

TTM TECHNOLOGIES INC  
Form S-3/A  
April 16, 2004

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As filed with the Securities and Exchange Commission on April 16, 2004

Registration No. 333-113171

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## SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

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### AMENDMENT NO. 1

TO

### FORM S-3

REGISTRATION STATEMENT

Under The Securities Act of 1933

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## TTM Technologies, Inc.

(Exact name of Registrant as specified in its charter)

**Washington**

(State or other jurisdiction of  
incorporation or organization)

**91-1033443**

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

**2630 South Harbor Boulevard  
Santa Ana, California 92704  
(714) 327-3000**

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

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**Stacey M. Peterson  
Chief Financial Officer  
2630 South Harbor Boulevard  
Santa Ana, California 92704  
(714) 327-3000**

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

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

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

If any of the securities being registered in this form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, other than securities offered only in connection with dividend or interest reinvestment plans, check the following box. //

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

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

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

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

The information in this Prospectus is not complete and may be changed. We may not sell these securities until the registration statement filed with the Securities and Exchange Commission is effective. This prospectus is not an offer to sell securities, and it is not soliciting an offer to buy these securities in any state where the offer or sale is not permitted.

**SUBJECT TO COMPLETION, DATED APRIL 16, 2004**

**7,000,000 Shares  
Common Stock**

TTM Technologies, Inc. is selling 4,500,000 shares of common stock, and the selling shareholders identified in this prospectus are selling an additional 2,500,000 shares. We will not receive any of the proceeds from the sale of the shares sold by selling shareholders. Some of the selling shareholders have granted the underwriters a 30-day option to purchase up to an additional 1,050,000 shares to cover over-allotments, if any.

Our common stock is listed on the Nasdaq National Market under the symbol "TTMI." The last reported sale price on April , 2004 was \$ per share.

**INVESTING IN OUR COMMON STOCK INVOLVES RISKS. SEE "RISK FACTORS" BEGINNING ON PAGE 6.**

	<b>Per Share</b>	<b>Total</b>
Public offering price	\$	\$
Underwriting discount	\$	\$
Proceeds, before expenses, to us	\$	\$
Proceeds to the selling shareholders	\$	\$

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or passed upon the adequacy or accuracy of this prospectus. Any representation to the contrary is a criminal offense.

Thomas Weisel Partners LLC is acting as book-running lead manager for the offering. Thomas Weisel Partners LLC expects to deliver the shares to purchasers on or about April , 2004.

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**Thomas Weisel Partners LLC**

**RBC Capital Markets**

**Needham & Company, Inc.**

**Wells Fargo Securities, LLC**

The date of this prospectus is April , 2004.

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You should rely only on the information contained or incorporated by reference in this prospectus. We have not authorized anyone to provide you with information different from that contained in this prospectus. We are offering to sell shares of common stock and seeking offers to buy shares of common stock only in jurisdictions where offers and sales are permitted. The information contained in this prospectus is accurate only as of the date of this prospectus, regardless of the time of delivery of this prospectus or of any sale of the common stock.

In this prospectus "company," "we," "us" and "our" refer to TTM Technologies, Inc. and its subsidiaries. Unless otherwise indicated, all information in this prospectus assumes no exercise of the underwriters' over-allotment option.

This prospectus contains our trademarks and trade names and those of other companies.

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## PROSPECTUS SUMMARY

*You should read the following summary together with the more detailed information included in this prospectus concerning our company, and together with our financial statements and other information appearing in the documents incorporated by reference in this prospectus. Because this is only a summary, you should read the rest of this prospectus, including the documents incorporated by reference in this*

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*prospectus, before you invest in our common stock. You should read this entire prospectus carefully, especially the risks described under "Risk Factors."*

### **Our Company**

We are a one-stop provider of time-critical and technologically complex printed circuit boards, which serve as the foundation of sophisticated electronic products. We serve high-end commercial markets including networking/communications infrastructure, high-end computing and industrial/medical which are characterized by high levels of complexity, short product life cycles and moderate production volumes. Our customers include original equipment manufacturers, or OEMs, and electronic manufacturing services, or EMS, companies.

### **The TTM Solution**

We manufacture printed circuit boards that satisfy our customers' needs throughout all stages of an electronic product's life cycle from prototype to volume production. Key aspects of our solution include:

*One-stop manufacturing solution.* We offer a one-stop manufacturing solution to our customers through our specialized and integrated facilities, each of which generally focuses on a different stage of an electronic product's life cycle. This one-stop solution allows us to provide a broad array of services and technologies to meet the rapidly evolving needs of our customer base.

*Quick-turn services.* We deliver highly complex printed circuit boards to customers in significantly compressed lead times. This rapid delivery service enables OEMs to develop sophisticated electronic products quickly and reduce time to market. In addition, our quick-turn services provide us with an opportunity to cross-sell our other services, including high-mix and volume production, to our targeted end markets.

*Strong process and technology expertise.* We deliver time-critical and highly complex manufacturing services through our advanced manufacturing processes and technology expertise. We significantly enhanced our capability to manufacture technologically complex printed circuit boards through our December 2002 acquisition of Honeywell Advanced Circuits, Inc. We regularly manufacture printed circuit boards with up to 32 layers. Approximately 63% of our gross sales in 2003 involved the manufacture of printed circuit boards with at least 12 layers and 29% involved printed circuit boards with at least 20 layers.

### **Our Manufacturing Services**

#### *Quick-turn services*

We refer to our rapid turnaround services as "quick-turn" because we provide custom-designed printed circuit boards to our customers within as little as 24 hours to 10 days from time of order. As a result of our ability to rapidly and reliably respond to the critical time requirements of our customers, we generally receive a premium for our quick-turn services as compared to standard lead time prices.

*Prototype production.* In the design, testing and launch phase of a new electronic product's life cycle, our customers typically require limited quantities of printed circuit boards in a very

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short period of time. We satisfy this need by manufacturing prototype printed circuit boards in small quantities of up to 50 boards per order with delivery times ranging from as little as 24 hours to 10 days.

*Ramp-to-volume production.* After a customer's product has successfully completed the prototype phase, our customers introduce the product to the market and require larger quantities of printed circuit boards in a short period of time. This transition stage between low-volume prototype production and volume production is known as ramp-to-volume. Our ramp-to-volume services typically include manufacturing up to several hundred printed circuit boards per order with delivery times ranging from two to 10 days.

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For the years ended December 31, 2002 and 2003, orders with delivery requirements of 10 days or less represented 45% and 27% of our gross sales, respectively. Quick-turn orders decreased as a percentage of our gross sales in 2003 primarily due to the change in sales mix that resulted from our December 2002 acquisition of Advanced Circuits, which focuses primarily on manufacturing technologically complex printed circuit boards with standard delivery times.

### *Standard delivery time services*

Our standard delivery time services focus on the high-mix and complex technology requirements of our customers, with delivery times typically ranging from three to five weeks. High-mix manufacturing involves processing small lots, generally up to several hundred printed circuit boards, in a flexible manufacturing environment. Our high technology expertise is evidenced by our ability to regularly produce complex printed circuit boards with up to 32 layers in commercial volumes. In addition, many of our lower layer-count circuit boards are complex as a result of the incorporation of other technologically advanced features, including high performance materials and extremely fine geometries and tolerances. Our acquisition of Advanced Circuits significantly increased our ability to produce technologically complex printed circuit boards for high-end commercial applications. As a result, our average layer count increased from 8.6 in 2002 to 14.3 in 2003. Although we provide standard delivery time services to customers, including large OEMs, for high end commercial applications, we do not target our standard delivery time services to high-volume, consumer electronic applications such as cellular telephones, personal computers, hand-held devices and automotive products.

### **Our Facilities**

We utilize a facility specialization strategy in which each order is directed to the facility best suited to the customer's particular delivery time, product complexity and volume needs. Our three facilities use compatible technologies and manufacturing processes, allowing us to move orders easily between plants to optimize operating efficiency. This strategy provides customers with faster delivery times and enhanced product quality and consistency. Our Santa Ana, California facility focuses on prototype production and new customer development. Our Redmond, Washington facility primarily handles ramp-to-volume and high-mix production, with some capacity for prototype production. Our Chippewa Falls, Wisconsin facility, which we now operate since our Advanced Circuits acquisition, focuses on the very high technology segment of the printed circuit board industry with standard delivery times.

### **Our Chippewa Falls Facility Expansion**

In response to increased customer demand and higher current capacity utilization rates, our board of directors has approved a plan to significantly expand production capacity at our Chippewa Falls, Wisconsin facility. Chippewa Falls is our largest facility and serves the high-end, complex technology needs of some of our largest and most sophisticated commercial customers. The

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expansion is planned to occur in two phases that will permit us to incrementally match our capital expenditures with demand and market conditions. Together, the two phases of the plan represent an 85% increase in production capacity. All capacity increases described in phases one and two below represent cumulative increases from current capacity levels.

*Phase I.* In the first phase, we expect to hire approximately 100 additional employees by mid-2004 that will increase our Chippewa Falls' production capacity by more than 20% from current levels using our existing facility footprint. In addition, we expect to immediately commence construction on a 44,000 square foot expansion and have approved the order of capital equipment necessary to support it. We expect that construction of the first phase of the expansion, along with additional employee hires beyond those expected by mid-2004, will increase our Chippewa Falls' capacity by approximately 55% from current levels. The construction and equipment costs related to phase one are expected to be approximately \$10 million. We expect to complete construction of the first phase and reach production by the end of 2004.

*Phase II.* The second phase of the expansion plan will allow us to increase production capacity at the Chippewa Falls facility by an additional 30%, or a total of 85%, over current capacity. We expect to accomplish this second phase through additional staffing and the purchase of approximately \$4 million in capital equipment. The implementation of the second phase will be made as demand and market conditions warrant and can be completed within three to six months of determining to proceed. The decision to proceed with the second phase will be revisited on a regular basis throughout 2004 and in future periods.

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We believe that our ability to expand at our existing facilities allows us to efficiently grow without having to qualify customers for, and develop a management infrastructure at, a new facility. We reviewed numerous alternatives to meet our customers' needs and believe that this expansion plan provides us with a significant opportunity for growth with relatively limited risk. However, if our customers' demand for our services does not increase to the levels we are anticipating, we may decide to scale back or delay our planned expansion.

### Our Customers

Our significant OEM customers include Adtran, Agilent Technologies, Apple Computer, Cisco, Hewlett-Packard, IBM, ITT, Juniper Networks, Micron Technology, Motorola and Sun Microsystems. Our significant EMS customers include Benchmark Electronics, Celestica, Flextronics, Jabil Circuit, MC Assembly, Plexus and Solectron. We sell to OEMs both directly and through EMS companies. As of December 31, 2003, we had approximately 600 customers, compared to approximately 565 customers at December 31, 2002.

### Our Strategy

Our goal is to be the leading provider of time-critical, one-stop manufacturing services for highly complex printed circuit boards. Key aspects of our strategy include:

leveraging our one-stop manufacturing solution to capture additional business from customers throughout different stages of the product life cycle from prototype to volume production;

using our quick-turn capabilities to attract new customers with high-growth potential;

continuing to improve our technological capabilities and manufacturing processes to further reduce delivery times, improve quality, increase yields and decrease costs;

capitalizing on facility specialization to enhance operating efficiency; and

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expanding our presence in targeted markets through increasing production capacity, other internal initiatives and selective acquisitions.

### Our Address

We were incorporated in Washington in March 1978 as Pacific Circuits, Inc. and changed our name to TTM Technologies, Inc. in December 1999. Our principal executive offices are located at 2630 South Harbor Boulevard, Santa Ana, California 92704, and our telephone number at that address is (714) 327-3000.

### The Offering

Common stock offered by us	4,500,000 shares
Common stock offered by selling shareholders	2,500,000 shares
Common stock to be outstanding after this offering	45,276,270 shares
Over-allotment option	1,050,000 shares
Use of proceeds	We intend to use the net proceeds from this offering to purchase capital equipment and expand production capacity and for general corporate purposes, including working capital and possible acquisitions. We will not receive any of the proceeds from the sale of shares offered by selling shareholders.

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Nasdaq National Market symbol

TTMI

The above information is based on 40,606,270 shares outstanding as of February 15, 2004, includes 170,000 shares to be issued upon exercise of options by certain selling shareholders in connection with this offering, and excludes:

3,168,627 other shares issuable upon exercise of options outstanding under our management stock option plan at a weighted average exercise price of \$8.87 per share; and

approximately 4,413,389 shares available for future issuance under our two stock plans.

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## Summary Consolidated Financial Data (In thousands, except per share data)

The following table presents a summary of our historical consolidated financial data for the periods presented. You should read this data together with "Management's Discussion and Analysis of Financial Condition and Results of Operations" and our consolidated financial statements and the related notes included or incorporated by reference in this prospectus.

	Year Ended December 31,		
	2001	2002	2003
<b>Statement of Operations Data:</b>			
Net sales	\$ 128,989	\$ 88,989	\$ 180,317
Cost of goods sold	92,235	78,456	145,694
	36,754	10,533	34,623
<b>Operating expenses:</b>			
Selling and marketing	7,272	6,447	10,858
General and administrative	5,435	5,519	11,696
Amortization of intangibles	4,808	1,202	1,202
Restructuring charges		3,859	649
	17,515	17,027	24,405
Operating income (loss)	19,239	(6,494)	10,218
Interest expense	(2,644)	(1,084)	(583)
Amortization of debt issuance costs	(41)	(105)	(97)
Interest income and other, net	629	694	352
	17,183	(6,989)	9,890
Income (loss) before income taxes and extraordinary item	17,183	(6,989)	9,890
Income tax (provision) benefit	(6,189)	2,278	(3,901)
	10,994	(4,711)	5,989
Income (loss) before extraordinary item	10,994	(4,711)	5,989
Extraordinary gain		6,296	1,453
	10,994	1,585	7,442
Net income	\$ 10,994	\$ 1,585	\$ 7,442

Net income per common share:

	Year Ended December 31,		
Basic	\$ 0.29	\$ 0.04	\$ 0.19
Diluted	\$ 0.28	\$ 0.04	\$ 0.18
Weighted average common shares:			
Basic	37,482	39,511	39,993
Diluted	38,899	39,511	41,123

**Other Financial Data:**

Net cash provided by operating activities	\$ 38,245	\$ 10,011	\$ 18,582
Depreciation of property, plant and equipment	8,294	8,761	7,774

December 31, 2003

	December 31, 2003	
	Actual	As Adjusted(1)
<b>Balance Sheet Data:</b>		
Cash, cash equivalents and short-term investments	\$ 31,745	\$
Working capital	52,352	
Total assets	205,857	
Long-term debt, including current maturities	7,777	
Shareholders' equity	178,327	

- (1) Adjusted to reflect the sale of 4,500,000 shares of common stock offered by us at an assumed public offering price of \$ per share, the sale of 170,000 shares issuable upon the exercise of options by certain selling shareholders in connection with this offering at an exercise price of \$2.63 per share, the deduction of the underwriting discounts and estimated offering expenses and the receipt of the net proceeds as set forth in "Use of Proceeds."

**RISK FACTORS**

*You should carefully consider the risks described below before making an investment decision. The risks described below are not the only ones we face. Additional risks we are not presently aware of or that we currently believe are immaterial may also impair our business operations. Our business could be harmed by any of these risks. The trading price of our common stock could decline due to any of these risks, and you may lose all or part of your investment. In assessing these risks, you should also refer to the other information contained or incorporated by reference in this prospectus, including our financial statements and related notes.*

**Risks Related to Our Company**

**We are heavily dependent upon the worldwide electronics industry, which suffered a significant downturn in demand in 2001 and 2002, resulting in excess manufacturing capacity, increased price competition and slower moving inventories. This global slowdown decreased demand for our manufacturing services and lowered our sales and gross margins.**

A majority of our revenues are generated from the electronics industry, which is characterized by intense competition, relatively short product life cycles and significant fluctuations in product demand. Furthermore, the industry is subject to economic cycles and recessionary periods and was negatively impacted by a contraction in the U.S. economy and worldwide electronics market from 2001 to 2003. Moreover, due to the uncertainty in the end markets served by most of our customers, it is difficult to predict our future financial results. A prolonged economic recession, excess manufacturing capacity or a decline in the electronics industry could negatively impact our business, results of operations and financial condition. Our net sales declined from \$129.0 million in 2001 to \$89.0 million in 2002 due to these factors. While the electronics



industry has seen improvements from the recent downturn, and we have experienced sequential quarterly increases in our net sales during 2003, this trend may not continue. A future decline in our net sales could harm our profitability and results of operations and could require us to record an additional valuation allowance against our deferred tax assets or recognize an impairment of our long-lived assets including goodwill and other intangible assets.

**During periods of excess global printed circuit board manufacturing capacity, our gross margins may fall and/or we may have to incur restructuring charges if we choose to reduce the capacity of or close any of our facilities.**

Due to fluctuations in demand, our facilities operated significantly below capacity as recently as the second quarter of 2003. When we experience excess capacity, our sales revenues may not fully cover our fixed overhead expenses, and our gross margins will fall. In addition, we generally schedule our quick-turn production facilities at less than full capacity to retain our ability to respond to unexpected additional quick-turn orders. However, if these orders are not received, we may forego some production and could experience continued excess capacity. The planned expansion of our Chippewa Falls facility would exacerbate any excess capacity issues if demand for our services does not increase to the levels that we are anticipating.

If we conclude we have significant long-term excess capacity, we may decide to cancel or delay our planned Chippewa Falls facility expansion, permanently close one or more of our facilities and lay off some of our employees. Closures or lay-offs could result in our recording restructuring charges, such as severance, other exit costs and asset impairments, as we did in the second and fourth fiscal quarters 2002 due to the restructuring and subsequent closure of our Burlington, Washington facility and in the first fiscal quarter 2003 due to the lay off of employees at our Redmond, Washington facility.

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**We are dependent upon a small number of OEM customers for a large portion of our net sales, and a decline in sales to major customers could harm our results of operations.**

A small number of customers are responsible for a significant portion of our net sales. We sell to OEMs both directly and through EMS companies. Sales attributable to our five largest OEM customers accounted for approximately 25.9% of our net sales in 2002 and 51.6% of our net sales in 2003. Our 2003 increase in customer concentration was due primarily to our acquisition of Advanced Circuits, which has a small number of large customers. If our customers fail to place orders with us at past levels, it would harm our business, results of operations and financial condition. We expect a significant portion of our net sales will continue to be generated by a small number of customers.

Our customer concentration could fluctuate depending on future customer requirements, which will depend in large part on market conditions in the electronics industry segments in which our customers participate. The loss of one or more major customers or a decline in sales to our major customers could significantly harm our business, results of operations and financial condition and lead to declines in the trading price of our common stock. In addition, we generate significant accounts receivable in connection with providing manufacturing services to our customers. If one or more of our significant customers were to become insolvent or were otherwise unable to pay for the manufacturing services provided by us, our results of operations would be harmed.

**We compete against manufacturers in Asia, where production costs are lower. These competitors may gain market share in our key market segments, which may have an adverse effect on the pricing of our products.**

We may be at a competitive disadvantage with respect to price when compared to manufacturers with lower cost facilities in Asia and other locations. We believe price competition from printed circuit board manufacturers in Asia and other locations with lower production costs may play an increasing role in the market. We do not have offshore facilities in lower cost locations such as Asia. While historically our competitors in these locations have produced less technologically advanced printed circuit boards, they continue to expand their capacity with advanced equipment to produce higher technology printed circuit boards. In addition, fluctuations in foreign currency exchange rates may benefit these offshore competitors. As a result, these competitors may gain market share, which may force us to lower our prices, reducing our gross margins.

**We are exposed to the credit risk of some of our customers and to credit exposures in weakened markets.**

Most of our sales are on an "open credit" basis, with standard industry payment terms. We monitor individual customer payment capability in granting such open credit arrangements, seek to limit such open credit to amounts we believe the customers can pay, and maintain reserves we believe are adequate to cover exposure for doubtful accounts. During periods of economic downturn in the electronics industry and the global economy, our exposure to credit risks from our customers increases. Although we have programs in place to monitor and mitigate the associated risks, such programs may not be effective in reducing our credit risks.

Our 10 largest customers accounted for approximately 42% of our net sales in 2002 and approximately 64% of our net sales in 2003. OEMs often direct a significant portion of their purchases through a relatively limited number of EMS companies. Our contractual relationship is typically with the EMS companies, who are obligated to pay us for our products. Because we expect OEMs to continue to direct our sales to EMS companies, we expect to continue to be subject to the credit risk of a limited number of customers. This concentration of customers exposes us to increased credit risks. If one or more of our significant EMS customers were to become insolvent or were otherwise unable to pay us, our results of operations would be harmed. Some of our

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customers are EMS companies located abroad, and our exposure to these foreign customers increased as a result of our December 2002 acquisition of Advanced Circuits. Our foreign sales are denominated in U.S. dollars, and are typically on the same "open credit" basis and terms described above. Our foreign receivables are expected to continue to grow as a percentage of our total receivables. We do not utilize credit insurance as a risk management tool.

**We have expanded our operations through acquisitions, and we may have trouble integrating acquisitions. Acquisitions involve numerous risks.**

As part of our business strategy, we expect that we will continue to grow by pursuing acquisitions of businesses, technologies, assets or product lines that complement or expand our existing business. We currently have no commitments or agreements to acquire any business. Our existing credit facility restricts our ability to acquire the assets or business of other companies, and, accordingly, will require us to obtain the consent of our lenders and could require us to pay significant fees, become subject to reduced liquidity, or become subject to additional or more restrictive covenants in order to consummate such acquisitions. Consequently, we may not be able to identify suitable acquisition candidates or finance and complete transactions that we choose to pursue.

Our acquisition of companies and businesses and expansion of operations involve risks, including the following:

- the potential inability to identify assets best suited to our business plan;
- the potential inability to successfully integrate acquired operations and businesses or to realize anticipated synergies, economies of scale or other expected value;
- diversion of management's attention from normal daily operations of the business;
- difficulties in managing production and coordinating operations at new sites;
- the potential inability to retain existing customers of acquired companies when we desire to do so;
- insufficient revenues to offset increased expenses associated with acquisitions;
- the potential need to restructure, modify or terminate customer relationships of the acquired company;
- an increased concentration of business from existing or new customers; and
- the potential loss of key employees of acquired operations.

Acquisitions may cause us to:

issue common stock that would dilute our current shareholders' percentage ownership;

assume liabilities;

record goodwill and non-amortizable intangible assets that will be subject to impairment testing and potential periodic impairment charges;

enter markets in which we have limited or no prior experience;

incur amortization expenses related to certain intangible assets;

incur large and immediate write-offs;

incur costs whether or not a proposed acquisition is consummated;

incur unanticipated costs; or

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become subject to litigation and environmental issues.

Acquisitions of high-technology companies are inherently risky, and no assurance can be given that our previous or future acquisitions will be successful and will not harm our business, operating results or financial condition. Failure to manage and successfully integrate acquisitions we make could harm our business and operating results in a material way. Even when an acquired company has already developed and marketed products, product enhancements may not be made in a timely fashion. In addition, unforeseen issues might arise with respect to such products after the acquisition.

**If we are unable to respond to rapid technological change and process development, we may not be able to compete effectively.**

The market for our manufacturing services is characterized by rapidly changing technology and continual implementation of new production processes. The future success of our business will depend in large part upon our ability to maintain and enhance our technological capabilities, to manufacture products that meet changing customer needs, and to successfully anticipate or respond to technological changes on a cost-effective and timely basis. We expect that the investment necessary to maintain our technological position will increase as customers make demands for products and services requiring more advanced technology on a quicker turnaround basis. We may not be able to raise additional funds in order to respond to technological changes as quickly as our competitors.

In addition, the printed circuit board industry could encounter competition from new or revised manufacturing and production technologies that render existing manufacturing and production technology less competitive or obsolete. We may not respond effectively to the technological requirements of the changing market. If we need new technologies and equipment to remain competitive, the development, acquisition and implementation of those technologies and equipment may require us to make significant capital investments.

**Competition in the printed circuit board market is intense, and we could lose market share if we are unable to maintain our current competitive position in end markets using our quick-turn, high technology and high-mix manufacturing services.**

The printed circuit board industry is intensely competitive, highly fragmented and rapidly changing. We expect competition to continue, which could result in price reductions, reduced gross margins and loss of market share. Our principal domestic competitors include DDi, Endicott Interconnect Technologies, Merix, Sanmina-SCI and Tyco. In addition, we increasingly compete on an international basis and new and emerging technologies may result in new competitors entering our markets.

Many of our competitors and potential competitors have a number of significant advantages over us, including:

greater financial and manufacturing resources that can be devoted to the development, production and sale of their products;

more established and broader sales and marketing channels;

more manufacturing facilities worldwide, some of which are closer in proximity to OEMs;

manufacturing facilities which are located in countries with lower production costs;

ability to add additional capacity faster or more efficiently;

preferred vendor status with existing and potential customers;

greater name recognition; and

larger customer bases.

In addition, these competitors may respond more quickly to new or emerging technologies, or adapt more quickly to changes in customer requirements and devote greater resources to the development, promotion and sale of their products than we do. We must continually develop improved manufacturing processes to meet our customers' needs for complex products, and our manufacturing process technology is generally not subject to significant proprietary protection. During recessionary periods in the electronics industry, our strategy of providing quick-turn services, an integrated manufacturing solution and responsive customer service may take on reduced importance to our customers. As a result, we may need to compete more on the basis of price, which could cause our margins to decline. Periodically, printed circuit board manufacturers experience overcapacity. Overcapacity, combined with weakness in demand for electronic products, results in increased competition and price erosion for printed circuit boards.

**Our quarterly results of operations are often subject to demand fluctuations and seasonality. With a high level of fixed operating costs, even small revenue shortfalls would decrease our gross margins and potentially cause the trading price of our common stock to decline.**

Our quarterly results of operations fluctuate for a variety of reasons, including:

timing of orders from and shipments to major customers;

the levels at which we utilize our manufacturing capacity;

price competition;

changes in our mix of revenues generated from quick-turn versus standard delivery time services;

expenditures or write-offs, including those related to acquisitions, facility restructurings or asset impairments; and

expenses relating to expanding existing manufacturing facilities.

A significant portion of our operating expenses is relatively fixed in nature, and planned expenditures are based in part on anticipated orders. Accordingly, unexpected revenue shortfalls may decrease our gross margins. In addition, we have experienced sales fluctuations due to seasonal patterns in the capital budgeting and purchasing cycles as well as inventory management practices of our customers and the end markets we serve. In particular, the seasonality of the computer industry and quick-turn ordering patterns impact the overall printed circuit board industry. These seasonal trends have caused fluctuations in our quarterly operating results in the past and may continue to do so in the future. Results of operations in any quarterly period should not be considered indicative of the results to be expected for any future period. In addition, our future quarterly operating results may fluctuate and may not meet the expectations of securities analysts or investors. If this occurs, the trading price of our common stock would likely decline.

**Because we sell on a purchase order basis, we are subject to uncertainties and variability in demand by our customers, which could decrease revenues and harm our operating results.**

We sell to customers on a purchase order basis rather than pursuant to long-term contracts. Our quick-turn orders are subject to particularly short lead times. Consequently, our net sales are subject to short-term variability in demand by our customers. Customers submitting a purchase order may cancel, reduce or delay their order for a variety of reasons. The level and timing of orders placed by our customers vary due to:

customer attempts to manage inventory;

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changes in customers' manufacturing strategies, such as a decision by a customer to either diversify or consolidate the number of printed circuit board manufacturers used or to manufacture its own products internally;

variation in demand for our customers' products; and

changes in new product introductions.

We have periodically experienced terminations, reductions and delays in our customers' orders. Further terminations, reductions or delays in our customers' orders could harm our business, results of operations and financial condition.

**The increasing prominence of EMS providers in the printed circuit board industry could reduce our gross margins, potential sales and customers.**

Our sales to EMS providers increased from approximately 28% of our net sales in 2002 to approximately 61% of our net sales in 2003. EMS providers source on a global basis to a greater extent than OEMs. The growth of EMS providers increases the purchasing power of such providers and could result in increased price competition, or the loss of existing OEM customers. In addition, some EMS providers, including several of our customers, have the ability to directly manufacture printed circuit boards. If a significant number of our other EMS customers were to acquire the ability to directly manufacture printed circuit boards, our customer base may shrink, and our business and net sales may decline substantially. Moreover, if any of our OEM customers outsource the production of printed circuit boards to these EMS providers, our business, results of operations and financial condition may be harmed.

**If we were to increase our amortization of definite-lived intangible assets as a result of additional acquisitions, our earnings could be negatively impacted. Similarly, if we were to revalue our existing intangible assets downward, our operating results would be harmed.**

As of December 31, 2003, our consolidated balance sheet reflected \$76.1 million of goodwill and intangible assets. We evaluate whether events and circumstances have occurred that indicate the remaining balance of goodwill and intangible assets may not be recoverable. When factors indicate that assets should be evaluated for possible impairment, we may be required to reduce the carrying value of our goodwill and intangible assets, which could harm our results during the periods in which such a reduction is recognized. Our goodwill and intangible assets may increase in future periods if we consummate other acquisitions. Amortization or impairment of these additional intangibles would, in turn, harm our earnings.

**We rely on suppliers for the timely delivery of raw materials used in manufacturing our printed circuit boards, and an increase in industry demand or the presence of a shortage for these raw materials may increase the price of these raw materials and reduce our gross margins. If a raw material supplier fails to satisfy our product quality standards, it could harm our customer relationships.**

To manufacture our printed circuit boards, we use raw materials such as laminated layers of fiberglass, copper foil and chemical solutions, which we order from our suppliers. Although we have preferred suppliers for most of our raw materials, the materials we use are generally readily available in the open market, and numerous other potential suppliers exist. However, from time to time manufacturers of products that also use these raw materials increase their demand for these materials and, as a result, the prices of these materials increase. During these periods of increased demand, our gross margins may decrease as we have to pay more for our raw materials. If a raw material supplier fails to satisfy our product quality standards, it could harm our customer relationships. Suppliers may from time to time extend lead times, limit supplies or increase prices

due to capacity constraints or other factors, which could harm our ability to deliver our products on a timely basis.

**Damage to our manufacturing facilities could increase our costs of doing business and adversely affect our ability to deliver our manufacturing services on a timely basis.**

We have three manufacturing facilities, which are located in Chippewa Falls, Wisconsin; Redmond, Washington; and Santa Ana, California. The destruction or closure of any of our manufacturing facilities for a significant period of time as a result of fire, explosion, blizzard, act of war or terrorism, flood, tornado, earthquake, lightning or other natural disaster could increase our costs of doing business and harm our ability to deliver our manufacturing services on a timely basis and, consequently, our operating results.

**Our manufacturing processes depend on the collective industry experience of our employees. If these employees were to leave us, our manufacturing processes may suffer and we may not be able to compete effectively.**

We have limited patent or trade secret protection for our manufacturing process. We rely on the collective experience of our employees in the manufacturing process to ensure we continuously evaluate and adopt new technologies in our industry. Although we are not dependent on any one employee or a small number of employees, if a significant number of our employees involved in our manufacturing process were to leave our employment and we were not able to replace these people with new employees with comparable experience, our manufacturing processes may suffer as we may be unable to keep up with innovations in the industry. As a result, we may lose our ability to continue to compete effectively.

**We may be exposed to intellectual property infringement claims by third parties which could be costly to defend, could divert management's attention and resources and, if successful, could result in liability.**

We could be subject to legal proceedings and claims for alleged infringement by us of third party proprietary rights, such as patents, from time to time in the ordinary course of business. For example, in the past we were informed that our prior use of a chemical solution in our manufacturing process may have infringed upon the intellectual property rights of the holder of the patent of the chemical solution. Although no legal action has been taken against us, any claims relating to this alleged infringement, even if not meritorious, could result in costly litigation and divert management's attention and resources. In addition, if we are unsuccessful in disputing this assertion, we could be required to pay royalties or damages for our past use of the chemical solution. Finally, it is possible that the circuit board designs and other specifications supplied to us by our customers might infringe the patents or other intellectual property rights of third parties, in which case our manufacture of printed circuit boards according to such designs and specifications could expose us to legal proceedings for allegedly aiding and abetting the violation, as well as to potential liability for the infringement. If we do not prevail in any litigation as a result of any of the above or related allegations, our business may be harmed.

**Our business may suffer if any of our key senior executives discontinues employment with us or if we are unable to recruit and retain highly skilled engineering and sales staff.**

Our future success depends to a large extent on the services of our key managerial employees, particularly Kenton Alder, our chief executive officer. We may not be able to retain our executive officers and key personnel or attract additional qualified management in the future. Our business also depends on our continuing ability to recruit, train and retain highly qualified employees, particularly engineering and sales and marketing personnel. The competition for these employees is intense, and the loss of these employees could harm our business. Further, our ability to

successfully integrate acquired companies depends in part on our ability to retain key management and existing employees at the time of the acquisition.

**Products we manufacture may contain design or manufacturing defects, which could result in reduced demand for our services and liability claims against us.**

We manufacture products to our customers' specifications, which are highly complex and may contain design or manufacturing errors or failures despite our quality control and quality assurance efforts. Defects in the products we manufacture, whether caused by a design, manufacturing or materials failure or error, may result in delayed shipments, customer dissatisfaction, or a reduction or cancellation of purchase orders. If these defects occur either in large quantities or too frequently, our business reputation may be impaired. In connection with our acquisition of Advanced Circuits in December 2002, our sales mix shifted towards standard delivery time products, which have larger production runs and thereby increase our exposure to these types of defects. Since our products are used in products that are integral to our customers' businesses, errors, defects or other performance problems could result in financial or other damages to our customers beyond the cost of the printed circuit board, for which we may be liable. Although our invoices and sales arrangements generally contain provisions designed to limit our exposure to product liability and related claims, existing or future laws or unfavorable judicial decisions could negate these limitation of liability provisions. Product liability litigation against us, even if it were unsuccessful, would be time consuming and costly to defend.

**Our failure to comply with the requirements of environmental laws could result in fines and revocation of permits necessary to our manufacturing processes.**

Our operations are regulated under a number of federal, state and foreign environmental and safety laws and regulations that govern, among other things, the discharge of hazardous materials into the air and water, as well as the handling, storage and disposal of such materials. These laws and regulations include the Clean Air Act, the Clean Water Act, the Resource Conservation and Recovery Act, and the Comprehensive Environmental Response, Compensation and Liability Act, as well as analogous state and foreign laws. Compliance with these environmental laws is a major consideration for us because our manufacturing processes use and generate materials classified as hazardous such as ammoniacal etching solutions, copper and nickel. Because we use hazardous materials and generate hazardous wastes in our manufacturing processes, we may be subject to potential financial liability for costs associated with the investigation and remediation of our own sites, or sites at which we have arranged for the disposal of hazardous wastes, if such sites become contaminated. Even if we fully comply with applicable environmental laws and are not directly at fault for the contamination, we may still be liable. The wastes we generate include spent ammoniacal etching solutions, metal stripping solutions and hydrochloric acid solution containing palladium; waste water which contains heavy metals, acids, cleaners and conditioners; and filter cake from equipment used for on-site waste treatment. We believe that our operations substantially comply with all applicable environmental laws. However, any material violations of environmental laws by us could subject us to revocation of our effluent discharge permits. Any such revocations could require us to cease or limit production at one or more of our facilities, and harm our business, results of operations and financial condition. Even if we ultimately prevail, environmental lawsuits against us would be time consuming and costly to defend.

Environmental laws could also become more stringent over time, imposing greater compliance costs and increasing risks and penalties associated with violation. We operate in environmentally sensitive locations and we are subject to potentially conflicting and changing regulatory agendas of political, business and environmental groups. Changes or restrictions on discharge limits, emissions levels, material storage, handling or disposal might require a high level of unplanned capital

investment and/or relocation. It is possible that environmental compliance costs and penalties from new or existing regulations may harm our business, results of operations and financial condition.

**If our net earnings do not continue to recover or we are not able to predict with a reasonable degree of probability that they will continue, we may have to record an additional valuation allowance against our net deferred tax assets.**

As of December 31, 2003, we had net deferred tax assets of approximately \$12.1 million. If we should determine that it is more likely than not that we will not generate taxable income in sufficient amounts to be able to use our net deferred tax assets, we would be required to increase our current valuation allowance against these deferred tax assets. This would result in an additional income tax provision and a deterioration of our results of operations.

**Risks Related to Arthur Andersen LLP**

**We have been unable to obtain any required consents from our former independent public accountants, Arthur Andersen LLP. It is unlikely you would be able to recover damages from them.**

In June 2002, Arthur Andersen was convicted of federal obstruction of justice charges in connection with its destruction of documents related to Enron Corp. and subsequently ceased conducting business. In order to include audited financial statements in a registration statement, we are required to obtain a consent from the independent public accountants who reported on the financial statements. Arthur Andersen cannot provide consents to include financial statements reported on by them in our registration statement. The report covering the financial statements for our fiscal year ended December 31, 2001 was previously issued by Arthur Andersen and has not been reissued by them. Because we are unable to obtain a consent from Arthur Andersen, you will be unable to sue Arthur Andersen under Section 11 of the Securities Act for material misstatements or omissions, if any, in the registration statement and prospectus, including the financial statements covered by their previously issued report. Since Arthur Andersen has ceased conducting business, it is unlikely you would be able to recover damages from Arthur Andersen for any claim against them.

#### **Risks Related to this Offering**

**We will have broad discretion as to the application of our net proceeds from this offering.**

A significant portion of our net proceeds from this offering are contemplated for general corporate purposes. Accordingly, management will have broad discretion as to the application of the offering proceeds. Pending our use of the net proceeds for general corporate purposes, including working capital and potential acquisitions, such proceeds will be invested in short-term, investment-grade securities. It is possible that the return on such investments will be less than that which would be realized were we immediately to use such funds for other purposes.

**The trading price of our common stock has been highly volatile, and we expect this volatility to continue in the future.**

The trading price of our common stock has fluctuated significantly from \$23.88 per share on October 22, 2000 to \$1.20 per share on October 10, 2002 to \$20.55 per share on January 29, 2004. The market price of our common stock may fluctuate further as a result of a number of factors. Factors that could cause fluctuations in the trading price of our common stock include:

actual and anticipated variations in our operating results;

general economic and market conditions;

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interest rates;

geo-political conditions throughout the world;

general conditions, including changes in demand in the printed circuit board industry and the end markets which it serves;

perceptions of the strengths and weaknesses of the printed circuit board industry and the end markets which it serves;

our ability to pay principal and interest on our debt when due;

developments in our relationships with our lenders, customers, and/or suppliers;

announcements of alliances, mergers or other relationships by or between our competitors and/or our suppliers and customers;



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announcements of plant closings, layoffs, restructurings or bankruptcies by our competitors; and

developments related to regulations, including environmental and wastewater regulations.

We expect this volatility to continue in the future. In addition, any shortfall or changes in our revenue, gross margins, earnings or other financial results could also cause the trading price of our common stock to fluctuate significantly. In recent years, the stock market in general has experienced extreme price and volume fluctuations that have affected the printed circuit board industry and that may be unrelated to the operating performance of the companies within these industries. These broad market fluctuations may harm the trading price of our common stock.

### **Shares eligible for public sale after this offering could harm the trading price of our common stock.**

The trading price for our common stock could decline as a result of sales by our existing shareholders of a large number of shares of our common stock in the market after this offering or the perception that such sales may occur. These sales also might make it more difficult for us to sell equity or equity-related securities in the future at a time and price that we deem appropriate. Of the approximately 45.2 million shares that will be outstanding following the completion of this offering:

approximately 43.2 million shares generally will be freely tradable in the public market, including all of the 7.0 million shares offered under this prospectus;

approximately 2.0 million additional shares may be sold after the expiration of the 90-day lock-up agreements entered into by our officers, directors and the selling shareholders in this offering, subject to compliance with the volume limitations and other restrictions of Rule 144; and

approximately 3.2 million additional shares will be eligible for issuance pursuant to options presently outstanding under our existing stock option plans, which shares we anticipate will be freely tradable once issued.

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### **SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS**

All statements, trend analyses and other information contained in this prospectus, including those regarding markets for our manufacturing services and trends in or expectations for net sales, gross profit or expense levels, and any statement that contains the words "anticipate," "believe," "plan," "estimate," "expect," "intend," "seek" and other similar expressions, constitute "forward-looking statements" within the meaning of the Private Securities Litigation Reform Act of 1995. The matters described in these forward-looking statements are subject to business and economic risks, including those risks identified in "Risk Factors" and in the cautionary statements elsewhere in this prospectus and our actual results of operations may differ significantly from those contained in the forward-looking statements because of such risks. Accordingly, the cautionary statements made in this prospectus apply to all forward-looking statements wherever they appear in this prospectus. In addition, these forward-looking statements reflect our current expectations, and we do not undertake to update or revise these forward-looking statements, even if experience or future changes make it clear that any projected results expressed or implied in this prospectus or other statements by us will not be realized.

Market data and forecasts used in this prospectus including, for example, estimates of the size and growth rates of the printed circuit board market, have been obtained from independent industry sources, and we have not verified the data.

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### **USE OF PROCEEDS**

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We estimate that we will receive net proceeds of approximately \$       million from the sale of 4,500,000 shares of our common stock in this offering, after deducting the underwriting discount and estimated offering expenses payable by us. We will not receive any proceeds from the sale of the common stock being offered by the selling shareholders.

We expect to use approximately \$14.5 million of the net proceeds from this offering to purchase capital equipment and approximately \$5.5 million to expand our production capacity, most notably at our Chippewa Falls facility. We expect to use the approximately \$       million of remaining net proceeds for general corporate purposes, including working capital and possible acquisitions. As part of our business strategy, we regularly seek opportunities to acquire businesses, technologies, assets and product lines that complement or expand our existing business, although we have no agreements or understandings relating to any transactions.

A significant portion of our net proceeds from this offering are contemplated for general corporate purposes. Accordingly, management will have broad discretion as to the application of the offering proceeds. Pending our use of such proceeds for general corporate purposes, including working capital and potential acquisitions, such proceeds will be invested in short-term, investment-grade securities.

### DIVIDEND POLICY

We have not paid any dividends since 1998 and we do not anticipate paying any dividends in the foreseeable future. Additionally, our credit facility prohibits the payment of dividends. We presently intend to retain any future earnings to finance future operations and expansion of our business, and to reduce indebtedness.

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### CAPITALIZATION

The following table sets forth our capitalization as of December 31, 2003:

on an actual basis; and

as adjusted to reflect (1) the sale of the 4,500,000 shares of common stock offered by us, at an assumed public offering price of \$       per share, the deduction of the underwriting discounts and estimated offering expenses and the application of the net proceeds we will receive from the offering in the manner described in "Use of Proceeds;" and (2) the sale of 170,000 shares issuable upon the exercise of options by certain selling shareholders who will sell these shares in this offering.

	December 31, 2003	
	Actual	As Adjusted
	(In thousands)	
Cash and cash equivalents	\$ 24,237	\$
Short-term investments	7,508	
Long-term debt, including current maturities	\$ 7,777	\$
Shareholders' equity:		
Common stock, no par value, 100,000,000 shares authorized, and 40,475,302 shares issued and outstanding, actual; and 45,145,302 shares issued and outstanding, as adjusted (1)	153,256	
Retained earnings	25,106	
Deferred stock-based compensation	(35)	

December 31, 2003

Total shareholders' equity		178,327	
Total capitalization	\$	186,104	\$

(1)

Excludes the following shares:

3,346,260 other shares issuable upon exercise of options outstanding under our management stock option plan at a weighted average exercise price of \$8.66 per share; and

approximately 3,566,724 shares available for future issuance under our two stock plans.

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**SELECTED CONSOLIDATED FINANCIAL DATA**  
(In thousands, except per share data)

You should read the selected consolidated financial data set forth below in conjunction with our consolidated financial statements and related notes and "Management's Discussion and Analysis of Financial Condition and Results of Operations" included in or incorporated by reference in this prospectus.

	Year Ended December 31,				
	1999	2000	2001	2002(1)	2003(1)
<b>Statement of Operations Data:</b>					
Net sales	\$ 106,447	\$ 203,729	\$ 128,989	\$ 88,989	\$ 180,317
Cost of goods sold	82,200	127,137	92,235	78,456	145,694
Gross profit	24,247	76,592	36,754	10,533	34,623
<b>Operating expenses:</b>					
Selling and marketing	3,920	10,156	7,272	6,447	10,858
General and administrative	2,584	8,305	5,435	5,519	11,696
Amortization of intangibles(2)	2,230	4,810	4,808	1,202	1,202
Restructuring charges(3)				3,859	649
Amortization of deferred retention bonus	1,849	5,470			
Management fees	439	2,150			
Total operating expenses	11,022	30,891	17,515	17,027	24,405
Operating income (loss)	13,225	45,701	19,239	(6,494)	10,218
<b>Other income (expense):</b>					
Interest expense	(10,432)	(12,176)	(2,644)	(1,084)	(583)
Amortization of debt issuance costs	(755)	(742)	(41)	(105)	(97)

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	Year Ended December 31,				
Interest income and other, net	54	181	629	694	352
Loss on early extinguishments of debt	(2,317)	(9,930)			
Income (loss) before income taxes and extraordinary item	(225)	23,034	17,183	(6,989)	9,890
Income tax (provision) benefit	(2)	5,038	(6,189)	2,278	(3,901)
Income (loss) before extraordinary item	(227)	28,072	10,994	(4,711)	5,989
Extraordinary gain				6,296	1,453
Net income (loss)	\$ (227)	\$ 28,072	\$ 10,994	\$ 1,585	\$ 7,442
Income (loss) per common share, before extraordinary item:					
Basic	\$ (0.01)	\$ 0.88	\$ 0.29	\$ (0.12)	\$ 0.15
Diluted	\$ (0.01)	\$ 0.82	\$ 0.28	\$ (0.12)	\$ 0.15
Income (loss) per common share:					
Basic	\$ (0.01)	\$ 0.88	\$ 0.29	\$ 0.04	\$ 0.19
Diluted	\$ (0.01)	\$ 0.82	\$ 0.28	\$ 0.04	\$ 0.18
Weighted average common shares:					
Basic	22,312	31,919	37,482	39,511	39,993
Diluted	22,312	34,166	38,899	39,511	41,123
<b>Other Financial Data:</b>					
Net cash provided by (used in) operating activities	\$ (2,227)	\$ 43,692	\$ 38,245	\$ 10,011	\$ 18,582
Depreciation of property, plant and equipment	3,635	5,500	8,294	8,761	7,774

December 31,

	1999	2000	2001	2002	2003
<b>Balance Sheet Data:</b>					
Working capital	\$ 13,995	\$ 22,186	\$ 29,099	\$ 40,405	\$ 52,352
Total assets	168,327	202,133	193,076	197,506	205,857
Long-term debt, including current maturities	140,164	43,312	32,625	10,000	7,777
Shareholders' equity	16,537	137,742	150,079	167,426	178,327

- (1) Our results for the year ended December 31, 2002 include only six days of activity of Advanced Circuits, Inc., which we acquired on December 26, 2002. A full year of activity at this subsidiary is included in our results for the year ended December 31, 2003. In both 2002 and 2003, we recorded extraordinary gains related to this acquisition. See Note 3 to our consolidated financial statements incorporated by reference.
- (2) In 2002, we adopted Statement of Financial Accounting Standards ("SFAS") No. 142, "Goodwill and Intangible Assets" and ceased amortizing goodwill. Our expense in 2002 and 2003 solely reflects amortization of intangibles related to our acquisition of Power Circuits in July 1999. See Note 2 to our consolidated financial statements incorporated by reference.
- (3) We recorded restructuring charges in 2002 and 2003 related to the closure of our Burlington, Washington, facility. The charge in 2002 is composed primarily of severance expense and other cash exit costs as well as non-cash expenses to write down the value of the

building and equipment held for sale. The charge in 2003 was to further write down the value of the building and equipment. See Note 4 to our consolidated financial statements incorporated by reference.

**MANAGEMENT'S DISCUSSION AND ANALYSIS OF  
FINANCIAL CONDITION AND RESULTS OF OPERATIONS**

*You should read the following discussion in conjunction with the "Selected Consolidated Financial Data" section of this prospectus, and our consolidated financial statements and the related notes incorporated by reference in this prospectus.*

**Overview**

We are a one-stop provider of time-critical and technologically complex, multilayer printed circuit boards, which serve as the foundation of sophisticated electronic products. We serve high-end commercial markets including networking/communications infrastructure, high-end computing and industrial/medical which are characterized by high levels of complexity, short product life cycles and moderate production volumes. Our customers include OEMs and EMS companies. Our time-to-market and high technology focused manufacturing services enable our customers to reduce the time required to develop new products and bring them to market.

On December 26, 2002, we acquired the stock of Advanced Circuits from Honeywell for a purchase price of one dollar. The total cost of the acquisition, including transaction fees and expenses, was approximately \$900,000. The acquisition was accounted for under the purchase method of accounting. The fair value of the net assets we acquired exceeded the cost to purchase Advanced Circuits, resulting in negative goodwill. In accordance with SFAS No. 141, the amount of negative goodwill was allocated proportionately to reduce the assigned values of the acquired assets, except for current assets and deferred income taxes. We recorded the remaining \$6.3 million of unallocated negative goodwill as an extraordinary gain in 2002. See Note 3 to our consolidated financial statements incorporated herein by reference for a description of the extraordinary gain.

Pursuant to the terms of the acquisition, we were entitled to a purchase adjustment from Honeywell if Advanced Circuit's working capital, as defined in the purchase agreement, was less than \$13.9 million as of the closing date. We made a claim for a purchase price adjustment on account of a working capital shortfall. In the quarter ended March 31, 2003, we settled our claim against Honeywell and received a payment of approximately \$1.4 million for the working capital shortfall, which amount was \$570,000 greater than the settlement we had estimated we would receive as of December 31, 2002. We also resolved certain other indemnification claims with Honeywell during 2003 and finalized certain preliminary estimates of fair value related to assets we acquired and liabilities we assumed that were made as of December 31, 2002. In accordance with SFAS No. 141, we recorded an additional extraordinary gain of approximately \$1.5 million in 2003, of which \$570,000 related to the working capital shortfall discussed above.

The market for our products experienced a sustained downturn during 2001 and 2002 due to the economic slowdown in the electronics industry. During this period, we reduced our work force and focused on cost reduction by improving the efficiency of our operations and negotiating lower prices on key supplies from our vendors. Throughout this period we added new customers and generated positive cash flow from operations. We remained poised for future growth by acquiring Advanced Circuits in December 2002 and by continuing to invest in capital equipment. During 2003, we generated increased sales through our Advanced Circuits acquisition, market share gains and due to the improving economic conditions in our customers' end markets. Our gross profit margin also increased from 2002 to 2003 due to our improved operating leverage as costs that are largely fixed in nature, such as labor, were absorbed over greater production volume. If market conditions continue to improve in 2004, we expect further growth in revenue and further increases in our gross margin.

We manufacture printed circuit boards at three specialized and integrated facilities in the United States. Our facility in Santa Ana, California, specializes in quick-turn work, which has delivery times of 10 days or less and is characterized by small volumes of printed circuit boards. Our Chippewa

Falls, Wisconsin, facility focuses on large-volume production runs of technologically complex multilayer printed circuit boards with average lead times of two to ten weeks. Our Redmond, Washington, facility focuses on mid-volume production of standard lead-time printed circuit boards.

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In response to increased customer demand and higher current capacity utilization rates, our board of directors has approved a plan to significantly expand production capacity at our Chippewa Falls, Wisconsin facility. Chippewa Falls is our largest facility and serves the high-end, complex technology needs of some of our largest and most sophisticated commercial customers. The expansion is planned to occur in two phases that will permit us to incrementally match our capital expenditures with demand and market conditions. Together, the two phases of the plan represent an 85% increase in production capacity. All capacity increases described in phases one and two below represent cumulative increases from current capacity levels.

In the first phase of our expansion plan, we expect to hire approximately 100 additional employees by mid-2004 that will increase our Chippewa Falls' production capacity by more than 20% from current levels using our existing facility footprint. In addition, we expect to immediately commence construction on a 44,000 square foot expansion and have approved the order of capital equipment necessary to support it. We expect that construction of the first phase of the expansion, along with additional employee hires beyond those expected by mid-2004, will increase our Chippewa Falls' capacity by approximately 55% from current levels. The construction and equipment costs related to phase one are expected to be approximately \$10 million. We expect to complete construction of the first phase and reach production by the end of 2004.

The second phase of the expansion plan will allow us to increase production capacity at the Chippewa Falls facility by an additional 30%, or a total of 85%, over current capacity. We expect to accomplish this second phase through additional staffing and the purchase of approximately \$4 million in capital equipment. The implementation of the second phase will be made as demand and market conditions warrant and can be completed within three to six months of determining to proceed. The decision to proceed with the second phase will be revisited on a regular basis throughout 2004 and in future periods.

We believe that our ability to expand at our existing facilities allows us to efficiently grow without having to qualify customers for, and develop a management infrastructure at, a new facility. We have reviewed numerous alternatives to meet our customers' needs and believe that this expansion provides us with a significant opportunity for growth with relatively limited risk. However, if our customers' demand for our services does not increase to the levels we are anticipating, we may decide to scale back or delay our planned expansion.

We measure customers as those companies that have placed at least two orders in the preceding 12-month period. As of December 31, 2003, we had approximately 600 customers. Sales to our 10 largest customers accounted for 63.8% of our net sales in 2003 and 41.8% of our net sales in 2002. We sell to OEMs both directly and indirectly through EMS companies. Sales attributable to our five largest OEM customers accounted for approximately 51.6% of our net sales in 2003.

The following table shows the percentage of our net sales attributable to each of the principal end markets we served for the periods indicated:

End Markets(1)	Year Ended December 31,		
	2001	2002	2003
Networking/Communication	33.6%	30.6%	39.2%
High-End Computing	20.4	14.8	34.8
Industrial/Medical	27.3	25.9	11.9
Computer Peripherals	10.0	20.4	8.9
Handheld/Cellular	3.8	3.0	2.1
Other	4.9	5.3	3.1
<b>Total</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>

(1) Sales to EMS companies are classified by the end markets of their OEM customers.

We measure the time sensitivity of our products by tracking the quick-turn percentage of our work. We define quick-turn orders as those with delivery times of 10 days or less, which typically captures research and development, prototype and new product introduction work in addition to unexpected short-term demand among our customers. Generally, we quote prices after we receive the design specifications and time

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and volume requirements from our customers. Our quick-turn services command a premium price as compared to standard lead time prices. Quick-turn orders represented 45% of revenues in 2002 and 27% of revenues in 2003. The quick-turn percentage decreased due to the acquisition of Advanced Circuits, which produces mainly standard lead-time products. We also deliver a large percentage of compressed lead-time work with lead times of 11 to 20 days. We receive a premium price for this work as well. Purchase orders may be cancelled prior to shipment. We charge customers a fee, based on percentage completed, if an order is cancelled once it has entered production.

We recognize revenues when persuasive evidence of a sales arrangement exists, the sales terms are fixed and determinable, title and risk of loss has transferred, and collectibility is reasonably assured generally when products are shipped to the customer. Net sales consist of gross sales less an allowance for returns, which has typically been less than 2% of gross sales. We provide our customers a limited right of return for defective printed circuit boards. We record an allowance for estimated sales returns at the time of sale based on our historical results. To the extent actual returns vary from our historical experience, revisions to the allowances may be required.

Cost of goods sold consists of materials, labor, outside services and overhead expenses incurred in the manufacture and testing of our products. Many factors affect our gross margin, including capacity utilization, product mix, production volume and yield. As of the end of 2003, we were operating at approximately 80% of our production capacity. We plan to increase our production capacity in stages during 2004 and 2005 by adding new equipment and expanding our facilities. We do not participate in any significant long-term supply contracts, and we believe there are a number of potential suppliers for the raw materials we use. We believe that our cost of goods sold will continue to fluctuate as a percentage of net sales.

Selling and marketing expenses consist primarily of salaries and commissions paid to our internal sales force and commissions paid to independent sales representatives, salaries paid to our sales support staff as well as costs associated with marketing materials and trade shows. As general economic conditions continue to improve, we expect to receive more quick-turn orders due to increased prototype work and new product introduction among our customers. As these quick-turn sales become a higher percentage of total sales, our average commission rate is expected to increase. We generally pay higher commissions to our independent sales representatives for quick-turn work, which generally has a higher gross profit component than standard lead-time work. We expect our selling and marketing expenses to continue to fluctuate as a percentage of net sales.

General and administrative costs primarily include the salaries for executive, finance, accounting, information technologies, facilities and human resources personnel, as well as insurance expenses, expenses for accounting and legal assistance, incentive compensation expense and bad debt expense. We expect these expenses to continue to fluctuate as a percentage of net sales as we add personnel and incur additional costs related to the growth of our business and the requirements of operating as a public company.

Amortization of intangibles consists of intangible assets, which we recorded as a result of the Power Circuits acquisition in July 1999. Effective January 1, 2002, we no longer record amortization on goodwill. However, we continue to amortize our definite-lived intangible assets, which are primarily comprised of strategic customer relationships. Goodwill amortization was \$3.6 million in 2001. See transition disclosures in Note 2 to the 2002 consolidated financial statements incorporated by reference in this prospectus.

Our restructuring charges in 2002 relate primarily to the costs of closing our Burlington, Washington plant. The charges included primarily the costs of laying off employees and non-cash impairment charges related to the Burlington building, property and equipment. Restructuring charges in 2003 relate primarily to severance costs to consolidate overhead operations following the acquisition of Advanced Circuits in December 2002 as well as a further write down of assets held for sale.

Our interest expense relates to our senior credit facility and our other long-term obligations.

Amortization of debt issuance costs consists of the amortization of loan origination fees and related expenses. Interest and other income consist primarily of interest received on our cash balances.

### **Critical Accounting Policies**

Our consolidated financial statements are prepared in accordance with accounting principles generally accepted in the United States of America. The preparation of these financial statements requires management to make estimates and assumptions that affect the reported amounts of assets, liabilities, revenue and expenses, and related disclosure of contingent assets and liabilities. Management 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. Senior management has discussed the development, selection and disclosure of these estimates with the audit committee of our board of directors.

Actual results may differ from these estimates under different assumptions or conditions.

Accounting policies where significant judgments and estimates are made include asset valuation related to bad debts and inventory obsolescence; sales returns and allowances; impairment of long-lived assets, including goodwill and intangible assets; self-insured medical reserves; and realizability of deferred income tax assets. A detailed description of these estimates and our policies to account for them is included in the notes to our consolidated financial statements.

We provide customary credit terms to our customers and generally do not require collateral. We perform ongoing credit evaluations of the financial condition of our customers and maintain an allowance for doubtful accounts based upon historical collections experience and expected collectibility of accounts. Our allowance for doubtful accounts declined in 2003 compared to 2002 despite increasing net sales and accounts receivable primarily as a result of the larger concentration of customers with strong credit profiles and the improved overall quality of our accounts receivable in 2003 compared to 2002. Our actual bad debts may differ from our estimates.

In assessing the realization of inventories, we are required to make judgments as to future demand requirements and compare these with current and committed inventory levels. Our inventory requirements change based on our projected customer demand, which changes due to market conditions, technological and product life cycle changes and longer or shorter than expected usage periods. We maintain certain finished goods inventories near certain key customer locations in accordance with agreements. Although this inventory is typically supported by valid purchase orders, should these customers ultimately not purchase these inventories, our results of operations and financial condition would be adversely affected.

We derive revenues primarily from the sale of printed circuit boards using customer supplied engineering and design plans and recognize revenues when persuasive evidence of a sales arrangement exists, the sales terms are fixed and determinable, title and risk of loss has transferred, and collectibility is reasonably assured generally when products are shipped to the customer. We provide our customers a limited right of return for defective printed circuit boards. We accrue an

estimated amount for sales returns and allowances at the time of sale based on historical information. To the extent actual returns vary from our historical experience, revisions to the allowances may be required.

We have significant long-lived tangible and intangible assets consisting of property, plant and equipment, goodwill and definite-lived intangibles. We review these assets for impairment whenever events or changes in circumstances indicate that the carrying amount of such assets may not be recoverable. In addition, we perform an impairment test related to goodwill at least annually. Our goodwill and intangibles are attributable to our quick-turn business. During the fourth fiscal quarter 2003, we performed an impairment assessment of our goodwill, which requires the use of a fair-value based analysis and determined that no impairment existed. At December 31, 2003, we determined that there were no events or changes in circumstances which indicated that the carrying amount of long-lived tangible assets and definite-lived intangible assets may not be recoverable. We use an estimate of the future undiscounted net cash flows in measuring whether our long-lived tangible assets and definite-lived intangible assets are recoverable. If forecasts and assumptions used to support the realizability of our long-lived assets change in the future, significant impairment charges could result that would adversely affect our results of operations and financial condition.

Deferred income tax assets are reviewed for recoverability and valuation allowances are provided, when necessary, to reduce deferred tax assets to the amounts expected to be realized. At December 31, 2003, we have a net deferred income tax asset of \$12.1 million, which is net of a valuation allowance of approximately \$17.0 million. Should our expectations of taxable income change in future periods, it may be necessary to adjust our valuation allowance, which could positively or negatively affect our results of operations in the period such a determination is made. In addition, we record income tax provision or benefit during interim periods at a rate that is based on expected results for the full year. If future changes in market conditions cause actual results for the year to be more or less favorable than those expected, adjustments to the effective income tax rate could be required.

We are self-insured for group health insurance benefits provided to our employees, and purchase insurance to protect against claims at the individual and aggregate level. The insurance carrier adjudicates and processes employee claims and is paid a fee for these services. We reimburse our insurance carrier for paid claims subject to variable monthly limitations. We estimate our exposure for claims incurred but not paid at the end of each reporting period and use historical information supplied by our insurance carrier and broker to estimate our liability for these claims. This liability is subject to a total limitation that varies based on employee enrollment and factors that are established at each annual contract renewal. Our actual claims experience may differ from our estimates.

In connection with our acquisition of Advanced Circuits in December 2002, we became contractually responsible for the majority of a rebate obligation to a customer. The rebate is based on a percentage of net sales to this customer. We have made estimates regarding the amount



and timing of future net sales to this customer and have applied a discount factor to the estimated rebates to estimate the present value of our obligation. We have also estimated that portion of the total obligation which we believe is a current liability. Based on our future net sales experience with this customer, we may change our estimate of the portion that is a current liability.

## RESULTS OF OPERATIONS

The following table sets forth statement of operations data expressed as a percentage of net sales for the periods indicated:

	Year Ended December 31,		
	2001	2002	2003
Net sales	100.0%	100.0%	100.0%
Cost of goods sold	71.5	88.2	80.8
<b>Gross profit</b>	<b>28.5</b>	<b>11.8</b>	<b>19.2</b>
Operating expenses:			
Selling and marketing	5.6	7.2	6.0
General and administrative	4.2	6.2	6.5
Amortization of intangibles	3.8	1.4	0.7
Restructuring charges		4.3	0.3
<b>Total operating expenses</b>	<b>13.6</b>	<b>19.1</b>	<b>13.5</b>
Operating income (loss)	14.9	(7.3)	5.7
Other income (expense):			
Interest expense	(2.0)	(1.2)	(0.3)
Amortization of debt issuance costs		(0.1)	(0.1)
Interest income and other, net	0.4	0.8	0.2
<b>Income (loss) before income taxes and extraordinary item</b>	<b>13.3</b>	<b>(7.8)</b>	<b>5.5</b>
Income tax (provision) benefit	(4.8)	2.5	(2.2)
<b>Income (loss) before extraordinary item</b>	<b>8.5</b>	<b>(5.3)</b>	<b>3.3</b>
Extraordinary gain		7.1	0.8
<b>Net income</b>	<b>8.5%</b>	<b>1.8%</b>	<b>4.1%</b>

### Year Ended December 31, 2003 Compared to Year Ended December 31, 2002

The full year 2003 includes the results of operations of Advanced Circuits, which was acquired in a stock purchase on December 26, 2002. Advanced Circuits' results of operations are included for six days in 2002.

#### Net Sales

Net sales increased 102.6% from \$89.0 million in 2002 to \$180.3 million in 2003 due to increases in both price and production volume. Improving prices accounted for approximately 22% of the increase in total revenue. This price improvement was due to a number of factors, including an improving economy in 2003; the shift toward end markets, such as networking and high-end computing, that are characterized by faster growth and higher prices; and the increasing complexity of our product offering. We generally charge higher prices for printed circuit

boards with high layer counts and other high-technology features because of both the higher material content and the greater level of skill required to manufacture these boards accurately. Increased production volume accounted for approximately 78% of the increase in revenue from 2002 to 2003. Advanced Circuits, which we acquired in December 2002, accounted for more than one-half of our total net sales for 2003. The combined net sales of our remaining facilities declined by approximately 5% due to the closure of our Burlington, Washington plant in December 2002.

#### *Gross Profit*

Cost of goods sold increased \$67.2 million, or 85.7%, from \$78.5 million in 2002 to \$145.7 million in 2003. Higher cost of goods sold resulted from higher labor, materials and variable overhead costs associated with an increase in the number of printed circuit boards sold. The volume of boards sold increased due to the acquisition of Advanced Circuits partially offset by lower

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aggregate volumes sold at our remaining facilities. In addition, a reduction in fixed costs due to the closure of our Burlington facility favorably impacted our cost structure. As a percentage of net sales, cost of goods sold decreased from 88.2% for 2002 to 80.8% for 2003 primarily due to improved absorption of manufacturing overhead and greater labor efficiency. In addition, we benefited from lower unit pricing for our direct materials, partially offset by higher direct materials costs associated with a sales mix shift towards higher layer-count boards and certain expenses associated with our up-front investments in 2003 in equipment, additional employees and expanded capacity at our Redmond facility. In connection with our acquisition of Advanced Circuits, no value was assigned to the acquired property and equipment and accordingly, we record no depreciation expense for these acquired assets. We expect our depreciation expense to increase in the future as a result of our planned Chippewa Falls facility expansion.

Expenditures for information technology salaries and expenses for 2002 have been reclassified to general and administrative expenses to conform to the presentation for 2003. This reclassification more appropriately reflects the overall corporate nature of our information technology expenses. As a percentage of net sales, the reclassification reduced cost of goods sold and increased gross profit by 1.1% in 2002.

As a result of the foregoing, gross profit increased \$24.1 million, or 228.7%, from \$10.5 million in 2002 to \$34.6 million in 2003. Our gross margin improved to 19.2% in 2003 from 11.8% in 2002. The improvement in our gross margin was due largely to increased absorption of fixed costs. Printed circuit board manufacturing is a multi-step process that requires a certain level of equipment and staffing for even minimal production volumes. As production increases, our employees are able to work more efficiently and produce more printed circuit boards without incurring significant cost increases. These gains in efficiency helped offset the increased costs related to our shift in 2003 toward more complex work characterized by higher layer count. Our average layer count increased from 8.6 in 2002 to 14.3 in 2003 due to the acquisition of Advanced Circuits.

#### *Operating Expenses*

Sales and marketing expenses increased \$4.5 million from \$6.4 million, or 7.2% of net sales, in 2002 to \$10.9 million, or 6.0% of net sales, in 2003. The decrease as a percentage of net sales resulted from improved absorption of fixed selling costs and a lower commission rate associated with a mix shift to more standard lead-time products due primarily to our acquisition of Advanced Circuits.

General and administrative expenses increased \$6.2 million from \$5.5 million, or 6.2% of net sales, in 2002 to \$11.7 million, or 6.5% of net sales, in 2003. The increase in expenses as a percentage of net sales resulted primarily from higher personnel costs principally attributable to our acquisition of Advanced Circuits; higher corporate governance expenses, principally higher directors' and officers' liability insurance premiums and accounting and legal fees; increased incentive compensation expense; transition costs to integrate Advanced Circuits; an increase in the bad debt provision; and higher information technology costs. Information technology salaries and expenses for 2002 have been reclassified from cost of goods sold to general and administrative expenses to conform to the presentation for 2003.

Amortization of intangibles was for intangible assets with finite lives from the Power Circuits acquisition, which occurred in July 1999. Amortization of intangibles was \$1.2 million in both 2002 and 2003.

During the second quarter of 2002, we reduced our labor force at our Burlington, Washington, facility. During the fourth quarter of 2002, we consolidated manufacturing capabilities by closing our Burlington, Washington facility to better manage and control our business. As a result, we recorded \$3.9 million in total restructuring charges in 2002. These charges included the impairment of the

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building, property and equipment of \$1.8 million, employee termination and severance of \$1.5 million and other exit costs of \$0.6 million associated with the facility closure. We terminated a total of 193 employees, which were primarily involved in the manufacturing process. During the first quarter of 2003, we took a \$0.2 million restructuring charge for severance and other exit charges primarily in connection with the lay off of 45 employees at our Redmond, Washington facility.

During 2002, we designated building and equipment with a remaining net book value of \$2.8 million as assets held for sale. During 2003, we reviewed the fair value of the remaining assets held for sale for possible impairment and recorded an additional impairment charge of \$0.4 million. At December 31, 2003, the carrying value of the remaining assets held for sale was \$2.3 million. These assets have been stated at their estimated fair value less selling costs, and we are actively marketing the assets for sale. Due to the inherent uncertainty of the estimates involved, the value of the assets held for sale could change in the near term, which could result in an additional impairment charge. The chart below shows the additions to and utilization of the accrued restructuring charges during the years ended December 31, 2002 and 2003.

	<u>Severance</u>	<u>Other Exit Charges</u>	<u>Impairment Charge</u>	<u>Total</u>
	(in thousands)			
2002 Charge	\$ 1,459	\$ 562	\$ 1,838	\$ 3,859
Utilization	(1,134)	(358)	(1,838)	(3,330)
Accrued at December 31, 2002	325	204		529
2003 Charge	200	3	446	649
Utilization	(525)	(117)	(446)	(1,088)
Accrued at December 31, 2003	\$	\$ 90	\$	\$ 90

We expect to pay the remaining \$90,000 of other exit charges during 2004.

Our reduction in force at our Burlington, Washington facility in the second quarter of 2002 resulted in annual cost savings of approximately \$4 million, which began in the third quarter of 2002. We experienced annual cost savings of approximately \$3 million in 2003 from the closure of Burlington, Washington facility in the fourth quarter of 2002.

#### *Income Taxes*

The provision for income taxes increased by \$6.2 million from a benefit of \$2.3 million in 2002 to a provision of \$3.9 million in 2003. The income tax benefit in 2002 resulted from a pretax loss before extraordinary item, and the income tax provision in 2003 resulted from pretax income before extraordinary item. Our effective income tax rate in 2002 was 32.6%, and it was 39.4% in 2003. Our effective income tax rate is primarily impacted by state income taxes, which vary due to the sales and profitability mix among our facilities as well as certain non-deductible items.

#### *Extraordinary Gain*

In 2003, we recorded an additional extraordinary gain of \$1.5 million after resolving contingencies concerning the fair value of certain assets acquired and liabilities assumed as part of our acquisition of Advanced Circuits, including the settlement of a claim for a working capital adjustment. In 2002, we recorded an extraordinary gain of \$6.3 million as part of our acquisition of Advanced Circuits. The fair value of the net assets acquired exceeded the cost to purchase Advanced Circuits, resulting in negative goodwill. In accordance with SFAS No. 141, the amount of negative goodwill was allocated proportionately to reduce the assigned values of acquired assets except current assets and deferred income taxes. The remaining unallocated negative goodwill was

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recorded as an extraordinary gain. See Note 3 to our consolidated financial statements incorporated herein by reference for a description of the extraordinary gains.

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

#### *Net Sales*

Net sales decreased 31.0% from \$129.0 million in 2001 to \$89.0 million in 2002 due to declines in both price and production volume. Falling prices accounted for approximately 15% of the decrease in total revenue. Prices fell due to a significant downturn that began in 2001 in the electronics industry and in the end markets served by our customers. This decline in prices was offset somewhat by an increase in our quick-turn production volume. Quick-turn production as a percentage of revenue increased from 40% in 2001 to 47% in 2002. We generally charge higher prices for printed circuit boards with shorter lead times because of the greater level of skill required to manufacture these boards accurately and on time. Declining production volume accounted for approximately 85% of the decline in revenue from 2002 to 2001. The acquisition of Advanced Circuits in December 2002 accounted for approximately \$1.4 million of our net sales in 2002.

#### *Cost of Goods Sold*

Cost of goods sold decreased \$13.7 million, or 14.9%, from \$92.2 million in 2001 to \$78.5 million in 2002. The decrease in cost of goods sold resulted from lower labor, materials and variable overhead costs that were associated with a decline in the number of printed circuit boards sold. As a percentage of net sales, cost of goods sold increased from 71.5% in 2001 to 88.2% in 2002. Higher medical expense, higher depreciation expense and an increase in unabsorbed manufacturing overhead due to excess capacity partially offset by a reclassification of information technology expenses in 2002 resulted in a higher cost of goods sold percentage. Expenditures for information technology salaries and expenses for 2002 have been reclassified to general and administrative expenses to conform to the presentation for 2003. This reclassification more appropriately reflects the overall corporate nature of our information technology expenses. As a percentage of net sales, the reclassification reduced cost of goods sold and increased gross profit by 1.1% in 2002.

#### *Gross Profit*

Gross profit decreased \$26.3 million, or 71.3%, from \$36.8 million in 2001 to \$10.5 million in 2002. This decrease in gross profit resulted primarily from a lower volume of printed circuit boards sold and to a lesser extent from lower pricing levels. Our gross margin was 11.8% in 2002 compared to 28.5% in 2001. Gross margin decreased due to increased medical expense, increased depreciation expense and lower absorption of fixed manufacturing expenses partially offset by a reclassification of information technology expenses in 2002.

#### *Operating Expenses*

Sales and marketing expenses decreased \$0.9 million from \$7.3 million in 2001 to \$6.4 million in 2002. The decrease resulted from lower commissions to sales representatives due to lower net sales in 2002. As a percentage of net sales, selling expenses increased from 5.6% in 2001 to 7.2% in 2002. The increase as a percentage of net sales was due to lower absorption of fixed sales and marketing expenses and higher average per-unit commissions related to a higher proportion of quick-turn sales in 2002.

General and administrative expenses increased \$0.1 million from \$5.4 million in 2001 to \$5.5 million in 2002. This increase resulted from the reclassification of information technology expenses from cost of goods sold to general and administrative expense in 2002 as well as higher

costs for directors and officers insurance and a higher bad debt provision. As a percentage of sales, general and administrative expenses increased to 6.2% of sales in 2002 from 4.2% of sales in 2001.

Amortization of intangibles consists of amortization of goodwill and other intangible assets from the Power Circuits acquisition, which occurred in July 1999. Amortization of intangibles decreased \$3.6 million from \$4.8 million in 2001 to \$1.2 million in 2002. This decrease resulted from our adoption of Statement of Financial Accounting Standards ("SFAS") No. 142, "Goodwill and Other Intangible Assets," effective January 1, 2002. Under the new rules, goodwill is not amortized, rather it is subject to impairment testing. The amortization expense recorded in 2002 was for definite-lived intangible assets.

During the second quarter of 2002, the Company reduced its labor force at its Burlington, Washington, facility. During the fourth quarter of 2002, the Company consolidated manufacturing capabilities by closing its Burlington, Washington facility to better manage and control its

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business. As a result, the Company recorded \$3.9 million in total restructuring charges in 2002. These charges included the impairment of the building, property and equipment of \$1.8 million, employee termination and severance of \$1.5 million and other exit costs of \$0.6 million associated with the facility closure. The Company terminated a total of 193 employees which were primarily involved in the manufacturing process.

The chart below shows the additions to and utilization of the accrued restructuring charges during the year ended December 31, 2002.

	Severance	Other Exit Charges	Impairment Charge	Total
	(in thousands)			
2002 Charge	\$ 1,459	\$ 562	\$ 1,838	\$ 3,859
Utilization	(1,134)	(358)	(1,838)	(3,330)
<b>Accrued at December 31, 2002</b>	<b>325</b>	<b>204</b>	<b>1,838</b>	<b>3,377</b>

We expect to pay the remaining \$0.3 million of severance during the first fiscal quarter 2003 and the \$0.2 million of other exit charges during 2003.

Our reduction in force at our Burlington, Washington facility in the second quarter is expected to result in annualized cost savings of approximately \$4 million beginning in the third quarter of 2002. As a result of the closure of Burlington, Washington facility in the fourth quarter of 2002, we estimate that our costs will be reduced by approximately \$3 million per year beginning in 2003.

### *Interest Expense*

Interest expense decreased \$1.5 million from \$2.6 million in 2001 to \$1.1 million in 2002. This decrease resulted from a lower interest rate on our term loan as well as a lower balance due to repayment of principal. The expiration of an interest rate swap agreement on December 31, 2001, also contributed to the decline in interest expense through a reduction in our effective interest rate.

### *Amortization of Debt Issuance Costs*

Amortization of debt issuance costs increased \$64,000 from \$41,000 in 2001 to \$105,000 in 2002. In December 2002, we prepaid approximately \$14.5 million of our borrowings under our senior credit facility in connection with the closing of our acquisition of Advanced Circuits. As a result of our prepayment of indebtedness, we wrote off additional debt issuance costs.

### *Interest Income and Other, Net*

Interest income and other, net, increased \$0.1 million from income of \$0.6 million in 2001 to income of \$0.7 million in 2002. This increase resulted from higher cash balances, partially offset by lower interest rates earned.

### *Income Taxes*

The provision for income taxes decreased from a provision of \$6.2 million in 2001 to a benefit of \$2.3 million in 2002. This income tax benefit resulted from a pretax net loss. Our effective income tax rate in 2002 was 32.6%, and it was 36% in 2001. Our effective income tax rate is primarily impacted by certain non-deductible items.

### *Extraordinary Gain*

In 2002, we recorded an extraordinary gain of \$6.3 million as part of our acquisition of Advanced Circuits. The fair value of the net assets acquired exceeded the cost to purchase Advanced Circuits, resulting in negative goodwill. In accordance with SFAS No. 141, the amount of negative goodwill was allocated proportionately to reduce the assigned values of acquired assets except current assets and deferred income taxes. The remaining unallocated negative goodwill was recorded as an extraordinary gain. See Note 3 to our consolidated financial statements for the description of the extraordinary gain.

**Liquidity and Capital Resources**

Our principal sources of liquidity have been cash provided by operations, proceeds from our public offerings and proceeds from employee exercises of stock options. Our principal uses of cash have been to meet debt service requirements, finance capital expenditures, fund working capital and finance mergers and acquisitions. We anticipate that these uses will continue to be the principal demands on our cash in the future. As of December 31, 2003, we had net working capital of approximately \$52.4 million, compared to \$40.4 million as of December 31, 2002. The increase in working capital is primarily attributable to increases in cash, short-term investments and accounts receivable.

Our 2004 capital plan is expected to total \$20 million and reflects capacity expansion at all three of our facilities. The capital plan includes approximately \$10 million for the first phase of our planned Chippewa Falls facility expansion. In addition to this planned expansion, our capital plan for 2004 includes \$10 million that primarily will fund capital equipment purchases to increase capacity and expand our technological capabilities throughout our facilities. The second phase of our Chippewa Falls capacity expansion, not currently included in the 2004 capital plan, would cost approximately \$4 million and would be made as demand and market conditions warrant. This second phase could be completed within three to six months of determining to proceed and will be revisited on a regular basis throughout 2004 and in future periods.

The following table provides information on future payments under the Company's credit facility, future minimum lease payments under non-cancelable operating leases and other long-term

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liabilities reflected on our balance sheet under generally accepted accounting principles as of December 31, 2003 (in thousands):

<b>Contractual Obligations</b>	<b>Total</b>	<b>Less than 1 year</b>	<b>1-3 years</b>	<b>4-5 years</b>	<b>After 5 years</b>
Long-term debt	\$ 7,777	\$ 4,444	\$ 3,333	\$	\$
Operating leases	699	189	192	34	284
Other long-term liabilities(1)	3,132	1,111	2,008	13	
<b>Total contractual cash obligations</b>	<b>\$ 11,608</b>	<b>\$ 5,744</b>	<b>\$ 5,533</b>	<b>\$ 47</b>	<b>\$ 284</b>

(1)

Our balance sheet reflects these other long-term liabilities at their net present value.

Based on our current level of operations, we believe that cash generated from operations, available cash and amounts available under our senior credit facility will be adequate to meet our currently anticipated debt service requirements, capital expenditures and working capital needs for the next 12 months and beyond. Our principal liquidity needs for periods beyond the next 12 months are for the cost of repaying the remaining balance of our senior term loan, other contractual obligations and for the second phase of our planned Chippewa Falls expansion described above.

Net cash provided by operating activities was \$18.6 million in 2003, compared to \$10.0 million in 2002. Our 2003 operating cash flow of \$18.6 million primarily reflects net income of \$7.4 million, \$9.4 million of depreciation, amortization and imputed interest expense, and a \$4.2 million decrease in deferred income taxes, partially offset by a net increase in working capital of \$1.4 million, excluding cash and short-term investments.

Net cash used in investing activities was \$14.1 million in 2003, compared to \$8.5 million in 2002. In 2003, we purchased \$6.6 million of property, plant and equipment and \$7.5 million in net short-term investments.

Net cash provided by financing activities was \$0.9 million in 2003, compared to \$7.1 million used in financing activities in 2002. Our 2003 financing cash flow reflects net proceeds of \$3.3 million from a secondary stock offering and employee stock option exercises, partially offset by \$2.2 million in principal repayments on our long-term debt.

We amended our senior credit agreement as of April 30, 2003. We have a term loan with a remaining balance of \$7.8 million that is payable in equal quarterly installments through September 30, 2005. We have a committed revolving loan facility of \$25.0 million with a final maturity date of September 29, 2005. We may prepay the term loan and borrow, repay and reborrow under the revolving loan facility at any time. The term loan and the revolving loan bear interest at rates ranging from LIBOR plus 1.5% to 2.5% or the Alternate Base Rate (as defined in the credit agreement) plus 0.5% to 1.0%. The amount added to the LIBOR rate or the Alternate Base Rate varies depending upon the Company's leverage ratio as defined in the agreement. As of December 31, 2003, the term loan had a weighted average interest rate of 2.71%. Since the amendment effective date of April 30, 2003, our borrowings under the revolving facility are subject to a borrowing base or formula that is based on our accounts receivable and inventory. As of December 31, 2003, we had no outstanding revolving loan balances. We pay quarterly a commitment fee ranging from 0.30% to 0.45% on the unused revolving commitment amount. The credit facility is secured by substantially all of our assets and contains financial covenants customary for this type of financing. As of December 31, 2003, we were in compliance with the covenants and had \$16.9 million of available borrowing capacity under our revolving loan facility.

### **Foreign Currency Exchange Risk**

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 sales made.

### **Impact of Inflation**

We believe that our results of operations are not dependent upon moderate changes in the inflation rate as we expect that we will be able to pass along component price increases to our customers.

### **Seasonality**

We have historically experienced lower sales in our second and third fiscal quarters due to patterns in the capital budgeting and purchasing cycles of our customers and the end markets they serve. In particular, this effect is caused by the seasonality of our high-end computing segment and customer quick-turn ordering patterns. We expect to mitigate the impact of seasonality through diversification of our customer base.

## **BUSINESS**

### **Overview**

We are a one-stop provider of time-critical and technologically complex printed circuit boards, which serve as the foundation of sophisticated electronic products. We serve high-end commercial markets including networking/communications infrastructure, high-end computing and industrial/medical which are characterized by high levels of complexity, short product life cycles and moderate production volumes. Our customers include OEMs and EMS companies.

### **Industry Background**

Printed circuit boards are manufactured from sheets of laminated material, or panels. Each panel is typically subdivided into multiple printed circuit boards, each consisting of a pattern of electrical circuitry etched from copper to provide an electrical connection between the components mounted to it.

Printed circuit boards serve as the foundation for virtually all electronic products, ranging from consumer products (such as cellular telephones and personal computers) to high-end commercial electronic equipment (such as medical equipment, data communications routers and switches, and servers). Generally, consumer electronics products utilize commodity-type printed circuit boards with lower layer counts, less complexity and larger production runs. High-end commercial equipment products require more customized, multilayer printed circuit boards using advanced technologies. In addition, most commercial end-markets have low volume requirements that demand a highly flexible manufacturing environment. As producing sophisticated circuit boards becomes more complex, high-end manufacturers must continually invest in advanced production equipment, engineering and process technology, and a skilled workforce.

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According to Henderson Ventures, the worldwide market for printed circuit boards was approximately \$32.2 billion in 2003, with North America producing 16.5%, or \$5.3 billion. As a result of consolidation and the slowdown in the electronics industry in 2001 and 2002, many manufacturing facilities were closed, reducing North American printed circuit board manufacturing capacity by an estimated 30% to 40%. Management believes that this reduced capacity will provide significant opportunities for well-capitalized manufacturers that have advanced technological capabilities, particularly if the global electronics industry continues to improve.

We see several trends for the printed circuit board manufacturing industry. These include:

*Short electronic product life cycles.* Continual advances in technology have shortened the life cycles of complex electronic products, placing greater pressure on OEMs to quickly bring new products to market. The accelerated time-to-market and ramp-to-volume needs of OEMs of high-end commercial equipment creates opportunities for printed circuit board manufacturers that can offer engineering support in the prototype stage and manufacturing scalability throughout the production life cycle.

*Increasing complexity of electronic products.* OEMs are continually designing higher performance electronic products, which require technologically complex printed circuit boards that can accommodate higher speeds and component densities. These complex printed circuit boards often require very high layer counts, advanced manufacturing processes and high-mix production capabilities. OEMs are increasingly relying upon larger printed circuit board manufacturers who possess the financial resources necessary to invest in advanced manufacturing process technologies and sophisticated engineering staff, often to the exclusion of smaller printed circuit board manufacturers which do not possess such technology or resources.

*Increasing competition from Asian manufacturers.* In recent years, many electronics manufacturers have moved their production to Asia to take advantage of its exceptionally large,

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low-cost labor pool. This is particularly true for consumer electronics producers that utilize commodity-type printed circuit boards with lower layer counts and complexity. These less sophisticated printed circuit boards are generally mass produced and have experienced significant pricing pressures from Asian manufacturers. Printed circuit boards requiring complex technologies, advanced manufacturing processes, quick turnaround times or high-mix production are subject to less foreign competition. In addition, many of the unique challenges involved in successfully designing and manufacturing highly complex printed circuit the ongoing capital investment required to maintain state-of-the-art capabilities have effectively served as barriers to entry in these high-mix and high-complexity segments of the domestic printed circuit board industry.

*Decreased reliance on multiple printed circuit board manufacturers by OEMs.* OEMs have traditionally relied on multiple printed circuit board manufacturers to provide different services as an electronic product moves through its life cycle. The transfer of a product among different printed circuit board manufacturers often results in increased costs and inefficiencies due to incompatible technologies and manufacturing processes and production delays. As a result, OEMs are reducing the number of printed circuit board manufacturers on which they rely, presenting an opportunity for those that can offer one-stop manufacturing capabilities from prototype to volume production.

### **The TTM Solution**

We manufacture printed circuit boards that satisfy our customers' needs throughout all stages of an electronic product's life cycle from prototype to volume production. Key aspects of our solution include:

*One-stop manufacturing solution.* We offer a one-stop manufacturing solution to our customers through our specialized and integrated facilities, each of which generally focuses on a different stage of an electronic product's life cycle. This one-stop solution allows us to provide a broad array of services and technologies to meet the rapidly evolving needs of our customer base.

*Quick-turn services.* We deliver highly complex printed circuit boards to customers in significantly compressed lead times. This rapid delivery service enables OEMs to develop sophisticated electronic products quickly and reduce time to market. In addition, our quick-turn services provide us with an opportunity to cross-sell our other services, including high-mix and volume production in our targeted end markets.



*Strong process and technology expertise.* We deliver time-critical and highly complex manufacturing services through our advanced manufacturing processes and technology expertise. We regularly manufacture printed circuit boards with up to 32 layers. For 2003, approximately 63% of our gross sales involved the manufacture of printed circuit boards with at least 12 layers and 29% involved printed circuit boards with at least 20 layers.

## **Our Manufacturing Services**

### *Quick-turn*

We refer to our rapid turnaround services as "quick-turn" because we provide custom-designed printed circuit boards to our customers within as little as 24 hours to 10 days. As a result of our ability to rapidly and reliably respond to the critical time requirements of our customers, we generally receive a premium for our quick-turn services as compared to standard lead time prices.

*Prototype production.* In the design, testing and launch phase of a new electronic product's life cycle, our customers typically require limited quantities of printed circuit boards in a very short period of time. We satisfy this need by manufacturing prototype printed circuit boards in small quantities of up to 50 boards per order with delivery times ranging from as little as 24 hours to 10 days.

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*Ramp-to-volume production.* After a product has successfully completed the prototype phase, our customers introduce the product to the market and require larger quantities of printed circuit boards in a short period of time. This transition stage between low-volume prototype production and volume production is known as ramp-to-volume. Our ramp-to-volume services typically include manufacturing up to several hundred printed circuit boards per order with delivery times ranging from two to 10 days.

For the years ended December 31, 2002 and 2003, orders with delivery requirements of 10 days or less represented 45% and 27% of our gross sales, respectively. Quick-turn orders decreased as a percentage of our gross sales in 2003 primarily due to the change in order mix resulting from December 2002 our acquisition of Advanced Circuits, which focuses primarily on manufacturing technologically complex printed circuit boards with standard delivery times.

### *Standard delivery time*

Our standard delivery time services focus on the high-mix and complex technology requirements of our customers, with delivery times typically ranging from three to five weeks. High-mix manufacturing involves processing small lots, generally up to several hundred printed circuit boards, in a flexible manufacturing environment. Our high technology expertise is evidenced by our ability to regularly produce complex printed circuit boards with up to 32 layers in commercial volumes. In addition, many of our lower layer-count circuit boards are complex as a result of the incorporation of other technologically advanced features, including high performance materials and extremely fine geometries and tolerances. Our acquisition of Advanced Circuits significantly increased our ability to produce technologically complex printed circuit boards for high-end commercial applications. As a result, our average layer count increased from 8.6 in 2002 to 14.3 in 2003. Although we provide standard delivery time services to customers, including large OEMs, for high end commercial applications, we do not target our standard delivery time services to high-volume, consumer electronic applications such as cellular telephones, personal computers, hand-held devices and automotive products.

## **Strategy**

Our goal is to be the leading provider of time-critical, one-stop manufacturing services for highly complex printed circuit boards. Key aspects of our strategy include:

*Leveraging our one-stop manufacturing solution.* Our quick-turn capabilities allow us to establish relationships with customers early in a product's life cycle, giving us an advantage in securing preferred vendor status for subsequent ramp-to-volume and volume production opportunities. We also seek to gain quick-turn business from our existing ramp-to-volume and volume customers.

*Using our quick-turn capabilities to attract new customers with high-growth potential.* Our time-to-market strategy focuses on the rapid introduction and short product life cycle of advanced electronic products. We continue to attract emerging companies to our Santa Ana facility and believe that our ability to rapidly and reliably respond to the critical time requirements of our customers provides us with a significant competitive advantage.

*Continuing to improve our technological capabilities and manufacturing processes.* We are consistently among the first to adopt new developments in printed circuit board manufacturing processes and technology. We continuously evaluate new manufacturing processes and technology to further reduce our delivery times, improve quality, increase yields and decrease costs. As a result of our strong balance sheet, we believe that we are well-positioned to invest in technologies that are required by the leading OEMs in the electronics industry.

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*Capitalizing on facility specialization to enhance operating efficiency.* We utilize a facility specialization strategy in which each order is directed to the facility best suited to the customer's particular delivery time, product complexity and volume needs. Our three facilities use compatible technologies and manufacturing processes, allowing us to move orders easily between plants to optimize operating efficiency. This strategy provides customers with faster delivery times and enhanced product quality and consistency.

*Expanding our presence in targeted markets through internal initiatives and selective acquisitions.* We actively target technologies and business opportunities that enhance our competitive position in selected markets. We intend to pursue high-end commercial customers, which demand flexible and advanced manufacturing processes, expertise with high-performance specialty materials and other high-mix and complex technology capabilities. Our acquisition of Advanced Circuits exemplifies our ability to successfully expand our complex technology and specialty materials expertise, and we will consider additional acquisitions that increase our position in our targeted markets. In addition, we regularly evaluate and pursue internal initiatives aimed at adding new customers and better serving existing customers within our markets. As an example, in response to increased customer demand and higher current capacity utilization rates, our board of directors has approved a plan to significantly expand production capacity at our Chippewa Falls, Wisconsin facility. The planned expansion will enable us to increase our production capacity in Chippewa Falls by approximately 55% over current capacity by the end of 2004 and by approximately 85% over current capacity when fully implemented.

## **Manufacturing Technology**

The market for our products is characterized by rapidly evolving technology. In recent years, the trend in the electronic products industry has been to increase the speed, complexity and performance of components while reducing their size. We believe our technological capabilities allow us to address the needs of manufacturers who must bring complicated electronic products to market faster.

To manufacture printed circuit boards, we generally receive circuit designs directly from our customers in the form of computer data files, which we review to ensure data accuracy and product manufacturability. Processing these computer files with computer aided design (CAD) technology, we generate images of the circuit patterns that we then physically develop on individual layers, using advanced photographic processes. Through a variety of plating and etching processes, we selectively add and remove conductive materials to form horizontal layers of thin circuits, called traces, which are separated by insulating material. A finished multilayer circuit board laminates together a number of layers of circuitry, using intense heat and pressure under vacuum. Vertical connections between layers are achieved by plating through small holes, called vias. Vias are made by highly specialized drilling equipment capable of achieving extremely fine tolerances with high accuracy. We specialize in high layer-count printed circuit boards with extremely fine geometries and tolerances. Because of the tolerances involved, we employ clean rooms in certain manufacturing processes where tiny particles might otherwise create defects on the circuit patterns. We also use automated optical inspection systems to ensure consistent quality.

We believe that our highly specialized equipment and advanced manufacturing processes enable us to reliably produce printed circuit boards with the following characteristics:

*High layer count.* Manufacturing printed circuit boards with higher numbers of layers is difficult to accomplish due to the greater number of processes required. We regularly manufacture printed circuit boards with up to 32 layers on a quick-turn and volume basis. As a result of our acquisition of Advanced Circuits, our average layer count increased from 8.6 in 2002 to 14.3 in 2003. For 2003, approximately 63% of our gross sales involved the

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manufacture of printed circuit boards with at least 12 layers and 29% involved printed circuit boards with at least 20 layers.

*Blind and buried vias.* Vias are drilled holes which provide electrical connectivity between layers of circuitry in a printed circuit board. Blind vias connect the surface layer of the printed circuit board to the nearest inner layer. Buried vias are holes that do not reach either surface of the printed circuit board but allow inner layers to be interconnected. Products with blind and buried vias can be made thinner, smaller, lighter and with higher component density and more functionality than products with traditional vias.

*Buried capacitance.* Buried capacitance technology involves embedding the capacitive and resistive elements inside the printed circuit board, which allows for removal of passive components from the surface of the printed circuit board and thereby leaves more surface area for active components. Use of this technology results in greater design flexibility and products with higher component density and increased functionality.

*Fine line traces and spaces.* Traces are the connecting copper lines between the different components of the printed circuit board and spaces are the distances between traces. The smaller the traces and tighter the spaces, the higher the density on the printed circuit board and the greater the expertise required to achieve a desired final yield on an order. We are able to provide 0.003 inch traces and spaces.

*High aspect ratios.* The aspect ratio is the ratio between the thickness of the printed circuit board and the diameter of a drilled hole. The higher the ratio, the greater the difficulty to reliably form, electroplate and finish all the holes on a printed circuit board. We are able to provide aspect ratios of up to 15:1.

*Thin core processing.* A core is the basic inner-layer building block material from which printed circuit boards are constructed. A core consists of a flat sheet of material comprised of glass-reinforced resin with copper foil on either side. The thickness of inner-layer cores is determined by the overall thickness of the printed circuit board and the number of layers required. The demand for thinner cores derives from requirements of thinner printed circuit boards, higher layer counts and various electrical parameters. Core thickness in our printed circuit boards ranges from as little as 0.002 inches up to 0.062 inches.

*Microvias.* Microvias are small vias with diameters generally between 0.001 inches and 0.005 inches after plating. These very small vias consume much less space on the layers they interconnect, thereby providing for greater wiring densities and closer spacing of components and their attachment pads. The fabrication of printed circuit boards with microvias requires specialized equipment, such as laser drills, and highly developed process knowledge. Applications such as handheld wireless devices employ microvias to obtain a higher degree of functionality from a given surface area.

*Fulfill hole fill process.* Our Fulfill process provides designers the opportunity to increase the density of component placements by reducing the surface area required to place many types of components. In traditional design, components are routed from their surface interfaces through via connections in order to access power and ground connections and the internal circuitry used to connect to other discrete components. Fulfill provides a method to allow for vias to be placed inside their respective surface mount pads by filling the vias with a thermoset epoxy and plating flat copper surface mount pads directly over the filled hole.

*Advanced materials.* We manufacture circuit boards using a wide variety of advanced insulating materials. These high-performance materials offer electrical, thermal, and long-term reliability advantages over conventional materials but are more difficult to manufacture. We are certified by Underwriters Laboratories to manufacture printed circuit boards using many

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types and combinations of these specialty materials. This wide offering allows us to manufacture complex boards for niche, high-end commercial markets.

**Customers and Markets**

Our customers include both OEMs and EMS companies that primarily serve the networking/communications, industrial/medical, and high-end computing segments of the electronics industry. We measure customers as those companies that have placed at least two orders in the preceding 12-month period. As of December 31, 2002, we had approximately 565 customers, and approximately 600 customers as of December 31, 2003.

Our significant customers include:

**Networking/Communications**

Adtran  
Broadcom  
Cisco  
Juniper Networks  
Lucent

**High-end Computing**

Apple Computer  
Hewlett-Packard  
(formerly Compaq)  
IBM  
Silicon Graphics  
Sun Microsystems  
Unisys

**Computer Peripherals**

Advanced Input Devices  
Dataram  
Intel  
Micron Technology  
Nvidia  
Seagate  
Smart Modular

**Industrial/Medical**

Agilent Technologies  
Credence  
General Electric  
National Instruments  
Raytheon  
Sonosite  
Texas Instruments

**EMS Companies**

Benchmark Electronics  
Celestica  
Flextronics  
Jabil Circuit  
MC Assembly  
Plexus  
Solectron

**Other**

ITT  
L3 Communications  
Matsushita Avionics Systems  
Rockwell Collins

**Handheld/cellular**

Motorola  
Thales

The following table shows the percentage of our net sales in each of the principal end markets we served for the periods indicated:

<b>End Markets(1)</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>
Networking/Communications	33.6%	30.6%	39.2%
High-end Computing	20.4	14.8	34.8
Industrial/Medical	27.3	25.9	11.9
Computer Peripherals	10.0	20.4	8.9
Handheld/Cellular	3.8	3.0	2.1
Other	4.9	5.3	3.1
<b>Total</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>

(1) Sales to EMS companies are classified by the end markets of their OEM customers.

Sales attributable to our five largest OEM customers, which can vary from year to year, accounted for 51.6% of our net sales in 2003 and 25.9% in 2002. Our five largest OEM customers in 2003 were Cisco, Hewlett Packard, IBM, Motorola and Sun Microsystems. Sales attributed to OEMs include sales made through EMS providers. Sales to EMS providers comprised approximately 61% and 28% of our sales in 2003 and 2002, respectively. Although our contractual relationship is with the EMS company, we typically negotiate price and volume requirements directly with the OEMs. In

addition, we are on the approved vendor lists of several of our EMS providers, which allow us to be awarded additional discretionary orders. Our five largest EMS customers in 2003 were Benchmark Electronics, Celestica, Jabil, Plexus and Solectron. Sales to Solectron and Celestica accounted for 22.2% and 14.0%, respectively, of our net sales in 2003.

During 2003, 71.9% of our net sales were to customers in the United States, 11.1% were to Malaysia, 7.5% were to Italy, 5.1% were to Canada, and the remainder primarily were to other European and Asian countries. In 2002, approximately 94% of our net sales were in the United States, 2% in Malaysia, 1% in Canada, and the remainder primarily in other European and Asian countries. In 2001, approximately 93% of our net sales were in the United States, 3% in China, 1% in Canada, and the remainder primarily in other European and Asian countries.

### **Sales and Marketing**

Our marketing strategy focuses on building long-term relationships with our customers' engineering and new product introduction personnel early in the product development phase. As the product moves from the prototype stage through ramp-to-volume and volume production, we shift our focus to the customers' procurement department in order to capture sales at each point in the product's life cycle.

Our staff of engineers, sales support, and managers assist our sales representatives in advising customers with respect to manufacturing feasibility, design review, and technology limits through direct communication and visits. We combine our sales efforts with customer service at each facility to better serve our customers. Each customer is assigned one salesperson for all services across all facilities, in order to establish individual accountability for each client. Our sales force is comprised primarily of commission-based, independent sales representatives, who are complemented by a direct sales force.

We have a broad geographic reach. Our international presence includes inventory hubs in Italy, Scotland, Canada and Malaysia and sales offices in Scotland, England and Singapore. We believe our international reach enables us to access new customers and allows us to better serve existing customers.

### **Suppliers**

The primary raw materials that we use include copper-clad layers of fiberglass of varying thicknesses, impregnated with bonding materials; chemical solutions such as copper and gold for plating operations; photographic film; carbide drill bits; and plastic for testing fixtures.

We use just-in-time procurement practices to maintain our raw materials inventory at low levels and work closely with our suppliers to obtain technologically advanced raw materials. Although we have preferred suppliers for some raw materials, most of our raw materials are generally readily available in the open market from numerous other potential suppliers. In addition, we periodically seek alternative supply sources to ensure that we are receiving competitive pricing and service. Adequate amounts of all raw materials have been available in the past, and we believe this availability will continue into the foreseeable future.

### **Competition**

Despite industry consolidation, the printed circuit board industry is fragmented and characterized by intense competition. Our principal competitors include DDi, Endicott Interconnect Technologies, Merix, Sanmina-SCI and Tyco.

We believe we compete favorably, based on the following competitive factors:

ability to offer one-stop manufacturing capabilities;

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ability to offer time-to-market capabilities;

capability and flexibility to produce technologically complex products;

flexibility to manufacture high-mix products;

consistent high-quality product; and

outstanding customer service.

In addition, we believe our continuous evaluation and early adoption of new manufacturing and production technologies give us a competitive advantage. We believe that our ability to manufacture printed circuit boards using advanced technologies such as blind and buried vias, larger panel size, sequential lamination, and smaller traces and spaces provide us with a competitive advantage over manufacturers that do not possess these technological capabilities. We believe these advanced manufacturing and production technologies are increasingly replacing and making obsolete the older technologies. Our future success will depend in large part on our ability to maintain and enhance our manufacturing capabilities and production technologies.

### **Backlog**

Although we obtain firm purchase orders from our customers, our customers typically do not make firm orders for delivery of products more than 30 to 60 days in advance. In addition, orders may be rescheduled or canceled, and the products in the markets which we serve are characterized by increasingly short product life cycles. Therefore, we believe that backlog information is not material to an understanding of our business.

### **Intellectual Property**

We have limited patent or trade secret protection for our manufacturing processes. We believe our business depends on the effectiveness of our fabrication techniques and our ability to continue to improve our manufacturing processes. We rely on the collective experience of our employees in the manufacturing process to ensure we continuously evaluate and adopt new technologies in our industry. In addition, we depend on training, recruiting and retaining our employees, who are required to have sufficient know-how to operate advanced equipment and to conduct complicated manufacturing processes.

### **Governmental Regulation**

Our operations are subject to federal, state and local regulatory requirements relating to environmental compliance and site cleanups, waste management and health and safety matters. In particular, we are subject to regulations promulgated by:

the Occupational Safety and Health Administration pertaining to health and safety in the workplace;

the Environmental Protection Agency pertaining to the use, storage, discharge and disposal of hazardous chemicals used in the manufacturing processes; and

corresponding state, county and city agencies.

To date, the costs of compliance and environmental remediation have not been material to us. Nevertheless, additional or modified requirements may be imposed in the future. If such additional or modified requirements are imposed on us, or if conditions requiring remediation are found to exist, we may be required to incur substantial additional expenditures.

### **Employees**

As of January 30, 2004, we had 1,541 employees, none of whom were represented by unions. Of these employees, 1,433 were involved in manufacturing and engineering, 51 worked in sales and marketing, and 57 worked in accounting, systems and other support capacities. We have not experienced any labor problems resulting in a work stoppage and believe that we have good relations with our employees.

## Properties

The following describes our principal manufacturing facilities and does not give effect to our planned expansion of the Chippewa Falls facility.

Location	Square Feet	Primary Use	Secondary Use
Santa Ana, CA	98,000	Prototype	Ramp-to-volume
Redmond, WA	102,200	Ramp-to-volume	High-mix and prototype
Chippewa Falls, WI	235,000	High technology	High-mix and prototype

We own all of our manufacturing and administrative office facilities. Our owned facilities are subject to mortgages under our senior credit facility.

While we own our former manufacturing facility in Burlington, Washington, it is subject to a land lease that expires in July 2025. In connection with a restructuring in the fourth quarter of 2002, we have closed the Burlington, Washington facility and are actively marketing it for sale. We also lease a sales office in Hopkins, Minnesota. This sales office contains approximately 8,700 square feet.

## Legal Proceedings

From time to time we may become a party to various legal proceedings arising in the ordinary course of our business. There can be no assurance that we will prevail in any such litigation.

We were advised that we have been added as a defendant in a patent infringement lawsuit filed in 2001 in the U.S. District Court for the District of Arizona by Lemelson Medical, Education and Research Foundation, Limited Partnership. The suit alleges that we have infringed certain "bar code," "machine vision" and other patents owned by the plaintiff and seeks injunctive relief, damages for the alleged infringements and payment of the plaintiff's attorneys' fees. In March 2002, the lawsuit was stayed pending the outcome of *Symbol Technologies, et al. v. Lemelson* in the U.S. District Court for the District Court of Nevada, in which a declaratory relief suit filed by certain manufacturers challenged the validity, enforceability and infringement of Lemelson's "bar code" and "machine vision" patents. As a result of the stay, we have not filed an answer to the complaint nor has any discovery been conducted. In January 2004, the Nevada court found the Lemelson patents, including those patents asserted by the Lemelson Foundation against us in the Arizona case, to be invalid, not infringed and unenforceable. The Lemelson Foundation has the right to appeal the Nevada court's judgment. Although the ultimate outcome of this matter is not currently determinable, we believe we have meritorious defenses to these allegations and do not expect this litigation to materially impact our business, results of operations or financial condition. However, there can be no assurance that the ultimate resolution of this matter will not have a material adverse effect on our results of operations for any quarter.

## MANAGEMENT

### Directors and Executive Officers

The following table, together with the accompanying text, presents certain information as of February 15, 2004, with respect to each of our directors and executive officers.

Name	Age	Position
Kenton K. Alder	54	Chief Executive Officer, President and Director
James K. Bass	47	Director
Richard P. Beck	70	Director

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Name	Age	Position
Jeffrey W. Goettman	44	Chairman and Director
John G. Mayer	53	Director
Douglas P. McCormick	35	Director
Michael E. Moran	40	Vice Chairman and Director
Stacey M. Peterson	40	Sr. Vice President, Chief Financial Officer and Secretary
O. Clay Swain	40	Sr. Vice President, Sales and Marketing
Shane S. Whiteside	38	Sr. Vice President and Chief Operating Officer

*Kenton K. Alder* has served as our Chief Executive Officer, President and Director since March 1999. From January 1997 to July 1998, Mr. Alder served as Vice President of Tyco Printed Circuit Group Inc., a printed circuit board manufacturer. Prior to that time, Mr. Alder served as President and Chief Executive Officer of ElectroStar, Inc., previously a publicly held printed circuit board manufacturing company, from December 1994 to December 1996. From January 1987 to November 1994, Mr. Alder served as President of Lundahl Astro Circuits Inc., a predecessor company to ElectroStar. Mr. Alder holds a Bachelor of Science degree in Finance and a Bachelor of Science degree in Accounting from Utah State University.

*James K. Bass* has served as our Director since September 2000. Mr. Bass has been the Chief Executive Officer and a Director of Suntron Corporation, a publicly held provider of high-mix electronic manufacturing services, since its incorporation in May 2001 and as Chief Executive Officer of EFTC Corporation, a subsidiary of Suntron, since July 2000. From 1996 to July 2000, Mr. Bass was a Senior Vice President of Sony Corporation. Prior to that, Mr. Bass spent 15 years in various manufacturing management positions at the aerospace group of General Electric Corporation. Mr. Bass holds a B.S.M.E. degree from Ohio State University.

*Richard P. Beck* has served as our Director since February 2001. Mr. Beck is presently retired. From November 2001 to May 2002, Mr. Beck served as Senior Vice President of Advanced Energy Industries, a publicly held manufacturer of power conversion systems and integrated technology solutions. From February 1998 to November 2001, Mr. Beck served as Senior Vice President and Chief Financial Officer of Advanced Energy, and continues to serve as a Director of the company. From March 1992 until February 1998, Mr. Beck served as Vice President and Chief Financial Officer of Advanced Energy. From November 1987 to March 1992, Mr. Beck served as Executive Vice President and Chief Financial Officer for Cimage Corporation, a computer software company. Mr. Beck is also chairman of the board, is chairman of the audit committee and serves on the compensation committee of Applied Films Corporation, a publicly held manufacturer of flat panel display equipment. He is also a Director of Photon Dynamics, Inc., a publicly held manufacturer of flat panel display test equipment, and is chairman of its audit committee. Mr. Beck holds a Bachelor

of Science degree in Accounting and Finance and a Master of Business Administration degree from Babson College.

*Jeffrey W. Goettman* has served as our Chairman and Director since January 1999. Mr. Goettman has been a Managing Partner of Thayer Capital Partners, a private equity investment company, since April 2001. Mr. Goettman joined Thayer Capital Partners in February 1998. Prior to that time, Mr. Goettman served as a Managing Director and founder of the Electronics Manufacturing Services Group at Robertson Stephens & Co. Inc., an investment bank, from February 1994 to February 1998. In addition, Mr. Goettman has been the Chairman of the Board of Suntron Corporation since May 2001. Mr. Goettman holds a Bachelor of Science degree from Duke University and a Master of Business Administration degree from the Stanford University Graduate School of Business.

*John G. Mayer* has served as our Director since September 2000. Mr. Mayer is presently retired. From January 1997 to November 1999, Mr. Mayer served as Vice President of Tyco Printed Circuit Group, Inc., a printed circuit board manufacturer. Mr. Mayer served as Chief Operating Officer of ElectroStar, Inc., previously a publicly held printed circuit board manufacturing company, from December 1994 to December 1996. From April 1986 to November 1994, Mr. Mayer served as President of Electro-Etch Circuits, Inc., a predecessor company to ElectroStar. Mr. Mayer holds a Bachelor of Arts degree in History, the Arts and Letters from Yale University and a Juris Doctor degree from UCLA School of Law.



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*Douglas P. McCormick* has served as our Director since September 1999. Mr. McCormick has been a Managing Director of Thayer Capital Partners, a private equity investment company, since January 2001, and was a Vice President and Principal of that company since January 1999. Prior to that time, Mr. McCormick served as an associate at Morgan Stanley & Co. Incorporated, an investment bank, from June 1997 to January 1999. In addition, Mr. McCormick has been a Director of Suntron Corporation since October 2001. Mr. McCormick holds a Bachelor of Science degree in Economics from the United States Military Academy and a Master of Business Administration degree from Harvard Business School.

*Michael E. Moran* has served as our Director since January 1999 and our Vice Chairman since June 1999. Mr. Moran has been a Managing Partner of Brockway Moran & Partners, Inc., a private equity investment firm, since September 2000. Mr. Moran was a founding partner of Brockway Moran & Partners, Inc. in January 1998. Mr. Moran served as a Senior Vice President at Trivest, Inc., a private equity investment firm, from 1994 to 1998. Mr. Moran previously served on the board of directors of ElectroStar, Inc., a publicly held printed circuit board manufacturing company that was sold to Tyco International in January 1997. Mr. Moran holds a Bachelor of Science degree in Business Administration from Drake University and a Master of Business Administration degree from DePaul University.

*Stacey M. Peterson* has served as our Senior Vice President since October 2003 and as our Chief Financial Officer since February 2000. From May 1998 to February 2000, Ms. Peterson served as Business Manager for ARCO Products Company at Atlantic Richfield Company, an oil and gas company. Prior to that time, Ms. Peterson served as Chief Financial Officer, from July 1996 to May 1998, and Controller, from November 1995 to July 1996, of the PayPoint Business Unit of Atlantic Richfield Company. From August 1993 to November 1995, Ms. Peterson served as Financial Advisor, Corporate Finance at Atlantic Richfield Company. Ms. Peterson holds a Bachelor of Science degree in Applied Economics and Business Management from Cornell University and a Master of Business Administration degree from the University of Pennsylvania, the Wharton School.

*O. Clay Swain* has served as our Senior Vice President Sales and Marketing since October 2003, having served as our Vice President Sales and Marketing since September 2001, our Vice President Sales since June 2000 and as our National Sales Manager from March 2000. From

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July 1999 to February 2000, Mr. Swain served as General Manager of Tyco Printed Circuit Group, Logan Division, a publicly held printed circuit board manufacturing company. From January 1997 to June 1999, Mr. Swain served as Director of Sales of Tyco Printed Circuit Group. From December 1994 to December 1996, Mr. Swain served as National Sales Manager of ElectroStar, Inc., previously a publicly held printed circuit board manufacturing company. Mr. Swain holds a Bachelor of Science degree and a Master in Business Administration degree from Utah State University.

*Shane S. Whiteside* has served as our Senior Vice President since October 2003 and our Chief Operating Officer since December 2002. From January 2001 to November 2002, Mr. Whiteside was the Vice President of Operations Santa Ana Division and our Director of Operations Santa Ana Division from July 1999 to December 2000. From March 1998 to June 1999, Mr. Whiteside was the Director of Operations of Power Circuits. Prior to joining Power Circuits, Mr. Whiteside was Product Manager for Technical USA from December 1996 to March 1998 and a Technical Sales Representative from September 1993 to December 1996. Mr. Whiteside holds a Bachelor of Arts degree in Economics from the University of California at Irvine.

### Related Party Transactions

We are party to a management agreement with entities directly controlled by Thayer Capital Partners and Brockway Moran & Partners. We paid these entities \$258,000 in financial advisory fees in connection with our February 2002 public offering, and a \$500,000 financial advisory fee in connection with our December 2002 acquisition of Advanced Circuits. The management agreement requires us to pay these entities a financial advisory fee of 1.5% of the first \$50,000 of the proceeds or value of any transaction with respect to which the three entities render financial advisory services to the Company, and 1% of any amount of proceeds or value in excess of \$50,000 until such time as these entities and their affiliates, on a combined basis, own less than 25% of our total outstanding voting stock. Following our public offering in September 2003, Thayer Capital Partners and Brockway Moran & Partners and their affiliates no longer own 25% of our total outstanding voting stock, and, accordingly, we are no longer obligated to pay them financial advisory fees.

We had a consulting and management services agreement with Pyxis Partnership, an entity controlled by Kenneth L. Shirley, a member of our board of directors through November 2002. Pyxis provided certain management and consulting services for which we paid Pyxis approximately \$168,000 for these services in 2002.

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## SELLING SHAREHOLDERS

The following table sets forth information known to us with respect to the beneficial ownership of our common stock as of February 15, 2004, as adjusted to reflect the sale of common stock in this offering by each selling shareholder.

Name and Address(1)	Shares Beneficially Owned Prior to the Offering(2)		Number of Shares Being Offered(3)	Shares Beneficially Owned After the Offering(2)	
	Number	Percent		Number	Percent
Thayer Capital Partners entities(3)(4) 1455 Pennsylvania Ave. NW Suite 350 Washington, DC 22004	3,562,248	8.8%	1,781,702	1,780,546	4.0%
Circuit Holdings LLC(5) 1455 Pennsylvania Ave. NW Suite 350 Washington, DC 22004	959,254	2.4	959,254		
Brockway Moran & Partners Fund, L.P.(3)(6) 225 N.E. Mizner Boulevard, 7th Fl. Boca Raton, FL 33432	809,873	2.0	548,298	261,575	*
Kenton K. Alder(7)	519,578	1.2	100,000	419,578	*
Shane S. Whiteside(8)	170,529	*	25,000	145,529	*
O. Clay Swain(9)	154,595	*	20,000	134,595	*
Stacey M. Peterson(10)	139,020	*	25,000	114,020	*

\*

Represents beneficial ownership of less than 1%.

(1)

Except as otherwise indicated, the address of each person listed on the table is 2630 South Harbor Boulevard, Santa Ana, California 92704. None of the selling shareholders are registered broker-dealers or are affiliates of broker-dealers.

(2)

In computing the number of shares beneficially owned by a person and the percentage ownership of that person, we have included the shares of common stock subject to options and warrants held by that person that are currently exercisable or will become exercisable within 60 days after February 15, 2004 (including performance-based options that will vest upon completion of this offering), but we have not included those shares for purposes of computing percentage ownership of any other person. We have assumed unless otherwise indicated that the persons and entities named in the table have sole voting and investment power with respect to all shares beneficially owned, subject to community property laws where applicable. Beneficial ownership is based on 40,606,270 shares of our common stock outstanding as of February 15, 2004 and 45,276,270 shares of common stock outstanding after completion of this offering, including the issuance of 170,000 shares in connection with the exercise of options by certain selling shareholders and assuming no exercise of the underwriters' over-allotment option.

(3)

The table above does not give effect to the sale of additional shares if the underwriters exercise the over-allotment option. In the event the underwriters exercise the over-allotment option in full, the following shareholders will sell up to the following number of additional shares:

Thayer Equity Investors III, L.P.	410,923
Thayer Equity Investors IV, L.P.	364,218
TC Circuits, L.L.C.	13,284
Brockway Moran & Partners Fund, L.P.	261,575
<b>Total</b>	<b>1,050,000</b>

- (4) Represents shares held by each of Thayer Equity Investors III, L.P., Thayer Equity Investors IV, L.P. and TC Circuits L.L.C., together with the shares held directly by Circuit Holdings. The following Thayer Capital Partners entities will sell the following number of shares in this offering, assuming no exercise of the underwriters' over-allotment option:

Circuit Holdings LLC	959,254
Thayer Equity Investors III, L.P.	428,655
Thayer Equity Investors IV, L.P.	379,935
TC Circuits, L.L.C.	13,858
	1,781,702

The Thayer Capital Partners entities are affiliates and are deemed to beneficially own all of the shares that are directly owned by Circuit Holdings.

Thayer Equity Investors III, L.P. and TC Circuits L.L.C. are each controlled by limited liability companies the managing members of which are Frederick Malek, Carl Rickertsen and Paul Stern.

Thayer Equity Investors IV, L.P. is controlled by a limited liability company the managing members of which are Frederick Malek, Jeffrey Goettman and Daniel Dickinson.

Mr. Goettman, one of our directors, is a Managing Partner of each of the limited liability companies that control Thayer Equity Investors III, L.P. and Thayer Equity Investors IV, L.P. Mr. McCormick, one of our directors, is a Managing Director of the limited liability company that controls Thayer Equity Investors IV, L.P.

- (5) Circuit Holdings LLC is owned by these entities as follows:

Thayer Equity Investors III, L.P.	31%
Thayer Equity Investors IV, L.P.	28
TC Circuits, L.L.C.	1
Brockway Moran & Partners Fund, L.P.	40
	100%
Total	100%

- (6) Brockway Moran & Partners Fund, L.P. is controlled by Brockway Moran & Partners, Inc. Peter C. Brockway, Michael E. Moran and H. Randall Litten are the only shareholders of Brockway Moran & Partners, Inc., and none of these persons owns a majority interest in Brockway Moran & Partners, Inc. Mr. Moran, one of our directors, is a Managing Partner of Brockway Moran & Partners, Inc.

- (7) Includes 1,500 shares held by Mr. Alder's children and 480,078 shares issuable upon exercise of options within 60 days of February 15, 2004 (assuming completion of this offering). Mr. Alder disclaims beneficial ownership of the shares held by his children. Mr. Alder is the President and Chief Executive Officer of our company. Mr. Alder will exercise options with respect to 100,000 shares in connection with this offering.

- (8) Reflects 170,529 shares issuable upon exercise of options within 60 days of February 15, 2004 (assuming completion of this offering). Mr. Whiteside is the Senior Vice President and Chief Operating Officer of our company. Mr. Whiteside will exercise options with respect to 25,000 shares in connection with this offering.
- (9) Includes 153,595 shares issuable upon exercise of options within 60 days of February 15, 2004 (assuming completion of this offering). Mr. Swain is the Senior Vice President, Sales and Marketing of our company. Mr. Swain will exercise options with respect to 20,000 shares in connection with this offering.
- (10) Reflects 139,020 shares issuable upon exercise of options within 60 days of February 15, 2004 (assuming completion of this offering). Ms. Peterson is the Senior Vice President, Chief Financial Officer and Secretary of our company. Ms. Peterson will exercise options with respect to 25,000 shares in connection with this offering.

#### UNITED STATES TAX CONSEQUENCES TO NON-U.S. HOLDERS

The following is a general discussion of the principal United States federal income and estate tax consequences of the acquisition, ownership and disposition of our common stock by a Non-U.S. Holder. As used in this prospectus, the term "Non-U.S. Holder" means a beneficial owner of our common stock other than:

a citizen or resident of the United States,

a corporation or other entity taxable as a corporation created or organized in or under the laws of the United States or of any political subdivision of the United States,

an estate the income of which is includable in gross income for United States federal income tax purposes regardless of its source, or

a trust subject to the primary supervision of a United States court and the control of one or more United States persons, or a trust (other than a wholly owned grantor trust) that was treated as a domestic trust despite not meeting the requirements described above.

This discussion does not consider:

state, local or foreign tax consequences,

specific facts and circumstances that may be relevant to a particular Non-U.S. Holder's tax position in light of their particular circumstances,

the tax consequences for the shareholders or beneficiaries of a Non-U.S. Holder,

special tax rules that may apply to certain Non-U.S. Holders, including without limitation, partnerships, banks, insurance companies, dealers in securities and traders in securities, or

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special tax rules that may apply to a Non-U.S. Holder that holds our common stock as part of a "straddle," "hedge" or "conversion transaction."

The following discussion is based on provisions of the United States Internal Revenue Code of 1986, as amended, also known as the Code, applicable Treasury regulations and administrative and judicial interpretations, all as of the date of this prospectus, and all of which are subject to change, retroactively or prospectively. The following discussion assumes that our common stock is held as a capital asset. The following summary is for general information. Accordingly, each Non-U.S. Holder should consult a tax advisor regarding the United States federal, state, local and foreign income and other tax consequences of acquiring, holding and disposing of shares of our common stock.

### Dividends

We do not anticipate paying cash dividends on our common stock in the foreseeable future. See "Dividend Policy." In the event, however, that dividends are paid on shares of our common stock, dividends paid to a Non-U.S. Holder of our common stock generally will be subject to withholding of United States federal income tax at a 30% rate, or such lower rate as may be provided by an applicable income tax treaty. Non-U.S. Holders should consult their tax advisors regarding their entitlement to benefits under a relevant income tax treaty.

Withholding generally is imposed on the gross amount of a distribution, regardless whether we have sufficient earnings and profits to cause the distribution to be a dividend for United States federal income tax purposes. However, we may elect to withhold less than the gross amount of the distribution if we determine that the distribution is not paid out of our current or accumulated earnings and profits, based on our reasonable estimates.

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Dividends that are effectively connected with a Non-U.S. Holder's conduct of a trade or business in the United States or, if an income tax treaty applies, attributable to a permanent establishment in the United States, known as "United States trade or business income", are generally subject to United States federal income tax on a net income basis at regular graduated rates, but are not generally subject to the 30% withholding tax if the Non-U.S. Holder files the appropriate United States Internal Revenue Service form with the payor. Any United States trade or business income received by a Non-U.S. Holder that is a corporation may also, under certain circumstances, be subject to an additional "branch profits tax" at a 30% rate or such lower rate as specified by an applicable income tax treaty.

Dividends paid to a Non-U.S. Holder of our common stock who claims the benefit of an applicable income tax treaty rate generally will be required to satisfy applicable certification and other requirements. A Non-U.S. Holder of our common stock that is eligible for a reduced rate of United States withholding tax under an income tax treaty may obtain a refund or credit of any excess amounts withheld by filing an appropriate claim for a refund with the United States Internal Revenue Services.

### Gain on Disposition of Common Stock

A Non-U.S. Holder generally will not be subject to United States federal income tax in respect of gain recognized on a disposition of our common stock unless:

the gain is United States trade or business income, in which case the branch profits tax described above may apply to a corporate Non-U.S. Holder,

the Non-U.S. Holder is an individual who holds our common stock as a capital asset within the meaning of Section 1221 of the Code, is present in the United States for more than 182 days in the taxable year of the disposition and meets certain other requirements,

the Non-U.S. Holder is subject to tax pursuant to the provisions of the United States tax law applicable to certain United States expatriates, or

we are or have been a "United States real property holding corporation" for United States federal income tax purposes at any time during the shorter of the five-year period ending on the date of disposition of the period that the Non-U.S. Holder held our common stock.

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Generally, a corporation is a "United States real property holding corporation" if the fair market value of its "United States real property interests," such as interest in real property located in the United States or the Virgin Islands, and certain interests in other United States real property holding corporations, equals or exceeds 50% of the sum of the fair market value of its worldwide real property interests plus its other assets used or held for use in a trade or business. We believe we have never been, are not currently and are not likely to become a United States real property holding corporation for United States federal income tax purposes.

### Federal Estate Tax

Common stock owned or treated as owned by an individual who is a Non-U.S. Holder at the time of death will be included in the individual's gross estate for United States federal estate tax purposes, unless an applicable estate tax or other treaty provides otherwise.

### Information Reporting and Backup Withholding Tax

We must report annually to the United States Internal Revenue Service and to each Non-U.S. Holder the amount of dividends paid to that holder and the tax withheld with respect to those dividends. Copies of the information returns reporting those dividends and withholding may also be

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made available to the tax authorities in the country in which the Non-U.S. Holder is a resident under the provisions of an applicable income tax treaty or agreement.

Under certain circumstances, United States Treasury Regulations require information reporting and backup withholding on certain payments on our common stock. For example, a Non-U.S. Holder of our common stock that fails to certify its Non-U.S. holder status in accordance with applicable United States Treasury Regulations may be subject to backup withholding. For 2004, the backup withholding rate is 28%.

The payment of the proceeds of the disposition of our common stock by a holder to or through the United States office of a broker generally will be subject to information reporting and backup withholding unless the holder either certifies its status as a Non-U.S. Holder under penalties of perjury or otherwise establishes an exemption. The payment of the proceeds of the disposition by a Non-U.S. Holder of our common stock to or through a foreign office of a foreign broker will not be subject to backup withholding or information reporting unless the foreign broker is a "United States related person." In the case of the payment of proceeds from the disposition of our common stock by or through a foreign office of a broker that is a United States person or a "United States related person," information reporting, but currently not backup withholding, on the payment applies unless the broker receives a statement from the owner, signed under penalty of perjury, certifying its foreign status or the broker has documentary evidence in its files that the holder is a Non-U.S. Holder and the broker has no actual knowledge to the contrary. For this purpose, a "United States related person" is:

a "controlled foreign corporation" for United States federal income tax purposes,

a foreign person 50% or more of whose gross income from all sources for the three-year period ending with the close of its taxable year preceding the payment, or for such part of the period that the broker has been in existence, is derived from activities that are effectively connected with the conduct of a United States trade or business,

a foreign partnership if, at any time during the taxable year, (A) at least 50% of the capital or profits interest in the partnership is owned by United States persons, or (B) the partnership is engaged in a United States trade or business, or

certain U.S. branches of foreign banks or insurance companies.

Backup withholding may apply to the payment of disposition proceeds by or through a foreign office or a broker that is a United States person or a United States related person unless certain certification requirements are satisfied or an exemption is otherwise established and the broker has no actual knowledge that the holder is a United States person. Non-U.S. Holders should consult their own tax advisors regarding the application of the information reporting and backup withholding rules to them.

Amounts withheld under the backup withholding rules do not constitute a separate United States federal income tax. Any amounts withheld under the backup withholding rules from a payment to a Non-U.S. Holder will be refunded, or credited against the holder's United States federal income tax liability, if any, provided that the required information is furnished to the United States Internal Revenue Service.

**UNDERWRITING**

Subject to the terms and conditions set forth in an underwriting agreement, each of the underwriters named below has severally agreed to purchase from us and the selling shareholders the aggregate number of shares of common stock set forth opposite their respective names below:

Underwriters	Number of Shares
Thomas Weisel Partners LLC	
RBC Capital Markets Corporation	
Needham & Company, Inc.	
Wells Fargo Securities, LLC	
Total	7,000,000

Of the 7,000,000 shares to be purchased by the underwriters, 4,500,000 shares will be purchased from us and 2,500,000 shares will be purchased from the selling shareholders.

The underwriting agreement provides that the obligations of the several underwriters are subject to various conditions, including approval of legal matters by counsel. The nature of the underwriters' obligations commits them to purchase and pay for all of the shares of common stock listed above if any are purchased. Our common stock is offered subject to receipt and acceptance by the underwriters and to the other conditions, including the right to reject orders in whole or in part.

The underwriting agreement provides that we and the selling shareholders will indemnify the underwriters against liabilities specified in the underwriting agreement under the Securities Act of 1933, as amended, or will contribute to payments that the underwriters may be required to make relating to these liabilities.

Thomas Weisel Partners LLC is acting as book-running lead manager for this offering. Thomas Weisel Partners LLC expects to deliver the shares to purchasers on or about March 1, 2004.

**Over-Allotment Option**

Some of the selling shareholders have granted a 30-day over-allotment option to the underwriters to purchase up to a total of 1,050,000 additional shares of our common stock at the public offering price, less the underwriting discount, as set forth on the cover page of this prospectus. If the underwriters exercise this option in whole or in part, then each of the underwriters will be separately committed, subject to the conditions described in the underwriting agreement, to purchase the additional shares of our common stock in proportion to their respective commitments set forth in the table above. Any such additional shares would be purchased from the selling shareholders that granted the over-allotment option, in proportion to the maximum number of additional shares to be sold by each of them pursuant to the over-allotment option. See footnote (3) under "Selling Shareholders."

**Commissions and Discounts**

The underwriters propose to offer the shares of common stock directly to the public at the public offering price set forth on the cover page of this prospectus, and at this price less a concession not in excess of \$ \_\_\_\_\_ per share of common stock to other dealers specified in a master agreement among underwriters who are members of the National Association of Securities Dealers, Inc. The underwriters may allow, and the other dealers specified may reallow, concessions not in excess of \$ \_\_\_\_\_ per share of common stock to these other dealers. After this offering, the offering price, concessions and other selling terms may be changed by the underwriters.

The following table summarizes the compensation to be paid to the underwriters by us and the proceeds, before expenses, payable to us and the selling shareholders:

	Per Share	Total	
		Without Over-Allotment	With Full Over-Allotment
Public offering price	\$	\$	\$
Underwriting discount	\$	\$	\$
Proceeds, before expenses, to us	\$	\$	\$
Proceeds to selling shareholders	\$	\$	\$
<b>Indemnification of Underwriters</b>			

We and the selling shareholders will indemnify the underwriters against some civil liabilities, including liabilities under the Securities Act and liabilities arising from breaches of our representations and warranties contained in the underwriting agreement. If we or the selling shareholders are unable to provide this indemnification, we and the selling shareholders will contribute to payments the underwriters may be required to make in respect of those liabilities.

**No Sales of Similar Securities**

The underwriters will require all of our directors and executive officers and the selling shareholders to agree not to offer, sell, agree to sell, directly or indirectly, or otherwise dispose of any shares of common stock or any securities convertible into or exchangeable for shares of common stock except for the shares of common stock they are selling in this offering without the prior written consent of Thomas Weisel Partners LLC for a period of 90 days after the date of this prospectus. However, these agreements will permit sales of securities pursuant to the officers' 10b5-1 trading plans announced in early February 2004. Each week, 22,400 shares of our common stock are expected to be sold under those plans.

We have agreed that for a period of 90 days after the date of this prospectus, we will not, without the prior written consent of Thomas Weisel Partners LLC, offer, sell or otherwise dispose of any shares of common stock, except for the shares of common stock offered by us in this offering, the shares of common stock issuable upon exercise of outstanding options on the date of this prospectus and the shares of our common stock that are issued under our option plans.

**Nasdaq National Market Listing**

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

**Short Sales, Stabilizing Transactions and Penalty Bids**

In order to facilitate this offering, persons participating in this offering may engage in transactions that stabilize, maintain or otherwise affect the price of our common stock during and after this offering. Specifically, the underwriters may engage in the following activities in accordance with the rules of the Securities and Exchange Commission.

*Short sales.* Short sales involve the sales by the underwriters of a greater number of shares than they are required to purchase in the offering. Covered short sales are short sales made in an amount not greater than the underwriters' over-allotment option to purchase additional shares from some of the selling shareholders in this offering. The underwriters may close out any covered short position by either exercising their over-allotment option to purchase shares or purchasing shares in the open market. In determining the source of shares to close out the covered short position, the underwriters will consider, among other things, the price of shares available for purchase in the

open market as compared to the price at which they may purchase shares through the over-allotment option. Naked short sales are any short sales in excess of such over-allotment option. The underwriters must close out any naked short position by purchasing shares in the open market. A naked short position is more likely to be created if the underwriters are concerned that there may be downward pressure on the price of the



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common stock in the open market after pricing that could adversely affect investors who purchase in this offering.

*Stabilizing transactions.* The underwriters may make bids for or purchases of shares of our common stock for the purpose of pegging, fixing or maintaining the price of the shares.

*Penalty bids.* If the underwriters purchase shares in the open market in a stabilizing transaction or syndicate covering transaction, they may reclaim a selling concession from the underwriters and selling group members who sold those shares as part of this offering. Stabilization and syndicate covering transactions may cause the price of the shares to be higher than it would be in the absence of these transactions. The imposition of a penalty bid might also have an effect on the price of the shares if it discourages resales of the shares.

The transactions above may occur on the Nasdaq National Market or otherwise. Neither we nor the underwriters make any representation or prediction as to the effect that the transactions described above may have on the price of the shares. If these transactions are commenced, they may be discontinued without notice at any time.

### LEGAL MATTERS

The validity of the shares of common stock to be issued by us and sold by the selling shareholders in this offering will be passed upon for us by Karr Tuttle Campbell P.S., Seattle, Washington. Other legal matters in connection with this offering will be passed upon for us by Greenberg Traurig, LLP, Phoenix, Arizona. Legal matters in connection with this offering will be passed upon for the underwriters by O'Melveny & Myers LLP, San Francisco, California.

### EXPERTS

The consolidated balance sheets of TTM Technologies, Inc. as of December 31, 2002 and 2003, and the related consolidated statements of operations, shareholders' equity, cash flows and financial statement schedules for the years then ended have been incorporated by reference herein in reliance upon the reports of KPMG LLP, independent auditors, incorporated by reference herein, and upon the authority of said firm as experts in accounting and auditing. The audit reports refer to the Company's adoption of Statement of Financial Accounting Standards No. 142, *Goodwill and Other Intangible Assets* as of January 1, 2002. However, KPMG LLP was not engaged to audit, review, or apply any procedures to the 2001 consolidated financial statements other than with respect to such transitional disclosures.

Our consolidated financial statements for the year ended, and as of, December 31, 2001 incorporated by reference in this prospectus had been audited by Arthur Andersen LLP, independent accountants, as indicated in their report with respect thereto, and are incorporated by reference herein in reliance upon the authority of such firm as experts in auditing and accounting in giving said report. We have been unable to obtain the written consent of Arthur Andersen LLP to our naming it as an expert and as having audited the consolidated financial statements and incorporating by reference its audit report in this prospectus, as Arthur Andersen LLP has ceased conducting operations. Accordingly, it is highly unlikely that you will be able to recover damages from Arthur Andersen LLP under Section 11 of the Securities Act for any untrue statements of material fact contained in the financial statements audited by Arthur Andersen LLP or any omissions to state a material fact required to be stated therein or necessary to make the statements therein not misleading.

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We changed certifying accountants from Arthur Andersen LLP to KPMG LLP effective May 14, 2002, and Arthur Andersen LLP was dismissed as our principal accountant on that date. Arthur Andersen LLP's reports on our financial statements for the prior fiscal year did not contain an adverse opinion or disclaimer of opinion and were not qualified or modified as to uncertainty, audit scope or accounting principles. The decision to change accountants was approved by our board of directors. During fiscal 2001 and the subsequent interim period prior to such change in accountants, there were no disagreements with Arthur Andersen LLP on any matter of accounting principles or practices, financial statement disclosure or auditing scope or procedures. During our 2000 and 2001 fiscal years and subsequent interim periods prior to such change in accountants, there occurred none of the "reportable events" listed in Item 304(a)(1)(v)(A-D) of Regulation S-K. We have requested and received from Arthur Andersen LLP the letter required by Item 304(a)(3) of Regulation S-K (and filed the same as an exhibit to our report on Form 8-K filed on May 17, 2002), which states that Arthur Andersen LLP agrees with the statements made by us in this prospectus in response to Item 304(a)(1) of Regulation S-K. We refer you to "Risk Factors" We have been unable to obtain any required consents from our former independent public accountants, Arthur Andersen LLP. It is unlikely you would be able to recover damages from them."

**WHERE YOU CAN FIND MORE INFORMATION**

We file annual, quarterly and special reports, proxy statements and other information with the Securities and Exchange Commission. You can read and copy any materials we file with the Securities and Exchange Commission at its Public Reference Room at 450 Fifth Street, N.W., Washington, D.C. 20549 and at its regional office located at 500 West Madison Street, Chicago, Illinois 60661. You can obtain information about the operations of the Securities and Exchange Commission Public Reference Room by calling the Securities and Exchange Commission at 1-800-SEC-0330. The Securities and Exchange Commission also maintains a Web site that contains information we file electronically with the Securities and Exchange Commission, which you can access over the Internet at <http://www.sec.gov>. Our common stock is quoted on the Nasdaq National Market under the symbol "TTMI," and you can obtain information about us at the offices of Nasdaq Operations, 1735 K Street, N.W., Washington, D.C. 20006.

Our annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, registration statements, and amendments to those reports are available without charge on our website, [http://www.ttmtech.com/ir/sec\\_filings](http://www.ttmtech.com/ir/sec_filings), as soon as reasonably practicable after they are filed electronically with the SEC. Copies are also available without charge by (1) telephonic request by calling our Investor Relations Department at (714) 327-3000, (2) email request to [investor@ttmtech.com](mailto:investor@ttmtech.com), or (3) a written request to TTM Technologies, Inc., Attention: Investor Relations, 2630 S. Harbor Blvd., Santa Ana, CA 92704.

This prospectus is part of a registration statement we have filed with the Securities and Exchange Commission relating to the securities. As permitted by Securities and Exchange Commission rules, this prospectus does not contain all of the information we have included in the registration statement and accompanying exhibits we filed with the Securities and Exchange Commission. You may refer to the registration statement and exhibits for more information about us and the securities. The registration statement and the exhibits are available at the Securities and Exchange Commission's Public Reference Room or through its Web site.

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**INCORPORATION BY REFERENCE**

The Securities and Exchange Commission allows us to "incorporate by reference" the information we file with it, which means that we can disclose important information to you by referring you to those documents. The information we incorporate by reference is an important part of this prospectus, and later information that we file with the Securities and Exchange Commission will automatically update and supersede some of this information. We incorporate by reference the documents listed below, and any future filings we make with the Securities and Exchange Commission under Section 13(a), 13(c), 14 or 15(d) of the Securities and Exchange Act of 1934 until we sell all securities. The documents we incorporate by reference are:

our annual report on Form 10-K for the year ended December 31, 2003;

the description of our common stock contained in our Form 8-A registration statement filed on August 8, 2000, including any amendment or report filed for the purpose of updating that description.

Any statement contained in a document that is incorporated by reference will be modified or superseded for all purposes to the extent that a statement contained in this prospectus (or in any other document that is subsequently filed with the Securities and Exchange Commission and incorporated by reference) modifies or is contrary to that previous statement. Any statement so modified or superseded will not be deemed a part of this prospectus except as so modified or superseded.

You may request a copy of these filings at no cost by writing or telephoning our investor relations department at the following address and number:

TTM Technologies, Inc.  
2630 South Harbor Boulevard  
Santa Ana, California 92704  
(714) 327-3000

Attention: Ms. Stacey Peterson

**7,000,000 Shares  
Common Stock**

**Thomas Weisel Partners LLC**

**RBC Capital Markets**

**Needham & Company, Inc.**

**Wells Fargo Securities, LLC**

Neither we nor any of the underwriters have authorized anyone to provide information different from that contained in this prospectus. When you make a decision about whether to invest in our common stock, you should not rely upon any information other than the information in this prospectus. Neither the delivery of this prospectus nor the sale of our common stock means that information contained in this prospectus is correct after the date of this prospectus. This prospectus is not an offer to sell or solicitation of an offer to buy these shares of common stock in any circumstances under which the offer or solicitation is unlawful.

**PART II  
INFORMATION NOT REQUIRED IN PROSPECTUS**

**Item 14. Other Expenses of Issuance and Distribution.**

The following table sets forth the various expenses in connection with the sale and distribution of the securities being registered, other than the underwriting discounts, payable by the Registrant in connection with the sale of the securities being registered. All amounts shown are estimates, except the SEC registration fee, the NASD filing fee and the Nasdaq National Market listing fee.

SEC registration fee	\$	25,340
NASD fee		20,500
Nasdaq National Market listing fee		*
Printing and engraving expenses		*
Legal fees and expenses		*
Accounting fees and expenses		*
Transfer agent and registrar fees		*
Miscellaneous fees		*
		<hr/>
<b>Total</b>	<b>\$</b>	<b>*</b>
		<hr/>

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To be provided.

**Item 15. Indemnification of Directors and Officers.**

The Registrant's Amended Articles of Incorporation (Exhibit 3.1 to this Registration Statement) and Amended Bylaws (Exhibit 3.2 to this Registration Statement) require the Registrant to indemnify or agree to indemnify its directors and officers against liability which a director or officer may incur when made a party to a proceeding because of his or her being a director or officer of the Registrant, provided that no indemnification is permitted for: (i) acts or omissions which are finally adjudged to be intentional misconduct or a knowing violation of law; (ii) conduct which is finally adjudged to be an unlawful distribution to the shareholders of the corporation; or (iii) transactions with respect to which it is finally adjudged that the director or officer personally received a benefit in money, property or services to which he or she was not legally entitled. These documents also require the Registrant to advance or reimburse expenses which directors and officers incur in such proceeding prior to the final resolution of the proceeding. The Amended Bylaws allow the Registrant to obtain insurance coverage against liability which its directors and officers may incur while acting in such capacities.

In addition, the Registrant has entered into separate indemnification agreements, the form of which is attached as Exhibit 10.12 to this Registration Statement and incorporated herein by reference, with its directors and certain executive officers and key employees. The indemnification agreements provide these executive officers, directors and key employees with indemnification against liabilities that arise because of their status or service to the maximum extent permitted by the Washington Business Corporation Act (the "WBCA"). These agreements could require the Registrant to advance expenses to these individuals incurred as a result of any proceeding against them as to which they could be indemnified.

The Underwriting Agreement (Exhibit 1.1 hereto) provides for indemnification between the underwriters and the Registrant from and against certain liabilities arising in connection with the offering which is the subject of this Registration Statement.

The Registrant also has obtained in conjunction with the effectiveness of the Registration Statement a policy of directors' and officers' liability insurance that insures the Registrant's directors

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and officers against the cost of defense, settlement or payment of a judgment under certain circumstances.

**Item 16. Exhibits.**

- 1.1 Proposed form of Underwriting Agreement.(7)
- 2.1 Form of Plan of Reorganization.(1)
- 2.2 Recapitalization and Stock Purchase Agreement dated as of December 15, 1998 by and among Circuit Holdings, LLC, the Registrant and Lewis O. Coley, III, the Colleen Beckdolt Trust No. 2 and Ian Lewis Coley Trust No. 2.(1)
- 3.1 Registrant's Amended Articles of Incorporation.(1)
- 3.2 Registrant's Amended Bylaws.(1)
- 4.1 Form of Registrant's common stock certificate.(1)
- 4.2 Registration Rights Agreement dated as of December 15, 1998 among the Registrant, Lewis O. Coley, III and Circuit Holdings, LLC.(1)
- 4.3 Registration Rights Agreement dated as of July 13, 1999 among the Registrant and certain Purchasers listed on Schedule I thereto.(1)
- 4.4 Registration Rights Agreement dated as of July 13, 1999 among the Registrant and certain Purchasers of Warrants listed on Schedule I thereto.(1)

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- 4.5 Subscription Agreement dated as of July 13, 1999 among the Registrant and Purchasers of Company Common Stock listed on Schedule I thereto.(1)
- 5.1 Opinion of Karr Tuttle Campbell, P.S.(7)
- 10.1 Amended and Restated Credit Agreement dated as of September 29, 2000 among the Company, the Domestic Subsidiaries of the Company from time to time parties thereto, the Lender Parties thereto, First Union National Bank, as Administrative Agent, Fleet National Bank, as Syndication Agent, SunTrust Bank, as Documentation Agent, and First Union Capital Markets Corp., as Lead Arranger.(2)
- 10.2 First Amendment to Amended and Restated Credit Agreement dated as of October 13, 2000 among the Company, the Domestic Subsidiaries of the Company identified as a "Guarantor" on the signature pages thereto, the Lender Parties thereto and First Union National Bank, as Administrative Agent.(2)
- 10.3 Second Amendment to Amended and Restated Credit Agreement dated as of December 21, 2001 among the Company, the Domestic Subsidiaries of the Company identified as a "Guarantor" on the signature pages thereto, the Lender Parties thereto and First Union National Bank, as Administrative Agent.(3)
- 10.4 Third Amendment to Amended and Restated Credit Agreement dated April 30, 2003 among the Company, the Domestic Subsidiaries of the Company identified as a "Guarantor" on the signature pages thereto, and the Lender Parties thereto and Wachovia Bank, as Administrative Agent.(4)
- 10.5 Consent dated December 17, 2002 among the Company, the Domestic Subsidiaries of the Company identified as a "Guarantor" on the signature pages thereto, the Lender Parties thereto and First Union National Bank, as Administrative Agent(5)

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- 10.6 Amended, Restated and Consolidated Management and Consulting Agreement among the Registrant, T.C. Management L.L.C., T.C. Management IV, L.L.C. and Brockway Moran & Partners Management, L.P.(1)
- 10.7 Employment Agreement dated as of August 3, 2000 between the Registrant and Kenton K. Alder.(1)
- 10.8 Offer Letter dated as of February 25, 2000 between the Registrant and Stacey M. Peterson.(1)
- 10.9 Amended and Restated Management Stock Option Plan.(1)
- 10.10 Form of Management Stock Option Agreement.(1)
- 10.11 Form of 2000 Equity Compensation Plan.(1)
- 10.12 Form of Indemnification Agreement with directors, officers and key employees.(1)
- 10.13 Lease Agreement dated as of July 19, 1995 between the Port of Skagit County and the Registrant.(1)
- 10.14 Statutory Warranty Deeds for Redmond Facility.(1)
- 21.1 Subsidiaries of the Registrant(6)
- 23.1 Consent of KPMG LLP.(7)
- 23.2 Consent of Arthur Andersen LLP.(7)
- 23.3 Consent of Karr Tuttle Campbell, P.S. (included in opinion filed as Exhibit 5.1)(7)

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(1) Incorporated by reference to the Registration Statement on Form S-1 (Registration No. 333-39906) declared effective on September 20, 2000.

- (2) Incorporated by reference to the Registrant's Quarterly Report on Form 10-Q as filed with the Securities and Exchange Commission on November 16, 2000.
- (3) Incorporated by reference to the Registration Statement on Form S-3 (Registration No. 333-75796) declared effective on February 22, 2002.
- (4) Incorporated by reference to the Registration Statement on Form S-3 (Registration No. 333-107811) declared effective on September 17, 2003.
- (5) Incorporated by reference to the Registrant's Annual Report on Form 10-K as filed with the Securities and Exchange Commission on March 31, 2003.
- (6) Incorporated by reference to the Registrant's Annual Report on Form 10-K as filed with the Securities and Exchange Commission on February 27, 2004.
- (7) Filed herewith.

**Item 17. Undertakings**

The undersigned Registrant hereby undertakes that, for purposes of determining any liability under the Securities Act of 1933, each filing of the Registrant's annual report pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934 (and, where applicable, each filing of an employee benefit plan's annual report pursuant to Section 15(d) of the Securities Exchange Act of 1934) that is incorporated by reference in the registration statement shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial *bona fide* offering thereof.

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Inssofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers and controlling persons of the Registrant pursuant to the provisions described under "Item 15 Indemnification of Directors and Officers" above, or otherwise, the Registrant has been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the Registrant of expenses incurred or paid by a director, officer or controlling person of the Registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the Registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act and will be governed by the final adjudication of such issue.

The undersigned Registrant hereby undertakes that:

- (1) For purposes of determining any liability under the Securities Act, the information omitted from the form of prospectus filed as part of this Registration Statement in reliance upon Rule 430A and contained in a form of prospectus filed by the Registrant pursuant to Rule 424(b)(1) or (4) or 497(h) under the Securities Act shall be deemed to be part of this Registration Statement as of the time it was declared effective.
- (2) For the purposes of determining any liability under the Securities Act, each post-effective amendment that contains a form of prospectus shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial *bona fide* offering thereof.

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Stacey M. Peterson,  
*Attorney-in-Fact*

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