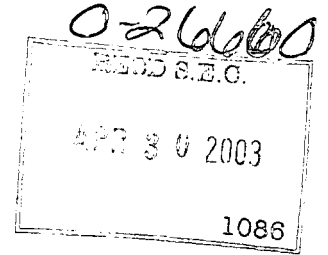




ESS TECHNOLOGY, INC. 2002 ANNUAL REPORT

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*Leading the Revolution in Digital Home Entertainment*



ESS Technology is a leading global provider of digital system chips for DVD, Video CD, and digital audio players—and is revolutionizing the industry by creating the next generation in home entertainment: the Digital Home System (DHS). ESS is headquartered in the Silicon Valley, in Fremont, California. The Company's common stock trades on the NASDAQ under the symbol ESST. [www.esstech.com](http://www.esstech.com).



## Letter to Shareholders

Dear Shareholders,

In 2002, our vision of a digital world continued to prove itself true. Last year, the DVD player became the fastest growing consumer electronics product in history.

This was no surprise to us. Years ago, I spoke about the emergence of digital technology in the home. Since then, we have been working hard developing new digital technologies and products for the consumer electronics market. Today we are a world leader in supplying solutions for digital home entertainment, including DVD, Video CD, and MP3 players. This is just the beginning.



Today, we are moving rapidly forward to realize our vision of the Digital Home System (DHS). The DHS is an innovative and powerful convergence platform for the home that integrates entertainment and communications technologies.

A perfect analogy for the DHS is the evolution of the personal computer (PC). Think of the DHS evolving from a DVD player to be the platform for the new consumer digital electronics home, much like the PC became a platform for business applications and communications. Initially, the PC was thought of as a standalone device, mainly as a word processing machine. Then it grew to become a platform for numerous business and engineering applications, networking, and the Internet—becoming an indispensable part of business.

Today, life without the PC would be unthinkable. This will soon happen in the home with the DHS. It will become the focal point for home entertainment and a central component of home life. The DHS is a flexible and powerful platform that integrates DVD, CD, MP3, digital video recording, digital photography, home networking, Internet access, cable, telephony, and other applications while interfacing with digital cameras, printers, faxes, and wireless devices. Tomorrow, the DHS will easily integrate whatever new digital consumer electronics technologies come along. We believe that it will spawn a revolution in home entertainment.

As ESS moves forward into this new era, it will continue to be powered by the two forces that have driven and sustained the Company since its founding—its people and technology. The intelligence and creativity of our people provide the ideas and engineering skills we need to create innovative products. At the same time, the flexibility and power of our core digital technology enables us to quickly, easily, and cost-effectively bring these new products to market. It is an exciting time in our business—and we are well positioned to meet the challenges and achieve success.

Fred S. L. Chan  
Chairman  
ESS Technology, Inc.

## Letter to Shareholders

Dear Shareholders,



Last year was a very busy year for ESS. During the year, ESS Technology became the global leader in digital video products in the consumer entertainment industry. For the year, ESS had approximately a 40% market share for DVD products and approximately a 50% market share for Video CD (VCD) products, making ESS the number one supplier of digital video products worldwide.

Because of our success in the consumer digital entertainment market, our profits grew 40% for the year. In addition, during 2002, we continued to strengthen our already strong balance sheet as we grew our cash reserves to almost \$200 million and remained debt free.

ESS's marketing and financial successes have come because of our vision of a digital revolution in home entertainment and because we have been able to take advantage of new opportunities in this exciting market. Digital technology is driving the convergence of home entertainment, including video, television, music, communications, and Internet access. Today we are continuing to work hard contributing to this new revolution and have an aggressive and comprehensive development program for exciting new digital entertainment products for 2003 and beyond.

Our new product roadmap includes new chips and chipsets for virtually every area of home entertainment, including set top boxes, digital video recorders, and next generation recordable DVDs. ESS is also helping the expansion of DVD technology into new form factors such as automotive DVDs, integrated DVD receivers and amplifiers, VCR/DVD and TV/DVD combination players, mini-stereos, and portable DVD players. We have also developed and introduced new chips for Digital Audio/Media Players that let consumers listen to audio and view photos and video anytime, anywhere.

In addition to our new products, ESS is continuing our expansion into new geographic areas as we continue to gain new design wins at major consumer electronics companies located in Japan, Korea, Europe and other consumer electronics markets around the globe.

All these achievements are a part of the digital entertainment revolution that ESS is helping to pioneer. Today, we are hard at work developing the next product in this revolution, the new Digital Home System (DHS). The DHS will manage all home entertainment content in a single system that distributes music, video, and other digital entertainment media throughout the home. We look forward to launching this innovative DHS offering during 2003.

Leading in markets and pioneering new products have been the hallmarks of ESS since its inception. This strategy has served us well and will continue to do so in the years ahead. The explosive growth of the VCD and DVD markets attracted new competition in the second half of 2002. To address this challenge, in 2003 ESS is introducing new products targeted to gain share in both of these expanding markets by doing what we have always done—introducing new features and adding value to our customers' products.

Overall, in 2002 ESS continued to execute our vision of a new world in consumer digital entertainment, and will continue to focus on introducing innovative new products and growing our market share in 2003. Looking forward, I am confident that our vision of the future, the knowledge of our customers' needs, and the dedication of the entire ESS team will assure our ongoing success. I thank you for your confidence in our Company.

A handwritten signature in black ink, appearing to read "Robert L. Blair". The signature is fluid and cursive, with a long horizontal stroke at the end.

Robert L. Blair  
President and CEO  
ESS Technology, Inc.

## ESS Technology: Creating New Digital Home Entertainment Products

### Technical Excellence.

Today ESS Technology's digital chips are used by many of the world's leading consumer electronics companies, including Sony, Denon, Samsung, Sharp, and Panasonic. The reasons our products are successful are the same now as they have always been—we provide the latest features in our products, industry-leading digital technology, and strong customer relationships.

### Fresh Thinking and New Features.

In 2002, our flagship Vibratto DVD products achieved outstanding market acceptance. Vibratto chips had already integrated an incredible array of features—progressive scan output, Windows Media Audio, MP3, Dolby Digital, DTS Surround, Karaoke CD+G, Kodak Picture CD, ESS Music Slideshow™, and Internet Web browsing. Last year, we made them even better by building in more leading-edge features.

We added Memory Stick™ compatibility—a new solid-state data storage technology used in millions of digital cameras, camcorders, and music players. Now consumers can take a Memory Stick from their digital camera or camcorder, plug it into their ESS Vibratto-equipped DVD player and instantly view their home digital photos and videos.

We also added SACD and DVD-Audio capability for high quality 24-bit digital audio, Dolby Pro Logic® II for richer, more brilliant sound, MPEG Advanced Audio Coding technology, Fujicolor CD capability for viewing Fuji digital photos on home television sets, SRS Labs TruSurround for surround sound over two-speaker systems, and more. Our Vibratto family continues to offer today's most full-featured DVD solutions in the industry.

### Industry Awards.

ESS's technology in our DVD chips is paying dividends for our customers. One example is Denon, Japan's leading manufacturer of high-quality audio and audio-visual products. Denon selected one of our Vibratto chips to power its new state-of-the-art DVD-9000 player. This new player was described as "one of the most technically sophisticated players on the planet" by *Tomorrow's Technology Today Magazine* and awarded the highest 5-star rating. It went on to win a First Place Best Buy award from Japan's *HiVi Audio Visual Magazine*, and a rating as the Prime DVD-Audio player in its class by *Stereo Magazine* (Japan).

### New Fast-Growing Automotive Market.

ESS also works with Clarion, the leading supplier of audio equipment to auto manufacturers worldwide, to help put a new family of state-of-the-art DVD systems on the road. These new systems, powered by our Vibratto chips, include a DVD Center-Unit all-in-one player and a series of 6-disk DVD auto-changers. With advanced ESS DVD technology, these new players give consumers theater-quality video and audio entertainment right in the comfort of their automobiles. ESS has gained many new designs worldwide for our feature-rich DVD chips in this exciting and fast-growing market.

**Innovative Products Providing New Opportunities.**

At the January 2003 Consumer Electronics Show (CES) in Las Vegas, we put our innovative thinking and technologies on display for our partners. We unveiled an easy-to-use, feature-rich and cost-effective Digital Video Recorder (DVR) that lets consumers record their favorite television programs while simultaneously viewing a DVD movie. InStat market research forecasts that DVD recorder sales will grow to 32 million units by 2006 and ESS is targeting to be a major player in this market.

We introduced a new Digital Media Processor (DMP) chip that lets consumers view video and photos from flash memory cards and Memory Sticks directly on home and portable TV sets. With this new system, multimedia content stored on memory cards can now be viewed anytime, anywhere.

We also demonstrated a multi-function DVD Recorder platform that combines a DVD player, hard disk drive, and advanced ESS MPEG encoding silicon and software. This versatile system lets consumers replace their old VCRs by archiving their VHS tapes to high-density DVD disks and build a media library from broadcast video, digital cameras, camcorders, or other digital systems. Even better, this platform allows different family members to record and replay live TV, digital audio music, or digital photographs, and play DVDs on one system, all at the same time. All family members can now enjoy whatever entertainment content they want.

Lastly, we introduced our new Wireless Media Player that distributes digital multimedia content throughout the house over a wireless LAN. Now consumers can store digital audio, digital video, and JPEG photos on a home media server—and access that content wirelessly in the living room, family room, kitchen, or wherever. It's true freedom of choice—audio and video when and where people want it.

**Insight and Vision.**

Everything we introduced at CES is just a preamble to the DHS, or Digital Home System. For years, ESS has been talking about bringing the digital revolution to home entertainment. The DHS is the realization of that vision, integrating digital video, digital audio, communications, home networking, and more—all in a single system. We believe the DHS will become the central control center for a revolution in home entertainment. We believe that this new entertainment platform will dramatically change and improve home entertainment, and provide the catalyst for new applications yet to be imagined and developed.

**Solid Foundation and Promising Future.**

In 2002, ESS introduced a new generation of digital home entertainment products that have set the stage for future growth. With the introduction of new Video CD and DVD products and these new Digital Home System products, 2003 will be an important and pivotal year for ESS Technology.

Our world-class engineering talent and resources, coupled with strong customer relationships and a commitment to excellence positions ESS to compete in and be a leader in the global market for digital home entertainment solutions. We look forward to the future.

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

Form 10-K

(Mark One)

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

For the fiscal year ended December 31, 2002

or

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

For the transition period from \_\_\_\_\_ to \_\_\_\_\_

Commission File Number 0-26660

**ESS Technology, Inc.**

(Exact name of Registrant as specified in its charter)

California

(State or other jurisdiction of  
incorporation or organization)

94-2928582

(I.R.S. Employer  
Identification No.)

48401 Fremont Blvd., Fremont, California

(Address of principal executive offices)

94538

(Zip Code)

Registrant's telephone number, including area code:

(510) 492-1088

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

None

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

Common Stock, no par value

(Title of Class)

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

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of the registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K.

Indicate by check mark whether the registrant is an accelerated filer (as defined in Rule 12b-2 of the Act). Yes  No

The aggregate market value of the voting and non-voting common equity held by non-affiliates of the registrant, computed by reference to \$17.54, the closing price of ESS common stock as reported on the NASDAQ National Market on June 28, 2002, the last business day of the registrant's most recently completed second fiscal quarter, was approximately \$547,875,160. Shares of common stock held by each officer and director and by each person who owned 5% or more of the registrant's outstanding common stock on that date have been excluded in that such persons may be deemed to be affiliates. This determination of affiliate status is not necessarily a conclusive determination for other purposes.

As of March 20, 2003, registrant had outstanding 39,637,976 shares of common stock.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the Proxy Statement for Registrant's 2003 Annual Meeting of Shareholders are incorporated by reference in Part III of this Report.

ESS TECHNOLOGY, INC.

2002 FORM 10-K

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*Certain information contained in or incorporated by reference in this Report contains forward-looking statements that involve risks and uncertainties. The statements contained in this Report that are not purely historical are forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended, including statements regarding our expectations, beliefs, intentions or strategies regarding the future. All forward-looking statements included in this Report are based on information available to us on the date hereof, and we assume no obligation to update any such forward-looking statements. Our actual results could differ materially from those discussed herein. Factors that could cause or contribute to such differences include, but are not limited to, those discussed in "Factors That May Affect Future Results," in the section captioned "Item 7, Management's Discussion and Analysis of Financial Condition and Results of Operations" and elsewhere in this Report. References herein to "the Company," "we," "our," "us" and similar words or phrases are references to ESS Technology, Inc. and its subsidiaries. Unless otherwise provided in this Report, trademarks identified by Registered Trademark- and -TM- are registered trademarks or trademarks, respectively, of ESS Technology, Inc. or its subsidiaries. All other trademarks are the properties of their respective owners.*

## PART I

### Item 1. *Business*

We are a leading designer, developer and marketer of highly integrated digital processor chips. These chips are the primary processors driving digital video and audio players, including DVD, Video CD ("VCD") and digital media players. Our chips use multiple processors and a programmable architecture that enable us to offer a broad array of features and functionality. We have also developed an encoding processor to address the growing demand for the digital video recorder ("DVR") and recordable DVD players. We believe that multi-featured DVD, DVR or recordable DVD players will serve as a platform for the digital home system ("DHS"), integrating various digital home entertainment and information delivery products into a single box. We are also a supplier of chips for use in modems, consumer digital audio and PC Audio products. We outsource all of our chip fabrication and assembly as well as the majority of our test operations, allowing us to focus on our design and development strengths.

We market our products worldwide through our direct sales force, distributors and sales representatives. Substantially all of our sales are to customers in Hong Kong, China, Taiwan, Korea, Singapore, and Japan. We employ sales and support personnel located outside of the United States in China, Hong Kong, Taiwan, Japan and Korea to support these international sales efforts. We expect that international sales will continue to represent a significant portion of our net revenue. In addition, substantially all of our products are manufactured, assembled and tested by independent third parties in Asia. We also have a limited number of employees engaged in research and development efforts outside of the United States. There are special risks associated with conducting business outside of the United States. See "Factors That May Affect Future Results — We have significant international sales and operations that are subject to the special risks of doing business outside the United States."

ESS was incorporated in California in 1984 and became a public company in 1995. In April 1999, we expanded our business beyond the semiconductor segment by establishing Vialta, Inc. ("Vialta"), a subsidiary that would operate in the internet segment. In April 2001, our board of directors adopted a plan to distribute to our shareholders all of our shares in Vialta. The Vialta spin-off was completed on August 21, 2001. Vialta is reported separately as a discontinued operation. See Note 5, "Discontinued Operation" and Note 15, "Related Party Transactions with Vialta, Inc.," in Notes to Consolidated Financial Statements.

### Industry Background

From large screen televisions to VCRs to multi-featured DVD players, technology continues to improve the home entertainment experience. Technology advancements have enhanced the clarity, color, sound, functionality and convenience of television home entertainment. In particular, the transition from analog to digital formats has allowed audio and video data to be compressed with little or no perceptible audio and

image degradation, improving storage and transmission efficiency. Digital formats provide users with several benefits, including random access to data, superior editing capabilities and enhanced security features such as protection against unauthorized copying. The development of digital media has created markets for new products such as VCD, DVD and multi-featured DVD, DVR and recordable DVD players. As digital processing and transmission technology improves, we believe additional home entertainment products will continue to be introduced.

Some of the more significant digital home entertainment products include:

- *DVD Players.* DVD players provide significantly higher quality playback than is possible with VCR or VCD technology through the use of MPEG-2 video decoding and high quality digital audio technologies.
- *Video CD Players.* VCD players are music CD players that have been modified to display video on a television and typically sell for less than a low end VCR. VCD offers quality comparable to VCRs, but is limited to approximately 73 minutes of video information, using an MPEG format standard for compression. The VCD market is divided into the standard VCD market, and the subsequently developed super VCD ("SVCD") market. VCD is popular in many developing countries while SVCD is almost exclusively sold in China. We are currently the leading supplier of VCD processor chips.
- *Digital Set-Top Boxes ("STBs").* Digital STBs enable subscriber-based digital television through cable, terrestrial broadcast, digital subscriber line, or DSL, and satellite transmissions. We are developing a system controller chip for the STB market.
- *Digital Video Recorders ("DVRs").* DVRs provide local hard disk storage similar to a VCR and enable storage and playback of live video streams on a real-time basis. DVRs can be in the form of standalone players or be incorporated into digital STBs to enhance their functionality. We expect to begin supplying DVR encoder chips to our customers in 2003.
- *Recordable DVD Players.* Recordable DVD players add high quality video and audio recording capabilities to the DVD disc. We expect to begin supplying recordable DVD encoder chips to our customers in 2003.
- *Consumer Digital Audio Players.* Consumer digital audio players include multi-channel surround sound products with movie theater quality sound systems. Our chips incorporate this digital audio processor as components of a home entertainment system.

The television, the telephone and the personal computer ("PC") have emerged as the three principal home systems that manage digital entertainment and information. The television and the PC are the principal devices for viewing and manipulating digital content. STBs, DVD players and game consoles connected to televisions, are emerging as the principal platforms for viewing home entertainment, while PCs remain the principle platform for storing data and accessing the internet.

Increasing advances in semiconductor technology are allowing digital products to converge, resulting in cost savings and added convenience for consumers. For example, CD players were initially developed to play audio content in the CD format only. Then, DVD players were introduced, combining video with the CD audio format. Now, additional audio formats, such as MP3, and other features are being added. Consumers can currently buy separate STBs that provide internet connectivity, separate DVRs as well as boxes that deliver digital programming. In the future, all of these features and functions may become available through a single DVD platform. At the same time, advances in communication devices allow better distribution of information and home entertainment content to the home and within the home, and provide opportunities for further development of multimedia products.

As digital home entertainment systems converge and become increasingly complex, makers of these systems increasingly require sophisticated semiconductor chips that are multi-featured, adaptable and cost-effective. Companies, such as ESS, that provide a highly integrated chip with multiple processors and a programmable architecture to address the needs of the latest DHS products, are well placed to benefit from the growth in this market.

## Our Solution

Our chips are the primary processors driving multi-featured DVD products that play DVD, CD, MP3, WMA (Windows Media Audio), full-featured karaoke and other audio and video formats, through home entertainment systems. Our DVD chips support high quality video formats such as Progressive Scan, and high quality audio formats, including Dolby Digital, DTS Surround, DVD audio and Sony's SACD audio. Our DVD chips also allow consumers to view digital photo CDs with the music slideshow feature on their television. Our chips use multiple processors and a programmable architecture that enable us to offer a broad array of features and functionality. We have also incorporated the recording functions by using the MPEG encoder chip to upgrade DVD players to become DVR and recordable DVD players. We believe that multi-featured DVD, DVR or recordable DVD players will serve as a platform for the DHS integrating various digital home entertainment and information delivery products into a single box. We are also a supplier of chips for use in VCD players, digital media players, modem, consumer digital audio and PC Audio products.

We believe we have the following competitive advantages:

- Our highly programmable chips are more flexible allowing us to efficiently add new capabilities that address advances in home entertainment technologies and enable our customers to accelerate their time to market;
- Our DVD chips offer a broad array of advanced features and functionality;
- Our DVD encoder chips offer superior video and audio recording quality;
- Our large workforce of engineers (over 60% of our employees) is continually developing sophisticated solutions to our customer's evolving needs using our chips;
- We have over 100 sales and support personnel worldwide delivering outstanding customer service;
- We work closely with our customers to develop cost-effective design solutions incorporating our high-functionality chips that enable our customers to lower their total manufacturing cost; and
- Our longstanding strategic relationships in China position us to capture additional business as consumer electronics manufacturing increasingly migrates to China.

## Our Strategy

Our objective is to become the leading supplier of system processor chips for the DHS based on a DVD platform. To achieve our objective, we are pursuing the following strategies:

*Leverage Our Proprietary Technology.* Our chips are based on a programmable architecture that uses multiple processors working independently, which provides us with several advantages:

- *Multiple Processors.* We believe our design approach of using multiple processors allows us to provide efficient, cost-effective solutions for our customers. We believe this design approach will allow us to develop an entire digital home entertainment system processor on a single chip.
- *Highly Programmable Chips.* Our highly programmable chips enable us to add or modify features more quickly than competitors whose chips are less programmable. In the past we have successfully added significant features such as MP3 and Kodak picture CD formats through software enhancements without requiring hardware redesign and refabrication. This programmability also enables us to tailor our chips to meet our customers' specific needs by making minor modifications that allow our customers to enhance features and improve time-to-market with new products.

*Develop System-on-a-Chip ("SOC") DVD Chip.* We are developing a SOC DVD chip that will incorporate the front-end servo technology and existing high performance DVD system processor chip. This will enable a low cost DVD player with advanced features.

*Develop the Next Generation CODEC Chip for the recordable DVD.* We are developing the next generation of integrated DVD encoder and decoder ("CODEC") into a single chip for both DVR and recordable DVD players.

*Develop the Next Generation Processor Chip for the DHS.* We are developing the next generation DVD chip that will incorporate many new advanced capabilities. We are designing this chip with a third independent processor to enable us to support the following standard operating systems: Linux, PocketPC (formerly WinCE) and VxWorks. By supporting standard operating systems, we can leverage third-party software applications, such as standard web browsers, and third-party software drivers to support printers, digital cameras and other consumer electronics products.

*Offer a Low-Cost Total Solution.* Our engineers have significant system design expertise at the consumer product level. We design our chips to either work with lower-cost components or to decrease the number of components in our customers' products to lower their total manufacturing cost. We work in close collaboration with our customers in their product development process. By helping our customers design their products using our chips, we can lower their total manufacturing costs. We believe this approach enables us to provide our customers with a low-cost total solution.

*Leverage Our Relationships with Low-Cost Manufacturers to Capture Additional Worldwide Market Share.* We believe that consumer electronics companies will continue to move contract manufacturing to lower-cost manufacturers located in China. We are a leading supplier of video system processor chips to original equipment manufacturers ("OEMs"), located in China. Our customers in China manufacture and sell DVD and VCD players both as contract manufacturers for well-known brand labels and under their own brands. We believe we can leverage our position in China to gain design wins with additional key consumer electronics companies as they migrate their manufacturing to China.

*Expand Relationships with Leading Consumer Electronics Companies.* We are increasing our sales efforts to, and actively pursuing key design wins with, leading consumer electronics companies located in Asia, Europe and South America.

*Employ Our Software Expertise to Develop New Technologies.* More than 60% of our employees are engineers, a significant number of whom are software engineers. We have a diversified base of technologies and a strong track record for developing new technologies in-house. We intend to leverage our software expertise to continue to develop new technologies and add features to our products.

*Pursue Acquisitions of Complementary and Advanced Technologies.* We have in the past acquired and will continue to consider acquiring complementary technologies or product lines to enhance our own product offerings and to accelerate our time to market. In addition, we will continue to form agreements with other companies to develop technologies.

## Products

We offer a broad array of DVD chips, DVD encoder chips, VCD chips, communication chips, consumer digital audio chips and PC Audio chips.

*DVD Chips.* Our customers can choose from a variety of DVD chips with various feature combinations and price points. We provide highly integrated chips using multiple processors and a programmable architecture that enables us to offer a broad array of features and functionality. At the high end, our DVD chips enable consumers to play DVD, CD, MP3, WMA (Windows Media Audio and Video), full-featured karaoke and other audio and video formats through their home entertainment systems and view digital photo CDs on their television. Our DVD chips support high quality video formats such as Progressive Scan, and high quality audio formats, including Dolby Digital, DTS Surround, DVD audio and Sony's SACD audio. These chips can also be used as the primary processor in digital media players. With the popularity of digital media such as Smart Media, Compact Flash, Memory Stick and Secure Digital, there is a growing demand for digital media players that incorporated digital media interface that allow consumers to view digital media content on their television.

*DVD Encoder Chips.* We are leveraging our existing DVD relationship with our customers to offer our DVD encoder chips to enable them to build DVR or recordable DVD players to broaden their products range. The DVR and recordable DVD have VCR functionality with enhanced picture quality.

*Consumer Digital Audio Chips.* With the advancement in the high quality audio formats such as Dolby Digital, Dolby ProLogic, Dolby ProLogic II, Dolby Ex, Dolby Virtual Speaker, DTS Surround, DTS ES, MP3, WMA, DVD audio and Sony's SACD audio, our consumer digital audio chips enable consumer electronics manufacturers to build high quality, low cost 5.1 channel audio video receivers ("AVR") that compliment the existing installed base of DVD players.

*Video CD Chips.* Our VCD products consist of both standard VCD chips and an enhanced version known as SVCD chips. Our customers can choose from a variety of VCD and SVCD chip products, each with various feature combinations and price points. Our VCD chips include an MPEG-1 video and audio system decoder. They deliver full-screen, full-motion video at 30 frames per second with selectable CD-quality audio. Our SVCD chips include MPEG-2 video and MPEG-1 audio system decoders. The video quality of SVCD is roughly comparable to that of a high-quality VCR, and VCDs have slightly lower quality video. These chips are used in relatively low-cost VCD players that are sold primarily in China, South East Asia, India and other emerging countries.

*Communication Chips.* Internet-related applications, such as voice e-mail, internet radio and audio home pages and news-on-demand, are increasing the demand for integrated audio and computer fax/modem/network functions on the PC. Our communication products enable PC manufacturers to provide fax/modem/network capabilities to add-on cards and directly onto the motherboards of desktops and notebook PCs. We provide a full line of modem chips that are compliant with current worldwide modem standards and have various feature combinations and price points.

*PC Audio Chips.* Our PC Audio chips enable PC manufacturers to provide audio capabilities on add-in sound cards and directly on the motherboards of desktop and notebook computers. We were the pioneers in this market by offering the first single-chip PC Audio solution with high-quality sound reproduction. We provide PC Audio chips with various feature combinations and price points, but we are no longer emphasizing this business and expect that sales of PC Audio chips will continue to decline.

Sales of these products accounted for the following percentages of our net revenues in the past three years:

	Percentage of Net Revenues		
	Years Ended December 31,		
	2002	2001	2000
DVD.....	59%	37%	15%
VCD.....	31%	40%	42%
PC Audio.....	4%	16%	35%
Communication and Other .....	6%	7%	8%
Total.....	<u>100%</u>	<u>100%</u>	<u>100%</u>

#### Technology and Research and Development

Our DVD chips incorporate a digital signal processor ("DSP") and a reduced instruction set computer processor ("RISC"). The two processors work asynchronously on separate tasks, which allows us to build a highly integrated chip. We believe this architecture will enable us to efficiently add many additional features and functionality to our DVD chips as we pursue our overall DHS strategy.

We are developing the next generation DVD chip that will incorporate many new advanced capabilities. We are designing this chip with a third independent processor to enable us to support the following standard operating systems: Linux, PocketPC (formerly WinCE) and VxWorks. By supporting standard operating systems, we can leverage third-party software applications, such as standard web browsers, and third-party software drivers to support printers, digital cameras and other consumer electronics products.

We must continually design, develop and introduce new products that take advantage of market opportunities and address emerging technical standards. We intend to leverage our base of design expertise, analog, digital and mixed-signal design capabilities and process technologies, and software and systems expertise to continue to develop audio, video and communication solutions for the consumer electronics marketplace.

Our design environment is based on workstations, dedicated product simulators, system simulation with hardware and software modeling, and a high-level, design-description language. We invest regularly in new advanced equipment and software tools and we intend to maintain and enhance our library of core cells.

On research and development activities, we incurred approximately \$27.0 million during 2002, \$28.0 million during 2001, \$27.8 million during 2000, excluding a one-time charge of \$2.6 million related to purchased in-process research and development from the acquisition of NetRidium Communications, Inc. in the first quarter of 2000.

#### Customers

We sell our chips to distributors and OEMs of DVD, VCD, MP3, modem and PC products. Our customers manufacture and sell these products both as contract manufacturers for well-known brand labels and under their own brands. As a result, our chips can be found in a diverse array of DVD, VCD and PC products on store shelves in the United States, Asia and Europe. For example, our chips can be found in certain branded DVD players, such as those sold by RCA and Philips.

A substantial portion of our net revenues has been derived from sales to a small number of our customers. Sales to our top five end-customers (including end-customers that buy our products from our distributor — Dynax Electronics (HK) LTD (“Dynax Electronics”)) accounted for approximately 37% of our net revenues in 2002 and 42% of our net revenues in 2001. One of our top end-customers, Digital AV (formerly Shinco) accounted for approximately 8%, 9% and 10% of our net revenues for 2002, 2001 and 2000, respectively.

#### Sales and Distribution

We market our products worldwide through our direct sales force, distributors and sales representatives. We have sales and support offices in the United States, China, Hong Kong, Taiwan, Japan and Korea.

We believe customer service and technical support are important competitive factors in selling to major customers. Sales representatives and distributors supplement our efforts by providing additional customer service at the local level. We believe close contact with our customers not only improves the customer's level of satisfaction, but also provides important insight into future market direction.

International sales comprised approximately 99% of our net revenues in 2002, 97% of our net revenues in 2001 and 93% of our net revenues in 2000. Our international revenues in 2002, 2001 and 2000 were derived primarily from Asian customers who manufacture DVD, VCD, communications and PC Audio products. Companies in Asia manufacture a large percentage of the worldwide supply of these products. We believe a significant portion of our DVD chip products are incorporated into DVD players that are ultimately sold into the United States. We have direct sales personnel and technical staff located in China, Hong Kong, Taiwan, Japan and Korea where significant portions of our sales have historically been derived. Our products are also sold internationally through distributors and sales representatives located in Hong Kong, Korea, Singapore, and Japan. For fiscal 2002, net sales to customers in each region as a percentage of our total net sales were: Hong Kong 70%, China 8%, Taiwan 7%, Korea 4%, Singapore 4%, Europe 3% and Japan 2%. Our business is usually seasonal due to the Christmas holiday season in America and Europe, and the Chinese New Year season in China and Asia. Our sales representatives and distributors are not subject to minimum purchase requirements and can discontinue marketing any of our products at any time. In addition, certain of our distributors have rights of return for unsold product and rights to pricing allowances to compensate for rapid, unexpected price changes.

We rely on one of our distributors Dynax Electronics for a significant portion of our revenues, sales through Dynax Electronics were approximately 57%, 56% and 35% of our net revenues in 2002, 2001 and

2000, respectively. Dynax Electronics is not subject to any minimum purchase requirements and can discontinue marketing any of our products at any time. In addition, Dynax Electronics has rights of return for unsold product and rights to pricing allowances to compensate for rapid, unexpected price changes, therefore we do not recognize revenue until Dynax Electronics sells through to our end-customers.

### **Manufacturing**

We contract with third parties for all of our fabrication and assembly as well as the majority of our test operations. This manufacturing strategy enables us to focus on our design and development strengths, minimize fixed costs and capital expenditures and gain access to advanced manufacturing capabilities. Semiconductor manufacturing consists of foundry activity where wafer fabrication takes place, as well as chip assembly and testing activities. We use several independent foundries that use advanced manufacturing technologies to fabricate our chips. Substantially all of our products are manufactured by Taiwan Semiconductor Manufacturing Company ("TSMC"), which has manufactured products for us since 1989, United Microelectronics Corporation ("UMC"), which is also located in Taiwan, and other independent Asian foundries. Most of our products are currently fabricated using both mixed-signal and logic CMOS 0.25 to 0.18 micron process technologies. Manufacturing requires raw materials and a variety of components to be manufactured to our specifications. We depend on a limited number of suppliers to obtain adequate supplies of quality raw materials on a timely basis. We do not generally have guaranteed supply arrangements with our suppliers, and we depend on foundries such as TSMC, UMC and others for foundry capacity to produce products of acceptable quality and with acceptable manufacturing yields in a timely manner. As of December 31, 2002, we believe we have sufficient foundry capacity to meet our forecasted needs for the next 12 months.

After wafer fabrication by the foundry, all of our semiconductor products are assembled and tested by third-party vendors, primarily Advanced Semiconductor Engineering, Orient Semiconductor Electronics and Sampo Semiconductor in Taiwan. We have internally designed and developed our own test software and certain test equipment, which are provided to our test vendors. See "Factors That May Affect Future Results — Our products are manufactured by independent third parties."

### **Competition**

Our markets are intensely competitive and are characterized by rapid technological change, price reductions and rapid product obsolescence. Competition typically occurs at the design stage, where the customer evaluates alternative design approaches that require integrated circuits. Because of shortened product life cycles, there are frequent design win competitions for next-generation systems. We expect competition to remain intense from existing competitors and from companies that may enter our existing or future markets. In general, product prices in the semiconductor industry have decreased over the life of a particular product. The markets for most of the applications for our products are characterized by intense price competition. As the markets for our products mature and competition increases, we anticipate that prices for our products will continue to decline.

Our existing and potential competitors consist of medium and large domestic and international companies, many of whom have substantially greater financial, manufacturing, technical, marketing, distribution and other resources, greater intellectual property rights, broader product lines and longer-standing relationships with customers than we have. Our competitors also include a number of smaller and emerging companies.

Our principal competitors in the DVD market include MediaTek, Zoran, Sony, Panasonic, STMicroelectronic, LSI Logic, and Cirrus Logic. MediaTek has taken away some of our market share by launching a SOC DVD chip product into our targeted low end DVD player market. In addition, we expect that the DVD platform for the DHS will face competition from other platforms including STBs, as well as multi-function game boxes. Some of our competitors may supply chips for multiple platforms, such as LSI Logic and STMicroelectronics, each of which makes chips for both DVD players and STBs. We also face strong competition from a competitor in the VCD market.

Many of our current and potential competitors have longer operating histories as well as greater name recognition than we have. Any of these competitors may be able to respond more quickly to new or emerging technologies and changes in customer requirements and to devote greater resources to the development, promotion and sale of their products than we can.

In addition, as the market for the DHS develops, a number of companies with significantly greater resources than us could attempt to increase their presence in the market by acquiring or forming strategic alliances with our competitors resulting in increased competition to us. In the past years, LSI Logic acquired C-Cube Microsystems; Cirrus Logic acquired LuxSonor Semiconductors; and Oak Technology acquired TeraLogic.

### Proprietary Technology

We rely on a combination of patents, trademarks, copyrights, trade secret laws and confidentiality procedures to protect our intellectual property rights. As of December 31, 2002, we had 17 patents granted in the United States, which are going to expire over time commencing in 2008 and ending in 2020. In addition, as of December 31, 2002 we had 9 corresponding foreign patents, which are going to expire over time commencing in 2005 and ending in 2015. We have several patent applications pending and intend to seek further U.S. and international patents on our technology whenever possible.

The semiconductor industry is characterized by vigorous protection and pursuit of intellectual property rights or positions, which have resulted in significant and often protracted and expensive litigation. As of December 31, 2002, there was one intellectual property litigation matter pending against us which we are vigorously defending and believe will not have a material adverse effect on our business. In addition, we filed a complaint against MediaTek Incorporated, alleging copyright infringement and unfair competition. See Item 3, "Legal Proceedings."

We currently license certain of the technology we use in our products, and we expect to continue to do so in the future. We have, in the past, granted limited licenses to certain of our technology, some of which have expired. We have not derived material revenues from these licenses in recent periods. See "Factors That May Affect Future Results — We may not be able to adequately protect our intellectual property rights from unauthorized use and we may be subject to claims of infringement of third-party intellectual property rights."

### Employees

As of December 31, 2002, we had approximately 418 full-time employees, including 176 in research and development, 126 in marketing, sales and support, 69 in operations, finance and administration and 47 in manufacturing. Over 60% of our employees are engineers, and a significant number of them are software engineers. Our future success will depend, in part, on our ability to continue to attract, retain and motivate highly qualified technical and management personnel, particularly highly-skilled semiconductor design personnel and software engineers involved in new product development, for whom competition can be intense, particularly in the Silicon Valley. Our employees are not represented by any collective bargaining unit, and we have never experienced a work stoppage. We believe our relationship with our employees is good.

### Backlog

Our products are generally sold pursuant to standard purchase orders, which are frequently revised to reflect changes in the customer's requirements. Product deliveries are scheduled when we receive purchase orders. Generally, these purchase orders allow customers to reschedule delivery dates and cancel purchase orders without significant penalties. For these reasons, we believe that our backlog, while useful for scheduling production, is not necessarily a reliable indicator of revenues. Delays in delivery schedules and/or a reduction of backlog during any particular period could have a material adverse effect on our business and results of operations.



## Available Information

Our website is <http://www.ESSTECH.com>. We make available free of charge, on or through our website, our annual, quarterly and current reports, and any amendments to those reports, as soon as reasonably practicable after electronically filing such reports with the Securities and Exchange Commission. Information contained on our website is not part of this Report.

## Item 2. *Properties*

We own nearly 12 acres of land in Fremont, California, on which we built our two-story, 93,000 square-foot corporate headquarters as well as a 77,000 square-foot building next to our corporate headquarters, which is currently leased to Vialta, Inc. (our former subsidiary) under the Real Estate Matter Agreement. This agreement will terminate initially on December 31, 2003 and may be renewed for up to three years. See Note 15 to the consolidated financial statements in Item 8 of this Report, "Related Party Transactions with Vialta, Inc."

In addition we own an adjacent 11,000 square-foot dormitory building used to house visitors and guest workers. We also maintain leased office space in various locations. Additionally, we are building an approximately 5,000 square-foot warehouse next to our corporate headquarters in Fremont, California. We anticipate the warehouse will be completed in the spring of 2003.

We are productively utilizing substantially all of the above facilities and we consider the above facilities suitable and adequate to meet our current requirements. There are no liens on any of our owned land and buildings.

## Item 3. *Legal Proceedings*

On March 12, 2001, we filed a complaint in the U.S. District Court for the Northern District of California (Case No. C01-20208) against Brent Townshend, alleging unfair competition and patent misuse. The complaint seeks specific performance of contractual obligations and declarations of patent misuse, unenforceability, and estoppels against asserting patent rights. All of the claims relate to the refusal of Mr. Townshend to provide us with a license on reasonable and nondiscriminatory terms, as is required by applicable law. The patents relate to the manufacture and sale of high-speed modems. On April 30, 2002, we filed an amended complaint. On September 27, 2002, Townshend filed an answer and counterclaims, alleging patent infringement. We filed our answer to the counterclaims on October 17, 2002, and no trial date has yet been set. Townshend also filed patent infringement actions against Agere, Analog Devices, Cisco, and Intel, alleging infringement of the same patents. Both Townshend and ESS filed statements indicating that the new cases are related to our case. The parties are currently scheduled to hold a Case Management Conference on April 24, 2003, after which initial discovery will begin. We will vigorously pursue this litigation.

On September 27, 2002, we filed a complaint in the United States District Court for the Northern District of California (Case No. C02-04705) against MediaTek Incorporated, a Taiwanese company ("MediaTek"), alleging copyright infringement and unfair competition. The complaint seeks damages and an injunction barring importation into the United States of certain MediaTek semiconductor chips alleged to infringe our proprietary intellectual property as well as all downstream products, specifically DVD players, incorporating such MediaTek chips. We believe that MediaTek unlawfully acquired and copied our proprietary source code and graphical user interface relating to its DVD products, and then used that technology to target our customers and market MediaTek's chips in unfair competition. Simultaneous with the complaint, we filed a motion for expedited discovery to force MediaTek to turn over the suspected infringing code for expert analysis in support of a temporary restraining order. MediaTek's source code was produced at the end of December 2002. On February 26, 2003, MediaTek answered the complaint, asserting affirmative defenses and counterclaims for a declaratory judgment of non-infringement and for trade secret misappropriation. On March 7, 2003, we filed a motion for preliminary injunction against MediaTek's manufacture, distribution, and importation of DVD chips, or in the alternative, for an expedited trial on our copyright claims. We also seek a recall order requiring MediaTek to recall all DVD chips from its customers, distributors, retailers, and end users. We are vigorously pursuing this litigation.

After we revised our revenues and earnings guidance for the third quarter of 2002 on September 12, 2002, several holders of our common stock, purporting to represent a class of similarly aggrieved shareholders, filed lawsuits against us. The complaints allege that we issued misleading statements regarding our business and failed to disclose material facts during the alleged class period (January 23, 2002 through September 12, 2002). To date, eight putative class action lawsuits have been filed in the United States District Court, Northern District of California. These cases are: Daniel C. Rann v. ESS Technology, Inc., et al. (Case No. C02-4497), filed September 13, 2002; James W. Becker and Randy Bohart v. ESS Technology, Inc., et al. (Case No. C02-4695), filed September 27, 2002; Palmer Fauconnier v. ESS Technology, Inc., et al. (Case No. C02-4734), filed September 30, 2002; Mike Forrestal v. ESS Technology, Inc., et al. (Case No. C02-4739), filed September 30, 2002; Sandy Dorman v. ESS Technology, Inc., et al. (Case No. C02-4732), filed September 30, 2002; Patriot Shipping Corporation v. ESS Technology, Inc., et al. (Case No. C02-4749), filed October 1, 2002; Adam D. Saphier v. ESS Technology, Inc., et al. (Case No. C02-5028), filed October 17, 2002; and Mayer Abramowitz v. ESS Technology, Inc., et al. (Case No. C02-5354), filed on November 7, 2002. These actions have been consolidated and are proceeding as a single action under the caption "In re ESS Technology Securities Litigation." The plaintiffs are seeking unspecified damages for the class and unspecified costs and expenses. On March 11, 2003, the Company and the individual defendants filed a motion to dismiss the federal action pursuant to Rule 12(b)(6) of the Federal Rules of Civil Procedure and the provisions of the Private Securities Litigation Reform Act. The motion is currently set for hearing on May 23, 2003.

Similarly after we revised our revenues and earnings guidance for the third quarter of 2002 on September 12, 2002, several holders of our common stock, purporting to represent the corporation, have brought derivative suits against us as a nominal defendant and certain of our officers and directors, alleging, among other things, breaches of fiduciary duty and insider trading. To date, three derivative suits have been filed in the California Superior Court, Alameda County. These cases are: Robert Haven, Derivatively on Behalf of ESS Technology v. Blair, et al. (Case No. 02-67527), filed October 3, 2002, James Shroff, Derivatively on Behalf of ESS Technology v. Blair, et al. (Case No. 02-68418), filed October 10, 2002 and David Chestnut, Derivatively on behalf of ESS Technology v. Chan, et al. (Case No. 02-69064), filed October 16, 2002. These actions have been consolidated and are proceeding as a single action entitled "ESS Cases." The derivative plaintiffs seek compensatory and other damages, disgorgement of profits and other relief. With respect to these state court derivative actions, we filed a demurrer to the claims and a motion to stay discovery on March 24, 2003.

Although we believe that we and our officers and directors have meritorious defenses to both actions and intend to defend these suits vigorously, we cannot predict with certainty the outcome of these lawsuits. Our defense against these lawsuits may be costly and may require a significant commitment of time and resources by our senior management. Management believes that these lawsuits are subject to coverage under our directors' and officers' liability insurance policies, although to date our carriers have reserved their rights with respect to coverage for these claims. In the event of a determination adverse to us, either with respect to coverage or with respect to the underlying merits of the lawsuits, we may incur substantial monetary liability, which could have a material adverse effect on our financial position, results of operation and cash flows.

*Item 4. Submission of Matters to a Vote of Security Holders*

We did not submit any matter to a vote of security holders during the quarter ended December 31, 2002.

### Executive Officers of the Registrant

The following table sets forth certain information regarding our current executive officers:

<u>Name</u>	<u>Age</u>	<u>Position</u>
Fred S.L. Chan .....	56	Chairman of the Board of Directors
Robert L. Blair .....	55	President, Chief Executive Officer and Director
Patrick Ang .....	43	Chief Operating Officer and Executive Vice President <sup>†</sup>
James B. Boyd .....	50	Chief Financial Officer and Assistant Secretary

*Fred S.L. Chan* has been a director since January 1986 and has served as Chairman of the Board since October 1992. Mr. Chan is also the Chairman of the Board for Vialta, Inc. and has served in that capacity since September 1999. Mr. Chan served as President and Chief Executive Officer of Vialta from September 1999 to August 2001. Mr. Chan served as our President from November 1985 until October 1996 and from February 1997 to September 1999. He served as our Chief Executive Officer from June 1994 until September 1999. Mr. Chan served as our Chief Financial Officer from October 1992 to May 1995. From 1984 to 1985, Mr. Chan was founder, President and Chief Executive Officer of AC Design, Inc., a VLSI chip design center providing computer aided design (CAD), engineering and other design services. From 1982 to 1984, he was co-founder, President and Chief Executive Officer of CAD/CAM Technology, Inc., a company in the business of computer aided engineering (CAE) systems development. Mr. Chan holds B.S.E.E. and M.S.C. degrees from the University of Hawaii.

*Robert L. Blair* has been our President and Chief Executive Officer since September 1999. Mr. Blair was elected as a director in 1999. Mr. Blair served as our Executive Vice President of Operations from April 1997 to September 1999. From December 1994 to March 1997, he was our Vice President of Operations. From December 1991 to November 1994, he was Senior Vice President of Operations (Software Packaging & Printing Division) of Logistix Corporation, a software turnkey company, and from 1989 to November 1991, he was Vice President and co-owner of Rock Canyon Investments, a real estate development-planning firm in California. From 1986 to 1989, he held various positions at Xidex Corporation, a computer diskette manufacturer, including President and General Manager, at XEMAG, a division of Xidex Corporation. From 1973 to 1986, he held several positions including Vice President, High Reliability Operations at Precision Monolithics, Inc.

*Patrick Ang* has been our Chief Operating Officer and Executive Vice President with responsibilities in worldwide sales and marketing since December 2001. From March 1998 to September 2001, Mr. Ang served as President and Chief Executive Officer of Broadxent, Inc. (formerly known as Digicom Systems, Inc.), a broadband communications equipment manufacturer, and from November 1997 to December 1999 Mr. Ang served as President of Ectiva, Inc., an internet appliance manufacturer, which was acquired by Creative Technology Ltd. in November 1997. From December 1993 to November 1997, Mr. Ang was employed as Division President for OPTi, Inc., a supplier of semiconductor products for the personal computer market. He was the founder of MediaSonic and co-founder of MediaChips, which was acquired by OPTi, Inc. in November 1993. Mr. Ang has more than 17 years of management, systems and semiconductor experience and had held various R&D positions at Telmos, Sierra Semiconductor and Triptech Microelectronics. Mr. Ang holds a B.S. in Electrical Engineering from the National University of Singapore. He is serving on the boards of directors for Sunrise Telecom, Inc. and Photoniko, Inc.

*James B. Boyd* has been our Chief Financial Officer since August 2000. Mr. Boyd was also elected as Assistant Secretary in August 2000. Prior to joining ESS, Mr. Boyd served from March 1998 until July 2000 as Chief Financial Officer of Gatefield Corporation, a Fremont-based manufacturer of field programmable electronic circuits used in PCs and consumer electronics. From August 1997 until January 1998, he was Chief Financial Officer of AirMedia, a developer of wireless communications software and from March 1996 until August 1997, he was Corporate Controller at Farallon Communications, a manufacturer and developer of internet hardware and software products. He has also held senior management positions with Fritz Companies, GTE Sprint Communications and Southern Pacific Companies. Mr. Boyd holds a B.S. degree and a MBA from the University of Wisconsin - Madison and a J.D. from Golden Gate University.

The information concerning compliance with Section 16 of the Securities Exchange Act of 1934 is incorporated by reference from the section in the proxy statement for the 2003 Annual Shareholders' Meeting entitled "Compliance under Section 16(a) of the Securities Exchange Act of 1934."

## PART II

### Item 5. *Market for the Registrant's Common Equity and Related Shareholder Matters*

Our common stock has been trading on the NASDAQ National Market under the symbol "ESST" since October 6, 1995. The following table sets forth the high and low sales prices for our common stock as reported by the NASDAQ National Market during the periods indicated.

	<u>High</u>	<u>Low</u>
<b>Fiscal 2002:</b>		
First Quarter ended March 31, 2002 .....	\$25.99	\$16.81
Second Quarter ended June 30, 2002 .....	\$21.98	\$12.76
Third Quarter ended September 30, 2002 .....	\$20.25	\$ 5.91
Fourth Quarter ended December 31, 2002 .....	\$ 9.32	\$ 4.28
<b>Fiscal 2001:</b>		
First Quarter ended March 31, 2001 .....	\$ 8.87	\$ 4.50
Second Quarter ended June 30, 2001 .....	\$10.60	\$ 4.75
Third Quarter ended September 30, 2001 .....	\$16.12	\$ 5.89
Fourth Quarter ended December 31, 2001 .....	\$24.45	\$ 9.95

As of February 28, 2003, there were approximately 207 record holders of our common stock. Since most shareholders are listed under their brokerage firm's names, the actual number of beneficial shareholders is higher.

The remaining information called for by this item relating to "Securities Authorized for Issuance Under Equity Compensation Plans" is reported in Item 12 of this Report.

#### Dividend Policy

We have never declared or paid cash dividends. We currently intend to retain all available funds and any future earnings for use in the operation of our business and do not anticipate paying any cash dividends in the foreseeable future.

### Item 6. *Selected Financial Data*

The following data should be read in conjunction with "Item 7, Management's Discussion and Analysis of Financial Condition and Results of Operations" and the financial statements and related notes thereto included in Item 8 of this Report.

We derived the selected consolidated statement of operations data for the years ended December 31, 2002, 2001 and 2000 and the selected consolidated balance sheet data as of December 31, 2002 and 2001 from our audited consolidated financial statements appearing elsewhere in this Report. We derived the selected consolidated statement of operations data for the years ended December 31, 1999 and 1998 and the selected

consolidated balance sheet data as of December 31, 2000, 1999 and 1998 from our audited consolidated financial statements, which are not included in this Report.

	Years Ended December 31, (1)				
	2002	2001	2000	1999	1998
	(In thousands, except per share data)				
<b>Statement of Operations Data:</b>					
Net revenues .....	\$273,442	\$271,380	\$303,436	\$310,651	\$218,252
Cost of revenues .....	<u>176,454</u>	<u>180,231</u>	<u>192,452</u>	<u>191,529</u>	<u>182,417</u>
Gross profit .....	96,988	91,149	110,984	119,122	35,835
Operating expenses:					
Research and development .....	26,964	27,957	27,832	36,028	30,529
Purchased in-process research and development .....	—	—	2,625	—	—
Selling, general and administrative .....	<u>34,170</u>	<u>40,689</u>	<u>36,225</u>	<u>38,558</u>	<u>36,289</u>
Operating income (loss) .....	35,854	22,503	44,302	44,536	(30,983)
Non-operating income (loss), net .....	<u>2,407</u>	<u>(18,780)</u>	<u>41,810</u>	<u>4,666</u>	<u>1,478</u>
Income (loss) before provision for income taxes .....	38,261	3,723	86,112	49,202	(29,505)
Provision for (benefit from) income taxes .....	<u>984</u>	<u>(7,262)</u>	<u>22,946</u>	<u>7,877</u>	<u>(1,489)</u>
Net income (loss) from continuing operations .....	37,277	10,985	63,166(2)	41,325	(28,016)
Net income (loss) per share from continuing operations:					
Basic .....	<u>\$ 0.85</u>	<u>\$ 0.26</u>	<u>\$ 1.49</u>	<u>\$ 1.02</u>	<u>\$ (0.68)</u>
Diluted .....	<u>\$ 0.80</u>	<u>\$ 0.24</u>	<u>\$ 1.37</u>	<u>\$ 0.91</u>	<u>\$ (0.68)</u>
Shares used in calculating net income (loss) per share from continuing operations:					
Basic .....	<u>44,044</u>	<u>42,274</u>	<u>42,548</u>	<u>40,640</u>	<u>40,955</u>
Diluted .....	<u>46,731</u>	<u>45,262</u>	<u>45,943</u>	<u>45,625</u>	<u>40,955</u>
<b>Balance Sheet Data:</b>					
Cash, cash equivalents and short-term investments .....	\$199,102	\$129,034	\$ 58,838	\$ 68,687	\$ 82,471
Working capital excluding net assets of discontinued operation (See Note 5) .....	210,001	156,966	138,541	85,228	81,124
Total assets .....	281,602	237,965	294,391	226,922	214,645
Current liabilities .....	44,558	54,056	73,901	72,804	72,573
Total shareholders' equity .....	\$229,368	\$176,978	\$211,429	\$183,579	\$142,072

(1) All of the data presented has been adjusted to give effect to the treatment of Vialta as a discontinued operation. See Note 5, "Discontinued Operations" to the consolidated financial statements in Item 8 of this Report.

(2) Net income from continuing operations included a net one-time item of \$2,625 purchased in-process research and development expense. For further details, see Note 14, "Acquisition and Related Charges" to the consolidated financial statements in Item 8 of this Report.

## Item 7. *Management's Discussion and Analysis of Financial Condition and Results of Operations*

Certain information contained in or incorporated by reference in the following Management's Discussion and Analysis of Financial Condition and Results of Operations, in "Factors that May Affect Future Results" below and elsewhere in this Report, contain "forward-looking statements" within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended. Forward-looking statements include statements concerning the future of our industry, our product development, our business strategy, our future acquisitions, the continued acceptance and growth of our products, and our dependence on significant customers. Actual results may differ materially from those projected in the forward-looking statements as a result of various factors including those discussed in "Factors that May Affect Future Results" below and elsewhere in this Report. In some cases, these statements can be identified by terminologies such as "may," "will," "expect," "anticipate," "estimate," "continue," or other similar words. Although we believe that the assumptions underlying the forward-looking statements contained in this Report are reasonable, they may be inaccurate. In light of the significant uncertainties inherent in the forward-looking statements included herein, the inclusion of such statements should not be regarded as a representation by us or any other person that the results or conditions described in such statements will be achieved.

### Overview

We are a leading designer, developer and marketer of highly integrated digital processor chips. These chips are the primary processors driving digital video and audio players, including DVD, Video CD ("VCD") and digital media players. Our chips use multiple processors and a programmable architecture that enable us to offer a broad array of features and functionality. Our products also include an encoding processor to address the growing demand for the digital video recorder ("DVR") and recordable DVD players. We believe that multi-featured DVD, DVR and recordable DVD players will serve as a platform for the digital home system ("DHS"), integrating various digital home entertainment and information delivery products into a single box. We are also a supplier of chips for use in modems, consumer digital audio and PC Audio products. We outsource all of our chip fabrication and assembly as well as the majority of our test operations, allowing us to focus on our design and development strengths.

We market our products worldwide through our direct sales force, distributors and sales representatives. Substantially all of our sales are to customers in Hong Kong, China, Taiwan, Korea, Singapore, and Japan. We employ sales and support personnel located outside of the United States in China, Hong Kong, Taiwan, Japan and Korea to support these international sales efforts. We expect that international sales will continue to represent a significant portion of our net revenue. In addition, substantially all of our products are manufactured, assembled and tested by independent third parties in Asia. We also have a limited number of employees engaged in research and development efforts outside of the United States. There are special risks associated with conducting business outside of the United States. See "Factors That May Affect Future Results — We have significant international sales and operations that are subject to the special risks of doing business outside the United States."

ESS was incorporated in California in 1984 and became a public company in 1995. In April 1999, we expanded our business beyond the semiconductor segment by establishing Vialta, a subsidiary that would operate in the internet segment. In April 2001, our board of directors adopted a plan to distribute to our shareholders all of our shares of Vialta. The Vialta spin-off was completed on August 21, 2001.

### Critical Accounting Policies and Estimates

#### *Use of Estimates*

Our consolidated financial statements are prepared in accordance with accounting principles generally accepted in the United States ("GAAP"). These accounting principles require us to make certain estimates, judgments and assumptions. We believe that the estimates, judgments and assumptions upon which we rely are reasonable based upon information available to us at the time that these estimates, judgments and assumptions are made. These estimates, judgments and assumptions can affect the reported amounts of assets

and liabilities as of the date of the financial statements, as well the reported amounts of revenues and expenses during the periods presented. To the extent there are material differences between these estimates, judgments or assumptions and actual results, our financial statements will be affected. The significant accounting policies that we believe are the most critical in understanding and evaluating our reported financial results include the following:

- Revenue Recognition
- Inventories and Inventory Reserves
- Goodwill and Other Intangible Assets
- Impairment of Long-lived Assets
- Income Taxes and Tax Reserves
- Legal Contingencies

In many cases, the accounting treatment of a particular transaction is specifically dictated by GAAP and does not require management's judgment in its application. There are also cases in which management's judgment is required in selecting appropriate accounting treatment among available alternatives under GAAP. Our management has reviewed these critical accounting policies and related disclosures with our Audit Committee. See Notes to Consolidated Financial Statements in Item 8 of this Report for additional information regarding our accounting policies and other disclosures required by GAAP.

#### *Revenue Recognition*

Revenue is primarily generated by product sales and is generally recognized at the time of shipment when persuasive evidence of an arrangement exists, the price is fixed or determinable and collection of the resulting receivable is reasonably assured, except for products sold to certain distributors with certain rights of return and allowance, in which case, revenue is deferred until such distributor resells the products to a third party. Such deferred revenues related to distributor sales, net of deferred cost of goods sold are included in accrued expenses on our balance sheets.

We provide for rebates based on current contractual terms and future returns based on historical experiences at the time revenue is recognized as reductions to product revenue. Actual amounts may be different from management's estimates. Such differences, if any, are recorded in the period they become known.

#### *Inventory and Inventory Reserves*

Our inventory is comprised of raw materials, work-in-process and finished goods, all of which are manufactured by third-party contractors. Inventory is valued at the lower of standard cost (which approximates actual cost on a first-in, first-out basis) or market. We reduce the carrying value of inventory for estimated slow-moving, excess, obsolete, damaged or otherwise unmarketable products by an amount that is the difference between cost and estimated market value based on forecasts of future demand and market conditions.

We evaluate excess or obsolete inventory primarily by estimating demand for individual products within specific time horizons, typically one year or less. We generally provide a 100% reserve for the cost of products with on-hand and committed quantities in excess of the estimated demand after considering factors such as product life cycles. Once established, reserves for excess or obsolete inventory are only released when the reserved products are scrapped or sold. We also evaluate the carrying value of inventory at the lower of standard cost or market on an individual product basis, and these evaluations are based on the difference between net realizable value and standard cost. Net realizable value is the forecasted selling price of the product less the estimated costs of completion and disposal. When necessary, we reduce the carrying value of inventory to net realizable value.

The estimates of future demand, forecasted sales prices and market conditions used in the valuation of inventory form the basis for our published and internal revenue forecast. If actual results are substantially lower than the forecast, we may be required to record additional write-downs of product inventory in future periods and this may have a negative impact on gross margins.

#### *Goodwill and Other Intangible Assets*

Effective January 1, 2002, we adopted Statement of Financial Accounting Standard ("SFAS") No. 142, "Goodwill and Other Intangible Assets" ("SFAS 142"), which addresses the accounting that must be applied to goodwill and intangible assets subsequent to their initial recognition. SFAS 142 requires that goodwill no longer be amortized, and instead, be tested for impairment at the reporting unit level at least annually.

We have goodwill and other intangible assets related to our previous acquisitions of NetRidium and SAS. In accordance with SFAS 142, we reclassified acquired workforce intangible assets, which were previously recognized apart from goodwill, as goodwill and ceased amortization of goodwill as of January 1, 2002. This change in accounting treatment reduced operating expenses by \$688,000 during twelve months ended December 31, 2002 from 2001 levels. In addition to goodwill associated with NetRidium and SAS, we recorded goodwill amortization of approximately \$1,668,000 and \$3,336,000 for the fiscal years ended December 31, 2001 and December 31, 2000 respectively, associated with the acquisition of Platform Technologies, Inc ("Platform"). Goodwill associated with the acquisition of Platform Technology was fully amortized in 2001.

The provisions of SFAS 142 also require us to complete a transitional impairment test of goodwill within six months of adoption. We completed our transitional impairment test of goodwill as of January 1, 2002, the adoption date of SFAS 142 and determined that goodwill was not impaired. In addition, we completed an annual impairment test in the fourth quarter of 2002, and determined that goodwill was not impaired.

#### *Impairment of Long-Lived Assets*

Pursuant to SFAS No. 144, "Accounting for the Impairment or Disposal of Long-Lived Assets" ("SFAS 144"), we review the recoverability of our long-lived assets based upon our estimates of the future undiscounted cash flows to be generated by the long-lived assets and will reserve for impairment whenever such estimated future cash flows indicate the carrying amount of the assets may not be fully recoverable. The adoption of SFAS 144 did not have a material effect on our financial statements.

#### *Income Taxes and Tax Reserves*

We account for income taxes under an asset and liability approach that requires the recognition of deferred tax liabilities and assets for the expected future tax consequences of timing differences between the carrying amounts and the tax bases of assets and liabilities. U.S. deferred income taxes are not provided on all un-remitted earnings of our foreign subsidiaries as such earnings are considered permanently invested. Assumptions underlying recognition of deferred tax assets and non-recognition of U.S. income tax on un-remitted earnings can change if our business plan is not achieved or if Congress adopts changes in the Internal Revenue Code of 1986, as amended.

#### *Legal Contingencies*

From time to time, we are subject to legal proceedings and claims, including claims of alleged infringement of trademarks, copyrights and other intellectual property rights and other claims arising out of the ordinary course of business. Further, we are currently engaged in certain shareholder class action and derivative lawsuits.

These contingencies require management judgment in order to assess the likelihood of any adverse judgments or outcomes and the potential range of probable losses. Liabilities for legal matters are accrued for when it is probable that a liability has been incurred and the amount of the liability can be reasonably estimated, based upon current law and existing information. Estimates of contingencies may change in the future due to new developments or changes in legal approach.



## Recent Accounting Pronouncements

In June 2002, the Financial Accounting Standards Board ("FASB") issued Statement of Financial Accounting Standards ("SFAS") 146, "Accounting for Costs Associated with Exit or Disposal Activities" ("SFAS 146"). SFAS 146 addresses financial accounting and reporting for costs associated with exit or disposal activities. SFAS 146 requires that a liability for a cost associated with an exit or disposal activity is recognized when the liability is incurred. In summary, SFAS 146 requires that the liability shall be recognized and measured initially at its fair value in the period in which the liability is incurred, except for one-time termination benefits that meet certain requirements. Since SFAS 146 is effective prospectively for exit or disposal activities initiated after December 31, 2002, the adoption of SFAS 146 will have no effect on our current financial position or results of operations.

In November 2002, the FASB issued FASB Interpretation No. 45, "Guarantor's Accounting and Disclosures Requirements for Guarantees, Including Indirect Guarantees of Indebtedness of Others" ("FIN 45"). FIN 45 requires that a liability be recorded in the guarantor's balance sheet upon issuance of a guarantee. In addition, FIN 45 requires disclosures about the guarantees that an entity has issued, including a reconciliation of changes in the entity's product warranty liabilities. The initial recognition and initial measurement provisions of FIN 45 are applicable on a prospective basis to guarantees issued or modified after December 31, 2002, irrespective of the guarantor's fiscal year-end. The disclosure requirements of FIN 45 are effective for financial statements of interim or annual periods ending after December 15, 2002. We have adopted this statement. The adoption of FIN 45 did not have a material effect on our financial position or results of operations.

In December 2002, the FASB issued SFAS No. 148, "Accounting for Stock-Based Compensation, Transition and Disclosure" ("SFAS 148"). SFAS 148 provides alternative methods of transition for a voluntary change to the fair value based method of accounting for stock-based employee compensation. SFAS 148 also requires that disclosures of the pro forma effect of using the fair value method of accounting for stock-based employee compensation be displayed more prominently and in a tabular format. Additionally, SFAS 148 requires disclosures of the pro forma effect in interim financial statements. The transition and annual disclosure requirements of SFAS 148 are effective for fiscal years ending after December 15, 2002. The interim disclosure requirements are effective for interim periods beginning after December 15, 2002. We do not expect that the adoption of SFAS 148 will have a material effect on our financial position or results of operations.

In January 2003, the FASB issued FASB Interpretation No. 46, "Consolidation of Variable Interest Entities, an Interpretation of ARB No. 51" ("FIN 46"). FIN 46 requires certain variable interest entities to be consolidated by the primary beneficiary of the entity if the equity investors in the entity do not have the characteristics of a controlling financial interest or do not have sufficient equity at risk for the entity to finance its activities without additional subordinated financial support from other parties. FIN 46 is effective immediately for all new variable interest entities created or acquired after January 31, 2003. For variable interest entities created or acquired prior to February 1, 2003, the provisions of FIN 46 must be applied for the first interim or annual period beginning after June 15, 2003. We do not expect that the adoption of FIN 46 will have a material effect on our financial position or results of operations.

## Results of Operations

Our consolidated financial information presents the net effect of the discontinued operation separately from the results of our continuing operations. Historical financial information has been reclassified to present consistently the discontinued operation of Vialta. The discussion and analysis that follow below generally focus on the continuing operations. Inflation has not had any material impact on our business to date.

The following table sets forth certain operating data as a percentage of net revenues:

	<u>Years Ended December 31,</u>		
	<u>2002</u>	<u>2001</u>	<u>2000</u>
Net revenues .....	100.0%	100.0%	100.0%
Cost of revenues .....	<u>64.5</u>	<u>66.4</u>	<u>63.4</u>
Gross margin .....	35.5	33.6	36.6
Operating expenses:			
Research and development .....	10.0	10.3	9.2
Purchased In-process research and development .....	—	—	0.9
Selling, general and administrative .....	<u>12.5</u>	<u>15.0</u>	<u>11.9</u>
Operating income .....	13.0	8.3	14.6
Non-operating income (loss), net .....	<u>0.9</u>	<u>(6.9)</u>	<u>13.8</u>
Income before income taxes .....	13.9	1.4	28.4
Provision for (benefit from) income taxes .....	<u>0.3</u>	<u>(2.6)</u>	<u>7.6</u>
Net income from continuing operations .....	13.6	4.0	20.8
Discontinued operation, net of minority interest .....	—	<u>(4.7)</u>	<u>(4.9)</u>
Net Income (loss) .....	<u>13.6%</u>	<u>(0.7)%</u>	<u>15.9%</u>

Comparison of Twelve Months Ended December 31, 2002 and December 31, 2001

*Net Revenues*

Net revenues were \$273.4 million in 2002 and \$271.4 million in 2001. Net revenues increased by \$2.0 million, or 0.8%, from 2001 to 2002 primarily due to the growth of our DVD business, partially offset by the decrease in the average selling prices (“ASP”) of our VCD chips and the decline in revenues of our PC Audio and communication products.

The following table summarizes revenues by our major product categories:

	<u>Percentage of</u> <u>Net Revenues</u> <u>Years Ended</u> <u>December 31,</u>	
	<u>2002</u>	<u>2001</u>
DVD .....	59%	37%
VCD .....	31%	40%
Communication and Other .....	6%	7%
PC Audio .....	<u>4%</u>	<u>16%</u>
Total .....	<u>100%</u>	<u>100%</u>

DVD revenues were \$161.7 million, an increase of \$62.3 million, or 62.7%, from 2001 to 2002 primarily due to higher unit sales, partially offset by lower ASP per unit. While unit sales increased by 90.7%, ASP per unit decreased by 14.7% from 2001 to 2002. Although unit sales in 2002 were higher than in 2001, unit sales in the third and fourth quarter of 2002 were lower than expected. We believe this resulted in part from the entry of a new competitor that penetrated the market faster than we previously thought possible and in part from lower than expected consumer demand for DVD products. We have filed a lawsuit in the United States against this new competitor, a company based in Taiwan, requesting both damages and an injunction to stop the importation into the United States of DVD players containing products we believe infringe our intellectual property rights. We expect this new competitor to gain market share among some China-based OEMs with respect to the current version of our DVD chip for use in DVD players intended to be sold in the United States. Even if we are successful in this lawsuit, we expect to lose market share among some China-

based OEMs that would otherwise use the current version of our DVD chip in DVD players intended to be sold in markets outside the United States. We sold approximately 21.6 million units of our DVD chip products in 2002.

VCD revenues were \$84.7 million, a decrease of \$25.3 million, or 23.0%, from 2001 to 2002, primarily due to a decrease in the ASP per unit, partially offset by an increase in unit sales. ASP per unit decreased by 35.3%, whereas unit sales increased by 19.1%. We continue to target the market for this product line by lowering our product costs. We sold approximately 28.3 million units of our VCD chip products in 2002.

Communication and other revenues were \$16.3 million, a decrease of \$3.1 million, or 16.0%, from 2001 to 2002 primarily due to a decrease in both unit sales and unit prices. Unit sales decreased by 2.2% and ASP per unit decreased by 14.3% from 2001 to 2002. We are no longer emphasizing this product line, which is in a mature market characterized by unit price declines. We sold approximately 4.1 million units of our Communication and other chip products in 2002.

PC Audio revenues were \$10.7 million, a decrease of \$31.8 million, or 74.9%, from 2001 to 2002, primarily due to a decrease in unit sales. Unit sales decreased by 75.3%, from 2001 to 2002, as we are no longer emphasizing this product line, which is a declining market as this technology is being incorporated into the PC's central processor chip. We sold approximately 3.0 million units of our PC Audio chip products in 2002.

International revenues accounted for approximately 99% of net revenues in 2002 and 97% of net revenues in 2001. Our international sales are denominated in U.S. dollars. We expect that international sales will continue to remain a high percentage of our net revenues.

#### *Gross Margin*

Gross profit increased to \$97.0 million in 2002 from \$91.1 million in 2001. Gross margins were 35.5% in 2002 and 33.6% in 2001. The increase in gross margin was primarily due to the growth of our DVD business in 2002, substantially offset by reduced sales and profitability of our other product categories. Although gross profit and margins increased in 2002 as compared to the preceding year, in the third quarter of 2002 we began experiencing increasing competition and pricing pressures for both our DVD and VCD products. As a result, overall gross margins of over 40% reported in the first and second quarters of 2002 decreased to 26% in the fourth quarter. We expect that gross margins will remain significantly below the levels experienced for the fiscal year 2002 at least until such time as our new product, the Vibratto II chip, or our other new products are introduced, achieve market acceptance, and are sold in volume.

As a result of intense competition in our markets, we expect the overall ASP per unit for our existing products to decline over the product life, and in 2003 gross margins may continue to shrink. We believe that in order to maintain or increase gross profit in 2003, we must achieve higher unit volume in shipments, reduce costs, add new features and introduce new products.

#### *Research and Development*

Research and development expenses were \$27.0 million, or 10.0% of net revenues, in 2002 and \$28.0 million, or 10.3% of net revenues, in 2001. Research and development expenses decreased by \$1.0 million, or 3.6%, from 2001 to 2002 primarily due to the decrease in amortization expenses of \$3.9 million, partially offset by the increase in salary expenses of \$2.3 million from research and development headcount increase. Amortization of goodwill was discontinued in January 2002 in accordance with SFAS 142. We expect that research and development will continue to be critical to our business as we introduce new products.

#### *Selling, General and Administrative Expenses*

Selling, general and administrative expenses were \$34.2 million, or 12.5% of net revenues, in 2002 and \$40.7 million, or 15.0% of net revenues, in 2001. Selling, general and administrative expenses decreased by \$6.5 million, or 16.0%, from 2001 to 2002 primarily due to the decrease in legal expenses, marketing

development fund ("MDF") expenses and salary expenses. Legal expenses decreased by \$2.7 million from 2001 to 2002 because in 2001 there were expenses incurred for trademark litigation and the filing and subsequent withdrawal of a registration statement on Form S-3 with respect to a proposed public offering by ESS that was abandoned in light of market turmoil caused by the September 11 terrorist attack. MDF expenses decreased by \$2.0 million from 2001 to 2002 primarily due to the cancellation of our MDF program with some customers and the change to a rebate program from our MDF program for the majority of the sales by some of our customers and distributors. Salary expenses decreased by \$1.0 million, from 2001 to 2002, primarily due to the decrease in sales and marketing headcounts.

#### *Non-operating Income (Loss), Net*

Net non-operating income (loss) was \$2.4 million in 2002 and (\$18.8) million in 2001. In 2002, net non-operating income consisted primarily of interest income of \$3.6 million and rental income of \$1.9 million from Vialta, partially offset by the loss from the (\$2.6) million write-down of and sale our investment in the stock of Cisco Systems, Inc. ("Cisco"). In 2001, net non-operating loss consisted of (\$21.2) million from the sale of 565,178 shares of Cisco stock in June 2001, partially offset by interest income of \$2.0 million and rental income of \$0.6 million from Vialta.

#### *Provision for (Benefit from) Income Taxes*

Our effective tax rate was 3% for 2002 and (241%) for 2001. Our effective tax rate, excluding the provision taken on the exchange of Komodo Technology shares for Cisco stock and subsequent sale of such Cisco stock, was 5% for 2002 and for 2001. We used an estimated 40% tax rate on the loss from the (\$2.6) million write-down and sale of our investment in Cisco stock, which resulted in a \$1.0 million tax benefit in 2002. We used an estimated 40% tax rate on the \$21.2 million loss from sale of Cisco stock which resulted in an \$8.5 million tax benefit in 2001.

Our 5% tax rate for 2002 and 2001 were lower than the combined federal and state statutory rate of 40% primarily as a result of the lower foreign tax rate on earnings from our foreign subsidiary, which was considered to be permanently reinvested, and tax credits in both years.

#### *Net Income from Continuing Operations*

Net income from continuing operations was \$37.3 million in 2002 and \$11.0 million in 2001. Net income from continuing operations increased by \$26.3 million from 2001 to 2002 primarily due to the higher-margin product mix and a \$6.5 million decrease in selling, general and administrative expenses in 2002 and the \$21.2 million loss incurred on the sale of the Cisco stock in 2001.

#### *Discontinued Operation, Net of Minority Interest*

Discontinued operation, net of minority interest was zero in 2002 and a loss of (\$12.8) million in 2001. In 2001, discontinued operation, net of minority interest consisted primarily of the operating loss from Vialta and the loss from disposal of discontinued operation for the spin-off of Vialta, which was completed on August 21, 2001.

#### *Net Income (Loss)*

Net income in 2002 was \$37.3 million and net loss in 2001 was (\$1.8) million. Net income increased by \$39.1 million from 2001 to 2002. The increase was primarily due to the increase of \$5.8 million in gross profit and the decrease of \$7.5 million in operating expenses from 2001 to 2002 and the (\$12.8) million loss for the discontinued operation recorded in 2001 and the (\$21.2) million loss from the sale of the Cisco stock recorded in 2001.

**Comparison of Twelve Months Ended December 31, 2001 and December 31, 2000**

*Net Revenues*

Net revenues were \$271.4 million in 2001 and \$303.4 million in 2000. Net revenues decreased by \$32.1 million, or 10.6%, from 2000 to 2001 primarily due to the continuing softness in the PC Audio market, which more than offset the growth in our DVD business.

The following table summarizes revenues by our major product categories:

	Percentage of Net Revenues Years Ended December 31,	
	2001	2000
DVD .....	37%	15%
VCD .....	40%	42%
Communication and Other .....	7%	8%
PC Audio .....	<u>16%</u>	<u>35%</u>
Total .....	<u>100%</u>	<u>100%</u>

DVD revenues increased by \$54.6 million from 2000 to 2001 primarily due to an increase in unit sales, partially offset by a decrease in ASP per unit. Unit sales increased by 223.8%, while ASP per unit decreased by 31.5%.

VCD revenues decreased by \$16.1 million from 2000 to 2001 primarily due to a decrease in ASP per unit, partially offset by an increase in unit sales. ASP per unit decreased by 13.1%, while unit sales increased by 0.4%.

Communication and other revenues decreased by \$6.0 million from 2000 to 2001 due to a decrease in both unit sales and ASP per unit. Unit sales decreased by 17.1% and ASP per unit decreased by 7.8%.

PC Audio revenues decreased by \$64.6 million from 2000 to 2001 primarily due to a decrease in both unit sales and ASP per unit. Unit sales decreased by 56.4% and ASP per unit decreased by 9.0%.

International revenues accounted for approximately 97% of net revenues in 2001 and 93% of net revenues in 2000. Our international sales are denominated in U.S. dollars.

*Gross Margin*

Gross profit was \$91.1 million in 2001 and \$111.0 million in 2000, representing corresponding gross margins of 33.6% of net revenues in 2001 and 36.6% of net revenues in 2000. The decrease in gross margin from 2000 to 2001 was primarily due to the under absorption of fixed overhead, meaning that certain fixed costs remained relatively constant for the two periods, while production levels of 2001 were lower than that of 2000. Under absorption of fixed overhead was partially offset by a \$3.3 million decrease in excess and obsolete inventory charges in 2001. During 2000, we purchased inventory based on our then current sales forecast and our intent to build up inventory on key products from our foundries due to a forecasted industry wide tight wafer capacity. However, during 2001, the overall market for PC products declined significantly, and, as a result, the demand for these products did not meet our forecasts resulting in a \$7.0 million of excess and obsolete inventory charges during 2001.

*Research and Development*

Research and development expenses were \$28.0 million, or 10.3% of net revenues, in 2001 and \$27.8 million, or 9.2% of net revenues, in 2000. The increase in research and development expenses from 2000 to 2001 was the result of normal variations in project workload.

#### *Purchased In-process Research and Development*

Purchased in-process research and development expenses were zero in 2001 and \$2.6 million, or 0.9% of net revenues, in 2000 due to the acquisition of NetRidium. See "Acquisition and Related Charges."

#### *Selling, General and Administrative Expenses*

Selling, general and administrative expenses were \$40.7 million, or 15.0% of net revenues, in 2001 and \$36.2 million, or 11.9% of net revenues, in 2000. The increase in selling, general and administrative expenses from 2000 to 2001 resulted primarily from the increase in legal expenses, marketing development fund ("MDF") expenses, salary, audit and accounting fees, partially offset by the decrease in amortization and bad debt expenses. Legal, audit and accounting expenses increased due to trademark litigations and the filing and subsequent withdrawal of a registration statement on Form S-3 with respect to a proposed public offering by ESS that was abandoned in light of the market turmoil. Salary increased due to headcount increase. MDF expense increased due to more sales to customers who were covered under this program.

#### *Non-operating Income (Loss), Net*

Net non-operating income (loss) was (\$18.8) million in 2001 and \$41.8 million in 2000. In 2001, net non-operating loss consisted primarily of a (\$21.2) million loss from the sale of 565,178 shares of Cisco stock in June 2001, partially offset by interest income of \$2.0 million and rental income of \$0.6 million from Vialta. In 2000, net non-operating income consisted primarily of a pre-tax gain of \$35.0 million on our exchange of preferred stock in Komodo Technology for restricted shares of common stock of Cisco in September 2000, in addition to a \$2.9 million gain from the sale of land and property, plant and equipment, and \$2.4 million of net interest income on cash, cash equivalents and short term investments.

#### *Provision for (Benefit from) Income Taxes*

Our effective tax rate was (241%) for 2001 and 37% for 2000. Our effective tax rate, excluding the provision taken on the exchange of Komodo Technology shares for Cisco stock and subsequent sale of such Cisco stock, was 5% for 2001 and 17% for 2000. We used an estimated 40% tax rate on the (\$21.2) million loss from sale of Cisco stock, which resulted in a \$8.5 million tax benefit in 2001.

Our 5% tax rate for 2001 and our 17% tax rate for 2000 were lower than the combined federal and state statutory rate of 40% primarily as a result of the lower foreign tax rate on earnings from our foreign subsidiary, which was considered to be permanently reinvested, and tax credit in 2001.

#### *Net Income from Continuing Operations*

Net income from continuing operations was \$11.0 million in 2001 and \$63.2 million in 2000. Net income from continuing operations decreased by \$52.2 million from 2001 to 2002 primarily due to the decrease in net revenues and the (\$21.2) million loss incurred on the sale of Cisco stock in 2001.

#### *Discontinued Operation, Net of Minority Interest*

Discontinued operation, net of minority interest was a loss of (\$12.8) million in 2001 and a loss of (\$14.9) million in 2000. In 2001, discontinued operation, net of minority interest consisted primarily of the operating loss from Vialta and the loss from disposal of discontinued operation for the spin-off of Vialta, which was completed on August 21, 2001. In 2000, the net loss from discontinued operation, net of minority interest, consisted primarily of the operating loss from Vialta.

#### *Net Income (Loss)*

Net loss was (\$1.8) million in 2001 and net income was \$48.3 million in 2000. Net income decreased by \$50.1 million from 2000 to 2001 primarily due to the decrease in net revenues and gross profit and the loss recorded in 2001 for the discontinued operation, net of minority interest and the sale of the Cisco stock.

## Acquisitions and Related Charges

NetRidium Communications, Inc. ("NetRidium") was founded in January 1999 and was acquired in February 2000, when it was still a development-stage company with no revenue. The acquisition was recorded using the purchase method of accounting and accordingly, the results of operations and cash flows of such acquisition have been included from the date of acquisition. Purchased in-process research and development aggregating \$2.6 million for the NetRidium acquisition was charged to operations in the second quarter of 2000. Technical infrastructure and covenants not to compete are being amortized over four years. In connection with the acquisition, we granted certain NetRidium employees stock options to purchase a total of 500,000 shares of our stock at \$17.68 per share, the fair market value on the date of grant. In addition, we have entered into employment contracts with certain former NetRidium employees, which, among other things, provide that if the employee stays with us for the applicable vesting periods during the four-year term of the employment agreement, the employee's stock options will have a value of at least \$8.85 more than the exercise price when such options become exercisable. Accordingly, we are accruing this additional compensation expense over the four-year term of the agreement. Approximately 428,000 of the options issued upon acquisition are subject to this guarantee. We recorded approximately \$0.7 million, \$0.5 million and \$0.9 million as compensation expenses under this guarantee, for fiscal year 2002, 2001 and 2000, respectively.

NetRidium was developing its intellectual property and foundation technologies in the area of broadband data delivery to homes and in-home data distribution. NetRidium's first product was scheduled for release in the summer of 2000. We expected this acquisition to provide these foundation technologies as a turnkey solution to network equipment manufacturers and personal computer providers. We planned to introduce a complete line of highly integrated technology products that would enable network manufacturers to produce reliable HomeLAN solutions over ordinary telephone wires.

Research and development expenses incurred on product development post acquisition were approximately \$4.0 million and \$3.3 million in 2001 and 2000, respectively. The product was not completed until February of 2002. No significant revenues have been recognized to date nor were significant revenues originally anticipated in 2002; however, we believe that home networking is an important future market for us and this technology will be important to our efforts to exploit that market. As of December 31, 2002, net unamortized intangible assets relating to the NetRidium acquisition were approximately \$650,000, including \$400,000 of goodwill and \$250,000 of technical infrastructure. We continue to monitor the carrying value of intangible assets related to the NetRidium acquisition in accordance with SFAS 142 and SFAS 144.

In April 2001, we entered into a definitive agreement to acquire Silicon Analog Systems ("SAS") in a merger transaction to be accounted for as a purchase business combination. SAS was a Canadian start-up company engaged in developing single chip solutions for wireless communications. This acquisition was effective on April 12, 2001. We paid \$1.0 million on the effective date and an additional \$1.0 million on April 12, 2002. The total purchase price of \$2.0 million along with \$75,000 of acquisition cost was primarily allocated to goodwill, based on an independent appraisal. The assets, liabilities and operating expenses for SAS were not material to our financial position or results of operations.

At the time of acquisition, SAS had generated approximately \$300,000 in consulting revenue. SAS had also developed intellectual property in wireless communications as well as analog circuit design, areas of key interest to us. Because of our experience with mixed signal products, we expected that this acquisition would advance our expertise in advanced analog design enabling us to develop intellectual property for key products.

As of December 31, 2002, the SAS design team is concentrating on video product development as well as radio frequency analog design, and designs from this group have been integrated into several video products. SAS has several patent applications pending and intends to seek further U.S. and international patents on its technology whenever possible.

## Eight Quarters Ended December 31, 2002

The following table sets forth our statement of operations data for each of the eight quarters from January 31, 2001 through December 31, 2002. All of the data presented have been restated to reflect Vialta as

a discontinued operation. We believe that going forward we will be more seasonal, depending on the timing of customer orders and demand for the holiday seasons, which typically occur during the third and fourth quarters. The operating results for any quarter are not necessarily indicative of results for any future period.

	Quarter Ended							
	Mar. 31, 2001	Jun. 30, 2001	Sept. 30, 2001	Dec. 31, 2001	Mar. 31, 2002	Jun. 30, 2002	Sept. 30, 2002	Dec. 31, 2002
	(Unaudited, in thousands)							
Net revenues .....	\$ 50,808	\$ 64,909	\$72,397	\$83,266	\$79,115	\$86,037	\$60,746	\$47,544
Cost of revenues .....	39,606	45,970	45,930	48,725	44,839	50,817	45,665	35,133
Gross profit .....	11,202	18,939	26,467	34,541	34,276	35,220	15,081	12,411
Operating Expenses:								
Research and development .....	6,411	7,592	7,273	6,681	6,381	7,043	7,160	6,380
Selling, general and administrative .....	8,666	8,917	11,686	11,420	10,356	11,051	6,452	6,311
Operating income (loss) .....	(3,875)	2,430	7,508	16,440	17,539	17,126	1,469	(280)
Non-operating income (loss), net ..	325	(20,795)	989	701	(1,267)	1,085	1,438	1,151
Income (loss) before income taxes	(3,550)	(18,365)	8,497	17,141	16,272	18,211	2,907	871
Provision for (benefit from) income taxes .....	(382)	(8,167)	425	862	(114)	889	148	61
Net income (loss) from continuing operations .....	(3,168)	(10,198)	8,072	16,279	16,386	17,322	2,759	810
Discontinued operation, net of minority interest:								
Loss from discontinued operation, net of minority interest .....	(4,205)	—	—	—	—	—	—	—
Income (Loss) from disposal of discontinued operation, net of minority interest .....	(13,312)	—	4,715	—	—	—	—	—
Net income (loss) .....	<u>\$(20,685)</u>	<u>\$(10,198)</u>	<u>\$12,787</u>	<u>\$16,279</u>	<u>\$16,386</u>	<u>\$17,322</u>	<u>\$ 2,759</u>	<u>\$ 810</u>

#### Liquidity and Capital Resources

Since inception, we have financed our cash requirements from cash generated by operations, the sale of equity securities, and other short-term and long-term debt. At December 31, 2002, we had cash, cash equivalents and short-term investments of \$199.1 million and working capital of \$210.0 million. At December 31, 2002, we had a \$10.0 million unsecured line of credit with U.S. Bank National Association, which will expire on June 5, 2005. This line of credit requires us to maintain certain financial ratios and operating results. As of December 31, 2002 and as of the filing date of this Report, we are in compliance with the borrowing criteria and there has been no borrowing under this line of credit.

On February 1, 2002, we commenced a public offering of 4,800,000 shares of our common stock at a price of \$19.38 per share. We sold 2,500,000 shares, and 2,300,000 shares were sold by selling shareholders. ESS did not receive any of the proceeds from the sale of shares by the selling shareholders: Annie M.H. Chan, the Annie M.H. Chan Living Trust and the Shiu Leung Chan & Annie M.H. Chan Gift Trust. The selling shareholders further granted an over-allotment option of 720,000 shares to underwriters, which the underwriters exercised on February 19, 2002. Net of underwriting discount, we received proceeds of \$45,550,000 before expenses. See Note 8, "Shareholder's Equity," to the consolidated financial statements in Item 8 of this report.

In April 2001, our Board of Directors decided to spin off Vialta, our majority-owned subsidiary. Accordingly, all of Vialta's assets and liabilities as of December 31, 2000 were reclassified in the balance sheet to net assets of discontinued operation, net of minority interest and its revenues and expenses for all periods presented were reclassified in the income statement to discontinued operation, net of minority interest. The spin-off transaction was completed in August 2001, and accordingly, we had no material assets, liabilities or



commitments relating to Vialta as of December 31, 2002. Further, we do not have any contractual obligations that are expected to have a material impact upon our revenues, operating results or cash flows under any of the spin-off agreements, which include the Master Distribution Agreement and its ancillary agreements, consisting of the Master Technology Ownership and License Agreement, the Employee Matters Agreement, the Tax Sharing and Indemnity Agreement, the Real Estate Matters Agreement, the Master Confidential Disclosure Agreement, and the Master Transitional Services Agreement. The Real Estate Matters Agreement will terminate initially on December 31, 2003 and may be renewed for up to three years. Under this agreement, Vialta pays us approximately \$1.85 million per year, receivable in installments of \$154,498 per month, to lease office space for its corporate headquarters. The Master Transitional Services Agreement terminated on August 21, 2002. See Note 5, "Discontinued Operations" and Note 15, "Related Party Transactions with Vialta, Inc." to the consolidated financial statements in Item 8 of this report.

In February 2000, we acquired, in a transaction accounted for as a purchase business combination, all of the outstanding shares of capital stock of NetRidium for \$5.3 million in cash, of which approximately 90% was paid at the closing in February 2000 and approximately 10% was paid in November 2000. At the closing, NetRidium had \$1.0 million of cash on hand, so the net use of cash for the purchase amounted to \$4.3 million.

In April 2001, we acquired in a transaction accounted for as a purchase business combination, all of the outstanding shares of capital stock of SAS for \$1.0 million in cash, which was paid at the closing in April 2001, plus an earn-out payment of \$1.0 million, which was paid in April 2002.

Net cash provided by operating activities was \$64.8 million for the year ended December 31, 2002 and \$93.5 million for the year ended December 31, 2001, and net cash used in operating activities was \$11.1 million for the year ended December 31, 2000. The net cash provided by operating activities for the year ended December 31, 2002 was primarily attributable to a net income of \$37.3 million, depreciation and amortization of \$6.1 million, write-down of investments of \$3.6 million, a decrease in accounts receivable of \$14.2 million, a decrease in inventory of \$13.3 million, and an increase in income tax payable and deferred income taxes of \$4.2 million, partially offset by a decrease in accounts payable and accrued expenses of \$14.0 million. The net cash provided by operating activities for the year ended December 31, 2001 was primarily attributable to a decrease in inventory of \$61.5 million, depreciation and amortization of \$14.6 million, a loss from discontinued operation of \$12.8 million, net loss from sales of investment of \$12.7 million, a decrease in accounts receivable of \$9.3 million, and an increase in income tax payable and deferred income taxes of \$4.0 million, offset by a decrease in accounts payable and accrued expenses of \$19.7 million. The net cash used in operating activities for the year ended December 31, 2000 was primarily attributable to an increase in inventory of \$56.6 million, a gain from sales of investment of \$35.0 million, an increase in accounts receivable of \$17.5 million, and a decrease in accounts payable of \$2.1 million, offset by a net income of \$48.3 million, loss from discontinued operation of \$14.9 million, depreciation and amortization of \$15.0 million, an increase in income tax payable and deferred income taxes of \$15.7 million, and an income tax benefit on disqualifying disposition of common stock options of \$4.6 million. Average days sales outstanding was approximately 45 days for fiscal year 2002, compared to approximately 52 days for fiscal year 2001 and approximately 70 days for fiscal year 2000.

Net cash used in investing activities was \$35.6 million for the year ended December 31, 2002 and \$16.5 million for the year ended December 31, 2001, and net cash provided by investing activities was \$14.1 million for the year ended December 31, 2000. The net cash used in investing activities for the year ended December 31, 2002 was primarily attributable to the purchase of short-term and long-term investments of \$55.4 million and \$5.2 million, respectively, and the purchase of property, plant and equipment of \$2.2 million, offset by proceeds from sales of short-term and long-term investments of \$25.7 million and \$0.4 million, respectively, and proceeds from the sale of Cisco stock of \$1.0 million. The net cash used in investing activities for the year ended December 31, 2001 was primarily attributable to the purchase of short-term and long-term investments of \$35.4 million and \$2.1 million, respectively, and the purchase of property, plant and equipment of \$2.0 million, offset by proceeds from sales of short-term investments of \$13.8 million, and proceeds from the sale of Cisco stock of \$11.1 million. The net cash provided by investing activities for the year ended December 31, 2000 was primarily attributable to sales of short-term investment of \$29.9 million, and sales of property, plant and equipment of \$3.9 million, offset by purchase of short-term and long-term investments of

\$10.2 million and \$2.6 million, respectively, cash paid for acquisition of \$4.3 million, and purchase of property, plant and equipment of \$2.6 million.

Net cash provided by financing activities was \$11.9 million for the year ended December 31, 2002, and cash used in financing activities was \$5.7 million for the year ended December 31, 2001 and \$17.7 million for the year ended December 31, 2000. The net cash provided by financing activities for the year ended December 31, 2002 was primarily attributable to proceeds from the sale of common stock in the secondary public offering of \$45.2 million and proceeds from the issuance of common stock under employee stock purchase plan and stock option plans of \$9.4 million, partially offset by cash paid for repurchase of common stock of \$42.7 million. The net cash used in financing activities for the year ended December 31, 2001 was primarily attributable to cash paid for repurchase of common stock of \$14.3 million, partially offset by proceeds from the issuance of common stock under employee stock plans of \$8.6 million. The net cash used in financing activities for the twelve months ended December 31, 2000 was primarily attributable to cash paid for repurchase of common stock of \$27.8 million, partially offset by proceeds from the issuance of common stock under employee stock plans of \$10.1 million.

### *Commitments and Contingencies*

We maintain leased office space in various locations, in addition to certain testing equipment leased from third parties. Future minimum rental payments under these operating leases are as follows (in thousands):

<u>Year Ended December 31,</u>	<u>Amount</u>
2003 .....	\$1,588
2004 .....	46
2005 .....	16
2006 .....	<u>16</u>
Total	<u>\$1,666</u>

Lease expenses were approximately \$1.2 million, \$1.5 million and \$1.4 million in 2002, 2001 and 2000, respectively.

As of December 31, 2002, our commitments to purchase inventory from the third-party contractors aggregated approximately \$10.7 million. Under these contractual agreements, we may order inventory from time to time, depending on our inventory needs. There is no termination date to these agreements.

From time to time, we are subject to legal proceedings and claims, including claims of alleged infringement of trademarks, copyrights and other intellectual property rights and other claims arising out of the ordinary course of business. Further, we are currently engaged in certain shareholder class action and derivative lawsuits. We intend to defend these suits vigorously and we may incur substantial expenses in litigating claims against third parties and defending against existing and future third-party claims that may arise. In the event of a determination adverse to us, we may incur substantial monetary liability and be required to change our business practices. Either of these results could have a material adverse effect on our financial position, results of operations and cash flows. See Part I, Item 3, Legal Proceedings.

### *Stock Repurchase*

We announced on May 7, 2002 that our Board of Directors authorized us to repurchase up to 3.0 million shares of ESS common stock, inclusive of all shares that then remained available for repurchase under previously announced programs, on the same terms and conditions as our prior repurchase programs. The repurchase program is being effected from time to time, depending on market conditions and other factors, through open market purchases. We repurchased the 3.0 million shares for an aggregated price of \$42.8 million at market prices ranging from \$5.27 to \$18.20 per share under the program, including purchases of 62,172 shares made during January of 2003. Upon repurchase, these shares were retired and no longer deemed outstanding.

We announced on August 8, 2002, that our Board of Directors authorized us to repurchase up to 5.0 million shares of ESS common stock, in addition to all shares that remain available for repurchase under previously announced programs, on the same terms and conditions as these prior repurchase programs. The repurchase program is being effected from time to time, depending on market conditions and other factors, through open market purchases. There was no purchase made under this program as of December 31, 2002 and we commenced our repurchase under this program in January 2003. We have repurchased 3,667,441 shares for an aggregated price of \$21.7 million at market prices ranging from \$5.43 to \$6.30 per share under this program as of March 20, 2003, leaving approximately 1.33 million shares available for repurchase as of such date. Upon repurchase, these shares were retired and no longer deemed outstanding.

To date, we have not declared or paid cash dividends to our stockholders and do not anticipate paying any dividend in the foreseeable future due to a number of factors, including the volatile nature of the semiconductor industry and the potential requirement to finance working capital in the event of a significant upturn in business. We reevaluate this practice from time to time but are not currently contemplating the payment of a cash dividend.

We have no long-term debt. Our capital expenditures for the next twelve months are anticipated to be approximately \$5.5 million. We may also use cash to acquire or invest in complementary business or products or to obtain the right to use complementary technologies. From time to time, in the ordinary course of business, we may evaluate potential acquisitions of, or investment in, such business, products or technologies owned by third parties. Also, from time to time the Board of Directors may approve the expenditure of cash resources to repurchase our common stock as market conditions warrant. Based on past performance and current expectations, we believe that our existing cash and short-term investments as of December 31, 2002, together with short-term investments, funds expected to be generated by operations, available borrowings under our line of credit and other financing options, will be sufficient to satisfy our working capital needs, capital expenditures, mergers and acquisitions, strategic investment requirements, acquisitions of property and equipment, stock repurchases and other potential needs for the next twelve months.

#### Factors That May Affect Future Results

*Our business is highly dependent on the expansion of the consumer electronics market.*

Since the second half of 2001, we have shifted our primary focus from the PC Audio business to developing products primarily for the consumer digital home entertainment market. Currently, our sales of video system processor chips to the DVD and VCD (including VCD and SVCD) player markets account for a majority of our net revenues. We expect that the consumer digital home entertainment market will continue to account for a significant portion of our net revenues for the foreseeable future. However, our strategy in this market may not be successful. Given the current economic environment and other consumer electronics products, consumer spending on DVD players and other home electronics may not increase as expected or may even weaken or fall. If the markets for these products and applications decline or fail to develop as expected, or we are not successful in our efforts to market and sell our products to manufacturers who incorporate integrated circuits into these products, our financial results will be harmed.

In addition, the potential decline in consumer confidence and consumer spending that may be occasioned by terrorist attacks or armed conflict could have a material adverse effect on our business, financial condition and results of operations.

*Our quarterly operating results are subject to fluctuations that may cause volatility or a decline in the price of our stock.*

Historically, our quarterly operating results have fluctuated significantly. Our future quarterly operating results will likely fluctuate from time to time and may not meet the expectations of securities analysts and

investors in a particular future period. The price of our common stock could decline due to such fluctuations. The following factors may cause significant fluctuations in our future quarterly operating results:

- Changes in demand for our products;
- Changes in the mix of products sold and our revenue mix;
- Charges related to excess inventory;
- Charges related the net realizable value of inventory;
- Seasonal customer demand;
- Increasing pricing pressures and resulting reduction in the ASP of any or all of our products;
- Gain or loss of significant customers;
- The cyclical nature of the semiconductor industry;
- The timing of our and our competitors' new product announcements and introductions and the market acceptance of new or enhanced versions of our and our customers' products;
- The timing of significant customer orders;
- Availability and cost of raw materials;
- Significant increases in expenses associated with the expansion of operations;
- Availability and cost of foundry capacity;
- A shift in manufacturing of consumer electronic products away from China; and
- Loss of key employees which could impact sales or the pace of product development.

*We often purchase inventory based on sales forecasts and if anticipated sales do not materialize, we may continue to experience significant inventory charges.*

We currently place non-cancelable orders to purchase our products from independent foundries on an approximately three-month rolling basis, while our customers generally place purchase orders with us that may be cancelled without significant penalty. If anticipated sales and shipments in any quarter are cancelled or do not occur as quickly as expected, expense and inventory levels could be disproportionately high and we may be required to record significant inventory charges in our statement of operations in a particular period. As our business grows, we may increasingly rely on distributors, which may further impede our ability to accurately forecast product orders. We have experienced significant inventory charges in the past and we may continue to experience these charges in future periods.

*Our research and development investments may fail to enhance our competitive position.*

We invest a significant amount of time and resources in our research and development activities to maintain and enhance our competitive position. Technical innovations are inherently complex and require long development cycles and the commitment of extensive engineering resources. We incur substantial research and development costs to confirm the technical feasibility and commercial viability of a product that in the end may not be successful. If we are not able to successfully complete our research and development projects on a timely basis, we may face competitive disadvantages. There is no assurance that we will recover the development costs associated with these projects or that we will be able to secure the financial resources necessary to fund future research and development efforts.

One of our significant projects is the development of a next generation DVD processor chip that will incorporate three independent processors and allow us to support additional features, including the Linux, PocketPC (formerly WinCE) and VxWorks operating systems. This will require a new architecture and a complete system on a chip design, which is extremely complex and may not be ultimately feasible. If we are unable to successfully develop this next generation DVD processor chip, or complete other significant research

and development projects, our business, financial condition and results of operations could be materially adversely affected.

For example, we are currently developing our DVD integrated chip solution Vibratto II, and we have incurred significant amount of resources on this complicated project. If we are not able to introduce Vibratto II on a timely basis or if Vibratto II fails to attain market acceptance, we may continue to lose market shares to competitors and our business, financial condition and results of operations could be materially adversely affected.

*We may need to acquire other companies or technologies to successfully compete in our industry and we may not be successful acquiring key targets or integrating these acquisitions with our business.*

We will continue to regularly consider the acquisition of other companies or the products and technologies of other companies to complement our existing product offerings, improve our market coverage and enhance our technological capabilities. There may be technologies that we need to acquire or license in order to remain competitive. However, we may not be able to identify and consummate suitable acquisitions and investments or be able to acquire them at costs that are competitive. Acquisitions and investments carry risks that could have a material adverse effect on our business, financial condition and results of operations, including:

- The failure to integrate with existing products and corporate culture;
- The inability to retain key employees from the acquired company;
- Diversion of management attention from other business concerns;
- The potential for large write-offs;
- The failure of the acquired products or technology to attain market acceptance;
- The failure to leverage the acquired products and technology to attain market acceptance;
- Issuances of equity securities dilutive to our existing shareholders; and
- The incurrence of substantial debt and assumption of unknown liabilities.

*Our sales may fluctuate due to seasonality and changes in customer demand.*

Since we are primarily focused on the consumer electronics market, we are likely to be affected both by changes in consumer demand and by seasonality in the sales of our products. Historically, over half of consumer electronic products are sold during the holiday seasons. Consumer electronic product sales have historically been much higher during the holiday shopping season than during other times of the year, although the manufacturers' shipments vary from quarter to quarter depending on a number of factors, including retail levels and retail promotional activities. In addition, consumer demand often varies from one product to another in consecutive holiday seasons, and is strongly influenced by the overall state of the economy. Because the consumer electronic market experiences substantial seasonal fluctuations, seasonal trends may cause our quarterly operating results to fluctuate and our inability to forecast these trends may adversely affect the market price of our common stock. In 2002, for example, we did not experience as much of a seasonal demand for our DVD chips as we expected. We believe that this was due in part to the entry of a new competitor, but also in part to lower than expected consumer demand for DVD players, which experienced strong sales during the 2001 holiday seasons. In the future, if the market for our products is not as strong during the holiday seasons, whether as a result of changes in consumer tastes or because of an overall reduction in consumer demand due to economic conditions, we may fail to meet expectation of securities analysts and investors which could cause our stock price to fall.

*Our products are subject to increasing pricing pressures.*

The markets for most of the applications for our chips are characterized by intense price competition. The willingness of OEMs to design our chips into their products depends, to a significant extent, upon our ability to

sell our products at cost-effective prices. We expect the ASP of our existing products to decline significantly over the life of each product as the markets for our products mature, new products or technology emerges and competition increases. If we are unable to reduce our costs sufficiently to offset declines in product prices or are unable to introduce more advanced products with higher margins, our gross margins may decline.

*We may lose business to competitors who have significant competitive advantages.*

Our existing and potential competitors consist, in part, of large domestic and international companies that have substantially greater financial, manufacturing, technical, marketing, distribution and other resources, greater intellectual property rights, broader product lines and longer-standing relationships with customers than we have. Our competitors also include a number of independent and emerging companies who may be able to better adapt to changing market conditions and customer demand. In addition, some of our current and potential competitors maintain their own semiconductor fabrication facilities and could benefit from certain capacity, cost and technical advantages.

DVD and VCD players face significant competition from video-on-demand, VCRs and other video formats. In addition, we expect that the DVD platform for the DHS will face competition from other platforms including STBs, as well as multi-function game boxes being manufactured and sold by large companies. Some of our competitors may be more diversified than us and supply chips for multiple platforms. A decline in DVD sales may have a disproportionate effect on us as we shift our focus to this market. Any of these competitive factors could reduce our sales and market share and may force us to lower our prices, adversely affecting our business, financial condition and results of operations.

*Our business is dependent upon retaining key personnel and attracting new employees.*

Our success depends to a significant degree upon the continued contributions of Fred S.L. Chan, our Chairman of the Board, and Robert L. Blair, our President and CEO. In the past, Mr. Chan has served as our President and Chief Executive Officer in addition to being our Chairman of the Board. Mr. Chan is critical to maintaining many of our key relationships with customers, suppliers and foundries in Asia. The loss of the services of Mr. Chan, Mr. Blair, or any of our other key executives could adversely affect our business. We may not be able to retain these key personnel and searching for their replacements could divert the attention of other senior management and increase our operating expenses. We currently do not maintain any key person life insurance.

To manage our future operations effectively, we will need to hire and retain additional management personnel, design personnel and software engineers. We may have difficulty recruiting these employees or integrating them into our business. The loss of services of any of our key personnel, the inability to attract and retain qualified personnel in the future, or delays in hiring required personnel, particularly design personnel and software engineers, could make it difficult to implement our key business strategies, such as timely and effective product introductions.

*Our customer base is highly concentrated, so the loss of a major customer could adversely affect our business.*

A substantial portion of our net revenues has been derived from sales to a small number of our customers. During 2002, sales to our top five end customers (including end-customers that buy our products from our distributor Dynax Electronics) were approximately 37% of our net revenues. We expect this concentration of sales to continue along with other changes in the composition of our customer base. The reduction, delay or cancellation of orders from one or more major customers or the loss of one or more major customers could materially and adversely affect our business, financial condition and results of operations. In addition, any difficulty in collecting amounts due from one or more key customers could harm our financial condition.

*We rely on a single distributor for a significant portion of our revenues and if this relationship deteriorates our financial results could be adversely affected.*

Sales through our largest distributor Dynax Electronics (a Hong Kong based company) were approximately 57%, 56% and 35% of our net revenues in 2002, 2001 and 2000. Dynax Electronics is not subject to any minimum purchase requirements and can discontinue marketing any of our products at any time. In addition, Dynax Electronics has rights of return for unsold product and rights to pricing allowances to compensate for rapid, unexpected price changes, therefore we do not recognize revenue until Dynax Electronics sells through to our end-customers. If our relationship with Dynax Electronics deteriorates, our quarterly results could fluctuate significantly as we experience short-term disruption to our sales and collection processes, particularly in light of the fact that we maintain significant account receivable from Dynax Electronics. As our business grows, we may increasingly rely on distributors, which may reduce our exposure to future sales opportunities. Although we believe that we could replace Dynax Electronics as our distributor for the Hong Kong and China markets, there can be no assurance that we could replace Dynax Electronics in a timely manner or if a replacement were found that the new distributor would be as effective as Dynax Electronics in generating revenue for us.

*We may not be able to adequately protect our intellectual property rights from unauthorized use and we may be subject to claims of infringement of third-party intellectual property rights.*

To protect our intellectual property rights we rely on a combination of patents, trademarks, copyrights and trade secret laws and confidentiality procedures. As of December 31, 2002, we had 17 patents granted in the United States. These patents will expire over time commencing in 2008 and ending in 2020. In addition, as of December 31, 2002, we had 9 corresponding foreign patents, which are going to expire over time commencing in 2005 and ending in 2015. We cannot assure you that patents will be issued from any of our pending applications or applications in preparation or that any claims allowed from pending applications or applications in preparation will be of sufficient scope or strength. We may not be able to obtain patent protection in all countries where our products can be sold. Also, our competitors may be able to design around our patents. The laws of some foreign countries may not protect our products or intellectual property rights to the same extent, as do the laws of the United States. We cannot assure you that the actions we have taken to protect our intellectual property will adequately prevent misappropriation of our technology or that our competitors will not independently develop technologies that are substantially equivalent or superior to our technology.

The semiconductor industry is characterized by vigorous protection and pursuit of intellectual property rights or positions. Litigation by or against us could result in significant expense and divert the efforts of our technical and management personnel, whether or not such litigation results in a favorable determination for us. Any claim, even if without merit, may require us to spend significant resources to develop non-infringing technology or enter into royalty or cross-licensing arrangements, which may not be available to us on acceptable terms, or at all. We may be required to pay substantial damages or cease the use and sale of infringing products, or both. In general, a successful claim of infringement against us in connection with the use of our technologies could adversely affect our business. For example, if we lose the Townshend modem case, our results of operations could be significantly harmed. We may initiate claims or litigation against third parties for infringement of our proprietary rights or to establish the validity of our proprietary rights. In the event of an adverse result in any such litigation our business could be materially harmed.

*We have significant international sales and operations that are subject to the special risks of doing business outside the United States.*

Substantially all of our sales are to customers in Hong Kong, China, Taiwan, Korea, Singapore and Japan. During 2002, sales to customers in Hong Kong, China and Taiwan were in excess of 85% of our net revenues. If our sales in one of these countries, such as China, were to fall, our financial condition could be materially impaired. We expect that international sales will continue to represent a significant portion of our net revenues. In addition, substantially all of our products are manufactured, assembled and tested by

independent third parties in Asia. There are special risks associated with conducting business outside of the United States, including:

- Unexpected changes in legislative or regulatory requirements and related compliance problems;
- Political, social and economic instability;
- Lack of adequate protection of our intellectual property rights;
- Changes in diplomatic and trade relationships, including changes in most favored nations trading status;
- Tariffs, quotas and other trade barriers and restrictions;
- Longer payment cycles and greater difficulties in accounts receivable collection;
- Potentially adverse taxes;
- Difficulties in obtaining export licenses for technologies;
- Language and other cultural differences, which may inhibit our sales and marketing efforts and create internal communication problems among our U.S. and foreign counterparts; and
- Currency exchange risks.

*Our products are manufactured by independent third parties.*

We rely on independent foundries to manufacture all of our products. Substantially all of our products are currently manufactured by Taiwan Semiconductor Manufacturing Company, Ltd., United Microelectronics Corporation and other independent Asian foundries. Our reliance on these or other independent foundries involves a number of risks, including:

- The possibility of an interruption or loss of manufacturing capacity;
- Reduced control over delivery schedules, manufacturing yields and costs; and
- The inability to reduce our costs as rapidly as competitors who perform their own manufacturing and who are not bound by volume commitments to subcontractors at fixed prices.

Any failure of these third-party foundries to deliver products or otherwise perform as requested could damage our relationships with our customers and harm our sales and financial results.

To address potential foundry capacity constraints in the future, we may be required to enter into arrangements, including equity investments in or loans to independent wafer manufacturers in exchange for guaranteed production capacity, joint ventures to own and operate foundries, or "take or pay" contracts that commit us to purchase specified quantities of wafers over extended periods. These arrangements could require us to commit substantial capital or to grant licenses to our technology. If we need to commit substantial capital, we may need to obtain additional debt or equity financing, which could result in dilution to our shareholders.

*Because we purchase raw materials from a limited number of suppliers, we could experience disruptions or cost increases*

We depend on a limited number of suppliers to obtain adequate supplies of quality raw materials on a timely basis. We do not generally have guaranteed supply arrangements with our suppliers. If we have difficulty in obtaining materials in the future, alternative suppliers may not be available, or if available, these suppliers may not provide materials in a timely manner or on favorable terms. If we cannot obtain adequate materials for the manufacture of our products, we may be forced to pay higher prices, experience delays and our relationships with our customers may suffer.



*We have extended sales cycles, which increase our costs in obtaining orders and reduce the predictability of our earnings.*

Our potential customers often spend a significant amount of time to evaluate, test and integrate our products. Our sales cycles often last for several months and may last for up to a year or more. These longer sales cycles require us to invest significant resources prior to the generation of revenues and subject us to the risk that customers may not order our products as anticipated. In addition, orders expected in one quarter could shift to another because of the timing of customers' purchase decisions. Any cancellation or delay in ordering our products after a lengthy sales cycle could adversely affect our business.

*Our products are subject to recall risks.*

The greater integration of functions and complexity of our products increases the risk that our customers or end users could discover latent defects or subtle faults in our products. These discoveries could occur after substantial volumes of product have been shipped, which could result in material recalls and replacement costs. Product recalls could also divert the attention of our engineering personnel from our product development needs and could adversely impact our customer relationships. In addition, we could be subject to product liability claims that could distract management, increase costs and delay the introduction of new products.

*The semiconductor industry is subject to cyclical variations in product supply and demand.*

The semiconductor industry is subject to cyclical variations in product supply and demand. Downturns in the industry have been characterized by abrupt fluctuations in product demand, production over-capacity and accelerated decline of ASP. Current trade association data indicate that the semiconductor industry has experienced a severe downturn since the third quarter of 2000 and this downturn is expected to continue for the foreseeable future. This downturn could harm our net revenues and gross margins if ASP continue to decline or demand falls. We cannot assure you that the market will stabilize or improve in the near term. A prolonged downturn in the semiconductor industry could materially and adversely impact our business and results of operations.

*We may need additional funds to execute our business plan, and if we are unable to obtain such funds, we may not be able to expand our business, and if we do raise such funds, your ownership in ESS may be subject to dilution.*

We may be required to obtain substantial additional capital to finance our future growth, fund our ongoing research and development activities and acquire new technologies or companies. To the extent that our existing sources of liquidity and cash flow from operations are insufficient to fund our activities, we may need to seek additional equity or debt financing from time to time. If our performance or prospects decrease, we may need to consummate a private placement or public offering of our capital stock at a lower price than you paid for your shares. If we raise additional capital through the issuance of new securities at a lower price than you paid for your shares, you will be subject to additional dilution. Further, such equity securities may have rights, preferences or privileges senior to those of our existing common stock. Additional financing may not be available to us when needed or, if available, it may not be available on terms favorable to us.

*Our success within the semiconductor industry depends upon our ability to develop new products in response to rapid technological changes and evolving industry standards.*

The semiconductor industry is characterized by rapid technological changes, evolving industry standards and product obsolescence. Our success is highly dependent upon the successful development and timely introduction of new products at competitive prices and performance levels. The success of new products depends on a number of factors, including:

- Anticipation of market trends;
- Timely completion of product development, design and testing;

- Market acceptance of our products and the products of our customers;
- Offering new products at competitive prices;
- Meeting performance, quality and functionality requirements of customers and OEMs; and
- Meeting the timing, volume and price requirements of customers and OEMs.

Our products are designed to conform to current specific industry standards, however we have no control of future modifications to these standards. Manufacturers may not continue to follow the current standards, which would make our products less desirable to manufacturers and reduce our sales. Our success is highly dependent upon our ability to develop new products in response to these changing industry standards.

*We operate in highly competitive markets.*

The markets in which we compete are intensely competitive and are characterized by rapid technological changes, price reductions and rapid product obsolescence. Competition typically occurs at the design stage, when customers evaluate alternative design approaches requiring integrated circuits. Because of shortened life cycles, there are frequent design win competitions for next-generation systems.

We expect competition to increase in the future from existing competitors and from other companies that may enter our existing or future markets with products that may be provided at lower costs or provide higher levels of integration, higher performance or additional features. Advancements in technology can change the competitive environment in ways that may be adverse to us. For example, today's high-performance central processing units in PCs have enough excess computing capacity to perform many of the functions that formerly required a separate chip set, which has reduced demand for our PC Audio chips. The announcements and commercial shipments of competitive products could adversely affect sales of our products and may result in increased price competition that would adversely affect the ASP and margins of our products.

The following factors may affect our ability to compete in our highly competitive markets:

- The timely shipment of our anticipated DVD integrated chip, the Vibratto II;
- The timely shipment of the next generation of our current DVD decoder chip, the Vibratto S;
- The timely shipment of our new VCD chip, the Visba IV;
- The price, quality and performance of our products and the products of our competitors;
- The timing and success of our new product introductions and those of our customers and competitors;
- The emergence of new multimedia standards;
- The development of technical innovations;
- The ability to obtain adequate foundry capacity and sources of raw materials;
- The rate at which our customers integrate our products into their products;
- The number and nature of our competitors in a given market; and
- The protection of our intellectual property rights.

*The value of our common stock may be adversely affected by market volatility.*

The price of our common stock fluctuates significantly. Many factors influence the price of our common stock, including:

- Future announcements concerning us, our competitors or our principal customers, such as quarterly operating results, changes in earnings estimates by analysts, technological innovations, new product introductions, governmental regulations, or litigation;
- The liquidity within the market for our common stock;

- Sales by our officers, directors and other insiders;
- Investor perceptions concerning the prospects of our business and the semiconductor industry;
- Market conditions and investor sentiment affecting market prices of equity securities of high technology companies; and
- General economic, political and market conditions, such as recessions or international currency fluctuations.

**Item 7A. *Quantitative and Qualitative Disclosures about Market Risk***

**Foreign Exchange Risks**

We fund our operations with cash generated by operations, the sale of marketable securities and short and long-term debt. As we operate primarily in Asia, we are exposed to market risk from changes in foreign exchange rates, which could affect our results of operations and financial condition. In order to reduce the risk from fluctuation in foreign exchange rates, our product sales and all of our arrangements with our foundry and test and assembly vendors are denominated in U.S. dollars. We have not entered into any currency hedging activities.

**Interest Rate Risks**

We also invest in short-term investments. Consequently, we are exposed to fluctuation in rates on these investments. Increases or decreases in interest rates generally translate into decreases and increases in the fair value of these investments. In addition, the credit worthiness of the issuer, relative values of alternative investments, the liquidity of the instrument, and other general market conditions may affect the fair values of interest rate sensitive investments. In order to reduce the risk from fluctuation in rates, we invest in highly liquid governmental notes and bonds with contractual maturities of less than two years. All of the investments have been classified as available for sale, and at December 31, 2002, the fair value of our investments approximated their costs.

Item 8. *Financial Statements and Supplementary Data*

The following documents are filed as part of this Report:

Report of Independent Accountants

Consolidated Balance Sheets as of December 31, 2002 and 2001

Consolidated Statements of Operations for the years ended December 31, 2002, 2001 and 2000

Consolidated Statements of Shareholders' Equity for the years ended December 31, 2002, 2001 and 2000

Consolidated Statements of Cash Flows for the years ended December 31, 2002, 2001 and 2000

Notes to Consolidated Financial Statements

## REPORT OF INDEPENDENT ACCOUNTANTS

To the Board of Directors and Shareholders of ESS Technology, Inc.:

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

As discussed in Note 2 to the consolidated financial statements, effective January 1, 2002, the Company changed its method of accounting for goodwill in accordance with Statement of Financial Accounting Standards No. 142, "Goodwill and Other Intangible Assets."

/s/ PRICEWATERHOUSECOOPERS LLP

San Jose, California  
January 24, 2003

ESS TECHNOLOGY, INC.  
CONSOLIDATED BALANCE SHEETS  
December 31, 2002 and 2001

	December 31,	
	2002	2001
	(In thousands)	
<b>ASSETS</b>		
Cash and cash equivalents .....	\$138,072	\$ 96,995
Short-term investments .....	61,030	32,039
Accounts receivable, net .....	28,435	42,595
Related party receivable — Vialta .....	33	47
Inventories, net .....	24,155	37,452
Prepaid expenses and other assets .....	2,834	1,894
Total current assets .....	254,559	211,022
Property, plant and equipment, net .....	18,985	22,438
Other assets .....	8,058	4,505
Total assets .....	\$281,602	\$237,965
<b>LIABILITIES AND SHAREHOLDERS' EQUITY</b>		
Accounts payable and accrued expenses .....	\$ 35,084	\$ 49,062
Related party payable — Vialta .....	—	111
Income tax payable and deferred income taxes .....	9,474	4,883
Total current liabilities .....	44,558	54,056
Non-current deferred tax liability .....	7,676	6,931
Total liabilities .....	52,234	60,987
Commitments and contingencies (Note 13) .....		
Shareholders' equity:		
Preferred stock, no par value, 10,000 shares authorized; none issued and outstanding .....	—	—
Common stock, no par value, 100,000 shares authorized; 43,305 and 42,334 shares issued and outstanding at December 31, 2002 and 2001, respectively ...	196,344	153,678
Accumulated other comprehensive income (loss) .....	504	(1,374)
Retained earnings .....	32,520	24,674
Total shareholders' equity .....	229,368	176,978
Total liabilities and shareholders' equity .....	\$281,602	\$237,965

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

ESS TECHNOLOGY, INC.  
CONSOLIDATED STATEMENTS OF OPERATIONS  
Years Ended December 31, 2002, 2001 and 2000

	Years Ended December 31,		
	2002	2001	2000
	(In thousands, except per share data)		
Net revenues .....	\$272,039	\$270,253	\$302,433
Net revenues from related party — Vialta .....	1,403	1,127	1,003
Total net revenues .....	\$273,442	\$271,380	\$303,436
Cost of revenues .....	176,454	180,231	192,452
Gross profit .....	96,988	91,149	110,984
Operating expenses:			
Research and development .....	26,964	27,957	27,832
Purchased in-process research and development .....	—	—	2,625
Selling, general and administrative .....	34,170	40,689	36,225
Operating income .....	35,854	22,503	44,302
Non-operating income (loss), net .....	2,407	(18,780)	41,810
Income before income taxes .....	38,261	3,723	86,112
Provision for (benefit from) income taxes .....	984	(7,262)	22,946
Net income from continuing operations .....	37,277	10,985	63,166
Discontinued operation, net of minority interest:			
Loss from discontinued operation, net of minority interest .....	—	(4,205)	(14,860)
Loss on disposal of discontinued operation, net of minority interest ..	—	(8,597)	—
Net income (loss) .....	<u>\$ 37,277</u>	<u>\$ (1,817)</u>	<u>\$ 48,306</u>
Net income (loss) per share:			
Basic:			
Continuing operations .....	\$ 0.85	\$ 0.26	\$ 1.49
Discontinued operation .....	—	(0.30)	(0.35)
	<u>\$ 0.85</u>	<u>\$ (0.04)</u>	<u>\$ 1.14</u>
Diluted:			
Continuing operations .....	\$ 0.80	\$ 0.24	\$ 1.37
Discontinued operation .....	—	(0.28)	(0.32)
	<u>\$ 0.80</u>	<u>\$ (0.04)</u>	<u>\$ 1.05</u>
Shares used in calculating net income (loss) per share:			
Basic .....	<u>44,044</u>	<u>42,274</u>	<u>42,548</u>
Diluted .....	<u>46,731</u>	<u>45,262</u>	<u>45,943</u>

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

ESS TECHNOLOGY, INC.

CONSOLIDATED STATEMENTS OF SHAREHOLDERS' EQUITY  
AND COMPREHENSIVE INCOME

Years Ended December 31, 2002, 2001 and 2000

	Common Stock		Accumulated Other Comprehensive Income (Loss)  (In thousands)	Retained Earnings	Total Shareholders' Equity
	Shares	Amount			
Balance at December 31, 1999 . . . . .	41,372	\$140,597	—	\$ 42,982	\$183,579
Issuance of common stock upon exercise of options . . . . .	2,660	9,290	—	—	9,290
Issuance of common stock for employee stock purchase plan . . . .	74	837	—	—	837
Income tax benefit on disqualifying disposition of common stock options . . . . .	—	4,639	—	—	4,639
Repurchase of common stock . . . . .	(1,973)	(6,166)	—	(21,678)	(27,844)
Unrealized loss on marketable securities . . . . .	—	—	(7,378)	—	(7,378)
Net income . . . . .	—	—	—	48,306	48,306
Balance at December 31, 2000 . . . . .	42,133	\$149,197	\$ (7,378)	\$ 69,610	\$211,429
Issuance of common stock upon exercise of options . . . . .	1,772	8,174	—	—	8,174
Issuance of common stock for employee stock purchase plan . . . .	69	405	—	—	405
Income tax benefit on disqualifying disposition of common stock options . . . . .	—	1,670	—	—	1,670
Repurchase of common stock . . . . .	(1,640)	(5,768)	—	(8,544)	(14,312)
Unrealized loss on marketable securities . . . . .	—	—	(6,705)	—	(6,705)
Net loss . . . . .	—	—	—	(1,817)	(1,817)
Loss on sale of marketable security . .	—	—	12,709	—	12,709
Net book value of discontinued operation on date of spin-off . . . . .	—	—	—	(34,575)	(34,575)
Balance at December 31, 2001 . . . . .	42,334	\$153,678	\$ (1,374)	\$ 24,674	\$176,978
Issuance of common stock upon exercise of options . . . . .	1,203	7,935	—	—	7,935
Issuance of common stock for employee stock purchase plan . . . .	216	1,452	—	—	1,452
Issuance of common stock from secondary public offering . . . . .	2,500	45,181	—	—	45,181
Income tax benefit on disqualifying disposition of common stock options . . . . .	—	1,025	—	—	1,025
Repurchase of common stock . . . . .	(2,948)	(13,228)	—	(29,431)	(42,659)
Stock-related compensation charge . .	—	301	—	—	301
Unrealized gain on marketable securities . . . . .	—	—	260	—	260
Net income . . . . .	—	—	—	37,277	37,277
Write down of Cisco shares . . . . .	—	—	1,573	—	1,573
Loss on sale of marketable security . .	—	—	45	—	45
Balance at December 31, 2002 . . . . .	<u>43,305</u>	<u>\$196,344</u>	<u>\$ 504</u>	<u>\$ 32,520</u>	<u>\$229,368</u>

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



**ESS TECHNOLOGY, INC.**  
**CONSOLIDATED STATEMENTS OF CASH FLOWS**  
**Years Ended December 31, 2002, 2001 and 2000**

	Years Ended December 31,		
	2002	2001	2000
	(In thousands)		
<b>Cash flows from operating activities:</b>			
Net income (loss) .....	\$ 37,277	\$ (1,817)	\$ 48,306
Adjustments to reconcile net income (loss) to net cash provided by (used in) operating activities:			
Loss from discontinued operation .....	—	12,802	14,860
Depreciation and amortization .....	6,080	14,640	15,005
Gain on sale of property, plant and equipment .....	(85)	—	(2,911)
Charges for purchased in-process research and development .....	—	—	2,625
(Gain) loss from sale of investments .....	189	12,709	(35,045)
Write-down of investments .....	3,612	—	—
Stock-related compensation charge .....	301	—	—
Income tax benefit on disqualifying disposition of common stock options .....	1,025	1,670	4,639
Changes in assets and liabilities:			
Accounts receivable .....	14,160	9,289	(17,524)
Related party receivable — Vialta .....	14	(47)	—
Inventories .....	13,297	61,488	(56,593)
Prepaid expenses and other assets .....	(1,208)	286	1,153
Accounts payable and accrued expenses .....	(13,978)	(19,677)	(2,114)
Related party payable — Vialta .....	(111)	(599)	842
Income tax payable and deferred income taxes .....	4,179	4,042	15,687
Net assets of discontinued operations .....	—	(1,246)	—
Net cash provided by (used in) operating activities .....	64,752	93,540	(11,070)
<b>Cash flows from investing activities:</b>			
Purchase of property, plant and equipment .....	(2,232)	(2,036)	(2,568)
Sale of property, plant and equipment .....	85	192	3,949
Purchase of short-term investments .....	(55,406)	(35,433)	(10,155)
Sale of short-term investments .....	25,732	13,788	29,869
Purchase of long-term investments .....	(5,212)	(2,100)	(2,640)
Sale of long-term investments .....	440	—	—
Cash paid for acquisitions .....	—	(2,072)	(4,266)
Purchase of Vialta stock .....	—	—	(100)
Proceeds from sale of Cisco stock .....	1,009	11,134	—
Net cash provided by (used in) investing activities .....	(35,584)	(16,527)	14,089
<b>Cash flows from financing activities:</b>			
Repurchase of common stock .....	(42,659)	(14,312)	(27,844)
Issuance of common stock from secondary public offering .....	45,181	—	—
Issuance of common stock under employee stock purchase plan and stock option plans .....	9,387	8,579	10,127
Net cash provided by (used in) financing activities .....	11,909	(5,733)	(17,717)
Net increase (decrease) in cash and cash equivalents .....	41,077	71,280	(14,698)
Cash and cash equivalents at beginning of year .....	96,995	25,715	40,413
Cash and cash equivalents at end of year .....	\$138,072	\$ 96,995	\$ 25,715
<b>Supplemental disclosure of cash flow information</b>			
Cash paid for income taxes .....	\$ 237	\$ 3,300	\$ 5,795
Cash refund for income taxes .....	\$ 4,520	\$ 6,684	\$ 3,975

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

## ESS TECHNOLOGY, INC.

### NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

#### Note 1. Nature of Business

We are a leading designer, developer and marketer of highly integrated digital processor chips. These chips are the primary processors driving digital video and audio players, including DVD, Video CD ("VCD") and digital media players. Our chips use multiple processors and a programmable architecture that enable us to offer a broad array of features and functionality. We have also developed an encoding processor to address the growing demand for the digital video recorder ("DVR") and recordable DVD players. We believe that multi-featured DVD, DVR and recordable DVD players will serve as a platform for the digital home system ("DHS"), integrating various digital home entertainment and information delivery products into a single box. We are also a supplier of chips for use in modems, consumer digital audio and PC Audio products. We outsource all of our chip fabrication and assembly as well as the majority of our test operations, allowing us to focus on our design and development strengths.

We market our products worldwide through our direct sales force, distributors and sales representatives. Substantially all of our sales are to customers in Hong Kong, China, Taiwan, Korea, Singapore, and Japan. We employ sales and support personnel located outside of the United States in China, Hong Kong, Taiwan, Japan and Korea to support these international sales efforts. We expect that international sales will continue to represent a significant portion of our net revenue. In addition, substantially all of our products are manufactured, assembled and tested by independent third parties in Asia. We also have a limited number of employees engaged in research and development efforts outside of the United States. There are special risks associated with conducting business outside of the United States.

ESS was incorporated in California in 1984 and became a public company in 1995. In April 1999, we expanded our business in the semiconductor segment by establishing Vialta, Inc. ("Vialta"), a subsidiary that would operate in the internet segment. In April 2001, our board of directors adopted a plan to distribute to our shareholders all of our shares in Vialta. The Vialta spin-off was completed on August 21, 2001. Vialta is reported separately as a discontinued operation. See Note 5, "Discontinued Operation" and Note 15, "Related Party Transactions with Vialta, Inc."

#### Note 2. Summary of Significant Accounting Policies

##### *Use of Estimates*

The preparation of financial statements in conformity with accounting principles generally accepted in the United States requires management to make estimates and assumptions that affect the amounts reported in the consolidated financial statements and accompanying notes. Actual results could differ materially from those estimates.

##### *Principles of Consolidation*

The consolidated financial statements include the accounts of ESS and its subsidiaries. All significant inter-company accounts and transactions have been eliminated.

##### *Foreign Currency Translation*

Our subsidiaries primarily use the U.S. dollar as their functional currency. Accordingly, assets and liabilities of these subsidiaries are translated using exchange rates in effect at the end of the period, except for non-monetary assets that are translated using historical exchange rates. Revenues and costs are translated using average exchange rates for the period, except for costs related to those balance sheet items that are translated using historical exchange rates. The resulting translation gains and losses are included in the Consolidated Statement of Operations as incurred.

ESS TECHNOLOGY, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

*Cash, Cash Equivalents, and Short-Term Investments*

We consider all highly liquid investments with an initial maturity of 90 days or less to be cash equivalents and investments with original maturity dates of greater than 90 days to be short-term investments.

Short-term investments are comprised of primarily debt instruments and marketable securities. Short-term investments are accounted for as available-for-sale and are reported at fair value with unrealized gains and losses, net of related tax, recorded as accumulated other comprehensive income in shareholders' equity until realized in accordance with SFAS 115, "Accounting for Certain Investments in Debt and Equity Securities." Gains and losses on securities sold are based on the specific identification method and are included in our Consolidated Statement of Operations as non-operating income (loss).

*Fair Value of Financial Instruments*

The reported amounts of certain of our financial instruments, including cash and cash equivalents, short-term investments, accounts receivable, accounts payable, accrued expenses and other current liabilities approximate fair value due to their short maturities.

*Inventory*

Our inventory is comprised of raw materials, work-in-process and finished goods, all of which are manufactured by third-party contractors. Inventory is valued at the lower of standard cost (which approximates actual cost on a first-in, first-out basis) or market. We reduce the carrying value of inventory for estimated slow-moving, excess, obsolete, damaged or otherwise unmarketable products by an amount that is the difference between cost and estimated market value based on forecasts of future demand and market conditions.

*Property and Equipment*

Property and equipment are stated at cost less accumulated depreciation and amortization. Depreciation is generally computed using the straight-line method over the estimated useful lives of the assets.

Building and building improvements .....	7-30 years
Machinery and equipment .....	3-5 years
Furniture and fixtures .....	3-5 years

Repairs and maintenance costs are expensed as incurred.

*Other Assets*

Investment in over 50% owned companies are consolidated. Investments in 20% to 50% owned companies are accounted for using the equity method. Investments in less than 20% owned companies are accounted for using the cost method unless we can exercise significant influence over the investee's operations or the investee is economically dependent upon us, in which case the equity method is used. We currently do not have any unconsolidated investments for which we account for the equity method. We periodically review the performance of these investments to ascertain if any adjustment to their carrying value is required.

Technical infrastructure and covenants not to compete are amortized over estimated useful lives that range from 3 to 4 years.

*Goodwill and Other Intangible Assets*

Effective January 1, 2002, we adopted Statement of Financial Accounting Standards ("SFAS") 142, "Goodwill and Other Intangible Assets" ("SFAS 142") which addresses the accounting that must be applied

ESS TECHNOLOGY, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

to goodwill and intangible assets subsequent to their initial recognition. SFAS 142 requires that goodwill no longer be amortized, and instead, be tested for impairment at the reporting unit level at least annually.

We have goodwill and other intangible assets related to our previous acquisitions of NetRidium and SAS. In accordance with SFAS 142, we reclassified acquired workforce intangible assets, which were previously recognized apart from goodwill, as goodwill and ceased amortization of goodwill as of January 1, 2002. This change in accounting treatment reduced operating expenses by \$688,000 for the year ended December 31, 2002 from 2001 levels. In addition to goodwill associated with NetRidium and SAS, we recorded goodwill amortization of approximately \$1,668,000 and \$3,336,000 during the fiscal years ended December 31, 2001 and December 31, 2000, respectively, associated with the acquisition of Platform Technologies, Inc ("Platform"). Goodwill associated with the acquisition of Platform Technology was fully amortized in 2001.

The provisions of SFAS 142 also require us to complete a transitional impairment test of goodwill within six months of adoption. We completed our transitional impairment test of goodwill as of January 1, 2002, the adoption date of SFAS 142 and determined that goodwill was not impaired. In addition, we completed our first annual impairment test in the fourth quarter of 2002, and determined that goodwill was not impaired.

A reconciliation of previously reported net income and loss per share for the twelve months ended December 31, 2001 and December 31, 2000 to the amounts adjusted for the exclusion of goodwill and workforce amortization, net of the effects of continued amortization of technical infrastructure and related income tax effect, are as follows (after we adopted SFAS 142 effective January 1, 2002, we discontinued our practice of amortizing goodwill):

	Years Ended December 31,	
	2001	2000
	(In thousands, except per share data)	
Reported net income (loss) .....	\$(1,817)	\$48,306
Add: Goodwill amortization .....	2,243	3,533
Tax impact .....	<u>(271)</u>	<u>(601)</u>
Adjusted net income (loss) .....	<u>\$ 155</u>	<u>\$51,238</u>
Reported Basic and diluted earnings per share:		
Basic .....	\$ (0.04)	\$ 1.14
Diluted .....	\$ (0.04)	\$ 1.05
Add: Goodwill amortization .....	0.05	0.08
Tax impact .....	<u>(0.01)</u>	<u>(0.01)</u>
Adjusted earnings per share		
Basic .....	<u>\$ —</u>	<u>\$ 1.21</u>
Diluted .....	<u>\$ —</u>	<u>\$ 1.12</u>

*Impairment of Long-Lived Assets*

Pursuant to SFAS No. 144, "Accounting for the Impairment or Disposal of Long-Lived Assets" ("SFAS 144"), we review the recoverability of long-lived assets based upon our estimates of the future undiscounted cash flows to be generated by the long-lived assets and will reserve for impairment whenever such estimated future cash flows indicate the carrying amount of the assets may not be fully recoverable. The adoption of SFAS 144 did not have a material effect on our financial statements.

## ESS TECHNOLOGY, INC.

### NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

#### *Revenue Recognition*

Revenue is primarily generated by product sales and is generally recognized at the time of shipment when persuasive evidence of an arrangement exists, the price is fixed or determinable and collection of the resulting receivable is reasonably assured, except for products sold to certain distributors with certain rights of return and allowance, in which case, revenue is deferred until such distributor resells the products to a third party. Such deferred revenues related to distributor sales, net of deferred cost of goods sold are included in accrued expenses on our balance sheets.

We provide for rebates based on current contractual terms and future returns based on historical experiences at the time revenue is recognized as reductions to product revenue. Actual amounts may be different from management's estimates. Such differences, if any, are recorded in the period they become known.

#### *Research and Development Costs*

We expense research and development costs as incurred.

#### *Income Taxes and Tax Reserves*

We account for income taxes under an asset and liability approach that requires the recognition of deferred tax liabilities and assets for the expected future tax consequences of timing differences between the carrying amounts and the tax bases of assets and liabilities. U.S. deferred income taxes are not provided on all un-remitted earnings of our foreign subsidiaries as such earnings are considered permanently invested. Assumptions underlying recognition of deferred tax assets and non-recognition of U.S. income tax on un-remitted earnings can change if our business plan is not achieved or if Congress adopts changes in the Internal Revenue Code of 1986, as amended.

#### *Earnings (Loss) Per Share*

Basic earnings per share ("EPS") is computed by dividing net income by the weighted average number of common stock outstanding for the period. Diluted EPS reflects the potential dilution that would occur if securities or other contracts to issue common stock were exercised or converted into common stock.

#### *Stock Based Compensation*

We account for stock-based compensation, including stock options granted under our stock option plans and shares issued under the 1995 Employee Stock Purchase Plan ("Purchase Plan"), using the intrinsic value method prescribed in APB No. 25, "Accounting for Stock Issued to Employees," and related interpretations. Compensation cost for stock options, if any, is recognized ratably over the vesting periods. Our policy is to grant options with an exercise price equal to the quoted market price of our stock on the grant date. We provide additional pro forma disclosures as required under SFAS No. 123, "Accounting for Stock-Based Compensation" ("SFAS 123") and SFAS No. 148, "Accounting for Stock-Based Compensation — Transition and Disclosure — an Amendment of FAS No. 123."

ESS TECHNOLOGY, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

Our pro forma net income (loss) and pro forma net income (loss) per share would have been as follows had compensation costs for options granted under our stock option plans and shares purchased under our Purchase Plan been determined based on the fair value at the grant dates, as prescribed in SFAS 123:

	Years Ended December 31,		
	2002	2001	2000
	(In thousands, except per share data)		
Net income (loss):			
As reported	\$ 37,277	\$ (1,817)	\$48,306
Amortization of stock compensation expense	<u>(10,827)</u>	<u>(11,282)</u>	<u>(21,768)</u>
Pro forma	<u>\$ 26,450</u>	<u>\$ (13,099)</u>	<u>\$26,538</u>
Net income (loss) per share — basic:			
As reported	\$ 0.85	\$ (0.04)	\$ 1.14
Pro forma	\$ 0.60	\$ (0.31)	\$ 0.62
Net income (loss) per share — diluted:			
As reported	\$ 0.80	\$ (0.04)	\$ 1.05
Pro forma	\$ 0.57	\$ (0.29)	\$ 0.58

The fair value of each option granted under our stock option plans is estimated on the date of grant using the Black-Scholes option-pricing model with the following assumptions:

	Employee Stock Options		
	2002	2001	2000
Expected dividend yield	0.0%	0.0%	0.0%
Risk-free interest rate	3.69%	4.43%	6.00%
Expected volatility	102%	90%	60%
Expected life (in years)	4	3	4

Shares purchased under the Purchase Plan in 2002, 2001 and 2000 were approximately 216,000, 69,000 shares and 74,000 shares, respectively, at an average price per share of \$6.74, \$5.78 and \$11.24, respectively. Pro forma compensation expense for the grant date fair value, as defined by SFAS 123, of the purchase rights granted under the Purchase Plan was calculated using the Black-Scholes model with the following assumptions for 2002, 2001 and 2000:

	1995 Employee Stock Purchase Plan		
	2002	2001	2000
Expected dividend yield	0.0%	0.0%	0.0%
Risk-free interest rate	3.69%	4.43%	6.00%
Expected volatility	102%	90%	60%
Expected life (in months)	6	6	6
Weighted average grant date fair value	\$3.45	\$3.92	\$4.30

Because additional option grants are expected to be made from our stock option plans and additional shares are expected to be purchased under the Purchase Plan each year, the above pro forma disclosures are not representative of pro forma effects on reported net income (loss) for future years.

ESS TECHNOLOGY, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

*Risks and Uncertainties*

We operate in one business segment that is characterized by rapid technological advances, changes in customer requirements and evolving industry standards. Our failure to anticipate or respond to such advances and changes could have a material adverse effect on our business and operating results.

*Comprehensive Income (Loss)*

SFAS No. 130, "Reporting Comprehensive Income" ("SFAS 130"), establishes a standard for the reporting and display of comprehensive income and its components within the financial statements. Comprehensive income, as defined, includes all changes in equity during a period from non-owner sources. Included in other comprehensive income are unrealized gains and losses on marketable securities, net of deferred tax. This adjustment is accumulated within the Consolidated Statement of Shareholders' Equity under the caption "Accumulated Other Comprehensive Income (Loss)."

*Concentration of Credit Risk*

Financial instruments, which potentially subject us to concentrations of credit risk, consist primarily of cash equivalents, short-term investments, and accounts receivable. By policy, we place our investments, other than U.S. Government Treasury instruments, only with financial institutions meeting our investment guidelines. Almost all of our accounts receivable are derived from sales to customers and distributors, in the consumer electronics, computer and communications markets. See Note 12, "Industries and Geographical Segment."

Substantially all of our sales are to customers in Hong Kong, China, Taiwan, Korea, Singapore and Japan. Dynax Electronics is our largest distributor, sales through Dynax Electronics accounted for approximately 57%, 56% and 35% of our net revenues in 2002, 2001 and 2000, respectively. Dynax Electronics' percentage of trade accounts receivable was 82% and 79% as of December 31, 2002 and December 31, 2001. Digital AV, our most significant direct customer, accounted for 8%, 9% and 10% of our net revenues in 2002, 2001 and 2000, respectively.

*Warranty*

We provide standard warranty coverage for twelve months. We account for the general warranty cost as a charge to cost of goods sold when revenue is recognized. The estimated warranty cost is based on historical product performance and field expenses. In addition to the general warranty reserves, we also provide specific warranty reserves for certain parts if there are potential warranty issues. The following table shows the details of the product warranty accrual, as required by FASB Interpretation No. 45, "Guarantor's Accounting and Disclosure Requirements for Guarantees, Including Indirect Guarantees of Indebtedness of Others," for the year ended December 31, 2002.

	Year Ended December 31, 2002
	(In thousands)
Beginning balance .....	\$ 544
Accruals for warranties issued during the period .....	1,067
Settlements made during the period .....	<u>1,061</u>
Ending balance .....	<u>\$ 550</u>

## ESS TECHNOLOGY, INC.

### NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

#### Recent Accounting Pronouncements

In June 2002, the Financial Accounting Standards Board ("FASB") issued SFAS No. 146, "Accounting for Costs Associated with Exit or Disposal Activities" ("SFAS 146"). SFAS 146 addresses financial accounting and reporting for costs associated with exit or disposal activities. SFAS 146 requires that a liability for a cost associated with an exit or disposal activity is recognized when the liability is incurred. In summary, SFAS 146 requires that the liability be recognized and measured initially at its fair value in the period in which the liability is incurred, except for one-time termination benefits that meet certain requirements. Since SFAS 146 is effective prospectively for exit or disposal activities initiated after December 31, 2002, the adoption of SFAS 146 will have no effect on our current financial position or results of operations.

In November 2002, the FASB issued FASB Interpretation No. 45, "Guarantor's Accounting and Disclosures Requirements for Guarantees, Including Indirect Guarantees of Indebtedness of Others" ("FIN 45"). FIN 45 requires that a liability be recorded in the guarantor's balance sheet upon issuance of a guarantee. In addition, FIN 45 requires disclosures about the guarantees that an entity has issued, including a reconciliation of changes in the entity's product warranty liabilities. The initial recognition and initial measurement provisions of FIN 45 are applicable on a prospective basis to guarantees issued or modified after December 31, 2002, irrespective of the guarantor's fiscal year-end. The disclosure requirements of FIN 45 are effective for financial statements of interim or annual periods ending after December 15, 2002. We have adopted this statement. The adoption of FIN 45 did not have a material effect on our financial position or results of operations.

In December 2002, the FASB issued SFAS No. 148, "Accounting for Stock-Based Compensation, Transition and Disclosure" ("SFAS 148"). SFAS 148 provides alternative methods of transition for a voluntary change to the fair value based method of accounting for stock-based employee compensation. SFAS 148 also requires that disclosures of the pro forma effect of using the fair value method of accounting for stock-based employee compensation be displayed more prominently and in a tabular format. Additionally, SFAS 148 requires disclosures of the pro forma effect in interim financial statements. The transition and annual disclosure requirements of SFAS 148 are effective for fiscal years ending after December 15, 2002. The interim disclosure requirements are effective for interim periods beginning after December 15, 2002. We do not expect that the adoption of SFAS 148 will have a material effect on our financial position or results of operations.

In January 2003, the FASB issued FASB Interpretation No. 46, "Consolidation of Variable Interest Entities, an Interpretation of ARB No. 51" ("FIN 46"). FIN 46 requires certain variable interest entities to be consolidated by the primary beneficiary of the entity if the equity investors in the entity do not have the characteristics of a controlling financial interest or do not have sufficient equity at risk for the entity to finance its activities without additional subordinated financial support from other parties. FIN 46 is effective immediately for all new variable interest entities created or acquired after January 31, 2003. For variable interest entities created or acquired prior to February 1, 2003, the provisions of FIN 46 must be applied for the first interim or annual period beginning after June 15, 2003. We do not expect that the adoption of FIN 46 will have a material effect on our financial position or results of operations.



ESS TECHNOLOGY, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

Note 3. Balance Sheet Components

	December 31,	
	2002	2001
	(In thousands)	
Cash and cash equivalents:		
Cash and money market accounts .....	\$ 14,121	\$ 29,327
U.S. government and corporate debt securities .....	123,951	67,541
Certificates of deposit .....	<u>—</u>	<u>127</u>
	<u>\$138,072</u>	<u>\$ 96,995</u>
Short-term investments:		
U.S. government and corporate debt securities .....	\$ 60,426	\$ 30,931
Marketable equity securities .....	\$ 46	3,615
Unrealized gain (loss) on marketable securities .....	<u>558</u>	<u>(2,507)</u>
	<u>\$ 61,030</u>	<u>\$ 32,039</u>
Accounts receivable, net:		
Accounts receivable .....	\$ 29,384	\$ 43,494
Less: Allowance for doubtful accounts .....	<u>(949)</u>	<u>(899)</u>
	<u>\$ 28,435</u>	<u>\$ 42,595</u>
Inventories:		
Raw materials .....	\$ 12,569	\$ 20,807
Work-in-process .....	7,138	10,918
Finished goods .....	<u>4,448</u>	<u>5,727</u>
	<u>\$ 24,155</u>	<u>\$ 37,452</u>
Property, plant and equipment:		
Land .....	\$ 2,860	\$ 2,860
Building and building improvements .....	23,339	22,766
Machinery and equipment .....	31,905	31,013
Furniture and fixtures .....	<u>13,482</u>	<u>13,080</u>
	71,586	69,719
Less: Accumulated depreciation and amortization .....	<u>(52,601)</u>	<u>(47,281)</u>
	<u>\$ 18,985</u>	<u>\$ 22,438</u>
Other assets:		
Investments .....	\$ 4,266	\$ 677
Covenants not to compete .....	2,074	1,937
Technical infrastructure .....	249	533
Other .....	<u>1,469</u>	<u>1,358</u>
	<u>\$ 8,058</u>	<u>\$ 4,505</u>

ESS TECHNOLOGY, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

	December 31,	
	2002	2001
	(In thousands)	
Accounts payable and accrued expenses:		
Accounts payable .....	\$ 10,045	\$ 10,285
Accrued compensation costs .....	4,033	5,927
Accrued commission and royalties .....	10,842	18,655
Marketing and advertising related accruals .....	1,876	5,945
Deferred revenue related to distributor sales, net of deferred cost of goods sold .....	818	1,571
Other accrued liabilities .....	<u>7,470</u>	<u>6,679</u>
	<u>\$ 35,084</u>	<u>\$ 49,062</u>

Depreciation expenses were approximately \$5.7 million, \$9.6 million and \$10.9 million in 2002, 2001 and 2000, respectively.

Note 4. Marketable Securities

The amortized costs and estimated fair value of securities available-for-sale as of December 31, 2002 and December 31, 2001 are as follows:

<u>December 31, 2002</u>	<u>Amortized Cost</u>	<u>Gross Unrealized Gains</u>	<u>Gross Unrealized Loss</u>	<u>Fair Value</u>
	(In thousands)			
Money market accounts .....	\$ 129	\$ —	\$ —	\$ 129
Certificate of Deposit .....	—	—	—	—
Municipal bonds .....	142,341	61	—	142,402
Corporate debt securities .....	36,108	374	(5)	36,477
Corporate equity securities .....	1,058	139	—	1,197
Government agency bonds .....	<u>5,928</u>	<u>93</u>	<u>—</u>	<u>6,021</u>
Total available-for-sale .....	\$185,564	\$667	\$ (5)	\$186,226
Less: Cash Equivalents .....	124,080	—	—	124,080
Short-term marketable securities .....	<u>60,472</u>	<u>563</u>	<u>(5)</u>	<u>61,030</u>
Long-term marketable securities .....	<u>\$ 1,012</u>	<u>\$104</u>	<u>\$ —</u>	<u>\$ 1,116</u>

ESS TECHNOLOGY, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

<u>December 31, 2001</u>	<u>Amortized Cost</u>	<u>Gross Unrealized Gains</u>	<u>Gross Unrealized Loss</u>	<u>Fair Value</u>
		(In thousands)		
Money market accounts .....	\$ 87	\$—	\$ —	\$ 87
Certificate of Deposit .....	127	—	—	127
Corporate debt securities .....	77,505	—	(29)	77,476
Corporate equity securities .....	3,615	—	(2,508)	1,107
Government agency bonds .....	<u>20,967</u>	<u>30</u>	<u>—</u>	<u>20,997</u>
Total available-for-sale .....	\$102,301	\$30	\$(2,537)	\$99,794
Less: Cash Equivalents .....	<u>67,755</u>	<u>—</u>	<u>—</u>	<u>67,755</u>
Short-term marketable securities .....	<u>\$ 34,546</u>	<u>\$30</u>	<u>\$(2,537)</u>	<u>\$32,039</u>

The contractual maturities of debt securities classified as available-for-sale as of December 31, 2002 regardless of the consolidated balance sheet classification are as follows:

<u>December 31, 2002</u>	<u>Estimated Fair Value</u>
	(In thousands)
Maturing 90 days or less from purchase .....	\$123,951
Maturing between 90 days and one year from purchase .....	9,073
Maturing more than one year from purchase .....	<u>51,876</u>
Total available-for-sale .....	<u>\$184,900</u>

Actual maturities may differ from contractual maturities because borrowers may have the right to call or prepay obligations with or without call or prepayment penalties, and we may need to sell the investment to meet our cash needs. Net realized gains and losses for the twelve months ended December 31, 2002 and 2001 were not material to our financial position or results of operations.

**Note 5. Discontinued Operation**

As of December 31, 2000, we had a 62.1% ownership and voting interest in Vialta. On April 21, 2001, ESS' Board of Directors adopted a plan to distribute all of our Vialta shares to our shareholders within twelve months thereafter. Effective as of August 21, 2001, we spun off Vialta by distributing to our shareholders all 50.6 million shares of Vialta Class A common stock then held by us. For all periods presented, Vialta is accounted for as a discontinued operation in our financial statements in accordance with APB No. 30. Amounts in the financial statements and related notes for all periods shown have been reclassified to reflect the discontinued operation.

For the period up to March 31, 2001, operating results for the discontinued operation are reported, net of minority interest, under "Loss from discontinued operation, net of minority interest" in the accompanying Statements of Operations. "Gain (loss) on disposal of discontinued operation, net of minority interest" in the accompanying Statements of Operations includes the initially estimated anticipated loss on the disposal of the discontinued operation and operating losses incurred between the measurement date and the estimated disposal date. Upon the distribution of Vialta shares on August 21, 2001, we recognized a \$4.7 million gain within "Gain (loss) on disposal of discontinued operation, net of minority interest" because the Vialta spin-off occurred sooner than initially estimated.

We had initially estimated that the disposal of Vialta, assuming a tax-free distribution, would result in a total loss of \$21.4 million, of which \$13.3 million was assigned to us due to our 62.1% share ownership.

ESS TECHNOLOGY, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

Included in the estimate were a \$1.1 million charge, net of minority interest, related to the spin-off of Vialta and a \$12.2 million charge of anticipated operating losses, net of minority interest, from operating the Vialta business between April 1, 2001 and September 30, 2001, the initially estimated completion date for the spin-off.

Operating results through March 31, 2001 were recorded as "Loss from discontinued operation, net of minority interest." Vialta's operating loss from April 1, 2001 through April 21, 2001 (the measurement date) has been included in the estimated loss on the disposal of the discontinued operation, net of minority interest, under "Gain (loss) on disposal of discontinued operation, net of minority interest" in the accompanying Statements of Operations in the first quarter of 2001.

	Period From January 1, 2001 Through August 20, 2001	Year Ended December 31, 2000
	(In thousands)	
Operating expenses .....	\$ 21,482	\$ 29,555
Net loss before minority interest .....	(18,468)	(23,289)
Loss attributable to minority interest .....	<u>(6,912)</u>	<u>(8,429)</u>
Loss from Vialta operation, net of minority interest .....	(11,556)	(14,860)
Expenses incurred in connection with spin-off of Vialta .....	<u>(1,246)</u>	<u>—</u>
Loss from and on disposal of Vialta operation, net of minority interest .....	<u>\$ (12,802)</u>	<u>\$ (14,860)</u>

Note 6. Debt

We have a \$10.0 million unsecured line of credit with U.S. Bank National Association, which will expire on June 5, 2005. Under the terms of the agreement, we may borrow at a fixed rate of LIBOR plus 1.5% or prime rate. The line of credit requires us to achieve certain financial ratios and operating results. As of December 31, 2002, we were in compliance with the borrowing criteria. There were no borrowings under this line of credit as of December 31, 2002.

Note 7. Income Taxes

Income before provision for (benefit from) income taxes consisted of the following:

	Years Ended December 31,		
	2002	2001	2000
	(In thousands)		
Domestic .....	\$(2,297)	\$(24,886)	\$44,024
Foreign .....	<u>39,574</u>	<u>28,609</u>	<u>42,088</u>
	<u>\$37,277</u>	<u>\$ 3,723</u>	<u>\$86,112</u>

ESS TECHNOLOGY, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

Provision for (benefit from) income taxes consisted of the following:

	Years Ended December 31,		
	2002	2001	2000
	(In thousands)		
Current:			
Federal .....	\$1,086	\$ 4,310	\$ 4,630
State .....	11	29	904
Foreign .....	141	42	—
	<u>1,238</u>	<u>4,381</u>	<u>5,534</u>
Deferred			
Federal .....	(224)	(10,505)	15,169
State .....	(30)	(1,138)	2,243
	<u>(254)</u>	<u>(11,643)</u>	<u>17,412</u>
Total .....	<u>\$ 984</u>	<u>\$ (7,262)</u>	<u>\$22,946</u>

Reconciliation between the provisions for (benefit from) income taxes computed at the federal statutory rate of 35% for the years ended December 31, 2002, 2001 and 2000 and the provision for (benefit from) income taxes is as follows:

	Years Ended December 31,		
	2002	2001	2000
	(In thousands)		
Provision at statutory rate .....	\$ 13,047	\$ 1,303	\$ 21,988
Tax benefit related to foreign jurisdictions .....	(15,007)	(11,275)	(16,672)
State income taxes, net of federal tax benefit .....	1745	171	2,898
General business credit .....	(1,111)	(800)	(227)
Nondeductible research and development costs .....	99	812	5,474
Vialta valuation allowance .....	—	—	9,485
Other .....	2,211	2,527	—
Provision for (benefit from) income taxes .....	<u>\$ 984</u>	<u>\$ (7,262)</u>	<u>\$ 22,946</u>

Deferred tax assets (liabilities) are comprised of the following:

	December 31,	
	2002	2001
	(In thousands)	
Current:		
State income taxes .....	\$ 1	\$ 1
Accounts receivable and inventory reserves .....	25	1,083
Accrued liabilities .....	882	2,015
Legal reserves and other .....	69	(764)
Deferred tax asset arising from unrealized loss on investments .....	(234)	1,018
Deferred stock gain .....	—	(1,466)
Current deferred tax asset (liability) .....	<u>\$ 743</u>	<u>\$ 1,887</u>

ESS TECHNOLOGY, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

	December 31,	
	2002	2001
	(In thousands)	
Non-current:		
Depreciation and amortization .....	1,463	2,208
Un-remitted earning from a foreign subsidiary .....	<u>(9,139)</u>	<u>(9,139)</u>
Non-current deferred tax liability .....	<u><u>\$(7,676)</u></u>	<u><u>\$(6,931)</u></u>

Note 8. Shareholders' Equity

*Common Stock*

On February 1, 2002, we commenced a public offering of 4,800,000 shares of our common stock at a price of \$19.38 per share. ESS sold 2,500,000 shares, and an additional 2,300,000 shares were sold by selling shareholders. ESS did not receive any of the proceeds from the sale of shares by the selling shareholders: Annie M.H. Chan, the Annie M.H. Chan Living Trust and the Shiu Leung Chan & Annie M.H. Chan Gift Trust. The selling shareholders further granted an over-allotment option of 720,000 shares to underwriters, which the underwriters exercised on February 19, 2002. Net of underwriting discount, we received proceeds of \$45,550,000 before expenses.

We announced on May 7, 2002 that our Board of Directors authorized us to repurchase up to 3.0 million shares of ESS common stock, inclusive of all shares that then remained available for repurchase under previously announced programs, on the same terms and conditions as our prior repurchase programs. The repurchase program is being effected from time to time, depending on market conditions and other factors, through open market purchases. We repurchased 2,937,828 shares for an aggregated price of \$42.5 million at market prices ranging from \$5.27 to \$18.20 per share under the program as of December 31, 2002. Upon repurchase, these shares were retired and no longer deemed outstanding.

We announced on August 8, 2002, that our Board of Directors authorized us to repurchase up to 5.0 million shares of ESS common stock, in addition to all shares that remain available for repurchase under previously announced programs, on the same terms and conditions as these prior repurchase programs. The repurchase program is being effected from time to time, depending on market conditions and other factors, through open market purchases. There was no purchase made under this program as of December 31, 2002.

*1992 Stock Option Plan*

In January 1992, we adopted the 1992 Stock Option Plan (the "1992 Plan"). We authorized 6,966,000 shares to be reserved for issuance under the 1992 Plan. In December 1999, we modified the vesting schedule for options granted subsequently such that initial grants would generally vest 25% at the end of the first year, after the anniversary date of the date of grant, and ratably thereafter over the remaining vesting period. Other grants would vest ratably over the vesting term.

This plan is no longer active and we will no longer issue options under this plan. The 1992 Plan terminated in January 2002, however, outstanding options issued under this plan will remain exercisable until they expire.

*1995 Equity Incentive Plan*

In August 1995, we adopted the 1995 Equity Incentive Plan (the "1995 Incentive Plan"), which provides for the grant of stock options and stock bonuses and the issuance of restricted stock to our employees, directors and others. We have reserved 3,000,000 shares of our common stock for issuance under the 1995 Incentive Plan. The terms of the 1995 Incentive Plan are generally similar to those of the 1992 Plan outlined above.

ESS TECHNOLOGY, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

*1995 Employee Stock Purchase Plan*

In August 1995, we adopted the 1995 Employee Stock Purchase Plan (the "Purchase Plan") and reserved a total of 225,000 shares of our common stock for issuance thereunder. The Purchase Plan, as most recently amended on April 21, 2001, authorizes the issuance of 925,000 shares under the Purchase Plan. The Purchase Plan, as amended, permits eligible employees to acquire shares of our common stock through payroll deductions at a price equal to the lower of 85% of the fair market value of our common stock at the beginning of the offering period or on the purchase date. The Purchase Plan, as amended, provides a 24-month rolling period beginning on each Enrollment Date and the purchase price is automatically adjusted to reflect the lower enrollment price. As of December 31, 2002, 653,498 shares have been issued under the Purchase Plan, as amended.

*1995 Directors Stock Option Plan*

In August 1995, we adopted the 1995 Directors Stock Option Plan (the "Directors Plan") and reserved a total of 300,000 shares of our common stock for issuance thereunder. The Director's Plan, as amended in April 2001, authorizes the issuance of 600,000 shares under the Directors Stock Option Plan. The Directors Plan allows for granting of stock options to non-employee members of the Board of Directors of the Company. The plan was amended as of April 21, 2001 to increase the number of options granted to new Board members and options granted subsequent to their initial appointment to the Board.

*1997 Equity Incentive Plan*

In May 1997, we adopted the 1997 Equity Incentive Plan (the "1997 Incentive Plan") and reserved a total of 3,000,000 shares of our common stock for issuance thereunder. The 1997 Incentive Plan, as most recently amended in May 2002, authorizes the issuance of 12,000,000 shares under the 1997 Incentive Plan. The vesting schedule of the 1997 Incentive Plan is generally similar to those of the 1992 Plan outlined above.

*2002 Non-executive Stock Option Plan*

In May 2002, we adopted the 2002 Non-Executive Stock Option Plan (the "2002 Plan") and reserved a total of 2,000,000 shares of our common stock for issuance thereunder. The 2002 Plan allows for granting of stock options to our non-executive employees and consultants, and options granted under the 2002 Plan shall be Nonstatutory Stock Options. The vesting schedule of the 2002 Plan is generally similar to those of the 1992 Plan outlined above.

*Platform Stock Option Plan*

In June 1997, in connection with the acquisition of Platform Technologies, Inc. ("Platform"), we assumed the Platform Stock Option Plan (the "Platform Plan"). We reserved and granted approximately 954,000 shares of ESS common stock under the Platform Plan pursuant to the outstanding options at the time of the Platform acquisition. The Platform options vest ratably over four years and we did not issue any additional options under the Platform Plan. The Platform plan is no longer active, however, 26,146 shares of outstanding options issued under this plan remain exercisable at December 31, 2002.

ESS TECHNOLOGY, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

*Summary of Stock Option Activity*

Transactions under our various stock option plans are summarized as follows:

	Available for Grant	Options Outstanding (In thousands)	Weighted Average Exercise Price
Balance at December 31, 1999 .....	1,455	7,529	\$ 5.14
Authorized .....	2,500	—	—
Granted .....	(3,150)	3,150	15.36
Exercised .....	—	(2,660)	3.49
Canceled .....	<u>1,867</u>	<u>(1,867)</u>	8.77
Balance at December 31, 2000 .....	2,672	6,152	\$ 9.99
Authorized .....	2,800	—	—
Granted .....	(4,184)	4,184	6.42
Exercised .....	—	(1,772)	4.74
Canceled .....	<u>1,045</u>	<u>(1,045)</u>	9.00
Balance at December 31, 2001 .....	2,333	7,519	\$ 8.34
Authorized .....	4,000	—	—
Granted .....	(1,643)	1,643	13.39
Exercised .....	—	(1,203)	6.46
Canceled .....	<u>596</u>	<u>(596)</u>	9.50
Balance at December 31, 2002 .....	<u>5,286</u>	<u>7,363</u>	\$ 9.64

The weighted average fair value of options granted during the years ended December 31, 2002, 2001 and 2000 were \$9.70, \$3.75 and \$9.37, respectively.

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

Range of Exercise Prices	Options Outstanding			Options Exercisable	
	Number Outstanding at December 31, 2002 (In thousands)	Average Remaining Contractual Life (In years)	Weighted Average Exercise Price	Number Exercisable at December 31, 2002 (In thousands)	Weighted Average Exercise Price
\$ 0.03 - \$ 4.69	413	4.47	\$ 2.98	348	\$ 2.72
4.70 - 4.89	2,344	5.67	4.88	1,156	4.88
4.90 - 10.49	1,161	7.92	7.32	499	6.46
10.50 - 13.19	1,231	6.75	12.72	338	12.61
13.20 - 14.09	1,109	9.20	13.88	67	13.44
\$14.10 - \$29.25	<u>1,105</u>	5.69	16.98	<u>544</u>	17.33
Total	<u>7,363</u>	6.67	\$ 9.64	<u>2,952</u>	\$ 8.27

At December 31, 2002, 2001 and 2000, options to purchase approximately 2,952,000, 1,546,000 and 2,069,000 shares, were exercisable at an average exercise price of \$8.27, \$8.76 and \$5.68, respectively.



ESS TECHNOLOGY, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

Note 9. Earnings Per Share

EPS is calculated in accordance with the provisions of SFAS No. 128, "Earnings Per Share" ("SFAS 128"). SFAS 128 requires us to report both basic EPS, which is based on the weighted average number of common stock outstanding, and diluted earnings per share, which is based on the weighted average number of common stock outstanding and all dilutive potential common stock outstanding.

In addition to net income (loss) per share, we have also reported per share data on the separate income statement components required by Accounting Principles Board Opinion No. 30, "Reporting the Results of Operation — Reporting the Effects of Disposal of a Segment of a Business and Extraordinary, Unusual and Infrequently Occurring Events and Transactions" ("APB No. 30"):

	Net Income (Loss)	Shares	Per Share Amount
	(In thousands, except per share data)		
<b>Year Ended December 31, 2002</b>			
Basic EPS from continuing operations . . . . .	\$ 37,277	44,044	\$ 0.85
Basic EPS from discontinued operation . . . . .	—	44,044	—
Basic EPS . . . . .	<u>37,277</u>	44,044	<u>0.85</u>
Effects of dilutive securities: Stock options . . . . .		2,687	
Diluted EPS from continuing operations . . . . .	37,277	46,731	0.80
Diluted EPS from discontinued operation . . . . .	—	46,731	—
Diluted EPS . . . . .	<u>\$ 37,277</u>	46,731	<u>\$ 0.80</u>
<b>Year Ended December 31, 2001</b>			
Basic EPS from continuing operations . . . . .	\$ 10,985	42,274	\$ 0.26
Basic EPS from discontinued operation . . . . .	<u>(12,802)</u>	42,274	<u>(0.30)</u>
Basic EPS . . . . .	<u>(1,817)</u>	42,274	<u>(0.04)</u>
Effects of dilutive securities: Stock options . . . . .		2,988	
Diluted EPS from continuing operations . . . . .	10,985	45,262	0.24
Diluted EPS from discontinued operation . . . . .	<u>(12,802)</u>	45,262	<u>(0.28)</u>
Diluted EPS . . . . .	<u>\$ (1,817)</u>	45,262	<u>\$(0.04)</u>
<b>Year Ended December 31, 2000</b>			
Basic EPS from continuing operations . . . . .	\$ 63,166	42,548	\$ 1.49
Basic EPS from discontinued operation . . . . .	<u>(14,860)</u>	42,548	<u>(0.35)</u>
Basic EPS . . . . .	<u>48,306</u>	42,548	<u>1.14</u>
Effects of dilutive securities: Stock options . . . . .		3,395	
Diluted EPS from continuing operations . . . . .	63,166	45,943	1.37
Diluted EPS from discontinued operation . . . . .	<u>(14,860)</u>	45,943	<u>(0.32)</u>
Diluted EPS . . . . .	<u>\$ 48,306</u>	45,943	<u>\$ 1.05</u>

For the years ended December 31, 2002, 2001 and 2000, there were options to purchase approximately 1,089,000, 2,540,000 and 157,000 shares of our common stock, respectively, with exercise prices greater than the weighted-average market value of such common stock. These options were excluded from the calculation of diluted earnings per share.

ESS TECHNOLOGY, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

Note 10. Non-Operating Income (Loss), Net

The following table lists the major components of Non-Operating Income (Loss) for the years ended December 31, 2002, 2001 and 2000, respectively:

	Years Ended December 31,		
	2002	2001	2000
	(In thousands)		
Interest income .....	\$3,586	\$ 2,019	\$ 2,428
Gain on exchange of Komodo shares to Cisco shares .....	—	—	35,045
Loss on sale of Cisco Stock .....	(61)	(21,187)	—
Loss on sale of other investments .....	(128)	—	—
Write-down on investments .....	(3,612)	—	—
Vialta rental income .....	1,852	640	—
Gain on sale of property, plant and equipment .....	85	—	2,911
Other .....	685	(252)	1,426
Total non-operating income (Loss) .....	<u>\$2,407</u>	<u>\$(18,780)</u>	<u>\$41,810</u>

Note 11. Comprehensive Income (loss)

Comprehensive income (loss) is comprised of net income (loss) and the unrealized loss on marketable securities. Comprehensive income (loss) was \$39.2 million, \$4.2 million and \$40.9 million for the years ended December 31, 2002, 2001 and 2000, respectively. The following table reconciles Net Income (Loss) to Comprehensive Income (Loss) for the years ended December 31, 2002, 2001 and 2000:

	Years Ended December 31,		
	2002	2001	2000
	(In thousands)		
Net income (loss) .....	\$37,277	\$(1,817)	\$48,306
Change in unrealized gain (loss) on marketable equity securities .....	1,878	6,004	(7,378)
Total comprehensive income .....	<u>\$39,155</u>	<u>\$ 4,187</u>	<u>\$40,928</u>

The following table shows the individual components of the Accumulated Other Comprehensive Income (Loss) on the Consolidated Balance Sheet as of December 31, 2002 and 2001:

	December 31,	
	2002	2001
	(In thousands)	
Unrealized loss on Cisco shares .....	—	\$(1,527)
Unrealized gain on marketable equity securities .....	504	153
Accumulated other comprehensive income (loss) .....	<u>\$504</u>	<u>\$(1,374)</u>

Note 12. Industries and Geographical Segment

*Industry Segments*

In 1998, we adopted SFAS No. 131 "Disclosures About Segments of an Enterprise and Related Information" ("SFAS 131"). SFAS 131 supersedes SFAS 14, "Financial Reporting for Segments of a Business Enterprise" and requires segment information be reported on the basis that it is used internally for evaluating segment performance and deciding how to allocate resources to segments.

**ESS TECHNOLOGY, INC.**

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

We operate in one reportable business segment: the semiconductor segment. We design, develop, support, manufacture and market highly integrated mixed-signal semiconductor, hardware, software and system solutions for DVD, internet related, communications, VCD/SVCD, Consumer Digital Audio and PC Audio applications.

From April 1999 to August 2001, we operated in two reportable segments — the semiconductor segment and the internet segment through our majority-owned subsidiary Vialta. Effective as of August 21, 2001, we spun off Vialta by distributing to our shareholders all 50.6 million shares of Vialta Class A common stock then held by us. Prior to 1999, we operated in a single business segment, semiconductor.

*Geographic Segments*

We sell and market to leading PC and consumer OEMs worldwide. International sales comprise a significant portion of our revenues. The following geographic location of our revenues is based upon destination of the shipment, thus our sales to Dynex Electronics is categorized as sales to Hong Kong; even though Dynex Electronics eventually sells through a lot of the products to China. Most of the long-lived assets located outside the United States are in Asia Pacific. The following is a summary of our geographic locations:

	<u>Net Sales</u>	<u>Long Lived Assets</u>
	(In thousands)	
<b>Year Ended December 31, 2002</b>		
United States .....	\$ 2,453	\$18,366
Hong Kong .....	191,510	619
Taiwan .....	19,346	—
Singapore .....	11,973	—
Japan .....	5,244	—
Rest of the world .....	42,916	—
Total foreign .....	<u>270,989</u>	<u>619</u>
Total .....	<u>\$273,442</u>	<u>\$18,985</u>
<b>Year Ended December 31, 2001</b>		
United States .....	\$ 6,885	\$21,800
Hong Kong .....	186,394	638
Taiwan .....	43,567	—
Japan .....	6,661	—
Singapore .....	1,975	—
Rest of the world .....	25,898	—
Total foreign .....	<u>264,495</u>	<u>638</u>
Total .....	<u>\$271,380</u>	<u>\$22,438</u>

**ESS TECHNOLOGY, INC.**

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

	Net Sales	Long Lived Assets
	(In thousands)	
<b>Year Ended December 31, 2000</b>		
United States .....	\$ 20,551	\$30,344
Hong Kong .....	149,925	689
Taiwan .....	79,302	—
Japan .....	15,138	—
Singapore .....	6,157	—
Canada .....	—	28
Rest of the world .....	32,363	20
Total foreign .....	282,885	737
Total .....	\$303,436	\$31,081

**Note 13. Commitments and Contingencies**

We maintain leased office space in various locations, in addition to certain testing equipment leased from third parties. Future minimum rental payments under these operating leases are as follows:

Years Ended December 31,	Amount
	(In thousands)
2003 .....	\$1,588
2004 .....	46
2005 .....	16
2006 .....	16
Total	\$1,666

Lease expenses were approximately \$1.2 million, \$1.5 million and \$1.4 million in 2002, 2001 and 2000, respectively.

As of December 31, 2002, our commitments to purchase inventory from the third-party contractors aggregated approximately \$10.7 million. Under these contractual agreements, we may order inventory from time to time, depending on our needs. There is no termination date to these agreements.

From time to time, we are subject to legal proceedings and claims, including claims of alleged infringement of trademarks, copyrights and other intellectual property rights and other claims arising out of the ordinary course of business. Further, we are currently engaged in certain shareholder class action and derivative lawsuits. We intend to defend these suits vigorously. We may incur substantial expenses in litigating claims against third parties and defending against existing and future third-party claims that may arise. In the event of a determination adverse to us, we may incur substantial monetary liability and be required to change our business practices. Either of these results could have a material adverse effect on our financial position, results of operations and cash flows.

**Note 14. Acquisitions and Related Charges**

NetRidium Communications, Inc. ("NetRidium") was founded in January 1999 and was acquired in February 2000, when it was still a development-stage company with no revenue. The acquisition was recorded using the purchase method of accounting and accordingly, the results of operations and cash flows of such acquisition have been included from the date of acquisition. Purchased in-process research and development

## ESS TECHNOLOGY, INC.

### NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

aggregating \$2.6 million for the NetRidium acquisition was charged to operations in the second quarter of 2000. Technical infrastructure and covenants not to compete are being amortized over four years. In connection with the acquisition, we granted certain NetRidium employees stock options to purchase a total of 500,000 shares of our stock at \$17.68 per share, the fair market value on the date of grant. In addition, we have entered into employment contracts with certain former NetRidium employees, which, among other things, provide that if the employee stays with us for the applicable vesting periods during the four-year term of the employment agreement, the employee's stock options will have a value of at least \$8.85 more than the exercise price when such options become exercisable. Accordingly, we are accruing this additional compensation expense over the four-year term of the agreement. Approximately 428,000 of the options issued upon acquisition are subject to this guarantee. We recorded approximately \$0.7 million, \$0.5 million and \$0.9 million as compensation expenses under this guarantee, for fiscal year 2002, 2001 and 2000, respectively.

NetRidium was developing its intellectual property and foundation technologies in the area of broadband data delivery to homes and in-home data distribution. NetRidium's first product was scheduled for release in the summer of 2000. We expected this acquisition to provide these foundation technologies as a turnkey solution to network equipment manufacturers and personal computer providers. We planned to introduce a complete line of highly integrated technology products that would enable network manufacturers to produce reliable HomeLAN solutions over ordinary telephone wires.

Research and development expenses incurred on product development post acquisition were approximately \$3.3 million and \$4.0 million in 2000 and 2001, respectively. The product was not completed until February of 2002. No significant revenues have been recognized to date nor were significant revenues originally anticipated in 2002; however, we believe that home networking is an important future market for us and this technology will be important to our efforts to exploit that market. As of December 31, 2002, net unamortized intangible assets relating to the NetRidium acquisition were approximately \$650,000, including \$400,000 of goodwill and \$250,000 of technical infrastructure. We continue to monitor the carrying value of intangible assets related to the NetRidium acquisition in accordance with SFAS 142 and SFAS 144.

In April 2001, we entered into a definitive agreement to acquire Silicon Analog Systems ("SAS") in a merger transaction to be accounted for as a purchase business combination. SAS was a Canadian start-up company engaged in developing single chip solutions for wireless communications. This acquisition was effective on April 12, 2001. We paid \$1.0 million on the effective date and an additional \$1.0 million on April 12, 2002. The total purchase price of \$2.0 million along with \$75,000 of acquisition cost was primarily allocated to goodwill, based on an independent appraisal. The assets, liabilities and operating expenses for SAS were not material to our financial position or results of operations.

At the time of acquisition, SAS had generated approximately \$300,000 in consulting revenue. SAS had also developed intellectual property in wireless communications as well as analog circuit design, areas of key interest to us. Because of our experience with mixed signal products, we expected that this acquisition would advance our expertise in advanced analog design enabling us to develop intellectual property for key products.

As of December 31, 2002, the SAS design team is concentrating on video product development as well as radio frequency analog design, and designs from this group have been integrated into several video products. SAS has several patent applications pending and intends to seek further U.S. and international patents on its technology whenever possible.

#### **Note 15. Related Party Transactions with Vialta, Inc**

In early January 2003, Fred S.L. Chan, Chairman of Board of Directors paid off a Company cash advance of \$40,000, a loan made in 1999. Mr. Fred S.L. Chan also serves as the Chairman of the Board for Vialta, each company pays Mr. Fred Chan a base salary separately.

## ESS TECHNOLOGY, INC.

### NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

In connection with the spin-off of Vialta, we entered into a Master Distribution Agreement that outlines the general terms and conditions of the distribution and a number of ancillary agreements that govern the various relationships between ESS and Vialta following the spin-off. The spin-off agreements, which include the Master Distribution Agreement and its ancillary agreements, consisting of the Master Technology Ownership and License Agreement, the Employee Matters Agreement, the Tax Sharing and Indemnity Agreement, the Real Estate Matters Agreement, the Master Confidential Disclosure Agreement, and the Master Transitional Services Agreement, provide for contractual obligations between the parties that are not expected to have any material impact on our revenues, operating results or cash flows.

The Master Technology Ownership and License Agreement supercedes the prior Intellectual Property and Research and Development Agreements between ESS and Vialta and allocates ownership rights generally along the product lines of each of ESS and Vialta. In the Master Technology Ownership and License Agreement, we acknowledge Vialta's exclusive ownership of specific technology and trademarks related to Vialta's products. Vialta has unrestricted rights to use the assigned technology and related trademarks that Vialta alone owns. The Master Technology Ownership and License Agreement does not obligate either Vialta or ESS to provide to the other improvements that it makes to its own technology.

The Employee Matters Agreement allocates responsibilities relating to current and former employees of Vialta and their participation in any benefits plans that ESS has sponsored and maintained. Prior to the distribution, ESS transferred to Vialta approximately 9,839,672 shares of Vialta Class A common stock. This same number of shares of Vialta Class A common stock has been authorized and reserved for issuance under the Vialta 2001 Non-Statutory Stock Option Plan. Immediately prior to the distribution, Vialta granted options to all ESS employees who held ESS options, based on ESS options outstanding as of the record date for the spin-off distribution. As a result, on the date of the distribution, approximately 9,839,672 of the total shares authorized under the 2001 Non-Statutory Stock Options Plan became subject to outstanding options. The resulting Vialta options will vest, become exercisable, expire and otherwise be treated under terms that essentially mirror the provisions of the corresponding ESS option held by the ESS employee.

The Tax Sharing and Indemnity Agreement allocate responsibilities for tax matters between ESS and Vialta. Vialta will indemnify ESS in the event the distribution initially qualifies for tax-free treatment and later becomes disqualified as a result of actions taken by Vialta or within Vialta's control. The Tax Sharing and Indemnity Agreement also assigns responsibilities for administrative matters such as the filing of returns, payment of taxes due, retention of records and conduct of audits, examinations and similar proceedings.

The Real Estate Matters Agreement addresses real estate matters relating to property owned by ESS that ESS leases to Vialta, as well as other properties already leased by Vialta. The Real Estate Matters Agreement also amends and restates the terms of the lease from ESS to Vialta for the Fremont facility that currently serves as Vialta's corporate headquarters. The Real Estate Matters Agreement will terminate initially on December 31, 2003 and may be renewed for up to three years. Under this agreement, Vialta pays us approximately \$1.85 million per year, receivable in installments of \$154,498 per month, to lease office space for its corporate headquarters.

The Master Confidential Disclosure Agreement provides that Vialta and ESS agree not to disclose confidential information of the other except in specific circumstances or as may be permitted in an ancillary agreement.

The Master Transitional Services Agreement governs corporate support services that ESS has agreed to provide to Vialta, including, without limitation, information technology systems, human resources administration, product order administration, customer service, buildings and facilities and finance and accounting services, each as specified and on the terms set forth in the Master Transitional Services Agreement and in the schedules to the Master Transitional Services Agreement. The Master Transitional Services Agreement also provides for the provision of additional services identified from time to time after the distribution date that

ESS TECHNOLOGY, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

Vialta reasonably believes were inadvertently or unintentionally omitted from the specified services, or that are essential to effectuate an orderly transition under the Master Distribution Agreement, so long as the provision of such services would not significantly disrupt our operations or significantly increase the scope of our obligations under the agreement. The Master Transitional Services Agreement expired on August 21, 2002, although we intend to continue to charge Vialta on a usage basis for IT hardware support, the cafeteria and the corporate dormitory.

The only other agreement between Vialta and us is a supply agreement under which ESS agrees to give Vialta the best price available to any other customers. ESS supplies chips to Vialta from time to time pursuant to standard purchase orders issued under this supply agreement. We anticipate that we will continue to provide products and services to Vialta under the terms of this supply agreement.

The following is a summary of major transactions between ESS and Vialta for the periods presented:

	Years Ended December 31	
	2002	2001
	(In thousands)	
Research and Development services provided to Vialta .....	\$ —	\$1,895
Selling, General and Administrative services provided to Vialta, net of charges from Vialta .....	(38)	3,042
Lease charges to Vialta under Real Estate Matters Agreement.....	1,852	640
Chip purchases by Vialta .....	1,403	1,127
Products (purchased from) Vialta .....	(61)	(74)
Total charges to Vialta, net of charges from Vialta .....	<u>\$3,156</u>	<u>\$6,630</u>

Charges by ESS to Vialta under the Master Transitional Services Agreement for research and development and selling, general and administrative services provided by us to Vialta are recorded in ESS' statements of operation as an offset to its applicable operating expenses. Charges from us to Vialta under the Real Estate Matters Agreement are recorded in ESS' Statements of Operations as other income. Product purchased from Vialta is recorded in ESS' Statements of Operations as selling, general and administrative expenses. Charges for chip purchase by Vialta are recorded in ESS' Statements of Operations under Net revenues from related party — Vialta.

In the years ended December 31, 2000, ESS incurred approximately \$260,000 of inter-company charges for sharing Vialta's tax credit resulting from Vialta's net operating loss in 2000.

On December 18, 2000, Vialta received a \$30.0 million loan from an entity controlled by Annie M.H. Chan, a then director of ESS and the spouse of Fred S.L. Chan. The \$30.0 million short-term loan along with \$194,000 accrued interest at 5.25% was repaid on January 31, 2001.

In September 1999, Vialta issued 40 million shares of Series A Convertible Preferred Stock at \$0.25 per share to us for \$10.0 million in cash. In October 1999, Mr. Fred S.L. Chan, Chairman of ESS and Vialta, purchased 4 million shares of Vialta common stock at \$0.25 per share for \$1.0 million by issuing a full recourse promissory note to Vialta, which bore interest at a market rate. The principal and accrued interest under this promissory note was paid in full in March 2000. Also in October 1999, Vialta issued 400,000 and 1,820,000 common shares at \$0.25 per share to us and certain employees, respectively, for full recourse promissory notes in the aggregate principal amount of \$555,000. These notes were fully paid in cash to Vialta in the first quarter of 2000.

**ESS TECHNOLOGY, INC.**

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

In December 1999, Vialta issued 40.3 million shares of Series B Preferred Stock at \$2.60 per share for \$104.8 million: 20 million shares to ESS for \$52.0 million and 20.3 million shares to third-party investors for \$52.8 million in cash. In January 2000, Vialta received \$20.8 million in the form of a full recourse promissory note, which bore interest at a market rate, from a party controlled by Mr. Fred S.L. Chan and his wife Ms. Annie Chan, a former director of ESS, for the purchase of 8 million shares of Series B Preferred Stock at \$2.60 per share. The principal and accrued interests under this promissory note were paid in full in March 2000. During the first quarter of 2000, Vialta received \$7.0 million in cash from third-party investors for subscriptions to purchase 2.7 million shares of its Series B Preferred Stock.

**Note 16. Significant Customers**

We sell to both direct customers and distributors. We use both a direct sales force as well as sales representatives to help us sell to our direct customers. The following table summarizes the percentage of our net revenues accounted for by our significant direct customer who accounted for 10% or more of our revenues in any of the past three years.

	Years Ended December 31,		
	2002	2001	2000
Digital AV (formerly Shinco) .....	8%	9%	10%

**Note 17. Transactions with Dynax Electronics**

We sell our products through distributors. Dynax Electronics is our largest distributor. We work directly with many of our customers in Hong Kong and China on product design and development, however, whenever one of these customers buys our products, the order is processed through Dynax Electronics, who functions much like a trading company. Dynax Electronics manages the order processing, arranges shipment into China and Hong Kong, manages the letters of credit, and provides credit and collection expertise and services. However, since the title and risk of loss for the inventory are transferred to Dynax Electronics upon shipment of inventory to Dynax Electronics, Dynax Electronics is legally responsible for all of our invoices regardless of when the inventory is sold to an end-customer. Revenues on sales to Dynax Electronics are deferred until Dynax Electronics sells the products to end-customers.

The following table summarizes Dynax Electronics' percentage of net revenues for the year ended December 31, 2002, 2001 and 2000, respectively:

	Years Ended December 31,		
	2002	2001	2000
	(In thousands, except percentage data)		
Net revenues .....	\$273,442	\$271,380	\$303,436
Net revenues from Dynax Electronics .....	\$156,963	\$151,972	\$106,203
Percentage of net revenues .....	57%	56%	35%

The following table summarizes Dynax Electronics' percentage of trade accounts receivable as of December 31, 2002 and 2001:

	December 31,	
	2002	2001
	(In thousands, except percentage data)	
Trade accounts receivable .....	\$29,523	\$42,799
Trade accounts receivable from Dynax Electronics .....	\$24,318	\$33,811
Percentage of trade accounts receivable .....	82%	79%



## ESS TECHNOLOGY, INC.

### NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

#### Note 18. Investments

In March 2002, we acquired 2,750,000 shares of Broadmedia, Inc. ("Broadmedia") common stock for approximately \$4,200,000 in cash, representing an 8% equity interest in Broadmedia. Broadmedia, a privately held company, is a product design and manufacturing house for OEMs with expertise in broadband network access equipment technologies. The investment in Broadmedia was accounted for using the cost method of accounting. We recorded charges of \$1,050,000 during the year ended December 31, 2002 to reduce the carrying value of our investment in Broadmedia to our estimate of its fair value. As a result of a corporate restructuring, Broadmedia's former wholly owned subsidiary Archtek Telecom Corporation became the parent company of Broadmedia and we effectively exchanged our Broadmedia shares for Archtek shares on December 31, 2002. A merger is anticipated between Broadmedia/Archtek and C-Com Corporation ("C-Com"), a publicly traded company in Taiwan. In light of the pending Archtek/C-Com merger, instead of receiving a stock certificate of Archtek stock for our Broadmedia stock, we expect to receive a C-Com stock certificate upon completion of the Archtek and C-Com merger, currently expected to occur in mid-2003 when the shareholders of those companies approve the transaction.

In April 2002, we acquired 1,600,000 shares of MosChip Semiconductor Technology Limited ("MosChip") common stock for approximately \$988,000 in cash, representing approximately 7% equity interest in MosChip. MosChip is a publicly traded company listed under Bombay Stock Exchange – one of Indian's two major stock exchanges. MosChip, based in Hyderabad, India, specializes in designing, manufacturing and marketing very large integrated circuits ("ICs"), with particular focus on consumer and data communication ICs. We account for our investment in MosChip as "available-for-sale securities" under SFAS 115. This investment resulted in an unrealized gain of \$64,000 recorded in accumulated other comprehensive income at December 31, 2002.

#### Note 19. ESS 401(K) Plan

We have a 401(K) Plan (the "401(K) Plan"), which covers substantially all employees. Each eligible employee may elect to contribute to the 401(K) Plan, through payroll deductions, up to 25% of their compensation, subject to current statutory limitations. No contributions were made by ESS through December 31, 2002.

#### Note 20. Subsequent Events

In January 2003, we acquired 4,545,400 shares of Convertible Non-Cumulative Preference Series B shares of Best Elite International Limited ("Best Elite") for approximately \$5,000,000 in cash, representing less than a 1% equity interest in Best Elite on a diluted basis. Best Elite is organized under the laws of the British Virgin Islands, as an investment vehicle for the purpose of establishing a foundry in mainland China.

In the period from January 1, 2003 through March 20, 2003, we repurchased 62,172 shares of our common stock at market price of \$5.43 per share to complete the 3.0 million share repurchase program announced by Board of Directors on May 7, 2002. During the same period, we repurchased 3,667,441 shares of our common stock for an aggregate price of \$21.7 million at market prices ranging from \$5.43 to \$6.30 per share under the 5.0 million share repurchase program approved by our Board of Directors and announced on August 8, 2002. Upon repurchase, these shares were retired and no longer deemed outstanding. As of March 20, 2003, we have approximately 1.33 million shares available of repurchase.

ESS TECHNOLOGY, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

Selected Quarterly Financial Data (un-audited)

The following table presents un-audited quarterly financial information for each of our last eight quarters. This information has been derived from our audited financial statements and has been prepared on the same basis as the audited Consolidated Financial Statements appearing elsewhere in this Form 10-K. Historical financial information has been reclassified to present consistently the discontinued operation of Vialta. In the opinion of management, all necessary adjustments, consisting only of normal recurring adjustments, have been included to present fairly the quarterly results.

	2001				2002			
	Mar. 31	June 30	Sept. 30	Dec. 31	Mar. 31	June 30	Sept. 30	Dec. 31
	(in thousands, except per share data)							
Statement of Operations								
Data:								
Net revenues . . . . .	\$ 50,808	\$ 64,909	\$72,397	\$83,266	\$79,115	\$86,037	\$60,746	\$47,544
Cost of revenues . . . . .	39,606	45,970	45,930	48,725	44,839	50,817	45,665	35,133
Gross profit . . . . .	11,202	18,939	26,467	34,541	34,276	35,220	15,081	12,411
Operating expenses:								
Research and development	6,411	7,592	7,273	6,681	6,381	7,043	7,160	6,380
Selling, general and administrative . . . . .	8,666	8,917	11,686	11,420	10,356	11,051	6,452	6,311
Operating income (loss) . . . . .	(3,875)	2,430	7,508	16,440	17,539	17,126	1,469	(280)
Non-operating income, net . . . . .	325	(20,795) (1)	989	701	(1,267) (2)	1,085	1,438	1,151
Income (loss) before income taxes . . . . .	(3,550)	(18,365)	8,497	17,141	16,272	18,211	2,907	871
Provision for (benefit from) income taxes . . . . .	(382)	(8,167)	425	862	(114)	889	148	61
Net income (loss) from continuing operations . . . . .	(3,168)	(10,198)	8,072	16,279	16,386	17,322	2,759	810
Discontinued operation, net of minority interest:								
Loss from discontinued operation, net of minority interest . . . . .	(4,205)	—	—	—	—	—	—	—
Income (Loss) from disposal of discontinued operation, net of minority interest . . . . .	(13,312)	—	4,715	—	—	—	—	—
Net income (loss) . . . . .	<u>\$ (20,685)</u>	<u>\$ (10,198)</u>	<u>\$12,787</u>	<u>\$16,279</u>	<u>\$16,386</u>	<u>\$17,322</u>	<u>\$ 2,759</u>	<u>\$ 810</u>
Net income (loss) per share:								
Basic								
Continuing operations . . . . .	\$ (0.07)	\$ 0.24	\$ 0.19	\$ 0.39	\$ 0.37	\$ 0.38	\$ 0.06	\$ 0.02
Discontinuing operation . . . . .	(0.42)	—	0.11	—	—	—	—	—
	<u>\$ (0.49)</u>	<u>\$ 0.24</u>	<u>\$ 0.30</u>	<u>\$ 0.39</u>	<u>\$ 0.37</u>	<u>\$ 0.38</u>	<u>\$ 0.06</u>	<u>\$ 0.02</u>
Diluted								
Continuing operations . . . . .	\$ (0.07)	\$ 0.24	\$ 0.18	\$ 0.35	\$ 0.34	\$ 0.36	\$ 0.06	\$ 0.02
Discontinuing operation . . . . .	(0.42)	—	0.10	—	—	—	—	—
	<u>\$ (0.49)</u>	<u>\$ 0.24</u>	<u>\$ 0.28</u>	<u>\$ 0.35</u>	<u>\$ 0.34</u>	<u>\$ 0.36</u>	<u>\$ 0.06</u>	<u>\$ 0.02</u>

ESS TECHNOLOGY, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

	2001				2002			
	Mar. 31	June 30	Sept. 30	Dec. 31	Mar. 31	June 30	Sept. 30	Dec. 31
	(In thousands, except per share data)							
Shares used in calculating net income (loss) per share:								
Basic .....	<u>42,370</u>	<u>42,375</u>	<u>42,380</u>	<u>41,976</u>	<u>44,209</u>	<u>45,147</u>	<u>43,484</u>	<u>43,378</u>
Diluted .....	<u>42,370</u>	<u>42,375</u>	<u>45,375</u>	<u>45,867</u>	<u>48,331</u>	<u>48,446</u>	<u>45,706</u>	<u>44,188</u>

- (1) Includes a (\$21,187) loss due to sale of Cisco shares.
- (2) Includes a (\$2,545) loss due to write down of the remaining Cisco shares for other than temporary decline in value.

**Item 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosures**

Not applicable.

**PART III**

Certain information required by Part III is omitted from this Report since we plan to file with the Securities and Exchange Commission the definitive proxy statement for our 2003 Annual Meeting of Shareholders (the "Proxy Statement") not later than 120 days after the end of the fiscal year covered by this Report, and certain information included therein is incorporated herein by reference.

**Item 10. Directors and Executive Officers of the Registrant**

The information concerning our directors and certain information concerning our Executive Officers required by this Item are incorporated by reference from our Proxy Statement, which we will file with the Commission not later than 120 days after our fiscal year-end. The notes concerning our executive officers required by this Item is set forth at the end of Part I in a section captioned "Executive Officers of the Registrant," above.

**Item 11. Executive Compensation**

The information required by this Item is incorporated by reference from the sections in our Proxy Statement entitled "Executive Compensation," which we will file with the Commission not later than 120 days after our fiscal year-end.

**Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Shareholder Matters**

The security ownership information required by this Item is incorporated by reference from the Proxy Statement, which we will file with the Commission not later than 120 days after our fiscal year-end.

The following table summarizes information with respect to options under ESS' equity compensation plans at December 31, 2002:

Plan Category	Equity Compensation Plan Information(1)		
	Number of Securities to be Issued Upon Exercise of Outstanding Options, Warrants and Rights (a) (3)	Weighted-average Exercise Price of Outstanding Options, Warrants and Rights (b)	Number of Securities Remaining Available for Future Issuance Under Equity Compensation Plans (excluding securities reflected in column (a)) (c)
Equity compensation plans approved by security holders . . . . .	7,340,416	\$9.65	3,308,927(2)
Equity compensation plans not approved by security holders . . . . .	<u>22,500</u>	\$4.40	<u>1,977,500</u>
Total . . . . .	<u>7,362,916</u>	\$9.64	<u>5,286,427</u>

- (1) Includes only options outstanding under ESS' stock option plans, as no stock warrants or rights were outstanding as of December 31, 2002.
- (2) Includes 271,502 shares of common stock reserved for future issuance under the ESS Technology, Inc. 1995 Employee Stock Purchase Plan.
- (3) Includes outstanding options to purchase 26,146 shares of ESS common stock assumed through the acquisition of Platform Technologies, Inc.

The equity compensation plans not approved by security holders have generally the same features as those approved by security holders. For further details regarding ESS' equity compensation plans, see Note 8, "Shareholders' Equity" in the consolidated financial statements in Item 8 of this Report.

**Item 13. *Certain Relationships and Related Transactions***

The information required by this Item is incorporated by reference from the Proxy Statement, which we will file with the Commission not later than 120 days after our fiscal year-end.

**Item 14. *Controls and Procedures***

- (a) Evaluation of disclosure controls and procedures. Our chief executive officer and our chief financial officer, after evaluating the effectiveness of our "disclosure controls and procedures" (as defined in the Securities Exchange Act of 1934 Rules 13a-14(c) and 15d-14(c)) as of a date (the "Evaluation Date") within 90 days before the filing date of this Annual Report, have concluded that as of the Evaluation Date, our disclosure controls and procedures were adequate and designed to ensure that material information relating to us and our consolidated subsidiaries would be made known to them by others within those entities. It should be noted that the design of any system of controls is based in part upon certain assumptions, and there can be no assurance that any design will succeed in achieving its stated goals.
- (b) Changes in internal controls. There were no significant changes in our internal controls or to our knowledge other factors that could significantly affect our disclosure controls and procedures subsequent to the Evaluation Date.

**PART IV**

**Item 15. *Exhibits, Financial Statement Schedules, and Reports on Form 8-K***

- (a)(1) Financial Statements

The consolidated financial statements of the registrant as set forth under Item 8 are filed as part of the Form 10-K.

- (a)(2) Financial Statement Schedule

REPORT OF INDEPENDENT ACCOUNTANTS ON  
FINANCIAL STATEMENT SCHEDULE

To the Board of Directors of  
ESS Technology, Inc.

Our audits of the consolidated financial statements referred to in our report dated January 24, 2003 appearing in this Form 10-K also included an audit of the financial statement schedule listed in Item 15(a)(2) of this Form 10-K. In our opinion, this financial statement schedule presents fairly, in all material respects, the information set forth therein when read in conjunction with the related consolidated financial statements.

/s/ PRICEWATERHOUSECOOPERS LLP

San Jose, California  
January 24, 2003

## VALUATION AND QUALIFYING ACCOUNTS

	<u>Balance at Beginning of Period</u>	<u>Additions Charged to Costs and Expenses</u>	<u>Deductions</u>	<u>Balance at Ending of Period</u>
	(In thousands)			
Year Ended December 31, 2002				
Allowance for doubtful accounts .....	\$ 899	\$ 50	\$ —	\$ 949
Allowance for sales returns .....	1,430	1,008	1,390	1,048
Inventory reserves .....	35,059	10,275	14,672	30,662
Valuation allowance on deferred tax assets .....	\$ —	\$ —	\$ —	\$ —
Year Ended December 31, 2001				
Allowance for doubtful accounts .....	\$ 2,393	\$ —	\$ 1,494	\$ 899
Allowance for sales returns .....	920	6,044	5,534	1,430
Inventory reserves .....	27,040	6,964	(1,055)	35,059
Valuation allowance on deferred tax assets .....	\$ 9,485	\$ —	\$ 9,485	\$ —
Year Ended December 31, 2000				
Allowance for doubtful accounts .....	\$ 2,459	\$ 1,534	\$ 1,600	\$ 2,393
Allowance for sales returns .....	315	7,110	6,505	920
Inventory reserves .....	18,147	10,236	1,343	27,040

All other schedules for which provision is made in applicable accounting regulations of the Securities and Exchange Commission are omitted because they are not required under the related instructions or are applicable.

The independent accountants' reports with respect to the above listed financial statements and financial statement schedule listed in Item 15(a)(1) and 15(a)(2), respectively, are filed on page 37 and page 70, respectively on Form 10-K.

## (a)(3) Exhibits

<u>Exhibit Number</u>	<u>Exhibit Title</u>
2.04	Master Distribution Agreement between the Registrant and Vialta, Inc. dated August 20, 2001, incorporated herein by reference to Exhibit 2.04 to the Registrant's Current Report on Form 8-K (file no. 000-26660) filed September 5, 2001.
3.01	Registrant's Articles of Incorporation, incorporated herein by reference to Exhibit 3.01 to the Registrant's Form S-1 Registration Statement (file no. 33-95388) declared effective by the Securities and Exchange Commission on October 5, 1995 (the "Form S-1").
3.02	Registrant's Bylaws, as amended, incorporated herein by reference to Exhibit 3.02 to the Registrant's Annual Report on Form 10-K for the year ended December 31, 1998 (file no. 000-26660) filed on March 31, 1999.
4.01	Registrant's Registration Rights Agreement dated May 28, 1993 among the Registrant and certain shareholders, incorporated herein by reference to Exhibit 10.07 to the Form S-1 (file no. 33-95388).
10.02	Registrant's 1992 Stock Option Plan and related documents, incorporated herein by reference to Exhibit 10.02 to the Form S-1 (file no. 33-95388).*
10.06	Registrant's Amended 401(k) Plan, incorporated herein by reference to Exhibit 10.06 to the Form S-1 (file no. 33-95388).*

<u>Exhibit Number</u>	<u>Exhibit Title</u>
10.11	Form of Indemnity Agreement entered into by Registrant with each of its directors and executive officers, incorporated herein by reference to Exhibit 10.11 to the Form S-1 (file no. 33-95388).
10.21	Option I Agreement between Registrant and Taiwan Semiconductor Manufacturing Co., Ltd. ("TSMC") dated November 30, 1995, as amended December 28, 1995, incorporated herein by reference to Exhibit 10.21 to the Registrant's Annual Report on Form 10-K, dated February 29, 1996 as amended March 29, 1996 (file no. 000-26660) (the "1995 Form 10-K").**
10.22	Option II Agreement between Registrant and TSMC dated November 30, 1995, incorporated herein by reference to Exhibit 10.22 to the 1995 Form 10-K (file no. 000-26660).**
10.23	Foundry Venture Agreement between Registrant and United Microelectronics Corporation ("UMC") dated November 28, 1995, as amended January 31, 1996, incorporated herein by reference to Exhibit 10.23 to the 1995 Form 10-K (file no. 000-26660).**
10.35	1995 Employee Stock Purchase Plan amended and restated as of April 21, 2001, incorporated herein by reference to Exhibit 10.35 to the Registrant's Quarterly Report on Form 10-Q (file no. 000-26660) filed August 15, 2001.
10.38	Master Technology Ownership and License Agreement between the Registrant and Vialta, Inc. dated August 20, 2001, incorporated herein by reference to Exhibit 10.38 to the Registrant's Current Report on Form 8-K (file no. 000-26660) filed September 5, 2001.
10.39	Employee Matters Agreement between the Registrant and Vialta, Inc. dated August 20, 2001, incorporated herein by reference to Exhibit 10.39 to the Registrant's Current Report on Form 8-K (file no. 000-26660) filed September 5, 2001.
10.40	Tax Sharing and Indemnity Agreement between the Registrant and Vialta, Inc. dated August 20, 2001, incorporated herein by reference to Exhibit 10.40 to the Registrant's Current Report on Form 8-K (file no. 000-26660) filed September 5, 2001.
10.41	Real Estate Matters Agreement between the Registrant and Vialta, Inc. dated August 20, 2001, incorporated herein by reference to Exhibit 10.41 to the Registrant's Current Report on Form 8-K (file no. 000-26660) filed September 5, 2001.
10.42	Master Confidential Disclosure Agreement between the Registrant and Vialta, Inc. dated August 20, 2001, incorporated herein by reference to Exhibit 10.42 to the Registrant's Current Report on Form 8-K (file no. 000-26660) filed September 5, 2001.
10.43	Master Transitional Services Agreement between the Registrant and Vialta, Inc. incorporated herein by reference to Exhibit 10.43 to the Registrant's Current Report on Form 8-K (file no. 000-26660) filed with the SEC on September 5, 2001.
10.44	Registrant's 1977 Equity Incentive Plan, amended and restated as of April 20, 2002, incorporated herein by reference to Exhibit 10.36 to the Registrant's Quarterly Report on Form 10-Q (file no. 000-26660) filed August 15, 2001.*
10.45	Registrant's 2002 Non-Executive Stock Option Plan dated May 22, 2002, incorporated herein by reference to Exhibits 99.1 to the form S-8 (file no. 333-89942) filed on June 6, 2002. *
10.46	Loan Agreement by and between ESS Technology, Inc. and U.S. Bank National Association dated as of August 14, 2002, incorporated herein by reference to Exhibit 10.46 to the Registrant's Quarterly Report on Form 10-Q (file no. 000-26660) filed on November 14, 2002.
10.48	Registrant's 1995 Equity Incentive Plan and related documents as amended.*
10.49	Registrant's 1995 Director' Stock Option Plan and related documents as amended.*
10.50	Joint Development Agreement dated December 14, 2001.**
10.51	Amendment to Joint Development Agreement dated January 18, 2003.**
11.01	Computation of Net Income Per Share.
21.01	List of Registrant's subsidiaries.
23.01	Consent of Independent Accountants.



Exhibit  
Number

Exhibit Title

99.1	Certification Pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
99.2	Certification Pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.

\* Represents a management contract or compensatory plan of arrangement.

\*\* Confidential treatment has been granted with respect to certain portions of this agreement.

(b) Reports on Form 8-K:

None.

With the exception of the information incorporated by reference to the our Proxy Statement for the 2003 Annual Meeting of Shareholders in Items 10, 11, 12 and 13 of Part III, the Proxy Statement is not deemed to be filed as part of this Report.

## SIGNATURES

Pursuant to the requirements of Section 13 of the Securities Exchange Act of 1934, the Registrant has duly caused this Annual Report on Form 10-K to be signed on its behalf by the undersigned, thereunto duly authorized.

ESS TECHNOLOGY, INC.  
(Registrant)

By:           /s/ ROBERT L. BLAIR            
Robert L. Blair  
*President and Chief Executive Officer*

Date: March 31, 2003

## POWER OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below hereby constitutes and appoints Robert L. Blair and James B. Boyd, and each of them severally, his or her true and lawful attorneys-in-fact, each with full power of substitution, for him or her in any and all capacities, to sign any and all amendments to this Annual Report on Form 10-K, and to file the same, with all exhibits thereto and all documents in connection therewith, with the Securities and Exchange Commission, hereby ratifying and confirming all each of said attorneys-in-fact or any of them, or his or their substitute or substitutes, may lawfully do or cause to be done or by virtue hereof.

Pursuant to the requirements of the Securities Exchange Act of 1934, this registration statement has been signed by the following persons on behalf of the registrant and in the capacities and on the dates indicated.

<u>Signature</u>	<u>Title</u>	<u>Date</u>
<u>          /s/ ROBERT L. BLAIR          </u> Robert L. Blair	President and Chief Executive Officer (principal executive officer)	March 31, 2003
<u>          /s/ JAMES B. BOYD          </u> James B. Boyd	Chief Financial Officer and Assistant Secretary (principal financial officer)	March 31, 2003
<u>          /s/ FRED S.L. CHAN          </u> Fred S.L. Chan	Chairman of the Board of Directors	March 31, 2003
<u>          /s/ PETER T. MOK          </u> Peter T. Mok	Director	March 31, 2003
<u>          /s/ DAVID S. LEE          </u> David S. Lee	Director	March 31, 2003
<u>          /s/ DOMINIC NG          </u> Dominic Ng	Director	March 31, 2003

## CERTIFICATIONS

I, Robert L. Blair, certify that:

1. I have reviewed this annual report on Form 10-K of ESS Technology, Inc.;
2. Based on my knowledge, this annual report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this annual report;
3. Based on my knowledge, the financial statements, and other financial information included in this annual report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this annual report;
4. The registrant's other certifying officers and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-14 and 15d-14) for the registrant and have:
  - a) designed such disclosure controls and procedures to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this annual report is being prepared;
  - b) evaluated the effectiveness of the registrant's disclosure controls and procedures as of a date within 90 days prior to the filing date of this annual report (the "Evaluation Date"); and
  - c) presented in this annual report our conclusions about the effectiveness of the disclosure controls and procedures based on our evaluation as of the Evaluation Date;
5. The registrant's other certifying officers and I have disclosed, based on our most recent evaluation, to the registrant's auditors and the audit committee of registrant's board of directors (or persons performing the equivalent functions):
  - a) all significant deficiencies in the design or operation of internal controls which could adversely affect the registrant's ability to record, process, summarize and report financial data and have identified for the registrant's auditors any material weaknesses in internal controls; and
  - b) any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal controls; and
6. The registrant's other certifying officers and I have indicated in this annual report whether there were significant changes in internal controls or in other factors that could significantly affect internal controls subsequent to the date of our most recent evaluation, including any corrective actions with regard to significant deficiencies and material weaknesses.

/s/ ROBERT L. BLAIR

Robert L. Blair  
*President and Chief Executive Officer*

Date: March 31, 2003

I, James B. Boyd, certify that:

1. I have reviewed this annual report on Form 10-K of ESS Technology, Inc.;
2. Based on my knowledge, this annual report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this annual report;
3. Based on my knowledge, the financial statements, and other financial information included in this annual report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this annual report;
4. The registrant's other certifying officers and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-14 and 15d-14) for the registrant and have:
  - a) designed such disclosure controls and procedures to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this annual report is being prepared;
  - b) evaluated the effectiveness of the registrant's disclosure controls and procedures as of a date within 90 days prior to the filing date of this annual report (the "Evaluation Date"); and
  - c) presented in this annual report our conclusions about the effectiveness of the disclosure controls and procedures based on our evaluation as of the Evaluation Date;
5. The registrant's other certifying officers and I have disclosed, based on our most recent evaluation, to the registrant's auditors and the audit committee of registrant's board of directors (or persons performing the equivalent functions):
  - a) all significant deficiencies in the design or operation of internal controls which could adversely affect the registrant's ability to record, process, summarize and report financial data and have identified for the registrant's auditors any material weaknesses in internal controls; and
  - b) any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal controls; and
6. The registrant's other certifying officers and I have indicated in this annual report whether there were significant changes in internal controls or in other factors that could significantly affect internal controls subsequent to the date of our most recent evaluation, including any corrective actions with regard to significant deficiencies and material weaknesses.

/s/ JAMES B. BOYD

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James B. Boyd  
*Chief Financial Officer*

Date: March 31, 2003

## INDEX TO EXHIBITS

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99.1	Certification Pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
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\* Represents a management contract or compensatory plan of arrangement.

\*\* Confidential treatment has been granted with respect to certain portions of this agreement.

## Corporate Information

### Directors

**Fred S. L. Chan**  
*Chairman of ESS Technology, Inc.*

**Robert L. Blair**  
*Director, President and Chief Executive Officer*

**David Lee**  
*Director*

**Peter. T. Mok**  
*Director*

**Dominic Ng**  
*Director*

### Executive Officers

**Fred S. L. Chan**  
*Chairman of the Board of Directors of the Company, Chairman of the Board of Directors of Vialta, Inc.*

**Robert L. Blair**  
*Director, President and Chief Executive Officer*

**Patrick Ang**  
*Executive Vice President and Chief Operating Officer*

**James B. Boyd**  
*Chief Financial Officer, Chief Accounting Officer and Assistant Secretary*

### Corporate Headquarters

48401 Fremont Boulevard  
Fremont, California 94538  
Telephone: 510/492-1088  
Facsimile: 510/492-1098

### Offices Worldwide

#### Domestic Offices

48401 Fremont Boulevard  
Fremont, California 94538  
510/492-1088

7575 Irvine Center Drive, Suite 150  
Irvine, California 92618  
949/453-6800

2600 Via Fortuna, Suite 100  
Austin, Texas 78746  
512/347-2088

### Overseas Offices

1708 Dolphin Avenue, Unit 1106,  
Kelowna, BC, Canada, V1Y 9S4  
250/869-0808  
Rm 808, 8/F, Tower B, Ke Yuan Bldg.,  
No. 105, Xi San Huan Bei Rd.,  
Hai Dian District, Beijing, PRC 100037  
86/10-8841-4206

15/F, Shenzhen Commercial Bank  
Mansion, No. 1099 Shen Nan Zhong  
Road, Shenzhen, PRC 518031  
86/755-2587-8318

Rm D4, 6/F, Jia Cheng Building  
No. 128 Jin Ji Hu Lu, Suzhou Industrial  
Park, Suzhou, PRC 215021  
86/512-6761-9838

Unit 1, 18th Floor, Westley Square,  
48 Hoi Yuen Road, Kwun Tong  
Kowloon, Hong Kong  
852/2418-0860

Rm A, 11/F, No. 216 Tun Hwa S. Road,  
Section 2, Taipei 106, Taiwan ROC  
886/2-2377-9221

No. 37, Kowa Bldg., 4-5 Tsukiji 1-chome,  
Chuo-ku, Tokyo 104-0045 Japan  
81/3-3457-1373

### Shareholder Information

The Annual Meeting of Shareholders will be held at 2:00 p.m., May 29, 2003, at The Marriott Hotel, 46100 Landing Parkway, Fremont, California 94538.

### Form 10-K

The Company's Form 10-K as filed with the Securities and Exchange Commission, is available without charge upon written request to:

Investor Relations  
48401 Fremont Boulevard  
Fremont, California 94538  
Telephone: 510/492-1161 or  
Email: [ir@esstech.com](mailto:ir@esstech.com)  
On-line:  
<http://www.esstech.com/IR/sec.shtm>

### Transfer Agent and Registrar

Chase Mellon Shareholder Services, LLC  
235 Montgomery Street  
23rd Floor  
San Francisco, California 94104  
Website: [www.chasemellon.com](http://www.chasemellon.com)

### Independent Accountants

PricewaterhouseCoopers LLP  
Ten Almaden Boulevard  
San Jose, California 95113

### Legal Counsel

Orrick, Herrington & Sutcliffe LLP  
1020 Marsh Road  
Menlo Park, California 94025

### Common Stock Data

As of February 28, 2003, there were approximately 207 record holders of the Company's Common Stock. The last reported sale price on that date was \$6.48.

### Stock Price History

The Company's Common Stock has been trading on the Nasdaq National Market under the symbol "ESST" since October 6, 1995. The following table sets forth the high and low reported sales prices for the Common Stock as reported by the Nasdaq National Market during the period indicated.

	High	Low
<b>Fiscal 2002</b>		
First Quarter	25.99	16.81
Second Quarter	21.98	12.76
Third Quarter	20.25	5.91
Fourth Quarter	9.32	4.28
<b>Fiscal 2001</b>		
First Quarter	8.87	4.50
Second Quarter	10.60	4.75
Third Quarter	16.12	5.89
Fourth Quarter	24.45	9.95

The Company has never declared or paid any cash dividends on its Common Stock. The Company currently anticipates that it will retain all future earnings for use in its business and does not anticipate paying any cash dividends in the foreseeable future.



ESS Technology, Inc.

48401 Fremont Boulevard, CA 94538 / Telephone: 510/492-1088 / Facsimile: 510/492-1098 / [www.esstech.com](http://www.esstech.com)