

PIXELWORKS INC  
Form 10-K/A  
May 30, 2003

# SECURITIES AND EXCHANGE COMMISSION

WASHINGTON, D.C. 20549

## FORM 10-K/A

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**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**

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**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: 000-30269**

## PIXELWORKS, INC.

(Exact name of registrant as specified in its charter)

**OREGON**

(State or other jurisdiction of  
incorporation or organization)

**91-1761992**

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

**8100 SW Nyberg Road  
Tualatin, Oregon**

(Address of principal executive  
offices)

**97062**

(Registrant's zip code)

**(503) 612-6700**

(Registrant's telephone number,  
including area code)

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

**None**

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

**Common Stock**

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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 checkmark whether the Registrant is an accelerated filer (as defined in Rule 12b-2 of the Act). Yes  No

The aggregate market value of voting Common Stock held by non-affiliates of the registrant at June 30, 2002 was approximately \$282,428,467. For purposes of this calculation, officers and directors are considered affiliates.

Number of shares of Common Stock outstanding at March 21, 2003: 44,258,251.

**Documents Incorporated by Reference**

<b>Document</b>	<b>Part of Form 10-K Into Which Documents are Incorporated</b>
Portions of Proxy Statement for 2003 Annual Meeting of Shareholders	Part III

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## PART I

### Item 1. BUSINESS

#### Overview

We are a leading designer, developer and marketer of semiconductors and software for the advanced display industry. Pixelworks system-on-chip semiconductors process and optimize video, computer graphics and Web information for display on a wide variety of devices used in business and consumer markets, including flat-panel monitors, digital televisions and multimedia projectors. Our product line is used by the world's leading manufacturers of consumer electronics and computer display products to enhance image quality and ease of use.

Our business model is based on delivering multiple products that address every major segment of the advanced display market including flat panel monitors, digital televisions and multimedia projectors. We are also developing products for emerging markets including electronic devices designed to access and display Web content.

Since our founding we have augmented our internal technology development capabilities through a series of strategic acquisitions. In January 2001, we completed the acquisition of Panstera, Inc to strengthen our competitive position in the XGA-resolution LCD monitor market. In January 2002, we completed the acquisition of nDSP Corporation, a developer and marketer of digital signal processing ICs that enhance video quality in a wide variety of display products for the consumer television market. In September 2002, we completed the acquisition of Jaldi Semiconductor which has developed a re-configurable system-on-chip for video processing focused at the high end of the digital television market.

We develop a range of semiconductor products including discrete ICs and system-on-chip ICs integrating a microprocessor, memory and image processing circuits that function as a computer on a single chip. Our product line of semiconductors and feature-rich software help our customers simplify their product design, reduce time to market, lower development costs and increase product performance. Our solutions enable our customers to use a common design environment across multiple products and applications.

We have announced that our semiconductors are used in products marketed by Dell, HP, Hitachi, InFocus Corporation, LG Electronics, NEC-Mitsubishi, Samsung, SANYO, Seiko Epson, Sharp, Sony and ViewSonic.

#### Industry Background

In order to take full advantage of the large amounts of visual information, users are demanding more sophisticated display devices capable of showing text, graphics and full motion video simultaneously. These products include flat panel monitors, digital televisions and multimedia projectors. Independent research firms are projecting significant growth for these devices over the next several years. The following data have

been gathered from published sources that were not specifically prepared or approved for use in this report.

DisplaySearch estimates that the market for flat panel monitors will increase from 32.1 million units in 2002 to 92.3 million units in 2005, a compound annual growth rate of 42%.

DisplaySearch estimates that the market for flat panel televisions including LCD TVs and plasma displays will increase from 3.4 million units in 2002 to 18.5 million units in 2005, a compound annual growth rate of 75%.

According to estimates from Stanford Resources and DisplaySearch the market for Digital Television will increase from 6.7 million units in 2002 to 30.3 million units in 2005, a compound annual growth rate of 65%.

Pacific Media Associates estimates that the market for multimedia projectors will increase from 1.6 million units in 2002 to 4.8 million units in 2005, a compound annual growth rate of 45%.

Today, the convergence of television and computer applications is creating new development opportunities for products that integrate the ability to display full motion video and support interactive capabilities such as browsing the Web while watching television. This convergence makes the interpretation and display of information more complex. While significant growth is forecasted for display devices, the increasing need to rapidly process large amounts of information delivered in a multitude of broadcast and Web transmission formats could constrain this growth. This bottleneck limits access to the full visual potential of content.

Developing the technology to cost effectively meet the breadth and complexity of new display devices poses several technical challenges. Digital display based products differ from CRT based displays in many respects, but the most significant difference is that they utilize a fixed, addressable matrix of picture elements or pixels, compared to the scanning approach used in CRT based products. This approach demands that, unlike most CRT based products, the incoming image signal must be digitally processed, specifically for display. CRT s, using, older, analog technology do not require this digital signal processing.

In addition the signals delivering content to these devices include analog, digital and video information that has been encoded using a combination of standard and non-standard industry formats. This information must be processed and optimized at very high speeds to match the functionality and display characteristics of different display devices. Second, these new devices require visual information to be displayed in a wide variety of sizes and formats. Each signal, whether analog or digital, must be manipulated to properly display the appropriate image in the correct format on the device. Third, all of these differing signals and formats need to be processed without compromising the visual quality of the information displayed. In fact, because of the image quality that is possible using digital display based products, compared to CRT s, the incoming signal must be enhanced to deliver the superior image quality that digital display products can provide.

The rapid development of high-resolution display technologies has created another challenge. The quality of a display device largely depends on its resolution. Resolution is defined by the number of picture elements, or pixels, that can be displayed. Pixels on a display are arranged in a matrix made up of a series of rows and columns. With higher resolution, more information can be displayed resulting in a crisper and cleaner image. In order to meet end users expectations for higher quality images, new display technologies are frequently introduced with higher resolutions. Today s mainstream computer monitors use an Extended Graphics Array, or XGA, display consisting of a matrix of 1,024 by 768 pixels. Higher computer resolution formats are emerging such as Super Extended Graphics Array, or SXGA, with 1,280 by 1,024 pixels, and Ultra Extended Graphics Array, or UXGA, with 1,600 by 1,200 pixels. In addition, 18 high definition television formats have been created to support HDTV video content.

The industry is seeking to address some of this complexity and to accelerate the acceptance of flat panel displays through the development of new standards such as the Digital Visual Interface, or DVI, specification, a digital standard for attaching a flat panel monitor to a computer. However, even with development of these standards, today s technology is reaching its physical limit of transmitting and receiving image data. New technology and standards are required to increase the available transmission capacity, or bandwidth. Without new standards, the adoption of advanced high-resolution, high-performance display products may be impeded.

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Furthermore, the traditional design approach of creating hard-wired solutions for specific technical challenges results in single-purpose semiconductors that are difficult to re-configure for new products. The resulting fixed functionality combined with the lengthy design cycles for new products has made it difficult for developers to quickly design high-performance, flexible, multi-featured, and affordable new display products.

## Products

Our products include semiconductors and software that enables our customers to quickly integrate our system-on-chip semiconductors into their digital display products across a broad range of applications.

Many of our image processing semiconductors include the following features:

*Intelligent Image Processing*-interprets and resizes incoming image signals to match the resolution and aspect ratio, or the relation of the width to the height of the specific display used in the product.

*Adaptive Image Optimization*-identifies the incoming computer or video signals and adjusts the display to produce the best possible image.

*Advanced Video Support*-recognizes and optimizes incoming video signals, including HDTV by eliminating artifacts on progressive displays by combining the most advanced digital video processing including noise reduction, dynamic edge enhancement and smoothing of moving lines to deliver clear, natural looking video images for a lifelike picture.

*Software Compatibility*-allows customers to rapidly create products across product lines and categories using a common set of software tools.

Other features of display controllers include:

*Support for a range of resolutions*-the ability to handle a full range of resolution standards from 640 by 480 pixels to 2,048 by 1,536 pixels.

*Intelligent Windowing*-movable and resizable content windows with adjustable transparency deliver more control over content viewing. These features let users watch television while working on a computer, monitor multiple channels or surf the Internet while watching a video - all on the same display. Intelligent Windowing includes formats such as Picture-In-Picture, Picture-On-Picture and Side-by-Side windows.



*Digital Keystone Correction*-a feature that allows a projector to be placed virtually anywhere in the room. By electronically adjusting the image to compensate for optical distortions a square, high-quality picture is projected.

*Our Software*

We provide a complete software development environment that helps customers reduce their time to market by providing an embedded operating system, computer programming code and tools necessary to customize display devices. Our Software Development Kit enables product differentiation through rapid customization of features, performance, and device look and feel with fast time to market and reduced development costs. Our software provides a consistent development platform that is portable across product lines and product categories.

*Future Product Development*

We plan to develop new system-on-chip semiconductors that address customer demand and are logical extensions of our design architecture. Higher levels of integration include adding analog to digital converters, video decoders, deinterlacers, audio processing, MPEG decoders and wireless signal receivers. These higher levels of integration will further reduce the number of components on circuit boards and help to lower overall system costs.

## Technology

Our core competency in semiconductor design involves an innovative methodology for developing complex system-on-chip designs. Our designs are based on self-contained modules that can be reassembled and reused in new product development programs. We extensively simulate and test our designs using the best available simulation and synthesis tools and internally developed proprietary validation tools.

### *Integrated Semiconductor Technology*

*On-chip Integration of Microprocessor, Memory and Digital Signal Processor.* Our system-on-chip semiconductors are a complete, integrated display controller on a single chip, which includes automatic image optimization, automatic image resizing and an onboard microprocessor. This single chip replaces all of the individual components of the traditional display controller.

*Broad Interface Flexibility.* Our display controllers work with analog or digital signals, ranging from low resolution computer graphics to the latest high-definition television formats.

*Complete Software Development Environment.* We provide an embedded operating system, source code and software tools necessary to customize display devices. Our software development environment includes a proprietary Windows-based user interface creation tool, GUI Builder, which enables customers to create finished products with a distinct look and feel. The GUI Builder also allows our customers to easily create multiple differentiated products from the same platform. In addition to controlling the user interface, our software forms the heart of the real-time system at the core of any modern display product. Our software provides a consistent development platform that is portable across product lines and product categories. For example, a customer that develops a projector product using our software can easily port that software for use in a monitor or a television. This benefits the customer by dramatically reducing time to market and providing a unique look and feel that delivers a consistent customer experience across an entire product portfolio.

### *Intelligent Image Processing Technology*

Our technology supports multi-standard analog and digital video, including digital television or DTV, HDTV, National Television Standards Committee, or NTSC, and other international video standards. Our intelligent image processing products simplify the use and development of display devices. Features of our technology include the following:

*Image Scaling and Shaping.* Our image processing technology incorporates proprietary programmable image scaling capable of resizing images to fit a wide variety of aspect ratios, which is the ratio of width to height of display screens, and resolutions. With our scaling, images can be adapted to aspect ratios ranging from traditional 4:3 aspect ratios of conventional computer monitors and televisions to the 16:9 format used in wide screen HDTVs. In addition, content designed for a specific resolution can be intelligently stretched or reduced in real time to fit a new resolution for a specific display without degrading the image. For example, low-resolution images are processed by intelligently adding information, so that when the new image is displayed, it looks smooth without jagged image areas. High-resolution content can be displayed on lower resolution displays by intelligently removing information without degrading image quality. This technology is essential to interfacing fixed resolution digital displays to the wide range of inputs that are present in today's marketplace.

Our technology allows the shape of an image to be changed in multiple dimensions. This is useful in compensating for optical distortions in products including front projection systems and rear projection televisions. For example, standard resolution videotapes designed for conventional television display can be resized and formatted for display on a high-resolution wide-screen flat panel television without degrading the image. This capability is increasingly important as HDTV becomes more prevalent. HDTV content can be delivered in as many as 18 different combinations of resolutions and aspect ratios.

*Adaptive Image Optimization.* Our products must translate a broad range of signals in standard and non-standard formats. We use a proprietary image processing technique to identify the characteristics of a signal and configure the system to produce the best possible image. Our adaptive image optimization technology automatically adjusts incoming signals to achieve the highest possible image quality. The display adjusts itself when it is turned on and continuously adjusts with every change of the incoming signals to display an optimal image.

*Advanced Video Processing.* Our products enhance the quality of video images on digital displays by using patent-pending video processing technology to deliver clear, natural looking video images. Our advanced video processing technology eliminates artifacts on progressive displays by combining the most advanced digital video processing including noise reduction, dynamic edge enhancement and smoothing of moving lines to deliver clear, natural looking video images for a life-like picture.

We have developed advanced video processing techniques specifically for flat panel displays, which are progressive scan devices. Images are built and displayed sequentially one row or line at a time. Typically, video signals are interlaced or built using every other row. First the odd rows are displayed and then the image is updated with the even rows. Our image processing technology converts the incoming interlaced video signals for display on flat panels by doubling the incoming signals to match the progressive scan capabilities of flat panel displays. This is an especially difficult challenge. Simply merging the odd and even fields results in very jagged image edges. Our intelligent approach uses a sophisticated video digital signal processing technique to display the best possible image. Pixelworks utilizes a variety of techniques for this advanced video processing depending on the application's or customer's price/performance requirements.

*Color Compensation Technology.* Our sophisticated custom color compensation technology makes it possible to display consistent color images from video and computer graphics, which use very different color palettes, on different display devices. Our color processing technology compensates for variations in the color performance of a display. Using our unique approach, any color can be addressed independently and adjusted without impacting other colors. Our customers can use our color compensation technology to compensate for non-uniform color in a specific display and to provide consistent color performance across multiple products using different display technologies. It can also be used to compensate for color variations in display components provided by different vendors.

#### *Fully Customizable On-Screen Display*

Our technology couples an integrated on-screen display controller with a unique Windows-based application that allows customers who are designing ImageProcessor semiconductors into their display products to quickly develop and implement their own unique user interfaces that can incorporate graphics and colorful icons in start-up displays and menus.

#### *Mixed Analog and Digital Signal Support*

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Our display controller semiconductors can support as many as four different sources of computer and video content to be displayed on a single device through integrated and add-on analog and digital receivers and connectors. Analog computer graphics, digital graphics supporting the DVI standard and video through a variety of sources can be captured, decoded and optimized.

*SmartPanels Specialized integration of display controller electronics and LCD modules*

SmartPanels are an emerging manufacturing trend in advanced display products. SmartPanels integrate all electronics directly onto the LCD display module in order to streamline monitor product development by reducing the number of circuit boards used, lowering assembly costs and minimizing the manufacturing challenges caused by sourcing and integrating an array of individual components from different vendors. SmartPanels cut development time by delivering pre-tested, regulatory approved hardware and software to LCD monitor manufacturers. This approach also provides the opportunity for new suppliers, who are not familiar with

the monitor market to deliver high quality LCD monitors to their customers very rapidly, with much less development expense than traditional monitor manufacturers.

Pixelworks has been developing a suite of technologies optimized for SmartPanel applications including integrated electronics combining interface electronics, a display controller, a programmable LCD timing controller with advanced electronic interference reduction and backlight inverter control.

### **Customers, Sales and Marketing**

We have achieved design wins with global leaders in the business computing and consumer electronics markets. We have announced products in production with Dell, HP, Hitachi, InFocus, LG Electronics, NEC-Mitsubishi, Samsung, SANYO, Seiko Epson, Sharp, Sony and ViewSonic.

The key elements of our sales and marketing strategy are to achieve design wins with industry leading branded manufacturers in targeted markets and to continue building strong customer-supplier relationships. Once a design win has been achieved, sales and marketing efforts are focused on building long-term mutually beneficial business relationships with our customers by providing superior technology and reducing their costs, which complements their product development objectives and meets their expectations for price-performance and time to market. Marketing efforts are focused on building market-leading brand awareness and preference for our system-on-chip semiconductors.

Our global distribution channel is multi-tiered and involves:

**Manufacturers Representatives** - independent sales agents who represent us in local markets and provide pre- and post-sales support and do not carry inventory.

**Distributors** - resellers in local markets who provide pre- and post-sales support and stock our ImageProcessor semiconductors in direct relation to specific manufacturing customer orders.

**Integrators** - OEM customers who build display devices based on specifications provided by branded manufacturers.

**Branded Manufacturers** - globally recognized manufacturers who develop display device specifications, manufacture, market and distribute display devices either directly or through resellers to end-users.

Branded Suppliers - globally recognized suppliers, who develop display device specifications and then source them from Integrators, typically in Asia, and distribute them either directly or through resellers to end-users.

In Japan, the majority of our products are sold through our distributor, Tokyo Electron Device which represented 45%, 52% and 59% of our total revenue for the years ended December 31, 2002, 2001 and 2000, respectively. Sales through Tokyo Electron Device to our customer Seiko Epson represented 10%, 12% and 17% of our total revenue for the years ended December 31, 2002, 2001 and 2000, respectively. In China and Taiwan, we sell through a combination of a network of distributors and direct sales. Sales through Neoview, a distributor in Taiwan, represented 12%, 8% and 3% of total revenue for the years ended December 31, 2002, 2001 and 2000, respectively. We support our European customers through a manufacturer's representative and a distributor. In Korea and the U.S., our customers are served by direct sales, which may be supported by manufacturer representatives. Certain distributors have price protection and stock rotation provisions in their distribution agreement, which in general allow for 5% to 10% of the products purchased in the prior six months to be returned in exchange for products of equal value.

Our sales and marketing team included 91 employees as of December 31, 2002. The sales and marketing team includes the architecture support team of 59 application engineers who provide technical expertise and assistance to manufacturing customers on final product development. We have sales, marketing and support offices in the U.S., China, Japan and Taiwan.

## **Research and Development**

At our inception, our internal research and development efforts were focused on the development of our PW364 ImageProcessor semiconductor for the high-end multimedia projection and flat panel monitor markets. Since the introduction of our first product our development efforts have been focused on pursuing higher levels of integration of new features in order to extend our system-on-chip semiconductors into new market segments including mainstream flat panel monitors and digital televisions. These higher levels of integration are designed to reduce components on circuit boards and to help to lower final systems costs for our customers. Future development efforts include system-on-chip technologies required for Internet and advanced video applications.

In addition to our 59 applications engineers, on December 31, 2002, we had 127 engineers, technologists and scientists who are organized into the following functional groups: Integrated Circuit Design, Software Engineering, Systems Engineering and Product and Test Engineering.

We have invested and expect that we will continue to invest significant resources in research and development activities. Our research and development expenses, inclusive of amortization of stock compensation, were \$25.7 million, \$24.2 million and \$11.1 million in 2002, 2001, and 2000, respectively.

## **Manufacturing**

Our products require advanced semiconductor processes and packaging technologies. Within the semiconductor industry we are known as a fabless company, meaning that we do not fabricate the semiconductors that we design and develop, but instead rely on third parties to manufacture our products. We have IC foundry relationships with Infineon, Taiwan Semiconductor Manufacturing Corporation or TSMC, and Toshiba. This approach allows us to concentrate our resources on product design and development where we believe we have greater competitive advantages.

## **Intellectual Property**

We rely on a combination of nondisclosure agreements and copyright, trademark and trade secret laws to protect the algorithms, design and architecture of our system-on-chip technology. As of February 2003, we have 3 patents and 33 patent applications pending with the U.S. Patent and Trademark Office, which relate generally to improvements in the visual display of digital image data including, but not limited to, improvements in image scaling and automatic image optimization and to the Digital Visual Interface standard. In addition to filing patents in the United States, we have applied for and have been granted 8 patents in Canada. We intend to seek patent protection for other significant technologies that we have already developed and expect to seek patent protection for future products as necessary. Any future patents may not be granted and if granted may be invalidated, circumvented, challenged or licensed to others.



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To supplement the technologies that we develop internally, we have licensed rights to use intellectual properties held by third parties, and we may license additional technology rights in the future. If any of these agreements terminate, we would be required to exclude the licensed technology from our existing and future product lines.

In particular, we licensed two U.S. patents (5,767,916 & 5,805,233) in February 2000 from InFocus Systems, Inc. that are material to our business. These patents are related to the method and apparatus for automatic pixel clock phase and frequency correction in analog to digital video signal conversion. These patents expire in the year 2018.

The semiconductor industry is characterized by frequent litigation regarding patent and other intellectual property rights. We have indemnification obligations with respect to the infringement of third party intellectual property rights. There is no intellectual property litigation currently pending against us. However, we may from time to time receive notifications of claims that we may be infringing patents or other intellectual property rights owned by third parties. If it is necessary or desirable, we may seek licenses under those patents or intellectual

property rights. However, we cannot be sure that licenses will be offered or that the terms of any offered licenses would be acceptable to us.

## **Competition**

In general, the market for semiconductors is intensely competitive. Our market is characterized by rapid technological change, evolving industry standards, compressed product life cycles and declining average selling prices. We believe the principle factors impacting competition in our markets are levels of product integration, functional versatility provided by software, compliance with industry standards, time to market, cost, product performance, system design costs, intellectual property, customer relationships and reputation.

Our current products face competition from specialized display controller developers and in-house display control chips designed by our customers and potential customers. Additionally, new, alternative display processing technologies and industry standards may emerge that directly compete with technologies that we offer.

We compete with specialized and diversified electronics and semiconductor companies that offer display processors or scaling components. Some of these include Genesis Microchip, I-Chips, Macronix, Micronas, Mstar Semiconductor, Inc., Mediatek, Oplus, Philips, Realtek, Silicon Image, Silicon Optix, SmartASIC, STMicroelectronics, Trident and Trumpion.

Potential competitors may include diversified semiconductor manufacturers including ATI, nVidia, National Semiconductor and Texas Instruments. In addition, start-up companies may seek to compete in our markets.

## **Employees**

As of December 31, 2002, we had a total of 260 employees 127 in engineering, 91 in sales and marketing, of which 59 are application engineers and 32 sales and marketing staff, 15 in operations, and 27 in finance and administration. Of these employees, 174 are in the United States. None of our employees are represented by a collective bargaining agreement, nor have we experienced any work stoppage. We consider our relationship with our employees to be good. The Company's future success will depend in large part upon its ability to continue to attract, retain, and motivate highly skilled and qualified personnel.

## **Available Information**

Our Internet website address is [www.pixelworks.com](http://www.pixelworks.com). Our Annual Report on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K and amendments to those reports filed or furnished pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934 are available through our internet website as soon as reasonably practicable after we electronically file such material with, or furnish it to, the Securities and Exchange Commission. Our internet website and the information contained therein or connected thereto are not intended to be incorporated into the Annual Report on Form 10-K.

**Item 2. PROPERTIES**

We lease 51,775 feet in two buildings located in Tualatin, Oregon, which house our corporate headquarters, and includes engineering, operations, sales, marketing and administrative facilities. We have leased these spaces through various dates ranging from September 2003 through February 2006. In connection with our acquisitions of nDSP Corp. in January 2002 and Jaldi Semiconductor in September 2002, we have added approximately 14,000 square feet in Campbell, California, and 12,000 square feet in Ontario, Canada. These leased facilities house research and development. The leases expire at various dates through May 2006. We rent space in three cities in China for purposes of research and development, sales and customer support. We rent additional space in Japan and Taiwan for the purpose of sales and customer support.

**Item 3. LEGAL PROCEEDINGS**

On December 7, 2001, a former employee filed a complaint in the Circuit Court of the State of Oregon, Washington County, later removed to federal court, claiming violations of various state and federal employment and discrimination laws. The complaint seeks at least \$7 million in economic, non-economic and liquidated damages, plus punitive damages. The plaintiff asserts several statutory claims, which may require payment of the prevailing party's attorney's fees. Although we believe we have meritorious defenses to all claims, it is impossible at this stage to evaluate the likelihood of an unfavorable outcome or to provide an estimate of the amount or range of potential loss, if any. In the event there is an adverse outcome to this litigation there may be a material adverse effect on our financial condition, cash flows or results of operations.

We are involved in other litigation from time to time that is routine in nature and incidental to the outcome of our business. We believe that the outcome of any such litigation would not have a material adverse effect on our financial condition, cash flows or results of operations.

**Item 4. SUBMISSION OF MATTERS TO A VOTE OF SECURITY HOLDERS**

No matters were submitted to a vote of the Company's security holders during the fourth quarter of the fiscal year ended December 31, 2002.

**PART II**

**Item 5. MARKET FOR THE REGISTRANT'S COMMON EQUITY AND RELATED SHAREHOLDER MATTERS**

On May 19, 2000, the Company completed its Initial Public Offering ( IPO ) selling 5,750,000 shares of Common Stock at \$10.00 per share. In June of 2000, the Company sold an additional 862,500 shares of Common Stock pursuant to the terms of the over-allotment agreement related to the IPO.

The Company's Common Stock is listed for trading on the Nasdaq National Market under the symbol PXLW. The stock began trading on May 19, 2000. The following table sets forth for the periods indicated, the highest and lowest closing sales prices for the Common Stock, as reported by the Nasdaq National market.

**Fiscal 2001**

	High	Low
First quarter	\$ 26.750	\$ 10.000

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Second quarter	\$	35.740	\$	8.313
Third quarter	\$	34.300	\$	10.040
Fourth quarter	\$	19.000	\$	9.410

**Fiscal 2002**

		<b>High</b>		<b>Low</b>
First quarter	\$	17.150	\$	10.510
Second quarter	\$	12.560	\$	7.170
Third quarter	\$	8.020	\$	4.500
Fourth quarter	\$	9.340	\$	3.915

As of March 21, 2003, there were approximately 348 shareholders of record, and the last per share sales price of the Common Stock on that date was \$5.75.

The Company has not declared any cash dividends in the past. The Company expects to retain any earnings to finance the expansion and development of its business and has no plans to declare cash dividends. The payment of dividends is within the discretion of the Company's Board of Directors and will depend on the earnings, capital requirements and operating and financial condition of the Company, among other factors.

Information with respect to equity compensation plans is included under the caption "Equity Compensation Plan Information" in the Company's Proxy Statement for its 2003 Annual Meeting of Shareholders and is incorporated by reference herein.

**Item 6. SELECTED FINANCIAL DATA**

The following selected financial data should be read in conjunction with Item 7 Management Discussion and Analysis of Financial Condition and Results of Operations and Item 8 Financial Statements and Supplementary Data.

	Years Ended December 31,				
	2002	2001	2000	1999	1998
	(in thousand, except per share data)				
<b>Statement of Operations Data:</b>					
Revenue	\$ 102,641	\$ 90,808	\$ 52,593	\$ 12,812	\$ 978
Cost of revenue	51,736	46,539	31,412	8,376	22
Gross profit	50,905	44,269	21,181	4,436	956
Operating expenses:					
Research and development	23,730	18,096	10,225	4,805	1,446
Selling, general and administrative	21,865	16,373	9,708	4,366	1,314
Amortization of goodwill and assembled workforce	242	15,982			
Patent settlement expense			4,078		
In-process research and development expense	24,342	32,400			
Amortization of deferred stock compensation	2,972	8,421	2,157	558	
Total operating expenses	73,151	91,272	26,168	9,729	2,760
Loss from operations	(22,246)	(47,003)	(4,987)	(5,293)	(1,804)
Interest and other income, net	2,275	4,444	4,420	409	215
Loss before income taxes	(19,971)	(42,559)	(567)	(4,884)	(1,589)
Provision for income taxes	880			3	14
Net loss	(20,851)	(42,559)	(567)	(4,887)	(1,603)
Preferred stock beneficial conversion feature			9,996		
Accretion of preferred stock redemption preference			2,100	4,278	10
Net loss attributable to common shareholders	\$ (20,851)	\$ (42,559)	\$ (12,663)	\$ (9,165)	\$ (1,613)
Net loss per share:					
Basic and diluted	\$ (0.48)	\$ (1.05)	\$ (0.50)	\$ (1.53)	\$ (0.61)
Weighted average shares	43,397	40,662	25,573	5,971	2,660
<b>Balance Sheet Data:</b>					
Cash and cash equivalents	\$ 62,152	\$ 53,288	\$ 49,681	\$ 12,199	\$ 6,119
Working capital	95,776	98,820	100,371	12,770	4,427
Total assets	227,212	202,839	120,294	18,394	7,676
Long-term obligations, net of current portion				591	
Redeemable convertible preferred stock				23,701	7,755

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Total shareholders equity (deficit)	214,816	193,633	106,453	(9,295)	(1,908)
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## Item 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

### Forward-looking Statements

This Management's Discussion and Analysis of Financial Condition and Results of Operations and other sections of this Report contain forward-looking statements within the meaning of the Securities Litigation Reform Act of 1995 that are based on current expectations, estimates and projections about the Company's business, management's beliefs, and assumptions made by management. Words such as expects, anticipates, intends, plans, believes, seeks, estimates, and variations of such words and similar expressions are intended to identify such forward-looking statements. These statements are not guarantees of future performance and involve certain risks and uncertainties that are difficult to predict. Therefore, actual outcomes and results may differ materially from what is expressed or forecasted in such forward-looking statements due to numerous factors including the risks discussed in this Report under the caption "Risk Factors" below, and from time to time in the Company's other Securities and Exchange Commission filings and reports. In addition, such statements could be affected by general industry and market conditions and growth rates, and general domestic and international economic conditions. Such forward-looking statements speak only as of the date on which they are made, and the company does not undertake any obligation to update any forward-looking statement to reflect events or circumstances after the date of this Report. If the Company does update or correct one or more forward-looking statements, investors and others should not conclude that the Company will make additional updates or corrections with respect thereto or with respect to other forward-looking statements.

### General

We design, develop and market system-on-chip integrated circuits ( ICs ) and software for the advanced display industry. Our system-on-chip and software technology translates and optimizes video and computer graphics for display on a wide variety of electronic devices used in business and consumer markets, including flat-panel monitors, digital televisions and multimedia projectors. Our product line is used by the world's leading manufacturers of consumer electronics and computer display products to enhance image quality and ease of use.

We sell our products worldwide through a direct sales force and indirectly through distributors and manufacturers representatives. Distributors have been established in Europe, Japan, Taiwan and China. Sales to distributors represented 68%, 61% and 64% of total revenue for the years ended December 31, 2002, 2001 and 2000, respectively. Manufacturers representatives support some of our European and Korean sales. In addition to our Tualatin, Oregon corporate headquarters, we have facilities in California, Canada, Japan, China and Taiwan.

Pixelworks recognizes revenue for product sales to direct customers and commissions on third party sales upon shipment of the underlying merchandise. Revenue from product sales to distributors is recognized upon shipment if the distributor has a firm sales commitment from an end customer. Pixelworks complies with the revenue recognition guidance summarized in Staff Accounting Bulletin No. 101, *Revenue Recognition in Financial Statements*. Reserves for sales returns and allowances are recorded at the time of shipment.

Historically, significant portions of our product revenue have been from a relatively small number of customers and distributors. Our top five end customers accounted for 41%, 43% and 49% for the years ended December 31, 2002, 2001 and 2000, respectively. End customers represent customers who indirectly purchase the Company's products through distributors and contract manufacturers as well as directly from the Company.

Significant portions of our products are sold overseas. Sales outside the U.S. accounted for 98%, 91% and 96% of total revenue for the years ended December 31, 2002, 2001 and 2000, respectively. Our end customers, branded manufacturers and integrators incorporate our products into systems that are sold worldwide. All revenue to date has been denominated in U.S. dollars.

### **Acquisitions**

On March 17, 2003, we announced the execution of a definitive merger agreement with Genesis Microchip, Inc., a Delaware corporation ( Genesis ), pursuant to which Genesis will merge with a subsidiary of Pixelworks and each outstanding share of Genesis common stock will be converted into a right to receive 2.3366 shares of Pixelworks common stock. Pixelworks will also assume all outstanding options to purchase Genesis common stock.

Headquartered in Alviso, California, with locations in Canada, China, India, Japan, Korea and Taiwan, Genesis is a fabless semiconductor company. Genesis' system-on-a-chip solutions are used worldwide by display manufacturers to produce visibly better images across a broad set of devices including flat-panel displays, digital TVs, digital CRTs, projectors and DVD players. The acquisition will be accounted for as a reverse acquisition under the purchase method of accounting whereby Genesis will be deemed the acquirer for accounting purposes. We will adopt Genesis' year-end and the historical financial statements of Genesis will be the historical financial statements of the combined company. We expect to record a one-time charge for purchased in-process research and development expenses ("IPR&D") in the first quarter of 2004. We will also incur other acquisition-related expenses that we expect to be large and ongoing. These expenses include the amortization of deferred stock compensation and the amortization of acquired intangible assets. Under the reverse acquisition method Pixelworks will expense all merger related costs as incurred.

On September 6, 2002, Pixelworks acquired the remaining equity interest in Jaldi Semiconductor Corporation ( Jaldi ), a privately held development stage fabless semiconductor company based near Toronto in Richmond Hill, Ontario, Canada, in exchange for approximately 1.7 million shares exchangeable for Pixelworks common stock and the assumption of all outstanding stock options. Pixelworks made an investment of \$7.5 million on January 30, 2001 in exchange for a 19.6% equity investment. The acquisition was recorded as an asset purchase and the results of Jaldi's operations are included in the Company's financial statements beginning on the date of acquisition. The Company incurred a charge of \$20.1 million in the third quarter of 2002 for purchased IPR&D related to the acquisition. Jaldi had two products under development at the acquisition date, contributing 70% and 30% of the total IPR&D value. The products under development were video processing semiconductors targeting the high-definition digital display markets. The development projects ranged from 70% to 90% complete. Both projects had expected completion dates within one year and an estimated aggregate cost to complete of \$1.6 million. Both products are currently in the prototype stage and are sampling to lead customers.

On January 14, 2002, we acquired all of the outstanding shares of nDSP, Inc. ( nDSP ) in exchange for approximately 1.2 million shares of Pixelworks stock. nDSP was a privately held fabless semiconductor company providing video processing ICs designed to enhance the picture quality of televisions, flat panel displays and multimedia projectors. The transaction was accounted for by the purchase method of accounting, and accordingly, the results of operations of nDSP, Inc. are included in the Company's financial statements beginning on the date of acquisition. Pixelworks recorded a one-time charge of \$4.2 million in the third quarter of 2002 for IPR&D related to the acquisition. At the time of the acquisition nDSP had one product line in production and three main product lines under development, each contributing from 7% to 64% of the total IPR&D value. The products under development were video processing ICs targeting the digital display and analog CRT television markets. The products ranged from 20% to 80% complete with expected completion dates within one year and an estimated aggregate cost to complete of \$2.5 million. Since the date of the acquisition one of the products in development has been completed, the second product is sampling to lead customers and the third product is expected to be complete by the end of 2003.

On January 30, 2001, we completed the acquisition of all of the outstanding capital stock and stock options of Panstera, Inc. ( Panstera ), a privately held fabless semiconductor company located in San Jose, California, in exchange for 4.5 million shares of Pixelworks Common Stock. The acquisition was recorded as a purchase transaction and the results of Panstera's operations are included in the Company's financial statements beginning on the date of acquisition. The Company incurred a charge of \$32.4 million in the first quarter of 2001 for IPR&D related to the acquisition. At the time of the acquisition, Panstera was developing a line of mixed signal IC's for the XGA resolution LCD monitor market, none of which had reached technological feasibility. Panstera had four main product groups under development at the acquisition date, each contributing from 11% to 41% to the total IPR&D value. The projects included the development of digital and analog receivers as well as digital processor ICs. The projects ranged from an estimated 50% to 85% complete. After the acquisition, we redefined some of the product development efforts begun by Panstera by combining elements of technology

developed prior to the acquisition at Panstera with technology developed at Pixelworks. Development efforts on the four main product groups have been concluded.

### **Critical Accounting Policies and Estimates**

The preparation of consolidated financial statements in conformity with accounting principles generally accepted in the United States ( GAAP ) requires management to make estimates and assumptions that affect the amounts reported in the financial statements and accompanying notes. On an on-going basis, the Company evaluates its estimates, including those related to product returns, bad debts, inventories, investments, prepaid expenses, intangible assets, income taxes, warranty obligations, litigation and other contingencies. Pixelworks bases its estimates on historical experience and on various other assumptions that are believed to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates under different assumptions or conditions.

Pixelworks believes the following critical accounting policies affect its more significant judgments and estimates used in the preparation of its consolidated financial statements. The Company records estimated reductions to revenue for customer returns based on historical experience. If actual customer returns increase the Company may be required to recognize additional reductions to revenue. The Company maintains allowances for doubtful accounts for estimated losses resulting from the inability of its customers to make required payments. If the financial condition of Pixelworks customers were to deteriorate, resulting in an impairment of their ability to make payments, additional allowances may be required. Pixelworks provides for the estimated cost of product warranties at the time revenue is recognized. While Pixelworks engages in extensive product quality programs and processes, including actively monitoring and evaluating the quality of its suppliers, Pixelworks estimated warranty liability is affected by product failure rates and material usage and service delivery costs incurred in correcting a product failure. Should actual product failure rates, material usage or service delivery costs differ from Pixelworks estimates, revisions to the estimated warranty liability would be required. Pixelworks writes down its inventory for estimated obsolescence or unmarketable inventory equal to the difference between the cost of inventory and the estimated market value based upon assumptions about future demand and market conditions. If actual market conditions are less favorable than those projected by management, additional inventory write-downs may be required. Pixelworks records a valuation allowance to reduce its deferred tax assets to the amount that is more likely than not to be realized. Should Pixelworks determine that it would not be able to realize all or part of its net deferred tax asset in the future, an adjustment to the deferred tax asset would be charged to income in the period such determination was made.

**Results of Operations**

The following table sets forth certain financial data for the Company for the periods indicated as a percentage of revenue.

	Years Ended December 31,		
	2002	2001	2000
Revenue	100.0%	100.0%	100.0%
Cost of revenue	50.4	51.2	59.7
Gross profit	49.6	48.8	40.3
Operating expenses:			
Research and development(1)	23.1	19.9	19.4
Selling, general and administrative(2)	21.3	18.0	18.5
Amortization of goodwill and assembled workforce	0.2	17.6	0.0
Patent settlement expense	0.0	0.0	7.8
In-process research and development expense	23.7	35.7	0.0
Amortization of deferred stock compensation	2.9	9.3	4.1
Total operating expense	71.2	100.5	49.8
Loss from operations	(21.6)	(51.7)	(9.5)
Interest and other income, net	2.2	4.9	8.4
Loss before income taxes	(19.4)	(46.8)	(1.1)
Provision for income taxes	0.9	0.0	0.0
Net loss	(20.3%)	(46.8%)	(1.1%)

Amount excludes amortization of deferred stock compensation of:

(1) Research and development	1.9%	6.8%	1.6%
(2) Selling, general and administrative	1.0%	2.5%	2.5%

**Year Ended December 31, 2002 Compared to Year Ended December 31, 2001**

**Revenue.** Revenue increased \$11.8 million from \$90.8 million for the year ended December 31, 2001 to \$102.6 million for the year ended December 31, 2002. This increase resulted from an 82% increase in units shipped offset in part by a 38% decline in average selling prices. Revenue from shipments to multimedia projector manufacturers, which represented 57% of total revenue for the year ended December 31, 2002, increased \$7.3 million, or 14%. The increase was related to growth in the overall multimedia projector market, and in particular, to growth in shipments to projector manufacturers in Japan. Revenue from shipments to advanced television manufacturers, which represented 16% of total revenue for the year ended December 31, 2002, increased \$13.6 million, or 458%. This increase resulted from the overall growth in the advanced television market as well as the shipment of products added through our acquisition of nDSP in January 2002. In particular, shipments to television manufacturers in China increased from \$0 to \$6.1 million. Revenue from shipments to LCD monitor manufacturers, which represented 23% of total revenue for the year ended December 31, 2002, decreased \$10.4 million, or 31%. The decrease resulted from a 20% increase in

unit shipments being more than offset by a 42% decline in average selling prices. Revenue from sources other than multimedia projector, advanced television, and LCD monitor manufacturers represented 4% of total revenue and increased \$1.4 million or 58% for the year ended December 31, 2002.

Gross profit. Gross profit margin was 49.6% of total revenue for the year ended December 31, 2002 compared to 48.8% of total revenue for the year ended December 31, 2001, inclusive of the amortization of developed technology and the amortization of deferred stock compensation. The improvement in gross profit margin resulted primarily from a greater percentage of revenue from products sold into advanced televisions, which carry higher average gross profit margins, reductions in product costs and the fixed components of cost of goods sold being spread over a higher revenue base.

Research and development. Research and development expense, inclusive of amortization of deferred stock compensation, was \$25.7 million, or 25.1% of total revenue for the year ended December 31, 2002 compared to \$24.2 million, or 26.7% of total revenue for the year ended December 31, 2001. The increase of \$1.5 million resulted primarily from a \$3.9 million increase in compensation expenses related to an increase in personnel of 46 employees and an increase in depreciation and amortization and other software and equipment related expenses of \$1.8 million. These expenses were partially offset by a decrease of \$4.2 million in amortization of deferred stock compensation that resulted from the use of the accelerated method of amortization, which recognizes more expense in earlier periods and the reversal of previously expensed stock compensation for unvested stock options that were cancelled upon employee termination in the current period.

Selling, general and administrative. Selling, general and administrative expense, including amortization of deferred stock compensation, was \$22.8 million, or 22.3% of total revenue for the year ended December 31, 2002 as compared to \$18.6 million, or 20.5% of total revenue for the year ended December 31, 2001. Most of the \$4.2 million increase resulted from a \$1.9 million increase in compensation expenses related to an increase in personnel of 34 employees. Additionally, rent increased \$1.2 million due to an increase in building space to support a greater number of employees with new office locations in China, California and Canada, depreciation and amortization increased \$403,000 due to additional purchases of long-term assets, outside services increased \$639,000 primarily for legal and accounting services to support new regulatory and reporting requirements in new and existing jurisdictions and sales commissions increased \$326,000 due to higher revenue. The balance of the increase consisted primarily of a \$364,000 increase in insurance and \$422,000 increase in travel related to customer visits to support products in development. Partially offsetting these expense increases was a decrease of \$1.3 million in amortization of deferred stock compensation as a result of the use of the accelerated method of amortization.

Amortization of goodwill and assembled workforce. Expenses for the amortization of goodwill and assembled workforce were \$242,000 and \$16.0 million for the years ended December 31, 2002 and 2001. At the time of the acquisition of Panstera in January 2001, the Company recorded \$84.2 million of goodwill, which was being amortized over sixty months, and \$1.8 million of assembled workforce, which was being amortized over thirty-six months. The Company began amortizing these assets in February 2001. As a result of the adoption of Statement of Financial Accounting Standards ( SFAS ) 142, the Panstera assembled workforce was reclassified to goodwill on January 1, 2002 and the Company ceased amortization of these assets on that date. As a result of the Jaldi asset acquisition in September 2002, the Company recorded \$2.9 million in assembled workforce, which is not subject to SFAS 141 and SFAS 142 and is being amortized over 36 months.

In-process research and development expense. In process research and development expense ( IPR&D ) for the year ended December 31, 2002, which resulted from the January 2002 acquisition of nDSP and the September 2002 acquisition of Jaldi, was \$24.3 million. This compared to IPR&D expense for the year ended December 31, 2001 of \$32.4 million, which resulted from the acquisition of Panstera. IPR&D expense represents the discounted future cash flows from R&D projects in development, but not yet completed, at the time of our acquisitions of Jaldi, nDSP and Panstera.

Amortization of deferred stock compensation. Stock compensation expense was \$3.0 million for the year ended December 31, 2002, a decrease of \$5.4 million from \$8.4 million for the year ended December 31, 2001. The decrease was due primarily to deferred stock compensation being amortized on an accelerated method, which results in a decreasing amount of deferred stock compensation expense each year, as well as, the reversal of previously recognized stock compensation expense for unvested stock options that were cancelled upon employee termination in the current year. Amortization of the December 31, 2002 balance of \$2.4 million of deferred stock



compensation is estimated to be \$1.7 million, \$570,000 and \$87,000 for the years ending December 31, 2003, 2004 and 2005, respectively.

Interest and other income and expense, net. Interest and other income and expense, net consists of interest income and other non-operating income and expenses. Interest and other income and expense, net decreased \$2.1 million from \$4.4 million for the year ended December 31, 2001 to \$2.3 million for the year ended December 31, 2002. This decrease was primarily the result of lower yields on invested cash in the current period due to overall interest rates declining over the past year.

Provision for income taxes. The Company recorded a provision for income tax expense during the year ended December 31, 2002 of \$880,000. Although the Company recognized a pretax book loss for the period, a tax provision was necessary due to certain large non-cash expenses recognized for book purposes not being deductible for tax purposes, which results in pre-tax income for tax purposes. These large non-cash expenses that are not deductible for tax purposes primarily include IPR&D expense, amortization of purchased developed technology and stock compensation expense. The Company recorded no tax provision during the year ended December 31, 2001. As of December 31, 2002, we had approximately \$26.2 million of net operating loss carryforwards to offset against future taxable income the benefit of which when utilized will go to equity and goodwill. The carryforwards expire on various dates through 2021, if not used. Utilization of a portion of net operating losses is subject to an annual limitation due to the ownership change provisions of the Internal Revenue Code of 1986 and similar state provisions. The Company has established a valuation allowance for certain deferred tax assets, including net operating loss and tax credit carryforwards. A valuation allowance is recorded when it is more likely than not that some portion of the deferred tax assets will not be realized.

#### **Year Ended December 31, 2001 Compared to Year Ended December 31, 2000**

Revenue. Revenue increased \$38.2 million from \$52.6 million for the year ended December 31, 2000 to \$90.8 million for the year ended December 31, 2001. The increase in revenue resulted from increased shipments of PW111, PW112, PW164, PW165, PW171 and PW365 ImageProcessor ICs. All of these products, with the exception of the PW164, were products that were newly introduced and not shipping in the year ended December 31, 2000. The increase in revenue was partially offset by decreased shipments of PW264 and PW364 ImageProcessor ICs.

Gross profit. Gross profit margin was 48.8% of total revenue for the year ended December 31, 2001 compared to 40.3% of total revenue for the year ended December 31, 2000, inclusive of the amortization of deferred stock compensation. The improvement in gross profit margin resulted primarily from the introduction of new products with higher average gross profit margins, and fixed costs being spread over higher revenues. Approximately 29% of revenue for the year ended December 31, 2001 was from newly introduced products that were not shipping in the year ended December 31, 2000.

Research and development. Research and development expense, inclusive of amortization of deferred stock compensation, was \$24.2 million or 26.7% of total revenue for the year ended December 31, 2001 compared to \$11.1 million, or 21.0% of total revenue for the year ended December 31, 2000. The increase of \$13.1 million resulted primarily from a \$5.3 million increase in amortization of deferred stock compensation and a \$3.5 million increase in compensation expenses related to an increase in personnel of 37 employees, primarily as a result of the Panstera acquisition. Upon completion of the acquisition in January 2001, the Company recorded deferred stock compensation expense related to the unvested portion of the stock option grants to employees that were assumed by Pixelworks. The balance of the increase was primarily the result of a \$2.0 million increase in expenses related to engineering consulting services and development services for products in development and a \$1.5 million increase in depreciation and amortization.

Selling, general and administrative. Selling, general and administrative expense, including amortization of deferred stock compensation, was \$18.6 million, or 20.5% of total revenue for the year ended December 31, 2001 as compared to \$11.0 million, or 21.0% of total revenue for the year ended December 31, 2000. Most of the \$7.6 million increase resulted from a \$2.6 million increase in compensation expenses related to an increase in personnel

of 27 employees. Amortization of deferred stock compensation increased \$940,000 primarily as a result of the acquisition of Panstera. Additionally, rent increased \$559,000 due to an increase in building space to support higher headcounts, depreciation and amortization increased \$472,000 due to additional purchases of long-term assets, outside services increased \$379,000 primarily for legal and accounting services and sales commissions increased \$410,000 due to higher revenue. The balance of the increase consisted primarily of a \$391,000 increase in insurance and \$410,000 increase in travel related to customer visits to support products in development.

Amortization of goodwill and assembled workforce. Expenses for the amortization of goodwill and assembled workforce were \$16.0 million for the year ended December 31, 2001. At the time of the acquisition of Panstera in January 2001, the Company recorded \$84.2 million of goodwill, which is being amortized over sixty months, and \$1.8 million of assembled workforce, which is being amortized over thirty-six months. The Company began amortizing these assets in February 2001.

In-process research and development expense. The Company recorded a one-time charge of \$32.4 million in the first quarter of 2001 to write off the in-process research and development that resulted from the acquisition of Panstera, Inc. The value assigned to IPR&D related to research projects for which technological feasibility had not been established. The value was determined by estimating the net cash flows from the sale of products from 2001 through 2005 resulting from the completion of such projects, and discounting the net cash flows back to their present value.

Amortization of deferred stock compensation. Stock compensation expense was \$8.4 million for the year ended December 31, 2001, an increase of \$6.2 million from \$2.2 million for the year ended December 31, 2000. The increase in stock compensation expense resulted from the unvested portion of stock option grants to employees. As a result of the acquisition of Panstera, the Company recorded \$13.4 million in deferred stock compensation, which is being amortized on an accelerated method over the vesting period of the assumed options. Amortization of the December 31, 2001 balance of \$5.7 million in deferred stock compensation is estimated to be \$3.8 million, \$1.6 million and \$308,000 for the years ending December 31, 2002, 2003, and 2004, respectively.

Interest and other income and expense, net. Interest and other income and expense, net consists of interest income and other non-operating income and expenses. Interest and other income and expense, net was unchanged from \$4.4 million for the year ended December 31, 2000 to \$4.4 million for the year ended December 31, 2001. Although the Company maintained higher average cash balances for the year ended December 31, 2001, the yields on invested cash in the current year were lower than those for the year ended December 31, 2000.

Provision for income taxes. The Company recorded no net provision for income tax expense during the years ended December 31, 2001 and 2000. As a result of the acquisition of Panstera in January 2001, the Company added \$1.2 million in deferred tax assets, related to Panstera's net operating loss carry forward which, when realized, will be offset against goodwill.

**Liquidity and Capital Resources**

As of December 31, 2002, the Company had cash and cash equivalents of \$62.2 million and working capital of \$95.8 million as compared to cash and cash equivalents of \$53.3 million and working capital of \$98.8 million as of December 31, 2001. Principal sources of cash during the year ended December 31, 2002 were proceeds from the maturities of marketable securities, net of purchases of marketable securities, of \$8.6 million, cash generated by operating activities of \$6.7 million and proceeds from the issuance of stock under the Company's employee stock purchase plan and stock option plans of \$1.5 million. Principal uses of cash during the year ended December 31, 2002 were property and equipment expenditures and purchases of other assets of \$7.1 million.

Principal sources of cash during the year ended December 31, 2001 were proceeds from the maturities of marketable securities, net of purchases of marketable securities, of \$6.1 million, cash generated by operating activities of \$10.4 million and proceeds from the issuance of stock under the Company's employee stock purchase plan and stock option plans of \$1.7 million. Principal uses of cash during the year ended December 31, 2001 were

the investment in Jaldi Semiconductor of \$7.5 million, property and equipment expenditures and purchases of other assets of \$7.1 million.

Accounts Receivable. Accounts receivable increased to \$10.4 million at December 31, 2002 from \$6.4 million at December 31, 2001, an increase of \$4.0 million or 63%. The increase in accounts receivable was primarily related to an increase in revenue in the quarter ended December 31, 2002 and the timing of shipments within the quarter. Average days sales outstanding ( DSO ) were 32 and 26 days at December 31, 2002 and December 31, 2001, respectively. The increase in DSO is a result of a change in customer mix and timing of shipments within the quarter.

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Inventories. Inventories increased \$2.6 million from \$4.2 million at December 31, 2001 to \$6.8 million at December 31, 2002. The increase was due to a \$1.3 million increase in work in process and a \$1.3 million increase in finished goods inventories. The increase in finished goods is a result of the broadening of our product line and a need to stock additional inventory to meet the higher customer demand. The increase in work in process inventory resulted from an increase in new products following the COT manufacturing process. Inventory turns were 11 and 10 at December 31, 2002 and 2001, respectively. Inventory turns of 11 represented approximately 5 weeks of shipments in inventory. Inventories are shown net of a reserve of \$1.4 million and \$412,000 as of December 31, 2002 and 2001, respectively. The net change in the reserve for obsolete inventory of \$1.0 million was the result of products reaching end of life and the anticipated transition of customers to newer products. The Company does not anticipate that changes to the reserve for obsolete inventory will materially impact the results of operations or capital resources.

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Long-Term Marketable Securities and Other Assets. Long-term marketable securities consisting of federal agency bonds with a weighted average days to maturity of 654 were \$14.5 million at December 31, 2002, an increase of \$7.0 million from \$7.5 million at December 31, 2001. The Company invested proceeds from the maturity of short-term marketable securities into long-term marketable securities in 2002 to take advantage of the more favorable interest rates.

Intangible assets increased \$4.4 million from \$3.8 million on December 31, 2001 to \$8.3 million on December 31, 2002. Intangible assets increased as a result of a \$3.2 million increase in acquired developed technology resulting from the acquisition of nDSP in January 2002 and \$2.7 million increase in assembled workforce resulting from the acquisition of Jaldi in September 2002. These increases in intangible assets were partially offset by the reclassification of \$1.3 million of assembled workforce to goodwill on January 1, 2002 as required under SFAS No. 142.

Other assets decreased \$5.5 million from \$10.1 million on December 31, 2001 to \$4.6 million on December 31, 2002. As a result of the acquisition of Jaldi in September 2002, other assets decreased by \$7.5 million, which represented the value of the original cost-based investment in Jaldi in January 2001. Partially offsetting the decrease in other assets resulting from the Jaldi acquisition was an increase in other miscellaneous assets of \$2.0 million.

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As of December 31, 2002, principal commitments consisted of obligations outstanding under operating leases. These commitments include leases for approximately 52,000 square feet in two facilities located in Tualatin, Oregon, expiring through 2006 and two facilities in California for approximately 18,000 square feet. In September 2002, the Company added approximately 12,000 square feet in Ontario, Canada as a result of the acquisition of Jaldi. The total annual estimated costs for these commitments are \$2.2 million, \$1.5 million, \$1.0 million and \$289,000 for the years ending December 31, 2003 through 2006, respectively. As a result of the acquisition of nDSP, the Company assumed some debt for equipment leases that as of December 31, 2002 represented approximately \$212,000. All of the equipment lease payments are scheduled for payment over the next 12 months. Although the Company has no other material commitments, we anticipate a substantial increase in our capital expenditures consistent with anticipated growth in our operations, infrastructure and personnel. In the future we may also require a larger inventory of products in order to support anticipated growth in our business.

The Company believes that its existing cash and cash equivalents and funds generated from operations will be sufficient to fund its operations for the next twelve months and the foreseeable future. From time to time, we may evaluate acquisitions of businesses, products or technologies that complement our business. Any such transactions, if consummated, may consume a material portion of our working capital or require the issuance of equity securities that may result in dilution to existing shareholders.

### **Recent Accounting Pronouncements**

In August 2001, the Financial Accounting Standards Board ( FASB ) issued SFAS No. 143, *Accounting for Asset Retirement Obligations*. SFAS 143 requires that the fair value of retirement obligations be recognized as a liability when they are incurred and that the associated retirement costs be capitalized as a long-term asset and expensed over its useful life. The provisions of SFAS 143 will be effective for fiscal years beginning after June

15, 2002. The Company does not expect that the adoption of SFAS 143 will have a material effect on its financial position or results of operations.

In April 2002, the FASB issued SFAS No. 145, *Rescission of FASB Statements No. 4, 44 and 64, Amendment of FASB Statement No. 13 and Technical Corrections*. SFAS 145 rescinds SFAS 4, which required all gains and losses from extinguishment of debt to be aggregated and, if material, classified as an extraordinary item, net of related income tax effect. Upon adoption of SFAS 145, companies will be required to apply the criteria in APB Opinion No. 30, *Reporting the Results of Operations—Reporting the Effects of Disposal of a Segment of a Business, and Extraordinary, Unusual and Infrequently Occurring Events and Transactions*, in determining the classification of gains and losses resulting from the extinguishment of debt. Additionally, SFAS 145 amends SFAS 13 to require that certain lease modifications that have economic effects similar to sale-leaseback transactions be accounted for in the same manner as sale-leaseback transactions. SFAS 145 will be effective for fiscal years beginning after May 15, 2002 with early adoption of the provisions related to the rescission of SFAS 4 encouraged. The Company does not expect that the adoption of SFAS 145 will have a material effect on its financial position or results of operations.

In July 2002, the FASB issued SFAS No. 146, *Accounting for Costs Associated with Exit or Disposal Activities*, which changes the way a Company will report the expenses related to restructuring. SFAS 146 is required to be adopted for exit or disposal activities initiated after December 31, 2002. The Company does not expect that the adoption of SFAS 143 will have a material effect on its financial position or results of operations.

In November 2002, the Emerging Issues Task Force reached a consensus on Issue No. 00-21 (EITF 00-21), *Revenue Arrangements with Multiple Deliverables*. EITF 00-21 addresses certain aspects of the accounting by a vendor for arrangements under which the vendor will perform multiple revenue generating activities. EITF 00-21 will be effective for interim periods beginning after June 15, 2003. The Company does not expect this issue to have a material impact on its consolidated financial position or results of operations.

In November 2002, the FASB issued Interpretation No. 45, *Guarantor's Accounting and Disclosure Requirements for Guarantees, Including Indirect Guarantees of Indebtedness to Others, an interpretation of FASB Statements No. 5, 57 and 107 and a rescission of FASB Interpretation No. 34*. This Interpretation elaborates on the disclosures to be made by a guarantor in its interim and annual financial statements about its obligations under guarantees issued. The Interpretation also clarifies that a guarantor is required to recognize, at inception of a guarantee, a liability for the fair value of the obligation undertaken. The initial recognition and measurement provisions of the Interpretation are applicable to guarantees issued or modified after December 31, 2002 and are not expected to have a material effect on the Company's financial statements. The disclosure requirements are effective for financial statements of interim or annual periods ending after December 15, 2002.

In December 2002, the FASB issued SFAS No. 148, *Accounting for Stock-Based Compensation - Transition and Disclosure, an amendment of FASB Statement No. 123*. This Statement amends FASB Statement No. 123, *Accounting for Stock-Based Compensation*, to provide alternative methods of transition for a voluntary change to the fair value method of accounting for stock-based employee compensation. In addition, SFAS 148 amends the disclosure requirements of SFAS 123 to require prominent disclosures in both annual and interim financial statements. Certain of the disclosure modifications are required for fiscal years ending after December 15, 2002 and are included in the notes to these consolidated financial statements.

In January 2003, the FASB issued Interpretation No. 46, *Consolidation of Variable Interest Entities, an interpretation of ARB No. 51*. This Interpretation addresses the consolidation by business enterprises of variable interest entities as defined in the Interpretation. The Interpretation applies immediately to variable interests in variable interest entities created after January 31, 2003, and to variable interests in variable interest entities obtained after January 31, 2003. The application of this Interpretation is not expected to have a material effect on the Company's financial statements. The Interpretation requires certain disclosures in financial statements issued after January 31, 2003 if it is reasonably

possible that the Company will consolidate or disclose information about variable interest entities when the Interpretation becomes effective.

### **RISK FACTORS**

*Investing in our shares of common stock involves a high degree of risk. If any of the following risks occur, the market price of our shares of common stock could decline and investors could lose all or part of their investment.*



## RISKS RELATED TO OUR OPERATIONS

**We have incurred net losses since our inception, and we may not achieve or sustain annual profitability.**

We incurred net losses of approximately \$20.9 million, \$42.6 million and \$567,000 in 2002, 2001 and 2000, respectively. In the future we expect our research and development and selling, general and administrative expenses to increase. Given expected increases in operating expense, we must increase revenues and gross profit to become profitable. We cannot be certain that we will achieve profitability in the future or, if we do, that we can sustain or increase profitability on a quarterly or annual basis. This may in turn cause the price of our common stock to decline. In addition, if we are not profitable in the future we may be unable to continue our operations.

**Fluctuations in our quarterly operating results make it difficult to predict our future performance and may result in volatility in the market price of our common stock.**

Our quarterly operating results are likely to vary significantly in the future based on a number of factors related to our industry and the markets for our products, some of which are not in our control and any of which may cause the price of our common stock to fluctuate. These factors include:

demand for flat panel monitors, advanced television displays, multimedia projectors and Internet appliances;

demand for our products and the timing of orders for our products;

the deferral of customer orders in anticipation of our new products or product enhancements or due to a reduction in our end customers' demand;

the loss of one or more of our key distributors or customers or a reduction, delay or cancellation of orders from one or more of these parties;

changes in the available production capacity at the semiconductor fabrication foundries that manufacture our products and changes in the costs of manufacturing;

our ability to provide adequate supplies of our products to customers and avoid excess inventory;

announcement or introduction of products and technologies by our competitors;

changes in product mix, product costs or pricing, or distribution channels; and

general economic conditions and economic conditions specific to the personal computer, display and semiconductor markets.

These factors are difficult to forecast, and these or other factors could seriously harm our business. We anticipate the rate of new orders may vary significantly from quarter to quarter. Our operating expenses and inventory levels are based on our expectations of future revenues and our operating expenses are relatively fixed in the short term. Consequently, if anticipated sales and shipments in any quarter do not occur when expected, operating expenses and inventory levels could be disproportionately high, and our operating results for that quarter and, potentially, future quarters may be negatively impacted. Any shortfall in our revenues would have a direct impact on our business. In addition, fluctuations in our quarterly results could adversely affect the price of our common stock in a manner unrelated to our long-term operating performance. Because our operating results are volatile and difficult to predict, you should not rely on the results of one quarter as an indication of our future performance. It is possible that in some future quarter our operating results will fall below the expectations of securities analysts and investors. In this event, the price of our common stock may decline significantly.

**Our highly integrated products and high-speed mixed signal products are difficult to manufacture without defects and the existence of defects in the manufactured products could result in an increase in our costs and delays in the availability of our products.**

The manufacture of semiconductors is a complex process and it is often difficult for semiconductor foundries to produce semiconductors free of defects. Because our products are more highly integrated than many other

semiconductors and incorporate mixed analog and digital signal processing and embedded memory technology, they are even more difficult to produce without defects.

The ability to manufacture products of acceptable quality depends on both product design and manufacturing process technology. Since defective products can be caused by either design or manufacturing difficulties, identifying quality problems can occur only by analyzing and testing our semiconductors in a system after they have been manufactured. The difficulty in identifying defects is compounded because the process technology is unique to each of the multiple semiconductor foundries we contract with to manufacture our products. Failure to achieve defect-free products due to their increasing complexity may result in an increase in our cost and delays in the availability of our products. For example, we have experienced field failures of our IC's in certain customer system applications that required us to institute additional IC level testing. As a result of these field failures we have incurred additional costs due to customers returning potentially affected products and have been required to resell products from third parties in order to meet certain customer commitments. Additionally, customers have experienced delays in receiving product shipments from us that resulted in the loss of revenue and profits.

**If we do not achieve additional design wins in the future, our ability to grow would be seriously limited.**

Our future success will depend on developers of advanced display devices designing our products into their systems. To achieve design wins we must define and deliver cost-effective, innovative and integrated semiconductors. Once a supplier's products have been designed into a system, the developer may be reluctant to change its source of components due to the significant costs associated with qualifying a new supplier. Accordingly, the failure on our part to obtain additional design wins with leading branded manufacturers or integrators, and to successfully design, develop and introduce new products and product enhancements could harm our business, financial condition and results of operations.

Achieving a design win does not necessarily mean that a developer will order large volumes of our products. A design win is not a binding commitment by a developer to purchase our products. Rather, it is a decision by a developer to use our products in the design process of that developer's products. Developers can choose at any time to discontinue using our products in their designs or product development efforts. If our products are chosen to be incorporated into a developer's products, we may still not realize significant revenues from that developer, if that developer's products are not commercially successful.

**Because of the complex nature of our semiconductor designs and the associated manufacturing process and the rapid evolution of our customers' product design we may not be able to develop new products or product enhancements in a timely manner, which could decrease customer demand for our products and reduce our revenues.**

The development of our semiconductors, which incorporate mixed analog and digital signal processing, is highly complex. These complexities require that we employ advanced designs and manufacturing processes that are unproven. Since commencing our operations, we have experienced increased development time and delays in introducing new products. We will not always succeed in developing new products or product enhancements nor do so in a timely manner. Acquisitions have significantly added to the complexity of our product development efforts. We must now coordinate very complex product development programs between multiple, geographically dispersed locations that were formerly done in one location.

Many of our designs involve the development of new high-speed analog circuits that are difficult to simulate and require physical prototypes not required by the primarily digital circuits we currently design. The result could be longer and less predictable development cycles.

Successful development and timely introduction of new or enhanced products depends on a number of other factors, including:

accurate prediction of customer requirements and evolving industry standards, including digital interface and content piracy protection standards;

development of advanced display technologies and capabilities;

timely completion and introduction of new product designs;

use of advanced foundry processes and achievement of high manufacturing yields; and

market acceptance of the new products.

If we are not able to successfully develop and introduce our products in a timely manner, our business and results of operations will be adversely affected.

**Integration of software in our products adds complexity and cost that may affect our ability to achieve design wins and may affect our profitability.**

Our products incorporate software and software development tools. The integration of software adds complexity, may extend our internal development programs and could impact our customers' development schedules. This complexity requires increased coordination between hardware and software development schedules and may increase our operating expenses without a corresponding increase in product revenue. Some customers and potential customers may choose not to use our products because of the additional requirements of implementing our software, preferring to use a product that works with their existing software. This additional level of complexity lengthens the sales cycle and may result in customers selecting competitive products requiring less software integration.

**A significant amount of our revenue comes from a few customers and distributors and any decrease in revenues from, or loss of any of these customers or distributors could significantly reduce our total revenues.**

We are and will continue to be dependent on a limited number of large distributors and customers for a substantial portion of our revenue. Sales to distributors represented 68%, 61% and 64% of total revenue for the years ending December 31, 2002, 2001 and 2000, respectively. During the years ending December 31, 2002, 2001 and 2000, sales to Tokyo Electron Device Limited, our distributor in Japan, represented 45%, 52% and 59%, respectively, of our total revenue. During 2002, 2001 and 2000 sales through Tokyo Electron Device to our customer Seiko Epson Corporation represented approximately 10%, 12% and 17%, respectively, of our total revenue. Sales to our top five customers accounted for approximately 41%, 43% and 52% for the years ended December 31, 2002, 2001 and 2000, respectively. As a result of this customer and distributor concentration, any one of the following factors could significantly impact our revenues:

a significant reduction, delay or cancellation of orders from one or more of our key distributors, branded manufacturers or integrators; or

a decision by one or more significant customers to select products manufactured by a competitor, or its own internally developed semiconductor, for inclusion in future product generations.

The display manufacturing market is highly concentrated among relatively few large manufacturers. We expect our operating results to continue to depend on revenues from a relatively small number of distributors that sell our products to display manufacturers and their suppliers.

**The concentration of our accounts receivable with a limited number of distributors exposes us to increased credit risk and could seriously harm our operating results and cash flows.**

At December 31, 2002, we had two customers that represented more than 10% of our accounts receivable balance. Tokyo Electron Device was the largest receivable representing 48% and 36% of our total accounts receivable at December 31, 2002 and 2001, respectively. Neoview represented 17% and 18% of the total accounts receivable at December 31, 2002 and 2001, respectively. The failure of these distributors or any other customer representing 10% or more of our total accounts receivable to pay these accounts receivable would result in a significant expense that would seriously harm our operating results and would reduce our cash flows.

**International sales account for a significant portion of our revenue, and if we do not successfully address the risks associated with our international operations, our revenue could decrease.**

Sales outside of the U.S. accounted for 98%, 91% and 96% of our total revenue in 2002, 2001 and 2000, respectively. Most of our customers are concentrated in China, Japan, Korea and Taiwan, with aggregate sales from those four countries accounting for 83%, 82% and 88% of our total revenue during the years ended December 31, 2002, 2001 and 2000, respectively. We anticipate that sales outside the U.S. will continue to account for a substantial portion of our revenues in future periods. In addition, customers who incorporate our products into their products sell them outside of the U.S., thereby exposing us indirectly to foreign risks. In

addition, all of our products are manufactured outside of the U.S. We are, therefore, subject to many international risks, including, but not limited to:

increased difficulties in managing international distributors and manufacturers of our products and components due to varying time zones, languages and business customs;

foreign currency exchange fluctuations such as the Asian financial crisis that occurred in 1998 which caused a devaluation in the currencies of Japan, Taiwan and Korea resulting in an increased cost of procuring our semiconductors;

potentially adverse tax consequences such as license fee revenue taxes imposed in Japan;

difficulties regarding timing and availability of export and import licenses, which have limited our ability to freely move demonstration equipment and samples in and out of Asia;

political and economic instability, particularly in China, Taiwan and Korea;

reduced or limited protection of our intellectual property, significant amounts of which are contained in software which is more prone to design piracy;

increased transaction costs related to sales transactions conducted outside of the U.S. such as charges to secure letters of credit for foreign receivables;

difficulties in maintaining sales representatives outside of the U.S. that are knowledgeable of the display processor industry and our display processor products;

changes in the regulatory environment in China, Japan, Korea and Taiwan that may significantly impact purchases of our products by our customers; and

difficulties in collecting accounts receivable.

**Our dependence on selling through distributors and integrators increases the complexity of managing our supply chain and may result in excess inventory or inventory shortages.**

Selling through distributors reduces our ability to forecast sales and increases the complexity of our business. Since our distributors are an intermediary between us and the companies using our products, we must rely on our distributors to accurately report inventory levels and production forecasts. This arrangement requires us to manage a more complex supply chain and monitor the financial condition and credit worthiness of our distributors and customers. Our failure to manage one or more of these challenges could result in excess inventory or shortages that could seriously impact our operating revenue or limit the ability of companies using our semiconductors to deliver their products.

**Dependence on a limited number of sole-source, third party manufacturers for our products exposes us to shortages based on capacity allocation, price increases with little notice, volatile inventory levels and delays in product delivery which could result in delays in satisfying customer demand, increased costs and loss of revenues.**

We do not own or operate a semiconductor fabrication facility and we do not have the resources to manufacture our products internally. We rely on third party foundries for wafer fabrication and other contract manufacturers for assembly and testing of our products. Our requirements represent only a small portion of the total production capacity of our contract manufacturers. Our third-party manufacturers have in the past re-allocated capacity to other customers even during periods of high demand for our products. We expect that this may occur in the future. We do not have a long-term supply contract with any of our contract manufacturers and they are not obligated to supply us with products for any specific period, in any specific quantity or at any specific price, except as may be provided in a particular purchase order. From time to time our third-party manufacturers increase prices charged to manufacture our products with little notice. This requires us to either increase the price we charge for our products or suffer a decrease in our gross margins. We try not to maintain substantial inventories of products, but need to order products long before we have firm purchase orders for those products which could result in excess inventory or inventory shortages.



If we are unable to obtain our products from manufacturers on schedule, our ability to satisfy customer demand will be harmed, and revenue from the sale of products may be lost or delayed. If orders for our products are canceled, expected revenues would not be realized. In addition, if the price charged by our third-party manufacturers increases we will be required to increase our prices, which could harm our competitiveness, or suffer declines in our gross margin.

**We use a COT, or customer-owned tooling, process for manufacturing some of our products which exposes us to the possibility of poor yields on manufactured products negatively impacting our gross profit margins and could also result in a reduction or loss of revenue.**

We are building some products on a customer owned tooling basis, also known in the semiconductor industry as COT, where we directly contract the manufacture of wafers and assume the responsibility for the assembly and testing of our products. As a result, we are subject to increased risks arising from wafer manufacturing yields and risks associated with coordination of the manufacturing, assembly and testing process. Failure to effectively use this approach to manufacturing would reduce our revenues and harm our gross margin and results of operations.

**We are dependent on our foundries to implement complex semiconductor technologies, which could adversely affect our operations if those technologies are not available, delayed or inefficiently implemented.**

In order to increase performance and functionality and reduce the size of our products, we are continuously developing new products using advanced technologies that further miniaturize semiconductors. However, we are dependent on our foundries to develop and provide access to the advanced processes that enable such miniaturization. We cannot be certain that future advanced manufacturing processes will be implemented without difficulties, delays or increased expenses. Our business, financial condition and results of operations could be materially and adversely affected if advanced manufacturing processes are unavailable to us, substantially delayed or inefficiently implemented.

**Manufacturers of our semiconductor products periodically discontinue manufacturing processes, which could make our products unavailable from our current suppliers.**

Semiconductor manufacturing technologies change rapidly and manufacturers typically discontinue older manufacturing processes in favor of newer ones. Once a manufacturer makes the decision to retire a manufacturing process, notice is generally given to its customers. Customers will then either retire the affected part or develop a new version of the part that can be manufactured on the newer process. In the event that a manufacturing process is discontinued, our products could become unavailable from our current suppliers. Additionally, migrating to a new, more advanced process requires significant expenditures for research and development. A significant portion of our products use 0.25um embedded DRAM technology and the required manufacturing process for these technologies will likely be available for the next two years. We also utilize a 0.18um standard logic process, which we expect will be readily available for the next three to five years. We have commitments from our suppliers to notify us in the event of a discontinuance of a manufacturing process in order to assist us with product transitions.

**If we have to qualify a new contract manufacturer or foundry for any of our products, we may experience delays that result in lost revenues and damaged customer relationships.**

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Our products require manufacturing with state-of-the-art fabrication equipment and techniques. Because the lead-time needed to establish a relationship with a new contract manufacturer is at least six months, and the estimated time for us to adapt a product's design to a particular contract manufacturer's processes is at least four months, there is no readily available alternative source of supply for any specific product. This could cause significant delays in shipping products, which may result in lost revenues and damaged customer relationships.

**Our future success depends upon the continued services of key personnel, many of whom would be difficult to replace and the loss of one or more of these employees could seriously harm our business by delaying product development.**

Our future success depends upon the continued services of our executive officers, key hardware and software engineers, and sales, marketing and support personnel, many of whom would be difficult to replace. The loss of one or more of these employees could seriously harm our business. Particularly, because of the highly technical

nature of our business, the loss of key engineering personnel could delay product introductions and significantly impair our ability to successfully create future products. We believe our success depends, in large part, upon our ability to identify, attract and retain qualified hardware and software engineers, and sales, marketing, finance and managerial personnel. Competition for talented personnel is intense and we may not be able to retain our key personnel or identify, attract or retain other highly qualified personnel in the future. We have experienced, and may continue to experience, difficulty in hiring and retaining employees with appropriate qualifications. If we do not succeed in hiring and retaining employees with appropriate qualifications, our product development efforts, revenues and business could be seriously harmed.

**Because we do not have long-term commitments from our customers, and plan purchases based on estimates of customer demand, which may be inaccurate, we must contract for the manufacture of our products based on those potentially inaccurate estimates.**

Our sales are made on the basis of purchase orders rather than long-term purchase commitments, which our customers may cancel or defer purchase orders at any time. This process requires us to make multiple demand forecast assumptions, each of which may introduce error into our estimates. If our customers or we overestimate demand, we may purchase products that we may not be able to sell. As a result, we would have excess inventory, which would negatively affect our operating results. Conversely, if our customers or we underestimate demand or if sufficient manufacturing capacity is unavailable, we would forego revenue opportunities, lose market share and damage our customer relationships.

**Development arrangements may cause us to incur substantial operating expenses without the guarantee of any associated revenue or far in advance of revenue.**

We have development arrangements with customers and other parties that consume large amounts of engineering resources far in advance of product revenue. Our work under these arrangements is technically challenging and may require deliverables on an accelerated basis. These arrangements place considerable demands on our limited resources, particularly on our most senior engineering talent, and may not result in revenue for twelve to eighteen months, if at all. In addition, allocating significant resources to these arrangements may detract from or delay the completion of other important development projects. Any of these development agreements could be canceled at any time without notice. These factors could have a material and adverse effect on our long-term business and results of operations.

**Because of our long product development process and sales cycle, we may incur substantial expenses before we earn associated revenues and may not ultimately sell as many units of our products as we forecasted.**

We develop products based on anticipated market and customer requirements and incur substantial product development expenditures, which can include the payment of large up-front, third-party license fees and royalties, prior to generating associated revenues. Because the development of our products incorporates not only our complex and evolving technology, but also our customers' specific requirements, a lengthy sales process is often required before potential customers begin the technical evaluation of our products. Our customers typically perform numerous tests and extensively evaluate our products before incorporating them into their systems. The time required for testing, evaluation and design of our products into a customer's equipment can take up to six months or more. It can take an additional six months before a customer commences volume shipments of systems that incorporate our products. However, even when we achieve a design win, the customer may never ship systems incorporating our products. Because of our relatively limited history in selling our products, we cannot assure you that the time required for the testing, evaluation and design of our products by our customers would not exceed six months. Because of this lengthy development cycle, we will experience delays between the time we incur expenditures for research and development, sales and marketing, inventory levels and the time we generate revenues, if any, from these expenditures. Additionally, if actual sales volumes for a particular product are substantially less than originally forecasted, we may experience large write-offs of capitalized license fees, product masks and prepaid royalties that would negatively affect our operating results.

**Shortages of other key components for our customers' products could delay our ability to sell our products.**

Shortages of components and other materials that are critical to the design and manufacture of our customers' products could limit our sales. These components include liquid crystal display panels and other display components, analog-to-digital converters, digital receivers and video decoders. During 2000, some companies that

used our products experienced delays in the availability of key components from other suppliers, which, in turn, threatened a delay in demand for the products that we supplied to them.

**Shortages of materials used in the manufacturing of our products may increase our costs or limit our revenues and impair our ability to ship our products on time.**

From time to time, shortages of materials that are used in our products may occur. In particular, we may experience shortages of semiconductor wafers and packages. If material shortages occur, we may incur additional costs or be unable to ship our products to our customers in a timely fashion, all of which could harm our business and negatively impact our earnings.

**Our products could become obsolete if necessary licenses of third-party technology are not available to us or are only available on terms that are not commercially viable.**

We license technology from third parties that is incorporated into our products or product enhancements. Future products or product enhancements may require additional third-party licenses that may not be available to us or available on terms that are commercially reasonable. If we are unable to obtain any third-party license required to develop new products and product enhancements, we may have to obtain substitute technology of lower quality or performance standards or at greater cost, either of which could seriously harm the competitiveness of our products.

**We may not be able to respond to the rapid technological changes in the markets in which we compete, or we may not be able to comply with industry standards in the future making our products less desirable or obsolete.**

The markets in which we compete or seek to compete are subject to rapid technological change, frequent new product introductions, changing customer requirements for new products and features, and evolving industry standards. The introduction of new technologies and the emergence of new industry standards could render our products less desirable or obsolete, which could harm our business. Recent examples of changing industry standards include the introduction of high-definition television, or HDTV, new digital receivers and displays with resolutions that have required us to accelerate development of new products to meet these new standards.

**Our software development tools may be incompatible with industry standards and challenging to implement, which could slow product development or cause us to lose customers and design wins.**

Our existing products incorporate complex software tools designed to help customers bring products into production. Software development is a complex process and we are dependent on software development languages and operating systems from vendors that may compromise our ability to design software in a timely manner. Also, software development is a volatile market and new software languages are introduced to the market that may be incompatible with our existing systems and tools. New software development languages may not be compatible with our own requiring significant engineering efforts to migrate our existing systems in order to be compatible with those new languages. Existing or new software development tools could make our current products obsolete or hard to use. Software development disruptions could slow our product development or cause us to lose customers and design wins.

**Our integrated circuits and software could contain defects, which could reduce sales of those products or result in claims against us.**

Despite testing by both our customers and us, errors or performance problems may be found in existing or new semiconductors and software. This could result in a delay in the recognition or loss of revenues, loss of market share or failure to achieve market acceptance. These defects may cause us to incur significant warranty, support and repair costs. They could also divert the attention of our engineering personnel from our product development efforts and harm our relationships with our customers. The occurrence of these problems could result in the delay or loss of market acceptance of our semiconductors and would likely harm our business. Defects, integration issues or other performance problems in our semiconductors and software could result in financial or other damages to our customers or could damage market acceptance of our products. Our customers could also seek damages from us for their losses. A product liability claim brought against us even if unsuccessful, would likely be time consuming and costly to defend.

**The concentration of our manufactures and customers in the same geographic region increases our risk that a natural disaster, labor strike or political unrest could disrupt our operations.**

Most of our current manufacturers and customers are located in China, Japan, Korea and Taiwan. The risk of earthquakes in the Pacific Rim region is significant due to the proximity of major earthquake fault lines in the area. In September 1999, a current manufacturer's facilities were affected by a significant earthquake in Taiwan. As a consequence of this earthquake, this manufacturer suffered power outages and disruption that impaired its production capacity. Earthquakes, fire, flooding and other natural disasters in the Pacific Rim region, or political unrest, labor strikes or work stoppages in countries where our manufacturers and customers are located likely would result in the disruption of our foundry partners' assembly capacity. Any disruption resulting from extraordinary events could cause significant delays in shipments of our solutions until we are able to shift our manufacturing or assembling from the affected contractor to another third-party vendor. There can be no assurance that alternative capacity could be obtained on favorable terms, if at all.

**Others may bring infringement actions against us that could be time-consuming and expensive to defend.**

We may become subject to claims involving patents or other intellectual property rights. For example, in early 2000 we were notified by InFocus Corporation ( InFocus ) that we were infringing patents held by InFocus. In February 2000, we entered into a license agreement with InFocus granting us the right to use the technology covered by the InFocus patents. As a result, we recorded a one-time charge of \$4.1 million for patent settlement expense in the first quarter of 2000. Intellectual property claims could subject us to significant liability for damages and invalidate our proprietary rights. In addition, intellectual property claims may be brought against customers that incorporate our products in the design of their own products. These claims, regardless of their success or merit and regardless of whether we are named as defendants in a lawsuit, would likely be time-consuming and expensive to resolve and would divert the time and attention of management and technical personnel. Any future intellectual property litigation or claims also could force us to do one or more of the following:

stop selling products using technology that contains the allegedly infringing intellectual property;

attempt to obtain a license to the relevant intellectual property, which license may not be available on reasonable terms or at all;

attempt to redesign those products that contain the allegedly infringing intellectual property; and

pay damages for past infringement claims that are determined to be valid or which are arrived at in settlement of such litigation or threatened litigation.

If we are forced to take any of the foregoing actions, we may be unable to manufacture and sell our products, which could seriously harm our business. In addition, we may not be able to develop, license or acquire non-infringing technology under reasonable terms. These developments could result in an inability to compete for customers or could adversely affect our ability to increase our earnings.

**Our limited ability to protect our intellectual property and proprietary rights could harm our competitive position by allowing our competitors to access our proprietary technology and to introduce similar display processor products.**

Our ability to compete effectively with other companies will depend, in part, on our ability to maintain the proprietary nature of our technology, including our semiconductor designs and software. We rely on a combination of patent, copyright, trademark and trade secret laws, as well as nondisclosure agreements and other methods to protect our proprietary technologies. We hold 3 patents and have 33 patent applications pending with the U.S. Patent and Trademark Office for protection of our significant technologies. In addition to filing patents in the United States, we have applied for and have been granted 8 patents in Canada. We cannot assure you that the degree of protection offered by patents or trade secret laws will be sufficient. Furthermore, we cannot assure you that any patents will be issued as a result of any pending applications, or that, if issued, any claims allowed will be sufficiently broad to protect our technology. In addition, it is possible that existing or future patents may be challenged, invalidated or circumvented. We provide the computer programming code for our software to selected customers in connection with their product development efforts, thereby increasing the risk that customers will misappropriate our proprietary software. Competitors in both the United States and foreign countries, many of



which have substantially greater resources, may apply for and obtain patents that will prevent, limit or interfere with our ability to make and sell our products, or develop similar technology independently or design around our patents. Effective copyright, trademark and trade secret protection may be unavailable or limited in foreign countries.

**Any acquisition or equity investment we make could disrupt our business and severely harm our financial condition.**

We intend to continue to consider investments in or acquisitions of complementary businesses, products or technologies. To-date, we acquired Panstera, Inc. in January 2001, nDSP in January 2002 and Jaldi Semiconductor in September 2002. The acquisitions of Panstera, nDSP and Jaldi contain a very high level of risk primarily because the investments were made based on in-process technological development that may not be completed, or if completed, may not be commercially viable. If this were the case, our financial results would likely be very negatively affected.

These and any future acquisitions and investments could result in:

issuance of stock that dilutes current stockholders' percentage ownership;

incurrence of debt;

assumption of liabilities;

amortization expenses related to other intangible assets;

impairment of goodwill; or

large and immediate write-offs.

Our operation of any acquired business will also involve numerous risks, including, but not limited to:

problems combining the purchased operations, technologies or products;

unanticipated costs;

diversion of management's attention from our core business;

adverse effects on existing business relationships with customers;

risks associated with entering markets in which we have no or limited prior experience; and

potential loss of key employees, particularly those of the acquired organizations.

We may not be able to successfully integrate businesses, products, technologies or personnel that we might acquire in the future and any failure to do so could disrupt our business and seriously harm our financial condition.

**Goodwill represents a significant portion of the Company's total assets.**

As of December 31, 2002, goodwill amounted to \$82.5 million, or approximately 36%, of the Company's total assets. Effective January 1, 2002 with the adoption of new accounting standards the Company is required to review goodwill for possible impairment on an annual basis or when events and circumstances arise which indicate a possible impairment. The review of goodwill for impairment may result in large write-offs of goodwill, which could have a material adverse effect on results of operations.

**Failure to manage our expansion effectively could adversely affect our ability to increase our business and results of operations.**

Our ability to successfully market and sell our products in a rapidly evolving market requires effective planning and management processes. We continue to increase the scope of our operations domestically and internationally and have increased our headcount substantially. Through internal growth as well as acquisition, our headcount grew from 109 to 176 employees in 2001, a 61% increase. During 2002, our headcount increased 84 to 260 employees on December 31, 2002, a 48% increase. With our acquisition of nDSP we added 41 employees in the

first quarter of 2002 with 25 of the employees located in China. We added 28 people in Canada as a result of the acquisition of Jaldi in the third quarter of 2002. Our past growth, and our expected future growth, places a significant strain on our management systems and resources including our financial and managerial controls, reporting systems and procedures. To manage our growth effectively, we must implement and improve operational and financial systems, train and manage our employee base and attract and retain qualified personnel with relevant experience. We must also manage multiple relationships with customers, business partners, contract manufacturers, suppliers and other third parties. Moreover, we will spend substantial amounts of time and money in connection with our rapid growth and may have unexpected costs. Our systems, procedures or controls may not be adequate to support our operations and we may not be able to expand quickly enough to exploit potential market opportunities. While we have not, to date, suffered any significant adverse consequences due to our growth, if we do not continue to manage growth effectively our business would be seriously harmed.

### **RISKS RELATED TO OUR INDUSTRY**

#### **Failure of consumer demand for flat panel displays and other display technologies to increase could impede our growth.**

Our product development strategies anticipate that consumer demand for flat panel displays and other emerging display products will increase in the future. The success of our products is dependent on increased demand for these products, which are at early stages of development. The potential size of the flat panel display market and the timing of its development are uncertain and will depend upon a number of factors, all of which are beyond our control. In order for the market for many of our products to grow, advanced flat panel displays must be widely available and affordable to consumers. In the past, the supply of advanced flat panel displays has been cyclical. We expect this pattern to continue. Under-capacity in the advanced flat panel display market may limit our ability to increase our revenues because our customers may limit their purchases of our products if they cannot obtain sufficient supplies of advanced flat panel displays. In addition, advanced flat panel display prices may remain high because of limited supply, and consumer demand may not grow if the supply of advanced flat panel displays does not increase.

#### **If products incorporating our semiconductors are not compatible with computer display protocols, video standards and other devices, the market for our products will be reduced and our business prospects could be significantly limited.**

Our products are incorporated into our customers' products, which have different parts and specifications and utilize multiple protocols that allow them to be compatible with specific computers, video standards and other devices. If our customers' products are not compatible with these protocols and standards, consumers will return these products, or consumers will not purchase these products, and the markets for our customers' products could be significantly reduced. As a result, a portion of our market would be eliminated, and our business would be harmed.

#### **Intense competition in our markets may reduce sales of our products, reduce our market share, decrease our gross profit and result in large losses.**

Rapid technological change, evolving industry standards, compressed product life cycles and declining average selling prices are characteristics of our market and could have a material adverse effect on our business, financial condition and results of operations. As the overall price of advanced flat panel display screens continues to fall, we may be required to offer our products to manufacturers at discounted prices due to increased price competition. At the same time, new, alternative display processing technologies and industry standards may emerge that directly compete with technologies that we offer. We may be required to increase our investment in research and development at the same time that product prices are falling. In addition, even after making this investment, we cannot assure you that our technologies will be superior to those of

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our competitors or that our products will achieve market acceptance, whether for performance or price reasons. Failure to effectively respond to these trends could reduce the demand for our products.

We compete with a range of specialized and diversified electronic and semiconductor companies that offer display processors. In particular, we compete against Genesis Microchip, Inc., I-Chips, Macronix International Co., Ltd., Micronas, Mstar Semiconductor, Inc., Oplus, Philips, Silicon Image, Inc., Silicon Optix,

SmartASIC, Inc., STMicroelectronics NV, Trident, Trumpion and other companies. Potential competitors may include diversified semiconductor manufacturers including ATI, National Semiconductor Corp., nVidia, Philips, Texas Instruments, Inc. and other diversified semiconductor companies. We also compete in some instances against in-house processing solutions designed by our customers. Many of our competitors have longer operating histories and greater resources to support development and marketing efforts. Some of our competitors may operate their own fabrication facilities. These competitors may be able to react faster and devote more resources to efforts that compete directly with our own. In the future, our current or potential customers may also develop their own proprietary display processors and become our competitors. In addition, start-up companies may seek to compete in our markets. Our competitors may develop advanced technologies enabling them to offer more cost-effective and higher quality semiconductors to our customers than those offered by us. Increased competition could harm our business, financial condition and results of operations by, for example, increasing pressure on our profit margin or causing us to lose sales opportunities. We cannot assure you that we can compete successfully against current or potential competitors.

**The market for Internet enabled display products may not evolve rapidly enough to support expanded market acceptance of our products and industry standards in this market continue to evolve.**

If the emerging market for Internet enabled display products does not develop or does not evolve fast enough to support rapid market acceptance of our products, our business, financial condition and results of operations will be materially and adversely affected. Our success will depend on our ability to achieve design wins with customers developing new products and enhanced products for the Internet enabled display products market and their ability to successfully introduce and promote these products. There can be no assurance that the Internet enabled display products market will develop to the extent or in the timeframes necessary to support expansion of our business. We anticipate that Internet enabled display products will be generally based on industry standards, which are continually evolving. The emergence of new industry standards could render our products or our customer's products unmarketable or obsolete and we may incur substantial unanticipated costs to comply with any new standards. Moreover, our past sales have resulted, to a significant extent, from our ability to anticipate changes in technology and industry standards and to develop and introduce new and enhanced products addressing changes within our industry. Our continued ability to adapt to industry changes and to anticipate future standards, and the rate of adoption and acceptance of those standards, will be a significant factor in maintaining or improving our competitive position and our prospects for growth. There can be no assurance that we will be able to anticipate the evolving standards in the semiconductor industry and, in particular, the applications in the Internet enabled display products market, or that we will be able to successfully develop and introduce new products into this market.

**The cyclical nature of the semiconductor industry may lead to significant variances in the demand for our products and could harm our operations.**

In the past, the semiconductor industry has been characterized by significant downturns and wide fluctuations in supply and demand. Also, during this time, the industry has experienced significant fluctuations in anticipation of changes in general economic conditions, including economic conditions in Asia and North America. The cyclical nature of the semiconductor industry has led to significant variances in product demand and production capacity. It has also accelerated erosion of average selling prices per unit. We may experience periodic fluctuations in our future financial results because of changes in industry-wide conditions.

#### **OTHER RISKS**

**The anti-takeover provisions of Oregon law and in our articles of incorporation could adversely affect the rights of the holders of our common stock by preventing a sale or takeover of us at a price or prices favorable to the holders of our common stock.**

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The anti-takeover provisions of Oregon law and our articles of incorporation may make a change in control of our business more difficult, even if a change in control would be beneficial to the shareholders. These provisions may allow the board of directors to prevent changes in the management and control of our business. Under Oregon law, our board of directors may adopt additional anti-takeover measures in the future. One anti-takeover provision that we have is the ability of our board of directors to determine the terms of preferred stock and issue preferred stock without the approval of the holders of the common stock. At this time, there are no shares of preferred stock

outstanding. However, because the rights and preferences of any series of preferred stock may be set by the board of directors in its sole discretion without approval of the holders of the common stock, the rights and preferences of this preferred stock may be superior to those of the common stock. Accordingly, the rights of the holders of common stock may be adversely affected.

**Our principal shareholders have significant voting power and may take actions that may make it more difficult to sell our shares at a premium to take over candidates.**

Our executive officers, directors and other principal shareholders, in the aggregate, beneficially own 10,092,585 shares or approximately 23% of our outstanding common stock as of March 21, 2003. These shareholders currently have, and will continue to have, significant influence with respect to the election of our directors and approval or disapproval of our significant corporate actions. This influence over our affairs might be adverse to the interest of our other shareholders. In addition, the voting power of these shareholders could have the effect of delaying or preventing a change in control of our business or otherwise discouraging a potential acquirer from attempting to obtain control of us, which could prevent our other shareholders from realizing a premium over the market price for their common stock.

**The price of our common stock has and may continue to fluctuate substantially.**

Investors may not be able to sell shares of our common stock at or above the price they paid due to a number of factors, including:

actual or anticipated fluctuations in our operating results;

changes in expectations as to our future financial performance;

changes in financial estimates of securities analysts;

announcements by us or our competitors of technological innovations, design wins, contracts, standards or acquisitions;

the operating and stock price performance of other comparable companies;

changes in market valuations of other technology companies; and

inconsistent trading volume levels of our common stock.

In particular, the stock prices of technology companies like us have been highly volatile recently. These fluctuations often have been unrelated or disproportionate to the operating performance of those companies. Market fluctuations as well as general economic, political and market conditions including recessions, interest rate changes or international currency fluctuations, may negatively impact the market price of our common stock. Therefore, the price of our common stock may decline, and the value of your investment may be reduced regardless of our performance.

**We may be unable to meet our future capital requirements, which would limit our ability to grow.**

We believe our current cash balances will be sufficient to meet our capital requirements for the next 12 months. However, we may need, or could elect, to seek additional funding prior to that time. To the extent that currently available funds are insufficient to fund our future activities, we may need to raise additional funds through public or private equity or debt financing. Additional funds may not be available on terms favorable to us or our shareholders. Further, if we issue equity securities, our shareholders may experience additional dilution or the new equity securities may have rights, preferences or privileges senior to those of our common stock. If we cannot raise funds on acceptable terms, we may not be able to develop or enhance our products, take advantage of future opportunities or respond to competitive pressures or unanticipated requirements.

**Item 7(a). QUANTITATIVE AND QUALITATIVE DISCLOSURE ABOUT MARKET RISK**

Our primary market risk exposure is the impact of interest rate fluctuations on interest income earned on our investment portfolio. The risks associated with market, liquidity and principal are mitigated by investing in



high-credit quality securities and limiting concentrations of issuers and maturity dates. Derivative financial instruments are not part of our investment portfolio.

All of our sales are denominated in U.S. dollars and as a result, we have relatively little exposure to foreign currency exchange risk with respect to any of our sales. We have employees located in offices in Canada, Japan, Taiwan and China and as a result a portion of our operating expenses are denominated in foreign currencies. Accordingly, our operating results are affected by changes in the exchange rate between the U.S. dollar and those currencies. Any future strengthening of those currencies against the U.S. dollar could negatively impact our operating results by increasing our operating expenses as measured in U.S. dollars. We cannot estimate the effect that an immediate 10% change in foreign currency exchange rates would have on our future operating results or cash flows as a direct result of changes in exchange rates. However, management believes that the effect of an immediate 10% change in exchange rates would not have a material impact on our future operating results or cash flows. We do not currently hedge against foreign currency rate fluctuations.

**Item 8. FINANCIAL STATEMENTS AND SUPPLEMENTAL DATA**

The Company's Consolidated Financial Statements and the Independent Auditors Report thereon are presented in the following pages. The Financial Statements filed in Item 8 are as follows:

Independent Auditors Report

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

Consolidated Statements of Redeemable Convertible Preferred Stock and Shareholders Equity (Deficit) for the years ended December 31, 2002, 2001 and 2000

Notes to Consolidated Financial Statements

**INDEPENDENT AUDITORS REPORT**

The Board of Directors and Shareholders  
Pixelworks, Inc.:

We have audited the accompanying consolidated balance sheets of Pixelworks, Inc. and subsidiaries as of December 31, 2002 and 2001, and the related consolidated statements of operations, redeemable convertible preferred stock and shareholders' equity (deficit), and cash flows for each of the three years in the period ended December 31, 2002. These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these consolidated financial statements based on our audits.

We conducted our audits in accordance with auditing standards generally accepted in the United States of America. Those standards 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. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, these consolidated financial statements present fairly, in all material respects, the financial position of Pixelworks, Inc. and its subsidiaries as of 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.

As discussed in Note 1 to the consolidated financial statements, effective January 1, 2002, the Company adopted the provisions of SFAS 142, Goodwill and Other Intangible Assets, as required for goodwill and intangible assets resulting from business combinations.

/s/ KPMG LLP

Portland, Oregon  
January 17, 2003

## PIXELWORKS, INC.

## CONSOLIDATED BALANCE SHEETS

(in thousands, except share data)

	December 31,	
	2002	2001
<b><u>ASSETS</u></b>		
<b>CURRENT ASSETS</b>		
Cash and cash equivalents	\$ 62,152	\$ 53,288
Short-term marketable securities	24,915	40,517
Accounts receivable, net	10,421	6,378
Inventories, net	6,788	4,176
Prepaid expenses and other current assets	3,896	3,667
Total current assets	108,172	108,026
Long-term marketable securities	14,500	7,450
Property and equipment, net	9,073	5,463
Goodwill	82,548	67,912
Intangible assets	8,275	3,846
Other assets	4,644	10,142
Total assets	\$ 227,212	\$ 202,839
<b><u>LIABILITIES AND SHAREHOLDERS' EQUITY</u></b>		
<b>CURRENT LIABILITIES</b>		
Accounts payable	\$ 5,084	\$ 2,391
Accrued liabilities	7,312	6,815
Total current liabilities	12,396	9,206
Commitments and contingencies		
Shareholders' equity:		
Common stock, \$.001 par value. Authorized 250,000,000 shares; 43,967,585 and 41,398,324 shares issued and outstanding at December 31, 2002 and 2001, respectively	287,566	259,363
Shares exchangeable into common stock; 1,731,099 issued and 1,108,969 outstanding at December 31, 2002	10,491	
Deferred stock compensation	(2,402)	(5,658)
Note receivable for common stock		(84)
Accumulated deficit	(80,839)	(59,988)
Total shareholders' equity	214,816	193,633

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Total liabilities and shareholders' equity	\$	227,212	\$	202,839
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The accompanying notes are an integral part of these consolidated financial statements.

## PIXELWORKS, INC.

## CONSOLIDATED STATEMENTS OF OPERATIONS

(in thousands, except share and per share data)

	Years Ended December 31,		
	2002	2001	2000
Revenue	\$ 102,641	\$ 90,808	\$ 52,593
Cost of revenue (inclusive of amortization of deferred stock compensation of \$21 in 2002, \$40 in 2001 and \$70 in 2000)	51,736	46,539	31,412
Gross profit	50,905	44,269	21,181
Operating expenses:			
Research and development(1)	23,730	18,096	10,225
Selling, general and administrative(2)	21,865	16,373	9,708
Amortization of goodwill and assembled workforce	242	15,982	
Patent settlement expense			4,078
In-process research and development expense	24,342	32,400	
Amortization of deferred stock compensation	2,972	8,421	2,157
Total operating expenses	73,151	91,272	26,168
Loss from operations	(22,246)	(47,003)	(4,987)
Interest income	2,349	4,444	4,562
Interest expense	(74)		(38)
Other expense, net			(104)
Interest and other income, net	2,275	4,444	4,420
Loss before income taxes	(19,971)	(42,559)	(567)
Provision for income taxes	880		
Net loss	(20,851)	(42,559)	(567)
Preferred stock beneficial conversion feature			9,996
Accretion of preferred stock redemption preference			2,100
Net loss attributable to common shareholders	\$ (20,851)	\$ (42,559)	\$ (12,663)
Basic and diluted net loss per share	\$ (0.48)	\$ (1.05)	\$ (0.50)

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Weighted average shares - basic and diluted	43,397,296	40,661,642	25,573,392
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Amount excludes amortization of deferred stock compensation of:

(1) Research and development	\$ 1,990	\$ 6,150	\$ 826
(2) Selling, general and administrative	982	2,271	1,331

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

## PIXELWORKS, INC.

## CONSOLIDATED STATEMENTS OF CASH FLOWS

(in thousands)

	Years Ended December 31,		
	2002	2001	2000
Cash flows from operating activities:			
Net loss	\$ (20,851)	\$ (42,559)	\$ (567)
Adjustments to reconcile net loss to net cash provided by operating activities:			
Depreciation and amortization	6,045	4,435	2,418
Deferred income taxes	(646)	(2,256)	
Write-off of property and equipment and other assets	87		516
Provision for doubtful accounts	7		57
Income tax benefits from disqualifying dispositions	1,357	2,256	
Amortization of acquisition related assets	726	15,982	
Amortization of deferred stock compensation	2,993	8,461	2,227
In-process research and development expense	24,342	32,400	
Non-cash portion of patent settlement expense			2,752
Changes in operating assets and liabilities, net of effects of acquisitions:			
Accounts receivable	(3,840)	230	(4,128)
Inventories	(1,788)	(896)	(1,876)
Prepaid expenses and other current assets	1,222	(1,618)	(571)
Accounts payable	394	(7,070)	8,408
Accrued liabilities	(2,477)	2,094	3,203
Other non-current assets	(891)	(1,052)	
Other long-term liabilities			(6)
Net cash provided by operating activities	6,680	10,407	12,433
Cash flows provided by (used in) investing activities:			
Purchases of property and equipment	(5,622)	(4,988)	(4,161)
Purchases of other assets and investments	(1,525)	(9,599)	(2,622)
Acquisitions, net of cash received	102		
Purchase of investments	(46,445)	(68,561)	(57,051)
Proceeds from the maturities of investments	54,998	74,645	3,000
Net cash provided by (used in) investing activities	1,508	(8,503)	(60,834)
Cash flows provided by financing activities:			
Net decrease in line of credit			(669)
Payments on long-term debt	(779)		(1,083)
Proceeds from issuances of preferred stock			26,528
Proceeds from initial public offering, net of costs			60,528
Issuances of common stock	1,455	1,703	579
Net cash provided by financing activities	676	1,703	85,883



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Increase in cash and cash equivalents	8,864	3,607	37,482
Cash and cash equivalents at beginning of year	53,288	49,681	12,199
Cash and cash equivalents at end of year	\$ 62,152	\$ 53,288	\$ 49,681

Supplemental disclosure of cash flow information:

Cash paid during the respective year for:

Interest	\$ 80	\$	\$
Income taxes	51	118	

Supplemental disclosure of non-cash investing and financing activities:

Preferred stock beneficial conversion feature			9,996
Accretion of preferred stock redemption preference			2,100
Value of shares issued in acquisitions	\$ 37,501	\$ 118,150	\$

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

## PIXELWORKS, INC.

## CONSOLIDATED STATEMENTS OF REDEEMABLE CONVERTIBLE PREFERRED STOCK AND SHAREHOLDERS' EQUITY (DEFICIT)

(in thousands, except share data)

	Redeemable convertible preferred stock		Common stock		Exchangeable shares		Deferred Stock Compensation	Note Receivable for Common Stock	Accumulated deficit	Total shareholders' equity(deficit)
	Shares	Amount	Shares	Amount	Shares	Amount				
Balances as of December 31, 1999	10,900,007	\$ 23,701	9,874,313	\$		\$	(2,230)	\$ (199)	\$ (6,866)	\$ (9,295)
Issuance of Series D convertible preferred stock	2,239,212	28,528								
Stock issued under stock option and stock purchase plans			616,938	552				27		579
Initial public offering			6,612,500	60,528						60,528
Deferred compensation related to stock options				2,275			(2,275)			
Reversal of deferred compensation related to terminations				(72)			72			
Amortization of deferred stock compensation							2,227			2,227
Preferred stock beneficial conversion feature		10,748							(9,996)	(9,996)
Accretion of preferred stock redemption preference		2,100		(2,100)						(2,100)
Conversion of preferred stock to common in connection with initial public offering	(13,139,219)	(65,077)	19,708,829	65,077						65,077
Net loss									(567)	(567)
			36,812,580	126,260			(2,206)	(172)	(17,429)	106,453

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Balances as of  
December 31,  
2000

Stock issued under stock option and stock purchase plans and tax benefits associated with non-qualified stock option exercises and disqualifying dispositions	862,799	3,040		88		3,128
Shares issued in connection with Panstera acquisition	3,722,945	131,590		(13,440)		118,150
Reversal of deferred compensation related to terminations		(1,527)		1,527		
Amortization of deferred stock compensation				8,461		8,461
Net loss					(42,559)	(42,559)

Balances as of  
December 31,  
2001

	41,398,324	259,363		(5,658)	(84)	(59,988)	193,633
Stock issued under stock option and stock purchase plans and tax benefits associated with non-qualified stock option exercises and disqualifying dispositions	764,433	2,716			84		2,800
Shares issued in connection with Jaldi acquisition		1,011	1,731,099	16,376	(1,205)		16,182
Shares issued in connection with nDSP acquisition	1,185,995	20,114					20,114
Release and cancellation of shares held in escrow from nDSP acquisition	(3,297)	(55)					(55)
Deferred compensation related to stock options		2,495		(2,495)			
Reversal of deferred compensation		(3,963)		3,963			

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related to terminations									
Amortization of deferred stock compensation					2,993				2,993
Conversion of exchangeable shares to common	622,130	5,885	(622,130)	(5,885)					
Net loss								(20,851)	(20,851)
Balances as of December 31, 2002	\$ 43,967,585	\$ 287,566	1,108,969	\$ 10,491	\$ (2,402)	\$ (80,839)	\$	\$	214,816

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

**PIXELWORKS, INC.**

**Notes to Consolidated Financial Statements**

**(in thousands, except share and per share data)**

**1. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES**

*Nature of Business*

Pixelworks, Inc. ( Pixelworks ) is a leading designer, developer and marketer of semiconductors and software for the advanced display industry. Pixelworks system-on-chip semiconductors process and optimize video, computer graphics and Web information for display on a wide variety of devices used in business and consumer markets, including flat-panel monitors, digital televisions and multimedia projectors.

*Basis of Presentation*

The consolidated financial statements include the accounts of Pixelworks and its wholly owned subsidiaries, Pixelworks Nova Scotia Company, Jaldi Semiconductor, Pixelworks Ltd, Pixelworks Taiwan, LLC and Pixelworks Japan, LLC. Significant intercompany accounts and transactions have been eliminated. Accounts denominated in foreign currencies have been remeasured using the U.S. dollar as the functional currency.

*Critical Accounting Policies and Estimates*

The preparation of consolidated financial statements in conformity with accounting principles generally accepted in the United States ( GAAP ) requires management to make estimates and assumptions that affect the amounts reported in the financial statements and accompanying notes. On an on-going basis, the Company evaluates its estimates, including those related to product returns, bad debts, inventories, investments, prepaid expenses, intangible assets, income taxes, warranty obligations, litigation and other contingencies. Pixelworks bases its estimates on historical experience and on various other assumptions that are believed to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates under different assumptions or conditions.

Pixelworks believes the following critical accounting policies affect its more significant judgments and estimates used in the preparation of its consolidated financial statements. The Company records estimated reductions to revenue for customer returns based on historical experience. If actual customer returns increase the Company may be required to recognize additional reductions to revenue. The Company maintains allowances for doubtful accounts for estimated losses resulting from the inability of its customers to make required payments. If the financial condition of Pixelworks customers were to deteriorate, resulting in an impairment of their ability to make payments, additional allowances may be required. Pixelworks provides for the estimated cost of product warranties at the time revenue is recognized. While Pixelworks engages in extensive product quality programs and processes, including actively monitoring and evaluating the quality of its suppliers, Pixelworks

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estimated warranty liability is affected by product failure rates and material usage and service delivery costs incurred in correcting a product failure. Should actual product failure rates, material usage or service delivery costs differ from Pixelworks' estimates, revisions to the estimated warranty liability would be required. Pixelworks writes down its inventory for estimated obsolescence or unmarketable inventory equal to the difference between the cost of inventory and the estimated market value based upon assumptions about future demand and market conditions. If actual market conditions are less favorable than those projected by management, additional inventory

write-downs may be required. Pixelworks records a valuation allowance to reduce its deferred tax assets to the amount that is more likely than not to be realized. Should Pixelworks determine that it would not be able to realize all or part of its net deferred tax asset in the future, an adjustment to the deferred tax asset would be charged to income in the period such determination was made.

*Cash and Cash Equivalents*

Pixelworks considers all highly liquid investments having an original maturity of three months or less to be cash equivalents. Cash equivalents of \$52,830 and \$46,182 as of December 31, 2002 and 2001, respectively, consist primarily of money market funds, market auction preferreds, government agency securities and commercial paper.

*Marketable Securities*

The Company accounts for its marketable securities in accordance with SFAS 115, *Accounting for Certain Investments in Debt and Equity Securities*. The cost of securities sold is based on the specific identification method. The short-term investments in marketable securities have been classified as held to maturity as the Company has the intent and ability to hold to maturity and, accordingly the investments are reported at amortized cost and consist of:

	Amortized Cost	December 31, 2002 Unrealized gains	Fair Value
Corporate notes and bonds	\$ 11,863	\$ 26	\$ 11,889
U.S. Treasury/Agency securities	13,052	52	13,104
	\$ 24,915	\$ 78	\$ 24,993

	Amortized Cost	December 31, 2001 Unrealized gains	Fair Value
Corporate notes and bonds	\$ 16,661	\$ 147	\$ 16,808
U.S. Treasury/Agency securities	16,857	161	17,018
Other	6,999	1	7,000
	\$ 40,517	\$ 309	\$ 40,826

Long-term marketable securities consist of U.S. Treasury securities with maturities ranging from 1-2 years and with amortized costs, unrealized gains and market values as follows:

	<b>December 31,</b>	
<b>2002</b>		<b>2001</b>

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Amortized cost	\$	14,500	\$	7,450
Unrealized holding gain		23		52
Fair value	\$	14,523	\$	7,502

*Accounts Receivable*

Accounts receivable are recorded based on the selling price of the item sold and are recorded at the time of shipment. Accounts receivable is net of an allowance for doubtful accounts of \$212 as of December 31, 2002 and 2001. The allowance is determined based on our historical charge off experience as well as



industry experience. The following table presents a roll forward of the allowance for doubtful accounts for the indicated periods:

	December 31,		
	2002	2001	2000
Balance as of beginning of period	\$ 212	\$ 212	\$ 155
Provision	7		57
Charge offs	(7)		
Balance as of end of period	\$ 212	\$ 212	\$ 212

#### *Inventories*

Inventories consist of finished goods and work in process and are stated at the lower of standard cost (approximates actual cost on a first-in, first-out basis) or market (net realizable value).

#### *Property and equipment*

Property and equipment are stated at cost or fair value at date of acquisition. The cost of repairs and maintenance is expensed as incurred. Depreciation on computer equipment and software, tooling and leasehold improvements is calculated on a straight-line basis over the estimated useful lives of the assets, two years for computer equipment and software and the estimated life of the product for tooling, generally two years. Amortization of leasehold improvements is recognized over the shorter of the life of the improvement or the remaining life of the lease.

#### *Goodwill and Intangible Assets*

##### **Goodwill**

Goodwill represents the excess of cost over fair value of net assets acquired in a business combination. The Company adopted SFAS 142, *Goodwill and Other Intangible Assets*, on January 1, 2002. As a result, goodwill and assembled workforce are no longer amortized. Through December 31, 2001, goodwill and assembled workforce were amortized over an estimated life of 60 and 36 months respectively. Goodwill, net of accumulated amortization at the end of each period consisted of the following:

	December 31,	
	2002	2001
Balance at beginning of year	\$ 67,912	\$
Additions:		
Acquisitions	14,371	84,175

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Reclass assembled workforce	1,250		
Goodwill amortization			(15,432)
Release and cancellation of shares held in escrow	(55)		
Utilization of acquired net operating loss carryforwards	(930)		(831)
Balance at end of year	\$	82,548	\$ 67,912

SFAS 141 required, upon adoption of SFAS 142, that the Company evaluate its existing intangible assets and goodwill that were acquired in purchase business combinations prior to June 30, 2001, and to make any necessary reclassifications in order to conform with the new criteria in SFAS 141. As a result, the Company reclassified \$1,250 of assembled workforce to goodwill on January 1, 2002. Upon adoption of SFAS 142, the Company was required to reassess the useful lives and residual values of all intangible assets acquired, and make any necessary amortization period adjustments by the end of the first interim period after adoption. In addition, to the extent an intangible asset is identified as having an

indefinite useful life, the Company was required to test the intangible asset for impairment in accordance with the provisions of SFAS 142 within the first interim period. To accomplish this, the Company identified one reporting unit, Pixelworks, and determined the carrying value of that reporting unit by assigning the assets and liabilities, including the existing goodwill and intangible assets, to that reporting unit as of the date of adoption. No impairment loss was indicated as of the date of adoption and the Company did not recognize any impairment loss as the cumulative effect of a change in accounting principle in the first interim period. As of the date of adoption, the Company had \$69,162 of goodwill and other intangible assets, which was subject to the transition provisions of SFAS 141 and 142.

The following schedule reconciles reported net loss for all periods presented to adjusted net loss and net loss per share exclusive of amortization of goodwill and assembled workforce.

	Years ended December 31,	
	2001	2000
Net loss	\$ (42,559)	\$ (12,663)
Add back: amortization of goodwill and assembled workforce	15,982	
Adjusted net loss	\$ (26,577)	\$ (12,663)
Basic and diluted net loss per share	\$ (1.05)	\$ (0.50)
Adjusted basic and diluted net loss per share	\$ (0.65)	\$ (0.50)

#### Intangibles Assets

Acquired intangible assets consists of the following as of December 31, 2002:

	Gross carrying amount	Weighted Average Amortization period	Accumulated amortization
Amortizing intangible assets:			
Developed technology	\$ 3,700	7 years	\$ 485
Assembled workforce	2,909	3 years	242

Amortization of the December 31, 2002 balance of developed technology for the years ending December 31, 2003, 2004, 2005, 2006 and 2007 will be approximately \$529 annually. Amortization of the December 31, 2002 balance of assembled workforce for the years ending December 31, 2003, 2004 and 2005 will be approximately \$970, \$970, \$727, respectively.

In addition to acquisition related intangible assets, the Company has intangible assets that consists of intellectual property, primarily technology license agreements. Intangible assets are stated at cost and are amortized over the life of the agreement or the estimated life of the asset if not contractually limited.

#### Asset Impairments

The Company adopted SFAS 144, *Accounting for the Impairment or Disposal of Long-lived Assets*, effective January 1, 2002. The adoption of SFAS 144 has not had an impact on the Company's consolidated financial position or results of operations. As required by SFAS 144 management reviews long-lived assets and the related intangible assets for impairment whenever events or changes in circumstances indicate the carrying amount of the assets may not be recoverable. Recoverability of these assets is determined by comparing the forecasted undiscounted net cash flows of the operation to which the assets relate, to the carrying amount including associated intangible assets of the operation.

If the operation is determined to be unable to recover the carrying amount of its assets, then intangible assets are written down first, followed by the other long-lived assets of the operation, to fair value. Fair value is determined based on discounted cash flows or appraised values, depending upon the nature of the assets. Assets to be disposed of would be separately presented in the balance sheet and reported at the lower of carrying amount or fair value less costs to sell, and are no longer depreciated. The assets and liabilities of a disposed group classified as held for sale would be presented in the appropriate asset and liability sections of the balance sheet.

Goodwill and intangible assets not subject to amortization are tested annually for impairment, and are tested for impairment more frequently if events and circumstances indicate that the asset might be impaired. An impairment loss is recognized to the extent that the carrying amount exceeds the asset's fair value.

Prior to the adoption of SFAS 144, the Company accounted for long-lived assets in accordance with SFAS 121, *Accounting for Impairment of Long-Lived Assets to be Disposed Of*.

#### *Stock-Based Compensation*

SFAS 123, *Accounting for Stock-Based Compensation*, defines a fair value based method of accounting for an employee stock option or similar instrument. Under the fair value based method, compensation cost is measured at the grant date based on the value of the award and is recognized over the service period, which is usually the vesting period. However, SFAS 123 also allows an entity to continue to measure compensation cost using the intrinsic value based method of accounting prescribed by APB Opinion No. 25 ( *Opinion 25* ), *Accounting for Stock Issued to Employees*. Under the intrinsic value based method, compensation cost is the excess, if any, of the quoted market price of the stock at grant date or other measurement date over the amount an employee must pay to acquire the stock. Entities electing to remain with the accounting in Opinion 25 must make pro forma disclosures of net income and, if presented, earnings per share, as if the fair value based method had been applied. Pixelworks has elected to continue to apply the prescribed accounting in Opinion 25 and make the required disclosures under SFAS 123.

Pixelworks accounts for equity instruments issued to non-employees in accordance with the provisions of SFAS 123 and Emerging Issues Task Force consensus on Issue No. 96-18, *Accounting for Equity Instruments that are Issued to Other than Employees for Acquiring, or in Conjunction with Selling Goods or Services*. There have been no equity instruments issued to non-employees during the periods presented.

Had Pixelworks accounted for its stock-based compensation plan in accordance with SFAS 123, Pixelworks' net loss would approximate the pro forma disclosure as follows:

	Years Ended December 31,		
	2002	2001	2000
Net loss attributable to common shareholders:			
As reported	\$ (20,851)	\$ (42,559)	\$ (12,663)
Stock compensation, net of tax, as reported	2,993	8,461	2,227
Stock compensation, net of tax, under SFAS 123	(12,882)	(16,162)	(1,873)
Pro forma	(30,740)	(50,260)	(12,309)

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Basic and diluted net loss per share:			
As reported	(0.48)	(1.05)	(0.50)
Pro forma	(0.71)	(1.24)	(0.48)

The effects of applying SFAS 123 in this pro forma disclosure are not indicative of future amounts and additional awards are anticipated in future years.

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The fair value of compensation costs reflected in the above pro forma amounts were determined using the Black-Scholes option pricing model and the following weighted average assumptions for grants used in the calculation are as follows:

	2002	2001	2000
Risk-free interest rate	2.76%	4.49%	5.75%
Expected dividend yield	0%	0%	0%
Expected life	5.4 years	5 years	5 years
Volatility	115%	126%	110%

Under the Black-Scholes option pricing model the weighted-average fair value of options granted at market value during 2002, 2001 and 2000 was approximately \$8.85, \$18.99 and \$15.11, respectively. Weighted-average fair value of options granted below fair value during 2002 was approximately \$10.77.

### *Revenue Recognition*

Pixelworks recognizes revenue for product sales to direct customers and commissions on third party sales upon shipment of the underlying merchandise, when collection of the relevant receivable is probable, when pervasive evidence of an arrangement exists and the sales price is fixed and determinable. Revenue from product sales to distributors is recognized upon shipment if the distributor has a firm sales commitment from an end customer. Certain distributors have price protection and stock rotation provisions in their distribution agreement, which in general allow for 5% to 10% of the products purchased in the prior six months to be returned in exchange for products of equal value. A reserve for sales returns and allowances is recorded at the time of shipment. The following table presents a roll forward of the reserve for sales returns and allowances for the year ended December 31, 2002:

Balance as of beginning of year	\$	673
Provision		541
Charge offs		(626)
Balance as of end of year	\$	588

Pixelworks accrues a liability for the estimated future repair and replacement costs to be incurred under the provisions of Pixelworks warranty agreements. The following table presents a roll forward of the reserve for warranty returns for the year ended December 31, 2002:

Balance as of beginning of year	\$	978
Provision		556
Charge offs		(765)
Balance as of end of year	\$	769

### *Research and Development*

Research and development are charged to expense as incurred.

*Income Taxes*

Income taxes are accounted for under the asset and liability method. Deferred tax assets and liabilities are recognized for the future tax consequences attributable to differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax bases and operating loss and tax credit carry forwards. Deferred tax assets and liabilities are measured using enacted tax rates expected to apply to taxable income in the years in which those temporary differences are expected to be recovered or settled. The effect on deferred tax assets and liabilities of a change in tax rates is recognized in income in the period that includes the enactment date. A valuation allowance is established when necessary to reduce deferred tax assets to the amount expected to be realized.



*Fair Value of Financial Instruments*

The carrying amount of cash and cash equivalents, accounts receivable and accounts payable approximate fair value due to the short-term nature of these instruments. The fair value of short-term investments and long-term marketable securities is \$39,516 including unrealized holding gains of \$101.

*Comprehensive Income*

SFAS 130, *Reporting Comprehensive Income*, establishes standards for the reporting of comprehensive income and its components, but has no impact on the Company's net earnings (loss) or total shareholders' equity. To date, there are no such transactions that are required to be reported in comprehensive income.

*Concentration of Suppliers*

Pixelworks does not own or operate a semiconductor fabrication facility and does not have the resources to manufacture its products internally. Pixelworks relies on three third party foundries to produce all its products. In light of these dependencies, it is reasonably possible that failure to perform by one of these suppliers could have a severe impact on Pixelworks' growth and results of operations.

*Risk of Technological Change*

The markets in which Pixelworks competes or seeks to compete are subject to rapid technological change, frequent new product introductions, changing customer requirements for new products and features, and evolving industry standards. The introduction of new technologies and the emergence of new industry standards could render Pixelworks' products less desirable or obsolete which could harm its business.

*Concentration of Credit Risk*

Financial instruments that potentially subject Pixelworks to a concentration of credit risk consist of cash and cash equivalents, investments and accounts receivable. Pixelworks limits its exposure to credit risk associated with cash and cash equivalents by placing its cash and cash equivalents with various high credit quality financial institutions.

As of December 31, 2002, two accounts represented 48% and 16% of gross accounts receivable. At December 31, 2001, four accounts represented 36%, 18%, 12%, and 11% of gross accounts receivable. Loss or non-performance by these significant customers could adversely affect Pixelworks financial position or results of operations.

*Costs of Software Developed or Obtained for Internal Use*

Internal use software development costs are accounted for in accordance with Statement of Position 98-1, *Accounting for the Costs of Computer Software Developed or Obtained for Internal Use*. Costs incurred in the preliminary project stage are expensed as incurred and costs incurred in the application and development stage, which meet the capitalized criteria, are capitalized and amortized on a straight-line basis over two years, the estimated useful life of the asset.

*Net loss per share*

Pixelworks reports net loss per share in accordance with SFAS 128, *Earnings per Share*, and SEC Staff Accounting Bulletin No. 98, which requires the presentation of both basic and diluted earnings per share. Basic earnings per share ( EPS ) is computed on the basis of weighted average number of common shares outstanding. Diluted EPS is computed on the basis of weighted average common shares outstanding plus the effect of outstanding stock options and warrants using the treasury stock method,

shares of convertible preferred stock on an as converted basis, and shares of restricted stock, if the potential common shares are not anti-dilutive.

The following weighted-average potential common shares have been excluded from the computation of diluted loss per share for the periods presented because the effect would have been anti-dilutive:

	Years Ended December 31,		
	2002	2001	2000
Potential common stock equivalent shares related to stock options	1,334,356	2,425,285	2,763,288
Shares of restricted stock subject to repurchase	91,650	122,844	920,577
Shares of convertible preferred stock on an as converted basis			7,061,687

Potential common stock equivalent shares related to stock options excludes 3,199,252, 636,706 and 46,548 weighted shares for which the options exercise price was greater than the average market price for the years ended December 31, 2002, 2001 and 2000, respectively.

The computation of basic weighted average shares outstanding includes exchangeable shares. These exchangeable shares, which were issued on September 6, 2002 to former shareholders of Jaldi Semiconductor in an asset acquisition, are intended to have the characteristics essentially equivalent to common stock.

#### *Reclassifications*

Certain reclassifications have been made to the prior year statements to conform to the current year presentation.

## **2. ACQUISITIONS**

### **Jaldi Semiconductor Corp.**

On September 6, 2002, Pixelworks acquired the remaining equity interest in Jaldi Semiconductor Corporation ( Jaldi ), a privately held development stage fabless semiconductor company based near Toronto in Richmond Hill, Ontario, Canada, in exchange for 1,731,099 shares exchangeable for Pixelworks common stock and the assumption of all outstanding stock options. Pixelworks made an investment of \$7,500 on January 30, 2001 in exchange for a 19.6% equity investment. The acquisition has been accounted for as an asset purchase and the results of Jaldi s operations have been included in the Company s financial statements beginning on September 6, 2002. Jaldi s technology is expected to expand Pixelworks product portfolio for the digital television market.

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Under the terms of the reorganization agreement between Jaldi, Pixelworks, Inc. and Pixelworks Nova Scotia, each outstanding share of Jaldi was exchanged for .531727153 of a Jaldi exchangeable share. Holders of exchangeable shares have dividend, voting and other rights equivalent to common stockholders of Pixelworks, Inc. These exchangeable shares are the economic equivalent of common shares of Pixelworks, Inc. and may be exchanged for those shares on a one-for-one basis at any time. The aggregate purchase price of Jaldi was approximately \$24,988 consisting of 1,731,099 shares that are issuable upon the exchange of the Jaldi exchangeable shares that are valued at \$16,376, the assumption of approximately 119,000 stock options valued at \$1,011, and \$7,601 cash (including the \$7,500 investment in 2001). The estimated fair value of the shares issued was based on the average closing price of Pixelworks common stock on the day prior to the announcement of the intent to exercise the option to acquire Jaldi, the day of the announcement, and the day following the announcement (\$9.46 per share).

The purchase price of this development stage company was derived as follows for accounting purposes:

	Jaldi Shares	Total Pixelworks Common Shares	Fair Value
Common shares	3,255,657	1,731,099	\$ 16,376
Stock options	223,571	118,858	1,011
	3,479,228	1,849,957	17,387
Cash investment in 2001			7,500
Estimated acquisition costs			101
Total purchase price			\$ 24,988

The purchase price was allocated to the assets and liabilities based on fair values as follows:

Assets acquired:	
Current assets	\$ 2,084
Non-current assets	2,111
Acquired in-process research and development	20,142
Deferred compensation on unvested stock awards assumed	1,205
Assembled workforce	2,909
Less:	
Liabilities assumed	(3,463)
Allocated purchase price	\$ 24,988

The purchase price was allocated to assets acquired and liabilities assumed based on management's analysis and estimates of their fair values. Management's estimates of fair value are based upon assumptions believed to be reasonable, but which are inherently uncertain and unpredictable. The IPR&D and the assembled workforce were valued at \$6,300 and \$910, respectively. The remaining excess purchase price over the identified tangible and intangible net assets was \$15,841 and was allocated to the intangible assets on a pro-rata basis resulting in \$1,999 of the purchase price being assigned to assembled workforce and \$13,842 being assigned to IPR&D assets. The IPR&D was expensed at the date of acquisition in accordance with FASB Interpretation No. 4 ( FIN 4 ), *Applicability of FASB Statement No. 2 to Business Combinations Accounted for by the Purchase Method*.

The value assigned to IPR&D related to research projects for which technological feasibility had not been established and no future alternative uses existed. The fair value was determined using the income approach, which discounts expected future cash flows from projects under development to their net present value using a risk adjusted rate. Each project was analyzed to determine the technological innovations, which included; the utilization of core technology; the complexity, cost and time to complete development; any alternative future use or current technological feasibility; and the stage of completion. Future cash flows were estimated, taking into account the expected life cycles of the product and the underlying technology, relevant market sizes and industry trends. The estimated net cash flows from these products were based on management's estimates of related revenues, cost of goods sold, R&D costs, selling, general and administrative costs, income taxes and charges for the use of contributory assets. A discount rate of 22% was utilized based on the technology of the products, the stage of completion of the projects, the complexity of the development effort and the risks associated with reaching technological feasibility of the projects. The nature of the efforts to develop the in-process technology into commercially viable products principally related to the completion of all planning, designing, prototyping, verification and testing activities that are necessary to establish that the product can be produced to meet its design

specification, including function, features and technical performance requirements.

Jaldi had two products under development at the acquisition date, contributing 70% and 30% of the total IPR&D value. The products under development were video processing semiconductors targeting

the high-definition digital display markets. The development projects ranged from 70% to 90% complete. All development projects had expected completion dates within one year and an estimated aggregate cost to complete of \$1,600. Both products are currently in the prototype stage and are sampling to lead customers.

**nDSP**

On January 14, 2002, the Company acquired 100% of the outstanding shares of nDSP, Inc. ( nDSP ). The results of nDSP's operations have been included in the Company's financial statements beginning on the date of acquisition. nDSP is a fabless semiconductor company involved in the development of video processing ICs for the advanced display market. nDSP, headquartered in California, also has offices in China. The acquisition of nDSP is expected to strengthen Pixelworks' advanced video processing product and technology portfolio and enable the Company to compete in the analog CRT and digital TV market. nDSP's technologies complement the technology found in Pixelworks' system-on-a-chip ICs.

The aggregate purchase price of nDSP was 1,185,995 shares of Pixelworks common stock valued at \$20,114. The estimated fair value of the shares issued was based on the average closing price of Pixelworks' common stock on the day prior to the announcement of the Agreement and Plan of Merger, the day of the announcement, and the day following the announcement (\$16.96 per share).

The purchase price for accounting purposes was derived as follows:

	nDSP Shares	Total Pixelworks Common Shares	Fair Value
nDSP Common	6,534,079	19,843	\$ 337
nDSP Series A preferred	6,692,918	381,209	6,465
nDSP Series B preferred	6,118,723	784,943	13,312
	19,345,720	1,185,995	20,114
Estimated acquisition costs			857
Total purchase price			\$ 20,971

The purchase price was allocated to the assets and liabilities based on fair values as follows:

Assets acquired:	
Current assets	\$ 1,409
Non-current assets	741
Acquired in-process research and development	4,200
Developed technology	3,700
Goodwill	14,371

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Less:

Liabilities assumed		(3,450)
Allocated purchase price	\$	20,971

The goodwill is not expected to be deductible for tax purposes.

The purchase price was allocated to assets acquired and liabilities assumed based on management's analysis and estimates of their fair values. Management's estimates of fair value are based upon assumptions believed to be reasonable, but which are inherently uncertain and unpredictable. Of the \$22,271 of acquired intangible assets, \$3,700 was assigned to acquired developed technology with a seven year estimated remaining life and \$4,200 was assigned to IPR&D assets that were



expensed at the date of acquisition in accordance with FIN 4. The \$14,371 of goodwill was assigned to the Company as a reporting unit reporting unit. In addition, the Company recorded a deferred tax asset of approximately \$6,200, subject to a full valuation allowance, related primarily to nDSP's net operating loss carry-forward, which will be offset against goodwill when utilized.

The value assigned to IPR&D related to research projects for which technological feasibility had not been established and no future alternative uses existed. The fair value was determined using the income approach, which discounts expected future cash flows from projects under development to their net present value using a risk adjusted rate. Each project was analyzed to determine the technological innovations included; the utilization of core technology; the complexity, cost and time to complete development; any alternative future use or current technological feasibility; and the stage of completion. Future cash flows were estimated, taking into account the expected life cycles of the product and the underlying technology, relevant market sizes and industry trends. The estimated net cash flows from these products were based on management's estimates of related revenues, cost of goods sold, R&D costs, selling, general and administrative costs, income taxes and charges for the use of contributory assets. A discount rate was determined for each project based on the technology of the product. For the developed technology a discount rate of 35% was used. The in-process technology rates utilized ranged from 40% to 55% and were based on the stage of completion of the project, the complexity of the development effort and the risks associated with reaching technological feasibility of the project. The nature of the efforts to develop the in-process technology into commercially viable products principally related to the completion of all planning, designing, prototyping, verification and testing activities that are necessary to establish that the product can be produced to meet its design specification, including function, features and technical performance requirements.

nDSP had three main product groups under development at the acquisition date, each contributing from 7% to 64% of the total IPR&D value. The projects under development were video processing ICs targeting the digital display and analog CRT television markets. The projects ranged from 20% to 80% complete. All projects had expected completion dates within one year and an estimated aggregate cost to complete of \$2,500. Since the date of the acquisition one of the products in development has been completed, the second product is sampling to lead customers and the third product is expected to be complete by the end of 2003.

### **Pantera**

On January 30, 2001, we completed the acquisition of all of the outstanding capital stock and stock options of Pantera, Inc. ( Pantera ), a privately held fabless semiconductor company located in San Jose, California, in exchange for 4.5 million shares of Pixelworks Common Stock. The acquisition was recorded as a purchase transaction and the results of Pantera's operations have been included in the Company's financial statements beginning on the date of acquisition. The Company incurred a charge of \$32,400 in the first quarter of 2001 for IPR&D related to the acquisition.

The following table reflects the unaudited combined results of Pixelworks, Inc., Pantera and nDSP as if the acquisitions had taken place at the beginning of 2001. Both periods exclude charges for IPR&D expense. The pro forma information does not necessarily reflect the actual results that would have occurred nor is it necessarily indicative of future results of operations of the combined companies.

	Years ended December 31,	
	2002	2001
Net revenue	\$ 102,702	\$ 92,954
Net loss	(1,039)	(24,408)
Net loss per share:		
Basic and diluted	\$ (0.02)	\$ (0.56)
Weighted average shares outstanding:		
Basic and diluted	44,580,570	43,884,731

### 3. BALANCE SHEET COMPONENTS

#### *Property and Equipment*

Property and equipment consist of the following:

	December 31,	
	2002	2001
Software	\$ 8,169	\$ 4,211
Equipment	6,098	3,865
Tooling	4,333	3,075
Leasehold improvements	636	284
	19,236	11,435
Less accumulated depreciation and amortization	(10,163)	(5,972)
	\$ 9,073	\$ 5,463

#### *Inventories*

Inventories are shown net of a reserve of \$1,377 and \$412 as of December 31, 2002 and 2001, respectively. The net change in the reserve for obsolete inventory for the years ended December 31, 2002, 2001 and 2000 was an increase of approximately \$965, \$239 and \$108, respectively. Inventories consist of the following:

	December 31,	
	2002	2001
Finished goods	\$ 5,249	\$ 3,993
Work in process	1,539	183

\$	6,788	\$	4,176
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*Accrued Liabilities*

Accrued liabilities consist of the following:

	December 31,	
	2002	2001
Payroll and related liabilities	\$ 2,811	\$ 2,806
Reserve for sales returns	588	673
Warranty	769	978
Other	3,144	2,358
	\$ 7,312	\$ 6,815

**4. SHAREHOLDERS EQUITY**

*Series D offering and beneficial conversion feature*

On February 22, 2000, Pixelworks issued a total of 2,239,212 shares of Series D preferred stock at \$12.75 per share. The Series D preferred stock was issued with a beneficial conversion feature totaling \$10.7 million measured as the difference between the estimated fair value of the underlying common stock and the conversion price of \$8.50 per share.

*Initial Public Offering*

On May 19, 2000, Pixelworks sold 5,750,000 shares of common stock at \$10.00 per share in an Initial Public Offering ( IPO ). In June 2000, Pixelworks sold an additional 862,500 shares of common stock under the terms of the over allotment agreement relating to the IPO.

*Convertible Preferred Stock*

Upon the completion of the IPO in May 2000, the entire then outstanding convertible preferred shares were automatically converted into common shares.

*Exchangeable Shares*

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In connection with the Jaldi asset acquisition, Pixelworks issued 1,731,099 exchangeable shares. Holders of each exchangeable share have dividend, voting and other rights equivalent to those of common shareholders. These exchangeable shares are the economic equivalent of common shares and each exchangeable share may be exchanged at any time for one share of Pixelworks common stock.

### *Note Receivable for Common Stock*

During 1999, 305,937 of stock options were exchanged for 305,937 shares of common stock subject to vesting in exchange for a note receivable. The note receivable is due and payable the earlier of 1) August 31, 2008 or 2) upon termination of the borrower's employment and bears interest at 6% per year, payable annually. The note receivable was secured by the shares of common stock issued thereunder. As of December 31, 2002 and 2001, there were 12,186 and 81,410 shares of unvested common stock, respectively. The note was paid in full in 2002.

### *Stock Option Plans*

Pixelworks has a 1997 Incentive Stock Option Plan and a 2001 Non-qualified Stock Option Plan (the option plans) under which 7,840,116 and 4,000,000 stock options, respectively, may be granted to employees. Options granted under the plans must generally be exercised while the individual is an employee and within ten years of the date of grant. On the standard vesting schedule, each option shall become exercisable at a rate of 25% on the first anniversary date of the grant and on the last day of every

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month thereafter for a total of thirty-six additional increments unless otherwise specifically stated at the time of grant. On the alternative vesting schedule, options become exercisable monthly for a period of four years, with 10% becoming exercisable in the first year, 20% becoming exercisable in the second year, 30% becoming exercisable in the third year, and 40% becoming exercisable in the fourth year.

The following is a summary of stock option activity:

	Number of shares	Weighted average exercise price
Options outstanding as of December 31, 1999	2,914,256	\$ .992
Granted at market	256,500	28.864
Granted below market	399,175	5.422
Exercised	(604,563)	.740
Canceled	(132,487)	5.405
Options outstanding as of December 31, 2000	2,832,881	3.988
Granted at market	1,414,325	15.668
Options exchanged in acquisition	777,042	.214
Exercised	(784,694)	1.093
Canceled	(137,116)	7.818
Options outstanding as of December 31, 2001	4,102,438	7.726
Granted at market	2,231,102	10.621
Granted below market	729,500	10.250
Options exchanged in acquisition	118,858	2.067
Exercised	(635,766)	.761
Canceled	(731,438)	8.226
Options outstanding as of December 31, 2002	5,814,694	\$ 9.736

Range of exercise price	Options outstanding		Weighted average exercise price	Options exercisable	
	Number outstanding at December 31, 2002	Weighted average remaining contractual life		Number exercisable at December 31, 2002	Weighted average exercise price
\$0.170 - 0.170	329,080	5.79	\$ 0.170	329,080	\$ 0.170
0.210 - 1.490	650,320	6.03	0.817	458,572	0.781
1.850 - 5.890	831,348	7.55	3.328	361,494	2.623
5.930 - 8.249	826,309	9.49	7.657	41,937	7.704
8.313 - 9.830	549,451	8.65	9.092	121,738	9.055
9.950 - 10.250	703,250	9.04	10.236	1,982	10.017
10.260- 16.500	1,206,819	8.95	14.235	115,007	14.221
16.640- 31.484	640,959	8.11	23.046	216,049	23.364
31.920- 38.313	57,158	7.85	35.099	27,271	35.449
39.000- 39.000	20,000	7.78	39.000	10,833	39.000

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\$0.170 - 39.000	5,814,694	8.20	\$	9.736	1,683,963	\$	6.461
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As of December 31, 2002, 3,479,280 shares were available for grant under the option plans.

Pixelworks has recorded deferred stock compensation of \$22,210 through December 31, 2002. This deferred stock compensation is based on the difference between the fair market value of common stock and the exercise price of the option or stock on the grant date. Deferred stock compensation is being amortized on an accelerated basis over the vesting period, generally four years, consistent with the method described in FASB Interpretation No. 28. Pixelworks recognized compensation expense of \$2,993, \$8,461 and \$2,227 during the years ended December 31, 2002, 2001 and 2000, respectively, related to these grants. Amortization of the December 31, 2002 balance of deferred stock compensation for the years ending December 31, 2003, 2004 and 2005 will approximate \$1,745, \$570 and \$87, respectively.

### *Employee Stock Purchase Plan*

The Company has an Employee Stock Purchase Plan ( ESPP ). Under the ESPP employees may purchase shares of the Company's common stock at 85% of the fair market value at specific, predetermined dates. A total of 1,500,000 shares of common stock have been reserved for issuance under the ESPP. During the years ended December 31, 2002 and 2001, the Company issued 128,667 and 78,218 shares under the ESPP for proceeds of approximately \$887 and \$757, respectively. As of December 31, 2002, there were 1,280,740 shares available for issuance under this plan.

## 5. INCOME TAXES

The income tax benefit was allocated as follows:

	Years Ended December 31,		
	2002	2001	2000
Income from continuing operations	\$ 880	\$	\$
Goodwill, for intital recognition of acquired tax benefits that previously were included in the valuation allowance	(930)	(831)	
Stockholders' equity, for compensation expense for tax purposes in excess of amounts recognized for financial reporting purposes	(1,357)	(1,425)	
Income tax benefit	\$ (1,407)	\$ (2,256)	\$

Income tax expense attributable to income from continuing operations is comprised of the following:

	Years Ended December 31,		
	2002	2001	2000
Current:			
Federal	\$ 1,346	\$ 2,136	\$



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State	180	120
Total current	1,526	2,256
Deferred:		
Federal	(572)	(2,136)
State	(74)	(120)
Total deferred	(646)	(2,256)
Income tax expense	\$ 880	\$

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The significant differences between the U.S. federal statutory tax rate and Pixelworks' effective tax rate for financial statement purposes are as follows:

	Years Ended December 31,		
	2002	2001	2000
Computed expected income tax benefit	(34)%	(34)%	(34)%
Increase (decrease) resulting from:			
State income taxes, net of federal tax benefit	1	1	(33)
Change in valuation allowance		(6)	363
Non-deductible goodwill amortization		12	
In-process research and development	41	26	
Research and experimentation credit	(5)	(2)	(81)
Difference between financial and tax reporting for stock option exercises			(224)
Other	1	3	9
Actual tax expense	4%	%	%

The tax effects of temporary differences and net operating loss carryforwards which give rise to significant portions of deferred tax assets and deferred tax liabilities are as follows:

	December 31,	
	2002	2001
Deferred tax assets:		
Net operating loss carryforwards	\$ 10,097	\$ 2,113
Research and experimentation credit carryforwards	4,661	2,464
Depreciation and amortization		195
Accrued vacation	386	281
Reserves and accrued expenses	1,296	960
Deferred compensation	89	3,509
Other	271	123
Total gross deferred tax assets	16,800	9,645
Deferred tax liabilities:		
Depreciation and amortization	(1,312)	
Less valuation allowance	(11,760)	(7,389)
Net deferred tax assets	\$ 3,728	\$ 2,256

The net deferred tax assets are included in the consolidated balance sheet as follows:

	December 31,	
	2002	2001
Prepaid expenses and other current assets	\$ 1,673	\$ 1,241

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Other assets		2,055		1,015
Net deferred tax assets	\$	3,728	\$	2,256

During the year ended December 31, 2002, the Company acquired deferred tax assets from the acquisition of nDSP of \$6,693, subject to a valuation allowance of \$6,693 and from the acquisition of Jaldi of \$2,557, subject to a valuation allowance of \$2,557.

The Company has established a valuation allowance for certain deferred tax assets, including net operating loss and tax credit carryforwards. SFAS 109 requires that a valuation allowance be recorded when it is

more likely than not that some portion of the deferred tax assets will not be realized. The net change in the total valuation allowance for the years ended December 31, 2002, 2001 and 2000 was an increase of approximately \$4,371, \$2,603 and \$2,058, respectively.

Certain subsequently recognized tax benefits related to the valuation allowance for deferred tax assets as of December 31, 2002 will be allocated to common stock and goodwill in the amounts of approximately \$1,749 and \$9,584, respectively.

As of December 31, 2002, the Company has acquired federal, state and foreign net operating loss carryforwards of approximately \$16,468, \$15,373 and \$9,732, respectively, which will expire between the years 2007 - 2021. As of December 31, 2002, the Company has generated federal, state and foreign credit carryforwards of approximately \$3,497, \$1,419 and \$500, respectively, which will expire between the years 2007 - 2021. Utilization of acquired net operating loss and credit carryforwards are subject to certain annual limitations when there is a change of more than 50% in ownership. Such a change occurred with the acquisition of nDSP and Jaldi during 2002.

## 6. SEGMENT INFORMATION

In accordance with SFAS 131, *Disclosures about Segments of an Enterprise and Related Information*, Pixelworks has identified a single operating segment: the design and development of integrated circuits for electronic display devices.

### *Significant Customers*

The following table shows percentage of total revenue by distributor for those distributors generating 10% or more of total revenue:

	Years Ended December 31,		
	2002	2001	2000
Distributor A	45%	52%	59%
Distributor B	12%	8%	3%

For the years ended December 31, 2002 and 2001, one end customer represented 10% and 12% of revenue, respectively. End customers represent customers who indirectly purchase the Company's products through distributors and contract manufacturers, as well as, directly from the Company.

### *Geographic Information*

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Revenues are attributed to countries based on the domicile of the customer. Revenue by geographic region representing 10% or more of total revenue was as follows:

	Years Ended December 31,		
	2002	2001	2000
Japan	\$ 49,278	\$ 47,143	\$ 30,990
Taiwan	17,738	13,456	8,259
Korea	11,901	14,026	7,041
United States	2,411	7,854	2,352
Other	21,313	8,329	3,951
Total revenue	\$ 102,641	\$ 90,808	\$ 52,593

Long-lived assets located outside of the United States are immaterial.

## 7. COMMITMENTS AND CONTINGENCIES

### *Royalties*

Pixelworks licenses certain technology and has agreed to pay certain suppliers a per unit royalty based on either the number of chips sold or the net sales price of the chips containing the licensed technology. Pixelworks has recorded \$826, \$271 and \$835 in royalty expense for the years ended December 31, 2002, 2001 and 2000, respectively

### *401(k) Plan*

Pixelworks has a profit-sharing plan for eligible employees under the provisions of Internal Revenue Code Section 401(k). Participants may defer a percentage of their annual compensation on a pre-tax basis, not to exceed the dollar limit that is set by law. A discretionary matching contribution by Pixelworks is allowed and is equal to a uniform percentage of the amount of salary reduction elected to be deferred, which percentage will be determined each year by Pixelworks. Pixelworks made no contributions to the 401(k) plan during 2002, 2001 or 2000.

### *Leases*

Pixelworks leases office space under various operating leases that expire at various dates through 2006.

Future minimum payments under the leases are as follows:

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**Years Ending December 31:**

2003	2,464
2004	1,559
2005	1,071
2006	289
Total	\$ 5,383

Rent expense for the years ended December 31, 2002, 2001 and 2000 was \$2,330, \$1,112 and \$453, respectively.

*Contract Manufacturers*

In the normal course of business, Pixelworks generally commits to purchase products from its contract manufacturers to be delivered within the most recent 90 days covered by forecasts with cancellation fees.

In the opinion of management, such obligations will not significantly affect the Company's financial position or results of operations.

#### *Litigation*

On December 7, 2001, a former employee filed a complaint in the Circuit Court of the State of Oregon, Washington County, later removed to federal court, claiming violations of various state and federal employment and discrimination laws. The complaint seeks at least \$7,000 in economic, non-economic and liquidated damages, plus punitive damages. The plaintiff asserts several statutory claims, which may require payment of the prevailing party's attorney's fees. Although we believe we have meritorious defenses to all claims, it is impossible at this stage to evaluate the likelihood of an unfavorable outcome or to provide an estimate of the amount or range of potential loss, if any. In the event there is an adverse outcome to this litigation there may be a material adverse effect on our financial condition, cash flows or results of operations.

We are involved in other litigation from time to time that is routine in nature and incidental to the outcome of our business. We believe that the outcome of any such litigation would not have a material adverse effect on our financial condition, cash flows, or results of operations.

#### **8. PATENT SETTLEMENT**

In February of 2000, Pixelworks entered into a perpetual license agreement with InFocus Systems, Inc. ( InFocus ) for the use of its proprietary automatic pixel clock phase and frequency correction technology specified in two patents held by InFocus in exchange for 156,863 shares of Series D preferred stock, valued at \$12.75 per share, and \$2,400 in cash, payable in four equal quarterly installments beginning March 31, 2000. In addition, approximately \$753 of the patent settlement expense recorded in connection with the issuance of Series D Preferred Stock to InFocus was based on the difference between the estimated fair value of the underlying common stock and the Series D conversion price of \$8.50 per share. Pixelworks also received a release of any claims InFocus may have against Pixelworks relating to these patents.



**9. QUARTERLY FINANCIAL DATA (Unaudited)**

Included in the following quarterly financial data are non-recurring charges for in-process research and development expense related to the acquisitions of Jaldi in September 2002, nDSP in January 2002 and Panstera in January 2001.

	<b>March 31, 2002</b>	<b>June 30, 2002</b>	<b>September 30, 2002</b>	<b>December 31, 2002</b>
Net revenue	\$ 22,005	\$ 24,644	\$ 26,862	\$ 29,130
Gross profit	11,467	12,383	13,215	13,861
Income (loss) from operations	(4,400)	1,094	(19,298)	358
Income (loss) before taxes	(3,755)	1,688	(18,756)	852
Net income/(loss)	(3,906)	1,361	(18,985)	679
Net income (loss) per share, basic	(0.09)	0.03	(0.44)	0.02
Net income (loss) per share, diluted	(0.09)	0.03	(0.44)	0.01

	<b>March 31, 2001</b>	<b>June 30, 2001</b>	<b>September 30, 2001</b>	<b>December 31, 2001</b>
Net revenue	\$ 21,344	\$ 22,732	\$ 24,074	\$ 22,658
Gross profit	9,271	10,744	11,467	12,827
Loss from operations	(35,548)	(4,576)	(4,036)	(2,843)
Loss before taxes	(34,086)	(3,448)	(3,039)	(1,986)
Net loss	(34,086)	(3,448)	(3,039)	(1,986)
Net loss per share, basic and diluted	(0.87)	(0.08)	(0.07)	(0.05)

**10. SUBSEQUENT EVENT (Unaudited)**

On March 17, 2003, the Company announced the execution of a definitive merger agreement with Genesis Microchip ( Genesis ) pursuant to which Genesis will merge with a subsidiary of Pixelworks and each outstanding share of Genesis common stock will be converted into a right to receive 2.3366 shares of Pixelworks common stock. Pixelworks will also assume all outstanding options to purchase Genesis common stock. The transaction will be accounted for as a reverse acquisition under the purchase method of accounting and accordingly the Company's results of operations will be included in Genesis results of operations beginning on the date of the acquisition.

**Item 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE**

None

**PART III**

**Item 10. DIRECTORS AND EXECUTIVE OFFICERS OF THE REGISTRANT**

Information concerning the directors of the Company is included under Election of Directors in the Company's definitive Proxy Statement for its Annual Meeting of Shareholders filed or to be filed not later than 120 days after the end of the fiscal year covered by this Report (the 2003 Proxy Statement) and is incorporated herein by reference.

Information with respect to executive officers is included under Executive Officers of the Registrant in the 2003 Proxy Statement and is incorporated herein by reference.

Information with respect to Section 16(a) of the Securities Exchange Act is included under Section 16(a) Beneficial Ownership Reporting Compliance in the 2003 Proxy Statement and is incorporated herein by reference.

**Item 11. EXECUTIVE COMPENSATION**

Information with respect to executive compensation is included under Executive Compensation in the 2003 Proxy Statement and is incorporated herein by reference.

**Item 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT**

Information with respect to security ownership of certain beneficial owners and management is included under Voting Securities and Principal Shareholders in the 2003 Proxy Statement and is incorporated herein by reference.

Information with respect to equity compensation plans is included under the caption Equity Compensation Plan Information in the 2003 Proxy statement and is incorporated herein by reference.

**Item 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS**

Information with respect to certain relationships and related transactions with management is included under Certain Relationships and Related Transactions in the 2003 Proxy Statement and is incorporated herein by reference.

**PART IV**

**Item 14. CONTROLS AND PROCEDURES**

Within the 90-day period prior to the filing of this report, an evaluation was carried out under the supervision and with the participation of the Company's management, including the Chief Executive Officer ( CEO ) and Chief Financial Officer ( CFO ), of the effectiveness of our disclosure controls and procedures. Based on that evaluation, the CEO and CFO have concluded that the Company's disclosure controls and procedures are effective to ensure that information required to be disclosed by the Company in reports that it files or submits under the Securities Exchange Act of 1934 is recorded, processed, summarized and reported within the time periods specified in Securities and Exchange Commission rules and forms. Subsequent to the date of their evaluation, there were no significant changes in the Company's internal controls or in other factors that could significantly affect the disclosure controls, including any corrective actions with regard to significant deficiencies and material weaknesses.

**PART IV**

**Item 15. EXHIBITS, FINANCIAL STATEMENT SCHEDULES AND REPORTS ON FORM 8-K**

**(a)1. Financial Statements:**

The following financial statements are included in Item 8:

Independent Auditors Report

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

Consolidated Statements of Redeemable Convertible Preferred Stock and Shareholders Equity (Deficit) for the years ended December 31, 2002, 2001 and 2000

Notes to Consolidated Financial Statements

**(a)2. Financial Statement Schedules:**

All schedules have been omitted since they are either not required or the information is otherwise included.

**(a)3. Exhibits:**

<b>Exhibit Number</b>	<b>Description</b>
2.1	Agreement and Plan of Merger dated as of December 13, 2000 among Pixelworks, Inc., Panther Acquisition, Inc. Panstera, Inc. and those certain shareholders of Panstera, Inc. signatories thereto**.
2.2	Amendment to Agreement and Plan of Merger dated as of January 26, 2001 among Pixelworks, Inc., Panther Acquisition, Inc. and Panstera, Inc.**
2.3	Agreement and Plan of Merger and Reorganization dated as of December 6, 2001 among Pixelworks, Inc., Nighthawk Acquisition, Corp. and those certain shareholders of nDSP Delaware, Inc. who are signatories thereto***.
2.4	Reorganization Agreement among Pixelworks, Inc., Pixelworks Nova Scotia Company, Certain Shareholders of Jaldi Semiconductor Corp. and Jaldi Semiconductor Corp. dated Jaldi dated August 2, 2002*****
2.5	Jaldi Semiconductor, Inc. Exchangeable Share Provisions*****

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- 2.6 Exchangeable Share Support Agreement among Jaldi Semiconductor Corp., Pixelworks, Inc., Pixelworks Nova Scotia and Jaldi Semiconductor Corp. dated September 6, 2002\*\*\*\*\*
- 2.7 Voting and Exchange Trust Agreement among Jaldi Semiconductor Corp., Pixelworks, Inc., Pixelworks Nova Scotia Company and CIBC Mellon Trust Company, dated September 6, 2002\*\*\*\*\*
- 2.8 Agreement and Plan of Merger, dated as of March 17, 2003 among Pixelworks, Inc., an Oregon corporation, Display Acquisition Corp., a Delaware corporation and a direct wholly-owned subsidiary of Pixelworks, and Genesis Microchip Inc., a Delaware corporation. \*\*\*\*\*

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- 2.9 Form of Pixelworks Voting Agreement, dated as of March 17, 2003 by and among each of the directors of Pixelworks Inc. and Genesis Microchip Inc., a Delaware corporation. \*\*\*\*\*
- 2.10 Form of Genesis Voting Agreement, dated as of March 17, 2003 by and among each of the directors of Genesis Microchip Inc. and Pixelworks Inc., an Oregon corporation.\*\*\*\*\*
- 3.1 Sixth Amended and Restated Articles of Incorporation of Pixelworks, Inc.\*
- 3.2 Articles of Amendment to Sixth Amended and Restated Articles of Incorporation of Pixelworks Inc., as filed with the Secretary of State of Oregon on September 6, 2002\*\*\*\*\*
- 3.3 First Restated Bylaws of Pixelworks, Inc.\*
- 4.1 Reference is made to Exhibit 3.1 above.\*
- 4.2 Third Amended Registration Rights Agreement dated February 22, 2000.\*
- 10.1 Form of Indemnity Agreement between Pixelworks, Inc. and each of its Officers and Directors.\* +
- 10.2 Pixelworks, Inc. 1997 Stock Incentive Plan.\*\*+
- 10.3 Registration Rights Agreement dated as of December 6, 2001 among Pixelworks Inc., Nighthawk Acquisition Corp. and those certain shareholders of nDSP Delaware, Inc. who are signatories thereto.\*\*\*
- 10.4 Sublease Agreement Dated September 7, 2001 between Epicor Software Corporation and Pixelworks, Inc.\*\*\*\*\*
- 10.5 Pixelworks, Inc. 2001 Nonqualified Stock Option Plan\*\*\*\*\*+
- 10.6 Pixelworks, Inc. 2000 Employee Stock Purchase Plan.\*\*+
- 10.7 Lease Agreement Dated April 14, 1999 between Southcenter III and IV Investors LLC and Pixelworks, Inc.\*
- 10.8 VAutomation Incorporated Synthesizable Soft Core Agreement dated November 4, 1997 between VAutomation Incorporated and Pixelworks, Inc.\*
- 10.9 Intellectual Property Sublicense Agreement dated March 30, 1999 between VAutomation Incorporated and Pixelworks, Inc.\*
- 10.10 License Agreement dated February 22, 2000 between Pixelworks, Inc. and InFocus Systems, Inc.\*
- 10.11 Employment Agreement between Jeffrey B. Bouchard and Pixelworks, Inc.\* +
- 10.12 Shareholders Agreement dated as of January 15, 2001 among Pixelworks, Inc., Panstera, Inc., and those certain shareholders of Panstera, Inc.\*\*
- 10.13 Third Amendment to Lease dated March 1, 2002 between Copper Mountain Trust Corporation and Pixelworks, Inc.\*\*\*\*\*
- 21 Subsidiaries of Pixelworks, Inc.
- 23 Consent of KPMG LLP dated May 29, 2003.



24 Power of Attorney (included on Signature Page).

99.1 Certification of Chief Executive Officer

99.2 Certification of Chief Financial Officer

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\* Incorporated by reference to the Company's Registration Statement on Form S-1 (Reg. No. 333-31134), declared effective on May 19, 2000.

\*\* Incorporated by reference to the Company's report on Form 8-K filed on February 13, 2001.

\*\*\* Incorporated by reference to the Company's report on Form 8-K filed on January 29, 2002.

\*\*\*\* Incorporated by reference to the Company's Registration Statement on Form S-8 filed on May 31, 2001.

\*\*\*\*\* Incorporated by reference to the Company's Registration Statement on Form S-3 filed on October 15, 2002.

\*\*\*\*\* Incorporated by reference to the Company's report on Form 8-K filed on March 20, 2003.

\*\*\*\*\* Incorporated by reference to the Company's report on Form 10-K filed on March 25, 2002.

+ Indicates a management contract or compensation arrangement

**(b) Reports on Form 8-K**

During the three month period ended December 31, 2002 there were no reports on Form 8-K were filed.



**SIGNATURES**

Pursuant to the requirements of Sections 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

PIXELWORKS, INC.

By: /s/ Allen H Alley  
Allen H. Alley  
Chairman of the Board, President and  
Chief Executive Officer

Dated: May 29, 2003

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

<b>Signature</b>	<b>Title</b>	<b>Date</b>
/s/ Allen H. Alley Allen H. Alley	Chairman, President and Chief Executive Officer	May 29, 2003
/s/ Jeffrey B. Bouchard Jeffrey B. Bouchard	Vice President, Finance and Chief Financial Officer	May 29, 2003
/s/ Oliver D. Curme Oliver D. Curme	Director	May 29, 2003
/s/ Frank Gill Frank Gill	Director	May 29, 2003
/s/ Mark A. Stevens Mark A. Stevens	Director	May 29, 2003

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/s/ Scott Gibson  
Scott Gibson

Director

May 29, 2003

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**CERTIFICATIONS**

I, Allen H. Alley, certify that:

1. I have reviewed this annual report on Form 10-K/A of Pixelworks, 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 the Exchange Act Rules 13a-14 and 15d-14) for the registrant and we 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 the registrant's board of directors (or persons performing the equivalent function):

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.

6. The registrant's other certifying officers and I have indicated in this annual report whether or not 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.

Date: May 29, 2003

/s/ Allen H. Alley  
Allen H. Alley  
Chairman of the Board, President  
and Chief Executive Officer

**CERTIFICATIONS**

I, Jeffrey B. Bouchard, certify that:

1. I have reviewed this annual report on Form 10-K/A of Pixelworks, 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 the Exchange Act Rules 13a-14 and 15d-14) for the registrant and we 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 the registrant's board of directors (or persons performing the equivalent function):

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.

6. The registrant's other certifying officers and I have indicated in this annual report whether or not 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.

Date: May 29, 2003

/s/ Jeffrey B. Bouchard

Jeffrey B. Bouchard  
Vice President, Finance  
and Chief Financial Officer

**Exhibit Index**

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- 10.11 Employment Agreement between Jeffrey B. Bouchard and Pixelworks, Inc.\* +
- 10.12 Shareholders Agreement dated as of January 15, 2001 among Pixelworks, Inc., Panstera, Inc., and those certain shareholders of Panstera, Inc.\*\*
- 10.13 Third Amendment to Lease dated March 1, 2002 between Copper Mountain Trust Corporation and Pixelworks, Inc.\*\*\*\*\*
- 21 Subsidiaries of Pixelworks, Inc.
- 23 Consent of KPMG LLP dated May 29, 2003.
- 24 Power of Attorney (included on Signature Page).
- 99.1 Certification of Chief Executive Officer
- 99.2 Certification of Chief Financial Officer

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\* Incorporated by reference to the Company's Registration Statement on Form S-1 (Reg. No. 333-31134), declared effective on May 19, 2000.

\*\* Incorporated by reference to the Company's report on Form 8-K filed on February 13, 2001.

\*\*\* Incorporated by reference to the Company's report on Form 8-K filed on January 29, 2002.

\*\*\*\* Incorporated by reference to the Company's Registration Statement on Form S-8 filed on May 31, 2001.

\*\*\*\*\* Incorporated by reference to the Company's Registration Statement on Form S-3 filed on October 15, 2002.

\*\*\*\*\* Incorporated by reference to the Company's report on Form 8-K filed on March 20, 2003.

\*\*\*\*\* Incorporated by reference to the Company's report on Form 10-K filed on March 25, 2002.

+ Indicates a management contract or compensation arrangement