

HARMONIC INC
Form S-3
April 04, 2005

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As filed with the Securities and Exchange Commission on April 4, 2005

Registration No. 333-

**SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549**

**Form S-3
REGISTRATION STATEMENT
UNDER
THE SECURITIES ACT OF 1933**

HARMONIC INC.

(Exact name of Registrant as specified in its charter)

Delaware

*(State or other jurisdiction of
incorporation or organization)*

77-0201147

*(I.R.S. Employer
Identification Number)*

**549 Baltic Way
Sunnyvale, CA 94089
(408) 542-2500**

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

**Anthony J. Ley
President and Chief Executive Officer**

**549 Baltic Way
Sunnyvale, CA 94089
(408) 542-2500**

*(Name, address, including zip code, and telephone number,
including area code, of agent for service)*

Copies to:

**Robert G. Day
Michael A. Occhiolini
Wilson Sonsini Goodrich & Rosati
Professional Corporation
650 Page Mill Road
Palo Alto, CA 94304
(650) 493-9300**

Approximate date of commencement of proposed sale to the public: As soon as practicable after the effective date of this Registration Statement.

If the only securities being registered on this Form are being offered pursuant to dividend or interest reinvestment plans, please check the following box.

If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, other than securities offered only in connection with dividend or interest

reinvestment plans, check the following box.

If this Form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, please check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. _____

If this Form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. _____

If delivery of the prospectus is expected to be made pursuant to Rule 434, please check the following box.

CALCULATION OF REGISTRATION FEE

Title of Each Class of Securities to be Registered	Amount to be Registered	Proposed Maximum Offering Price Per Unit(1)	Proposed Maximum Offering Price Aggregate(2)	Amount of Registration Fee
Common Stock, \$0.000 par value(3)				
Preferred Stock, \$0.001 par value				
Debt Securities(4)				
Warrants to purchase Common Stock				
Total(5)(6)	\$126,590,000(5)(6)	100%	\$126,590,000(5)(6)	\$14,899.64

(1) The proposed maximum offering price per unit will be determined from time to time by the Registrant in connection with the issuance by the Registrant of the securities registered hereunder.

(2) Estimated solely for the purpose of calculating the registration fee, which is calculated in accordance with Rule 457(o) under the Securities Act.

(3) Each share of Common Stock includes a right to purchase one one-thousandth of a share of Series A Participating Preferred Stock. In addition to the securities registered hereunder, the registrant is also registering in indeterminate number of shares of Common Stock as may be issued upon exchange or conversion of securities issued directly hereunder. No separate consideration will be received for any shares of Common Stock so issued upon conversion or exchange.

(4) Or (i) if any debt securities are issued at an original issue discount, such greater principal amount at maturity as shall result in an aggregate initial offering price equal to the amount to be registered or (ii) if any debt securities are issued with a principal amount denominated in a foreign currency or composite currency, such principal amount as shall result in an aggregate initial offering price equivalent thereto in United States dollars at the time of initial offering.

(5)

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Pursuant to Rule 429 of the Securities Act of 1933, as amended, securities having an aggregate initial offering price of \$73,410,000 are being carried forward from Registration Statement No. 333-84430. \$13,800 of the filing fee previously paid in connection with such registration statement is associated with these securities.

- (6) The proposed maximum offering price per unit will be determined by us in connection with the issuance of the securities. The securities registered hereunder may be sold separately or as units with other securities registered hereby.

The Registrant hereby amends this Registration Statement on such date or dates as may be necessary to delay its effective date until the Registrant shall file a further amendment which specifically states that this Registration Statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act of 1933 or until the Registration Statement shall become effective on such date as the Commission acting pursuant to said Section 8(a) may determine.

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The information in this prospectus is not complete and may be changed. We may not sell the securities until the registration statement filed with the Securities and Exchange Commission is effective. This 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.

SUBJECT TO COMPLETION, DATED APRIL 4, 2005

PROSPECTUS

\$200,000,000
Harmonic Inc.
By this prospectus, we may offer
Common Stock
Preferred Stock
Debt Securities
Warrants for Common Stock

See Risk Factors on page 4 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 1, 2005, the last reported sale price of our common stock on the Nasdaq National Market was \$9.55 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 _____, 2005

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

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

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 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.

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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 \$200,000,000. 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.

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 (VOD), high definition television (HDTV), 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 direct broadcast satellite operators. We also derive a growing portion of our sales from telephone companies that offer video services to their customers.

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 network operators in a competitive environment 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. Personalized video services, such as VOD, and the availability of TV sets equipped for HDTV will require increasing amounts of bandwidth to the home in order to deliver maximum choice and flexibility. In addition, certain operators have initiated trials to deliver live television to cellular telephones and other mobile devices. Compression of video and data to utilize effectively the available bandwidth, the cost-effective transport of digital traffic within networks, and the construction of robust **fat pipes** for distribution of content are all essential elements in the ability of operators to maximize revenue and minimize capital expenditures and operating costs.

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

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.

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.

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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 \$200,000,000 of common stock, preferred stock, warrants to purchase common stock and debt securities. 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.

Common Stock

We may offer our common stock, par value \$0.001 per share, either alone or underlying other registered securities convertible or exercisable 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.

Preferred Stock

We may issue preferred stock, par value \$0.001 per share, 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.

Warrants

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

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 previously filed with the Securities and Exchange Commission, and are incorporated by reference into this 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**.

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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 any 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.

Subordination

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

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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 and cash flows.

A significant portion of Harmonic's sales have been derived from sales to cable television and satellite operators, and we expect these sales to constitute a significant portion of net sales for the foreseeable future. Demand for our products will depend on the magnitude and timing of capital spending by cable television operators, satellite operators, telephone companies and broadcasters for constructing and upgrading 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 industry standards;

delays associated with the evaluation of new services, new standards, and system architectures by many cable and satellite television operators;

emphasis on generating revenue from existing customers by operators instead of new construction or network upgrades;

a reduction in the amount of capital available to finance projects of our customers and potential customers;

proposed business combinations and divestitures by our customers and regulatory review thereof;

economic and financial conditions in domestic and international markets; and

bankruptcies and financial restructuring of major customers.

The financial difficulties of certain of our customers and changes in our customers' deployment plans adversely affected our business 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

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NTL, a major international customer, emerged from bankruptcy in 2003. 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, which was ultimately rejected by regulators. 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 in 2004 compared to 2003. However, 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. In addition, industry consolidation has, in the past and may in the future, constrain capital spending among our customers. In this regard, we believe that the proposed sale of Adelphia Communications and the recent privatization of Cox Communications have led to capital spending delays at these customers. We cannot currently predict the impact of the proposed sale of Adelphia Communications or the privatization of Cox Communications on our future sales. As a result, we cannot assure you that we will maintain or increase our net sales in the future.

Major U.S. cable operators have indicated that the substantial completion of major network upgrades, which involved significant labor and construction costs, will lead to lower capital expenditures in the future. If our product portfolio and product development plans do not position us well to capture an increased portion of the capital spending of US cable operators, our revenue may decline and our operating results would be adversely affected.

Our customer base is concentrated and the loss of one or more of our key customers would harm 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 2004, 2003, and 2002 accounted for approximately 55%, 65% and 61% 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 U.S. cable operator, reaching approximately 22 million subscribers. In the DBS segment, The News Corporation Ltd. acquired an indirect controlling interest in Hughes Electronics, the parent company of DIRECTV in 2003. In addition, the sale or financial restructuring of companies such as Adelphia Communications and several European operators may lead to further industry consolidation. In 2004 and 2003, sales to Comcast accounted for 17% and 32%, respectively, of net sales. In 2002, sales to Charter Communications and Comcast accounted for 18% and 10% of net sales. If Comcast and AT&T Broadband had been combined for all of 2002, total revenues for the combined entity would have been 17% of net sales. The loss of Comcast or any other significant customer or any reduction in orders by Comcast 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 Comcast declined in 2004 compared to 2003, both in absolute dollars and as a percentage of revenues. The loss of, or any reduction in orders from, a significant customer would harm our business.

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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 U.S. and in foreign markets;
- changes in market demand;
- the timing and amount of orders, especially from significant customers;
- the timing of revenue recognition from solution contracts which may span several quarters;
- the timing of revenue recognition on sales arrangements, which may include multiple deliverables;
- the need to replace revenue from a major project for a Japanese customer that was completed in 2004 with other domestic or international customers;
- 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;
- the amount and timing of sales to telcos, which are particularly difficult to predict;
- 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;
- changes in our operating expenses and extraordinary expenses;
- the impact of FAS 123R, a new accounting standard which requires us to expense stock options;
- 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 compatible set top boxes, and our customers' need for local franchise and licensing approvals.

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 during the third quarter of 2002, the first quarter of 2003, and the third quarter of 2004, 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.

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Our future growth depends on market acceptance of several emerging broadband services, on the adoption of new broadband technologies and on several other broadband industry trends.

Future demand for our products will depend significantly on the growing market acceptance of several emerging broadband services, including digital video; VOD; HD television; very high-speed data services and voice-over-IP (VoIP) telephony.

The effective delivery of these services will depend, in part, on a variety of new network architectures, such as:
FTTP networks;

new video compression standards such as MPEG-4/ H.264 and Microsoft's Windows Media 9 broadcast profile (VC-1);

the greater use of protocols such as IP; and

the introduction of new consumer devices, such as advanced set-top boxes and personal video recorders (PVRs).

If adoption of these emerging services and/or technologies is not as widespread or as rapid as we expect, or if we are unable to develop new products based on these technologies on a timely basis, our net sales growth will be materially and adversely affected.

Furthermore, other technological, industry and regulatory trends will affect the growth of our business. These trends include the following:

convergence, or the desire of certain network operators to deliver a package of video, voice and data services to consumers, also known as the triple play ;

the use of digital video by businesses, governments and educators;

the privatization of state-owned telcos around the world;

efforts by regulators and governments in the U.S. and abroad to encourage the adoption of broadband and digital technologies; and

the extent and nature of regulatory attitudes towards such issues as competition between operators, access by third parties to networks of other operators, and new services such as VoIP.

If, for instance, operators do not pursue the triple play as aggressively as we expect, our net sales growth would be materially and adversely affected. Similar, if our expectations regarding these and other trends are not met, our net sales may be materially and adversely affected.

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;

fail to achieve market acceptance; or

are ahead of the market.

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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.

Our CS division is currently developing and marketing products based on new video compression standards. Encoding products based on the current MPEG-2 compression standards have represented a significant portion of the Company's sales since the acquisition of DiviCom in 2000. New standards, such as MPEG-4/ H.264 and Microsoft's Windows Media 9 broadcast profile (VC-1), are being adopted which are expected to provide significantly greater compression efficiency, thereby making more bandwidth available to operators. Harmonic is developing products based on these new standards in order to remain competitive and is devoting considerable resources to this effort. There can be no assurance that these efforts will be successful in the near future, or at all.

Our BAN division is currently marketing products for FTTP networks which telcos have begun to build. Although we believe that a number of our existing products can be deployed successfully in these networks, we will need to devote considerable resources to obtaining orders, qualifying our products and hiring knowledgeable personnel, and we may make significant financial commitments. There can be no assurance that these efforts will be successful in the near future, or at all.

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;

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. In this regard, our sales cycles with our current and potential telco customers are particularly unpredictable. Additionally, orders may include multiple elements, the timing of delivery of which may impact the timing of revenue recognition. Quarterly and annual results may fluctuate significantly due to revenue recognition policies and the timing of the receipt of orders. For example, revenue from two significant customer orders in the third quarter of 2004 was delayed due to these factors until the fourth quarter of 2004.

In addition, a significant portion of our revenue is derived from solution sales that principally consist of and include the system design, manufacture, test, installation and integration of equipment to the specifications of Harmonic's customers, including equipment acquired from third parties to be integrated with Harmonic's products. Revenue forecasts for solution contracts are based on the estimated timing of the system 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.

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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 U.S. in 2004, 2003 and 2002 represented 42%, 29% and 29% 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. Furthermore, a substantial portion of our contract manufacturing occurs overseas. In addition, a portion of our research and development occurs overseas, including at our facilities in Israel, and, following our acquisition of Broadcast Technologies Ltd., also in the United Kingdom. Our international operations, the international operations of our contract manufacturers, 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;

political and economic instability; and

changes in economic policies by foreign governments

During 2004, a significant percentage of our international revenues were derived from a major upgrade by a Japanese customer of its satellite facilities. That upgrade has now been completed, and we expect sales to this customer to decline in 2005, which could adversely affect our sales to international customers.

Certain of our international customers have accumulated significant levels of debt and have announced during the past three 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 operating expenses have typically been denominated in U.S. 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 U.S. 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 U.S.. 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. Any or all of these factors could adversely impact our business and results of operations.

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 recent economic recession, adverse conditions in capital markets and financial difficulties in both the service and equipment sectors, including bankruptcies. Many of our domestic and international customers accumulated significant levels of debt and announced reorganizations and financial restructurings during the past three 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 operators, such as

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RCN and WinFirst, also had difficulty in accessing capital markets. Both 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 went through bankruptcy proceedings. European digital broadcasters, such as ITV Digital, Kirsch and Quiero, also filed for protection from creditors.

While the capital market concerns about the domestic cable industry have eased, 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 Comcast/ AT&T Broadband transaction in 2002 and the acquisition by The News Corporation Ltd. in December 2003 of an indirect controlling interest in Hughes Electronics, the parent company of DIRECTV. This transaction followed regulatory opposition to the proposed acquisition of DIRECTV by EchoStar. 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. More recently, restructuring of the industry has continued with the privatization of Cox Communications, the planned sale of Adelphia Communications out of bankruptcy, and the proposed sale of Cablevision's VOOM! satellite assets to Echostar. In addition, further business combinations may occur in our 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.

Changes in telecommunications regulations could harm our prospects and future sales.

Changes in telecommunications regulations in the U.S. and other countries could affect the sales of our products. In particular, regulations dealing with access by competitors to the networks of incumbent operators could slow or stop additional construction or expansion by these operators. Increased regulation of our customers' pricing or service offerings could limit their investments and consequently the sales of our products. Changes in regulations could have a material adverse effect on our business, operating results, and financial condition.

Competition for qualified personnel, particularly management personnel, can be intense. In order to manage our growth, we must be successful in addressing management succession issues and attracting and retaining qualified 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 must successfully manage transition and replacement issues that may result from the departure or retirement of members of our senior management. We are dependent on our ability to retain and motivate high caliber personnel, in addition to attracting new personnel. Competition for qualified management, 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 senior management and engineers and other technical personnel, could negatively affect our business.

Recent and proposed regulations related to equity compensation could adversely affect earnings, affect our ability to raise capital and affect our ability to attract and retain key personnel.

Since our inception, we have used stock options as a fundamental component of our employee compensation packages. We believe that our stock option plans are an essential tool to link the long-term interests of stockholders and employees, especially executive management, and serve to motivate management to make decisions that will, in the long run, give the best returns to stockholders. The Financial Accounting Standards Board (FASB) has announced changes to U.S. GAAP, effective for fiscal periods beginning after June 15, 2005, that will require us to record a charge to earnings for employee stock option grants and employee stock purchase plan rights. This regulation will negatively impact our earnings and may affect our ability to raise capital on acceptable terms. In addition, new regulations implemented by The Nasdaq National

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Market requiring stockholder approval for all stock option plans could make it more difficult for us to grant options to employees in the future. To the extent that new regulations make it more difficult or expensive to grant options to employees, we may incur increased compensation costs, change our equity compensation strategy or find it difficult to attract, retain and motivate employees, each of which could materially and adversely affect our business.

We are exposed to additional costs and risks associated with complying with increasing and new regulation of corporate governance and disclosure standards.

We are spending an increased amount of management time and external resources to 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. Particularly, Section 404 of the Sarbanes-Oxley Act requires management's annual review and evaluation of our internal controls over financial reporting, and attestation of the effectiveness of our internal controls over financial reporting by management and the Company's independent registered public accounting firm in connection with the filing of our annual report on Form 10-K for the fiscal year ended December 31, 2004, and with each subsequently filed annual report on Form 10-K. We have documented and tested our internal control systems and procedures and have made improvements in order for us to comply with the requirements of Section 404. This process required us to hire additional personnel and outside advisory services and has resulted in significant additional accounting and legal expenses. While our assessment of our internal controls over financial reporting resulted in our conclusion that as of December 31, 2004, our internal control over financial reporting was effective, we cannot predict the outcome of our testing in future periods. If we conclude in future periods that our internal controls over financial reporting are not effective or if our independent registered public accounting firm is unable to provide an unqualified opinion as of future year-ends, investors may lose confidence in our financial statements, and the price of our stock may suffer.

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

We have generated substantial operating losses since we began operations in June 1988. Although we generated a small net profit in 2004 after several years of losses, future profitability is highly uncertain, and we may never achieve sustained 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 December 31, 2004 we had an accumulated deficit of \$1.9 billion. These losses, among other things, have had and may have an adverse effect on our stockholders' equity and working capital.

We believe that the proceeds of the stock offering we completed in November 2003, together 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 strategic opportunities or to strengthen our financial position. The stock offering we completed in November 2003 related to a registration statement on Form S-3 declared effective by the SEC in April 2002. In April 2005, we filed this registration statement on Form S-3 with the SEC. Pursuant to the registration statement on Form S-3 declared effective by the SEC in April 2002 and this registration statement on Form S-3, we will continue to be able to issue common stock, preferred stock, debt securities and warrants to purchase common stock from time to time, up to an aggregate of approximately \$200 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

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

Our net sales increased approximately 36% in 2004 from 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. 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 sufficient volumes 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 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 have been in the past adversely affected by significant provisions for excess and obsolete inventories.

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

Harmonic maintains a facility in Caesarea in the State of Israel with a total of 62 employees as of December 31, 2004, or approximately 11% 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 U.S. war on terrorism and the terrorist attacks and hostilities within Israel have heightened these risks. We cannot assure you that 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.

Table of Contents***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 was particularly severe during the recent economic downturn as equipment suppliers competed aggressively for customers' reduced capital spending. Harmonic's competitors in the fiber optics systems business include corporations such as C-Cor, 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, new standards for video compression are being introduced and products based on these standards are being developed by Harmonic and certain competitors. If our competitors are successful in bringing these products to market earlier, or if these products are more technologically capable than ours, then our sales could be materially and adversely affected. 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 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. Also, decisions by customers to adopt new technologies or products are often delayed by extensive evaluation and qualification processes and can result in delays in sales of current 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 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. For example, we depend on LSI Logic for video encoding chips. 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

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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. In late 2003, we entered into a three-year agreement with Plexus Services Corp. as our primary contract manufacturer. We completed the transition during the summer of 2004. Difficulties in managing relationships with current contract manufacturers, could impede our ability to meet our customers' requirements and adversely affect our operating results. An inability to obtain adequate deliveries or any other circumstance that would require us to seek alternative sources of supply could negatively 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 in the past, were adversely affected by significant excess and obsolete inventory charges.

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 December 31, 2003 due to reduced industry spending and demand for our products. If demand for products increases significantly, we may need to increase our headcount, as we did during 2004, adding 33 employees. 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 may be materially affected by the WEEE and RoHS directives.

The European Union has finalized the Waste Electrical and Electronic Equipment (WEEE) directive, which regulates the collection, recovery, and recycling of waste from electrical and electronic products, and the Restrictions on the Use of Certain Hazardous Substances in Electrical and Electronic Equipment (RoHS) directive, which bans the use of certain hazardous materials including lead, mercury, cadmium, chromium, and halogenated flame-retardants. Under WEEE, we will be responsible for financing operations for the collection, treatment, disposal, and recycling of past and future covered products. Because the specific legal requirements have not been finalized, we are presently unable to reasonably estimate the amount of any costs that may be necessary in order to comply with WEEE. We cannot assure you that compliance with WEEE and RoHS will not have a material adverse effect on our financial condition or results of operations.

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. As of December 31, 2004, approximately \$15.8 million of pre-merger tax liabilities remained outstanding and are included in accrued liabilities. 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 11 countries. Harmonic paid a further \$5.8 million of these tax obligations in February 2005, but is unable to predict when the remaining 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

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LSI Logic. Conversely, if the settlements are more than the \$10.0 million pre-merger tax liability after the February 2005 payments, 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 LSI Logic, Harmonic generally will remain liable, and such liability could have a material adverse effect on our financial condition, results of operations or cash flows.

We may be subject to risks associated with other acquisitions.

We have made, continue to consider making and may make investments in complementary companies, products or technologies. For example, on February 25, 2005, we acquired all of the issued and outstanding shares of Broadcast Technologies Ltd., a private U.K. company. In connection with this and other acquisition transactions, we could have difficulty assimilating or retaining the acquired companies' key personnel and operations, integrating the acquired technology or products into ours or complying with internal control requirements of the Sarbanes-Oxley Act as a result of an acquisition. We also may face challenges in achieving the strategic objectives, cost savings or other benefits from these proposed acquisitions 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 or 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 (acquired by LSI Logic in June 2001) 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 has 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 current term of this agreement is through October 2005, with automatic annual renewal unless terminated by either party in accordance with the agreement provisions. 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. 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 or cash flows could be harmed.

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

We currently hold 39 issued U.S. patents and 19 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.

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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 or 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 U.S. District Court for the Central District of California alleging that optical fiber amplifiers incorporated into certain of Harmonic's products infringe U.S. 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 continues to evaluate 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 litigation 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 or 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).

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 U.S. 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

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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. The U.S. Court of Appeals for the Ninth Circuit heard oral arguments on February 17, 2005, but has not ruled on the appeal yet.

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 U.S. 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 is 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. On July 22, 2003, the Court approved the parties' stipulation to stay the case pending resolution of the appeal in the securities class action. Although the parties initially agreed in principle to a dismissal without prejudice on similar terms as in the federal derivative action, after further discussion, the parties decided that the stay currently in place suffices to protect their respective interests.

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 or cash flows.

On July 3, 2003, Stanford University and Litton Systems filed a complaint in U.S. District Court for the Central District of California alleging that optical fiber amplifiers incorporated into certain of Harmonic's products infringe U.S. 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, we are unable to determine whether we will be able to settle this litigation on reasonable terms or at all, nor can we predict the impact of an adverse outcome of this

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litigation if we elect to defend against it. No estimate can be made of the possible range of loss associated with the resolution of this contingency and accordingly, we have 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 or cash flows.

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 U.S. 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 U.S. and other economies will recover and our business will improve.

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.

Our stock price may be volatile.

The market price of our common stock has fluctuated significantly in the past, 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.

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.

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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.

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, continue, further, plans, believes, seeks, estimat 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.

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.

Table of Contents**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:

	Fiscal Year Ended December 31,				
	2000	2001	2002	2003	2004
Ratio of earnings available to cover fixed charges(1)					1.8

(1) Due to our losses in 2000, 2001, 2002 and 2003, the ratio coverage was less than 1:1. Additional earnings of \$1.7 billion, \$167.2 million, \$76.4 million and \$29.1 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 COMMON STOCK

Harmonic is authorized to issue up to 150,000,000 shares of common stock, \$0.001 par value per share. As of April 1, 2005, 73,093,625 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.

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

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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. Other than the Series A preferred stock associated with Harmonic's rights plan described below under the Stockholder Rights Plan, 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 U.S. 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.

Stockholder rights plan

In July 2002, pursuant to a Preferred Stock Rights Agreement between us and Mellon Investor Services, LLC, acting as rights agent, our board of directors declared a dividend of one right to purchase one one-thousandth of a share of Series A preferred stock for each outstanding share of our common stock. The dividend was paid on August 7, 2002 to stockholders of record as of the close of business on that date. Each right entitles the registered holder to purchase from us one one-thousandth of a share of Series A preferred stock at an exercise price of \$25.00, subject to adjustment upon specified events set forth in the rights agreement.

Rights evidenced by common stock certificates. The rights will not be exercisable until the distribution date. Certificates for the rights have not been sent to stockholders and the rights will attach to and trade together with our common stock. Accordingly, common stock certificates outstanding on August 7, 2002 will evidence the related rights, and common stock certificates issued after the record date will contain a notation incorporating the rights agreement by reference. Until the distribution date (or earlier redemption or expiration of the rights), the surrender or

transfer of any certificates for common stock outstanding as of the record date, even without notation or a copy of the summary of rights being attached to such certificate, will also constitute the transfer of the rights associated with the common stock represented by such certificate.

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Distribution date. The rights will separate from our common stock, rights certificates will be issued and the rights will become exercisable on the distribution date which will occur upon the earlier of (a) the tenth business day (or such later date as may be determined by our board of directors) after a person or group of affiliated or associated persons has acquired, or obtained the right to acquire, beneficial ownership of 15% or more of the common stock then outstanding, or (b) the tenth business day (or such later date as may be determined by our board of directors) after a person or group announces a tender or exchange offer, the consummation of which would result in the beneficial ownership by a person or group of 15% or more of our then outstanding common stock.

Issuance of rights certificates; expiration of rights. As soon as practicable following the distribution date, a rights certificate will be mailed to holders of record of the common stock as of the close of business on the distribution date and such separate rights certificate alone will evidence the rights from and after the distribution date. The rights will expire on the earliest of (i) August 7, 2012, the final expiration date, or (ii) redemption or exchange of the rights as described below.

Initial exercise of the rights. Following the distribution date, and until one of the further events described below, holders of the rights will be entitled to receive, upon exercise and the payment of the purchase price, one one-thousandth share of the Series A preferred stock. In the event that we do not have sufficient Series A preferred stock available for all rights to be exercised, or our board decides that such action is necessary and not contrary to the interests of rights holders, we may instead substitute cash, assets or other securities for the Series A preferred stock for which the rights would have been exercisable under this provision or as described below.

Right to buy our common stock. Unless the rights are earlier redeemed, in the event that an acquiring person or group obtains 15% or more of our then outstanding common stock, then each holder of a right which has not theretofore been exercised (other than rights beneficially owned by the acquiring person, which will thereafter be void) will thereafter have the right to receive, upon exercise, common stock having a value equal to two times the purchase price. Rights are not exercisable following the occurrence of an event as described above until such time as the rights are no longer redeemable by us as set forth below.

Right to buy acquiring company shares. Similarly, unless the rights are earlier redeemed, in the event that, after an acquiring person or group obtains 15% or more of our then outstanding common stock, (i) we are acquired in a merger or other business combination transaction, or (ii) 50% or more of our consolidated assets or earning power is sold (other than in transactions in the ordinary course of business), proper provision must be made so that each holder of a right which has not theretofore been exercised (other than rights beneficially owned by the acquiring person, which will thereafter be void) will thereafter have the right to receive, upon exercise, shares of common stock of the acquiring company having a value equal to two times the purchase price.

Exchange provision. At any time after an acquiring person or group obtains 15% or more of our then outstanding common stock and prior to the acquisition by such acquiring person of 50% or more of our outstanding common stock, our board of directors may exchange the rights (other than rights owned by the acquiring person), in whole or in part, at an exchange ratio of one common stock per right.

Redemption. At any time on or prior to the close of business on the earlier of (i) the fifth day following the attainment of 15% or more of our then outstanding common stock by an acquiring person (or such later date as may be determined by action of our board of directors and publicly announced by us), or (ii) August 7, 2012, we may redeem the rights in whole, but not in part, at a price of \$0.001 per right.

Adjustments to prevent dilution. The purchase price payable, the number of rights, and the number of Series A preferred stock or common stock or other securities or property issuable upon exercise of the rights are subject to adjustment from time to time in connection with the dilutive issuances by us as set forth in the rights agreement. With certain exceptions, no adjustment in the purchase price will be required until cumulative adjustments require an adjustment of at least 1% in such purchase price.

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Cash paid instead of issuing fractional shares. No fractional common stock will be issued upon exercise of a right and, in lieu thereof, an adjustment in cash will be made based on the market price of the common stock on the last trading date prior to the date of exercise.

No stockholders' rights prior to exercise. Until a right is exercised, the holder, as such, will have no rights as a stockholder (other than any rights resulting from such holder's ownership of common stock), including, without limitation, the right to vote or to receive dividends.

Amendment of rights agreement. The terms of the rights and the Rights Agreement may be amended in any respect without the consent of the rights holders on or prior to the distribution date. Thereafter, the terms of the rights and the rights agreement may be amended without the consent of the rights holders in order to cure any ambiguities or to make changes which do not adversely affect the interests of rights holders (other than the acquiring person).

Rights and preferences of the Series A preferred stock. Each one one-thousandth of a share of Series A preferred stock has rights and preferences substantially equivalent to those of one share of common stock.

No voting rights. The rights will not have any voting rights.

Certain anti-takeover effects. The rights approved by our board of directors are designed to protect and maximize the value of our outstanding equity interests in the event of an unsolicited attempt by an acquirer to take over our company in a manner or on terms not approved by our board of directors. Takeover attempts frequently include coercive tactics to deprive our board of directors and its stockholders of any real opportunity to determine our destiny. The rights have been declared by our board in order to deter such tactics, including a gradual accumulation of shares in the open market of 15% or greater position to be followed by a merger or a partial or two-tier tender offer that does not treat all stockholders equally. These tactics unfairly pressure stockholders, squeeze them out of their investment without giving them any real choice and deprive them of the full value of their shares.

The rights are not intended to prevent a takeover and will not do so. Subject to the restrictions described above, the rights may be redeemed by us at \$0.001 per right at any time prior to the distribution date. Accordingly, the rights should not interfere with any merger or business combination approved by our board of directors.

However, the rights may have the effect of rendering more difficult or discouraging our acquisition if such acquisition is deemed undesirable by our board of directors. The rights may cause substantial dilution to a person or group that attempts to acquire us on terms or in a manner not approved by our board of directors, except pursuant to an offer conditioned upon the negotiation, purchase or redemption of the rights.

Issuance of the rights does not in any way weaken our financial strength or interfere with our business plans. The issuance of the rights themselves has no dilutive effect, will not affect reported earnings per share, should not be taxable to us or to our stockholders, and will not change the way in which our shares are presently traded.

DESCRIPTION OF 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

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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 superseded 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 U.S. \$1,000 or any multiple of U.S. \$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,

if other than U.S. 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,

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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.

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 depositary, or its nominee, that we will identify in a prospectus supplement,

be deposited with the depositary or nominee or custodian, and

bear any required legends.

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

the depositary has notified us that it is unwilling or unable to continue as depositary or has ceased to be qualified to act as depositary,

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 depositary, or its nominee, is the registered owner of a global security, the depositary 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 depositary 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 depositary 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 depositary 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 depositary, 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 depositary. The depositary policies and procedures may change from time to time. Neither we nor any trustee will have any responsibility or liability for the depositary'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.

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,

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will be repaid to us. After such time, 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 U.S. 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.

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.

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

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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.

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,

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curing any ambiguities or inconsistencies,

providing for guaranties of, or additional obligors on, the securities;

permitting the facilitation of 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.

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 U.S. government obligations or, in the case of debt securities denominated in a currency other than United 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 U.S. 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

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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.

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.

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

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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,

(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,

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(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.

DESCRIPTION OF WARRANTS

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,

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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.

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 also make sales through the Internet or through other electronic means. Since we may from time to time elect to offer securities directly to the public, with or without the involvement of agents, underwriters or dealers, utilizing the Internet (sometimes referred to as the "world wide web") or other forms of electronic bidding or ordering systems for the pricing and allocation of such securities, you will want to pay particular attention to the description of that system we will provide in a prospectus supplement.

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Such electronic system may allow bidders to directly participate, through electronic access to an auction site, by submitting conditional offers to buy that are subject to acceptance by us, and which may directly affect the price or other terms and conditions at which such securities are sold. These bidding or ordering systems may present to each bidder, on a so-called real-time basis, relevant information to assist in making a bid, such as the clearing spread at which the offering would be sold, based on the bids submitted, and whether a bidder's individual bids would be accepted, prorated or rejected. For example, in the case of debt security, the clearing spread could be indicated as a number of basis points above an index treasury note. Of course, many pricing methods can and may also be used.

Upon completion of such an electronic auction process, securities will be allocated based on prices bid, terms of bid or other factors. The final offering price at which securities would be sold and the allocation of securities among bidders would be based in whole or in part on the results of the Internet or other electronic bidding process or auction.

Many variations of Internet or other electronic auction or pricing and allocation systems are likely to be developed in the future as new technology evolves, and we may utilize such systems in connection with the sale of securities. The specific rules of such an auction would be described to potential bidders in a prospectus supplement. You should review carefully the auction and other rules we will describe in an prospectus supplement in order to understand and participate intelligently in the applicable offering.

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.

In connection with underwritten offerings of securities, underwriters may over-allot or effect transactions that stabilize, maintain or otherwise affect the market price of the offered securities at levels above those that might otherwise prevail in the open market, including by entering stabilizing bids, effecting syndicate covering transactions or imposing penalty bids, each of which is described below.

A stabilizing bid means the placing of any bid, or the effecting of any purchase, for the purpose of pegging, fixing or maintaining the price of a security.

A syndicate covering transaction means the placing of any bid on behalf of the underwriting syndicate or the effecting of any purchase to reduce a short position created in connection with the offering.

A penalty bid means an arrangement that permits the managing underwriter to reclaim a selling concession from a syndicate member in connection with the offering when offered securities originally sold by the syndicate member are purchased in syndicate covering transactions.

These transactions may be effected on the New York Stock Exchange, the Nasdaq National Market, in the over-the-counter market or otherwise. Underwriters are not required to engage in any of these activities, or to continue the activities if commenced.

We may enter into derivative transactions with third parties, or sell securities not covered by this prospectus to third parties in privately negotiated transactions. If the applicable prospectus supplement indicates, in connection with those derivatives, the third parties may sell securities covered by this prospectus and the applicable prospectus supplement, including in short sale transactions. If so, the third party may use securities pledged by us or borrowed from us or others to settle those sales or to close out any open borrowings of stock, and may use securities received from us in settlement of those derivatives to close out any related

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open borrowings of stock. The third parties in such sale transactions will be underwriters and, if not identified in this prospectus, will be identified in the applicable prospectus supplement, or a post-effective amendment.

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.

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, 2004 have been so incorporated in reliance on the report of PricewaterhouseCoopers LLP, an independent registered public accounting firm, given on the authority of said firm as experts in auditing and accounting.

WHERE YOU CAN FIND MORE INFORMATION

We file reports, proxy statements, and other information with the Securities and Exchange Commission, or SEC. Copies of our reports, proxy statements, and other information may be inspected at the public reference facilities maintained by the SEC:

Judiciary Plaza
450 Fifth Street, N.W.
Room 1024
Washington, D.C. 20549

Citicorp Center
500 West Madison Street
Suite 1400
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.

We have elected to incorporate by reference certain information into this prospectus. By incorporating by reference, we can disclose important information to you by referring you to another document we have filed separately with the SEC. The information incorporated by reference is deemed to be part of this prospectus, except for information incorporated by reference that is superseded by information contained in this prospectus, any applicable prospectus supplement or any document we subsequently file with the SEC that is incorporated or deemed to be incorporated by reference in this prospectus. Likewise, any statement in this prospectus or any document which is incorporated or deemed to be incorporated by reference herein will be deemed to have been modified or superseded to the extent that any statement contained in any applicable prospectus supplement or any document that we subsequently file with the SEC that is incorporated or deemed to be incorporated by reference herein modifies or supersedes that statement. We incorporate by

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reference the following documents that we have previously filed with the SEC (other than information in such documents that is deemed not to be filed):

Annual Report on Form 10-K for the fiscal year ended December 31, 2004;

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; and

The description of our Series A participating preferred stock contained in our registration statement on Form 8-A, filed with the Commission on July 25, 2002 under Section 12(g) of the Exchange Act, including any amendment or report filed for the purpose of updating such description.

We also are incorporating by reference all future documents that we file with the SEC pursuant to Section 13(a), 13(c), 14 or 15(d) of the Securities Exchange Act of 1934 prior to the termination of the offering of the securities made hereby (other than information in such documents that is deemed not to be filed). In addition, all filings that we file with the SEC pursuant to Section 13(a), 13(c), 14 or 15(d) of the Securities Exchange Act of 1934 after the date of this amendment to the registration statement and prior to the effectiveness of the registration statement shall be deemed to be incorporated by reference herein (other than information in such documents that is deemed not to be filed).

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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PART II
INFORMATION NOT REQUIRED IN THE PROSPECTUS

Item 14. Other expenses of issuance and distribution

The aggregate estimated (other than the registration fee) expenses to be paid by the registrant in connection with this offering are as follows:

Securities and Exchange Commission registration fee	\$	14,899.64
Trustee s fees and expenses		15,000
Accounting fees and expenses		200,000
Legal fees and expenses of the registrant		250,000
Printing and engraving		50,000
Blue sky fees and expenses		15,000
Transfer agent fees and expenses		15,000
Miscellaneous		16,200
Total	\$	576,099.64

Item 15. Indemnification of directors and officers of Harmonic Inc.

Our Bylaws limit the liability of our directors and officers for expenses to the maximum extent permitted by Delaware law. Delaware law provides that directors of a corporation will not be personally liable for monetary damages for breach of their fiduciary duties as directors, except for liability (i) for any breach of their duty of loyalty to the corporation or its stockholders; (ii) for acts or omissions not in good faith or that involve intentional misconduct or a knowing violation of law; (iii) for unlawful payments of dividends or unlawful stock repurchases or redemptions as provided in Section 174 of the Delaware General Corporation Law; or (iv) for any transaction from which the director derived an improper personal benefit.

Our Certificate of Incorporation provides that we must indemnify our directors and may indemnify our other officers, employees and agents to the fullest extent permitted by law.

We have entered into agreements to indemnify our directors and officers, in addition to indemnification provided for in our Bylaws. These agreements, among other things, indemnify our directors and officers for certain expenses (including attorneys fees), judgments, fines and settlement amounts incurred by any such person in any action or proceeding, including any action by or in the right of Harmonic, arising out of such person s services as a Harmonic director or officer, any subsidiary of Harmonic or any other company or enterprise to which the person provides services at our request.

Harmonic s Bylaws also permit us to secure insurance on behalf of any officer, director, employee or other agent for any liability arising out of his or her actions in such capacity, regardless of whether the Bylaws would permit indemnification. We also maintain an insurance policy insuring our directors and officers against liability for certain acts and omissions while acting in their official capacities.

Item 16. Exhibits

The following exhibits are filed herewith or incorporated by reference herein:

Exhibit Number	Exhibit Title
1.1	Form of Underwriting Agreement
1.2	Form of Preferred Stock Purchase Agreement*

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- 1.3 Form of Senior Debt Securities Purchase Agreement*
- 1.4 Form of Subordinated Debt Securities Purchase Agreement*

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Exhibit Number	Exhibit Title
1.5	Form of Warrant Purchase Agreement*
3.1	Restated Certificate of Incorporation, as amended**
3.2	Bylaws**
4.1	Form of Senior Indenture (incorporated by reference to Exhibit 4.1 to the Company's Registration Statement on Form S-3 (Registration No. 333-84430))
4.2	Form of Subordinated Indenture (incorporated by reference to Exhibit 4.2 to the Company's Registration Statement on Form S-3 (Registration No. 333-84430))
4.3	Form of Senior Debt Security (included in Exhibit 4.1)
4.4	Form of Subordinated Debt Security (included in Exhibit 4.2)
4.5	Form of Certificate of Designation***
4.6	Form of Preferred Stock Certificate***
4.7	Form of Warrant Agreement***
4.8	Form of Warrant Certificate***
5.1	Opinion of Wilson Sonsini Goodrich & Rosati, Professional Corporation
12.1	Computation of Ratio of Earnings Available to Cover Fixed Charges
23.1	Consent of PricewaterhouseCoopers, LLP, independent registered public accounting firm
23.2	Consent of Wilson Sonsini Goodrich & Rosati, Professional Corporation (included in Exhibit 5.1)
24.1	Power of Attorney of Certain Directors and Officers of Registrant (set forth on the signature pages to this Registration Statement)
25.1	Form T-1 Statement of Eligibility of Trustee for Senior Debt Securities under the Trust Indenture Act of 1939
25.2	Form T-1 Statement of Eligibility of Trustee for Subordinated Debt Securities under the Trust Indenture Act of 1939

* To be filed by amendment or by a report on Form 8-K pursuant to Section 601 of Regulation S-K.

** Previously filed as an exhibit to the Company's Form 10-K for the year ended December 31, 2001.

*** To be filed as an exhibit to a report pursuant to Section 13(a) or 15(d) of the Securities Act of 1934.

Item 17. Undertakings

The undersigned registrant hereby undertakes:

(1) To file, during any period in which offers or sales are being made, a post-effective amendment to this registration statement:

(a) To include any prospectus required by Section 10(a)(3) of the Securities Act,

(b) To reflect in the prospectus any facts or events arising after the effective date of the registration statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the registration statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the Commission pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than a 20 percent change in the maximum aggregate offering price set forth in the Calculation of Registration Fee table in the effective registration statement,

(c) To include any material information with respect to the plan of distribution not previously disclosed in the Registration Statement or any material change to such information in the

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Registration Statement; provided, however, that clauses (a) and (b) do not apply if the information required to be included in a post-effective amendment by such clauses is contained in periodic reports filed with or furnished to the Securities and Exchange Commission by the registrant pursuant to Section 13 or Section 15(d) of the Securities Exchange Act of 1934 (the Exchange Act) that are incorporated by reference in the registration statement.

(2) That, for the purpose of determining any liability under the Securities Act, each such post-effective amendment shall be deemed a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

(3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.

(4) That, for purposes of determining any liability under the Securities Act, each filing of the registrant's annual report pursuant to Section 13(a) or Section 15(d) of the Exchange Act that is incorporated by reference in this registration statement shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof. Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers and controlling persons of the registrant pursuant to the provisions described under Item 15 above, or otherwise, the registrant has been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the registrant of expenses incurred or paid by a director, officer or controlling person of the registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act and will be governed by the final adjudication of such issue. The undersigned registrant hereby undertakes that:

(1) For purposes of determining any liability under the Securities Act of 1933, the information omitted from the form of prospectus filed as part of this registration statement in reliance upon Rule 430A and contained in a form of prospectus filed by the registrant pursuant to Rule 424(b)(1) or (4) or 497(h) under the Securities Act shall be deemed to be part of this registration statement as of the time it was declared effective.

(2) For the purpose of determining any liability under the Securities Act of 1933, each post-effective amendment that contains a form of prospectus shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

Table of Contents**SIGNATURES**

Pursuant to the requirements of the Securities Act, as amended, the registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-3 and has duly caused this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Sunnyvale, State of California, on April 4, 2005.

HARMONIC INC.
By: /s/ Robin N. Dickson

Robin N. Dickson,
Chief Financial Officer

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Anthony J. Ley and Robin N. Dickson and each of them individually, as his or her true and lawful attorneys-in-fact and agents with full power of substitution and resubstitution, for him or her and in his or her name, place and stead, in any and all capacities to sign the Registration Statement filed herewith and any or all amendments to said Registration Statement (including post-effective amendments and registration statements filed pursuant to Rule 462(b) under the Securities Act of 1933, as amended, and otherwise), and to file the same, with all exhibits thereto, and other documents in connection therewith, with the Securities and Exchange Commission granting unto said attorneys-in-fact and agents the full power and authority to do and perform each and every act and thing requisite and necessary to be done in and about the foregoing, as full to all intents and purposes as he might or could do in person, hereby ratifying and confirming all that said attorneys-in-fact and agents or any of them, or his or her substitute, may lawfully do or cause to be done by virtue thereof.

Pursuant to the requirements of the Securities Act, this Registration Statement has been signed by the following persons in the capacities and on the dates indicated:

Signature	Title	Date
/s/ Anthony J. Ley Anthony J. Ley	Chief Executive Officer and President (Principal Executive Officer) and Chairman of the Board of Directors	April 4, 2005
/s/ Robin N. Dickson Robin N. Dickson	Chief Financial Officer (Principal Financial and Accounting Officer)	April 4, 2005
/s/ David R. Van Valkenburg David R. Van Valkenburg	Director	April 4, 2005
/s/ E. Floyd Kvamme E. Floyd Kvamme	Director	April 4, 2005
/s/ William F. Reddersen William F. Reddersen	Director	April 4, 2005
/s/ Lewis Solomon	Director	April 4, 2005

Lewis Solomon

/s/ Michael L. Vaillaud

Director

April 4, 2005

Michael L. Vaillaud

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3.2	Bylaws**
4.1	Form of Senior Indenture (incorporated by reference to Exhibit 4.1 to the Company's Registration Statement on Form S-3 (Registration No. 333-84430))
4.2	Form of Subordinated Indenture (incorporated by reference to Exhibit 4.2 to the Company's Registration Statement on Form S-3 (Registration No. 333-84430))
4.3	Form of Senior Debt Security (included in Exhibit 4.1)
4.4	Form of Subordinated Debt Security (included in Exhibit 4.2)
4.5	Form of Certificate of Designation***
4.6	Form of Preferred Stock Certificate***
4.7	Form of Warrant Agreement***
4.8	Form of Warrant Certificate***
5.1	Opinion of Wilson Sonsini Goodrich & Rosati, Professional Corporation
12.1	Computation of Ratio of Earnings Available to Cover Fixed Charges
23.1	Consent of PricewaterhouseCoopers, LLP, independent registered public accounting firm
23.2	Consent of Wilson Sonsini Goodrich & Rosati, Professional Corporation (included in Exhibit 5.1)
24.1	Power of Attorney of Certain Directors and Officers of Registrant (set forth on the signature pages to this Registration Statement)

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- 25.1 Form T-1 Statement of Eligibility of Trustee for Senior Debt Securities under the Trust Indenture Act of 1939
- 25.2 Form T-1 Statement of Eligibility of Trustee for Subordinated Debt Securities under the Trust Indenture Act of 1939

* To be filed by amendment or by a report on Form 8-K pursuant to Section 601 of Regulation S-K.

** Previously filed as an exhibit to the Company's Form 10-K for the year ended December 31, 2001.

*** To be filed as an exhibit to a report pursuant to Section 13(a) or 15(d) of the Securities Act of 1934.