based on approximately 60,825,835 shares outstanding as of October 13, 2003, and does not include:

- 8,076,334 shares of common stock issuable upon exercise of outstanding options as of September 26, 2003 granted under our stock option plans, with a weighted average exercise price of \$14.39 per share;

- 4,113,205 additional shares of common stock available for future issuance under our stock option and employee stock purchase plans as of September 26, 2003; and

- 1,125,000 shares of common stock issuable upon exercise of the underwriters' over-allotment option.

Unless otherwise stated, all information contained in this prospectus supplement assumes that the underwriters do not exercise their over-allotment option.

**Table of Contents****Summary consolidated financial data**

We have derived our consolidated statement of operations data for the years ended December 31, 2000, 2001 and 2002 from our audited consolidated financial statements included in this prospectus supplement. We have derived our consolidated statement of operations data for the years ended December 31, 1999 and 1998 from our audited consolidated financial statements not included in this prospectus supplement. We have derived our consolidated balance sheet data as of June 27, 2003 and consolidated statement of operations data for each of the six months ended June 28, 2002 and June 27, 2003 from our unaudited consolidated financial statements included in this prospectus supplement. The unaudited consolidated financial statement data include, in our opinion, all adjustments (consisting only of normal recurring adjustments) that are necessary for a fair presentation of our financial position and results of operations for these periods. Operating results for the six months ended June 27, 2003 are not necessarily indicative of the results that may be expected for the fiscal year ending December 31, 2003. In addition, due to the acquisitions we have made, our results of operations are not necessarily comparable between periods presented. You should read the summary financial data set forth below in conjunction with Management's discussion and analysis of financial condition and results of operations and with our consolidated financial statements and related notes included in this prospectus supplement.

Consolidated statement of operations data:	Year ended December 31,					Six months ended	
	1998	1999	2000	2001	2002	June 28, 2002	June 27, 2003
							(unaudited)
	(in thousands, except per share data)						
Net sales	\$ 83,857	\$ 184,075	\$ 263,046	\$ 203,810	\$ 186,632	\$ 110,341	\$ 78,694
Gross profit <sup>(1)</sup>	30,555	80,605	75,171	1,555	54,429	34,998	23,499
Income (loss) from operations <sup>(1)(2)</sup>	(21,943)	29,017	(1,683,035)	(168,787)	(77,349)	(24,919)	(23,772)
Net income (loss) <sup>(1)</sup>	(21,453)	23,680	(1,654,008)	(166,407)	(76,918)	(25,136)	(23,349)
Basic net income (loss) per share	\$ (0.92)	\$ 0.84	\$ (34.06)	\$ (2.84)	\$ (1.29)	\$ (0.42)	\$ (0.39)
Diluted net income (loss) per share	\$ (0.92)	\$ 0.76	\$ (34.06)	\$ (2.84)	\$ (1.29)	\$ (0.42)	\$ (0.39)

(1) The six months ended June 27, 2003 gross profit, loss from operations and net loss include credits to cost of sales of \$2.1 million for products sold that had been written down in prior years. Operating expenses for the six months ended June 28, 2003 include a charge of approximately \$2.7 million related to the settlement of litigation with Power and Telephone Supply. The six months ended June 28, 2002 gross profit, loss from operations and net loss include charges of \$0.2 million as well as credits of \$2.9 million for products sold which had been written down in prior years. Operating expenses for the six months ended June 28, 2002 include a charge to operating expenses of \$2.7 million for probable losses on receivables for Adelphia Communications. Loss from operations for the six months ended June 27, 2003 and June 28, 2002 include amortization of intangible assets of \$6.9 million and \$11.7 million, respectively.

The year ended December 31, 2002 gross profit, loss from operations and net loss include special charges to cost of sales totaling \$0.8 million for severance and other costs, and credits of \$6.9 million for products sold during the year which had been written down in prior years. For the year ended December 31, 2002, special charges to operating expenses totaled \$22.5 million for excess facilities costs, a bad debt provision of \$2.7 million for probable losses on receivables for Adelphia Communications, and severance and other costs of \$0.9 million.

The 2001 gross profit, loss from operations and net loss include special charges to cost of sales totaling \$40.0 million for inventory and fixed asset write-downs and \$0.9 million for severance and other costs. Special charges to operating expenses include \$30.1 million for excess facilities costs, \$2.4 million for fixed asset provisions and \$1.6 million for severance and other costs and special charges of \$0.6 million to other income and expense.

The 2000 loss from operations and net loss include special charges to operating expenses of approximately \$1.42 billion, consisting of \$1.38 billion for impairment of goodwill and other intangible assets and \$39.8 million for acquired in-process technology. Special charges to cost of sales totaled \$10.0 million for excess and obsolete inventories.

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*The 1998 loss from operations and net loss include a charge to operating expenses of \$14.0 million for acquired in-process technology.*

- (2) *Loss from operations for 2000, 2001 and 2002 include amortization of intangible assets of \$234.2 million, \$20.7 million and \$18.7 million, respectively.*

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Consolidated balance sheet data:	As of June 27, 2003	
	Actual	As adjusted <sup>(1)</sup>
	(unaudited, in thousands)	
Cash, cash equivalents and short-term investments	\$ 36,310	\$ 93,573
Working capital	18,609	95,872
Total assets	151,956	209,219
Long term debt, including current portion	1,810	1,810
Stockholders' equity	39,863	97,126

(1) Adjusted to give effect to the sale of 7,500,000 shares of common stock at an assumed public offering price of \$8.15 per share and our receipt of the estimated net proceeds of that sale.

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## Risk factors

*You should carefully consider the following factors and other information in this prospectus supplement and the accompanying prospectus and the documents incorporated by reference in this prospectus supplement and the accompanying prospectus before deciding to invest in our common stock. You should also consider carefully the other information contained, or incorporated by reference, in this prospectus supplement or the accompanying prospectus. The actual results of our business could differ materially from those described as a result of the risks and uncertainties described below and elsewhere. In such case, the trading price of our common stock could decline, and you may lose all or part of your investment.*

**We depend on cable and satellite industry capital spending for a substantial portion of our revenue and any decrease or delay in capital spending in these industries would negatively impact our resources, operating results and financial condition and cash flows.**

Prior to the merger with C-Cube Microsystems Inc., or C-Cube, in May 2000, almost all of Harmonic's historic sales had been derived from sales to cable television operators and we expect these sales to constitute a significant portion of net sales for the foreseeable future. Through the merger with C-Cube, we acquired C-Cube's DiviCom business, which provides encoding products and systems for digital television. Almost all of the DiviCom business' historic sales had been derived from sales to satellite operators, telephone companies and cable operators. Demand for our products will depend on the magnitude and timing of capital spending by cable television operators, satellite operators, broadcasters and telephone companies for constructing and upgrading of their systems.

These capital spending patterns are dependent on a variety of factors, including:

- access to financing;
- annual budget cycles;
- the impact of industry consolidation;
- the status of federal, local and foreign government regulation of telecommunications and television broadcasting;
- overall demand for communication services and the acceptance of new video, voice and data services;
- evolving industry standards and network architectures;
- competitive pressures, including pricing pressures;
- discretionary customer spending patterns; and
- general economic conditions.

In the past, specific factors contributing to reduced capital spending have included:

- uncertainty related to development of digital video and cable modem industry standards;
- delays associated with the evaluation of new services and system architectures by many cable television operators;
- emphasis on generating revenue from existing customers by cable television operators instead of new construction or network upgrades;
- proposed business combinations by our customers and regulatory review thereof;
- economic and financial conditions in domestic and international markets; and
- bankruptcies and financial restructuring of major customers.





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The prolonged economic recession, the financial difficulties of certain of our customers and changes in our customers' deployment plans adversely affected our business in the latter part of 2001, throughout 2002 and in the first half of 2003. Two of our major domestic customers, Adelphia Communications and Winfirst, declared bankruptcy during the first half of 2002, while NTL, a major international customer, emerged from bankruptcy in early 2002. Furthermore, we believe that our net sales to satellite customers were adversely affected by the uncertainty related to the prolonged regulatory review of the proposed acquisition of DIRECTV by EchoStar in 2002. These events, coupled with uncertain and volatile capital markets, also pressured the market values of domestic cable operators and restricted their access to capital. This reduced access to funding for new and existing customers caused delays in the timing and scale of deployments of our equipment and also resulted in the postponement or cancellation of certain projects by our customers. Several customers also canceled new projects or delayed new orders to allow them to reduce inventory levels that were in excess of their deployment requirements. We believe that these factors contributed to decreased net sales in both our CS division and our BAN division during the second half of 2002 and the first half of 2003 compared to the first half of 2002.

We believe that the financial condition of many of our customers has stabilized or improved, and our net sales increased sequentially in both the second and third quarters of 2003. However, despite the improvement, our quarterly net sales during the second and third quarters of 2003 were lower than during the first and second quarters of 2002, and European spending remains generally weak. Furthermore, another economic downturn or other factors could cause additional financial difficulties among our customers, and customers whose financial condition has stabilized may not purchase new equipment at levels we have seen in the past. Continued financial difficulties among our customers would adversely affect our operating results and financial condition. Also, News Corp. Ltd. recently announced its plan to acquire a controlling interest in Hughes Electronics, the parent company of DIRECTV, subject to certain regulatory and shareholder approvals. We cannot currently predict the impact of the announcement by News Corp. Ltd. to acquire control of DIRECTV, and the related industry uncertainty, on our future sales. As a result, we cannot assure you that the sequential net sales growth we had during the second and third quarters of 2003 will continue.

**Our customer base is concentrated and the loss of one or more of our key customers would harm our business. The loss of any key customer would have a negative effect on our business.**

Historically, a majority of our sales have been to relatively few customers, and due in part to the consolidation of ownership of cable television and direct broadcast satellite systems, we expect this customer concentration to continue in the foreseeable future. Sales to our ten largest customers in 2001, 2002, and the first half of 2003 accounted for approximately 49%, 61% and 69% of net sales, respectively. Although we are attempting to broaden our customer base by penetrating new markets such as the telecommunications and broadcast markets and expand internationally, we expect to see continuing industry consolidation and customer concentration due in part to the significant capital costs of constructing broadband networks. For example, Comcast acquired AT&T Broadband in November 2002, thereby creating the largest US cable operator, reaching approximately 21 million subscribers. In the DBS segment, News Corp. Ltd. recently announced its plan to acquire a controlling interest in Hughes Electronics, the parent company of DIRECTV, subject to certain regulatory and shareholder approvals. This transaction follows regulatory opposition to the proposed acquisition of DIRECTV by EchoStar. Consummation of this transaction would result in additional industry concentration. In addition, financial restructurings of companies such as Adelphia Communications and several European operators may lead to further industry consolidation. In the second quarter of 2003, sales to Comcast accounted for 37% of net sales compared to 16% in the second quarter of 2002. In the second quarter of 2003, sales to Charter Communications accounted for 1% of net sales compared to 20% in the second quarter of 2002. For the first six months of 2003, Charter Communications represented 1% of net sales compared to 18% in the first six months of 2002. For the first six months of 2003, Comcast, DIRECTV and EchoStar accounted for 29%, 13% and 11% of net sales, respectively, compared to net sales of less than 10% for each of these customers in the first six months of 2002. For the first six months of 2003, our top ten customers accounted for 69% of net sales. The loss of Comcast, DIRECTV, EchoStar, or any other

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### **Risk factors**

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significant customer or any reduction in orders by Comcast, DIRECTV, EchoStar, or any significant customer, or our failure to qualify our products with a significant customer could adversely affect our business, operating results and liquidity. In this regard, sales to Charter Communications have been, and are expected to continue to be, significantly lower in 2003 than in 2002, both in absolute dollars and as a percentage of revenue, as they are now in the latter stages of their network upgrade program and they have significantly reduced capital spending. The loss of, or any reduction in orders from, a significant customer would harm our business.

#### **Our operating results are likely to fluctuate significantly and may fail to meet or exceed the expectations of securities analysts or investors, causing our stock price to decline.**

Our operating results have fluctuated in the past and are likely to continue to fluctuate in the future, on an annual and a quarterly basis, as a result of several factors, many of which are outside of our control. Some of the factors that may cause these fluctuations include:

- the level and timing of capital spending of our customers, both in the United States and in foreign markets;
  - changes in market demand;
  - the timing and amount of orders, especially from significant customers;
  - the timing of revenue from systems contracts which may span several quarters;
  - competitive market conditions, including pricing actions by our competitors;
  - seasonality, with fewer construction and upgrade projects typically occurring in winter months and otherwise being affected by inclement weather;
  - our unpredictable sales cycles;
  - new product introductions by our competitors or by us;
  - changes in domestic and international regulatory environments;
  - market acceptance of new or existing products;
  - the cost and availability of components, subassemblies and modules;
  - the mix of our customer base and sales channels;
  - the mix of our products sold;
  - our development of custom products and software;
  - the level of international sales; and
  - economic and financial conditions specific to the cable and satellite industries, and general economic conditions.
- For example, the timing of deployment of our equipment can be subject to a number of other risks, including the availability of skilled engineering and technical personnel, the availability of other equipment such as digital set top boxes, and the need for local franchise and licensing approvals. We believe that changes in our customers' deployment plans have in recent quarters delayed, and may in the future delay, the receipt of new orders or the release of existing backlog.

In addition, we often recognize a substantial portion of our revenues in the last month of the quarter. We establish our expenditure levels for product development and other operating expenses based on projected sales levels, and expenses are relatively fixed in the short term. Accordingly, variations in timing of sales can cause significant fluctuations in operating results. As a result of all these factors, our operating results in one or more future periods may fail to meet or exceed the expectations of securities analysts or investors. In that event, the trading

price of our common stock would likely decline. In this regard, due to lower than expected sales in several quarters during 2000 and 2001, and during the third quarter of

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2002 and the first quarter of 2003, we failed to meet our internal expectations, as well as the expectations of securities analysts and investors, and the price of our common stock declined, in some cases significantly.

#### **We may need additional capital in the future and may not be able to secure adequate funds on terms acceptable to us or at all.**

We have generated substantial operating losses since we began operations in June 1988. The extent of our future losses and the timing of potential profitability are highly uncertain, and we may never achieve profitable operations. We have been engaged in the design, manufacture and sale of a variety of broadband products since inception, which has required, and will continue to require, significant research and development expenditures. As of September 26, 2003, we had an accumulated deficit of approximately \$1.9 billion. We expect to incur losses for at least the next several quarters. These losses, among other things, have had and will have an adverse effect on our stockholders' equity and working capital. If we fail to obtain the necessary capital, we will not be able to fund our operations.

We believe that the proceeds of this offering, with our existing liquidity sources, will satisfy our cash requirements for at least the next twelve months, including the final settlement and payment of C-Cube's pre-merger tax liabilities. However, we may need to raise additional funds if our expectations are incorrect, to fund our operations, to take advantage of unanticipated opportunities or to strengthen our financial position. This prospectus supplement is part of a registration statement on Form S-3 declared effective by the SEC in April 2002. Following the completion of this offering, and assuming the underwriters do not exercise their over-allotment option, this registration statement will continue to allow Harmonic to issue various types of securities, including common stock, preferred stock, debt securities and warrants to purchase common stock from time to time, up to an aggregate of approximately \$85 million, subject to market conditions and our capital needs. Our ability to raise funds may be adversely affected by a number of factors relating to Harmonic, as well as factors beyond our control, including conditions in capital markets and the cable, telecom and satellite industries. There can be no assurance that such financing will be available on terms acceptable to us, if at all.

In addition, from time to time, we review potential acquisitions that would complement our existing product offerings, enhance our technical capabilities or expand our marketing and sales presence. Any future transaction of this nature could require potentially significant amounts of capital to finance the acquisition and related expenses as well as to integrate operations following a transaction, and could require us to issue our stock and dilute existing stockholders. If adequate funds are not available, or are not available on acceptable terms, we may not be able to take advantage of market opportunities, to develop new products or to otherwise respond to competitive pressures.

We may raise additional financing through public or private equity offerings, debt financings or additional corporate collaboration and licensing arrangements. To the extent we raise additional capital by issuing equity securities, our stockholders may experience dilution. To the extent that we raise additional funds through collaboration and licensing arrangements, it may be necessary to relinquish some rights to our technologies or products, or grant licenses on terms that are not favorable to us. If adequate funds are not available, we will not be able to continue developing our products.

#### **If sales forecasted for a particular period are not realized in that period due to the unpredictable sales cycles of our products, our operating results for that period will be harmed.**

The sales cycles of many of our products, particularly our newer products and products sold internationally, are typically unpredictable and usually involve:

- a significant technical evaluation;
- a commitment of capital and other resources by cable, satellite, and other network operators;
- time required to engineer the deployment of new technologies or new broadband services;

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- testing and acceptance of new technologies that affect key operations; and

- test marketing of new services with subscribers.

For these and other reasons, our sales cycles generally last three to six months, but can last up to 12 months. If orders forecasted for a specific customer for a particular quarter do not occur in that quarter, our operating results for that quarter could be substantially lower than anticipated.

As a result of the merger with C-Cube, a significant portion of our revenue is derived from solution contracts that include a combination of product sales as well as design, installation and integration services. Revenue forecasts for solution contracts are based on the estimated timing of the design, installation and integration of projects. Because the solution contracts generally span several quarters and revenue recognition is based on progress under the contract, the timing of revenue is difficult to predict and could result in lower than expected revenue in any particular quarter.

**We depend on our international sales and are subject to the risks associated with international operations, which may negatively affect our operating results.**

Sales to customers outside of the United States in 2001, 2002 and the first half of 2003 represented 40%, 29% and 27%, of net sales, respectively, and we expect that international sales will continue to represent a meaningful portion of our net sales for the foreseeable future. Part of our revenue growth strategy is to increase our presence in the international markets. Our international operations, and our efforts to increase sales in international markets, are subject to a number of risks, including:

- changes in foreign government regulations and telecommunications standards;
- import and export license requirements, tariffs, taxes and other trade barriers;
- fluctuations in currency exchange rates;
- difficulty in collecting accounts receivable;
- the burden of complying with a wide variety of foreign laws, treaties and technical standards;
- difficulty in staffing and managing foreign operations; and
- political and economic instability.

Certain of our international customers have accumulated significant levels of debt and have announced during the past two years, reorganizations and financial restructurings, including bankruptcy filings. Even if these restructurings are completed, we cannot assure you that these customers will be in a position to purchase new equipment at levels we have seen in the past.

While our international sales and operations have typically been denominated in US dollars, fluctuations in currency exchange rates could cause our products to become relatively more expensive to customers in a particular country, leading to a reduction in sales or profitability in that country.

Following implementation of the Euro in January 2002, a higher portion of our European business is denominated in Euros, which may subject us to increased foreign currency risk. Gains and losses on the conversion to US dollars of accounts receivable, accounts payable and other monetary assets and liabilities arising from international operations may contribute to fluctuations in operating results. Furthermore, payment cycles for international customers are typically longer than those for customers in the United States. Unpredictable sales cycles could cause us to fail to meet or exceed the expectations of security analysts and investors for any given period. In addition, foreign markets may not develop in the future.

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#### **If demand for our products increases more quickly than we expect, we may be unable to meet our customers' requirements.**

Our net sales increased sequentially in the second and third quarters of 2003. If demand for our products continues to increase, the difficulty of accurately forecasting our customers' requirements and meeting these requirements will increase. Forecasting to meet customers' needs is particularly difficult in connection with newer products. Our ability to meet customer demand depends significantly on the availability of components and other materials as well as the ability of our contract manufacturers to scale their production. From time to time, we assess our relationship with our contract manufacturers. Changes in these relationships, or reallocating manufacturing to new or existing contract manufacturers, could adversely affect our ability to meet our customers' requirements in a timely manner, if at all, and could create operating inefficiencies. Furthermore, we purchase several key components, subassemblies and modules used in the manufacture or integration of our products from sole or limited sources. Our ability to meet customer requirements depends in part on our ability to obtain a sufficient number of these materials in a timely fashion. Also, in recent years, in response to lower net sales and the prolonged economic recession, we significantly reduced our headcount and other expenses. As a result, we may be unable to respond to customer demand that increases more quickly than we expect. If we fail to meet customers' supply expectations, our net sales would be adversely affected and we may lose business.

#### **We face risks associated with having important facilities and resources located in Israel.**

Harmonic maintains a facility in Caesarea in the State of Israel that, as of June 27, 2003, included 62 employees, or approximately 10% of our workforce. The employees at this facility consist principally of research and development personnel involved in development of certain products for the CS division. In addition, we have pilot production capabilities at this facility consisting of procurement of subassemblies and modules from Israeli subcontractors and final assembly and test operations. Accordingly, we are directly influenced by the political, economic and military conditions affecting Israel, and any major hostilities involving Israel or the interruption or curtailment of trade between Israel and its trading partners could significantly harm our business. The September 2001 terrorist attacks, the ongoing US war on terrorism and the escalation of terrorist attacks and hostilities within Israel have heightened these risks. We cannot assure you that the protraction or escalation of current tensions in the Middle East will not adversely affect our business and results of operations.

In addition, most of our employees in Israel are currently obligated to perform annual reserve duty in the Israel Defense Forces and several have been called for active military duty recently. We cannot predict the effect of these obligations on Harmonic in the future.

#### **Pending business combinations and other financial and regulatory issues among our customers could adversely affect our business.**

The telecommunications industry has been particularly impacted by the prolonged economic recession, adverse conditions in capital markets and financial difficulties in both the service and equipment sectors, including bankruptcies. Although large telecommunications service providers such as WorldCom (now MCI) and troubled data and voice-oriented start-ups have not been traditional customers of Harmonic, the cable, satellite and broadcast sectors have experienced significant financial problems. Many of our domestic and international customers have accumulated significant levels of debt and have announced reorganizations and financial restructurings during the past two years, including bankruptcy filings. In particular, Adelphia Communications, a major domestic cable operator, declared bankruptcy in June 2002. The stock prices of other domestic cable companies came under pressure following the Adelphia bankruptcy due to concerns about debt levels and capital expenditure requirements for new and expanded services, thereby making the raising of capital more difficult and expensive. New competitors, such as RCN and WinFirst, also had difficulty in accessing capital markets. WinFirst subsequently filed for bankruptcy. In Europe, rapid consolidation of the cable industry through acquisition also led to significant levels of debt at the major MSOs, and companies such as NTL and UPC commenced bankruptcy.

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proceedings. European digital broadcasters, such as ITV Digital, Kirsch and Quiero, have also filed for protection from creditors.

While the capital market concerns about the domestic cable industry have eased somewhat since the summer of 2002, market conditions remain difficult and capital spending plans are generally constrained. It is likely that further industry restructuring will take place via mergers or spin-offs, such as the recent Comcast/AT&T Broadband transaction and the proposed spin-off of Time-Warner Cable from AOL Time-Warner. For instance, News Corp. Ltd. recently announced its plan to acquire a controlling interest in Hughes Electronics, the parent company of DIRECTV, subject to certain regulatory and shareholder approvals. This transaction follows regulatory opposition to the proposed acquisition of DIRECTV by EchoStar. We cannot currently predict the impact of the announcement by News Corp. Ltd. to acquire control of DIRECTV, and the related industry uncertainty, on our future sales. We believe that uncertainty during 2002 regarding the proposed DIRECTV and Echostar merger adversely affected capital spending by both of these parties as well as other customers. If the announcement by News Corp. Ltd. to acquire control of DIRECTV has a similar effect on industry capital spending, our sales will be adversely affected. In addition, further business combinations may occur in the satellite industry, and these further combinations could adversely affect our business. Regulatory issues, financial concerns and business combinations among our customers are likely to significantly affect the industry, its capital spending plans and our levels of business for the foreseeable future.

**We must be able to manage expenses and inventory risks associated with meeting the demand of our customers.**

If actual orders are materially lower than the indications we receive from our customers, our ability to manage inventory and expenses may be affected. If we enter into purchase commitments to acquire materials, or expend resources to manufacture products, and such products are not purchased by our customers, our business and operating results could suffer. In this regard, our gross margins and operating results for the fourth quarter of 2000 and in 2001 were adversely affected by provisions for excess and obsolete inventories of approximately \$49 million.

**The markets in which we operate are intensely competitive and many of our competitors are larger and more established.**

The markets for cable television fiber optics systems and digital video broadcasting systems are extremely competitive and have been characterized by rapid technological change and declining average selling prices. Pressure on average selling prices has been particularly severe during the recent economic downturn as equipment suppliers compete aggressively for customers' reduced capital spending. Harmonic's competitors in the cable television fiber optics systems business include corporations such as C-Cor.net, Motorola, and Scientific-Atlanta. In the digital and video broadcasting systems business, we compete broadly with vertically integrated system suppliers including Motorola, Scientific-Atlanta, Tandberg Television and Thomson Multimedia, and in certain product lines with Cisco and a number of smaller companies.

Many of our competitors are substantially larger and have greater financial, technical, marketing and other resources than Harmonic. Many of these large organizations are in a better position to withstand any significant reduction in capital spending by customers in these markets. They often have broader product lines and market focus and may not be as susceptible to downturns in a particular market. In addition, many of our competitors have been in operation longer than we have and therefore have more long standing and established relationships with domestic and foreign customers. We may not be able to compete successfully in the future which may harm our business.

If any of our competitors' products or technologies were to become the industry standard, our business could be seriously harmed. For example, US cable operators have to date mostly purchased proprietary digital systems from Motorola and Scientific-Atlanta. While certain operators have made limited purchases of the open systems provided by Harmonic, we cannot assure you that our digital products will find broad market acceptance with US cable operators. In addition, companies that have historically not had a large presence in the broadband communications equipment market have begun recently to

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expand their market share through mergers and acquisitions. The continued consolidation of our competitors could have a significant negative impact on us. Further, our competitors, particularly competitors of our digital and video broadcasting systems business, may bundle their products or incorporate functionality into existing products in a manner that discourages users from purchasing our products or which may require us to lower our selling prices resulting in lower gross margins.

#### **Broadband communications markets are characterized by rapid technological change.**

Broadband communications markets are relatively immature, making it difficult to accurately predict the markets' future growth rates, sizes or technological directions. In view of the evolving nature of these markets, it is possible that cable television operators, telephone companies or other suppliers of broadband wireless and satellite services will decide to adopt alternative architectures or technologies that are incompatible with our current or future products. If we are unable to design, develop, manufacture and sell products that incorporate or are compatible with these new architectures or technologies, our business will suffer.

#### **We need to develop and introduce new and enhanced products in a timely manner to remain competitive.**

Broadband communications markets are characterized by continuing technological advancement, changes in customer requirements and evolving industry standards. To compete successfully, we must design, develop, manufacture and sell new or enhanced products that provide increasingly higher levels of performance and reliability. However, we may not be able to successfully develop or introduce these products, if our products:

- are not cost effective;
- are not brought to market in a timely manner;
- are not in accordance with evolving industry standards and architectures; or
- fail to achieve market acceptance, or are ahead of the market.

Also, to successfully develop and market certain of our planned products for digital applications, we may be required to enter into technology development or licensing agreements with third parties. We cannot assure you that we will be able to enter into any necessary technology development or licensing agreement on terms acceptable to us, or at all. The failure to enter into technology development or licensing agreements when necessary could limit our ability to develop and market new products and, accordingly, could materially and adversely affect our business and operating results.

#### **We purchase several key components, subassemblies and modules used in the manufacture or integration of our products from sole or limited sources, and we are increasingly dependent on contract manufacturers.**

Many components, subassemblies and modules necessary for the manufacture or integration of our products are obtained from a sole supplier or a limited group of suppliers. Our reliance on sole or limited suppliers, particularly foreign suppliers, and our increased reliance on subcontractors since the merger with C-Cube involves several risks, including a potential inability to obtain an adequate supply of required components, subassemblies or modules and reduced control over pricing, quality and timely delivery of components, subassemblies or modules. In particular, certain optical components have in the past been in short supply and are available only from a small number of suppliers, including sole source suppliers. While we expend resources to qualify additional optical component sources, consolidation of suppliers in the industry and the small number of viable alternatives have limited the results of these efforts. We do not generally maintain long-term agreements with any of our suppliers. Managing our supplier and contractor relationships is particularly difficult during time periods in which we introduce new products and during time periods in which demand for our products is increasing, especially if demand increases more quickly than we expect. Furthermore, from time to time we assess our relationship with our contract manufacturers. Changes in these relationships, or reallocating manufacturing to new or



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existing contract manufacturers, could adversely affect our ability to meet our customers' requirements in a timely manner, if at all, and could create operating inefficiencies. An inability to obtain adequate deliveries or any other circumstance that would require us to seek alternative sources of supply could affect our ability to ship our products on a timely basis, which could damage relationships with current and prospective customers and harm our business. We attempt to limit this risk by maintaining safety stocks of certain components, subassemblies and modules. As a result of this investment in inventories, we have in the past and in the future may be subject to risk of excess and obsolete inventories, which could harm our business, operating results, financial position and liquidity. In this regard, our gross margins and operating results from the fourth quarter of 2000 through the third quarter of 2001 were adversely affected by excess and obsolete inventory charges of approximately \$49 million.

#### **We need to effectively manage our operations and the cyclical nature of our business.**

The cyclical nature of our business has placed, and is expected to continue to place, a significant strain on our personnel, management and other resources. This strain was exacerbated by the acquisition of DiviCom and the subsequent loss of numerous employees, including senior management. In addition, we reduced our work force by approximately 44% between December 31, 2000 and June 27, 2003 due to reduced industry spending and demand for our products. If demand for products increases significantly, we may need to increase our headcount. Our ability to manage our business effectively in the future, including any future growth, will require us to train, motivate and manage our employees successfully, to attract and integrate new employees into our overall operations, to retain key employees and to continue to improve our operational, financial and management systems.

#### **We are incurring additional costs and devoting more management resources to comply with increasing regulation of corporate governance and disclosure.**

We are spending an increased amount of management time and external resources to understand and comply with changing laws, regulations and standards relating to corporate governance and public disclosure, including the Sarbanes-Oxley Act of 2002, new SEC regulations and Nasdaq Stock Market rules. Devoting the necessary resources to comply with evolving corporate governance and public disclosure standards may result in increased general and administrative expenses and a diversion of management time and attention to compliance activities. Moreover, we may not be able to comply with these new rules and regulations on a timely basis.

#### **Competition for qualified personnel can be intense, and we may not be successful in attracting and retaining personnel.**

Our future success will depend, to a significant extent, on the ability of our management to operate effectively, both individually and as a group. We are dependent on our ability to retain and motivate high caliber personnel, in addition to attracting new personnel. In spite of the current worldwide economic slowdown, competition for qualified technical and other personnel can be intense, and we may not be successful in attracting and retaining such personnel. Competitors and others have in the past and may in the future attempt to recruit our employees. While our employees are required to sign standard agreements concerning confidentiality and ownership of inventions, we generally do not have employment contracts or non-competition agreements with any of our personnel. The loss of the services of any of our key personnel, the inability to attract or retain qualified personnel in the future or delays in hiring required personnel, particularly engineers and other technical personnel, could negatively affect our business.

#### **We are liable for C-Cube's pre-merger tax liabilities, including tax liabilities resulting from the spin-off of its semiconductor business.**

Under the terms of the merger agreement with C-Cube, Harmonic is generally liable for C-Cube's pre-merger tax liabilities. Approximately \$20.8 million of pre-merger tax liabilities remained outstanding and were included in accrued liabilities as of June 27, 2003. We are working with LSI Logic, which acquired C-Cube's spun-off semiconductor business in June 2001 and assumed its obligations, to develop an

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approach to settle these obligations, a process which has been underway since the merger in 2000. These liabilities represent estimates of C-Cube's pre-merger tax obligations to various tax authorities in 13 countries. We are currently in discussions with tax authorities in 2 of these countries, but none of these estimates has yet been finalized. Harmonic is unable to predict when any or all of these tax obligations will be paid, or in what amount. The full amount of the estimated obligation has been classified as a current liability. To the extent that these obligations are finally settled for less than the amounts provided, Harmonic is required, under the terms of the merger agreement, to refund the difference to LSI Logic. Conversely, if the settlements are more than the \$20.8 million pre-merger tax liability, LSI Logic is obligated to reimburse Harmonic.

The merger agreement stipulates that Harmonic will be indemnified by the spun-off semiconductor business if the cash reserves are not sufficient to satisfy all of C-Cube's tax liabilities for periods prior to the merger. If for any reason, the spun-off semiconductor business does not have sufficient cash to pay such taxes, or if there are additional taxes due with respect to the non-semiconductor business and Harmonic cannot be indemnified by C-Cube, Harmonic generally will remain liable, and such liability could have a material adverse effect on our financial condition, results of operations and cash flows.

#### **We may be subject to risks associated with other acquisitions.**

We have made and may make investments in complementary companies, products or technologies. If we make acquisitions, we could have difficulty assimilating or retaining the acquired companies' key personnel and operations or integrating the acquired technology or products into ours. We also may face challenges in achieving the strategic objectives, cost savings or other benefits from a proposed acquisition and difficulties in expanding our management information systems to accommodate the acquired business. These difficulties could disrupt our ongoing business, distract our management and employees and significantly increase our expenses. Moreover, our operating results may suffer because of acquisition-related expenses, amortization of intangible assets and impairment of acquired goodwill or intangible assets. Furthermore, we may have to incur debt or issue equity securities to pay for any future acquisitions, or to provide for additional working capital requirements, the issuance of which could be dilutive to our existing shareholders. If we are unable to successfully address any of these risks, our business, financial condition and operating results could be harmed.

#### **Cessation of the development and production of video encoding chips by C-Cube's spun-off semiconductor business may adversely impact us.**

The DiviCom business and C-Cube semiconductor business collaborated on the production and development of two video encoding microelectronic chips prior to the merger. In connection with the merger, Harmonic and the spun-off semiconductor business entered into a contractual relationship under which Harmonic will have access to certain of the spun-off semiconductor business technologies and products which the DiviCom business previously depended for its product and service offerings. The spun-off semiconductor business is the sole supplier of these chips to Harmonic. Several of these products continue to be important to our business, and we have incorporated these chips into additional products that we have developed.

However, under the contractual relationships between Harmonic and the spun-off semiconductor business, which was acquired by LSI Logic in June 2001, the semiconductor business does not have a firm commitment to continue the development of video encoding microelectronic chips. As a result, the semiconductor business may choose not to continue future development of the chips for any reason. The semiconductor business may also encounter in the future technological difficulties in the production and development of the chips. If the spun-off semiconductor business is not able to or does not sustain its development and production efforts in this area our business, financial condition, results of operations and cash flows could be harmed. Also, this agreement expires in October 2004.

#### **Our failure to adequately protect our proprietary rights may adversely affect us.**

We currently hold 44 issued United States patents and 16 issued foreign patents, and have a number of patent applications pending. Although we attempt to protect our intellectual property rights through

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patents, trademarks, copyrights, licensing arrangements, maintaining certain technology as trade secrets and other measures, we cannot assure you that any patent, trademark, copyright or other intellectual property rights owned by us will not be invalidated, circumvented or challenged, that such intellectual property rights will provide competitive advantages to us or that any of our pending or future patent applications will be issued with the scope of the claims sought by us, if at all. We cannot assure you that others will not develop technologies that are similar or superior to our technology, duplicate our technology or design around the patents that we own. In addition, effective patent, copyright and trade secret protection may be unavailable or limited in certain foreign countries in which we do business or may do business in the future.

We believe that patents and patent applications are not currently significant to our business, and investors therefore should not rely on our patent portfolio to give us a competitive advantage over others in our industry. We believe that the future success of our business will depend on our ability to translate the technological expertise and innovation of our personnel into new and enhanced products. We generally enter into confidentiality or license agreements with our employees, consultants, vendors and customers as needed, and generally limit access to and distribution of our proprietary information. Nevertheless, we cannot assure you that the steps taken by us will prevent misappropriation of our technology. In addition, we have taken in the past, and may take in the future, legal action to enforce our patents and other intellectual property rights, to protect our trade secrets, to determine the validity and scope of the proprietary rights of others, or to defend against claims of infringement or invalidity. Such litigation could result in substantial costs and diversion of resources and could negatively affect our business, operating results, financial position and cash flows.

In order to successfully develop and market certain of our planned products for digital applications, we may be required to enter into technology development or licensing agreements with third parties. Although many companies are often willing to enter into technology development or licensing agreements, we cannot assure you that such agreements will be negotiated on terms acceptable to us, or at all. The failure to enter into technology development or licensing agreements, when necessary, could limit our ability to develop and market new products and could cause our business to suffer.

#### **We or our customers may face intellectual property infringement claims from third parties.**

Harmonic's industry is characterized by the existence of a large number of patents and frequent claims and related litigation regarding patent and other intellectual property rights. In particular, leading companies in the telecommunications industry have extensive patent portfolios. From time to time, third parties, including these leading companies, have asserted and may assert exclusive patent, copyright, trademark and other intellectual property rights against us or our customers. Indeed, a number of third parties, including leading companies, have asserted patent rights to technologies that are important to us.

On July 3, 2003, Stanford University and Litton Systems filed a complaint in US District Court for the Central District of California alleging that optical fiber amplifiers incorporated into certain of Harmonic's products infringe US Patent No. 4,859,016. This patent expired in September 2003. The complaint seeks injunctive relief, royalties and damages. Harmonic has not been served in the case. Harmonic is currently evaluating its position with respect to this patent and has engaged in discussions with the plaintiff regarding potential settlement of the matter. At this time, Harmonic is unable to determine whether Harmonic will be able to settle this matter on reasonable terms or at all, nor can Harmonic predict the impact of an adverse outcome of this matter if Harmonic elects to defend against it. Consequently, Harmonic has made no provision in its financial statements for the outcome of a negotiated settlement or an unfavorable verdict in litigation. An unfavorable outcome of this matter could have a material adverse effect on Harmonic's business, operating results, financial position and cash flows.

Our suppliers and customers may receive similar claims. We have agreed to indemnify some of our suppliers and customers for alleged patent infringement. The scope of this indemnity varies, but, in some instances, includes indemnification for damages and expenses (including reasonable attorney's fees). In this regard, since December 2000, we have been in communication with several of Harmonic's customers who have been contacted by one of these leading companies that believes certain of our products require

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a license under a number of their patents. We currently are reviewing the identified patents to examine whether we consider a license necessary. While it is our understanding that the third party is willing to grant our customers a non-exclusive license under the identified patents, there can be no assurance that the terms of any offered license would be acceptable to our customers or that failure to obtain a license or the costs associated with any license would not cause our operating results to be materially adversely affected.

### **We are the subject of securities class action claims and other litigation which, if adversely determined, could harm our business and operating results.**

Between June 28 and August 25, 2000, several actions alleging violations of the federal securities laws by Harmonic and certain of its officers and directors (some of whom are no longer with Harmonic) were filed in or removed to the United States District Court for the Northern District of California. The actions subsequently were consolidated.

A consolidated complaint, filed on December 7, 2000, was brought on behalf of a purported class of persons who purchased Harmonic's publicly traded securities between January 19 and June 26, 2000. The complaint also alleged claims on behalf of a purported subclass of persons who purchased C-Cube securities between January 19 and May 3, 2000. In addition to Harmonic and certain of its officers and directors, the complaint also named C-Cube Microsystems Inc. and several of its officers and directors as defendants. The complaint alleged that, by making false or misleading statements regarding Harmonic's prospects and customers and its acquisition of C-Cube, certain defendants violated sections 10(b) and 20(a) of the Securities Exchange Act of 1934. The complaint also alleged that certain defendants violated section 14(a) of the Exchange Act and sections 11, 12(a)(2), and 15 of the Securities Act of 1933 by filing a false or misleading registration statement, prospectus, and joint proxy in connection with the C-Cube acquisition.

On July 3, 2001, the Court dismissed the consolidated complaint with leave to amend. An amended complaint alleging the same claims against the same defendants was filed on August 13, 2001. Defendants moved to dismiss the amended complaint on September 24, 2001. On November 13, 2002, the Court issued an opinion granting the motions to dismiss the amended complaint without leave to amend. Judgment for defendants was entered on December 2, 2002. On December 12, 2002, plaintiffs filed a motion to amend the judgment and for leave to file an amended complaint pursuant to Rules 59(e) and 15(a) of the Federal Rules of Civil Procedure. On June 6, 2003, the Court denied plaintiffs motion to amend the judgment and for leave to file an amended complaint.

Plaintiffs filed a notice of appeal on July 1, 2003. According to the scheduling order issued by the Court on July 3, 2003, plaintiffs' opening brief is due on October 17, 2003. Plaintiffs have filed a motion requesting a 31-day extension of time, until November 17, 2003, to file their opening brief. Defendants have not opposed this request.

A derivative action purporting to be on behalf of Harmonic was filed against its then-current directors in the Superior Court for the County of Santa Clara on September 5, 2000. Harmonic also was named as a nominal defendant. The complaint is based on allegations similar to those found in the securities class action and claims that the defendants breached their fiduciary duties by, among other things, causing Harmonic to violate federal securities laws. The derivative action was removed to the United States District Court for the Northern District of California on September 20, 2000. All deadlines in this action were stayed pending resolution of the motions to dismiss the securities class action. On July 29, 2003, the Court approved the parties' stipulation to dismiss this derivative action without prejudice and to toll the applicable limitations period. The limitations period is tolled until fourteen days after (1) defendants provide plaintiff with a copy of the mandate issued by the Ninth Circuit in the securities action or (2) either party provides written notice of termination of the tolling period, whichever occurs first.

A second derivative action purporting to be on behalf of Harmonic was filed in the Superior Court for the County of Santa Clara on May 15, 2003. It alleges facts similar to those previously alleged in the securities class action and the federal derivative action. The complaint names as defendants former and current Harmonic officers and directors, along with former officers and directors of C-Cube Microsys-

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tems, Inc., who were named in the securities class action. The complaint also names Harmonic as a nominal defendant. The complaint alleges claims for abuse of control, gross mismanagement, and waste of corporate assets against the Harmonic defendants, and claims for breach of fiduciary duty, unjust enrichment, and negligent misrepresentation against all defendants. The action has been stayed pending resolution of the appeal in the securities class action. The parties have agreed in principle to a dismissal without prejudice and a tolling of the statute of limitations period on similar terms as in the federal derivative action.

Based on its review of the complaints filed in the securities class action, Harmonic believes that it has meritorious defenses and intends to defend itself vigorously. There can be no assurance, however, that Harmonic will prevail. No estimate can be made of the possible range of loss associated with the resolution of this contingency and accordingly, the Company has not recorded a liability. An unfavorable outcome of this litigation could have a material adverse effect on Harmonic's business, operating results, financial position and cash flows.

Harmonic announced on July 17, 2003 a settlement of its litigation with Power and Telephone Supply (P&T) in Federal court in Tennessee. Under the terms of the settlement agreement, Harmonic agreed to pay \$2.8 million to P&T in release of all outstanding claims. The settlement followed summary judgment against Harmonic on certain of the claims made by P&T under a Tennessee statute relating to retailers and suppliers. These claims arose from the cancellation of purchase orders on P&T by one its end-customers in 2000. Harmonic's operating results for the second quarter and first half of 2003 include a charge to general and administrative expense of approximately \$2.7 million related to the settlement with P&T. The settlement charge is after accounting for the value of products to be returned and other costs. Harmonic paid \$1.0 million of the settlement on July 24, 2003 and is obligated to pay the balance of \$1.8 million on January 15, 2004. The settlement payments are secured by a standby letter of credit.

**The terrorist attacks of 2001 and the ongoing threat of terrorism have created great uncertainty and may continue to harm our business.**

Current conditions in the US and global economies are uncertain. The terrorist attacks in 2001 created many economic and political uncertainties that have severely impacted the global economy. We experienced a further decline in demand for our products after the attacks. The long-term effects of the attacks, the situation in Iraq and the ongoing war on terrorism on our business and on the global economy remain unknown. Moreover, the potential for future terrorist attacks has created additional uncertainty and makes it difficult to estimate how quickly the US and other economies will recover and our business will improve.

**Our stock price may be volatile.**

The market price of our common stock has fluctuated significantly in the past, particularly in recent years, and is likely to fluctuate in the future. In addition, the securities markets have experienced significant price and volume fluctuations and the market prices of the securities of technology companies have been especially volatile. Investors may be unable to resell their shares of our common stock at or above their purchase price. In the past, companies that have experienced volatility in the market price of their stock have been the object of securities class action litigation.

**We rely on a continuous power supply to conduct our operations, and any electrical and natural gas crisis could disrupt our operations and increase our expenses.**

We rely on a continuous power supply for manufacturing and to conduct our business operations. Interruptions in electrical power supplies in California in the early part of 2001 could recur in the future. In addition, the cost of electricity and natural gas has risen significantly. Power outages could disrupt our manufacturing and business operations and those of many of our suppliers, and could cause us to fail to meet production schedules and commitments to customers and other third parties. Any disruption to our operations or those of our suppliers could result in damage to our current and prospective business relationships and could result in lost revenue and additional expenses, thereby harming our business and operating results.

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### **Risk factors**

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#### **Some anti-takeover provisions contained in our certificate of incorporation, bylaws and stockholder rights plan, as well as provisions of Delaware law, could impair a takeover attempt.**

Harmonic has provisions in its certificate of incorporation and bylaws, each of which could have the effect of rendering more difficult or discouraging an acquisition deemed undesirable by the Harmonic Board of Directors. These include provisions:

- authorizing blank check preferred stock, which could be issued with voting, liquidation, dividend and other rights superior to Harmonic common stock;
- limiting the liability of, and providing indemnification to, directors and officers;
- limiting the ability of Harmonic stockholders to call and bring business before special meetings;
- requiring advance notice of stockholder proposals for business to be conducted at meetings of Harmonic stockholders and for nominations of candidates for election to the Harmonic Board of Directors;
- controlling the procedures for conduct and scheduling of Board and stockholder meetings; and
- providing the board of directors with the express power to postpone previously scheduled annual meetings and to cancel previously scheduled special meetings.

These provisions, alone or together, could delay hostile takeovers and changes in control or management of Harmonic.

In addition, Harmonic has adopted a stockholder rights plan. The rights are not intended to prevent a takeover of Harmonic, and we believe these rights will help Harmonic's negotiations with any potential acquirers. However, if the Board of Directors believes that a particular acquisition is undesirable, the rights may have the effect of rendering more difficult or discouraging that acquisition. The rights would cause substantial dilution to a person or group that attempts to acquire Harmonic on terms or in a manner not approved by the Harmonic Board of Directors, except pursuant to an offer conditioned upon redemption of the rights.

As a Delaware corporation, Harmonic also is subject to provisions of Delaware law, including Section 203 of the Delaware General Corporation law, which prevents some stockholders holding more than 15% of our outstanding common stock from engaging in certain business combinations without approval of the holders of substantially all of our outstanding common stock.

Any provision of our certificate of incorporation or bylaws, our stockholder rights plan or Delaware law that has the effect of delaying or deterring a change in control could limit the opportunity for Harmonic stockholders to receive a premium for their shares of Harmonic common stock, and could also affect the price that some investors are willing to pay for Harmonic common stock.

#### **We have broad discretion in how we use the net proceeds of this offering, and we may not use these proceeds in a manner desired by our stockholders.**

Our management will have broad discretion with respect to the use of the net proceeds from this offering and investors will be relying on the judgment of our management regarding the application of these proceeds. Our management could spend most of the net proceeds from this offering in ways which our stockholders may not desire or that do not yield a favorable return. You will not have the opportunity, as part of your investment in our common stock, to influence the manner in which the net proceeds of this offering are used. As of the date of this prospectus supplement, we plan to use the net proceeds from this offering primarily for working capital and general corporate purposes and to satisfy existing liabilities. See Use of proceeds. Our financial performance may differ from our current expectations or our business needs may change as our business and the industry we address evolve. As a result, the proceeds we receive in this offering may be used in a manner significantly different from our current expectations.

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## Use of proceeds

We estimate that the net proceeds to us from this offering will be approximately \$57.3 million (\$66.0 million if the underwriters' over-allotment option is exercised in full), assuming a public offering price of \$8.15 per share, after the payment of underwriting discounts and commissions and estimated offering expenses payable by us.

We intend to use the net proceeds from this offering for general corporate purposes, including the payment of existing liabilities, research and development expenses, to pay for the development of new products or technologies, equipment acquisitions, and general working capital and operating expenses. We have not determined the amounts we plan to spend on any of the areas listed above or the timing of these expenditures. As a result, our management will have broad discretion to allocate the net proceeds from this offering.

Pending application of the net proceeds as described above, we intend to invest the net proceeds of the offering in short-term, investment-grade, interest-bearing securities.

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**Price range of our common stock**

Our common stock trades on the Nasdaq National Market under the symbol HLIT. The following table sets forth the quarterly range of high and low reported sale prices of our common stock on the Nasdaq National Market for the periods indicated:

	<b>High</b>	<b>Low</b>
<b>Year ended December 31, 2001</b>		
First Quarter	\$ 12.75	\$ 4.29
Second Quarter	14.37	2.75
Third Quarter	17.30	6.48
Fourth Quarter	15.13	6.50
<b>Year ended December 31, 2002</b>		
First Quarter	\$ 14.15	\$ 9.38
Second Quarter	12.20	2.60
Third Quarter	3.62	1.10
Fourth Quarter	3.52	1.01
<b>Year ended December 31, 2003</b>		
First Quarter	\$ 4.66	\$ 2.30
Second Quarter	5.43	3.28
Third Quarter	6.85	3.18
Fourth Quarter (through October 15)	8.55	6.25

On October 15, 2003, the last reported sale price of the common stock as reported on the Nasdaq National Market was \$8.15 per share. As of October 13, 2003, there were approximately 526 record holders of our common stock.

**Dividend policy**

We have not paid dividends on our common stock. We currently do not intend to pay dividends and intend to retain any earnings for use in our business and the financing of our capital requirements for the foreseeable future. Our bank line of credit facility with Silicon Valley Bank includes covenants prohibiting the payment of dividends. The payment of any future cash dividends on our common stock will necessarily be dependent upon our earnings and financial needs, along with applicable legal and contractual restrictions.



**Table of Contents****Capitalization**

The following table sets forth our capitalization as of June 27, 2003:

- on an actual basis; and

- on an adjusted basis giving effect to our sale of the common stock in this offering under this prospectus supplement at an assumed offering price of \$8.15 per share and the receipt of the net proceeds of this sale.

This table should be read in conjunction with Management's discussion and analysis of financial condition and results of operations and our consolidated financial statements and the related notes incorporated by reference in this prospectus supplement and the accompanying prospectus.

	As of June 27, 2003	
	Actual	As adjusted
	(unaudited, in thousands, except par value)	
Cash, restricted cash, cash equivalents and short-term investments	\$ 36,310	\$ 93,573
Total liabilities	\$ 112,093	\$ 112,093
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; 60,462 shares issued and outstanding, actual, 67,962 shares issued and outstanding, as adjusted)	60	68
Capital in excess of par value	1,964,120	2,021,375
Accumulated deficit	(1,924,474)	(1,924,474)
Accumulated comprehensive income	157	157
Total stockholders' equity	39,863	97,126
Total capitalization	\$ 151,956	\$ 209,219

The table above excludes:

- 8,076,334 shares of common stock issuable upon exercise of outstanding options as of September 26, 2003 granted under our stock plans, with a weighted average exercise price of \$14.39 per share;
- 4,113,205 additional shares of common stock available for future issuance under our stock option and employee stock purchase plans as of September 26, 2003; and
- 1,125,000 shares of common stock issuable upon exercise of the underwriters' over-allotment option.

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**Dilution**

The net tangible book value of our common stock on June 27, 2003 was approximately \$12.6 million, or \$0.21 per share. Net tangible book value per share is equal to the amount of our total tangible assets, less total liabilities, divided by the number of our shares of our common stock outstanding. Dilution in net tangible book value per share represents the difference between the amount per share paid by the purchasers of shares of our common stock in this offering and the net tangible book value per share of our common stock immediately afterwards. After giving effect to our sale of the 7,500,000 shares of common stock we are offering through this prospectus supplement, assuming a public offering price of \$8.15 per share, and after deducting the underwriting discounts and commissions and estimated offering expenses, our net tangible book value as of June 27, 2003 would have been approximately \$69.9 million, or \$1.03 per share. This represents an immediate increase in net tangible book value of \$0.82 per share to existing shareholders and an immediate dilution of \$7.12 per share to new investors purchasing our common stock in this offering. The following table illustrates this dilution:

Assumed public offering price per share		\$8.15
Net tangible book value per share as of June 27, 2003	\$0.21	
Increase per share attributable to new investors	0.82	
	<hr/>	
Net tangible book value per share after this offering		1.03
		<hr/>
Dilution per share to new investors		\$7.12
		<hr/>

The foregoing table does not take into effect further dilution to new investors that could occur upon the exercise of outstanding options and therefore excludes:

- 8,076,334 shares of our common stock issuable upon exercise of outstanding options as of September 26, 2003 granted under our stock option plans, with a weighted average exercise price of \$14.39 per share; and
- 4,113,205 additional shares available for future issuance under our stock option and employee stock purchase plans as of September 26, 2003.

**Table of Contents****Selected consolidated financial data**

We have derived our consolidated statement of operations data for the years ended December 31, 2000, 2001 and 2002 from our audited consolidated financial statements included in this prospectus supplement. We have derived our consolidated statement of operations data for the years ended December 31, 1999 and 1998 from our audited consolidated financial statements not included in this prospectus supplement. We have derived our consolidated balance sheet data as of June 27, 2003 and consolidated statement of operations data for each of the six months ended June 28, 2002 and June 27, 2003 from our unaudited consolidated financial statements included in this prospectus supplement. The unaudited consolidated financial statement data include, in our opinion, all adjustments (consisting only of normal recurring adjustments) that are necessary for a fair presentation of our financial position and results of operations for these periods. Operating results for the six months ended June 27, 2003 are not necessarily indicative of the results that may be expected for the fiscal year ending December 31, 2003. In addition, due to the acquisitions we have made, our results of operations are not necessarily comparable between periods presented. You should read the summary financial data set forth below in conjunction with Management's discussion and analysis of financial condition and results of operations and with our consolidated financial statements and related notes included in this prospectus supplement.

Consolidated statements of operations data:	Year ended December 31,					Six months ended		
	1998	1999	2000	2001	2002	June 28, 2002	June 27, 2003	
	(in thousands, except per share data)						(unaudited)	
Net sales	\$ 83,857	\$ 184,075	\$ 263,046	\$ 203,810	\$ 186,632	\$ 110,341	\$ 78,694	
Gross profit <sup>(1)</sup>	30,555	80,605	75,171	1,555	54,429	34,998	23,499	
Income (loss) from operations <sup>(1)(2)</sup>	(21,943)	29,017	(1,683,035)	(168,787)	(77,349)	(24,919)	(23,772)	
Net income (loss) <sup>(1)</sup>	(21,453)	23,680	(1,654,008)	(166,407)	(76,918)	(25,136)	(23,349)	
Basic net income (loss) per share	\$ (0.92)	\$ 0.84	\$ (34.06)	\$ (2.84)	\$ (1.29)	\$ (0.42)	\$ (0.39)	
Diluted net income (loss) per share	\$ (0.92)	\$ 0.76	\$ (34.06)	\$ (2.84)	\$ (1.29)	\$ (0.42)	\$ (0.39)	

(1) The six months ended June 27, 2003 gross profit, loss from operations and net loss include credits to cost of sales of \$2.1 million for products sold that had been written down in prior years. Operating expenses for the six months ended June 28, 2003 include a charge of approximately \$2.7 million related to the settlement of litigation with Power and Telephone Supply. The six months ended June 28, 2002 gross profit, loss from operations and net loss include charges of \$0.2 million as well as credits of \$2.9 million for products sold which had been written down in prior years. Operating expenses for the six months ended June 28, 2002 include a charge to operating expenses of \$2.7 million for probable losses on receivables for Adelpia Communications. Loss from operations for the six months ended June 27, 2003 and June 28, 2002 include amortization of intangible assets of \$6.9 million and \$11.7 million, respectively.

The year ended December 31, 2002 gross profit, loss from operations and net loss include special charges to cost of sales totaling \$0.8 million for severance and other costs, and credits of \$6.9 million for products sold during the year which had been written down in prior years. For the year ended December 31, 2002, special charges to operating expenses totaled \$22.5 million for excess facilities costs, a bad debt provision of \$2.7 million for probable losses on receivables for Adelpia Communications, and severance and other costs of \$0.9 million.

The 2001 gross profit, loss from operations and net loss include special charges to cost of sales totaling \$40.0 million for inventory and fixed asset write-downs and \$0.9 million for severance and other costs. Special charges to operating expenses include \$30.1 million for excess facilities costs, \$2.4 million for fixed asset provisions and \$1.6 million for severance and other costs and special charges of \$0.6 million to other income and expense.

The 2000 loss from operations and net loss include special charges to operating expenses of approximately \$1.42 billion, consisting of \$1.38 billion for impairment of goodwill and other intangible assets and \$39.8 million for acquired in-process technology. Special charges to cost of sales totaled \$10.0 million for excess and obsolete inventories.

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*The 1998 loss from operations and net loss include a charge to operating expenses of \$14.0 million for acquired in-process technology.*

- (2) *Loss from operations for 2000, 2001 and 2002 include amortization of intangible assets of \$234.2 million, \$20.7 million and \$18.7 million, respectively.*

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**Management's discussion and analysis of financial condition and results of operations**

*The following discussion of our financial condition and results of operations should be read in conjunction with our consolidated financial statements and the related notes included elsewhere in this prospectus. The discussion contains forward-looking statements that involve known and unknown, risks and uncertainties, including those set forth under "Risk factors."*

**OVERVIEW**

We design, manufacture and sell digital video systems and fiber optic systems that enable network operators to provide a range of interactive and advanced digital services that include digital video, video-on-demand, high definition television, high-speed Internet access and telephony. Historically, most of our sales have been derived from sales of digital headend products and fiber optic transmission systems to cable television and satellite operators. We also derive a small portion of our sales from telephone companies that offer video services to their customers.

Before 1997, almost all of our sales were derived directly or indirectly from sales of fiber optic transmission systems to cable television operators. With the introduction of digital headend products beginning in 1997, we broadened our product offering to enable delivery of digital video, voice and data over satellite and wireless networks and cable systems. In order to further expand our digital systems capability, Harmonic acquired C-Cube Microsystems Inc. in May 2000, pursuant to the terms of a merger agreement dated October 27, 1999. Under the terms of the merger agreement, C-Cube spun off its semiconductor business as a separate publicly traded company, which was subsequently acquired by LSI Logic in June 2001. C-Cube merged into Harmonic, and Harmonic therefore acquired C-Cube's DiviCom business, which provides encoding products and systems for digital television. The merger was structured as a tax-free exchange of stock and has been accounted for under the purchase method of accounting. The purchase price, including merger-related costs, was approximately \$1.8 billion. As of December 31, 2000, Harmonic determined that there was an impairment and recorded an impairment charge of \$1.4 billion, eliminating goodwill and reducing identified intangibles acquired to \$79.3 million. The merged company has been organized into two operating divisions, Convergent Systems, or CS, for digital video systems, and Broadband Access Networks, or BAN, for fiber optic systems.

**NET SALES**

Harmonic's net sales decreased 26% in the second quarter of 2003 compared to the second quarter of 2002, decreased 29% in the first half of 2003 compared to the first half of 2002, decreased 23% in 2001 compared to 2000 and 8% in 2002 compared to 2001. Since the middle of 2000, Harmonic's sales have been well below levels achieved by Harmonic and DiviCom in 1999 and early 2000. During 2002, certain of our domestic and international customers that had accumulated significant levels of debt announced reorganizations and financial restructurings, including bankruptcy filings. In particular, Adelphia Communications declared bankruptcy in June 2002, and as a result, we recorded reduced revenue from Adelphia from the first quarter of 2002 through the second quarter of 2003 and established a \$2.9 million provision in the second quarter of 2002 for probable losses on receivables and deferred costs of sales determined to no longer be recoverable. Adelphia accounted for approximately 5% of our net sales in the first quarter of 2002 and approximately 2% of our net sales for the full year in 2002 and the first half of 2003. The stock prices of other domestic cable companies came under pressure following the Adelphia Communications bankruptcy due to concerns about debt levels and capital expenditure requirements for new and expanded services. These financial difficulties, and their effect on our customers' capital spending and access to capital, adversely affected our net sales. Furthermore, we believe that our net sales to satellite customers were adversely affected by the uncertainty related to the prolonged regulatory review of the proposed acquisition of DIRECTV by EchoStar in 2002.

We believe that the financial condition of many of our customers has stabilized or improved, and our net sales increased sequentially in both the second and third quarters of 2003. However, despite the improve-

**Table of Contents****Management's discussion and analysis of financial condition and results of operations**

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ment, our quarterly net sales during the second and third quarters of 2003 were lower than during the first and second quarter of 2002, and European spending remains generally weak. Furthermore, another economic downturn or other factors could cause additional financial difficulties among our customers, and customers whose financial condition has stabilized may not purchase new equipment at levels we have seen in the past. Continued financial difficulties among our customers would adversely affect our operating results and financial condition. Also, News Corp. Ltd. recently announced its plan to acquire a controlling interest in Hughes Electronics, the parent company of DIRECTV, subject to certain regulatory and shareholder approvals. We cannot currently predict the impact of the announcement by News Corp. Ltd. to acquire control of DIRECTV, and the related industry uncertainty, on our future sales. As a result, we cannot assure you that the sequential net sales growth we had during the second and third quarters of 2003 will continue.

Harmonic often recognizes a substantial portion of its net sales in the last month of the quarter. Harmonic establishes its expenditure levels for product development and other operating expenses based on projected sales levels, and expenses are relatively fixed in the short term. Accordingly, variations in timing of sales can cause significant fluctuations in operating results. In addition, because a significant portion of Harmonic's business is derived from orders placed by a limited number of large customers, the timing of such orders can also cause significant fluctuations in our operating results. Harmonic's expenses for any given quarter are typically based on expected sales and if sales are below expectations, our operating results may be adversely impacted by our inability to adjust spending to compensate for the shortfall. As a result of these and other factors, Harmonic's operating results in one or more future periods may fail to meet or exceed the expectations of securities analysts or investors. In that event, the trading price of our common stock would likely decline. Due to lower than expected sales in several quarters during 2000 and 2001, the third quarter of 2002, and the first quarter of 2003, Harmonic failed to meet the expectations of securities analysts, and the price of our common stock declined, in some cases significantly. See Risk factors Our operating results are likely to fluctuate significantly and may fail to meet or exceed the expectations of securities analysts or investors, causing our stock price to decline.

**Segments**

CS division and BAN division net sales decreased 17% and 38% in the second quarter of 2003, respectively, compared to the second quarter of 2002. For the first half of 2003, CS and BAN net sales decreased 21% and 39%, respectively, compared to the first half of 2002. CS division sales increased significantly from the first quarter of 2001 through the second quarter of 2002 due principally to demand for our next-generation digital systems such as the Narrowcast Services Gateway, or NSG, for video-on-demand deployments, and the MV50 encoder. CS sales of the MV50 encoder benefited during this period from the expansion of local channel offerings and compliance with FCC must carry regulations by domestic direct broadcast satellite, or DBS, operators. However, CS sales decreased significantly after the first half of 2002 due principally to lower sales to cable operators, other than Comcast, as a result of lower NSG shipments, and as domestic cable operators focused on initial VOD service launches rather than new VOD deployments. In addition, during the second half of 2002 the decrease in CS sales was also attributable to lower sales to satellite customers that we believe resulted, in part, from the prolonged regulatory review of the proposed acquisition of DIRECTV by EchoStar. BAN division sales decreased significantly from the third quarter of 2000 due in particular to reduced spending by AT&T Broadband, which was acquired by Comcast in November 2002, and RCN, and in 2003 decreased due to reduced spending by Charter Communications. In 2000, 2001 and 2002, net sales of CS products accounted for approximately 33%, 63% and 59% of net sales, respectively, while net sales of BAN products accounted for approximately 67%, 37% and 41% of net sales, respectively. CS sales prior to the merger with C-Cube in May 2000 and our acquisition of the DiviCom business consisted of sales of our TRANsend and CyberStream product lines.

**Customer concentration**

Historically, a majority of our net sales have been to relatively few customers, and due in part to the consolidation of ownership of cable television and direct broadcast satellite systems, we expect this customer concentration to continue for the foreseeable future. In 2000, net sales to AT&T Broadband

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represented 12% of sales, and net sales to RCN represented 11% of net sales. In 2001, net sales to Charter Communications represented 11% of net sales. In 2002, net sales to Charter Communications and Comcast accounted for 18% and 10% of net sales, respectively. If Comcast, which acquired AT&T Broadband in November 2002, and AT&T Broadband had been combined for all of 2002, total net sales to the combined company would have been 17% of net sales. For the first six months of 2003, our top ten customers accounted for 69% of net sales. For the same period, Comcast, DIRECTV and EchoStar accounted for 29%, 13% and 11% of net sales and Charter Communications accounted for 1% of net sales. In 2003, sales to Charter Communications have been significantly lower than in 2002, both in absolute dollars and as a percentage of revenue, as Charter Communications is now in the later stages of its network upgrade program. In addition, our sales to Charter Communications may be impacted by capital market concerns about the cable industry and Charter Communications in the aftermath of the Adelphia Communications bankruptcy filing in June 2002. As of December 31, 2002, Harmonic had accounts receivable of \$3.5 million due from Charter Communications, which was subsequently collected.

**International**

Sales to customers outside of the United States in 2000, 2001 and 2002 represented 40%, 40% and 29% of net sales, respectively. A significant portion of international sales are made to distributors and system integrators, which are generally responsible for importing the products and providing installation and technical support and service to customers within their territory. While net sales to international customers increased sequentially in the second quarter of 2003, principally in Asia, international sales generally remained weak. We believe that this was due in part to financial restructurings and regulatory issues in Europe. However, we expect international sales to continue to account for a meaningful portion of our net sales for the foreseeable future.

**COST OF SALES AND OPERATING EXPENSES**

Our operating results in 2001 also included charges of \$39.2 million for excess and obsolete inventories and \$3.3 million for fixed asset impairment. The provisions for excess and obsolete inventories resulted from significant reductions in the demand for our products, principally BAN division products. In accordance with our policy, we wrote down inventory levels in excess of our demand forecasts.

During 2001, Harmonic reduced its workforce by approximately 30% and recorded severance and other costs of \$2.5 million at the time. As a result of uncertain market conditions and lower sales during the second half of 2002, Harmonic implemented a series of cost control measures that included workforce reductions totaling approximately 120 employees during the second half of 2002. Harmonic recorded severance charges of \$1.5 million during the second half of 2002 related to the work force reductions. These actions coupled with normal turnover reduced headcount from over 1,000 at the end of 2000 to 559 as of June 27, 2003.

In light of Harmonic's reduced headcount, difficult business conditions and a weak local commercial real estate market, we reassessed our accrual for the costs of excess facilities and recorded a charge of \$22.5 million during the third quarter of 2002. We changed our estimates with regard to the expected timing and amount of sublease income due to the substantial surplus of vacant space in the San Francisco Bay Area. The excess facilities charge recorded during the third quarter of 2002 was for facilities that we no longer occupied, do not intend to occupy or plan to sublease. The 2002 charges followed \$30.1 million recorded for excess facilities in 2001 when the initial accruals were established.

Operating results for the second quarter and first half of 2003 include a charge to general and administrative expense of approximately \$2.7 million related to the settlement of litigation with Power and Telephone Supply (P&T) in Federal court in Tennessee. Under the terms of the settlement agreement announced on July 17, 2003, Harmonic agreed to pay \$2.8 million to P&T in release of all outstanding claims. The settlement followed summary judgment against Harmonic on certain of the claims made by P&T under a Tennessee statute relating to retailers and suppliers. These claims arose from the cancellation of purchase orders on P&T by one its end-customers in 2000. The settlement charge is after accounting for the value of products to be returned and other costs. Harmonic paid \$1.0 million of the

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### **Management's discussion and analysis of financial condition and results of operations**

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settlement on July 24, 2003 and is obligated to pay the balance of \$1.8 million on January 15, 2004. The settlement payments are secured by a standby letter of credit.

### **CRITICAL ACCOUNTING POLICIES**

The preparation of financial statements and related disclosures requires Harmonic to make judgments, assumptions and estimates that affect the reported amounts of assets and liabilities, the disclosure of contingencies and the reported amounts of revenue and expenses in the financial statements and accompanying notes. Material differences may result in the amount and timing of revenue and expenses if different judgments or different estimates were made. See Note 1 of Notes to Consolidated Financial Statements for details of Harmonic's accounting policies. Critical accounting policies, judgments and estimates which we believe have the most significant impact on Harmonic's financial statements are set forth below:

- Revenue recognition;
- Allowances for doubtful accounts, returns and discounts;
- Valuation of inventories;
- Impairment of long-lived assets;
- Restructuring costs and accruals for excess facilities;
- Assessment of the probability of the outcome of current litigation; and
- Accounting for income taxes.

#### **Revenue recognition**

Harmonic recognizes revenue when persuasive evidence of an arrangement exists, delivery has occurred or services have been provided, the sale price is fixed or determinable, collectibility is reasonably assured and risk of loss and title has transferred to the customer. Revenue from product sales is generally recognized upon shipment, and allowances are provided for estimated returns and discounts. Such allowances are adjusted periodically to reflect actual and anticipated experience. Revenue on solution sales, which principally include the design, manufacture, test, integration and installation of equipment to our customers' specifications, or acquired from third parties to be integrated with our products, is recognized using the percentage of completion method. Under the percentage of completion method, revenue recognized reflects the portion of the anticipated contract revenue that has been earned, equal to the ratio of labor costs expended to date to anticipated final labor costs, based on current estimates of labor costs to complete the project. If the estimated costs to complete a project exceed the total contract amount, indicating a loss, the entire anticipated loss is recognized. Revenue from services is generally recognized as services are performed. Maintenance services are recognized ratably over the maintenance term, which is typically one year. Deferred revenue represents billings in excess of revenue recognized.

Revenue recognition in each period is dependent on our application of these accounting policies. If we believe that any of the conditions to recognize revenue has not been met, we defer revenue recognition. For example, if collectibility is not reasonably assured we defer revenue recognition until subsequent cash receipt. Our application of percentage-of-completion accounting is subject to our estimates of labor costs to complete each project. In the event that actual results differ from these estimates or we adjust these estimates in future periods, our operating results for a particular period could be adversely affected.

#### **Allowances for doubtful accounts, returns and discounts**

We establish allowances for doubtful accounts, returns and discounts based on credit profiles of our customers, current economic trends, contractual terms and conditions and historical payment, return and discount experience, as well as for known or expected events. If there were to be a deterioration of a major customer's creditworthiness or if actual defaults, returns or discounts were higher than our historical experience our operating results and financial position could be adversely affected.





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**Management's discussion and analysis of financial condition and results of operations**

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**Valuation of inventories**

Harmonic states inventories at the lower of cost or market. We establish provisions for excess and obsolete inventories after evaluation of historical sales and future demand and market conditions, expected product lifecycles and current inventory levels. In the event that we adjust our estimates, such as future demand and expected product lifecycles, our operating results and financial position could be adversely affected.

**Impairment of long-lived assets**

We perform an evaluation of the carrying value of intangibles and long-lived assets whenever we become aware of an event or change in circumstances that would indicate potential impairment. We evaluate the recoverability of other intangible assets and long-lived assets on the basis of undiscounted cash flows from each asset group. If impairment is indicated, provisions for impairment are determined based on fair value, principally using discounted cash flows. Changes in industry and market conditions or the strategic realignment of our resources could result in an impairment of identified intangibles or long-lived assets. There can be no assurance that future impairment tests will not result in a charge to earnings.

**Restructuring costs and accruals for excess facilities**

For restructuring activities initiated prior to December 31, 2002 we recorded restructuring costs when Harmonic committed to an exit plan and significant changes to the exit plan were not likely. To determine our excess facility accrual we estimate expected sublease rental income on each excess facility. In the event we are unable to achieve expected levels of sublease rental income, we will need to revise our estimate of the liability which could materially impact our operating results, financial position and cash flows. For restructuring activities initiated after December 31, 2002 we will follow Statement of Financial Accounting Standards, or SFAS No. 146, Accounting for Costs Associated with Exit or Disposal Activities, as discussed under New Accounting Pronouncements below.

**Assessment of the probability of the outcome of current litigation**

Harmonic records accruals for loss contingencies when it is probable that a liability has been incurred and the amount of loss can be reasonably estimated. Based on Harmonic's review of the complaints filed in the securities class action and certain other pending litigation, Harmonic believes that it either has meritorious defenses with respect to those actions and claims or is unable to predict the impact of an adverse outcome and, accordingly, no loss contingencies have been accrued with respect to those actions and claims. There can be no assurance, however, that we will prevail. An unfavorable outcome of these legal proceedings could have a material adverse effect on our business, financial position, operating results and cash flows. As of June 27, 2003, \$2.8 million was accrued for the settlement of litigation with Power and Telephone Supply in Federal court in Tennessee. See Legal Proceedings .

**Accounting for income taxes**

In preparation of our financial statements, we estimate our income taxes for each of the jurisdictions in which we operate. This involves estimating our actual current tax exposures and assessing temporary differences resulting from differing treatment of items, such as reserves and accruals, for tax and accounting purposes. These differences result in deferred tax assets and liabilities, which are included within our consolidated balance sheet. Based on our judgment that the likelihood that our deferred tax assets will be recovered from future taxable income is not assured, we established a valuation allowance of \$63.0 million in 2001 which was increased to \$104.9 million in 2002. At December 31, 2002 we have fully reserved for our net deferred tax assets related to temporary differences, net operating loss and tax credit carryforwards.

Significant management judgment is required in determining our provision for income taxes, our deferred tax assets and liabilities and our future taxable income for purposes of assessing our ability to realize any future benefit from our deferred tax assets. In the event that actual results differ from these estimates or

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we adjust these estimates in future periods, our operating results and financial position could be materially affected.

**RESULTS OF OPERATIONS**

The following table sets forth the percentage of net sales represented by items in our consolidated income statements for the periods presented:

	Fiscal year ended December 31,			Six months ended	
	2000	2001	2002	June 28, 2002	June 27, 2003
				(unaudited)	
Net sales	100%	100%	100%	100%	100%
Cost of sales	71	99	71	68	70
Gross profit	29	1	29	32	30
Operating expenses					
Research and development	19	25	22	20	21
Selling, general and administrative	25	53	43	29	34
Impairment of goodwill and other intangibles	525				
Amortization of intangibles	84	6	5	5	5
Acquired in-process technology	15				
Total operating expense	668	84	70	54	60
Loss from operations	(639)	(83)	(41)	(22)	(30)
Interest and other income, net	4	1			
Loss before income taxes	(635)	(82)	(41)	(22)	(30)
Provision for (benefit from) income taxes	(6)			1	
Net loss	(629)%	(82)%	(41)%	(23)%	(30)%

**Six months ended June 28, 2002 and June 27, 2003**

Harmonic's net sales decreased 26% from \$56.3 million in the second quarter of 2002 to \$41.7 million in the second quarter of 2003. For the six month periods, net sales decreased 29% from \$110.3 million in the first half of 2002 to \$78.7 million in the first half of 2003. The sales decreases in both periods reflected significantly lower sales in each division. BAN division sales decreased 38% in the second quarter of 2003 compared to the second quarter of 2002, and decreased 39% in the first six months of 2003 compared to the first six months of 2002. The BAN sales decreases were principally due to cautious capital spending by cable operators, in particular Charter Communications. We believe this cautious spending was caused by current conditions in financial markets and capital market concerns about the cable industry in the aftermath of the Adelphia bankruptcy filing in the first half of 2002. CS division sales decreased 17% in the second quarter of 2003 compared to the second quarter of 2002, and decreased 21% in the first six months of 2003 compared to the first six months of 2002. The CS sales decreases were attributable to lower sales to domestic cable and satellite customers due in part to competitive pricing pressures, partially offset by volume increases, in certain product lines. Harmonic's domestic sales represented 73% of net sales in the second quarter of 2003 compared to 77% of net sales in the second quarter of 2002.

**Gross profit**

Gross profit decreased from \$19.2 million (34% of net sales) in the second quarter of 2002 to a gross profit of \$12.8 million (31% of net sales) in the second quarter of 2003. For the six month periods, gross profit decreased from \$35.0 million (32% of net sales) in the first six months of

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2002 to \$23.5 million (30% of net sales) in the first six months of 2003. The decreases in gross profit for both periods of 2003 were primarily due to lower overall sales volume and heightened competitive pricing pressures for certain products, particularly in the CS division. These factors were partially offset by a higher proportion of CS

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division sales in both periods of 2003, which historically carry higher margins, and cost control measures implemented during the second half of 2002. The cost control measures included a reduction in headcount to streamline our manufacturing operations and technical service and support organizations.

Gross profit includes amortization of intangibles of \$3.0 million and \$6.0 million for the second quarter and first half of 2002, respectively, compared to \$1.5 million and \$3.0 million for the second quarter and first half of 2003, respectively. In addition, gross profit includes credits related to products sold for which the cost basis had been written down in prior years of \$2.9 million for the second quarter and first half of 2002 compared to \$1.0 million and \$2.1 million for the second quarter and first half of 2003, respectively.

Harmonic anticipates that gross margins may fluctuate in future periods due to a number of factors including sales volume, pricing, product mix, factory and service organization spending levels and the timing and amount of sales of previously written down products.

### **Research and development**

Research and development expenses decreased from \$10.8 million (19% of net sales) in the second quarter of 2002 to \$8.4 million (20% of net sales) in the second quarter of 2003. For the six month periods, research and development expenses decreased from \$21.9 million (20% of net sales) in 2002 to \$16.9 million (22% of net sales) in 2003. The decreases in absolute dollars were primarily due to lower headcount associated with the workforce reductions during the second half of 2002 and ongoing cost control measures. The increases in research and development expenses as a percentage of sales were attributable to decreased net sales.

### **Selling, general and administrative**

Selling, general and administrative expenses decreased from \$17.0 million (30% of net sales) in the second quarter of 2002 to \$14.4 million (35% of net sales) in the second quarter of 2003. For the six month periods, selling, general and administrative expenses decreased from \$32.3 million (29% of net sales) in 2002 to \$26.5 million (34% of net sales) in 2003. The decreases in absolute dollars were principally due to a reduction in headcount associated with the work force reductions implemented during the second half of 2002. The increases in selling, general and administrative expenses as a percentage of sales were attributable to decreased net sales.

Selling, general and administrative expenses for the second quarter and first half of 2002 included a \$2.7 million charge to provide for probable losses on receivables in connection with the Adelphia bankruptcy filing. In addition, selling, general and administrative expenses for the second quarter and first half of 2003 included a charge of \$2.7 million related to the settlement of litigation with Power and Telephone Supply in Federal court in Tennessee.

### **Amortization of intangibles**

Harmonic recorded amortization of \$2.8 million and \$5.7 million in the second quarter and first half of 2002, respectively. Amortization expense decreased to \$1.9 million and \$3.9 million in the second quarter and first half of 2003 due to cessation of amortization associated with the acquisition of Cogent Technology.

### **Interest and other income (expense), net**

Interest and other income (expense), net, increased from \$0.3 million in the second quarter of 2002 to \$0.4 million in the second quarter of 2003, and increased from \$0.3 million in the first half of 2002 to \$0.6 million in the first half of 2003. The increases were principally due to foreign currency translation gains in both periods of 2003 compared to foreign currency translation losses in both periods of 2002, partially offset by lower interest income and higher interest expense in each period of 2003.

### **Income taxes**

Provisions for income tax expense of \$0.1 million and \$0.2 million were recorded for the second quarter and first half of 2003 compared to no provision in the second quarter of 2002 and a provision of

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\$0.5 million for the first half of 2002. The lower provision in the first half of 2003 compared to the first half of 2002 was due to the expectation of lower foreign income taxes in 2003 than in 2002.

**Segments**

Harmonic's management uses income or loss from segment operations as its measure of segment profitability. Income or loss from segment operations excludes intangible amortization expense, corporate expenses, including excess facilities charges, and interest and other income. See Note 13 of Notes to Consolidated Financial Statements for further detail regarding segment operations.

Fluctuations in net sales by operating segments are discussed more extensively in the section above entitled Net Sales. With regard to losses from segment operations, the CS division had a loss from segment operations of \$1.7 million in the second quarter of 2002 compared to a loss of \$1.6 million in the second quarter of 2003. For the six month periods CS had a loss from segment operations of \$4.6 million for the 2002 period compared to \$5.1 million for the 2003 period. The increased CS losses in both periods of 2003 compared to 2002 were due to lower sales and lower gross margins offset in part by lower operating expenses resulting from lower headcount. CS results for the second quarter and first half of 2003 included credits of \$0.1 million and \$0.3 million, respectively, related to products sold for which the cost basis had been written down in prior years, compared to \$0.3 million for the second quarter and first half of 2002.

The BAN division had income from segment operations of \$2.0 million in the second quarter of 2002 compared to a loss from segment operations of \$0.6 million in the second quarter of 2003. For the six month periods, BAN had income from segment operations of \$1.0 million in the 2002 period compared to a loss from segment operations of \$2.1 million in the 2003 period. The BAN losses in both periods of 2003 compared to income in both periods of 2002 were due to lower sales and lower gross margins, partially offset by lower operating expenses associated with lower headcount. BAN results for the second quarter and first half of 2003 include credits of \$0.9 million and \$1.8 million, respectively, related to products sold for which the cost basis had been written down in prior years, compared to \$2.6 million for the second quarter and first half of 2002.

**Years ended December 31, 2000, 2001 and 2002****Net sales**

Harmonic's net sales decreased 8% to \$186.6 million in 2002, from \$203.8 million in 2001. The lower net sales were due to a 15% decrease in CS division sales, partially offset by a 3% increase in BAN division sales. The CS sales decrease was principally attributable to significantly lower sales of encoders to domestic satellite customers. We believe these lower sales were due, in part, to purchasing delays created by the uncertainty of the regulatory review of the proposed acquisition of DIRECTV by EchoStar, which was ultimately called off in the fourth quarter. The lower CS division sales to satellite customers were partially offset by higher sales of the Narrowcast Services Gateway, or NSG, for video-on-demand deployments to cable operators. With regard to the BAN division, the modest increase was due to higher sales of node products, partially offset by lower transmitter sales, and generally higher unit volumes, offset by lower pricing. International sales represented 29% of net sales in 2002, compared to 40% in 2001 reflecting a 35% decrease in international sales. This international sales decrease was partially offset by a 9% increase in domestic sales. The significant decrease in international sales was due principally to depressed market conditions, particularly in Europe, which impacted both divisions.

Harmonic's net sales decreased 23% to \$203.8 million in 2001, from \$263.0 million in 2000. The lower net sales were due to a 57% decrease in BAN sales partially offset by a 47% increase in CS sales. The significant decrease in BAN sales in 2001 was principally due to weak capital spending on transmission upgrades, particularly reduced capital spending by AT&T Broadband and RCN. These two customers accounted for a combined total of less than 5% of net sales in 2001 compared to a combined total of 23% of net sales in 2000. The significant increase in CS sales during 2001 was principally due to sales of new next-generation digital products including the MV50 encoder and Narrowcast Services Gateway, or NSG, which commenced volume shipment in the second quarter of 2001. This increase was also attributable to the fact that net sales for 2000 included only eight months of sales for the DiviCom

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business as the C-Cube merger was accounted for as a purchase transaction and closed on May 3, 2000. International sales represented 40% of net sales in both 2001 and 2002.

**Gross profit**

Gross profit increased to \$54.4 million (29% of net sales) in 2002 from \$1.6 million (1% of net sales) in 2001. The increase in gross profit was primarily attributable to special charges in 2001 of \$40.9 million, principally for excess and obsolete inventories, and credits in 2002 of \$6.9 million related to products sold for which the cost basis had been written down in prior years. Also contributing to the higher gross profit in 2002 were cost control measures, including a reduction in headcount in our manufacturing and technical service and support organizations, associated with work force reductions throughout 2001 and during the second half of 2002. These factors which contributed to higher gross margins in 2002 compared to 2001, were partially offset by lower pricing and a higher proportion of BAN division revenue which historically has had lower margins.

Gross profit decreased to \$1.6 million (1% of net sales) in 2001, from \$75.2 million (29% of net sales) in 2000. The decrease in gross profit was primarily due to decreased sales and associated lower fixed cost absorption as a result of lower production levels and purchasing volumes. Also contributing to the lower gross profit and margins in 2001 were lower pricing and changes in product mix. In addition, approximately \$40.9 million of the reduction in gross profit was attributable to the recording of provisions for excess and obsolete inventories, the impairment of certain fixed assets and severance and other costs resulting from streamlining our product lines in both divisions. The provisions for excess and obsolete inventories of \$39.2 million resulted from significant reductions in demand for our products, principally BAN division products. In accordance with our policy we established provisions for inventory levels in excess of our demand forecasts. The decreases in gross profit and gross margins were partially offset by the inclusion of DiviCom for the entire year in 2001.

**Research and development**

Research and development expenses decreased to \$40.8 million (22% of net sales) in 2002, from \$51.3 million (25% of net sales) in 2001. The decreases in 2002 were primarily due to a reduction in headcount associated with the workforce reductions over the past two years and ongoing cost control measures. Research and development expenses increased to \$51.3 million (25% of net sales) in 2001 from \$49.3 million (19% of net sales) in 2000. The increase in absolute dollars was primarily due to inclusion of DiviCom for the entire year in 2001, which historically spent a higher percentage of net sales on research and development than Harmonic, partially offset by lower headcount and associated expenses. In 2001, the increase in research and development expenses as a percentage of net sales was primarily attributable to decreased net sales, but also attributable to the inclusion of DiviCom for the entire year.

**Sales, general and administrative**

Selling, general and administrative expenses decreased to \$81.4 million (43% of net sales) in 2002, from \$106.3 million (53% of net sales) in 2001. The decreases were due principally to the reduction in headcount associated with the work force reductions and to lower promotional costs. In addition, selling, general and administrative expenses in 2001 included excess facilities charges of \$30.1 million compared to \$22.5 million in 2002. Selling, general and administrative expenses increased to \$106.3 million (53% of net sales) in 2001 from \$67.0 million (25% of net sales) in 2000. The increase in absolute dollars was due principally to \$32.8 million of excess facility, severance and other costs, and the inclusion of DiviCom for the entire year in 2001, partially offset by lower headcount and associated expenses. The increase as a percentage of net sales was also attributable to the decrease in net sales.

**Amortization and impairment of intangibles**

Amortization of intangibles decreased to \$9.5 million in 2002 from \$12.7 million in 2001. The decrease in 2002 was due principally to cessation of goodwill amortization on adoption of SFAS No. 142 Goodwill and Other Intangible Assets effective January 1, 2002. Harmonic expects to record approximately \$7.7 million in amortization of intangibles in 2003.

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Amortization of intangibles decreased to \$12.7 million in 2001, from \$221.7 million in 2000. The decrease in 2001 was due to the recording of an impairment charge of \$1.4 billion as of December 31, 2000 to write down long-lived assets associated with the acquisition of the DiviCom business completed in May 2000. DiviCom was acquired in a tax-free exchange of stock at a time when the market values of telecommunications equipment manufacturers were substantially higher. The DiviCom business had experienced a significant decrease in the demand for its products and services as customers in the digital headend systems market reduced levels of current and planned capital expenditures and, as a result, revenues, cash flows and expected future growth rates decreased. Due to these significant changes, management performed an evaluation of the recoverability of the goodwill and other long-lived assets related to the DiviCom business in accordance with SFAS No. 121 Accounting for the Impairment of Long-Lived Assets and for Long-Lived Assets to be Disposed Of. Because the estimated future undiscounted cash flows of this operation were less than the carrying value of the related long-lived assets as of December 31, 2000, an impairment charge was required. The impairment charge represents the amount required to write-down long-lived assets to fair value based on management's best estimate of this operation's future discounted cash flows. As a result of the impairment charge, Harmonic wrote off the remaining unamortized goodwill and reduced the recorded value of other identified intangibles related to its acquisition of the DiviCom business to \$79.3 million.

**Acquired in-process technology**

Harmonic recorded charges to operations of \$39.8 million in 2000 for acquired in-process technology in connection with the C-Cube merger and Cogent acquisition. See Note 3 of Notes to Consolidated Financial Statements. These amounts were expensed on the acquisition dates in accordance with generally accepted accounting principles because the acquired technology had not yet reached technological feasibility and had no future alternative uses.

**Interest and other income, net**

Interest and other income, net, was \$0.9 million in 2002, \$1.6 million in 2001 and \$10.5 million in 2000. The decrease in 2002 was due principally to lower interest income, and to a lesser extent higher interest expense on borrowings under Harmonic's equipment term loan. The decrease in interest income was due to lower average cash and short term investment balances as well as lower interest rates. The decrease in 2001 was principally due to lower average cash and short term investments. Lower interest rates also contributed to the decrease.

**Income taxes**

Harmonic recorded a provision for income taxes of \$0.5 million in 2002 principally due to foreign income taxes despite a loss before income taxes of \$76.4 million. The valuation allowance was increased from \$63.0 million in 2001 to \$104.9 million in 2002. The valuation allowance is for the full amount of the net deferred tax asset, because realization of any future benefit from deductible temporary differences, net operating losses and tax credit carry forwards was uncertain at December 31, 2002. Harmonic recorded a benefit from income taxes of only \$0.8 million despite a loss before income taxes of \$167.2 million in 2001. This was principally due to the establishment of the valuation allowance for the full amount of Harmonic's net deferred tax assets of \$63.0 million. For 2000, Harmonic recorded a benefit from income taxes of only \$18.6 million, principally due to non-deductible goodwill impairment and amortization, and acquired in-process technology related to the acquisition of DiviCom.

In 2003, Harmonic expects to record a provision for income taxes of less than \$1.0 million due principally to foreign income taxes. This estimate is based on current tax laws, current estimates of 2003 operating results and the expected distribution of income among various tax jurisdictions, all of which is subject to change. In addition, Harmonic is liable for C-Cube's taxes for periods prior to the merger. See Risk factors We are liable for C-Cube's pre-merger tax liabilities, including tax liabilities resulting from the spin-off of its semiconductor business.

**Segments**

Harmonic's management uses income or loss from segment operations as its measure of segment profitability. Income or loss from segment operations excludes intangible amortization expense, corporate



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expenses, including excess facilities charges, and interest and other income. See Note 13 of Notes to Consolidated Financial Statements.

Fluctuations in net sales by operating segment are discussed more extensively in the section above entitled, *Net Sales*. With regard to losses from segment operations, BAN had a loss of \$4.0 million in 2002 compared to a loss of \$60.1 million in 2001. The improved results in 2002 were due to a 3% increase in sales, improved factory absorption and lower operating expenses, resulting primarily from lower headcount. In addition, BAN results included special charges in 2001 of \$28.6 million for excess and obsolete inventories and credits of \$5.9 million in 2002 related to products sold in 2002 for which the cost basis had been written down in prior years. BAN had a loss from segment operations of \$60.1 million in 2001 compared to \$4.4 million in 2000. The larger loss in 2001 was due primarily to a 57% decrease in sales and the recording of special charges impacting gross profits as discussed above.

CS had a loss from segment operations of \$15.7 million in 2002 compared to a loss of \$36.3 million in 2001. Despite a 15% decrease in sales in 2002, results improved, principally due to lower headcount and other cost control measures. In addition, CS results included special charges for excess and obsolete inventories in 2001 of \$10.6 million and credits of \$1.0 million in 2002 related to products sold in 2002 for which the cost basis had been written down in prior years. CS had a loss from segment operations of \$36.3 million in 2001 compared to a loss of \$25.1 million in 2000. Despite a 47% increase in sales, the loss from segment operations increased in 2001 due in part to the special charges for excess and obsolete inventories which impacted gross profits. In addition, 2000 results only included eight months of operating results for the DiviCom business as the C-Cube merger closed on May 3, 2000.

**QUARTERLY OPERATING RESULTS**

The table below presents certain unaudited consolidated statement of operations data for our six most recently completed fiscal quarters.

Quarterly data:	2002				2003	
	Q1	Q2	Q3	Q4	Q1	Q2
	(unaudited)					
	(in thousands, except per share data)					
Net sales	\$ 54,032	\$ 56,309	\$ 37,019	\$ 39,272	\$ 37,041	\$ 41,653
Gross profit	15,763	19,235	9,928	9,503	10,747	12,752
Loss from operations	(13,505)	(11,414)	(38,436)	(13,994)	(11,752)	(12,020)
Net loss	(14,012)	(11,124)	(38,030)	(13,752)	(11,667)	(11,682)
Basic and diluted net loss per share	\$ (0.24)	\$ (0.19)	\$ (0.63)	\$ (0.23)	\$ (0.19)	\$ (0.19)

Net sales for the third quarter of 2003 were \$47.3 million and net loss was \$(7.5) million.

**LIQUIDITY AND CAPITAL RESOURCES**

As of June 27, 2003, cash and cash equivalents and short term investments totaled \$36.3 million compared to \$49.2 million as of December 31, 2002.

Cash provided by operations was \$1.7 million in the first half of 2002 compared to cash used in operations of \$11.7 million in the first half of 2003. The use of cash in operations in the first six months of 2003 compared to cash provided by operations in 2002 was primarily due to significantly lower non-cash charges for depreciation and amortization of intangibles in 2003, and a more significant increase in accounts receivable in 2003 than in 2002, partially offset by a lower net loss in 2003. The more significant increase in accounts receivable in the first six months of 2003 than the comparable period of 2002 was due to recognition of a more substantial portion of our revenue in the last month of the second quarter of 2003 than in the last month of the second quarter of 2002. In addition, we received a federal income tax refund of \$3.1 million in the first half of 2002 related to a net operating loss carryback claim.

Cash used in operations was \$24.8 million in the year ended December 31, 2001 compared to \$5.4 million in the year ended December 31, 2002. The reduced use of cash in operations in 2002 was due to a



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significantly reduced net loss that was substantially offset by non-cash charges for depreciation and amortization and net cash provided through improved working capital management. Cash used in operations in 2001 was primarily due to the significant net loss, partially offset by depreciation and amortization, and net cash provided through improved working capital management compared to 2000. During 2001, Harmonic received income tax refunds of \$25.6 million.

Under the terms of the merger agreement with C-Cube, Harmonic is generally liable for C-Cube's pre-merger tax liabilities. Approximately \$20.8 million of pre-merger tax liabilities remained outstanding and were included in accrued liabilities as of June 27, 2003. We are working with LSI Logic, which acquired C-Cube's spun-off semiconductor business in June 2001 and assumed its obligations, to develop an approach to settle these obligations, a process which has been underway since the merger in 2000. These liabilities represent estimates of C-Cube's pre-merger tax obligations to various tax authorities in 13 countries. We are currently in discussions with tax authorities in 2 of these countries, but none of these estimates has yet been finalized. Harmonic is unable to predict when any or all of these tax obligations will be paid, or in what amount. The full amount of the estimated obligation has been classified as a current liability. To the extent that these obligations are finally settled for less than the amounts provided, Harmonic is required, under the terms of the merger agreement, to refund the difference to LSI Logic. Conversely, if the post-June 27, 2003 settlements are more than the \$20.8 million pre-merger tax liability, LSI Logic is obligated to reimburse Harmonic.

Additions to property, plant and equipment were \$1.8 million and \$1.5 million in the first half of 2002 and 2003, respectively. Additions to property, plant and equipment were \$29.1 million during the year ended December 31, 2001 compared to \$3.3 million in the year ended December 31, 2002. The decrease from 2001 was due principally to expenditures during 2001 for leasehold improvements and related furniture, fixtures and equipment in connection with relocation of former DiviCom employees to new facilities in Sunnyvale, and the implementation of a new enterprise resource planning software system. These major capital programs commenced during the second half of 2000 and were substantially completed during the first half of 2001. As a result of these major programs, capital expenditures for the combined company were significantly higher during 2000 and 2001 than historic levels, in 2002, and levels expected in the future. Harmonic currently expects capital expenditures to be approximately \$3 million during 2003.

In March 2003, Harmonic entered into a new bank line of credit facility with Silicon Valley Bank, which provides for borrowings up to \$13.5 million, including \$3.5 million for equipment under a secured term loan that can be drawn down until December 31, 2003. This new facility, which expires in March 2004, contains financial and other covenants including the requirement for Harmonic to maintain on deposit with the bank the greater of 50% of total cash, cash equivalents and short-term investments or \$10.0 million, or satisfy a liquidity covenant in the event cash, cash equivalents and short-term investments are less than \$10.0 million. This provision of the facility causes a restriction on Harmonic's ability to use cash and cash equivalents. Depending on the level of borrowings, letters of credit and other guarantees outstanding at any point in time, the amount of the restriction on usage will vary. As of June 27, 2003, \$4.5 million of cash and cash equivalents were restricted as to usage. If Harmonic is unable to maintain on deposit with the bank the minimum balance of \$10.0 million, or satisfy the liquidity covenant requirement, Harmonic would be in noncompliance with the facility. In the event of noncompliance by Harmonic with the covenants under the facility, Silicon Valley Bank would be entitled to exercise its remedies under the facility, including in the event amounts are outstanding under the facility, offset rights against the amounts Harmonic has maintained on deposit with the bank. At June 27, 2003, Harmonic was in compliance with these covenants, but as of July 25, 2003, we were not in compliance with a net loss covenant. Partially as a result, on September 26, 2003, we entered into a loan modification agreement which waived this noncompliance, amended the net loss covenant and also amended certain restrictions on issuances of letters of credit under the facility. As of September 26, 2003, we were in compliance with the covenants under our facility.

Future borrowings pursuant to the line bear interest at the bank's prime rate plus 0.25%-1.75% (prime rate plus 1.75%-2.0% for equipment borrowings) depending upon Harmonic total cash position. Borrowings are payable monthly and are collateralized by all of Harmonic's assets. Harmonic has entered

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into an agreement with another financial institution holding amounts on deposit to allow, in the event of default, Silicon Valley Bank to control these deposits. As of June 27, 2003, \$2.1 million was outstanding under the equipment term loan portion of this facility. The term loan was payable monthly, including principal and interest at rates of 6.25% per annum on outstanding borrowings as of June 27, 2003 and matures at various dates through January 2006. Other than standby letters of credit and guarantees there were no other outstanding borrowings or commitments under the line of credit facility as of June 27, 2003. See Note 15 of Notes to Consolidated Financial Statements for further detail regarding these obligations.

In March 2003, Harmonic also renewed a facility with Silicon Valley Bank that provides for the sale of trade receivables on a non-recourse basis up to \$12.5 million and expires in March 2004. Trade receivables sold under the facility are discounted based on the bank's prime rate plus 1.5% for North American customers and based on the bank's prime rate plus 2% for all other customers. This facility was not utilized in 2002 or in the first half of 2003.

Harmonic's ability to utilize both facilities with Silicon Valley Bank depends to a significant extent on having a sufficient amount of qualified receivables, which may fluctuate depending on the level and timing of sales and the aging, customer concentration, international mix and credit quality of receivables. To the extent that Harmonic does not have sufficient qualified receivables, Harmonic's ability to utilize these facilities could be significantly constrained. Based upon current levels of receivables, Harmonic believes that it would not be able to utilize a significant portion of these facilities at this time.

Future payments under contractual obligations, and other commercial commitments, as of December 31, 2002, were as follows (in thousands):

<b>Contractual obligations:</b>	<b>Less than 1 year</b>	<b>1-3 years</b>	<b>4-5 years</b>	<b>After 5 years</b>	<b>Total amounts committed</b>
Long-term debt	\$ 1,862	\$ 710	\$	\$	\$ 2,572
C-Cube pre-merger tax liabilities	20,800				20,800
Operating leases <sup>(1)</sup>	10,979	19,861	23,460	34,887	89,187
Inventory purchase commitments	12,932				12,932
<b>Total contractual obligations</b>	<b>\$46,573</b>	<b>\$20,571</b>	<b>\$23,460</b>	<b>\$34,887</b>	<b>\$125,491</b>

<b>Other commercial commitments:</b>	<b>Less than 1 year</b>	<b>1-3 years</b>	<b>4-5 years</b>	<b>After 5 years</b>	<b>Total amounts committed</b>
Standby letters of credit	\$ 850	\$			\$ 850
Indemnifications <sup>(2)</sup>					
Guarantees	1,285	623			1,908
<b>Total commercial commitments</b>	<b>\$2,135</b>	<b>\$623</b>			<b>\$2,758</b>

(1) Operating lease commitments include \$41.6 million of accrued excess facilities costs.

(2) Harmonic indemnifies some of its suppliers and customers for specified intellectual property rights pursuant to certain parameters and restrictions. The scope of these indemnities varies, but in some instances, includes indemnification for damages and expenses (including reasonable attorneys' fees). No amounts have been accrued in respect of the indemnification provisions at December 31, 2002.

We believe that the proceeds of this offering, with our existing liquidity sources, will satisfy our cash requirements for at least the next twelve months, including the final settlement and payment of C-Cube's pre-merger tax liabilities. However, we may need to raise additional funds if our expectations are incorrect, to take advantage of unanticipated opportunities or to strengthen our financial position. This prospectus supplement is part of a registration statement on Form S-3 declared effective by the SEC in April 2002. Following the completion of this offering, and

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assuming the underwriters do not exercise their over-allotment option, this registration statement will continue to allow Harmonic to issue various types

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### **Management's discussion and analysis of financial condition and results of operations**

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of securities, including common stock, preferred stock, debt securities and warrants to purchase common stock from time to time, up to an aggregate of approximately \$85 million, subject to market conditions and our capital needs. Our ability to raise funds may be adversely affected by a number of factors relating to Harmonic, as well as factors beyond our control, including conditions in capital markets and the cable, telecom and satellite industries. There can be no assurance that such financing will be available on terms acceptable to us, if at all. See Risk factors We may need additional capital in the future and may not be able to secure adequate funds on terms acceptable to us or at all.

In addition, from time to time, we review potential acquisitions that would complement our existing product offerings, enhance our technical capabilities or expand our marketing and sales presence. Any future transaction of this nature could require potentially significant amounts of capital to finance the acquisition and related expenses as well as to integrate operations following a transaction, and could require us to issue our stock and dilute existing stockholders. If adequate funds are not available, or are not available on acceptable terms, we may not be able to take advantage of market opportunities, to develop new products or to otherwise respond to competitive pressures.

### **QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK**

Market risk represents the risk of loss that may impact the operating results, financial position, or liquidity of Harmonic due to adverse changes in market prices and rates. Harmonic is exposed to market risk because of changes in interest rates and foreign currency exchange rates as measured against the US Dollar and currencies of Harmonic's subsidiaries.

#### **Foreign currency exchange risk**

Harmonic has a number of international subsidiaries each of whose sales are generally denominated in US dollars. Following implementation of the Euro in January 2002, a higher proportion of our European business is denominated in Euros which may subject us to increased foreign currency exchange risk. In addition, Harmonic has various international branch offices which provide sales support and systems integration services. While Harmonic does not anticipate that near-term changes in exchange rates will have a material impact on Harmonic's operating results, financial position and liquidity, Harmonic cannot assure you that a sudden and significant change in the value of local currencies would not harm Harmonic's operating results, financial position and liquidity.

#### **Interest rate risk**

Exposure to market risk for changes in interest rates relate primarily to Harmonic's investment portfolio of marketable debt securities of various issuers, types and maturities and to Harmonic's borrowings under its bank line of credit facility. Harmonic does not use derivative instruments in its investment portfolio, and its investment portfolio only includes highly liquid instruments with an original maturity of less than two years. These investments are classified as available for sale and are carried at estimated fair value, with material unrealized gains and losses reported in other comprehensive income. There is risk that losses could be incurred if Harmonic were to sell any of its securities prior to stated maturity. A 10% change in interest rates would not have a material impact on financial conditions, results of operations and cash flows.

### **RECENT ACCOUNTING PRONOUNCEMENTS**

In July 2002, the Financial Accounting Board ( FASB ) issued SFAS No. 146, Accounting for Costs Associated with Exit or Disposal Activities. The standard replaces Emerging Issues Task Force ( EITF ) Issue No. 94-3, Liability Recognition for Certain Employee Termination Benefits and Other Costs to Exit an Activity (including Certain Costs Incurred in a Restructuring) and requires companies to recognize costs associated with exit or disposal activities when they are incurred rather than at the date of a commitment to an exit or disposal plan. Harmonic adopted SFAS No. 146 effective January 1, 2003 and the adoption had no effect on our financial position, results of operations or cash flows.

In November 2002, the FASB issued FASB Interpretation No. 45 ( FIN 45 ), Guarantor's Accounting and Disclosure Requirements for Guarantees, Including Indirect Guarantees of Indebtedness of Others .

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FIN 45 requires the guarantor to recognize, at the inception of a guarantee, a liability for the fair value of the obligation undertaken in issuing the guarantee. It also expands on the disclosures by a guarantor in its financial statements about its obligations under certain guarantees that it has issued and to be made in regard to product warranties. Disclosures required under FIN 45 are included in these financial statements, however, the initial recognition and initial measurement provisions of FIN 45 are applicable on a prospective basis to guarantees issued or modified after December 31, 2002. Harmonic adopted FIN 45 effective January 1, 2003, and the adoption had no effect on our financial position, results of operations or cash flows.

In November 2002, the Emerging Issues Task Force ( EITF ) reached a consensus on Issue No. 00-21, Revenue Arrangements with Multiple Deliverables. EITF Issue No. 00-21 provides guidance on how to account for arrangements that involve the delivery or performance of multiple products, services and/or rights to use assets. The provisions of EITF Issue No. 00-21 will apply to revenue arrangements entered into in fiscal periods beginning after June 15, 2003. Harmonic adopted EITF Issue No. 00-21 effective June 28, 2003. The adoption of this standard had no material impact on our historical financial position, results of operations or cash flows.

In January 2003, the FASB issued FASB Interpretation No. 46 ( FIN 46 ), Consolidation of Variable Interest Entities , which addresses accounting for the assets, liabilities and activities of another entity. Prior to the issuance of FIN 46, a company generally included another entity in its consolidated financial statements only if it controlled the entity through voting interests. FIN 46 now requires a variable interest entity, as defined in FIN 46, to be consolidated by a company if that company is subject to a majority of the risk of loss from the variable interest entity activities or is entitled to receive a majority of the entity's residual returns or both. FIN 46 also requires disclosures about variable interest entities that the company is not required to consolidate but in which it has a significant variable interest. The consolidation requirements of FIN 46 apply immediately to variable interest entities created after January 31, 2003 and to older entities in the first fiscal year or interim period beginning after June 15, 2003. Certain of the disclosure requirements apply to all financial statements issued after January 31, 2003, regardless of when the variable interest entity was established. The adoption of FIN 46 had no effect on our financial position, results of operations or cash flows.

In April 2003, the FASB issued SFAS No. 149, Amendment of Statement 133 on Derivative Instruments and Hedging activities. SFAS No. 149 amends and clarifies the accounting for derivative instruments, including certain derivative instruments embedded in other contracts, and for hedging activities under SFAS No. 133, Accounting for Derivative Instruments and Hedging Activities. SFAS No. 149 is generally effective for contracts entered into or modified after June 27, 2003 and for hedging relationships designated after June 27, 2003. The adoption of this standard had no effect on our historical financial position, results of operations or cash flows.

In May 2003, the FASB issued SFAS No. 150, Accounting for Certain Financial Instruments with Characteristics of both Liabilities and Equity. SFAS No. 150 requires that certain financial instruments, which under previous guidance were accounted for as equity, must now be accounted for as liabilities. The financial instruments affected include mandatorily redeemable stock, certain financial instruments that require or may require the issuer to buy back some of its shares in exchange for cash or other assets and certain obligations that can be settled with shares of stock. SFAS No. 150 is effective for all financial instruments entered into or modified after May 31, 2003 and must be applied to existing instruments for the first interim period beginning after June 15, 2003. Harmonic believes that the adoption of this standard will have no material impact on its financial position, results of operations or cash flows.

In August 2003, the EITF reached a consensus on Issue No. 03-05, Applicability of SOP 97-2 to Non-Software Deliverables in an Arrangement Containing More-Than-Incidental Software. EITF 03-05 provides guidance on accounting for arrangements that include software and non-software deliverables. Software-related elements include software products and services and non-software deliverables for which the related software is essential to its functionality. Harmonic adopted the provisions of EITF No. 03-05 for revenue arrangements entered into after August 13, 2003. The adoption did not have a significant impact on the Harmonic's historical financial position or results of operations.

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**Business**

**OVERVIEW**

We design, manufacture and sell digital video systems and fiber optic systems that enable network operators to provide a range of interactive and advanced digital services that include digital video, video-on-demand, high definition television, high-speed Internet access and telephony. Historically, most of our sales have been derived from sales of digital headend products and fiber optic transmission systems to cable television and satellite operators. We also derive a small portion of our sales from telephone companies that offer video services to their customers.

Harmonic was initially incorporated in California in June 1988 and reincorporated into Delaware in May 1995. Our principal executive offices are located at 549 Baltic Way, Sunnyvale, California 94089. Our telephone number is (408) 542-2500. Harmonic is organized as two operating segments, Convergent Systems, or CS, for digital video systems, and Broadband Access Networks, or BAN, for fiber optic systems. Each segment has its own management team directing its product development and marketing strategies and its customer service requirements. A separate sales force generally supports both divisions with appropriate product and market specialization as required.

**INDUSTRY OVERVIEW**

**Demand for broadband services**

The demand for broadband services has increased significantly in recent years due in large part to the dramatic growth of the Internet, which has facilitated commercial applications such as telecommuting and electronic commerce as well as its widespread use for communicating and accessing information. Rapid growth in the number of Internet users and the demand for more bandwidth-intensive video, voice and data content has strained existing communications networks and created bottlenecks, especially in the last mile of the communications infrastructure where homes connect to the local network. In addition, changes in the broadcast television industry have led to a proliferation of new television channels and to the development of interactive and on-demand television services which have begun to be provided on an individual, as opposed to a broadcast basis. The delivery to subscribers of television programming and Internet-based information and communication services is converging, driven in part by advances in technology and in part by changes in the regulatory and competitive environment.

**Competition and deregulation**

Recent and proposed regulatory reform has spurred competition among communication service providers worldwide to offer combinations of video, voice and data services. Historically, US long distance carriers and regional Bell operating companies, or RBOCs, provided only telephony services in the residential market. Cable television multiple system operators, or MSOs, provided video programming. Direct broadcast satellite, or DBS, services, which became available in the United States in the early nineties, also provided only video programming and were initially further restricted by regulation from making local television channels available in local markets. As a result, none of these operators had networks conducive to providing high-speed data services to residential subscribers, or any other services that they had not been previously allowed to provide. The Telecommunications Act of 1996, however, generally permitted service operators to enter each other's markets and to provide a variety of voice, video and data services. As a result, most cable companies have begun to offer broadband services, including broadcast digital video, video-on-demand, internet access and telephony, over their cable systems in the last few years. Similarly, telephone companies, or telcos, are deploying various digital subscriber line, or DSL, technologies for high-speed data services over their existing copper networks. A small number of telcos also have deployed alternative delivery systems such as hybrid fiber coax, or HFC, fiber to the curb and broadband wireless for data and video transmission, and a few have also deployed video services over their DSL networks. Following regulatory changes, including the must-carry regulations, DBS operators have now introduced local channels in a substantial number of markets and have also deployed, on a limited basis, Internet services to the home and small businesses. Additionally, in many major metropolitan areas, new carriers have entered the communications services market, although many have



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### **Business**

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scaled back or halted network construction because of funding limitations caused by conditions in capital markets.

Similar deregulation of telecommunications and broadcasting abroad has fostered substantial growth and competition in foreign communications markets. Many countries have liberalized the provision of broadcast television and abolished or exposed to competition incumbent broadcast and telecom monopolies. Several have encouraged digital broadcasting in order to provide more channel capacity, higher quality video, and the provision of other digital services, such as data and voice. These developments have led to the establishment of new cable television networks, the launch of new DBS services and the introduction of broadband wireless services, the latter two particularly in countries with little wired infrastructure, or large remote areas where wired networks are not economical.

#### **Our cable market**

To address increasing competition and demand for high-speed broadband services, cable operators are introducing digital video, voice and data services in addition to traditional analog video. By offering bundled packages of broadband services, cable operators are seeking to obtain a competitive advantage over telephone companies and DBS providers and to create additional revenue streams. In order to provide high-speed Internet service, cable operators are deploying cable modems in an increasing number of their systems. According to the National Cable & Telecommunications Association, there were an estimated 13.8 million cable modem subscribers in the United States as of June 30, 2003. Similarly, cable operators are upgrading and rebuilding their networks to offer digital video, which enables cable operators to provide more channels and better picture quality than analog video, allowing them to better compete against the increasing penetration of DBS services. In many areas, cable operators have rolled out new interactive services such as video-on-demand, or VOD, on their digital platforms. VOD allows subscribers to order, start, pause and stop selected movies and other content at their own discretion. Some cable operators are also upgrading and building out their networks to provide telephony services. These operators have rolled out telephone services in a number of major markets and some have also targeted certain business markets for the delivery of high-bandwidth services.

The ability of cable operators to deliver digital video, voice and high-speed data services on a broad scale, however, is constrained by the design of their legacy networks. These networks, which reach more than 90% of US homes with televisions, were built initially for one-way broadcast analog television and have required substantial upgrades to make them capable of reliably supporting two-way digital services, such as high-speed Internet access and telephony. While some US operators have substantially completed these network upgrades, certain others, as well as many international operators, have not yet completed significant network upgrades. In addition to upgrading and extending network infrastructure with fiber optics, in order to provide new services it is necessary for cable operators to invest in digital headend equipment that can receive, process and distribute content from a variety of sources in increasingly complex headends. For example, VOD services require video storage equipment and servers, complemented by devices capable of routing, multiplexing and modulation for delivering signals to individual subscribers over an HFC network. As these new services continue to attract increasing numbers of subscribers, cable operators will be required to continue to upgrade both headends and the transmission network to handle the greater volume and complexity of traffic. We expect that operators will invest capital to more effectively manage available bandwidth as well as continue network upgrades such as node segmentation, the support of fewer homes on a single optical node.

#### **Our satellite market**

Satellite operators around the world have established digital television services serving millions of subscribers. These services, which are capable of providing up to several hundred channels of high quality video, have become popular with consumers who want a wider choice of programming than is typically available from traditional cable or broadcast television. The increasing availability of digital set top boxes and small low cost receiving dishes for subscribers' homes has facilitated the rollout of DBS services. DBS services, however, operate mostly in a one-way environment. Signals are transmitted from an uplink center to a satellite and then beamed to dishes located at subscribers' homes. This method is suited to the delivery of broadcast television, but does not lend itself easily to two-way services, such as Internet access.

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As cable operators expand the number of channels offered and introduce services such as video-on-demand, DBS providers are seeking to protect and expand their subscriber base in a number of ways. DBS operators now have the right to provide local channels to local markets in the United States and provide local channels in most of the largest metropolitan markets. In the United States, must-carry regulations generally require DBS operators to transmit all local channels in any markets they serve, thereby adding constraints on channel capacity. Advances in digital compression technology allow DBS operators to cost-effectively add these new channels and to further expand their video entertainment offerings.

### **Other markets**

Telcos are also facing increasing competition and demand for high-speed residential broadband services. To date, their offerings in residential markets have been aimed mostly at providing Internet access in addition to traditional voice services. This is being accomplished principally by the deployment of DSL technology. Like the cable networks, the telcos' legacy networks are not well equipped to offer new services. The substantial bandwidth and distance limitations of the copper-based last mile have limited DSL deployment and present an even greater barrier to providing video services. Although cable companies and certain new broadband service providers have networks equipped to deliver video and are moving to capture data and voice customers, few telcos have to date offered video services as a competitive response. Video delivered over DSL lines has major bandwidth limitations, but the use of video compression technology at very low bit rates has allowed certain operators to introduce video services. Terrestrial broadcasters in many countries are now being required by regulation to convert from analog to digital transmission in order to free up broadcast spectrum. The conversion to digital often provides the opportunity to deliver new services, such as high-definition television, HDTV, and data transmission. These broadcasters are faced with similar requirements to cable and satellite providers in that they need to convert analog signals to digital prior to transmission and must also effectively manage the available bandwidth to maximize their revenue streams.

### **The market opportunity**

The construction of new networks or the upgrade and extension of existing networks to facilitate high-speed broadband video, voice and data services requires substantial expenditure and often the replacement of significant portions of the existing infrastructure. The economic success of incumbent and new operators will depend to a large extent on their ability to offer a choice of attractively priced packages of voice, video and data services to consumers, and to do so with high reliability and easy access to their network. As PC penetration continues to increase, we believe that interchanges of video and data via the Internet will increase. Personalized video services, such as video-on-demand, and the availability of TV sets equipped to handle HDTV, will require increasing amounts of bandwidth to the home in order to deliver maximum choice and flexibility. Compression of video and data to utilize effectively the available bandwidth, cost-effective transport of digital traffic within networks, and the construction of robust fat pipes for distribution of content to and from the home are all essential elements in operators' ability to maximize revenue and minimize capital and operating costs.

### **Current industry conditions**

The telecommunications industry has been particularly impacted by the prolonged economic recession, adverse conditions in capital markets and financial difficulties in both the service and equipment sectors, including bankruptcies. Although large telecommunications service providers, such as WorldCom, and the many troubled data and voice-oriented start-ups, have not been traditional customers of Harmonic, the cable, satellite and broadcast sectors have experienced significant financial problems. Many of our domestic and international customers have accumulated significant levels of debt and have begun or completed reorganizations and financial restructurings, including bankruptcies. In particular, Adelphia Communications, a major domestic cable operator, declared bankruptcy in June 2002. The stock prices of other domestic cable companies came under pressure following the Adelphia bankruptcy due to concerns about debt levels and capital expenditure requirements for new and expanded services, thereby making the raising of capital more difficult and expensive. In Europe, rapid consolidation of the cable industry through acquisition also led to significant levels of debt at the major MSOs, and companies such as NTL and UPC commenced bankruptcy proceedings. European digital broadcasters, such as ITV Digital,

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Kirsch and Quiero, have also filed for protection from creditors. We believe that the financial condition of many of our customers has stabilized or improved, but industry spending levels have not returned to historic levels. Furthermore, it is likely that further industry restructuring will take place via mergers or spin-offs, such as the recent Comcast/ AT&T Broadband transaction, the proposed spin-off of Time-Warner Cable from AOL Time-Warner and the proposed acquisition by News Corp. Ltd. of a controlling interest in Hughes Electronics, the parent company of DIRECTV. Regulatory issues, financial concerns and business combinations among our customers are likely to significantly affect the industry, its capital spending plans, and our levels of business for the foreseeable future.

### **PRODUCTS**

Harmonic's products fall into two principal groups, Convergent Systems and Broadband Access Networks. In addition, Harmonic provides technical support services to its customers worldwide.

Our digital video products provide broadband operators with the ability to accept a variety of signals from different sources, in different protocols, and to organize, manage and distribute this content to maximize use of the available bandwidth. Our encoders, multiplexers and modulators allow our customers to convert analog video to digital and to process this output into a stream which can be delivered over a fiber or wireless network to subscribers. Our edge device, or gateway, products enable operators to deliver customized broadcast or narrowcast on-demand services to their subscribers.

Our optical transmission products, node platforms and return path products, and element management hardware and software allow cable operators to deliver traditional broadcast video services while supporting the roll-out of emerging interactive services and managing the fiber network. Various types of optical transmitters enable cable operators to design network architectures which address the service and technical requirements of their systems. Our optical nodes are designed to incorporate a variety of modules which provide the operator with network flexibility and scalability to support increases in subscribers and the introduction of new services.

#### **Convergent Systems products**

The Convergent Systems Division develops standards-based solutions that enable operators to increase the capacity of their broadband networks with advanced compression and stream processing technology. Our CS division's advanced digital video solutions enable satellite, cable, telco, broadcast, and wireless operators around the world to offer digital video services to their customers. As video, data and voice services continue to converge, effectively managing and processing these bandwidth-intensive applications becomes critical to the long-term viability of an operator's network.

#### **Compression products**

*DiviCom encoders.* This is a complete line of high performance encoders, which provide compression of video, audio and data channels. Using sophisticated signal pre-processing, noise reduction and encoding algorithms, these encoders produce high-quality video and audio at low data rates. Their compliance with widely adopted standards enables interoperability with other products and systems. The MV50 encoder, introduced in early 2001, has the highest compression efficiency of our encoder family, while the MV400 is designed for encoding of high definition television signals.

#### **Edge devices**

*Narrowcast Services Gateway.* Our Narrowcast Services Gateway, or NSG, is a fully integrated server gateway, which interfaces with the output from a video server and integrates routing, multiplexing and modulation into a single package for the delivery of video-on-demand services to subscribers over cable networks. The NSG is usually supplied with Gigabit Ethernet inputs, allowing the operator to deliver IP signals from the headend to the edge of the network for subsequent modulation on to the HFC network.

#### **Stream processing products**

*Media Node.* Media Node is a flexible MPEG-2 networking, switching and multiplexing platform. In a broadcast facility, the video, audio and data streams must be combined or multiplexed into a single stream prior to transmission. Our multiplexing platform combines compressed streams from various



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sources into a single transport stream. Sources may include Harmonic encoders or third-party devices such as video servers.

*Broadcast Network Gateway.* Our Broadcast Network Gateway, or BNG, provides digital turnaround and remote modulation capability with a variety of flexible input and output options. The BNG allows operators to manage a variety of digital streams without expensive decoding and re-encoding.

*Digital turnaround systems.* Our digital turnaround system is a flexible, modular platform incorporating various cards for grooming, multiplexing and scrambling digital signals prior to transmission over broadband networks. It is especially well suited to grooming applications where a local operator wants to change a line-up of pre-packaged channels or content received from a regional or national feed. We also provide the Terayon CherryPicker digital stream management system under a reseller agreement with Terayon Communications.

#### Control and automation products

Modern digital networks are a diverse array of hardware and software components from a variety of vendors, using a number of network protocols and standards. Network management is a key tool that lets service providers monitor and control their networks. Our expertise in digital video, audio and data helps service providers with their network management requirements. Our product line includes a full range of software products, such as our NMX Digital Service Manager, that give service providers the ability to visually monitor their digital video infrastructure at an aggregate level, rather than just discrete pieces of hardware, reducing their operational costs.

#### **Broadband Access Networks products**

The Broadband Access Networks Division applies its strengths in optics and electronics, including expertise with lasers, modulators, and radio frequency technology, to develop products which provide enhanced network reliability and allow broadband service providers to deliver advanced services, including two-way interactive services. We provide the operator with end-to-end capability in the fiber portion of the network.

#### Optical transmission systems

We offer MAXLink transmitters and optical amplifiers, PWRLink transmitters and DWDM systems for a wide range of optical transmission requirements.

*MAXLink transmitters and optical amplifiers.* The MAXLink transmitters and optical amplifiers operate at a wavelength of 1550 nm and serve long-haul applications and fiber dense architectures that are beyond the capability of shorter range 1310 nm transmitters. This system is suited to evolving cable networks employing such features as redundant rings, hub interconnects and broadcast layer transmission. The recently introduced MAXLink Plus further increases the channel capacity of cable and other networks and can transmit over distances in excess of 200 kilometers.

*PWRLink transmitters.* The PWRLink series of optical transmitters provides optical transmission primarily for use at a headend or hub for local distribution to optical nodes and for narrowcasting, which is the transmission of programming to a select set of subscribers.

*METROLink system.* Our METROLink DWDM system allows operators to expand the capacity of a single strand of fiber and also to provide narrowcast services directly from the headend to nodes. This ability can significantly reduce the size of hubs and the associated building and equipment maintenance costs. By increasing the downstream and upstream capacity of existing optical fiber, METROLink can also eliminate the significant expense of laying additional fiber.

*GIGALight.* Our GIGALight is a DWDM system for the transport of Gigabit Ethernet traffic. It allows high-bandwidth services, such as video-on-demand, to be carried on a single fiber and targeted to particular segments of the network by optical wavelength.

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Optical nodes, return path products and ethernet switching products

We offer a number of optical nodes, return path transmitters and receivers to provide two-way transmission capability. Optical nodes are designed to allow the customer to add capacity and scale as the number of subscribers grows and new services are provided.

*PWRBlazer optical nodes.* Our family of PWRBlazer optical nodes supports network architectures which meet the varying demands for bandwidth delivered to a service area. By the addition of modules providing functions such as return path transmission and DWDM, our configurable nodes are easily segmented to handle increasing two-way traffic over a fiber network without major plant reconstruction.

*Return path transmitters and receivers.* Our return path transmitters support two-way transmission capabilities by sending video, voice and data signals from the optical node back to the headend. These transmitters are available for either analog or digital transport.

*CurbSwitch.* Designed as a module for our PWRBlazer node platform, this hardened Ethernet switch enables operators to add high-bandwidth services in fiber-to-the-business or fiber-to-the-home applications. Initial commercial shipments of CurbSwitch were delivered in the third quarter of 2002.

### **Network management**

*NETWatch Management System.* Our NETWatch management system consists of transponders and network management software. The transponders operate in broadband networks to capture measurement data and our software enables the broadband service operator to monitor and control the HFC transmission network from a master headend or remote locations. Our NETWatch software is designed to be integrated into larger network management systems through the use of simple network management protocol, or SNMP.

### **Technical services**

We provide consulting, implementation and maintenance services to our customers worldwide, principally those which purchase CS division products or solutions. We draw upon our expertise in broadcast television, communications networking and compression technology to design, integrate and install complete solutions. We offer a broad range of services and support including program management, budget analysis, technical design and planning, parts inventory management, building and site preparation, integration and equipment installation, end-to-end system testing, comprehensive training and ongoing maintenance. Harmonic also has extensive experience in integrating our products with numerous third-party products and services.

**Table of Contents****Business****CUSTOMERS**

We sell our products to a variety of broadband communications companies. Set forth below is a representative list of our significant end-user and integrator/ distributor customers based on net sales during 2002.

United States	International
Adelphia Communications	Bell Express Vu
AT&T Broadband (now Comcast)	Canal Plus
Cablevision	Hong Kong Cable Television
Charter Communications	NTL
Comcast	Orbit Communications
Cox	Siemens
DIRECTV	Sumitomo/ BNMux
EchoStar	Telewest
Insight Communications	Telefónica
Paxson	TV Cabo
Sinclair Broadcasting	
Thales	
Time Warner Cable	

Historically, a majority of our sales have been to relatively few customers, and due in part to the consolidation of ownership of cable television and direct broadcast satellite systems, we expect this customer concentration to continue in the foreseeable future. Net sales to our ten largest customers in 2000, 2001, and 2002 accounted for approximately 52%, 49%, and 61% of net sales, respectively. In 2000, net sales to AT&T Broadband, which has been acquired by Comcast, represented 12% of net sales, and net sales to RCN represented 11% of net sales. In 2001, net sales to Charter Communications represented 11% of net sales. In 2002, net sales to Charter and Comcast accounted for 18% and 10% of net sales, respectively. If Comcast, which acquired AT&T Broadband in November 2002, and AT&T Broadband had been combined for all of 2002, total net sales to the combined company would have been 17% of net sales. For the first six months of 2003, our top ten customers accounted for 69% of net sales. For the same period, Comcast, DIRECTV and EchoStar accounted for 29%, 13% and 11% of net sales and Charter Communications accounted for 1% of net sales. Although we are attempting to broaden our customer base by penetrating new markets such as the telco and broadcast markets, we expect to see continuing industry consolidation and customer concentration due in part to the significant capital costs of constructing broadband networks. For example, Comcast acquired AT&T Broadband in November 2002, thereby creating the largest US cable operator, reaching approximately 22 million subscribers. In the DBS segment, News Corp. Ltd. recently announced its plan to acquire a controlling interest in Hughes Electronics, the parent company of DIRECTV. In addition, financial restructurings of companies such as Adelphia Communications and several European operators may lead to further industry consolidation. See Risk factors Our customer base is concentrated and the loss of one or more of our key customers would harm our business. The loss of any key customer would have a negative effect on our business.

Sales to customers outside of the United States in 2000, 2001 and 2002, represented 40%, 40%, and 29% of net sales, respectively. We expect international sales to continue to account for a substantial portion of our net sales for the foreseeable future. International sales are subject to a number of risks, including changes in foreign government regulations and telecommunications standards, import and export license requirements, tariffs, taxes and other trade barriers, fluctuations in foreign currency exchange rates, difficulty in collecting accounts receivable, difficulty in staffing and managing foreign operations, managing distributor relations and political and economic instability. In addition, certain of our international customers have accumulated significant levels of debt and have recently announced, or are expected to announce, reorganizations and financial restructurings, including bankruptcy filings. International markets may not develop and we may not receive future orders to supply our products in international markets at rates equal to or greater than those experienced in recent periods. See Risk factors We

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depend on our international sales and are subject to the risks associated with international operations, which may negatively affect our operating results.

### **SALES AND MARKETING**

In the United States we sell our products principally through our own direct sales force which is organized geographically and by major customer and market to support customer requirements. We sell to international customers through our own direct sales force as well as independent distributors and integrators. Principal sales offices outside of the United States are located in the United Kingdom, France, and China. International distributors are generally responsible for importing the products and providing certain installation, technical support and other services to customers in their territory. Our direct sales force and distributors are supported by a highly trained technical staff including application engineers who work closely with operators to develop technical proposals and design systems to optimize system performance and economic benefits to operators. Technical support provides a customized set of services, as required, for ongoing maintenance, support-on-demand and training for our customers and distributors both in our facilities and on-site.

Our marketing organizations develop strategies for product lines and, in conjunction with our sales force, identify evolving technical and application needs of customers so that our product development resources can be most effectively and efficiently deployed to meet anticipated product requirements. Our marketing organizations are also responsible for setting price levels, demand forecasting and general support of the sales force, particularly at major accounts. We have many programs in place to heighten industry awareness of Harmonic and our products, including participation in technical conferences, publication of articles in industry journals and exhibiting at trade shows.

### **MANUFACTURING AND SUPPLIERS**

We use third party contract manufacturers to assemble a substantial majority of subassemblies and modules for our products. Increasingly we are using such manufacturers to supply full turnkey products and we expect to subcontract an increasing number of tasks to third parties in the future. Our increasing reliance on subcontractors involves several risks, and we may not be able to obtain an adequate supply of components, subassemblies, modules and turnkey systems on a timely basis. Furthermore, from time to time we assess our relationship with our contract manufacturers. Changes in these relationships, or reallocating manufacturing to new or existing contract manufacturers, could adversely affect our ability to meet our customers' requirements and create operating inefficiencies.

Our manufacturing operations consist primarily of final assembly and test of fiber optic systems for our BAN division. These processes are performed by highly trained personnel employing technologically advanced electronic equipment and proprietary test programs. The manufacturing of our products and subassemblies is a complex process and we cannot assure you that we will not experience production problems or manufacturing delays in the future. Because we utilize our own manufacturing facilities for our BAN division fiber optic systems, and because such manufacturing capabilities are not readily available from third parties, any interruption in operations could materially and adversely affect our business, operating results, financial position and liquidity.

Many components, subassemblies and modules necessary for the manufacture or integration of our products are obtained from a sole supplier or a limited group of suppliers. Our reliance on sole or limited suppliers, particularly foreign suppliers, involves several risks, including a potential inability to obtain an adequate supply of required components, subassemblies or modules and reduced control over pricing, quality and timely delivery of components, subassemblies or modules. In particular, certain optical components have in the past been in short supply and are available only from a small number of suppliers, including sole source suppliers. While we expend considerable efforts to qualify additional optical component sources, consolidation of suppliers in the industry and the small number of viable alternatives have limited the results of these efforts. We do not generally maintain long-term agreements with any of our suppliers. Managing our supplier relationships is particularly difficult during time periods in which we introduce new products and during time periods in which demand for our products is increasing, especially if demand increases more quickly than we expect. An inability to obtain adequate deliveries or



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### **Business**

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any other circumstance that would require us to seek alternative sources of supply could affect our ability to ship our products on a timely basis, which could damage relationships with current and prospective customers and harm our business. We attempt to limit this risk by maintaining safety stocks of certain components, subassemblies and modules. As a result of this investment in inventories, we have in the past and in the future may be subject to risk of excess and obsolete inventories, which could harm our business, operating results, financial position and liquidity. In this regard, our gross margins and operating results from the fourth quarter of 2000 through the third quarter of 2001 were adversely affected by excess and obsolete inventory charges of approximately \$49 million.

### **INTELLECTUAL PROPERTY**

We currently hold 44 issued United States patents and 16 issued foreign patents, and have a number of patent applications pending. Although we attempt to protect our intellectual property rights through patents, trademarks, copyrights, licensing arrangements, maintaining certain technology as trade secrets and other measures, we cannot assure you that any patent, trademark, copyright or other intellectual property rights owned by us will not be invalidated, circumvented or challenged, that such intellectual property rights will provide competitive advantages to us or that any of our pending or future patent applications will be issued with the scope of the claims sought by us, if at all. We cannot assure you that others will not develop technologies that are similar or superior to our technology, duplicate our technology or design around the patents that we own. In addition, effective patent, copyright and trade secret protection may be unavailable or limited in certain foreign countries in which we do business or may do business in the future.

We believe that patents and patent applications are not currently significant to our business, and investors therefore should not rely on our patent portfolio to give us a competitive advantage over others in our industry. We believe that the future success of our business will depend on our ability to translate the technological expertise and innovation of our personnel into new and enhanced products. We generally enter into confidentiality or license agreements with our employees, consultants, vendors and customers as needed, and generally limit access to and distribution of our proprietary information. Nevertheless, we cannot assure you that the steps taken by us will prevent misappropriation of our technology. In addition, we have taken in the past, and may take in the future, legal action to enforce our patents and other intellectual property rights, to protect our trade secrets, to determine the validity and scope of the proprietary rights of others, or to defend against claims of infringement or invalidity. Such litigation could result in substantial costs and diversion of resources and could negatively affect our business, operating results, financial position and cash flows.

In order to successfully develop and market certain of our planned products for digital applications, we may be required to enter into technology development or licensing agreements with third parties. Although many companies are often willing to enter into such technology development or licensing agreements, we cannot assure you that such agreements will be negotiated on terms acceptable to us, or at all. The failure to enter into technology development or licensing agreements, when necessary, could limit our ability to develop and market new products and could cause our business to suffer.

Harmonic's industry is characterized by the existence of a large number of patents and frequent claims and related litigation regarding patent and other intellectual property rights. In particular, leading companies in the telecommunications industry have extensive patent portfolios. From time to time, third parties, including certain of these leading companies, have asserted and may assert exclusive patent, copyright, trademark and other intellectual property rights against us or our customers. You should read **Risk factors** We or our customers may face intellectual property infringement claims from third parties and **Legal Proceedings** for a description of the claim against us by Stanford University and Litton Systems. Also, since December 2000, we have been in communication with several of Harmonic's customers who have been contacted by one of these leading companies that believes certain of our products require a license under a number of their patents. We currently are reviewing the identified patents to examine whether we consider a license necessary. While it is our understanding that the third party is willing to grant our customers a non-exclusive license under the identified patents, there can be

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no assurance that the terms of any offered license would be acceptable to our customers or that failure to obtain a license or the costs associated with any license would not cause our business, operating results, financial position and liquidity to be materially adversely affected.

### **BACKLOG**

We schedule production of our systems based upon our backlog, open contracts, informal commitments from customers and sales projections. Our backlog consists of firm purchase orders by customers for delivery within the next twelve months as well as deferred revenue which is expected to be recognized within the next twelve months. At December 31, 2002, backlog, including deferred revenue amounted to \$23.1 million, compared to \$25.3 million at December 31, 2001. Anticipated orders from customers may fail to materialize and delivery schedules may be deferred or canceled for a number of reasons, including reductions in capital spending by cable, satellite and other operators or changes in specific customer requirements. In addition, due to weather-related seasonal factors and annual capital spending budget cycles at many major end-users, our backlog at December 31, 2002 or any other date, is not necessarily indicative of actual sales for any succeeding period.

### **COMPETITION**

The markets for cable television fiber optics systems and digital video systems are extremely competitive and have been characterized by rapid technological change and declining average selling prices. Harmonic's competitors in the cable television fiber optics systems business include corporations such as C-Cor.net, Motorola and Scientific-Atlanta. In the digital video systems business, we compete broadly with vertically integrated system suppliers including Motorola, Scientific-Atlanta, Tandberg Television and Thomson Multimedia, and in certain product lines with Cisco and a number of smaller companies.

Many of our competitors are substantially larger and have greater financial, technical, marketing and other resources than Harmonic. Many of these large organizations are in a better position to withstand any significant reduction in capital spending by customers in these markets. They often have broader product lines and market focus and will therefore not be as susceptible to downturns in a particular market. In addition, many of our competitors have been in operation longer than we have and therefore have more long standing and established relationships with domestic and foreign customers. We may not be able to compete successfully in the future and competition may harm our business, operating results, financial position and cash flows.

If any of our competitors' products or technologies were to become the industry standard, our business could be seriously harmed. For example, US cable operators have to date mostly purchased proprietary digital systems from Motorola and Scientific-Atlanta. While certain operators have made limited purchases of the open systems provided by Harmonic, we cannot assure you that many of our digital products will find broad market acceptance with US cable operators. In addition, companies that have historically not had a large presence in the broadband communications equipment market have expanded their market presence through mergers and acquisitions. The continued consolidation of our competitors could have a significant negative impact on us. In the cable television fiber optics segment, C-Cor.net has acquired certain assets from Philips and Scientific-Atlanta has acquired certain assets from Arris. Further, our competitors, particularly competitors of our digital and video broadcasting systems business, may bundle their products or incorporate functionality into existing products in a manner that discourages users from purchasing our products or which may require us to lower our selling prices resulting in lower gross margins.

### **RESEARCH AND DEVELOPMENT**

We have historically devoted a significant amount of our resources to research and development. Research and development expenses in 2000, 2001, and 2002 were \$49.3 million, \$51.3 million and \$40.8 million, respectively. Our success in designing, developing, manufacturing and selling new or enhanced products will depend on a variety of factors, including the identification of market demand for new products, product selection, timely implementation of product design and development, product performance, effective manufacturing and assembly processes and sales and marketing. Because of the complexity

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inherent in such research and development efforts, we cannot assure you that we will successfully develop new products, or that new products developed by us will achieve market acceptance. Our failure to successfully develop and introduce new products could harm our business and operating results.

### **EMPLOYEES**

As of December 31, 2002, we employed a total of 587 people, including 214 in sales, service and marketing, 174 in research and development, 109 in manufacturing operations and 90 in a general and administrative capacity. We also employ a number of temporary employees and consultants on a contract basis. During the last two fiscal years we have reduced our work force by approximately 40% in response to a significant slowing of industry spending and the consequent adverse impact on our operating results. None of our employees is represented by a labor union with respect to his or her employment by Harmonic. We have not experienced any work stoppages and we consider our relations with our employees to be good. Our future success will depend, in part, upon our ability to attract and retain qualified personnel. Competition for qualified personnel in the broadband communications industry and in our immediate geographic area remains strong, and we cannot assure you that we will be successful in retaining our key employees or that we will be able to attract skilled personnel in the future.

### **LEGAL PROCEEDINGS**

Between June 28 and August 25, 2000, several actions alleging violations of the federal securities laws by Harmonic and certain of its officers and directors (some of whom are no longer with Harmonic) were filed in or removed to the United States District Court for the Northern District of California. The actions subsequently were consolidated.

A consolidated complaint, filed on December 7, 2000, was brought on behalf of a purported class of persons who purchased Harmonic's publicly traded securities between January 19 and June 26, 2000. The complaint also alleged claims on behalf of a purported subclass of persons who purchased C-Cube securities between January 19 and May 3, 2000. In addition to Harmonic and certain of its officers and directors, the complaint also named C-Cube Microsystems Inc. and several of its officers and directors as defendants. The complaint alleged that, by making false or misleading statements regarding Harmonic's prospects and customers and its acquisition of C-Cube, certain defendants violated sections 10(b) and 20(a) of the Securities Exchange Act of 1934. The complaint also alleged that certain defendants violated section 14(a) of the Exchange Act and sections 11, 12(a)(2), and 15 of the Securities Act of 1933 by filing a false or misleading registration statement, prospectus, and joint proxy in connection with the C-Cube acquisition.

On July 3, 2001, the Court dismissed the consolidated complaint with leave to amend. An amended complaint alleging the same claims against the same defendants was filed on August 13, 2001. Defendants moved to dismiss the amended complaint on September 24, 2001. On November 13, 2002, the Court issued an opinion granting the motions to dismiss the amended complaint without leave to amend. Judgment for defendants was entered on December 2, 2002. On December 12, 2002, plaintiffs filed a motion to amend the judgment and for leave to file an amended complaint pursuant to Rules 59(e) and 15(a) of the Federal Rules of Civil Procedure. On June 6, 2003, the Court denied plaintiffs motion to amend the judgment and for leave to file an amended complaint.

Plaintiffs filed a notice of appeal on July 1, 2003. According to the scheduling order issued by the Court on July 3, 2003, plaintiffs' opening brief is due on October 17, 2003. Plaintiffs have filed a motion requesting a 31-day extension of time, until November 17, 2003, to file their opening brief. Defendants have not opposed this request.

A derivative action purporting to be on behalf of Harmonic was filed against its then-current directors in the Superior Court for the County of Santa Clara on September 5, 2000. Harmonic also was named as a nominal defendant. The complaint is based on allegations similar to those found in the securities class action and claims that the defendants breached their fiduciary duties by, among other things, causing Harmonic to violate federal securities laws. The derivative action was removed to the United States District Court for the Northern District of California on September 20, 2000. All deadlines in this action

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were stayed pending resolution of the motions to dismiss the securities class action. On July 29, 2003, the Court approved the parties' stipulation to dismiss this derivative action without prejudice and to toll the applicable limitations period. The limitations period is tolled until fourteen days after (1) defendants provide plaintiff with a copy of the mandate issued by the Ninth Circuit in the securities action or (2) either party provides written notice of termination of the tolling period, whichever occurs first.

A second derivative action purporting to be on behalf of Harmonic was filed in the Superior Court for the County of Santa Clara on May 15, 2003. It alleges facts similar to those previously alleged in the securities class action and the federal derivative action. The complaint names as defendants former and current Harmonic officers and directors, along with former officers and directors of C-Cube Microsystems, Inc., who were named in the securities class action. The complaint also names Harmonic as a nominal defendant. The complaint alleges claims for abuse of control, gross mismanagement, and waste of corporate assets against the Harmonic defendants, and claims for breach of fiduciary duty, unjust enrichment, and negligent misrepresentation against all defendants. The action has been stayed pending resolution of the appeal in the securities class action. The parties have agreed in principle to a dismissal without prejudice and a tolling of the statute of limitations period on similar terms as in the federal derivative action.

Based on its review of the complaints filed in the securities class action, Harmonic believes that it has meritorious defenses and intends to defend itself vigorously. There can be no assurance, however, that Harmonic will prevail. No estimate can be made of the possible range of loss associated with the resolution of this contingency and accordingly, Harmonic has not recorded a liability. An unfavorable outcome of this litigation could have a material adverse effect on Harmonic's business, operating results, financial position and cash flows.

Harmonic announced on July 17, 2003 a settlement of its litigation with Power and Telephone Supply (P&T) in Federal court in Tennessee. Under the terms of the settlement agreement, Harmonic agreed to pay \$2.8 million to P&T in release of all outstanding claims. The settlement followed summary judgment against Harmonic on certain of the claims made by P&T under a Tennessee statute relating to retailers and suppliers. These claims arose from the cancellation of purchase orders on P&T by one of its end-customers in 2000. Harmonic's operating results for the second quarter and first half of 2003 include a charge to general and administrative expense of approximately \$2.7 million related to the settlement with P&T. The settlement charge is after accounting for the value of products to be returned and other costs. Harmonic paid \$1.0 million of the settlement on July 24, 2003 and is obligated to pay the balance of \$1.8 million on January 15, 2004. The settlement payments are secured by a standby letter of credit.

On July 3, 2003, Stanford University and Litton Systems filed a complaint in US District Court for the Central District of California alleging that optical fiber amplifiers incorporated into certain of Harmonic's products infringe US Patent No. 4,859,016. This patent expired in September 2003. The complaint seeks injunctive relief, royalties and damages. Harmonic has not been served in the case. Harmonic is currently evaluating its position with respect to this patent and has engaged in discussions with the plaintiff regarding potential settlement of the matter. At this time, Harmonic is unable to determine whether Harmonic will be able to settle this matter on reasonable terms or at all, nor can Harmonic predict the impact of an adverse outcome of this matter if Harmonic elects to defend against it. Consequently, Harmonic has made no provision in its financial statements for the outcome of a negotiated settlement or an unfavorable verdict in litigation. An unfavorable outcome of this matter could have a material adverse effect on Harmonic's business, operating results, financial position and cash flows.

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The following table sets forth certain information regarding the executive officers and directors of Harmonic and their ages as of October 1, 2003:

Name	Age	Position
Anthony J. Ley	65	Chairman of the Board of Directors, President & Chief Executive Officer
Robin N. Dickson	56	Chief Financial Officer
Patrick Harshman	38	President, Broadband Access Networks
Yaron Simler	44	President, Convergent Systems
Israel Levi	63	Senior Vice President, Operations and Quality
E. Floyd Kvamme	65	Director
William F. Reddersen	55	Director
Lewis Solomon	68	Director
Michel L. Vaillaud	71	Director
David R. Van Valkenburg	61	Director

*Anthony J. Ley* has served as Harmonic's President and Chief Executive Officer since November 1988. Mr. Ley was elected Chairman of the Board of Directors in February 1995. From 1963 to 1987, Mr. Ley was employed at Schlumberger, Limited both in Europe and the United States, holding various senior business management and research and development positions, most recently as Vice President, Research and Engineering at Fairchild Semiconductor/ Schlumberger in Palo Alto, California. Mr. Ley holds an M.A. in mechanical sciences from the University of Cambridge and an S.M.E.E. from the Massachusetts Institute of Technology. He is also named as an inventor in 29 patents, is a Fellow of the I.E.E.E. (U.K.) and a senior member of the I.E.E.E.

*Robin N. Dickson* joined Harmonic in April 1992 as Chief Financial Officer. From 1989 to March 1992, Mr. Dickson was corporate controller of Vitelic Corporation, a semiconductor manufacturer. From 1976 to 1989, Mr. Dickson held various positions at Raychem Corporation, a materials science company, including regional financial officer of the Asia-Pacific Division of the International Group. Mr. Dickson holds a Bachelor of Laws from the University of Edinburgh and is a member of the Institute of Chartered Accountants of Scotland.

*Patrick Harshman* joined Harmonic in 1993 and has served as President of Broadband Access Networks Division since January 2001. Over the last nine years, Dr. Harshman has had management responsibilities for Harmonic's digital video and fiber optic transmission product lines and most recently served as Vice President of Marketing. Dr. Harshman received a Ph.D. in Electrical Engineering from the University of California, Berkeley, where his graduate research focused on nonlinear optical phenomena in optical communication systems.

*Yaron Simler* joined Harmonic in 1991 and has served as President of the Convergent Systems Division (CSD) since February 2001. Previously, Dr. Simler served as Vice President of Marketing for CSD. Over the last 10 years, Dr. Simler has held several different positions within Harmonic, including Engineer, Technical Marketing Manager, Product Manager, Applications Engineer, International Sales Manager and Director of Applications and Technology. Dr. Simler received a Ph.D. in Electrical Engineering from the University of California, Berkeley with a focus in optical communications. He is also credited with 1 patent.

*Israel Levi* joined Harmonic in July 1989 and was appointed Senior Vice President of Operations and Quality in November 2002. Between January 2001 and October 2002, Mr. Levi served as the Senior Vice President of Systems and Technology. From May 1996 through December 2000, he was Vice President of Research & Development. Prior to that, Mr. Levi served in management of product development at DSC, a telecommunications systems company. From 1984 to 1988, Mr. Levi served as Director of CATV Products Division at Catel Communications, a telecommunications equipment manufacturer. Mr. Levi holds an M.S. in Electrical Engineering from Carleton University, Ottawa, Canada and a B.S. in Electrical Engineering from Technion-Israel Institute of Technology. He is also named as an inventor in 5 patents.

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**Management**

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*E. Floyd Kvamme* has been a director of Harmonic since 1990. Since 1984, Mr. Kvamme has been a general partner of Kleiner Perkins Caufield & Byers, a venture capital firm. Mr. Kvamme is also a director of National Semiconductor Corporation, Photon Dynamics, Inc., Power Integrations, Inc., as well as several private companies. Mr. Kvamme holds a B.S.E.E. from the University of California, Berkeley and an M.S.E.E. from Syracuse University.

*William F. Reddersen* has been a director of Harmonic since July 2002. Now retired, Mr. Reddersen spent 31 years at BellSouth and AT&T. From 1998 to 2000, Mr. Reddersen was Executive Vice President of Corporate Strategy at BellSouth, and from 1991 to 1998, he was responsible for BellSouth's broadband strategy and business operations. Mr. Reddersen serves as a director of several private companies. He holds a B.S. in Mathematics from the University of Maryland and an M.S. in Management from the Massachusetts Institute of Technology, where he was a Sloan fellow.

*Lewis Solomon* has been a director of Harmonic since January 2002. Presently, Mr. Solomon is Co-Founder and Chief Executive Officer of Broadband Services, Inc. (BSI), an outsource provider of supply chain management, network planning, and fulfillment services. He is also Co-Founder and Chairman of G&L Investments, a consulting firm specializing in technology. From 1983 to 1988, he served as the Executive Vice President of Alan Patricof Associates, a global venture capital firm. Mr. Solomon also spent 14 years at General Instrument Corporation, ultimately as Senior Vice President and Assistant to the Chief Executive Officer. Mr. Solomon is a director of Anadigics Inc., Artesyn Technologies Inc, Terayon Communications and several private companies. BSI is a customer of Harmonic and, in 2002, purchased equipment in the amount of \$8.9 million. Terayon is a supplier to Harmonic and, in 2002, Harmonic purchased from Terayon equipment in the amount of \$1.0 million.

*Michel L. Vaillaud* has been a director of Harmonic since March 1997. Now retired, from 1973 to 1986 Mr. Vaillaud was with Schlumberger Limited, most recently as Chairman and Chief Executive Officer. He is a graduate of Ecole Polytechnique in Paris and Ecole Nationale Supérieure des Mines in Paris. He serves as a Trustee of the Institute of Advanced Studies in Princeton, New Jersey.

*David R. Van Valkenburg* has been a director of Harmonic since October 2001. Mr. Van Valkenburg currently serves as Chairman of Balfour Associates, Inc., a firm providing counsel to chief executive officers, boards of directors, banks and private equity funds. From 1995 to 2000, he was Executive Vice President of MediaOne Group, Inc. While at MediaOne Group, Mr. Van Valkenburg was seconded to Telewest Communications (UK) where he served as Chief Executive Officer and Chief Operating Officer from 1997 to 1999. He has also held the position of President at both Multivision Cable TV Corporation and Cox Cable Communications Inc. Mr. Van Valkenburg serves on the board of Mobile Data Solutions Inc., 360 Networks Inc., and several private companies. He holds a B.A. degree from Malone College, an M.S. degree from the University of Kansas, and an M.B.A. from Harvard University.

**Table of Contents****Underwriting**

We are offering the shares of our common stock described in this prospectus supplement through the underwriters named below. UBS Securities LLC, SoundView Technology Corporation and Needham & Company, Inc. are the representatives of the underwriters. We have entered into an underwriting agreement with the representatives. Subject to the terms and conditions of the underwriting agreement, each of the underwriters has severally agreed to purchase the number of shares of common stock listed next to its name in the following table:

<b>Underwriters</b>	<b>Number of shares</b>
UBS Securities LLC	
SoundView Technology Corporation	
Needham & Company, Inc.	
Total	7,500,000

The underwriting agreement provides that the underwriters must buy all of the shares if they buy any of them. However, the underwriters are not required to take or pay for the shares covered by the underwriters' over-allotment option described below.

Our common stock is offered subject to a number of conditions, including:

- receipt and acceptance of our common stock by the underwriters; and
- the underwriters' right to reject orders in whole or in part.

In connection with this offering, certain of the underwriters or securities dealers may distribute prospectuses electronically.

**OVER-ALLOTMENT OPTION**

We have granted the underwriters an option to buy up to an aggregate of 1,125,000 additional shares of our common stock. The underwriters may exercise this option solely for the purpose of covering over-allotments, if any, made in connection with this offering. The underwriters have 30 days from the date of this prospectus supplement to exercise this option. If the underwriters exercise this option, they will each purchase additional shares approximately in proportion to the amounts specified in the table above.

**COMMISSIONS AND DISCOUNTS**

Shares sold by the underwriters to the public will initially be offered at the initial offering price set forth on the cover of this prospectus supplement. Any shares sold by the underwriters to securities dealers may be sold at a discount of up to \$ \_\_\_\_\_ per share from the initial public offering price. Any of these securities dealers may resell any shares purchased from the underwriters to other brokers or dealers at a discount of up to \$ \_\_\_\_\_ per share from the initial public offering price. If all the shares are not sold at the initial public offering price, the representatives may change the offering price and the other selling terms. Sales of shares made outside of the United States may be made by affiliates of the underwriters. Upon execution of the underwriting agreement, the underwriters will be obligated to purchase the shares at the prices and upon the terms stated therein, and, as a result, will thereafter bear any risk associated with changing the offering price to the public or other selling terms.

The following table shows the per share and total underwriting discounts and commissions we will pay to the underwriters assuming both no exercise and full exercise of the underwriters' option to purchase up to an additional 1,125,000 shares.

	No exercise	Full exercise
Per share	\$	\$
Total	\$	\$

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### **Underwriting**

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We estimate that the total expenses of this offering payable by us, not including the underwriting discounts and commissions, will be approximately \$0.5 million.

### **NO SALES OF SIMILAR SECURITIES**

We, our executive officers and directors have entered into lock-up agreements with the underwriters. Under these agreements, we and each of these persons may not, without the prior written approval of UBS Securities LLC, subject to certain permitted exceptions, offer, sell, contact to sell or otherwise dispose of or hedge our common stock or securities convertible into or exercisable or exchangeable for our common stock. The permitted exceptions for our executive officers include the sale of up to 119,000 shares in the aggregate. These restrictions will be in effect for a period of 90 days after the date of this prospectus supplement. At any time and without public notice, UBS Securities LLC may in its sole discretion, release all or some of the securities from these lock-up agreements.

We have agreed to indemnify the underwriters against certain liabilities, including liabilities under the Securities Act. If we are unable to provide this indemnification, we will contribute to payments the underwriters may be required to make in respect of those liabilities.

### **NASDAQ NATIONAL MARKET QUOTATION**

Our common stock is quoted on the Nasdaq National Market under the symbol HLIT.

### **PRICE STABILIZATION, SHORT POSITIONS**

In connection with this offering, the underwriters may engage in activities that stabilize, maintain or otherwise affect the price of our common stock including:

- stabilizing transactions;
- short sales;
- purchases to cover positions created by short sales;
- imposition of penalty bids; and
- syndicate covering transactions.

Stabilizing transactions consist of bids or purchases made for the purpose of preventing or retarding a decline in the market price of our common stock while this offering is in progress. These transactions may also include making short sales of our common stock, which involves the sale by the underwriters of a greater number of shares of common stock than they are required to purchase in this offering, and purchasing shares of common stock on the open market to cover positions created by short sales. Short sales may be covered shorts, which are short positions in an amount not greater than the underwriters' over-allotment option referred to above, or may be naked shorts, which are short positions in excess of that amount.

The underwriters may close out any covered short position by either exercising their over allotment option, in whole or in part, or by purchasing shares in the open market. In making this determination, the underwriters will consider, among other things, the price of shares available for purchase in the open market as compared to the price at which they may purchase shares through the over-allotment option.

Naked short sales are in excess of the over-allotment option. The underwriters must close out any naked short position, by purchasing shares in the open market. A naked short position is more likely to be created if the underwriters are concerned that there may be downward pressure on the price of the common stock in the open market that could adversely affect investors who purchased in this offering.

The underwriters also may impose a penalty bid. This occurs when a particular underwriter repays to the underwriters a portion of the underwriting discount received by it because the representatives have repurchased shares sold by or for the account of that underwriter in stabilizing or short covering transactions.



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**Underwriting**

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In addition, in connection with this offering, certain of the underwriters (and selling group members) may engage in passive market making transactions in the common stock on the Nasdaq National Market prior to the pricing and completion of the offering. Passive market making consists of displaying bids on the Nasdaq National Market no higher than the bid prices of independent market makers and making purchases at prices no higher than these independent bids and effected in response to order flow. Net purchases by a passive market maker on each day are limited to a specified percentage of the passive market maker's average daily trading volume in the common stock during a specified period and must be discontinued when such limit is reached. Passive market making may cause the price of the common stock to be higher than the price that otherwise would exist in the open market in the absence of such transactions. If passive market making is commenced, it may be discontinued at any time.

As a result of these activities, the price of our common stock may be higher than the price that otherwise might exist in the open market. If these activities are commenced, they may be discontinued by the underwriters at any time. The underwriters may carry out these transactions on the Nasdaq National Market, in the over-the-counter market or otherwise.

The underwriters and their affiliates have provided and may provide certain commercial banking, financial advisory and investment banking services for us for which they receive customary fees.

The underwriters and their affiliates may from time to time in the future engage in transactions with us and perform services for us in the ordinary course of their business.

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## Legal matters

Certain legal matters will be being passed upon for Harmonic by Wilson Sonsini Goodrich & Rosati, Professional Corporation, Palo Alto, California. Dewey Ballantine LLP, New York, New York is acting as counsel to the underwriters in connection with this offering.

## Experts

The consolidated financial statements and the financial statement schedule as of December 31, 2002 and for the year then ended included herein and incorporated by reference in this prospectus supplement have been so included and incorporated in reliance on the report of PricewaterhouseCoopers LLP, independent accountants, given on the authority of said firm as experts in auditing and accounting. Please see Experts in the accompanying prospectus.

## Where you can find more information

We have filed annual, quarterly and special reports, proxy statements and other information with the SEC. The SEC maintains a website that contains the annual, quarterly and special reports, proxy statements and other information we file with the SEC. The address of the SEC website is <http://www.sec.gov>. You may also read and copy any document we file with the SEC at the SEC's Public Reference Room at 450 Fifth Street, N.W., Washington, D.C. 20549. You may obtain information on the Public Reference Room by calling the SEC at 1-800-SEC-0330.

We maintain an Internet website at <http://www.harmonicinc.com> (which is not intended to be an active hyperlink in this prospectus supplement). The information at our website is not incorporated in this prospectus supplement or the accompanying prospectus by reference, and you should not consider it part of this prospectus supplement or the accompanying prospectus.

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## Incorporation by reference

The SEC allows us to incorporate by reference the information we file with it, which means that we can disclose important information to you by referring you to those documents. The information incorporated by reference is considered to be part of this prospectus supplement, except for information superseded by information in this prospectus supplement. We incorporate by reference the documents listed below. This prospectus supplement and accompanying prospectus are part of a registration statement we filed with the SEC. The documents we incorporate by reference include:

- (1) Our annual report on Form 10-K for the fiscal year ended December 31, 2002;
- (2) Our quarterly reports on Form 10-Q for the quarterly periods ended March 28, 2003 and June 27, 2003, respectively;
- (3) Our current report on Form 8-K/A, filed with the SEC on June 5, 2003; and
- (4) The description of the our common stock contained in our registration statement on Form 8-A dated April 6, 1995, including any amendment or report filed for the purpose of updating such description.

All documents filed by us with the SEC pursuant to Section 13(a), 13(c), 14 or 15(d) of the Securities Exchange Act after the date of this prospectus supplement and before all of the common stock offered by this prospectus supplement have been sold are deemed to be incorporated by reference in, and to be part of, this prospectus supplement from the date any such document is filed.

Any statements contained in a document incorporated by reference in this prospectus supplement or accompanying prospectus shall be deemed to be modified, superseded or replaced for purposes of this prospectus supplement and the accompanying prospectus to the extent that a statement contained in this prospectus supplement and the accompanying prospectus (or in any other subsequently filed document which also is incorporated by reference in this prospectus supplement and the accompanying prospectus) modifies, supersedes or replaces such statement. Any statement so modified, superseded or replaced shall not be deemed, except as so modified, superseded or replaced, to constitute a part of this prospectus supplement or the accompanying prospectus. Statements contained in this prospectus supplement, the accompanying prospectus and any document incorporated by reference, as to the contents of any contract, agreement or other document referred to are not necessarily complete, and in each instance reference is made to the copy of the contract, agreement or other document filed as an exhibit to the registration statement or any incorporated document, each statement being so qualified by this reference.

You may request a copy of the above-documented filings at no cost by writing or telephoning us at Harmonic, Inc., 549 Baltic Way, Sunnyvale, CA 94089 or by telephoning us at (408) 542-2500.

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## Index to consolidated financial statements

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The financial statements of the DiviCom business for each of the three years in the period ended December 31, 1999 are not included in this prospectus supplement and are incorporated in the accompanying prospectus by reference from Harmonic Inc.'s Form 8-K dated March 15, 2002.

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**Harmonic Inc.**

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**Report of independent accountants**

To the Board of Directors and Stockholders

of Harmonic Inc.

In our opinion, the consolidated financial statements listed in the accompanying index present fairly, in all material respects, the financial position of Harmonic Inc. and its subsidiaries at December 31, 2002 and 2001, and the results of their operations and their cash flows for each of the three years in the period ended December 31, 2002 in conformity with accounting principles generally accepted in the United States of America. In addition, in our opinion, the financial statement schedule listed in the accompanying index presents fairly, in all material respects, the information set forth therein when read in conjunction with the related consolidated financial statements. These financial statements and financial statement schedule are the responsibility of the Company's management; our responsibility is to express an opinion on these financial statements and financial statement schedule based on our audits. We conducted our audits of these statements in accordance with auditing standards generally accepted in the United States of America, which require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, and evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

/s/ PRICEWATERHOUSECOOPERS LLP

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PRICEWATERHOUSECOOPERS LLP

San Jose, CA

January 22, 2003, except as to the second, third and fourth paragraphs of Note 9,  
which are dated as of March 28, 2003

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**Table of Contents****Harmonic Inc.****CONSOLIDATED BALANCE SHEETS**

	December 31,		June 27,
	2001	2002	2003
			(unaudited)
	(in thousands, except par value amounts)		
<b>ASSETS</b>			
<b>Current assets:</b>			
Cash and cash equivalents	\$ 36,005	\$ 21,542	\$ 22,867
Short-term investments	18,272	27,616	13,443
Accounts receivable, net	34,402	25,380	34,775
Inventories	30,944	25,904	21,644
Deferred income taxes	9,065		
Prepaid expenses and other assets	9,775	5,494	3,554
	<u>138,463</u>	<u>105,936</u>	<u>96,283</u>
Total current assets	138,463	105,936	96,283
Property and equipment, net	45,755	32,456	27,295
Intangibles and other assets	53,838	35,362	28,378
	<u>238,056</u>	<u>173,754</u>	<u>151,956</u>
	<b>\$ 238,056</b>	<b>\$ 173,754</b>	<b>\$ 151,956</b>
<b>LIABILITIES AND STOCKHOLDERS EQUITY</b>			
<b>Current liabilities:</b>			
Current portion of long-term debt	\$ 1,281	\$ 1,862	\$ 1,581
Accounts payable	10,296	7,258	9,578
Income taxes payable	2,804	6,900	7,179
Accrued liabilities	57,474	58,670	59,336
	<u>71,855</u>	<u>74,690</u>	<u>77,674</u>
Total current liabilities	71,855	74,690	77,674
Long-term debt, less current portion	1,465	710	511
Deferred income taxes	9,065		
Accrued excess facility costs, long-term	19,563	34,754	32,407
Other non-current liabilities	1,054	1,417	1,501
	<u>103,002</u>	<u>111,571</u>	<u>112,093</u>
Total liabilities	103,002	111,571	112,093
Commitments and contingencies (Notes 16, 17 and 18)			
<b>Stockholders equity:</b>			
Preferred Stock, \$.001 par value, 5,000 shares authorized; no shares issued or outstanding			
Common Stock, \$.001 par value, 150,000 shares authorized; 59,063, 60,064 and 60,462 (unaudited) shares issued and outstanding	59	60	60
Capital in excess of par value	1,959,043	1,963,234	1,964,120
Accumulated deficit	(1,824,207)	(1,901,125)	(1,924,474)
Accumulated other comprehensive income	159	14	157
	<u>135,054</u>	<u>62,183</u>	<u>39,863</u>
Total stockholders equity	135,054	62,183	39,863



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\$ 238,056	\$ 173,754	\$ 151,956
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The accompanying notes are an integral part of these consolidated financial statements.

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**Table of Contents****Harmonic Inc.****CONSOLIDATED STATEMENT OF OPERATIONS**

	Six months ended				
	Year ended December 31,			June 28,	June 27,
	2000	2001	2002	2002	2003
	(unaudited)				
	(in thousands, except per share data)				
Net sales	\$ 263,046	\$ 203,810	\$ 186,632	\$ 110,341	\$ 78,694
Cost of sales	187,875	202,255	132,203	75,343	55,195
Gross profit	75,171	1,555	54,429	34,998	23,499
Operating expenses:					
Research and development	49,315	51,319	40,829	21,914	16,934
Selling, general and administrative	67,036	106,340	81,427	32,347	26,471
Impairment of goodwill and other intangibles	1,380,328				
Amortization of intangibles	221,727	12,683	9,522	5,656	3,866
Acquired in-process technology	39,800				
Total operating expenses	1,758,206	170,342	131,778	59,917	47,271
Loss from operations	(1,683,035)	(168,787)	(77,349)	(24,919)	(23,772)
Interest and other income, net	10,456	1,574	931	283	623
Loss before income taxes	(1,672,579)	(167,213)	(76,418)	(24,636)	(23,149)
Provision for (benefit from) income taxes	(18,571)	(806)	500	500	200
Net loss	\$ (1,654,008)	\$ (166,407)	\$ (76,918)	\$ (25,136)	\$ (23,349)
Net loss per share:					
Basic and Diluted	\$ (34.06)	\$ (2.84)	\$ (1.29)	\$ (0.42)	\$ (0.39)
Weighted average shares:					
Basic and Diluted	48,564	58,540	59,779	59,513	60,457

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

**Table of Contents****Harmonic Inc.****CONSOLIDATED STATEMENT OF STOCKHOLDERS EQUITY**

	Common stock shares	Common stock	Capital in excess of par value	Accumulated deficit	Accumulated other comprehensive income	Stockholders equity
(in thousands)						
Balance at December 31, 1999	30,502	\$ 31	\$ 148,551	\$ (3,792)	\$ 98	\$ 144,888
Net loss				(1,654,008)		(1,654,008)
Unrealized gain on investments					271	271
Currency translation					291	291
Issuance of Common Stock for acquisitions	26,686	26	1,798,778			1,798,804
Issuance of Common Stock under option and purchase plans	703	1	5,455			5,456
Balance at December 31, 2000	57,891	58	1,952,784	(1,657,800)	660	295,702
Net loss				(166,407)		(166,407)
Unrealized loss on investments					(164)	(164)
Currency translation					(337)	(337)
Issuance of Common Stock under option and purchase plans	1,172	1	6,259			6,260
Balance at December 31, 2001	59,063	59	1,959,043	(1,824,207)	159	135,054
Net loss				(76,918)		(76,918)
Currency translation					(145)	(145)
Stock option charge			422			422
Issuance of Common Stock under option and purchase plans	1,001	1	3,769			3,770
Balance at December 31, 2002	60,064	60	1,963,234	(1,901,125)	14	62,183
Net loss*				(23,349)		(23,349)
Currency translation*					143	143
Stock option charge*			23			23
Issuance of Common Stock under option and purchase plans*	398		863			863
Balance as of June 27, 2003*	60,462	\$ 60	\$ 1,964,120	\$ (1,924,474)	\$ 157	\$ 39,863

\* *unaudited*

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

**Table of Contents****Harmonic Inc.****CONSOLIDATED STATEMENT OF CASH FLOWS**

	Year ended December 31,			Six months ended	
				June 28,	June 27,
	2000	2001	2002	2002	2003
	(in thousands)			(unaudited)	
<b>Cash flows from operating activities:</b>					
Net loss	\$(1,654,008)	\$(166,407)	\$(76,918)	\$(25,136)	\$(23,349)
Adjustments to reconcile net loss to net cash used in operating activities:					
Impairment of goodwill and other intangibles	1,380,328				
Acquired in-process technology	39,800				
Amortization of intangibles	234,407	20,741	18,648	11,700	6,947
Depreciation and amortization	12,977	18,169	15,735	8,229	6,613
Stock option charge			422	372	23
Provision for (benefit from) excess and obsolete inventories	10,000	39,190	(6,932)	(2,085)	(2,104)
Impairment and loss on disposal of fixed assets		12,523	856	660	62
Deferred income taxes	(19,021)	(2,806)	156	155	
Changes in assets and liabilities, net of effect of acquisitions:					
Accounts receivable	24,095	35,619	8,931	(4,072)	(9,336)
Inventories	(17,553)	10,038	11,907	5,182	6,407
Prepaid expenses and other assets	(7,921)	1,716	3,944	3,756	1,968
Accounts payable	(2,752)	(22,487)	(3,038)	696	2,320
Income taxes payable	(330,928)	1,763	4,126	3,271	279
Accrued and other liabilities	(8,909)	5,331	(1,993)	815	1,201
Accrued excess facilities costs		21,842	18,752	(1,864)	(2,692)
Net cash used in operating activities	<u>(359,485)</u>	<u>(24,768)</u>	<u>(5,404)</u>	<u>1,679</u>	<u>(11,661)</u>
<b>Cash flows provided by (used in) investing activities:</b>					
Purchases of investments	(66,563)	(58,490)	(27,874)	(9,232)	(3,735)
Proceeds from sale of investments	45,393	126,150	18,498	8,473	17,907
Acquisition of property and equipment	(29,877)	(29,080)	(3,292)	(1,764)	(1,514)
Cash received from acquisitions, net	393,739				
Net cash provided by (used in) investing activities	<u>342,692</u>	<u>38,580</u>	<u>(12,668)</u>	<u>(2,523)</u>	<u>12,658</u>
<b>Cash flows from financing activities:</b>					
Proceeds from issuance of Common Stock	5,454	6,260	3,770	2,449	863
Borrowings under bank line and term loan		3,203	1,274	890	310
Repayments under bank line and term loan		(457)	(1,448)	(621)	(790)
Net cash provided by financing activities	<u>5,454</u>	<u>9,006</u>	<u>3,596</u>	<u>2,718</u>	<u>383</u>
	22	(318)	13	(31)	(55)

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Effect of exchange rate changes on cash and cash equivalents

	_____	_____	_____	_____	_____
Net increase (decrease) in cash and cash equivalents	(11,317)	22,500	(14,463)	1,843	1,325
Cash and cash equivalents at beginning of period	24,822	13,505	36,005	36,005	21,542
	_____	_____	_____	_____	_____
Cash and cash equivalents at end of period	\$ 13,505	\$ 36,005	\$ 21,542	\$ 37,848	\$ 22,867
	_____	_____	_____	_____	_____

**Supplemental disclosure of cash flow information:**

Income tax payments (refunds), net	\$ 330,067	\$ (25,623)	\$ (3,759)	\$ (3,045)	\$ 23
Interest paid during the period	\$ 28	\$ 125	\$ 307	\$ 176	\$ 91
Non-cash financing activities:					
Issuance of Common Stock for acquisitions	\$ 1,798,804	\$	\$	\$	\$

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

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**HARMONIC INC.**

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**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

**NOTE 1 ORGANIZATION, BASIS OF PRESENTATION AND SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES**

Harmonic designs, manufactures and sells a variety of broadband solutions that allow communications service providers around the world to deliver video, voice and data to their subscribers. Harmonic's technically advanced fiber optic, digital video and data delivery systems enable network operators to provide a range of interactive and advanced digital services that include digital video, high-speed Internet access, telephony, HDTV, video and audio streaming, and video-on-demand.

Historically, almost all of our sales were derived directly or indirectly from sales of fiber optic transmission systems to cable television operators. With the introduction of our digital headend products beginning in 1997, we broadened our product offering to enable delivery of digital video, voice and data over satellite and wireless networks and cable systems.

In order to further expand our digital systems capability, Harmonic acquired C-Cube Microsystems Inc. in May 2000, pursuant to the terms of a merger agreement dated October 27, 1999. Under the terms of the merger agreement, C-Cube spun off its semiconductor business as a separate publicly traded company, which was subsequently acquired by LSI Logic in June 2001. C-Cube then merged into Harmonic and Harmonic therefore acquired C-Cube's DiviCom business, which provides encoding products and systems for digital television. The merger was structured as a tax-free exchange of stock and has been accounted for under the purchase method of accounting. The purchase price, including merger-related costs, was approximately \$1.8 billion. As of December 31, 2000, Harmonic determined that there was an impairment and recorded an impairment charge of \$1.4 billion, eliminating goodwill and reducing identified intangibles to \$79.3 million. See Note 4. The merged company has been organized into two operating divisions, Broadband Access Networks, or BAN, for fiber optic systems and Convergent Systems, or CS, for digital headend systems.

**Basis of presentation**

The consolidated financial statements of Harmonic include the financial statements of the Company and its wholly-owned subsidiaries. All intercompany accounts and transactions have been eliminated.

**Unaudited interim financial information**

The accompanying interim financial statements as of June 27, 2003 and for the six-month periods ended June 28, 2002 and June 27, 2003 are unaudited. In the opinion of management, these unaudited interim financial statements have been prepared on the same basis as the audited financial statements, and include all adjustments, consisting only of normal recurring adjustments, necessary for a fair presentation of results of the periods. The financial data and other information disclosed in the notes to the financial statements for these periods are unaudited. The interim results presented herein are not necessarily indicative of the results of operations that may be expected for the full fiscal year ending December 31, 2003, or any future period. The Company's fiscal quarters end on the Friday nearest the calendar quarter end, except for the fourth quarter, which ends on December 31. The third quarter of 2003 will end on September 26 in order to better equalize the number of days within each quarter of 2003.

**Use of estimates**

The preparation of financial statements in conformity with generally accepted accounting principles requires management to make estimates and assumptions that affect the reported amount of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reported period. Actual results could differ from those estimates.

**Cash equivalents**

Harmonic considers all highly liquid, investment-grade securities purchased with an original maturity date of three months or less at the date of purchase to be cash equivalents. Cash equivalents are stated at amounts that approximate fair value, based on quoted market prices.

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**HARMONIC INC.**

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**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

**Investments**

Harmonic's investments are comprised principally of corporate debt securities with maturities ranging from three months to two years. Harmonic classifies its investments as available for sale and carries its investments at estimated fair value using quoted market prices, with unrealized gains and losses reported in other comprehensive income. Interest and realized gains and losses are included in interest income. Realized gain and losses are recognized based on the specific identification method. Investments are anticipated to be used for current operations and are, therefore, classified as current assets, even though maturities may extend beyond one year.

**Fair value of financial instruments**

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

**Revenue recognition**

Harmonic recognizes revenue when persuasive evidence of an arrangement exists, delivery has occurred or services have been provided, the sale price is fixed or determinable, collectibility is reasonably assured, and risk of loss and title have transferred to the customer. Revenue from product sales are generally recognized upon shipment, and allowances are provided for estimated returns and discounts. Such allowances are adjusted periodically to reflect actual and anticipated experience. Revenue on solution sales, which principally include the design, manufacture, test, integration and installation of equipment to the specifications of Harmonic's customers, or acquired from third parties to be integrated with Harmonic's products, is recognized using the percentage of completion method. Under the percentage of completion method, revenue recognized reflects the portion of the anticipated contract revenue that has been earned, equal to the ratio of labor costs expended to date to anticipated final labor costs, based on current estimates of labor costs to complete the project. If the estimated costs to complete a project exceed the total contract amount, indicating a loss, the entire anticipated loss is recognized. Revenue from services is generally recognized as services are performed. Maintenance services are recognized ratably over the maintenance term, which is typically one year. Deferred revenue represents billings in excess of revenue recognized.

**Inventories**

Inventories are stated at the lower of cost, using the weighted average method, or market. Harmonic establishes provisions for excess and obsolete inventories to reduce such inventories to their estimated net realizable value. Such provisions are charged to cost of sales.

**Property and equipment**

Property and equipment are recorded at cost. Depreciation and amortization are computed using the straight-line method over the estimated useful lives of the assets. Estimated useful lives are 5 years for furniture and fixtures, and up to 4 years for machinery and equipment. Depreciation and amortization for leasehold improvements are computed using the shorter of the remaining useful lives of the assets up to 10 years or the lease term of the respective assets. Depreciation and amortization expense related to equipment and improvements for the years ended December 31, 2000, 2001 and 2002 and the six months ended June 28, 2002 and June 27, 2003 were \$13.0 million, \$18.2 million, \$15.7 million, \$8.2 million (unaudited) and \$6.6 million (unaudited), respectively.

**Goodwill and intangible assets**

Intangible assets represent purchased intangible assets and the excess of acquisition cost over the fair value of tangible and identified intangible net assets of businesses acquired, or goodwill. Purchased intangible assets include customer base, developed technology, trademark and tradename, and supply agreements. On January 1, 2002, Harmonic adopted Statement of Financial Accounting Standards No. 142 (SFAS 142), Goodwill and Other Intangible Assets, and in accordance with this statement, the

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**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

Company reclassified assembled workforce, net of related deferred tax liabilities, to goodwill, ceased amortizing goodwill, and performed impairment tests of goodwill and intangible assets. See Note 4.

**Impairment of long-lived assets**

Long-lived assets, such as other intangibles and property and equipment, are evaluated for recoverability when indicators of impairment are present. On January 1, 2002, the Company adopted SFAS No. 144, *Accounting for the Impairment or Disposal of Long-Lived Assets*, which addresses financial accounting and reporting for the impairment or disposal of long-lived assets. The Company evaluates the recoverability of other intangible assets and long-lived assets on the basis of undiscounted cash flows from each asset group. Under SFAS No. 144, if impairment is indicated, provisions for impairment are determined based on the fair value, using discounted cash flows.

**Restructuring costs and accruals for excess facilities**

For restructuring activities initiated prior to December 31, 2002 Harmonic recorded restructuring costs when the Company committed to an exit plan and significant changes to the exit plan were not likely. Harmonic determines the excess facility accrual based on estimates of expected sublease rental income for each excess facility. For restructuring activities initiated after December 31, 2002, the Company will follow SFAS No. 146, *Accounting for Costs Associated with Exit or Disposal Activities*, as discussed in Note 2.

**Accrued warranties**

The Company accrues for estimated warranty at the time of product shipment. Management periodically reviews the estimated fair value of its warranty liability and adjusts based on the terms of warranties provided to customers, historical and anticipated warranty claims experience, and estimates of the timing and cost of specified warranty claims.

**Concentrations of credit risk**

Financial instruments which subject Harmonic to concentrations of credit risk consist primarily of cash and cash equivalents and accounts receivable. Cash and cash equivalents are invested in short-term, highly liquid investment-grade obligations of commercial issuers, in accordance with Harmonic's investment policy. The investment policy limits the amount of credit exposure to any one financial institution or commercial issuer. Harmonic's accounts receivable are derived from sales to cable, satellite, and other network operators and distributors as discussed in Note 13. Harmonic generally does not require collateral and performs ongoing credit evaluations of its customers and provides for expected losses. At December 31, 2001, receivables from two customers represented 16% and 10% of total receivables, respectively. At December 31, 2002, receivables from three customers represented 15%, 11%, and 11% of total receivables, respectively. At June 27, 2003, receivables from two customers represented 36% (unaudited) and 10% (unaudited), respectively.

**Currency translation**

Harmonic has a number of international subsidiaries whose functional currency is the US 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 US dollars are recorded as a separate component of other comprehensive income (loss). For subsidiaries where the functional currency is the US dollar, gains and losses resulting from remeasuring foreign currency denominated balances into US dollars are included in other income.

**Income taxes**

Deferred income tax assets and liabilities are computed annually for differences between the financial statement and tax bases of assets and liabilities that will result in taxable or deductible amounts in the future based on enacted tax laws and rates applicable to the periods in which the differences are expected





**Table of Contents****HARMONIC INC.****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

to affect taxable income. Valuation allowances are established when necessary to reduce deferred tax assets to the amount expected to be realized.

**Accounting for employee stock plans**

Harmonic accounts for employee stock option plans based on the intrinsic value method in accordance with Accounting Principles Board No. 25 ( APB 25 ), Accounting for Stock Issued to Employees, and has adopted the disclosure requirements under SFAS No. 148, Accounting for Stock-Based Compensation Transition and Disclosure, which was issued in December 2002. If charges for Harmonic's stock plans had been determined based on the fair value method at the grant dates, as prescribed in SFAS No. 123, Accounting for Stock-Based Compensation, the Company's net loss and net loss per share would have been as follows:

	Year ended December 31,			Six months ended	
	2000	2001	2002	June 28, 2002	June 27, 2003
					(unaudited)
					(in thousands, except per share data)
Net loss as reported	\$(1,654,008)	\$(166,407)	\$(76,918)	\$(25,136)	\$(23,349)
Deduct: Stock compensation expense included in net loss, net of related tax effects			372	372	
Add: Total stock compensation expense determined under fair value based method for all awards, net of related tax effects	(14,557)	(21,890)	(13,216)	(7,138)	(5,939)
Pro forma net loss	<u>\$(1,668,565)</u>	<u>\$(188,297)</u>	<u>\$(89,762)</u>	<u>\$(31,902)</u>	<u>\$(29,288)</u>
Basic and Diluted net loss per share:					
As reported	\$ (34.06)	\$ (2.84)	\$ (1.29)	\$ (0.42)	\$ (0.39)
Pro forma	\$ (34.36)	\$ (3.22)	\$ (1.50)	\$ (0.54)	\$ (0.48)

These pro forma amounts may not be representative of the effects for future years as options vest over several years and additional awards are generally made each year.

The fair value of each option grant is estimated on the date of grant using the Black-Scholes multiple option pricing model with the following weighted average assumptions:

	Employee stock options				
	Year ended December 31,			Six months ended	
	2000	2001	2002	June 28, 2002	June 27, 2003
					(unaudited)
Dividend yield	0.0%	0.0%	0.0%	0.0%	0.0%
Volatility	101%	112%	122%	122%	126%
Risk-free interest rate	6.2%	4.2%	3.2%	3.2%	2.2%

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Expected life (years)	3.4	3.3	3.4	3.4	3.6
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**Employee Stock Purchase Plan**

	Year ended December 31,			Six months ended	
	2000	2001	2002	June 28,	June 27,
				2002	2003
				(unaudited)	
Dividend yield	0.0%	0.0%	0.0%	0.0%	0.0%
Volatility	127%	142%	139%	140%	136%
Risk-free interest rate	6.2%	3.9%	3.4%	3.0%	1.8%
Expected life (years)	1.4	1.2	1.4	1.4	1.2

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**Table of Contents****HARMONIC INC.**

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**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

In accordance with SFAS No. 123, stock options granted to non-employees are valued using the Black-Scholes option-pricing model and stock-based compensation expense is recognized as earned. Stock-based compensation expense is recognized on an accelerated basis using the multiple option method presented in Financial Accounting Standards Board Interpretation No. 28 ( FIN 28 ), Accounting for Stock Appreciation Rights and Other Variable Stock Option or Award Plans. For the years ended December 31, 2000, 2001 and 2002 and the six months ended June 28, 2002 and June 27, 2003 Harmonic recorded non-employee stock expenses of none, none, \$50 thousand, none (unaudited) and \$23 thousand (unaudited), respectively.

**Comprehensive income (loss)**

Comprehensive income (loss) includes net loss and other comprehensive income (loss). Other comprehensive income (loss) includes cumulative translation adjustments and unrealized gains and losses on available-for-sale securities. Harmonic's comprehensive income (loss) has been presented in Note 14.

**Accounting for derivatives and hedging activities**

Harmonic accounts for derivative financial instruments and hedging contracts in accordance with SFAS No. 133, Accounting for Derivative Instruments and Hedging Activities which requires that all derivatives be recognized at fair value in the statement of financial position, and that the corresponding gains or losses be reported either in the statement of operations or as a component of comprehensive income, depending on the type of hedging relationship that exists.

Periodically, Harmonic enters into foreign currency forward exchange contracts ( forward contracts ) to manage exposure related to accounts receivable denominated in foreign currencies. The Company does not enter into derivative financial instruments for trading purposes. At December 31, 2001, Harmonic had forward contracts outstanding of approximately \$2.4 million. Harmonic had no forward contracts outstanding as of December 31, 2002 and June 27, 2003 (unaudited).

**Reclassification**

Certain amounts in prior years' financial statements and related notes have been reclassified to conform to the 2002 presentation. These reclassifications are not material.

**NOTE 2 RECENT ACCOUNTING PRONOUNCEMENTS**

In July 2002, the Financial Accounting Standards Board ( FASB ) issued SFAS No. 146, Accounting for Costs Associated with Exit or Disposal Activities. The standard replaces Emerging Issues Task Force ( EITF ) Issue No. 94-3, Liability Recognition for Certain Employee Termination Benefits and Other Costs to Exit an Activity (including Certain Costs Incurred in a Restructuring) and requires companies to recognize costs associated with exit or disposal activities when they are incurred rather than at the date of a commitment to an exit or disposal plan. *Unaudited:* Harmonic adopted SFAS No. 146 effective January 1, 2003, and the adoption had no effect on the Company's financial position, results of operations, or cash flows.

In November 2002, the FASB issued FASB Interpretation No. 45 ( FIN 45 ), Guarantor's Accounting and Disclosure Requirements for Guarantees, Including Indirect Guarantees of Indebtedness of Others. FIN 45 requires the guarantor to recognize, at the inception of a guarantee, a liability for the fair value of the obligation undertaken in issuing the guarantee. It also expands the disclosures to be made by a guarantor in its financial statements about its obligations under certain guarantees that it has issued and in regard to product warranties. Disclosures required under FIN 45 are included in these financial statements, however, the initial recognition and initial measurement provisions of FIN 45 are applicable on a prospective basis to guarantees issued or modified after December 31, 2002. *Unaudited:* Harmonic adopted FIN 45 effective January 1, 2003, and the adoption had no effect on the Company's financial position, results of operations, or cash flows.

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**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

In November 2002, the Emerging Issues Task Force ( EITF ) reached a consensus on Issue No. 00-21, Revenue Arrangements with Multiple Deliverables. EITF Issue No. 00-21 provides guidance on how to account for arrangements that involve the delivery or performance of multiple products, services and/or rights to use assets. The provisions of EITF Issue No. 00-21 will apply to revenue arrangements entered into in fiscal periods beginning after June 15, 2003. *Unaudited:* Harmonic adopted EITF Issue No. 00-21 effective June 28, 2003. The adoption of EITF Issue No. 00-21 had no material impact on Harmonic's historical financial position, results of operations, or cash flows.

In January 2003, the FASB issued FASB Interpretation No. 46 ( FIN 46 ), Consolidation of Variable Interest Entities, which addresses accounting for the assets, liabilities and activities of another entity. Prior to the issuance of FIN 46, a company generally included another entity in its consolidated financial statements only if it controlled the entity through voting interests. FIN 46 now requires a variable interest entity, as defined in FIN 46, to be consolidated by a company if that company is subject to a majority of the risk of loss from the variable interest entity activities or is entitled to receive a majority of the entity's residual returns or both. FIN 46 also requires disclosures about variable interest entities that the company is not required to consolidate but in which it has a significant variable interest. The consolidation requirements of FIN 46 apply immediately to variable interest entities created after January 31, 2003 and to older entities in the first fiscal year or interim period beginning after June 15, 2003. Certain of the disclosure requirements apply to all financial statements issued after January 31, 2003, regardless of when the variable interest entity was established. *Unaudited:* The adoption of FIN 46 had no effect on the Company's financial position, results of operations, or cash flows.

*Unaudited:* In April 2003, the FASB issued SFAS No. 149, Amendment of Statement 133 on Derivative Instruments and Hedging activities. SFAS No. 149 amends and clarifies the accounting for derivative instruments, including certain derivative instruments embedded in other contracts, and for hedging activities under SFAS No. 133, Accounting for Derivative Instruments and Hedging Activities. SFAS No. 149 is generally effective for contracts entered into or modified after June 27, 2003 and for hedging relationships designated after June 30, 2003. The Company believes that the adoption of this standard will have no material impact on its financial position, results of operations, or cash flows.

*Unaudited:* In May 2003, the FASB issued SFAS No. 150, Accounting for Certain Financial Instruments with Characteristics of both Liabilities and Equity. SFAS No. 150 requires that certain financial instruments, which under previous guidance were accounted for as equity, must now be accounted for as liabilities. The financial instruments affected include mandatorily redeemable stock, certain financial instruments that require or may require the issuer to buy back some of its shares in exchange for cash or other assets and certain obligations that can be settled with shares of stock. SFAS No. 150 is effective for all financial instruments entered into or modified after May 31, 2003 and must be applied to existing instruments for the first interim period beginning after June 15, 2003. The adoption of this standard had no effect on the Company's financial position, results of operations, or cash flows.

*Unaudited:* In August 2003, the EITF reached a consensus on Issue No. 03-05, Applicability of SOP 97-2 to Non-Software Deliverables in an Arrangement Containing More-Than-Incidental Software. EITF 03-05 provides guidance on accounting for arrangements that include software and non-software deliverables. Software-related elements include software products and services and non-software deliverables for which the related software is essential to its functionality. The Company adopted the provisions of EITF No. 03-05 for revenue arrangements entered into after August 13, 2003. The adoption did not have a significant impact on the Company's historical financial position or results of operations.

**NOTE 3 ACQUISITIONS****DiviCom business**

On May 3, 2000, Harmonic acquired C-Cube Microsystems Inc., or C-Cube, pursuant to the terms of an Agreement and Plan of Merger and Reorganization (the Merger Agreement) dated October 27, 1999. Under the terms of the merger agreement, C-Cube spun off its semiconductor business as a separate publicly traded company prior to the closing. C-Cube then merged into Harmonic, and Harmonic

**Table of Contents****HARMONIC INC.****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

therefore acquired C-Cube's DiviCom business. The merger was structured as a tax-free exchange of stock and was accounted for using the purchase method of accounting.

The purchase price of \$1.8 billion included \$1.6 billion of stock issued, \$155 million in stock options assumed, and \$9.6 million of transaction expenses incurred. The issued stock reflected the conversion of each share of C-Cube common stock into 0.5427 shares of Harmonic stock, totaling 26.4 million shares at an average market price per share of \$62.00. The average market price per share was based on the average closing price of Harmonic common stock for a period three days before and after the October 27, 1999 announcement of the merger.

Following is a table of the purchase price allocation prior to the impairment charge discussed in Note 4 below (in thousands):

Purchase price allocation:	
Net tangible assets of DiviCom business	\$ 138,400
Fair value adjustments:	
Accounts receivable	(12,400)
Deferred tax asset	15,500
Inventory	4,000
Accrued liabilities	(27,700)
	<hr/>
Total fair value of tangible net assets acquired	117,800
Identified intangible assets acquired:	
Customer base	112,700
Developed technology	78,300
Trademark and trade name	13,900
Assembled workforce	22,700
Supply agreement	8,100
	<hr/>
Total intangibles (excluding goodwill)	235,700
In-process research and development	38,700
Goodwill	1,505,700
Deferred tax liabilities	(96,600)
	<hr/>
Total purchase price allocation	<u>\$ 1,801,300</u>

The tangible net assets acquired represented the historical net assets of the DiviCom business as of May 2, 2000 adjusted to eliminate intangibles of \$3.8 million arising from C-Cube's acquisition of the DiviCom business in 1996, plus additional cash of \$60 million received as a result of the merger. In addition, under the terms of the Merger Agreement, the Company is liable for all of C-Cube Microsystems' liabilities consisting principally of tax liabilities related to the spin-off of C-Cube's semiconductor business. The net assets acquired included \$333.7 million of cash and other consideration sufficient to pay these liabilities. As required under purchase accounting, the assets and liabilities have been adjusted to fair value.

The purchase price was allocated as set forth in the table above. The Income Approach, which includes an analysis of the markets, cash flows and risks associated with achieving such cash flows, was the primary method used in valuing the identified intangibles acquired. The value of the assembled workforce was derived by estimating the costs to replace existing employees, including recruiting, hiring and training costs. Expected cash flows were discounted at the Company's weighted average cost of capital of approximately 17%. Because the in-process research and development had not reached the stage of technological feasibility at the acquisition date and had no alternative future use, the amount was immediately charged to operations. The amounts allocated to customer base, developed technology, trademark and tradename, assembled workforce and supply agreement are being amortized over an estimated useful life of five years. The excess amount of the purchase price over the fair market value of the identifiable assets acquired was accounted for as goodwill and was initially being amortized over its estimated useful life of five years prior to recording a \$1.4 billion impairment charge as of December 31,



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**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

2000 (See Note 4). The valuation of the intangible assets has been based on management's best estimate of discounted future cash flows.

The Supply, License and Development Agreement ( Supply Agreement ) was entered into between Harmonic and C-Cube Semiconductor concurrent with the merger agreement. This separate agreement covers the supply, licensing and development of two encoder chips for Harmonic by the spun-off semiconductor business. The value of the Supply Agreement was derived by using the Income Approach.

As of December 31, 2001, the Company recorded an adjustment reducing identified intangibles by \$14.4 million to reflect the revised assessment of certain pre-merger liabilities, principally taxes, and the collection of certain pre-merger accounts receivable.

The following unaudited pro forma summary presents the combined statement of operations as if the merger had been completed on January 1, 2000 and does not purport to be indicative of what would have occurred had the merger actually been completed on such date or of results which may occur in the future. The impairment described in Note 4 occurred as of December 31, 2000, thus the pro forma summary below includes amortization of goodwill and other intangibles based on the purchase price allocation prior to the impairment charge. The impairment charge was reduced by \$109.8 million of amortization that was assumed to have occurred from January 2000 through acquisition in May 2000.

	<b>Pro forma December 31, 2000</b>
<b>(unaudited, in thousands, except per share data)</b>	
Net sales	\$306,821
Net loss	(1,666,655)
Net loss per share	
Basic and diluted	\$(29.02)
Weighted average shares	
Basic and diluted	57,430

Adjustments made in arriving at the pro forma unaudited results of operations include amortization of goodwill and other intangibles and related tax adjustments. No effect has been given to cost savings or operating synergies that may be realized as a result of the merger.

**Cogent Technology, Inc.**

On July 1, 2000, Harmonic completed the acquisition in a stock-for-stock transaction of privately-held Cogent Technology, Inc. ( Cogent ) of Santa Cruz, California, a developer of advanced MPEG-2 technology for the migration from analog to digital television on PCI based platforms for a purchase price of \$7.9 million. The acquisition was accounted for as a purchase and a one-time charge of \$1.1 million was recorded in the third quarter of 2000 for in-process research and development acquired. The results of operations of Cogent have been included in the consolidated financial statements of Harmonic from the date of acquisition. Pro forma financial information has not been presented as this acquisition was immaterial.

**NOTE 4 GOODWILL AND IDENTIFIED INTANGIBLES**

As of January 1, 2002, Harmonic adopted SFAS No. 142, Goodwill and Other Intangible Assets, which requires, among other things, that goodwill and intangible assets with indefinite useful lives no longer be amortized. In addition, the standard includes provisions for the reclassification of certain existing recognized intangibles as goodwill, reassessment of the useful lives of existing recognized intangibles, and the testing for impairment of existing goodwill and other intangibles at least annually. Upon adoption, the Company reassessed the classification of its goodwill and intangible assets, and reclassified \$0.2 million of assembled workforce, net of accumulated amortization and tax effects, to goodwill and ceased the amortization of goodwill.





**Table of Contents****HARMONIC INC.****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

For purposes of applying SFAS No. 142, management believes the operating segments, BAN and CS, represent the Company's reporting units. CS is the only reporting unit with goodwill and intangible assets.

The Company performed the transitional goodwill impairment test in the first quarter of 2002 and the annual impairment test of goodwill in the fourth quarter of 2002. In both instances, the fair value of CS, which was based on the operation's future discounted cash flows, exceeded its carrying amount, including goodwill, and therefore, goodwill was determined not to be impaired.

The following is a summary of reported net loss and loss per share as adjusted to exclude amortization of goodwill and assembled workforce, net of related tax effects, for the fiscal years ended on December 31, 2000, and 2001:

	Year ended December 31,	
	2000	2001
(in thousands, except per share data)		
Reported net loss	\$(1,654,008)	\$(166,407)
Goodwill amortization	201,743	673
Assembled workforce amortization, net of tax	1,818	1,092
Adjusted net loss	<u>\$(1,450,447)</u>	<u>\$(164,642)</u>
Basic and diluted net loss per share:		
Reported net loss	\$ (34.06)	\$ (2.84)
Goodwill amortization	4.15	0.01
Assembled workforce amortization, net of tax	0.04	0.02
Adjusted net loss per share	<u>\$ (29.87)</u>	<u>\$ (2.81)</u>

For the year ended December 31, 2002, the Company recorded a total of \$18.7 million of amortization expense for identified intangibles, of which \$9.1 million was included in cost of sales. Estimated future amortization expense for identified intangibles is \$13.9 million per year for 2003 and 2004, of which \$6.2 million per year will be included in cost of sales, and \$4.6 million for 2005, of which \$2.1 million will be included in cost of sales.

*Unaudited:* For the six months ended June 28, 2002 and June 27, 2003, the Company recorded a total of \$11.7 million and \$7.0 million, respectively, of amortization expense for identified intangibles of which \$6.0 million and \$3.1 million were included in cost of sales, respectively. Estimated future amortization expense of identified intangibles is \$7.0 million for the remaining six months of 2003. Future amortization expense to be included in cost of sales is estimated to be \$3.1 million for the remainder of 2003.

**Table of Contents****HARMONIC INC.****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

The following is a summary of goodwill and intangible assets:

	December 31, 2001			December 31, 2002			June 27, 2003		
	Gross carrying amount	Accumulated amortization	Net carrying amount	Gross carrying amount	Accumulated amortization	Net carrying amount	Gross carrying amount	Accumulated amortization	Net carrying amount
(unaudited)									
(in thousands)									
Identified intangibles:									
Developed core technology	\$29,059	\$ (7,849)	\$21,210	\$29,059	\$ (16,186)	\$12,873	\$29,059	\$ (18,945)	\$10,114
Customer base	33,295	(8,738)	24,557	33,295	(17,226)	16,069	33,295	(20,669)	12,626
Trademark and tradename	4,076	(1,068)	3,008	4,076	(2,103)	1,973	4,076	(2,526)	1,550
Assembled workforce	2,285	(1,907)	378						
Supply agreement	3,107	(815)	2,292	3,107	(1,603)	1,504	3,107	(1,925)	1,182
Subtotal of identified intangibles	71,822	(20,377)	51,445	69,537	(37,118)	32,419	69,537	(44,065)	25,472
Goodwill	1,557		1,557	1,780		1,780	1,780		1,780
Total goodwill and other intangibles	\$73,379	\$(20,377)	\$53,002	\$71,317	\$(37,118)	\$34,199	\$71,317	\$(44,065)	\$27,252

**Impairment of goodwill and other intangibles**

As of December 31, 2000, the Company recorded an impairment charge of approximately \$1.4 billion to write-down the goodwill and other intangibles associated with the acquisition of the DiviCom business completed in May 2000. DiviCom was acquired in a tax-free exchange of stock at a time when the market values of telecommunications equipment manufacturers were substantially higher. The DiviCom business had experienced a significant decrease in the demand for its products and services as customers in the digital headend systems market reduced levels of current and planned capital expenditures and, as a result, revenues, cash flows and expected future growth rates decreased. Due to these significant changes, management performed an evaluation of the recoverability of the goodwill and other long-lived assets related to the DiviCom business in accordance with the SFAS No. 121 Accounting for the Impairment of Long-Lived Assets and for Long-Lived Assets to be Disposed Of. Because the estimated future undiscounted cash flows of this operation was less than the carrying value of the related long-lived assets as of December 31, 2000, an impairment charge was required. The impairment charge represents the amount required to write-down long-lived assets to fair value based on management's best estimate of this operation's future discounted cash flows. As a result of the impairment charge, Harmonic wrote off the remaining unamortized goodwill and reduced the recorded value of other identified intangibles related to its acquisition of the DiviCom business to \$79.3 million.

**NOTE 5 RESTRUCTURING, EXCESS FACILITIES AND INVENTORY PROVISIONS**

In response to a significant reduction in industry spending, principally weak cable spending on transmission upgrades and the resulting adverse impact on Harmonic's operating results during 2001, the Company implemented a series of measures to control costs and improve operating efficiencies. These measures included three work force reductions during 2001, reducing its workforce by approximately 30%, for which the Company recorded and paid severance and other costs of \$2.5 million.

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In conjunction with the 2001 cost control measures, Harmonic evaluated its facility requirements and committed to a plan to exit excess facilities and consolidate its operations, principally on Harmonic's Sunnyvale, California campus. During 2001, Harmonic recorded a charge for fixed asset impairment of \$8.3 million and excess facilities costs of \$21.8 million for a combined total of \$30.1 million to selling,

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**HARMONIC INC.**

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**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

general and administrative expenses. The fixed asset impairment of \$8.3 million for unrecoverable leasehold improvements was recorded as a reduction of property, plant and equipment. The excess facilities charge of \$22.3 million was offset by \$0.5 million of deferred rent and was based on future facilities costs over the estimated vacancy period, reduced by estimated sublease income.

As a result of uncertain market conditions and lower sales during the second half of 2002, the Company implemented further workforce reductions of approximately 120 full-time employees. Harmonic recorded severance and other costs totaling \$1.5 million and paid \$1.1 million during 2002 associated with these actions. At December 31, 2002, remaining accrued severance costs were \$0.4 million, which will be paid during 2003.

In addition to the work force reductions in the second half of 2002, management reassessed the accrual for the costs of excess facilities in light of the Company's reduced headcount, difficult business conditions, and a weak local commercial real estate market, and changed its estimates with regard to the expected timing and amount of sublease income due to the substantial and growing surplus of vacant commercial space in the San Francisco Bay Area. Harmonic recorded an additional excess facilities charge of \$22.5 million, net of sublease income, to selling, general and administrative expenses for facilities that Harmonic does not intend to occupy or has exited and does not expect to reoccupy. As of December 31, 2002, accrued excess facilities cost totaled \$41.6 million of which \$6.8 million was included in current accrued liabilities and \$34.8 million in other non-current liabilities. The Company incurred cash outlays of \$3.8 million, net of \$0.2 million of sublease income, during 2002 principally for lease payments, property taxes, insurance and other maintenance fees related to vacated facilities.

*Unaudited:* During the six months ended June 27, 2003, Harmonic paid \$259 thousand of severance and other costs, and expects to pay the balance of \$155 thousand during the remainder of 2003. As of June 27, 2003, accrued excess facilities cost totaled \$38.9 million of which \$6.5 million was included in current accrued liabilities and \$32.4 million in other non-current liabilities. The Company incurred cash outlays of \$2.7 million during the first half of 2003, principally for lease payments, property taxes, insurance and other maintenance fees related to vacated facilities. Harmonic expects to pay approximately \$3.0 million of excess facilities lease costs, net of estimated sublease income, for the remainder of 2003 and to pay the remaining \$35.9 million, net of estimated sublease income, over the remaining lease terms through September 2010. Harmonic reassesses the liability quarterly and adjusts as necessary based on changes in the timing and amounts of expected sublease rental income. In the event the Company is unable to achieve expected levels of sublease rental income, Harmonic will need to revise its estimate of the liability, which could materially impact the Company's financial position, liquidity, cash flows and results of operations.

**Table of Contents****HARMONIC INC.****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

The following table summarizes restructuring activities:

	Workforce reduction	Fixed asset impairment	Excess facilities	Total
(in thousands)				
Balance at January 1, 2001	\$	\$	\$ 1,000	\$ 1,000
Provisions	2,513	8,263	22,355	33,618
Asset impairment		(8,263)		(8,263)
Cash payments	(2,513)		(513)	(3,513)
Balance at December 31, 2001			22,842	22,842
Provisions	1,505		22,500	24,005
Cash payments, net of sublease income	(1,091)		(3,748)	(4,839)
Balance at December 31, 2002	\$ 414	\$	\$41,594	\$42,008
Cash payments, net income of sublease income (unaudited)	(259)		(2,692)	(2,951)
Balance at June 27, 2003 (unaudited)	\$ 155	\$	\$38,902	\$39,057

As a result of the significant reduction in demand for its products, principally BAN division products, Harmonic recorded provisions of \$10.0 million and \$39.2 million during 2000 and 2001, respectively, for excess and obsolete inventories in accordance with its policy and demand forecasts.

**NOTE 6 CASH EQUIVALENTS AND INVESTMENTS**

At December 31, 2001, 2002 and as of June 27, 2003, cash, cash equivalents and short-term investments are summarized as follows:

	December 31,		June 27,
	2001	2002	2003
	(unaudited)		
	(in thousands)		
Cash and cash equivalents	\$36,005	\$21,542	\$22,867
Short-term investments:			
Less than one year	17,756	26,116	13,443
Due in 1-2 years	516	1,500	
Total short-term investments	18,272	27,616	13,443
Total cash, cash equivalents and short-term investments	\$54,277	\$49,158	\$36,310

Harmonic's short-term investments are stated at fair value, which approximate the cost of investments and are comprised of principally corporate debt securities. Harmonic currently believes that its existing liquidity sources, including the bank line of credit and trade receivables facilities, as

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limited by qualified receivables, will satisfy the Company's requirements for at least the next twelve months, including, the final settlement and payment of C-Cube's pre-merger tax liabilities. However, Harmonic may need to raise additional funds if its expectations or estimates change or prove inaccurate, or to take advantage of unanticipated opportunities or to strengthen our financial position. Harmonic's ability to raise funds may be adversely affected by a number of factors relating to Harmonic, as well as factors beyond its control, including increased market uncertainty surrounding the ongoing US war on terrorism, and the war in Iraq, as well as conditions in capital markets and the cable and satellite industries.

*Unaudited:* At June 27, 2003, \$4.5 million of cash is restricted under terms of the Company's credit agreement as disclosed in Note 9.

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**Table of Contents****HARMONIC INC.****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)****NOTE 7 BALANCE SHEET DETAILS**

	December 31,		June 27,
	2001	2002	2003
			(unaudited)
			(in thousands)
<b>Accounts receivable, net:</b>			
Accounts receivable	\$ 41,642	\$ 31,855	\$ 39,689
Unbilled accounts receivable	1,355	166	
	42,997	32,021	39,689
Less: allowance for doubtful accounts, returns and discounts	(8,595)	(6,641)	(4,914)
	\$ 34,402	\$ 25,380	\$ 34,775
<b>Inventories:</b>			
Raw materials	\$ 12,302	\$ 10,944	\$ 8,100
Work-in-process	3,920	1,404	1,088
Finished goods	14,722	13,556	12,456
	\$ 30,944	\$ 25,904	\$ 21,644
<b>Property and equipment:</b>			
Furniture and fixtures	\$ 7,449	\$ 7,391	\$ 7,425
Machinery and equipment	80,526	81,408	82,542
Leasehold improvements	25,927	25,700	25,788
	113,902	114,499	115,755
Less: accumulated depreciation and amortization	(68,147)	(82,043)	(88,460)
	\$ 45,755	\$ 32,456	\$ 27,295
<b>Intangibles and other assets:</b>			
Identified intangibles, net of amortization	\$ 51,445	\$ 32,419	\$ 25,472
Goodwill	1,557	1,780	1,780
Other assets	836	1,163	1,126
	\$ 53,838	\$ 35,362	\$ 28,378
<b>Accrued liabilities:</b>			
Pre-merger tax liability and other taxes	\$ 25,503	\$ 24,344	\$ 25,642
Deferred revenue	6,579	8,969	8,578
Accrued excess facility costs current	3,279	6,840	6,495
Accrued compensation	6,533	6,512	5,795
Accrued warranty	4,073	5,866	4,796



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Other	11,507	6,139	8,030
	<u>          </u>	<u>          </u>	<u>          </u>
	\$ 57,474	\$ 58,670	\$ 59,336
	<u>          </u>	<u>          </u>	<u>          </u>

**NOTE 8 NET LOSS PER SHARE**

The basic net loss per share is computed by dividing the net loss attributable to common stockholders for the period by the weighted average number of the common shares outstanding during the period. The diluted net loss per share is the same as the basic net loss per share for 2000, 2001, 2002 and the six months ended June 28, 2002 and June 27, 2003 because common equivalent shares and common shares issuable upon the exercise of stock options, are only considered when their effect would be dilutive. In

**Table of Contents****HARMONIC INC.****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

2000, 2001, 2002 and in the six months ended June 28, 2002 and June 27, 2003, 4.9 million, 4.9 million, 7.4 million, 5.5 million (unaudited) and 6.9 million (unaudited) of weighted average antidilutive securities, including options, were excluded from the net loss per share computations, respectively, because their effect is antidilutive.

Following is a reconciliation of the numerators and denominators of the basic and diluted net loss per share computations:

	Fiscal year ended December 31,		
	2000	2001	2002
	(in thousands, except per share data)		
Net loss (numerator)	\$(1,654,008)	\$(166,407)	\$(76,918)
Shares calculation (denominator):			
Weighted average shares outstanding basic	48,564	58,540	59,779
Effect of Dilutive Securities:			
Potential Common Stock relating to stock options			
Average shares outstanding diluted	48,564	58,540	59,779
Net loss per share basic and diluted	\$ (34.06)	\$ (2.84)	\$ (1.29)

**NOTE 9 CREDIT FACILITIES AND LONG-TERM DEBT**

During 2002, Harmonic had a bank line of credit facility, as modified in November 2002, which provided for borrowings up to \$13.0 million including a \$3.0 million secured equipment term loan and was available until April 2003. The facility contained financial and other covenants including a minimum cash covenant established in the November 2002 modification which required the Company to maintain at least 35% of its cash, cash equivalents and short-term investments with the bank. The Company was granted a grace period until January 31, 2003 to satisfy this covenant. After giving effect to this grace period, Harmonic was in compliance with the covenants as of December 31, 2002. The facility was renegotiated in March 2003, as discussed below. Borrowings pursuant to the line bore interest at the bank's prime rate (prime rate plus 2.0%-3.0% under the equipment term loan) and were payable monthly, and were collateralized by all of Harmonic's assets. During 2002, Harmonic borrowed an additional \$1.3 million under the equipment term loan portion of this facility. As of December 31, 2002, \$2.6 million was outstanding under the equipment term loan portion of this facility. The term loan was payable monthly, including principal and interest at rates of 7.25% to 10.0% per annum on outstanding borrowings as of December 31, 2002 and matures at various dates through July 2005. Other than standby letters of credit and guarantees (Note 16) there were no other outstanding borrowings or commitments under the line of credit facility as of December 31, 2002. Harmonic also had a facility which provided for the sale of trade receivables on a non-recourse basis up to \$12.5 million. This facility, which was not utilized in 2002, was amended in March 2003 upon execution of a new facility as discussed below.

In March 2003, Harmonic entered into a new bank line of credit facility with Silicon Valley Bank, which provides for borrowings up to \$13.5 million, including \$3.5 million for equipment under a secured term loan. This facility, which expires in March 2004, contains financial and other covenants including the requirement for Harmonic to maintain on deposit with the bank the greater of 50% of total cash, cash equivalents and short-term investments or \$10.0 million, or satisfy a liquidity covenant in the event cash, cash equivalents and short-term investments are less than \$10.0 million. This provision of the facility causes a restriction on the Company's ability to use cash and cash equivalents. Depending on the level of borrowings, letters of credit and other guarantees outstanding at any point in time, the amount of the restriction on usage will vary. If Harmonic is unable to maintain on deposit with the bank the minimum balance of \$10.0 million, or satisfy the liquidity covenant requirement, Harmonic would be in noncom-



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**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

pliance with the facility. In the event of noncompliance by Harmonic with the covenants under the facility, Silicon Valley Bank would be entitled to exercise its remedies under the facility, including in the event amounts are outstanding under the facility, offset rights against amounts Harmonic has maintained on deposit with the bank. Future borrowings pursuant to the line bear interest at the bank's prime rate plus 0.25%-1.75% (prime rate plus 1.75%-2% for equipment borrowings) depending upon the Company's total cash position. Borrowings are payable monthly and are collateralized by all of Harmonic's assets. The Company has entered into an agreement with another financial institution holding amounts on deposit to allow, in the event of default, Silicon Valley Bank to control these deposits.

In March 2003 Harmonic also renewed a facility with Silicon Valley Bank that provides for the sale of trade receivables on a non-recourse basis up to \$12.5 million and expires in March 2004. Trade receivables sold under the facility are discounted based on the bank's prime rate plus 1.5% for North American customers and prime rate plus 2% for all other customers.

The Company's ability to utilize both facilities with Silicon Valley Bank depends to a significant extent on having a sufficient amount of qualified receivables, which may fluctuate depending on the level and timing of sales and the aging, customer concentration, international mix and credit quality of receivables. To the extent that the Company does not have sufficient qualified receivables, Harmonic's ability to utilize these facilities could be significantly constrained. Based upon current levels of receivables, the Company believes that it would not be able to utilize a significant portion of these facilities at this time.

*Unaudited:* As of June 27, 2003, \$4.5 million of cash and cash equivalents was restricted as to usage. At June 27, 2003, Harmonic was in compliance with the covenants of its credit facilities. As of June 27, 2003, \$2.1 million was outstanding under the equipment term loan portion of this facility of which \$0.1 million and \$0.2 million was borrowed during the first and second quarters of 2003, respectively. The term loan is payable monthly, including principal and interest at 6.25% per annum on outstanding borrowings as of June 27, 2003 which mature at various dates through January 2006. Other than standby letters of credit and guarantees (Note 16) there were no other outstanding borrowings or commitments under the line of credit facility as of June 27, 2003. As of July 25, 2003, the Company was not in compliance with a net loss covenant under this line of credit facility. Partially as a result, on September 26, 2003, the Company entered into a loan modification agreement which waived this noncompliance, amended the net loss covenant and also amended certain restrictions on issuances of letters of credit under the facility. As of September 27, 2003, the Company was in compliance with the covenants under this line of credit facility.

**NOTE 10 CAPITAL STOCK****Preferred stock**

Harmonic has 5,000,000 authorized shares of preferred stock. On July 23, 2002, the Company classified 100,000 of these shares as Series A Participating Preferred Stock in connection with the board's same day approval and adoption of a stockholder rights plan. Under the plan, Harmonic declared and paid a dividend of one preferred share purchase right for each share of Harmonic common stock held by our stockholders of record as of the close of business on August 7, 2002. Each preferred share purchase right entitles the holder to purchase from us one one-thousandth of a share of Series A Participating Preferred Stock, par value \$0.001 per share, at a price of \$25.00, subject to adjustment. The rights are not immediately exercisable, however, and will become exercisable only upon the occurrence of certain events. The stockholder rights plan may have the effect of deterring or delaying a change in control of Harmonic.

**Stock issuances**

During 2000, Harmonic issued approximately 26,400,000 shares of common stock for acquisition of the DiviCom business and approximately 286,000 shares of common stock for the acquisition of Cogent. See Note 3, Acquisitions for further discussion.

**Table of Contents****HARMONIC INC.****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)****NOTE 11 BENEFIT PLANS****Stock option plans**

Harmonic has reserved 9,640,000 shares of Common Stock for issuance under various employee stock option plans. The options are granted for periods not exceeding ten years and generally vest 25% at one year from date of grant, and an additional 1/48 per month thereafter. Stock options are granted at the fair market value of the stock at the date of grant.

**Director option plans**

In May 2002, Harmonic's stockholders approved the 2002 Director Option Plan, replacing the 1995 Director Option Plan. Harmonic has a total of 428,000 shares of Common Stock reserved for issuance under the Director Plans. The Director Plans provide for the grant of non-statutory stock options to certain non-employee directors of Harmonic pursuant to an automatic, non-discretionary grant mechanism. Options are granted at the fair market value of the stock at the date of grant for periods not exceeding ten years. Initial grants generally vest monthly over three years, and subsequent grants generally vest monthly over one year.

The following table summarizes activities under the Plans:

	Shares available for grant	Stock options outstanding	Weighted average exercise price
(in thousands except exercise price)			
Balance at December 31, 1999	1,320	3,732	\$ 12.48
Shares authorized	4,741		
Options assumed in DiviCom acquisition	(2,703)	2,703	37.60
Options granted	(3,065)	3,065	24.29
Options exercised		(459)	5.95
Options canceled	458	(1,399)	33.22
	<u>751</u>	<u>7,642</u>	<u>22.73</u>
Balance at December 31, 2000	751	7,642	22.73
Shares authorized	2,000		
Options granted	(2,717)	2,717	9.06
Options exercised		(447)	5.50
Options canceled	1,777	(1,777)	19.72
Options expired		(970)	32.91
	<u>1,811</u>	<u>7,165</u>	<u>17.99</u>
Balance at December 31, 2001	1,811	7,165	17.99
Shares authorized	1,800		
Options granted	(1,871)	1,871	9.78
Options exercised		(205)	3.00
Options canceled	1,038	(1,038)	14.59
Options expired	(14)	(489)	16.16
	<u>2,764</u>	<u>7,304</u>	<u>\$ 16.91</u>
Balance at December 31, 2002	2,764	7,304	\$ 16.91

**Table of Contents****HARMONIC INC.****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

The following table summarizes information regarding stock options outstanding at December 31, 2002:

Range of exercise prices	Stock options outstanding			Stock options exercisable	
	Number outstanding at December 31, 2002	Weighted-average remaining contractual life (years)	Weighted-average exercise price	Number exercisable at December 31, 2002	Weighted average exercise price
(in thousands, except exercise price and life)					
\$ 0.23- 7.81	1,304	5.6	\$ 5.96	1,012	\$ 6.23
7.98- 9.13	1,479	8.0	9.04	715	9.04
9.25- 10.44	1,611	8.4	10.39	244	10.34
10.58- 23.56	1,832	7.5	21.14	1,082	21.69
23.75- 53.02	723	6.4	29.18	605	28.94
53.32-121.68	355	7.1	72.86	280	72.16
	7,304	7.3	\$ 16.91	3,938	\$ 19.41

The weighted-average fair value of options granted was \$16.08, \$6.33 and \$7.24 for 2000, 2001, and 2002, respectively.

**Employee stock purchase plan**

As of December 31, 2001, Harmonic believed that it had insufficient shares reserved for issuance under its 1995 Employee Stock Purchase Plan (the 1995 Purchase Plan ) to cover all expected purchases under commenced offering periods that ran through June 2003. The authorization of additional shares under the 1995 Purchase Plan would have resulted in future non-cash charges which, depending on the future market price per share of Harmonic's common stock, could have been significant. In May 2002, Harmonic's stockholders approved the 2002 Employee Stock Purchase Plan (the 2002 Purchase Plan ) replacing the 1995 Employee Stock Purchase Plan effective for the offering period beginning on July 1, 2002. As a result, no charge was required. The 2002 Purchase Plan, which has reserved 1,500,000 shares for issuance, enables employees to purchase shares at 85% of the fair market value of the Common Stock at the beginning of the offering period or end of the purchase period, whichever is lower. Each offering period has a maximum duration of two years and consists of four six month purchase periods. Offering periods and purchase periods generally begin on the first trading day on or after January 1 and July 1 of each year. The 2002 Purchase Plan is intended to qualify as an employee stock purchase plan under Section 423 of the Internal Revenue Code. During 2000, 2001, and 2002, stock issued under the purchase plans was 244,712, 813,181, and 780,670 shares at weighted average prices of \$11.22, \$4.80, and \$3.99, respectively. The weighted-average fair value of each right to purchase shares of common stock granted under the purchase plans were \$16.44, \$6.30, and \$5.21, for 2000, 2001, and 2002, respectively.

**Retirement/Savings plan**

Harmonic has a retirement/savings plan which qualifies as a thrift plan under Section 401(k) of the Internal Revenue Code. This plan allows participants to contribute up to 20% of total compensation, subject to applicable Internal Revenue Service limitations. Harmonic makes discretionary contributions to the plan of 25% of the first 4% contributed by eligible participants up to a maximum contribution per participant of \$750 per year.

**Table of Contents****HARMONIC INC.****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)****NOTE 12 INCOME TAXES**

The provision for (benefit from) income taxes consists of the following:

	Fiscal year ended December 31,		
	2000	2001	2002
(in thousands)			
Current:			
Federal	\$	\$	\$
Foreign	450	2,000	279
State			65
	<u>450</u>	<u>2,000</u>	<u>344</u>
Deferred:			
Federal	(17,329)	(1,580)	156
Foreign			
State	(1,692)	(1,226)	
	<u>(19,021)</u>	<u>(2,806)</u>	<u>156</u>
	<u>\$ (18,571)</u>	<u>\$ (806)</u>	<u>\$ 500</u>

Harmonic's provision for (benefit from) income taxes differed from the amount computed by applying the statutory US federal income tax rate to the loss before income taxes as follows:

	Fiscal year ended December 31,		
	2000	2001	2002
(in thousands)			
Benefit from income taxes at statutory rate	\$ (585,403)	\$ (58,395)	\$ (26,746)
Differential in rates on foreign earnings	514	6,324	1,183
State taxes, net of federal benefit	39	(10,782)	(4,620)
Acquired in-process technology and non-deductible goodwill	567,192	791	
Research and development credit			(5,700)
Valuation allowance		63,026	41,883
Others	(913)	(1,770)	(5,500)
	<u>\$ (18,571)</u>	<u>\$ (806)</u>	<u>\$ 500</u>

Deferred tax assets (liabilities) comprise the following:

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	Fiscal year ended December 31,		
	2000	2001	2002
	(in thousands)		
Deferred tax assets:			
Reserves and accruals	\$	\$ 42,934	\$ 52,121
Net operating loss carryovers	1,582	26,892	48,128
Depreciation and amortization		4,312	4,613
Research and development credit carryovers		2,265	10,898
Other	28,924	7,716	2,440
	<u>30,506</u>	<u>84,119</u>	<u>118,200</u>
Valuation allowance		(63,026)	(104,909)
	<u>30,506</u>	<u>21,093</u>	<u>13,291</u>
Deferred tax liabilities:			
Intangibles	(35,215)	(21,093)	(13,291)
	<u>(35,215)</u>	<u>(21,093)</u>	<u>(13,291)</u>
Net deferred tax assets (liabilities)	\$ (4,709)	\$	\$



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**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

As of December 31, 2002, Harmonic had approximately \$131.4 million and \$37.1 million of net operating loss carryovers for federal and state tax reporting purposes, respectively, to offset future taxable income; such federal and state carryovers will begin to expire on various dates after the year 2005 if not utilized.

Harmonic's net deferred tax assets increased due to nondeductible reserves, an increase in net operating losses and tax credit carry forwards. Harmonic has provided a valuation allowance for the full amount of its net deferred tax assets since realization of any future benefit from deductible temporary differences, net operating losses and tax credit carry forwards is uncertain at December 31, 2002.

Under the terms of the merger agreement with C-Cube, Harmonic is generally liable for C-Cube's pre-merger tax liabilities. Approximately \$20.8 million of pre-merger tax liabilities remain outstanding, and Harmonic expects final settlement, and payment, of these obligations to a variety of taxing authorities and LSI Logic during 2003. These amounts have been included in accrued liabilities.

**NOTE 13 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 chief operating decision maker. Prior to the acquisition of the DiviCom business, Harmonic was organized as one operating segment ( Pre-Merger Harmonic ). On May 3, 2000, Harmonic completed the acquisition of the DiviCom business, thus changing its organizational structure. The merged company has been organized into two operating segments: BAN, for fiber optic systems, and CS, for digital headend systems. These segments do not correspond to the pre-merger companies in significant ways. For example, some of Harmonic's pre-merger product lines are now part of the CS segment. Each segment has its own management team directing its product development, marketing strategies and its customer service requirements. A separate sales force generally supports both divisions with appropriate product and market specialization as required.

The results of the reportable segments are derived directly from Harmonic's management reporting system. These results reported below are based on Harmonic's method of internal reporting and are not necessarily presented in conformity with generally accepted accounting principles. Following the acquisition of DiviCom, management commenced measuring the performance of each segment based on several metrics, including revenue and income or loss from segment operations. These results are used, in part, to evaluate the performance of, and allocate resources to each of the segments. Income (loss) from segment operations excludes intangible amortization expense, corporate expenses, excess facilities charges, eliminations, and interest and other income. Corporate expenses, excess facilities charges, and eliminations include human resources, legal, finance and other corporate departments, excess facility charges of \$30.1 million and \$22.5 million for the years ended December 31, 2001 and 2002, respectively, and intercompany eliminations. Net income or loss, and assets and liabilities are not internally reported by business segment.

Revenue for the periods prior to May 3, 2000 has been reclassified to reflect the new organizational structure. The reclassified revenue for the prior periods reflects only Harmonic's revenue, and not the historical revenue of the DiviCom business prior to its acquisition. However, income or loss from segments operations is not available and is impractical to prepare for the periods prior to the quarter ended June 30, 2000, and accordingly, has not been presented. Pre-merger Harmonic income from segment operations reflects Harmonic's net income, excluding goodwill amortization, for the three month period ended March 31, 2000.

**Table of Contents****HARMONIC INC.****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)****Segment sales and profit:**

	Fiscal year ended December 31,			Six months ended	
	2000	2001	2002	June 28,	June 27,
				2002	2003
	(in thousands)			(unaudited)	
Net sales:					
Broadband Access Networks (BAN)	\$ 175,111	\$ 74,772	\$ 76,914	\$ 45,438	\$ 27,608
Convergent Systems (CS)	87,935	129,038	109,718	64,903	51,086
Total net sales	\$ 263,046	\$ 203,810	\$ 186,632	\$ 110,341	\$ 78,694
Income (loss) from segment operations:					
Broadband Access Networks	\$ (4,367)	\$ (60,103)	\$ (4,033)	\$ 1,017	\$ (2,074)
Convergent Systems	(25,139)	(36,254)	(15,649)	(4,640)	(5,065)
Pre-Merger Harmonic	13,999				
Loss from segment operations	(15,507)	(96,357)	(19,682)	(3,623)	(7,139)
Impairment of goodwill and other intangibles	(1,380,328)				
Acquired in-process technology	(39,800)				
Amortization of intangibles	(234,407)	(20,741)	(18,648)	(11,700)	(6,946)
Interest and other income, net	10,456	1,574	931	283	623
Excess facilities charges		(30,100)	(22,500)		
Corporate expenses and eliminations	(12,993)	(21,591)	(16,519)	(9,596)	(9,687)
Loss before income taxes	\$ (1,672,579)	\$ (167,213)	\$ (76,418)	\$ (24,636)	\$ (23,149)

**Geographic information:**

	Fiscal year ended December 31,		
	2000	2001	2002
	(in thousands)		
Net sales:			
United States	\$ 158,555	\$ 121,479	\$ 133,222
Foreign countries	104,491	82,331	53,410
Total	\$ 263,046	\$ 203,810	\$ 186,632
Property, equipment and intangibles:			
United States	\$ 131,746	\$ 96,472	\$ 64,863

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Foreign countries	3,779	2,285	1,792
	<u>          </u>	<u>          </u>	<u>          </u>
Total	\$ 135,525	\$ 98,757	\$ 66,655
	<u>          </u>	<u>          </u>	<u>          </u>

**Major customers**

To date, a substantial majority of Harmonic's net sales have been to relatively few customers, and Harmonic expects this customer concentration to continue in the foreseeable future. In 2000, sales to Charter Communications and Comcast Cable accounted for 12% and 11% of net sales, respectively. In 2001, sales to DIRECTV and Charter Communications accounted for 13% and 11% of net sales, respectively. In 2002, sales to AT&T Broadband and RCN accounted for 18% and 10% of net sales, respectively.

**Table of Contents****HARMONIC INC.****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)****NOTE 14 COMPREHENSIVE LOSS**

The Company's total comprehensive loss was as follows:

	Fiscal year ended December 31,			Six months ended	
	2000	2001	2002	June 28, 2002	June 27, 2003
	(in thousands)			(unaudited)	
Net loss	(1,654,008)	(166,407)	(76,918)	(25,136)	(23,349)
Change in unrealized gain on investments, net	271	(164)		5	
Foreign currency translation	291	(337)	(145)	(31)	143
Total comprehensive loss	<u>(1,653,446)</u>	<u>(166,908)</u>	<u>(77,063)</u>	<u>(25,162)</u>	<u>(23,206)</u>

**NOTE 15 RELATED PARTY**

Lewis Solomon, a director of Harmonic since January 2002, is CEO of Broadband Services Inc. (BSI). BSI purchases products from Harmonic in connection with its supply chain management and fulfillment services business. Revenues from BSI were \$8.9 million for the year ended December 31, 2002. Accounts receivable from BSI were \$0.4 million as of December 31, 2002. Mr. Solomon is also a director of Terayon Communications, with whom the Company signed a reseller agreement for certain products during the second quarter of 2002. As of December 31, 2002, Harmonic had liabilities to Terayon of approximately \$0.5 million for inventory purchases.

*Unaudited:* Revenue from BSI for the six months ended June 28, 2002 was approximately \$7.2 million. For the six month period ended June 27, 2003, revenue from BSI was \$31 thousand. There was no accounts receivable balance from BSI as of June 27, 2003. As of June 27, 2003, Harmonic had liabilities to Terayon of \$0.5 million, for inventory purchases.

**NOTE 16 GUARANTEES****Warranties**

The Company accrues for estimated warranty costs at the time of product shipment. Management periodically reviews the estimated fair value of its warranty liability and adjusts based on the terms of warranties provided to customers, historical and anticipated warranty claims experience, and estimates of the timing and cost of specified warranty claims. Activity for the Company's warranty accrual, which is included in accrued liabilities is summarized below (in thousands):

Balance as of January 1, 2002	\$ 4,073
Accrual for warranties	6,251
Warranty costs incurred	(4,458)
Balance as of December 31, 2002.	\$ 5,866
Accrual for warranties (unaudited)	1,859
Warranty costs incurred (unaudited)	(2,930)
Balance as of June 27, 2003 (unaudited)	\$ 4,795

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**Standby letters of credit**

As of December 31, 2002 the Company's financial guarantees consisted of standby letters of credit outstanding, which were related to customs bond requirements and purchase cards. The maximum amount of potential future payments under these arrangements was \$0.9 million. As of June 27, 2003 the maximum amount of potential future payments under these arrangements was \$1.0 million (unaudited).

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**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)****Guarantees**

As of December 31, 2002, Harmonic had other guarantees outstanding totaling \$1.9 million. As of June 27, 2003, Harmonic had no outstanding guarantees (unaudited).

**Indemnifications**

Harmonic indemnifies some of its suppliers and customers for specified intellectual property rights pursuant to certain parameters and restrictions. The scope of these indemnities varies, but in some instances, includes indemnification for damages and expenses (including reasonable attorneys' fees). No amounts have been accrued in respect of the indemnifications provisions at December 31, 2002 and at June 27, 2003 (unaudited).

**NOTE 17 COMMITMENTS AND CONTINGENCIES****Commitments facilities leases**

Harmonic leases its facilities under noncancelable operating leases which expire at various dates through September 2010. Total lease payments related to these operating leases were \$5,802,000, \$10,513,000, and \$11,506,000, for 2000, 2001 and 2002, respectively. Future minimum lease payments under noncancelable operating leases at December 31, 2002, are as follows (in thousands):

2003	\$ 10,491
2004	9,847
2005	9,926
2006	11,034
2007	34,887
	<hr/>
Thereafter	\$88,612
	<hr/>

As of December 31, 2002, \$41.6 million of these lease costs were provided for as accrued excess facility costs. See Note 5 Restructuring, Excess Facilities and Inventory Provisions.

**Commitments Royalties**

Harmonic has obtained research and development grants under various Israeli government programs that require the payment of royalties on sales of certain products resulting from such research. During 2000, 2001 and 2002 royalty expenses were not material to results of operations.

**Purchase commitments with contract manufacturers and suppliers**

The Company uses several contract manufacturers and suppliers to provide manufacturing services for a substantial majority of its products. In addition, some components, sub-assembly and modules are obtained from a sole supplier or limited group of suppliers. During the normal course of business, in order to reduce manufacturing lead times and ensure adequate component supply, the Company enters into agreements with certain contract manufacturers and suppliers that allows them to procure inventory based upon criteria as defined by the Company. As of December 31, 2002, the Company has purchase commitments for inventory of approximately \$12.9 million.

**Commitments Contingencies**

Harmonic's industry is characterized by the existence of a large number of patents and frequent claims and related litigation regarding patent and other intellectual property rights. In particular, leading companies in the telecommunications industry have extensive patent portfolios. From

time to time, third parties, including these leading companies, have asserted and may assert exclusive patent, copyright, trademark and other intellectual property rights against us or our customers. Such assertions and claims arise in the normal course of our operations. The resolution of assertions and claims cannot be predicted

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**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

with certainty. Management believes that the final outcome of such matters would not have a material adverse effect on Harmonic's business, operating results, financial position and liquidity.

**NOTE 18 LEGAL PROCEEDINGS**

Between June 28 and August 25, 2000, several actions alleging violations of the federal securities laws by Harmonic and certain of its officers and directors (some of whom are no longer with Harmonic) were filed in or removed to the United States District Court for the Northern District of California. The actions subsequently were consolidated.

A consolidated complaint, filed on December 7, 2000, was brought on behalf of a purported class of persons who purchased Harmonic's publicly traded securities between January 19 and June 26, 2000. The complaint also alleged claims on behalf of a purported subclass of persons who purchased C-Cube securities between January 19 and May 3, 2000. In addition to Harmonic and certain of its officers and directors, the complaint also named C-Cube Microsystems Inc. and several of its officers and directors as defendants. The complaint alleged that, by making false or misleading statements regarding Harmonic's prospects and customers and its acquisition of C-Cube, certain defendants violated sections 10(b) and 20(a) of the Securities Exchange Act of 1934. The complaint also alleged that certain defendants violated section 14(a) of the Exchange Act and sections 11, 12(a)(2), and 15 of the Securities Act of 1933 by filing a false or misleading registration statement, prospectus, and joint proxy in connection with the C-Cube acquisition.

On July 3, 2001, the Court dismissed the consolidated complaint with leave to amend. An amended complaint alleging the same claims against the same defendants was filed on August 13, 2001. Defendants moved to dismiss the amended complaint on September 24, 2001. On November 13, 2002, the Court issued an opinion granting the motions to dismiss the amended complaint without leave to amend. Judgment for defendants was entered on December 2, 2002. On December 12, 2002, plaintiffs filed a motion to amend the judgment and for leave to file an amended complaint pursuant to Rules 59(e) and 15(a) of the Federal Rules of Civil Procedure. Although a hearing on that motion was set for February 5, 2003, the Court issued an order stating that it would decide the motion without a hearing.

*Unaudited:* On June 6, 2003, the Court denied plaintiff's motion to amend the judgment and for leave to file an amended complaint. Plaintiffs filed a notice of appeal on July 1, 2003. According to the scheduling order issued by the Court on July 3, 2003, plaintiffs' opening brief is due on October 17, 2003. Plaintiffs have filed a motion requesting a 31-day extension of time, until November 17, 2003, to file their opening brief. Defendants have not opposed this request.

A derivative action purporting to be on behalf of Harmonic was filed against its then-current directors in the Superior Court for the County of Santa Clara on September 5, 2000. Harmonic also was named as a nominal defendant. The complaint is based on allegations similar to those found in the securities class action and claims that the defendants breached their fiduciary duties by, among other things, causing Harmonic to violate federal securities laws. The derivative action was removed to the United States District Court for the Northern District of California on September 20, 2000. All deadlines in this action were stayed pending resolution of the motions to dismiss the securities class action. *Unaudited:* On July 29, 2003, the Court approved the parties' stipulation to dismiss this derivative action without prejudice and to toll the applicable limitations period. The limitations period is tolled until fourteen days after (1) defendants provide plaintiff with a copy of the mandate issued by the Ninth Circuit in the securities action or (2) either party provides written notice of termination of the tolling period, whichever occurs first.

*Unaudited:* A second derivative action purporting to be on behalf of Harmonic was filed in the Superior Court for the County of Santa Clara on May 15, 2003. It alleges facts similar to those previously alleged in the securities class action and the federal derivative action. The complaint names as defendants former and current Harmonic officers and directors, along with former officers and directors of C-Cube Microsystems, Inc., who were named in the securities class action. The complaint also names Harmonic as



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**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

a nominal defendant. The complaint alleges claims for abuse of control, gross mismanagement, and waste of corporate assets against the Harmonic defendants, and claims for breach of fiduciary duty, unjust enrichment, and negligent misrepresentation against all defendants. The action has been stayed pending resolution of the appeal in the securities class action. The parties have agreed in principle to a dismissal without prejudice and a tolling of the statute of limitations period on similar terms as in the federal derivative action.

Based on its review of the complaints filed in the securities class action, Harmonic believes that it has meritorious defenses and intends to defend itself vigorously. There can be no assurance, however, that Harmonic will prevail. No estimate can be made of the possible range of loss associated with the resolution of this contingency and accordingly, Harmonic has not recorded a liability. An unfavorable outcome of this litigation could have a material adverse effect on Harmonic's business, operating results, financial position and cash flows.

In November 2001, we were sued in Tennessee state court by a company alleging breach of contract and breach of a Tennessee statute relating to retailers and suppliers. The suit had a claim for \$2.5 million and other unspecified damages, lost profits and attorneys' fees. No liability was provided at December 31, 2002, as Harmonic believed it was not probable that a liability had been incurred and the amount of loss, if any, could not be estimated.

*Unaudited:* Harmonic announced on July 17, 2003 a settlement of its litigation with Power and Telephone Supply (P&T) in Federal court in Tennessee. Under the terms of the settlement agreement, Harmonic agreed to pay \$2.8 million to P&T in release of all outstanding claims. The settlement followed summary judgment against Harmonic on certain of the claims made by P&T under a Tennessee statute relating to retailers and suppliers. These claims arose from the cancellation of purchase orders on P&T by one of its end-customers in 2000. Harmonic's operating results for the second quarter and first half of 2003 include a charge to general and administrative expense of approximately \$2.7 million related to the settlement with P&T. The settlement charge is after accounting for the value of products to be returned and other costs. Harmonic paid \$1.0 million of the settlement on July 24, 2003 and is obligated to pay the balance of \$1.8 million on January 15, 2004. The settlement payments are secured by a standby letter of credit.

*Unaudited:* On July 3, 2003, Stanford University and Litton Systems filed a complaint in US District Court for the Central District of California alleging that optical fiber amplifiers incorporated into certain of Harmonic's products infringe US Patent No. 4,859,016. This patent expired in September 2003. The complaint seeks injunctive relief, royalties and damages. Harmonic has not been served in the case. Harmonic is currently evaluating its position with respect to this patent and has engaged in discussions with the plaintiff regarding potential settlement of the matter. At this time, Harmonic is unable to determine whether Harmonic will be able to settle this matter on reasonable terms or at all, nor can Harmonic predict the impact of an adverse outcome of this matter if Harmonic elects to defend against it. No estimate can be made of the possible range of loss associated with the resolution of this contingency and accordingly, Harmonic has not recorded a liability associated with the outcome of a negotiated settlement or an unfavorable verdict in litigation. An unfavorable outcome of this matter could have a material adverse effect on Harmonic's business, operating results, financial position and cash flows.

**Table of Contents****FINANCIAL STATEMENT SCHEDULE II VALUATION AND QUALIFYING ACCOUNTS AND RESERVES****Allowance for doubtful accounts, returns and discounts**

	Balance at beginning of period	Charges to revenue	Charges to expense	Deduction from reserves	Balance at end of period
			(in thousands)		
2000	\$ 1,529	\$ 14,816	\$ 250	\$ (9,675)	\$ 6,920
2001	6,920	9,776	3,988	(12,089)	8,595
2002	8,595	2,272	3,576	(7,802)	6,641

All other 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 statement or notes thereto.

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PROSPECTUS

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\$150,000,000

## **Harmonic Inc.**

By this prospectus, we may offer

Common Stock

Preferred Stock

Debt Securities

Warrants for Common Stock

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**See Risk Factors on page 7 for information you should consider before buying the securities.**

Our common stock is listed on the Nasdaq National Market under the symbol HLIT. On April 15, 2002, the last reported sale price of our common stock on the Nasdaq National Market was \$10.20 per share.

We will provide specific terms of these securities in supplements to this prospectus. You should read this prospectus and any prospectus supplement carefully before you invest.

This prospectus may not be used to offer and sell securities unless accompanied by a prospectus supplement.

**Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or determined if this prospectus is truthful or complete. Any representation to the contrary is a criminal offense.**

This prospectus is dated April 18, 2002

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Unless stated otherwise, references in this prospectus to Harmonic, we, us, its or our refer to Harmonic Inc., a Delaware corporation, and its subsidiaries.

Each trademark, trade name or service mark of any other company appearing in this prospectus belongs to its holder.

**SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS**

This prospectus and the documents incorporated herein by reference contain forward-looking statements within the meaning of Section 27A of the Securities Act and Section 21E of the Exchange Act. Words such as anticipates, expects, intends, may, will, should, potential, could, further, plans, believes, seeks, estimates, variations of such words and similar expressions are intended to identify such forward looking statements. These statements are not guarantees of future performance and are subject to certain risks, uncertainties and assumptions that are difficult to predict. Therefore, actual results could differ materially from those expressed or forecasted in any such forward-looking statements as a result of certain factors, including those set forth in Risk Factors, as well as those noted in similar sections of the documents incorporated herein by reference. In connection with forward-looking statements which appear in these disclosures, investors should carefully review the factors set forth in this prospectus under Risk Factors.

The cautionary statements contained in any prospectus supplement under the caption Risk Factors and other similar statements contained elsewhere in this prospectus, including the documents that are incorporated by reference, identify important factors with respect to such forward-looking statements, including certain risks and uncertainties that could cause our actual results, performance or achievements expressed or implied by such forward-looking statements.

Although we believe that the expectations reflected in such forward-looking statements are based upon reasonable assumptions, no assurance can be given that such expectations will be attained or that any deviations will not be material. We disclaim any obligation or undertaking to disseminate any updates or revision to any forward-looking statement contained herein to reflect any change in our expectations with regard thereto or any change in events, conditions or circumstances on which any such statement is based.

NO PERSON HAS BEEN AUTHORIZED TO GIVE ANY INFORMATION OR TO MAKE ANY REPRESENTATIONS IN CONNECTION WITH THIS OFFERING OTHER THAN THOSE CONTAINED OR INCORPORATED BY REFERENCE IN THIS PROSPECTUS AND ANY ACCOMPANYING PROSPECTUS SUPPLEMENT IN CONNECTION WITH THE OFFERING DESCRIBED HEREIN AND THEREIN, AND, IF GIVEN OR MADE, SUCH INFORMATION OR REPRESENTATIONS MUST NOT BE RELIED UPON AS HAVING BEEN AUTHORIZED BY THE COMPANY. NEITHER THIS PROSPECTUS NOR ANY PROSPECTUS SUPPLEMENT SHALL CONSTITUTE AN OFFER TO SELL OR A SOLICITATION OF AN OFFER TO BUY OFFERED

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SECURITIES IN ANY JURISDICTION IN WHICH IT IS UNLAWFUL FOR SUCH PERSON TO MAKE SUCH AN OFFERING OR SOLICITATION. NEITHER THE DELIVERY OF THIS PROSPECTUS OR ANY PROSPECTUS SUPPLEMENT NOR ANY SALE MADE HEREUNDER SHALL UNDER ANY CIRCUMSTANCES IMPLY THAT THE INFORMATION CONTAINED OR INCORPORATED BY REFERENCE HEREIN OR IN ANY PROSPECTUS SUPPLEMENT IS CORRECT AS OF ANY DATE SUBSEQUENT TO THE DATE HEREOF OR OF SUCH PROSPECTUS SUPPLEMENT.

IN CONNECTION WITH THE OFFERING OF CERTAIN OFFERED SECURITIES, CERTAIN PERSONS PARTICIPATING IN SUCH OFFERING MAY ENGAGE IN TRANSACTIONS THAT STABILIZE, MAINTAIN OR OTHERWISE AFFECT THE MARKET PRICES OF SUCH OFFERED SECURITIES OR OTHER SECURITIES OF THE COMPANY, INCLUDING STABILIZING TRANSACTIONS, SYNDICATE COVERING TRANSACTIONS AND THE IMPOSITION OF PENALTY BIDS. SPECIFICALLY, SUCH PERSONS MAY OVER ALLOT IN CONNECTION WITH THE OFFERING AND MAY BID FOR AND PURCHASE THE OFFERED SECURITIES IN THE OPEN MARKET.

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**Summary**

This prospectus is part of a Registration Statement on Form S-3 that we filed with the Securities and Exchange Commission using a shelf registration process. Under this shelf process, we may sell any combination of securities described in this prospectus in one or more offerings, up to a total dollar amount of \$150,000,000. This prospectus provides you with a general description of the securities we may offer. Each time we sell securities, we will provide a prospectus supplement that will contain specific information about the terms of that offering. The prospectus supplement may, along with information that is incorporated by reference as described under the heading **Where You Can Find More Information**, also add, update or change information contained in this prospectus. You should read both this prospectus and any prospectus supplement together with additional information described below under the heading **Where You Can Find More Information**.

**HARMONIC INC.**

Harmonic designs, manufactures and sells a variety of broadband solutions that allow communications service providers around the world to deliver video, voice and data to their subscribers. Harmonic's technically advanced fiber optic, digital video and data delivery systems enable network operators to provide a range of interactive and advanced digital services that include digital video, high-speed Internet access, telephony, HDTV, video and audio streaming, and video-on-demand.

Historically, almost all of our sales were derived directly or indirectly from sales of fiber optic transmission systems to cable television operators. With the introduction of digital headend products beginning in 1997, we broadened our product offering to enable delivery of digital video, voice and data over satellite and wireless networks and cable systems.

In order to further expand our digital systems capability, Harmonic entered into a merger agreement with C-Cube Microsystems Inc., or C-Cube, on October 27, 1999, pursuant to which C-Cube merged into Harmonic. Under the terms of the merger agreement, C-Cube spun off its semiconductor business as a separate publicly traded company prior to the May 3, 2000 closing. C-Cube then merged into Harmonic and Harmonic therefore acquired C-Cube's DiviCom business, which provides MPEG-2 encoding products and systems for digital television.

The merged Company has been organized into two product divisions, Broadband Access Networks, or BAN, for fiber optic systems and Convergent Systems, or CS, for digital headend systems. While the two divisions have been organized generally around the pre-merger Harmonic fiber optics systems and the DiviCom digital headend systems, respectively, these divisions do not correspond to the pre-merger companies in significant ways. For example, certain Harmonic product lines are now part of the CS division.

Harmonic was initially incorporated in California in June 1988 and reincorporated into Delaware in May 1995. Our principal executive offices are located at 549 Baltic Way, Sunnyvale, California 94089. Our telephone number is (408) 542-2500.

**The securities we may offer**

We may offer up to \$150,000,000 of common stock, preferred stock, debt securities, and warrants to purchase common stock. A prospectus supplement, which we will provide to you each time we offer securities, will describe the specific amounts, prices, and terms of these securities.

We may sell the securities to or through underwriters, dealers or agents, or directly to purchasers. We, as well as any agents acting on our behalf, reserve the sole right to accept and to reject in whole or in part any proposed purchase of securities. Each prospectus supplement will set forth the names of any underwriters, dealers, or agents involved in the sale of the securities described in that prospectus supplement and any applicable fee, commission or discount arrangements with them.

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### **Debt securities**

We may offer secured or unsecured obligations in the form of either senior or subordinated debt. The senior debt securities and the subordinated debt securities are together referred to in this prospectus as the debt securities. The unsecured senior debt securities will generally have the same rank in right of payment as our other unsecured, unsubordinated debt. The subordinated debt securities generally will be entitled to payment only after payment of our senior debt. Senior debt generally includes all debt for money borrowed by us, except debt that is stated in the instrument governing the terms of that debt to be not senior to, or to have the same rank in right of payment as, or to be expressly junior to, the subordinated debt securities.

The senior and subordinated debt securities will be issued under separate indentures between us and a trustee. We have summarized the general features of the debt securities to be governed by the indentures. These indentures have been filed as exhibits to the registration statement (No. 333-84430) that we have filed with the Securities and Exchange Commission (this prospectus being a part of that registration statement). We encourage you to read these indentures. Instructions on how you can get copies of these documents are provided below under the heading Where You Can Find More Information.

### **General indenture provisions that apply to senior and subordinated debt**

- Each indenture allows debt to be issued in series with terms particular to each series.
- Neither indenture limits the amount of debt that we may issue or generally provides holders any protection should there be a highly leveraged transaction involving our company.
- The indentures allow us to merge or to consolidate with another United States entity or convey, transfer or lease our properties and assets substantially as an entirety to another United States entity, as long as certain conditions are met. If these events occur, the other entity will be required to assume our obligations on the debt securities and under the indentures, and we will be released from all liabilities and obligations, except in the case of a lease.
- The indentures provide that we and the respective trustee may generally amend the respective indenture with the consent of holders of a majority of the total principal amount of the debt outstanding in any series to change certain of our obligations or your rights concerning the debt. However, to change the payment of principal, interest, or adversely affect the right to convert or certain other matters, every holder in that series must consent.
- We may discharge the indentures and defease restrictive covenants by depositing sufficient funds with the trustee to pay the obligations when due, as long as certain conditions are met. The trustee would pay all amounts due to you on the debt from the deposited funds.

### **Events of default**

Each of the following is among the events of default specified in the indentures:

- Principal not paid when due;
  - Sinking fund payment not made when due;
  - Failure to pay interest for 30 days;
  - Covenants not performed for 90 days after notice; and
  - Certain events of bankruptcy, insolvency or reorganization of Harmonic.
- A prospectus supplement may describe deletions of, or changes or additions to, the events of default.

### **Remedies**

Upon an event of default, other than a bankruptcy, insolvency or reorganization, the trustee or holders of 25% of the principal amount outstanding in a series may declare the outstanding principal plus accrued interest, if any, immediately due and payable. However, the holders of a majority in principal amount may, under certain circumstances, rescind this action.





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**Subordination**

The subordinated indenture provides that the subordinated debt securities will be subordinated to all senior debt as defined in the subordinated indenture.

**Preferred stock**

We may issue preferred stock in one or more series. Our board of directors as a committee designated by the Board will determine the dividend, voting, and conversion rights and other provisions at the time of sale. Each series of preferred stock will be more fully described in the particular prospectus supplement that will accompany this prospectus, including redemption provisions, rights in the event of liquidation, dissolution or the winding up of Harmonic, voting rights and conversion rights.

**Common stock**

We may offer our common stock, par value \$0.001 per share, either alone or underlying other registered securities convertible into our common stock. Common stock holders are entitled to receive dividends declared by our board of directors out of funds legally available for the payment of dividends, subject to rights, if any, of preferred stock holders. Currently, we do not pay a dividend. Each holder of common stock is entitled to one vote per share. The holders of common stock have no preemptive rights or cumulative voting rights.

**Warrants**

We may issue warrants for the purchase of our common stock.

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### Risk factors

*Before you invest in any of our securities, you should be aware of various risks, including those described below. You should carefully consider these risk factors, together with all of the other information included or incorporated by reference in this prospectus and in the prospectus supplement, before you decide whether to purchase any of our securities. The risks set out below are not the only risks we face.*

*If any of the following risks occur, our business, financial condition and results of operations could be materially adversely affected. In such case, the trading price of our securities could decline, and you may lose all or part of your investment.*

**We depend on cable and satellite industry capital spending for a substantial portion of our revenue and any decrease or delay in capital spending in these industries would negatively impact our resources, operating results and financial condition.**

Prior to the merger with C-Cube, almost all of Harmonic's historic sales had been derived from sales to cable television operators and we expect these sales to constitute a significant portion of net sales for the foreseeable future. Almost all of the DiviCom business's historic sales had been derived from sales to satellite operators, telephone companies and cable operators. Demand for the combined company's products will depend on the magnitude and timing of capital spending by cable television operators, satellite operators, broadcasters and telephone companies for constructing and upgrading of their systems.

These capital spending patterns are dependent on a variety of factors, including:

- access to financing;
- annual budget cycles;
- the impact of industry consolidation;
- the status of federal, local and foreign government regulation of telecommunications and television broadcasting;
- overall demand for communication services and the acceptance of new video, voice and data services;
- evolving industry standards and network architectures;
- competitive pressures;
- discretionary customer spending patterns;
- general economic conditions.

In the past, specific factors contributing to reduced capital spending have included:

- uncertainty related to development of digital video and cable modem industry standards;
  - delays associated with the evaluation of new services and system architectures by many cable television operators;
  - emphasis on generating revenue from existing customers by cable television operators instead of new construction or network upgrades; and
  - general economic conditions in domestic and international markets.
- Recent developments in capital markets have reduced access to funding for new and existing customers causing delays in the timing and scale of deployments of our equipment, as well as the postponement of certain projects by our customers. Concerns over high debt levels, and in particular, recent disclosures of off-balance sheet financing by Adelphia Communications, have pressured the market values of cable operators and may further restrict their access to capital. Adelphia accounted for less than five percent of our revenues in 2001. In addition, during the past two years Harmonic and other vendors received notification from significant customers, including AT&T Broadband, RCN and Bell South, that they were



**Table of Contents****Risk factors**

canceling new projects, or delaying new orders to allow them to reduce inventory levels which were in excess of their current deployment requirements.

The timing of deployment of our equipment can be subject to a number of other risks, including the availability of skilled engineering and technical personnel, the availability of other equipment such as fiber optic cable, and the need for local zoning and licensing approvals. We believe that changes in our customers' deployment plans have in recent quarters delayed, and may in the future delay, the receipt of new orders or the release of existing backlog. Since the majority of our sales have been to relatively few customers, a delay in equipment deployment at any one customer has in the past and could have a material adverse effect on our sales in a particular quarter. In this regard, the Company's sales decreased each quarter from the second quarter of 2000 through the first quarter of 2001 and were below our expectations in the BAN and CS divisions as well as the expectations of securities analysts, and the price of our Common Stock declined significantly.

Cable television capital spending can be subject to the effects of seasonality, with fewer construction and upgrade projects typically occurring in winter months and otherwise being affected by inclement weather.

BAN division sales have decreased significantly from the third quarter of 2000 and were 57% lower in 2001 than in 2000. This was due to weak cable industry spending on transmission upgrades, particularly reduced spending by AT&T Broadband and RCN. These two customers accounted for a total of 23% of sales in 2000 compared to a combined total of less than 5% of sales in 2001. CS division sales from the second quarter of 2000 through the first quarter of 2001, consisting principally of DiviCom products, were below DiviCom's sales levels in 1999 and the first quarter of 2000, and were significantly below our expectations at the time the DiviCom merger was announced in October 1999. The lower CS sales were attributable principally to reduced spending by satellite operators. For a more detailed discussion regarding risks related to AT&T Broadband, RCN and other major customers, see "Our Customer Base Is Concentrated And The Loss Of One Or More Of Our Key Customers Would Harm Our Business. The Loss Of Any Key Customer Would Have A Negative Effect On Our Business."

CS division sales increased sequentially during the second and third quarters of 2001 and increased 58% during the second half of 2001 compared to the first half of the year, primarily due to demand for our next-generation digital systems such as the Narrowcast Services Gateway, or NSG, and the MV50 encoder. CS sales of the MV50 encoder during 2001 benefited in particular from the expansion of local channel offerings and compliance with FCC "must carry" regulations by domestic direct broadcast satellite, or DBS, operators. We anticipate that, in light of the announced merger of EchoStar and DirecTV and expectations that operators will add fewer new markets in 2002, our revenue from domestic DBS operators is likely to decline in 2002.

Due to the uncertainty of the capital spending plans of our customers and seasonal weakness, we expect a slight sequential sales decline during the first quarter of 2002. Harmonic expects to report a loss at least through the first half of 2002, and cannot predict when it will return to profitability.

**Our customer base is concentrated and the loss of one or more of our key customers would harm our business. The loss of any key customer would have a negative effect on our business.**

Historically, a majority of our sales and sales of DiviCom have been to relatively few customers, and due in part to the consolidation of ownership of cable television and direct broadcast satellite systems, we expect this customer concentration to continue in the foreseeable future. Sales to our ten largest customers in 2001, 2000, and 1999 accounted for approximately 49%, 52% and 75% of net sales, respectively. Although we are attempting to broaden our customer base by penetrating new markets such as the telco and broadcast markets, we expect to see continuing industry consolidation and customer concentration due in part to the significant capital costs of constructing broadband networks. For example, Comcast and AT&T Broadband, and EchoStar and DirecTV have announced plans to merge. Both combinations are subject to regulatory and shareholder approvals, among other conditions. In 2001, sales to DirecTV and Charter Communications accounted for 13% and 11% of net sales, respectively, compared to less than 10% for each of these customers in 2000 and 1999. In 2000, sales to AT&T Broadband accounted

**Table of Contents****Risk factors**

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for 12% of net sales compared to 41% in 1999. In addition, in 2000 RCN represented 11% of net sales. No other customer accounted for more than 10% of our net sales in 2001, 2000, or 1999. The loss of DirecTV or Charter Communications, or any other significant customer or any reduction in orders by DirecTV, Charter Communications or any significant customer, or our failure to qualify our products with a significant customer could adversely affect our business, operating results and liquidity. We cannot currently predict the impact of the acquisition of DirecTV by EchoStar, if approved, on our future sales. In addition, we cannot assure you that sales to other customers will compensate for the reduction in sales to AT&T Broadband and RCN nor can we predict the impact of the AT&T Broadband merger with Comcast on our future sales. Our sales are made on a purchase order or system contract basis, and none of our customers has entered into a long-term agreement requiring it to purchase our products. The loss of, or any reduction in orders from, a significant customer would harm our business.

**Our operating results are likely to fluctuate significantly and may fail to meet or exceed the expectations of securities analysts or investors, causing our stock price to decline.**

Our operating results have fluctuated in the past and are likely to continue to fluctuate in the future, on an annual and a quarterly basis, as a result of several factors, many of which are outside of our control. Some of the factors that may cause these fluctuations include:

- the level and timing of capital spending of our customers, both in the US and in foreign markets;
- changes in market demand;
- the timing and amount of customer orders;
- the timing of revenue from systems contracts which may span several quarters;
- competitive market conditions;
- our unpredictable sales cycles;
- new product introductions by our competitors or by us;
- changes in domestic and international regulatory environments;
- market acceptance of new or existing products;
- the cost and availability of components, subassemblies and modules;
- the mix of our customer base and sales channels;
- the mix of our products sold;
- our development of custom products and software;
- the level of international sales; and
- economic conditions specific to the cable and satellite industries, and general economic conditions.

In addition, we often recognize a substantial portion of our revenues in the last month of the quarter. We establish our expenditure levels for product development and other operating expenses based on projected sales levels, and expenses are relatively fixed in the short term. Accordingly, variations in timing of sales can cause significant fluctuations in operating results. In addition, because a significant portion of our business is derived from orders placed by a limited number of large customers, the timing of such orders can also cause significant fluctuations in our operating results. Our expenses for any given quarter are typically based on expected sales and if sales are below expectations, our operating results may be adversely impacted by our inability to adjust spending to compensate for the shortfall. As a result of all these factors, our operating results in one or more future periods may fail to meet or exceed the expectations of securities analysts or investors. In that event, the trading price of our common stock would likely decline. In this regard, due to lower than expected sales in each quarter from the second quarter of 2000 through the first quarter of 2001, we failed to meet our internal expectations, as well as



## **Table of Contents**

### **Risk factors**

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the expectations of securities analysts and investors, and the price of our common stock declined significantly.

As a result of the September 11, 2001 terrorist attacks in New York City and Washington, D.C., the United States and global economies have weakened and may continue to deteriorate, which may impair our ability to ship our products within the United States and internationally, and may result in further decreases in our revenues and cause our stock price to decline. In addition, it is anticipated that in the wake of these events, the United States and global capital markets will experience a period of continuing volatility. These events may have a negative impact on our business as a result of the cautious purchasing behavior of customers.

#### **We may need additional capital in the future and may not be able to secure adequate funds on terms acceptable to us.**

While we expect to report a loss at least through the first half of 2002, we currently believe that our existing liquidity sources, including bank line of credit and factoring facilities will satisfy our requirements for at least the next twelve months. We may need to raise additional funds if our estimates change or prove inaccurate or in order for us to respond to unforeseen technological or marketing hurdles, or to take advantage of unanticipated opportunities. Our ability to raise funds may be adversely affected by a number of factors relating to Harmonic, as well as factors beyond our control, including increased market uncertainty following the events of September 11, 2001 and the ongoing U.S. war on terrorism. There can be no assurance that such financing will be available on terms acceptable to us, if at all.

In addition, we may review other potential acquisitions that would complement our existing product offerings, enhance our technical capabilities or expand our marketing and sales presence. While we have no current agreements or negotiations underway with respect to any potential acquisition, any future transaction of this nature could require potentially significant amounts of capital. If adequate funds are not available, or are not available on acceptable terms, we may not be able to take advantage of market opportunities, to develop new products or to otherwise respond to competitive pressures.

#### **We depend on our international sales and are subject to the risks associated with international operations, which may negatively affect our operating results.**

Sales to customers outside of the United States in 2001, 2000 and 1999 represented 40%, 36% and 30%, of net sales, respectively, and we expect that international sales will continue to represent a substantial portion of our net sales for the foreseeable future. Our international operations are subject to a number of risks, including:

- changes in foreign government regulations and telecommunications standards;
- import and export license requirements, tariffs, taxes and other trade barriers;
- fluctuations in currency exchange rates;
- difficulty in collecting accounts receivable;
- the burden of complying with a wide variety of foreign laws, treaties and technical standards;
- difficulty in staffing and managing foreign operations; and
- political and economic instability.

While our international sales have typically been denominated in US dollars, fluctuations in currency exchange rates could cause our products to become relatively more expensive to customers in a particular country, leading to a reduction in sales or profitability in that country. Following implementation of the final phase of the Euro changeover effective January 1, 2002, we expect a higher portion of our European business to be denominated in Euros which may subject us to increased foreign currency risk. Gains and losses on the conversion to US dollars of accounts receivable, accounts payable and other monetary assets and liabilities arising from international operations may contribute to fluctuations in operating results. Furthermore, payment cycles for international customers are typically longer than those

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### **Risk factors**

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for customers in the United States. Unpredictable sales cycles could cause us to fail to meet or exceed the expectations of security analysts and investors for any given period. In addition, foreign markets may not develop in the future.

#### **We must be able to manage expenses and inventory risks associated with meeting the demand of our customers.**

From time to time, we receive indications from our customers as to their future plans and requirements to ensure that we will be prepared to meet their demand for our products. If actual orders differ materially from these indications, our ability to manage inventory and expenses may be affected. In addition, if we fail to meet customers' supply expectations, we may lose business from such customers. If we enter into purchase commitments to acquire materials, or expend resources to manufacture products and such products are not purchased by our customers, our business and operating results could suffer. In this regard, our gross margins and operating results for the last five quarters were adversely affected by provisions for excess and obsolete inventories of approximately \$49 million.

#### **The markets in which we operate are intensely competitive and many of our competitors are larger and more established.**

The markets for cable television fiber optics systems and digital video broadcasting systems are extremely competitive and have been characterized by rapid technological change and declining average selling prices.

Harmonic's competitors in the cable television fiber optics systems business include corporations such as Arris (a company owned in part by Nortel and AT&T), C-Cor.net, Motorola, Philips and Scientific-Atlanta.

In the digital and video broadcasting systems business, we compete broadly with vertically integrated system suppliers including Motorola, Scientific-Atlanta, Tandberg, Thomson Multimedia and Philips, and in certain product lines with Cisco and Terayon and a number of smaller companies.

Most of our competitors are substantially larger and have greater financial, technical, marketing and other resources than Harmonic. Many of these large organizations are in a better position to withstand any significant reduction in capital spending by customers in these markets. They often have broader product lines and market focus and will therefore not be as susceptible to downturns in a particular market. In addition, many of our competitors have been in operation longer than we have and therefore have more long standing and established relationships with domestic and foreign customers. We may not be able to compete successfully in the future and competition may harm our business.

If any of our competitors' products or technologies were to become the industry standard, our business could be seriously harmed. For example, US cable operators have to date mostly purchased proprietary digital systems from Motorola and Scientific-Atlanta. While certain operators have made limited purchases of the open systems provided by Harmonic, we cannot assure you that our digital products will find broad market acceptance with US cable operators. In addition, companies that have historically not had a large presence in the broadband communications equipment market have begun recently to expand their market share through mergers and acquisitions. The continued consolidation of our competitors could have a significant negative impact on us. Further, our competitors, particularly competitors of our digital and video broadcasting systems business, may bundle their products or incorporate functionality into existing products in a manner that discourages users from purchasing our products or which may require us to lower our selling prices resulting in lower gross margins.

#### **Broadband communications markets are relatively immature and characterized by rapid technological change.**

Broadband communications markets are relatively immature, making it difficult to accurately predict the markets' future growth rates, sizes or technological directions. In view of the evolving nature of these markets, it is possible that cable television operators, telephone companies or other suppliers of broadband wireless and satellite services will decide to adopt alternative architectures or technologies that are



## **Table of Contents**

### **Risk factors**

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incompatible with our current or future products. If we are unable to design, develop, manufacture and sell products that incorporate or are compatible with these new architectures or technologies, our business will suffer.

#### **We need to develop and introduce new and enhanced products in a timely manner to remain competitive.**

Broadband communications markets are characterized by continuing technological advancement, changes in customer requirements and evolving industry standards. To compete successfully, we must design, develop, manufacture and sell new or enhanced products that provide increasingly higher levels of performance and reliability. However, we may not be able to successfully develop or introduce these products, if our products:

- are not cost effective,
- are not brought to market in a timely manner,
- are not in accordance with evolving industry standards and architectures, or
- fail to achieve market acceptance.

In addition, to successfully develop and market our planned products, we must retain and continue to attract personnel with appropriate experience and expertise. Competition for qualified personnel is intense. We may not be successful in retaining and attracting qualified personnel.

Also, to successfully develop and market certain of our planned products for digital applications, we may be required to enter into technology development or licensing agreements with third parties. We cannot assure you that we will be able to enter into any necessary technology development or licensing agreement on terms acceptable to us, or at all. The failure to enter into technology development or licensing agreements when necessary could limit our ability to develop and market new products and, accordingly, could materially and adversely affect our business and operating results.

#### **We need to effectively manage our operations and the cyclical nature of our business.**

The growth of our operations and cyclical nature of our business has placed, and is expected to continue to place, a significant strain on our personnel, management and other resources. This strain has been exacerbated by the acquisition of DiviCom and the subsequent loss of numerous employees, including senior management. In addition, we reduced our work force by approximately 30% during 2001 due to reduced industry spending and demand for our products. Our ability to manage our business effectively in the future, including any future growth, will require us to train, motivate and manage our employees successfully, to attract and integrate new employees into our overall operations, to retain key employees and to continue to improve our operational, financial and management systems. In particular, in April 2001 we implemented a new management information system. We believe this new system significantly affects many aspects of our business, including accounting, manufacturing operations, purchasing, sales and marketing functions. The successful operation of this system is critical to our business. While the initial phase of implementation has been successful, there can be no assurance that we will complete the transition to the new system in an efficient, cost-effective or timely manner or that the new information system will be adequate to support all of our operations. If we fail to manage our existing operations or any future growth effectively, our business could suffer.

#### **Competition for qualified personnel is intense, and we may not be successful in attracting and retaining personnel.**

Our future success will depend, to a significant extent, on the ability of our management to operate effectively, both individually and as a group. We are dependent on our ability to retain and motivate high caliber personnel, in addition to attracting new personnel. In spite of the current worldwide economic slowdown, competition for qualified technical and other personnel remains intense, particularly in the San Francisco Bay Area and Israel, and we may not be successful in attracting and retaining such personnel.

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Competitors and others have in the past and may in the future attempt to recruit our employees. While our employees are required to sign standard agreements concerning confidentiality and ownership of inventions, we generally do not have employment contracts or noncompetition agreements with any of our personnel. The loss of the services of any of our key personnel, the inability to attract or retain qualified personnel in the future or delays in hiring required personnel, particularly engineers and other technical personnel, could negatively affect our business.

**We are liable for C-Cube's pre-merger tax liabilities, including tax liabilities resulting from the spin-off of its semiconductor business.**

The spin-off of C-Cube's semiconductor business gave rise to a significant tax liability of approximately \$320 million based on a valuation of the semiconductor business of \$1.1 billion. The estimated liability was paid in 2000. Under state law, Harmonic generally is liable for all of C-Cube's debts, including C-Cube's liability for taxes resulting from the spin-off and other pre-merger tax liabilities. C-Cube retained and transferred to Harmonic in the merger an amount of cash and other consideration sufficient to pay this liability as well as all other tax liabilities of C-Cube and its subsidiaries for periods prior to the merger. The merger agreement stipulates that Harmonic will be indemnified by the spun-off semiconductor business if the cash reserves are not sufficient to satisfy all of C-Cube's tax liabilities for periods prior to the merger. If for any reason, the spun-off semiconductor business does not have sufficient cash to pay such taxes, or if there are additional taxes due with respect to the non-semiconductor business and Harmonic cannot be indemnified by C-Cube, Harmonic generally will remain liable, and such liability could have a material adverse effect on Harmonic. The spun-off semiconductor business was recently acquired by LSI Logic, which assumed these obligations to Harmonic.

**Due to the structure of the merger transaction, Harmonic is liable for C-Cube's general pre-merger liabilities and any liabilities relating to C-Cube's semiconductor business for which the spun-off semiconductor business is unable to indemnify Harmonic.**

The merger of C-Cube into Harmonic, with Harmonic as the surviving entity, resulted in our assuming all of the liabilities of C-Cube at the time of the merger. Pursuant to the merger agreement, Harmonic is indemnified by the spun-off semiconductor business for liabilities associated with C-Cube's historic semiconductor business. However, if LSI Logic is unable to fulfill its indemnification obligations to Harmonic or if general liability claims not specifically associated with C-Cube's historic semiconductor business are asserted, we would have to assume such obligations. Those obligations could adversely effect our financial condition.

**We may be subject to risks associated with other acquisitions.**

We have made and may make investments in complementary companies, products or technologies. If we make acquisitions, we could have difficulty assimilating or retaining the acquired companies' personnel and operations or integrating the acquired technology or products into ours. These difficulties could disrupt our ongoing business, distract our management and employees and increase our expenses. Moreover, our operating results may suffer because of acquisition-related expenses, amortization of intangible assets and impairment of acquired goodwill or intangible assets. Furthermore, we may have to incur debt or issue equity securities to pay for any future acquisitions, the issuance of which could be dilutive to our existing shareholders. If we are unable to successfully address any of these risks, our business, financial condition and operating results could be harmed.

**Difficulties in the development and production of video encoding chips by C-Cube's spun-off semiconductor business may adversely impact us.**

The DiviCom business and C-Cube semiconductor business collaborated on the production and development of two video encoding microelectronic chips prior to the merger. In connection with the merger, Harmonic and the spun-off semiconductor business entered into a contractual relationship under which Harmonic will have access to certain of the spun-off semiconductor business technologies and products which the DiviCom business previously depended on for its product and service offerings.

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However, under the contractual relationships between Harmonic and the spun-off semiconductor business, which was recently acquired by LSI Logic, the semiconductor business does not have a firm commitment to continue the development of video encoding microelectronic chips. As a result, the semiconductor business may choose not to continue future development of the chips for any reason. The semiconductor business may also encounter in the future technological difficulties in the production and development of the chips. If the spun-off semiconductor business is not able to or does not sustain its development and production efforts in this area, we may not be able to fully recognize the benefits of the acquisition. See Supply, License and Development Agreement at page 60 of the joint proxy statement filed with the Securities and Exchange Commission on March 23, 2000, for further details of Harmonic's business relationship with the spun-off semiconductor business after the merger.

**If sales forecasted for a particular period are not realized in that period due to the unpredictable sales cycles of our products, our operating results for that period will be harmed.**

The sales cycles of many of our products, particularly our newer products and products sold internationally, are typically unpredictable and usually involve:

- a significant technical evaluation;
- a commitment of capital and other resources by cable, satellite, and other network operators;
- capital expenditures;
- time required to engineer the deployment of new technologies or services within broadband networks; and
- testing and acceptance of new technologies that affect key operations.

For these and other reasons, our sales cycles generally last three to six months, but can last up to 12 months. If orders forecasted for a specific customer for a particular quarter do not occur in that quarter, our operating results for that quarter could be substantially lower than anticipated.

As a result of the merger, a significant portion of our revenue is derived from solution contracts. A substantial portion of CS division revenues are from solution contracts that include a combination of product sales as well as design, installation and integration services. Revenue forecasts for solution contracts are based on the estimated timing of the design, installation and integration of projects. Because the solution contracts generally span several quarters and revenue recognition is based on progress under the contract, the timing of revenue is difficult to predict and could result in lower than expected revenue in any particular quarter.

**Our failure to adequately protect our proprietary rights may adversely affect us.**

We currently hold 39 issued United States patents and 8 issued foreign patents, and have a number of patent applications pending. Although we attempt to protect our intellectual property rights through patents, trademarks, copyrights, licensing arrangements, maintaining certain technology as trade secrets and other measures, we cannot assure you that any patent, trademark, copyright or other intellectual property rights owned by us will not be invalidated, circumvented or challenged, that such intellectual property rights will provide competitive advantages to us or that any of our pending or future patent applications will be issued with the scope of the claims sought by us, if at all. We cannot assure you that others will not develop technologies that are similar or superior to our technology, duplicate our technology or design around the patents that we own. In addition, effective patent, copyright and trade secret protection may be unavailable or limited in certain foreign countries in which we do business or may do business in the future.

We believe that the future success of our business will depend on our ability to translate the technological expertise and innovation of our personnel into new and enhanced products. We generally enter into confidentiality or license agreements with our employees, consultants, vendors and customers as needed, and generally limit access to and distribution of our proprietary information. Nevertheless, we cannot

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assure you that the steps taken by us will prevent misappropriation of our technology. In addition, we have taken in the past, and may take in the future, legal action to enforce our patents and other intellectual property rights, to protect our trade secrets, to determine the validity and scope of the proprietary rights of others, or to defend against claims of infringement or invalidity. Such litigation could result in substantial costs and diversion of resources and could negatively effect our business, operating results, financial position and liquidity.

In order to successfully develop and market certain of our planned products for digital applications, we may be required to enter into technology development or licensing agreements with third parties. Although many companies are often willing to enter into such technology development or licensing agreements, we cannot assure you that such agreements will be negotiated on terms acceptable to us, or at all. The failure to enter into technology development or licensing agreements, when necessary, could limit our ability to develop and market new products and could cause our business to suffer.

Harmonic's industry is characterized by the existence of a large number of patents and frequent claims and related litigation regarding patent and other intellectual property rights. In particular, leading companies in the telecommunications industry have extensive patent portfolios. From time to time, third parties, including these leading companies, have asserted and may assert exclusive patent, copyright, trademark and other intellectual property rights against us or our customers. Indeed, a number of third parties, including leading companies, have asserted patent rights to technologies that are important to us. We expect to increasingly be subject to infringement claims asserted by third parties as the numbers of products and competitors in the telecommunications industry grow. In this regard, since December 2000, we have been in communication with several of Harmonic's customers who have been contacted by one of these leading companies that believes certain of our products require a license under a number of their patents. We currently are reviewing the identified patents to examine whether we consider a license necessary. While it is our understanding that the third party is willing to grant our customers a non-exclusive license under the identified patents, there can be no assurance that the terms of any offered license would be acceptable to our customers or that failure to obtain a license or the costs associated with any license would not cause our operating results to be materially adversely affected.

**We purchase several key components, subassemblies and modules used in the manufacture or integration of our products from sole or limited sources, and we are increasingly dependent on contract manufacturers.**

Many components, subassemblies and modules necessary for the manufacture or integration of our products are obtained from a sole supplier or a limited group of suppliers. Our reliance on sole or limited suppliers, particularly foreign suppliers, and our increased reliance on subcontractors since the merger with C-Cube involves several risks, including a potential inability to obtain an adequate supply of required components, subassemblies or modules and reduced control over pricing, quality and timely delivery of components, subassemblies or modules. In particular, certain optical components have in the past been in short supply and are available only from a small number of suppliers, including sole source suppliers. While we expend considerable efforts to qualify additional optical component sources, consolidation of suppliers in the industry and the small number of viable alternatives have limited the results of these efforts. We do not generally maintain long-term agreements with any of our suppliers or subcontractors. An inability to obtain adequate deliveries or any other circumstance that would require us to seek alternative sources of supply could affect our ability to ship our products on a timely basis, which could damage relationships with current and prospective customers and harm our business. We attempt to limit this risk by maintaining safety stocks of these components, subassemblies and modules. As a result of this investment in inventories, we have in the past and in the future may be subject to risk of excess and obsolete inventories, which could harm our business. In this regard, our gross margins and operating results for the last five quarters were adversely affected by excess and obsolete inventory charges of approximately \$49 million.

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**Risk factors**

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**We face risks associated with having important facilities and resources located in Israel.**

Harmonic maintains two facilities in the State of Israel with a total of approximately 80 employees. The personnel at these facilities represent a significant portion of our research and development operations. Accordingly, we are directly influenced by the political, economic and military conditions affecting Israel, and any major hostilities involving Israel or the interruption or curtailment of trade between Israel and its present trading partners could significantly harm our business. The September terrorist attacks, the ongoing US war on terrorism and the escalation of terrorist attacks and hostilities within Israel have heightened these risks. We cannot assure you that the protraction or escalation of current tensions in the Middle East will not adversely affect our business and results of operations.

In addition, most of our employees in Israel are currently obligated to perform annual reserve duty in the Israel Defense Forces and are subject to being called for active military duty at any time. We cannot predict the effect of these obligations on Harmonic in the future.

**We are the subject of securities class action claims and other litigation which, if adversely determined, could harm our business and operating results.**

Between June 28 and August 25, 2000, several actions alleging violations of the federal securities laws by Harmonic and certain of its officers and directors (some of whom are no longer with Harmonic) were filed in or removed to the United States District Court for the Northern District of California. The actions subsequently were consolidated.

A consolidated complaint, filed on December 7, 2000, was brought on behalf of a purported class of persons who purchased Harmonic's publicly traded securities between January 19 and June 26, 2000. The complaint also alleged claims on behalf of a purported subclass of persons who purchased C-Cube securities between January 19 and May 3, 2000. In addition to Harmonic and certain of its officers and directors, the complaint also named C-Cube Microsystems Inc. and several of its officers and directors as defendants. The complaint alleged that, by making false or misleading statements regarding Harmonic's prospects and customers and its acquisition of C-Cube, certain defendants violated sections 10(b) and 20(a) of the Securities Exchange Act of 1934. The complaint also alleged that certain defendants violated section 14(a) of the Exchange Act and sections 11, 12(a)(2), and 15 of the Securities Act of 1933 by filing a false or misleading registration statement, prospectus, and joint proxy in connection with the C-Cube acquisition.

On July 3, 2001, the Court dismissed the consolidated complaint with leave to amend. An amended complaint alleging the same claims against the same defendants was filed on August 13, 2001. Defendants moved to dismiss the amended complaint on September 24, 2001. Pursuant to the Court's July 3, 2001 order, no hearing on the motions will be held unless the Court sets one.

A derivative action purporting to be on behalf of Harmonic was filed against its then-current directors in the Superior Court for the County of Santa Clara on September 5, 2000. Harmonic also was named as a nominal defendant. The complaint is based on allegations similar to those found in the securities class actions and claims that the defendants breached their fiduciary duties by, among other things, causing Harmonic to violate federal securities laws. The derivative action was removed to the United States District Court for the Northern District of California on September 20, 2000. All deadlines in this action have been stayed pending resolution of the motions to dismiss the securities actions. At an April 5, 2002 case management conference, the court continued the conference until June 7, 2002. The court stated that the parties need not appear if no decision on the motions to dismiss the securities action had been issued by that date.

Based on its review of the complaints filed in the securities class action, Harmonic believes that it has meritorious defenses and intends to defend itself vigorously. There can be no assurance, however, that Harmonic will prevail. An unfavorable outcome of this litigation could have a material adverse effect on Harmonic's business, operating results, financial position and liquidity.

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In November 2001, we were sued in Tennessee state court by a company alleging breach of contract and breach of a Tennessee statute relating to retailers and suppliers. The suit has a claim for \$2.5 million and other unspecified damages, lost profits and attorneys' fees. The suit has since been removed to Federal Court and a trial date has been set for June 2003. Harmonic believes that it has meritorious defenses and will defend the suit vigorously. However, we cannot assure you that an unfavorable outcome will not adversely impact our business, operating results, financial position and liquidity.

**Our stock price may be volatile.**

The market price of our common stock has fluctuated significantly in the past, particularly in recent years, and is likely to fluctuate in the future. In addition, the securities markets have experienced significant price and volume fluctuations and the market prices of the securities of technology companies have been especially volatile. Investors may be unable to resell their shares of our common stock at or above their purchase price. In the past, companies that have experienced volatility in the market price of their stock have been the object of securities class action litigation.

**We rely on a continuous power supply to conduct our operations, and California's current electrical and natural gas crisis could disrupt our operations and increase our expenses.**

We rely on a continuous power supply for manufacturing and to conduct our business operations. Interruptions in electrical power supplies in California in the early part of last year could recur in the future. In addition, the cost of electricity and natural gas has risen significantly. Power outages could disrupt our manufacturing and business operations and those of many of our suppliers, and could cause us to fail to meet production schedules and commitments to customers and other third parties. Any disruption to our operations or those of our suppliers could result in damage to our current and prospective business relationships and could result in lost revenue and additional expenses, thereby harming our business and operating results.

**Our certificate of incorporation and bylaws and Delaware law contain provisions that could discourage a takeover.**

Provisions of our Amended and Restated Certificate of Incorporation, Bylaws, and Delaware law could make it more difficult for a third party to acquire us, even if doing so would be beneficial to our stockholders.

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**Use of proceeds**

Unless otherwise indicated in the prospectus supplement, the net proceeds from the sale of securities offered by this prospectus will be used for general corporate purposes, including capital expenditures and to meet working capital needs. We expect from time to time to evaluate the acquisition of businesses, products and technologies for which a portion of the net proceeds may be used. Pending such uses, we will invest the net proceeds in interest-bearing securities.

**Ratio of earnings available to cover fixed charges**

The ratio of earnings to combined fixed charges and preferred stock dividends is identical to the ratio of earnings to fixed charges because we have not issued any preferred stock. The ratio of earnings to fixed charges and the ratio of earnings to combined fixed charges and preferred stock dividends for each of the periods indicated is as follows:

	<b>Fiscal Year Ended December 31,</b>				
	<b>1997</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>
Ratio of earnings available to cover fixed charges <sup>(a)</sup>	12:1		51:1		

(a) *Due to our losses in 1998, 2000, and 2001, the ratio coverage was less than 1:1. Additional earnings of \$21.5 million, \$1.7 billion, and \$167.2 million would have been required in each of those periods, respectively, to achieve a coverage of 1:1.*

In calculating the ratio of earnings available to cover fixed charges, earnings consist of net income (loss) before provisions for income taxes plus fixed charges. Fixed charges consist of:

- interest expense; and
- one-third of our rental expense, which we believe to be representative of interest attributable to rentals.

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## Description of the debt securities

The debt securities may be either secured or unsecured and will either be our senior debt securities or our subordinated debt securities. The debt securities will be issued under one or more separate indentures between us and a trustee. Senior debt securities will be issued under a senior indenture and subordinated debt securities will be issued under a subordinated indenture. Together, the senior indenture and subordinated indenture are called indentures. This prospectus, together with the applicable prospectus supplement, will describe all the material terms of a particular series of debt securities.

The following is a summary of selected provisions and definitions of the indentures. The summary of selected provisions of the indentures and the debt securities appearing below is not complete and is subject to, and qualified entirely by reference to, all of the provisions of the applicable indenture and certificates evidencing the applicable debt securities. For additional information, you should look at the applicable indenture and the certificate evidencing the applicable debt security that is filed as an exhibit to the registration statement which includes this prospectus. In this description of the debt securities, the words *Harmonic*, *we*, *us*, *its* or *our* refer only to Harmonic Inc. and not to any of our subsidiaries.

The following description sets forth selected general terms and provisions of the applicable indenture and debt securities to which any prospectus supplement may relate. Other specific terms of the applicable indenture and debt securities will be described in the applicable prospectus supplement. If any particular terms of the indenture or debt securities described in a prospectus supplement differ from any of the terms described below, then the terms described below will be deemed to have been superceded by that prospectus supplement.

### General

Debt securities may be issued in separate series without limitation as to aggregate principal amount. We may specify a maximum aggregate principal amount for the debt securities of any series.

We are not limited as to the amount of debt securities we may issue under the indentures. Unless otherwise provided in a prospectus supplement, a series of debt securities may be reopened to issue additional debt securities of such series.

The prospectus supplement relating to a particular series of debt securities will set forth:

- whether the debt securities are senior or subordinated,
- the offering price,
- the title,
- any limit on the aggregate principal amount,
- the person who shall be entitled to receive interest, if other than the record holder on the record date,
- the date or dates the principal will be payable,
- the interest rate or rates, which may be fixed or variable, if any, the date interest will accrue, the interest payment dates and the regular record dates or the method for calculating the dates and rates,
- the place where payments may be made,
- any mandatory or optional redemption provisions or sinking fund provisions and any applicable redemption or purchase prices associated with these provisions,
- if issued other than in denominations of US \$1,000 or any multiple of US \$1,000, the denominations in which the debt securities shall be issuable,
- if applicable, the method for determining how the principal, premium, if any, or interest will be calculated by reference to an index or formula,





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### **Description of the debt securities**

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- if other than US currency, the currency or currency units in which principal, premium, if any, or interest will be payable and whether we or a holder may elect payment to be made in a different currency,
- the portion of the principal amount that will be payable upon acceleration of maturity, if other than the entire principal amount,
- if the principal amount payable at stated maturity will not be determinable as of any date prior to stated maturity, the amount or method for determining the amount which will be deemed to be the principal amount,
- if applicable, whether the debt securities shall be subject to the defeasance provisions described below under Satisfaction and discharge; defeasance or such other defeasance provisions specified in the applicable prospectus supplement for the debt securities,
- any conversion or exchange provisions,
- whether the debt securities will be issuable in the form of a global security,
- any subordination provisions applicable to the subordinated debt securities if different from those described below under Subordinated Debt Securities,
- any paying agents, authenticating agents, security registrars or other agents for the debt securities,
- any provisions relating to any security provided for the debt securities, including any provisions regarding the circumstances under which collateral may be released or substituted,
- any deletions of, or changes or additions to, the events of default, acceleration provisions or covenants,
- any provisions relating to guaranties for the securities and any circumstances under which there may be additional obligors; and
- any other specific terms of such debt securities.

Unless otherwise specified in the prospectus supplement, the debt securities will be registered debt securities.

Debt securities may be sold at a substantial discount below their stated principal amount, bearing no interest or interest at a rate which at time of issuance is below market rates. The United States federal income tax considerations applicable to debt securities sold at a discount will be described in the applicable prospectus supplement.

### **Exchange and transfer**

Debt securities may be transferred or exchanged at the office of the security registrar or at the office of any transfer agent designated by us.

We will not impose a service charge for any transfer or exchange, but we may require holders to pay any tax or other governmental charges associated with any transfer or exchange.

In the event of any partial redemption of debt securities of any series, we will not be required to:

- issue, register the transfer of, or exchange, any debt security of that series during a period beginning at the opening of business 15 days before the day of mailing of a notice of redemption and ending at the close of business on the day of the mailing, or
- register the transfer of or exchange any debt security of that series selected for redemption, in whole or in part, except the unredeemed portion being redeemed in part.

We have initially appointed the trustee as the security registrar. Any transfer agent, and any other security registrar, will be named in the prospectus supplement. We may designate additional transfer agents or change transfer agents or change the office of the transfer agent. However, we will be required to maintain a transfer agent in each place of payment for the debt securities of each series.



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### **Description of the debt securities**

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#### **Global securities**

The debt securities of any series may be represented, in whole or in part, by one or more global securities. Each global security will:

- be registered in the name of a depository, or its nominee, that we will identify in a prospectus supplement,
- be deposited with the depository or nominee or custodian, and
- bear any required legends.

No global security may be exchanged in whole or in part for debt securities registered in the name of any person other than the depository or any nominee unless:

- the depository has notified us that it is unwilling or unable to continue as depository or has ceased to be qualified to act as depository,
- an event of default is continuing with respect to the debt securities of the applicable series, or
- any other circumstance described in a prospectus supplement has occurred permitting or requiring the issuance of any such security.

As long as the depository, or its nominee, is the registered owner of a global security, the depository or nominee will be considered the sole owner and holder of the debt securities represented by the global security for all purposes under the indentures. Except in the above limited circumstances, owners of beneficial interests in a global security will not be:

- entitled to have the debt securities registered in their names,
- entitled to physical delivery of certificated debt securities, or
- considered to be holders of those debt securities under the indenture.

Payments on a global security will be made to the depository or its nominee as the holder of the global security. Some jurisdictions have laws that require that certain purchasers of securities take physical delivery of such securities in definitive form. These laws may impair the ability to transfer beneficial interests in a global security.

Institutions that have accounts with the depository or its nominee are referred to as participants. Ownership of beneficial interests in a global security will be limited to participants and to persons that may hold beneficial interests through participants. The depository will credit, on its book-entry registration and transfer system, the respective principal amounts of debt securities represented by the global security to the accounts of its participants.

Ownership of beneficial interests in a global security will be shown on and effected through records maintained by the depository, with respect to participants' interests, or any participant, with respect to interests of persons held by participants on their behalf.

Payments, transfers and exchanges relating to beneficial interests in a global security will be subject to policies and procedures of the depository. The depository policies and procedures may change from time to time. Neither we nor any trustee will have any responsibility or liability for the depository's or any participant's records with respect to beneficial interests in a global security.

#### **Payment and paying agents**

Unless otherwise indicated in a prospectus supplement, the provisions described in this paragraph will apply to the debt securities. Payment of interest on a debt security on any interest payment date will be made to the person in whose name the debt security is registered at the close of business on the regular record date. Payment on debt securities of a particular series will be payable at the office of a paying agent or paying agents designated by us. However, at our option, we may pay interest by mailing a check to the record holder. The corporate trust office will be designated as our sole paying agent.



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### **Description of the debt securities**

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We may also name any other paying agents in a prospectus supplement. We may designate additional paying agents, change paying agents or change the office of any paying agent. However, we will be required to maintain a paying agent in each place of payment for the debt securities of a particular series.

All moneys paid by us to a paying agent for payment on any debt security which remain unclaimed for a period ending the earlier of:

- 10 business days prior to the date the money would be turned over to the applicable state, or
- at the end of two years after such payment was due, will be repaid to us. Thereafter, the holder may look only to us for such payment.

### **No protection in the event of a change of control**

Unless otherwise indicated in a prospectus supplement with respect to a particular series of debt series, the debt securities will not contain any provisions which may afford holders of the debt securities protection in the event we have a change in control or in the event of a highly leveraged transaction (whether or not such transaction results in a change in control).

### **Covenants**

Unless otherwise indicated in a prospectus supplement, the debt securities will not contain any restrictive covenants, including covenants restricting either us or any of our subsidiaries from incurring, issuing, assuming or guarantying any indebtedness secured by a lien on any of our or our subsidiaries' property or capital stock, or restricting either us or any of our subsidiaries from entering into sale and leaseback transactions.

### **Consolidation, merger and sale of assets**

Unless we indicate otherwise in a prospectus supplement, we may not consolidate with or merge into any other person, in a transaction in which we are not the surviving corporation, or convey, transfer or lease our properties and assets substantially as an entirety to, any person, unless:

- the successor entity, if any, is a US corporation, limited liability company, partnership or trust,
- the successor entity assumes our obligations on the debt securities and under the indentures,
- immediately after giving effect to the transaction, no default or event of default shall have occurred and be continuing, and
- certain other conditions are met.

### **Events of default**

Unless we indicate otherwise in a prospectus supplement, the following will be events of default for any series of debt securities under the indentures:

- (1) we fail to pay principal of or any premium on any debt security of that series when due,
- (2) we fail to pay any interest on any debt security of that series for 30 days after it becomes due,
- (3) we fail to deposit any sinking fund payment when due,
- (4) we fail to perform any other covenant in the indenture and such failure continues for 90 days after we are given the notice required in the indentures, and
- (5) certain events including bankruptcy, insolvency or reorganization of Harmonic.

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Additional or different events of default applicable to a series of debt securities may be described in a prospectus supplement. An event of default of one series of debt securities is not necessarily an event of default for any other series of debt securities.

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### **Description of the debt securities**

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The trustee may withhold notice to the holders of any default, except defaults in the payment of principal, premium, if any, interest, any sinking fund installment on, or with respect to any conversion right of, the debt securities of such series. However, the trustee must consider it to be in the interest of the holders of the debt securities of such series to withhold this notice.

Unless we indicate otherwise in a prospectus supplement, if an event of default, other than an event of default described in clause (5) above, shall occur and be continuing, either the trustee or the holders of at least 25% in aggregate principal amount of the outstanding securities of that series may declare the principal amount of the debt securities of that series (or if any debt securities of that series are original issue discount securities, such other amount as may be specified in the applicable prospectus supplement), together with accrued and unpaid interest, if any, thereon to be due and payable immediately.

If an event of default described in clause (5) above shall occur, the principal amount of all the debt securities of that series (or if any debt securities of that series are original issue discount securities, such other amount as may be specified in the applicable prospectus supplement), together with accrued and unpaid interest, if any, thereon will automatically become immediately due and payable. Any payment by us on the subordinated debt securities following any such acceleration will be subject to the subordination provisions described below under Subordinated Debt Securities.

After acceleration the holders of a majority in aggregate principal amount of the outstanding securities of that series may, under certain circumstances, rescind and annul such acceleration if all events of default, other than the non-payment of accelerated principal, or other specified amounts, have been cured or waived.

Other than the duty to act with the required care during an event of default, the trustee will not be obligated to exercise any of its rights or powers at the request of the holders unless the holders shall have offered to the trustee reasonable indemnity. Generally, the holders of a majority in aggregate principal amount of the outstanding debt securities of any series will have the right to direct the time, method and place of conducting of any proceeding for any remedy available to the trustee or exercising any trust or power conferred on the trustee.

A holder will not have any right to institute any proceeding under the indentures, or for the appointment of a receiver or a trustee, or for any other remedy under the indentures, unless:

- (1) the holder has previously given to the trustee written notice of a continuing event of default with respect to the debt securities of that series,
- (2) the holders of at least a majority in aggregate principal amount of the outstanding debt securities of that series have made a written request and have offered reasonable indemnity to the trustee to institute the proceeding, and
- (3) the trustee has failed to institute the proceeding and has not received direction inconsistent with the original request from the holders of a majority in aggregate principal amount of the outstanding debt securities of that series within 60 days after the original request.

Holders may, however, sue to enforce the payment of principal, premium or interest on any debt security on or after the due date or to enforce the right, if any, to convert any debt security (if the debt security is convertible) without following the procedures listed in (1) through (3) above.

We will furnish the trustee an annual statement by our officers as to whether or not we are in default in the performance of the conditions and covenants under the indenture and, if so, specifying all known defaults.

### **Modification and waiver**

Unless we indicate otherwise in a prospectus supplement, Harmonic and the applicable trustee may make modifications and amendments to an indenture with the consent of the holders of a majority in aggregate principal amount of the outstanding securities of each series affected by the modification or amendment.



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### **Description of the debt securities**

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We may also make modifications and amendments to the indentures for the benefit of holders without their consent, for certain purposes including, but not limited to:

- providing for our successor to assume the covenants under the indenture,
- adding covenants or events of default,
- making certain changes to facilitate the issuance of the securities,
- securing the securities,
- providing for a successor trustee or additional trustees,
- curing any ambiguities or inconsistencies,
- providing for guaranties of, or additional obligors on, the securities;
- permitting of facilitating the defeasance and discharge of the securities, and
- other changes specified in the indenture.

However, neither we nor the trustee may make any modification or amendment without the consent of the holder of each outstanding security of that series affected by the modification or amendment if such modification or amendment would:

- change the stated maturity of any debt security,
- reduce the principal, premium, if any, or interest on any debt security,
- reduce the principal of an original issue discount security or any other debt security payable on acceleration of maturity,
- change the place of payment or the currency in which any debt security is payable,
- impair the right to enforce any payment after the stated maturity or redemption date,
- if subordinated debt securities, modify the subordination provisions in a materially adverse manner to the holders,
- adversely affect the right to convert any debt security if the debt security is a convertible debt security, or
- change the provisions in the indenture that relate to modifying or amending the indenture.

### **Satisfaction and discharge; defeasance**

We may be discharged from our obligations on the debt securities of any series that have matured or will mature or be redeemed within one year if we deposit enough money with the trustee to pay all the principal, interest and any premium due to the stated maturity date or redemption date of the debt securities.

Each indenture contains a provision that permits us to elect either or both of the following:

- We may elect to be discharged from all of our obligations, subject to limited exceptions, with respect to any series of debt securities then outstanding. If we make this election, the holders of the debt securities of the series will not be entitled to the benefits of the indenture, except for the rights of holders to receive payments on debt securities or the registration of transfer and exchange of debt securities and replacement of lost, stolen or mutilated debt securities.

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- We may elect to be released from our obligations under some or all of any financial or restrictive covenants applicable to the series of debt securities to which the election relates and from the consequences of an event of default resulting from a breach of these covenants. To make either of the above elections, we must deposit in trust with the trustee enough money to pay in full the principal, interest and premium on the debt securities. This amount may be made in cash and/or US government obligations or, in the case of debt securities denominated in a currency other than United

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### **Description of the debt securities**

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States dollars, foreign government obligations. As a condition to either of the above elections, we must deliver to the trustee an opinion of counsel that the holders of the debt securities will not recognize income, gain or loss for federal income tax purposes as a result of the action.

foreign government obligations means, with respect to debt securities of any series that are denominated in a currency other than US dollars:

- direct obligations of the government that issued or caused to be issued the currency in which such securities are denominated and for the payment of which obligations its full faith and credit is pledged, or, with respect to debt securities of any series which are denominated in euros, direct obligations of certain members of the European Union for the payment of which obligations the full faith and credit of such member is pledged, which in each case are not callable or redeemable at the option of the issuer thereof; or
- obligations of a person controlled or supervised by or acting as an agency or instrumentality of that government the timely payment of which is unconditionally guaranteed as a full faith and credit obligation by that government, which are not callable or redeemable at the option of the issuer thereof.

### **Notices**

Notices to holders will be given by mail to the addresses of the holders in the security register.

### **Governing law**

The indentures and the debt securities will be governed by, and construed under, the laws of the State of New York, without regard to principles of conflicts of laws.

### **No personal liability of directors, officers, employees and stockholders**

No incorporator, stockholder, employee, agent, officer, director or subsidiary of ours will have any liability for any obligations of ours, or because of the creation of any indebtedness under the debt securities, the indentures or supplemental indentures. The indentures provide that all such liability is expressly waived and released as a condition of, and as a consideration for, the execution of such indentures and the issuance of the debt securities.

### **Regarding the trustee**

The indentures limit the right of the trustee, should it become a creditor of Harmonic, to obtain payment of claims or secure its claims.

The trustee is permitted to engage in certain other transactions. However, if the trustee acquires any conflicting interest, and there is a default under the debt securities of any series for which it is trustee, the trustee must eliminate the conflict or resign.

### **Subordinated debt securities**

The indebtedness evidenced by the subordinated debt securities of any series is subordinated to the extent provided in the subordinated indenture and the applicable prospectus supplement to the prior payment in full, in cash or other payment satisfactory to the holders of senior debt, of all senior debt, including any senior debt securities.

Upon any distribution of our assets upon any dissolution, winding up, liquidation or reorganization, payments on the subordinated debt securities will be subordinated in right of payment to the prior payment in full in cash or other payment satisfactory to holders of senior debt of all senior debt.

In the event of any acceleration of the subordinated debt securities because of an event of default, holders of any senior debt would be entitled to payment in full in cash or other payment satisfactory to holders of senior debt of all senior debt before the holders of subordinated debt securities are entitled to receive any payment or distribution.



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### **Description of the debt securities**

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We are required to promptly notify holders of senior debt or their representatives under the subordinated indenture if payment of the subordinated debt securities is accelerated because of an event of default.

Under the subordinated indenture, we may also not make payment on the subordinated debt securities if:

- a default in the payment of senior debt occurs and is continuing beyond any grace period (a payment default), or
  - any other default occurs and is continuing with respect to designated senior debt that permits holders of designated senior debt to accelerate its maturity, and the trustee receives a payment blockage notice from us or some other person permitted to give the notice under the subordinated indenture (a non-payment default).
  - We may and shall resume payments on the subordinated debt securities:
  - in case of a payment default, when the default is cured or waived or ceases to exist, and
  - in case of a nonpayment default, the earlier of when the default is cured or waived or ceases to exist or 179 days after the receipt of the payment blockage notice if the maturity of the designated senior debt has not been accelerated.
- No new payment blockage period may start unless 365 days have elapsed from the effectiveness of the prior payment blockage notice.

No nonpayment default that existed or was continuing on the date of delivery of any payment blockage notice to the trustee shall be the basis for a subsequent payment blockage notice.

As a result of these subordination provisions, in the event of our bankruptcy, dissolution or reorganization, holders of senior debt may receive more, ratably, and holders of the subordinated debt securities may receive less, ratably, than our other creditors. The subordination provisions will not prevent the occurrence of any event of default under the subordinated indenture.

The subordination provisions will not apply to payments from money or government obligations held in trust by the trustee for the payment of principal, interest and premium, if any, on subordinated debt securities pursuant to the provisions described under Satisfaction and discharge; defeasance, if the subordination provisions were not violated at the time the money or government obligations were deposited into trust.

If the trustee or any holder receives any payment that should not have been made to them in contravention of subordination provisions before all senior debt is paid in full in cash or other payment satisfactory to holders of senior debt, then such payment will be held in trust for the holders of senior debt.

Senior debt securities will constitute senior debt under the subordinated indenture.

Additional or different subordination provisions may be described in a prospectus supplement relating to a particular series of debt securities.

### **Definitions**

designated senior debt means our obligations under any of our senior debt that expressly provides that it is designated senior debt.

indebtedness means:

(1) all of our indebtedness, obligations and other liabilities for:

- borrowed money, including our obligations in respect of overdrafts, foreign exchange contracts, currency exchange agreements, interest rate protection agreements, and any loans or advances from banks, whether or not evidenced by notes or similar instruments, or
- evidenced by bonds, debentures, notes or similar instruments, whether or not the recourse of the lender is to the whole of our assets or to only a portion of our assets, other than any account payable or other accrued current liability or obligation incurred in the ordinary course of business in connection with the obtaining of materials or services,



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**Description of the debt securities**

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- (2) all of our reimbursement obligations and other liabilities with respect to letters of credit, bank guarantees or bankers' acceptances,
- (3) all of our obligations and liabilities in respect of leases required, in conformity with generally accepted accounting principles, to be accounted for as capitalized lease obligations on our balance sheet,
- (4) all of our obligations and other liabilities under any other any lease or related document (including a purchase agreement) in connection with the lease of real property which provides that we are contractually obligated to purchase or cause a third party to purchase the leased property and thereby guarantee a minimum residual value of the leased property to the lessor and our obligations under such lease or related document to purchase or to cause a third party to purchase such leased property,
- (5) all of our obligations with respect to an interest rate or other swap, cap or collar agreement or other similar instrument or agreement or foreign currency hedge, exchange, purchase or similar instrument or agreement,
- (6) all of our direct or indirect guaranties or similar agreements in respect of, and obligations or liabilities to purchase or otherwise acquire or otherwise assure a creditor against loss in respect of, indebtedness, obligations or liabilities of another person of the kind described in clauses (1) through (5),
- (7) any of our indebtedness or other obligations described in clauses (1) through (6) secured by any mortgage, pledge, lien or other encumbrance existing on property which is owned or held by us regardless of whether the indebtedness or other obligation secured thereby shall have been assumed by us and
- (8) any and all deferrals, renewals, extensions, refundings, amendments, modifications or supplements to, any indebtedness, obligation or liability of the kind described in clauses (1) through (7).

senior debt means the principal of, premium, if any, interest, including all interest accruing subsequent to the commencement of any bankruptcy or similar proceeding, rent and all fees, costs, expenses and other amounts accrued or due in connection with our indebtedness, including all deferrals, renewals, extensions or refundings of, or modifications or supplements to, that indebtedness. Senior debt shall not include:

- any debt that expressly provides it shall not be senior in right of payment to the subordinated debt securities or expressly provides that such indebtedness is on the same basis or junior to the subordinated debt securities, or

- debt to any of our subsidiaries, a majority of the voting stock of which is owned, directly or indirectly, by us.

subsidiary means any entity of which more than a majority of the outstanding voting stock having the power to elect a majority of the board of directors of such entity (in the case of a corporation) is, or of which at least a majority of the equity interests (in the case of an entity which is not a corporation) are at the time owned, directly or indirectly, by us or by one or more of our other subsidiaries or by a combination of us and our other subsidiaries. For purposes of this definition, voting stock means stock which ordinarily has voting power for the election of directors, whether at all times or so long as no senior class of stock has such voting power by reason of any contingency.

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## Description of preferred stock

The board of directors has the authority, without further action by the stockholders, to issue up to 5,000,000 shares of preferred stock in one or more series and to fix the rights, preferences, privileges and restrictions thereof, including dividend rights, conversion rights, voting rights, terms of redemption, liquidation preferences, sinking fund terms and the number of shares constituting any series or the designation of such series, without any further vote or action by stockholders. No shares of preferred stock of Harmonic are outstanding.

Our board of directors has the authority, without stockholder consent, subject to certain limitations imposed by law or our bylaws, to issue one or more series of preferred stock at any time. The rights, preferences and restrictions of the preferred stock of each series will be fixed by the certificate of designation relating to each particular series. A prospectus supplement relating to each such series will specify the terms of the preferred stock as determined by our board of directors, including the following:

- the number of shares in any series,
- the designation for any series by number, letter or title that shall distinguish the series from any other series of preferred stock,
- the dividend rate and whether dividends on that series of preferred stock will be cumulative, noncumulative or partially cumulative,
- the voting rights of that series of preferred stock, if any,
- the conversion provisions applicable to that series of preferred stock, if any,
- the redemption or sinking fund provisions applicable to that series of preferred stock, if any,
- the liquidation preference per share of that series of preferred stock, if any, and
- the terms of any other preferences or rights, if any, applicable to that series of preferred stock.

We will describe the specific terms of a particular series of preferred stock in the prospectus supplement relating to that series. The description of preferred stock set forth above and in any description of the terms of a particular series of preferred stock in the related prospectus supplement will not be complete. You should refer to the applicable certificate of designation for such series of preferred stock for complete information with respect to such preferred stock. The prospectus supplement will also contain a description of certain US federal income tax consequences relating to the preferred stock.

Although it has no present intention to do so, our board of directors, without stockholder approval, may issue preferred stock with voting and conversion rights which could adversely affect the voting power of the holders of common stock. If we issue preferred stock, it may have the effect of delaying, deferring or preventing a change of control.



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## Description of common stock

Harmonic is authorized to issue up to 150,000,000 shares of common stock, \$0.001 par value per share. As of March 1, 59,470,455 shares of Harmonic's common stock were outstanding. The holders of common stock are entitled to one vote for each share held of record on all matters submitted to a vote of the stockholders.

Subject to preferences that may be applicable to any outstanding preferred stock, the holders of common stock are entitled to receive ratably such dividends, if any, as may be declared from time to time by the Board of Directors out of funds legally available for the purpose. In the event of a liquidation, dissolution or winding up of Harmonic, the holders of common stock are entitled to share ratably in all assets remaining after payment of liabilities, subject to prior distribution rights of preferred stock, if any, then outstanding. The common stock has no preemptive or conversion rights or other subscription rights. There are no redemption or sinking fund provisions applicable to the common stock. All outstanding shares of common stock are fully paid and nonassessable, and the shares of common stock to be issued upon the closing of this offering will be fully paid and nonassessable.

### **Anti-takeover provisions**

Certain provisions of Delaware law and Harmonic's restated certificate of incorporation and bylaws could make more difficult the acquisition of Harmonic by means of a tender offer, a proxy contest or otherwise and removal of incumbent officers and directors. These provisions, summarized below, are expected to discourage certain types of coercive takeover practices and inadequate takeover bids and to encourage persons seeking to acquire control of Harmonic to first negotiate with Harmonic. Harmonic believes that the benefits of increased protection of Harmonic's potential ability to negotiate with the proponent of an unfriendly or unsolicited proposal to acquire or restructure Harmonic outweigh the disadvantages of discouraging such proposals because, among other things, negotiation of such proposals could result in an improvement of their terms.

### **Delaware law**

We are subject to the provisions of Section 203 of the Delaware General Corporation Law, an anti-takeover law. In general, the statute prohibits a publicly-held Delaware corporation from engaging in a "business combination" with an "interested stockholder" for a period of three years after the date of the transaction in which the person became an interested stockholder, unless the business combination is approved in a prescribed manner. For purposes of Section 203, a "business combination" includes a merger, asset sale, or other transaction resulting in a financial benefit to the interested stockholder, and an "interested stockholder" is a person who, together with affiliates and associates, owns (or within three years prior, did own) 15% or more of the corporation's voting stock. A corporation may "opt out" of this statute, which we have not done. Existence of this provision would be expected to have an anti-takeover effect with respect to transactions not approved in advance by the Board of Directors, including discouraging attempts that might result in a premium over the market price for the shares of common stock held by stockholders.

### **Certificate of incorporation and bylaws provisions**

Harmonic's restated certificate of incorporation and bylaws do not provide for cumulative voting in the election of directors. The authorization of undesignated preferred stock makes it possible for the Board of Directors to issue preferred stock with voting or other rights or preferences that could impede the success of any attempt to change control of Harmonic. These and other provisions may have the effect of deterring hostile takeovers or delaying changes in control or management of Harmonic.

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## Description of the warrants

### General

We may issue warrants for the purchase of our common stock. Each series of warrants will be issued under a separate warrant agreement to be entered into between us and a bank or trust company, as warrant agent. The warrant agent will act solely as our agent in connection with the warrants. The warrant agent will not have any obligation or relationship of agency or trust for or with any holders or beneficial owners of warrants. This summary of certain provisions of the warrants is not complete. For the complete terms of a particular series of warrants, you should refer to the prospectus supplement for that series of warrants and the warrant agreement for that particular series.

The prospectus supplement relating to a particular series of warrants to purchase our common stock will describe the terms of the warrants, including the following:

- the title of the warrants,
- the offering price for the warrants, if any,
- the aggregate number of the warrants,
- the designation and terms of the common stock or preferred stock that may be purchased upon exercise of the warrants,
- the number of shares of common stock or preferred stock that may be purchased upon exercise of a warrant and the exercise price for the warrants,
- the dates on which the right to exercise the warrants shall commence and expire,
- if applicable, the minimum or maximum amount of the warrants that may be exercised at any one time,
- the currency or currency units in which the offering price, if any, and the exercise price are payable,
- if applicable, a discussion of material United States Federal income tax considerations,
- the antidilution provisions of the warrants, if any,
- the redemption or call provisions, if any, applicable to the warrants,
- any provisions with respect to holder's right to require us to repurchase the warrants upon a change in control, and
- any additional terms of the warrants, including terms, procedures, and limitations relating to the exchange, exercise and settlement of the warrants.

Holders of equity warrants will not be entitled:

- to vote, consent or receive dividends,
  - receive notice as stockholders with respect to any meeting of stockholders for the election of our directors or any other matter, or
  - exercise any rights as stockholders of Harmonic.
- As set forth in the applicable prospectus supplement, the exercise price and the number of shares of common stock purchasable upon exercise of the warrant will be subject to adjustment in certain events, including the issuance of a stock dividend to any holders of common stock, a stock split, reverse stock split, combination, subdivision or reclassification of common stock, and such other events, if any, specified in the applicable prospectus supplement.



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## Plan of distribution

We may sell the securities:

- through one or more underwriters or dealers,
- directly to purchasers,
- through agents, or
- through a combination of any of these methods of sale.
- We may distribute the securities from time to time in one or more transactions:
  - at a fixed price or prices, which may be changed from time to time,
  - at market prices prevailing at the times of sale,
  - at prices related to such prevailing market prices, or
  - at negotiated prices.

We will describe the method of distribution of each series of securities in the applicable prospectus supplement.

We may determine the price or other terms of the securities offered under this prospectus by use of an electronic auction. We will describe how any auction will determine the price or any other terms, how potential investors may participate in the auction and the nature of the obligations of the underwriter, dealer or agent in the applicable prospectus supplement.

Underwriters, dealers or agents may receive compensation in the form of discounts, concessions or commissions from us or our purchasers as their agents in connection with the sale of securities. These underwriters, dealers or agents may be considered to be underwriters under the Securities Act. As a result, discounts, commissions, or profits on resale received by the underwriters, dealers or agents may be treated as underwriting discounts and commissions. Each prospectus supplement will identify any such underwriter, dealer or agent, and describe any compensation received by them from us. Any initial public offering price and any discounts or concessions allowed or reallocated or paid to dealers may be changed from time to time.

Underwriters, dealers and agents may be entitled to indemnification by us against certain civil liabilities, including liabilities under the Securities Act, or to contribution with respect to payments made by the underwriters, dealers or agents, under agreements between us and the underwriters, dealers and agents.

We may grant underwriters who participate in the distribution of securities an option to purchase additional securities to cover over-allotments, if any, in connection with the distribution.

Some securities which we may issue under this prospectus may be new issues of securities with no established trading market. Underwriters involved in the public offering and sale of these series of securities may make a market in the securities. However, they are not obligated to make a market and may discontinue market making activity at any time. No assurance can be given as to the liquidity of the trading market for any securities.

Underwriters or agents and their associates may be customers of, engage in transactions with or perform services for us in the ordinary course of business.

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## Legal matters

Wilson Sonsini Goodrich & Rosati, Professional Corporation, Palo Alto, California, will pass upon the validity of the issuance of the securities offered by this prospectus.

## Experts

The consolidated financial statements incorporated in this prospectus by reference to the Annual Report on Form 10-K of Harmonic Inc. for the year ended December 31, 2001 have been so incorporated in reliance on the report of PricewaterhouseCoopers LLP, independent accountants, given on the authority of said firm as experts in auditing and accounting.

The financial statements of the Divicom business for each of the three years in the period ended December 31, 1999 are incorporated in this prospectus by reference from Harmonic Inc.'s Form 8-K dated March 15, 2002 have been audited by Deloitte & Touche LLP, independent auditors, as stated in their report, which is incorporated herein by reference, and have been so incorporated in reliance upon the report of such firm given upon their authority as experts in accounting and auditing.

## Where you can find more information

We file reports, proxy statements, and other information with the Securities and Exchange Commission. Copies of our reports, proxy statements, and other information may be inspected at the public reference facilities maintained by the SEC:

Judiciary Plaza	Citicorp Center
450 Fifth Street, N.W.	500 West Madison Street
Room 1024	Suite 1400
Washington, D.C. 20549	Chicago, Illinois 60661-2511

Copies of these materials may be obtained by mail at prescribed rates from the public reference section of the SEC at the addresses indicated above or by calling the SEC at 1-800-SEC-0330. Our reports, proxy statements and other information filed with the SEC are also available to the public over the Internet at the Commission's world wide web site at <http://www.sec.gov>.

Reports, proxy statements, and other information concerning Harmonic may also be inspected at The National Association of Securities Dealers, 1735 K Street, N.W., Washington, D.C. 20006.

**This prospectus includes information that has not been delivered or presented to you but is incorporated by reference. This means that we have disclosed important information to you by referring you to another document filed separately with the SEC. The information incorporated by reference is considered to be a part of this prospectus, and information that we file later with the Commission will automatically update and supersede this information.**

The following documents, which were filed by Harmonic with the SEC, are incorporated by reference into this prospectus:

- Annual Report on Form 10-K for the fiscal year ended December 31, 2001;
- Current Report on Form 8-K filed on March 15, 2002; and
- The description of our common stock contained in our registration statement on Form 8-A, filed with the Commission on April 6, 1995 under section 12(g) of the Exchange Act, including any amendment or report filed for the purpose of updating such description.



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**Where you can find more information**

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All documents we may file under Section 13(a), 13(c), 14, or 15(d) of the Securities Exchange Act after the filing of the foregoing documents are incorporated by reference into and will be deemed a part of this prospectus.

**You should rely only on the information contained in this prospectus or on information to which we have referred you. We have not authorized anyone else to provide you with any information.**

We will provide to each person who so requests, including any beneficial owner to whom a prospectus is delivered, a copy of these filings. You may request a copy of these filings, at no cost, by writing or telephoning us at the following address:

Harmonic Inc.  
549 Baltic Way  
Sunnyvale, CA 94089  
Telephone: (408) 542-2500  
Attention: Investor Relations

We are not making an offer of these securities in any state where the offer is not permitted. You should not assume the information in this prospectus or any prospectus supplement is accurate as of any date other than the date on the front of those documents.

We have filed a registration statement under the Securities Act of 1933 with respect to the securities we propose to issue under this prospectus. This prospectus does not contain all the information set forth in the registration statement because certain parts of the registration statement are omitted as provided by the rules and regulations of the SEC. You may obtain a copy of the registration statement at the sources and locations identified above.

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