TTM TECHNOLOGIES INC Form S-3 August 08, 2003

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As filed with the Securities and Exchange Commission on August 8, 2003

Registration No. 333-

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM S-3

REGISTRATION STATEMENT

Under The Securities Act of 1933

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)

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)

Copies to:

Bruce E. Macdonough, Esq. Michael L. Kaplan, Esq. Greenberg Traurig, LLP 2375 E. Camelback Rd. Phoenix, Arizona 85016 (602) 445-8000 Peter T. Healy, Esq. C. Brophy Christensen, Esq. O'Melveny & Myers LLP 275 Battery Street, Suite 2600 San Francisco, CA 94111 (415) 984-8700

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

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

If any of the securities being registered 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. //

CALCULATION OF REGISTRATION FEE

Title of Each Class of Securities to be Registered	Proposed Maximum Aggregate Offering Price(1)	Amount of Registration Fee
Common Stock, no par value	\$100,000,000.00	\$8,090.00

(1) Estimated solely for the purpose of calculating the registration fee pursuant to Rule 457(o).

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 AUGUST 8, 2003

10,000,000 Shares Common Stock

TTM Technologies, Inc. is selling 200,000 shares of common stock, and the selling shareholders identified in this prospectus are selling an additional 9,800,000 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 1,500,000 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 August 7, 2003 was \$8.01 per share.

INVESTING IN OUR COMMON STOCK INVOLVES RISKS. SEE "RISK FACTORS" BEGINNING ON PAGE 5.

	Per Share	Total	
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 , 2003.

Thomas Weisel Partners LLC

RBC Capital Markets

Needham & Company, Inc.

Wells Fargo Securities, LLC

The date of this prospectus is , 2003.

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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.

PROSPECTUS SUMMARY

You should read the following summary together with the more detailed information concerning our company, the common stock being sold in this offering and our financial statements appearing in this prospectus and 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 prospectus, before you invest in our common stock. 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 life cycles and moderate production volumes. Our customers include original equipment manufacturers and electronic manufacturing services companies. We significantly enhanced our capability to manufacture technologically complex printed circuit boards through our December 2002 acquisition of Honeywell Advanced Circuits, Inc.

The TTM Solution

We manufacture printed circuit boards that satisfy all stages of an electronic product's life cycle from prototype to volume production for targeted commercial end markets. Key aspects of our solution include:

One-stop manufacturing solution. We offer a one-stop manufacturing solution to our customers through our specialized 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 as little as 24 hours. This rapid delivery service enables original equipment manufacturers to develop sophisticated electronic products quickly and reduce time to market. In addition, our quick-turn services provide us with an opportunity to capture additional business, 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 the two fiscal quarters ended June 30, 2003, approximately 62% of our gross sales involved the manufacture of printed circuit boards with at least 12 layers, an industry accepted measure of complexity.

Our Manufacturing Services

Ouick-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.

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.

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, 2001 and 2002, orders with delivery requirements of 10 days or less represented 40% and 47% of our gross sales, respectively. Quick-turn orders decreased to approximately 28% of our gross sales for the two fiscal quarters ended June 30, 2003. This change in order mix resulted from our acquisition of Advanced Circuits, which focuses on manufacturing technologically complex printed circuit boards, primarily 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 volumes that satisfy our customers' entire production needs. 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 8.5 in the first two fiscal quarters of 2002 to 13.9 in the first two fiscal quarters of 2003. 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 and Customers

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, part of our recent Advanced Circuits acquisition, focuses on the very high technology segment of the printed circuit board industry with standard delivery times.

Our significant original equipment manufacturer customers include Adtran, Agilent Technologies, Apple Computer, Cisco, Hewlett-Packard, IBM, ITT, Juniper Networks, Micron Technology, Motorola, and Sun Microsystems. Our significant electronic manufacturing services customers include Benchmark Electronics, Celestica, Jabil Circuit, MC Assembly, Plexus, Solectron and Vanguard EMS. We sell to original equipment manufacturers both directly and through electronic manufacturing services companies. As of June 30, 2003, we had approximately 590 customers, compared to approximately 565 customers at December 31, 2002.

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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

expanding our presence in targeted niche markets through 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	200,000 shares
Common stock offered by selling shareholders	9,800,000 shares
Common stock to be outstanding after this offering	40,092,564 shares
Over-allotment option	1,500,000 shares
Use of proceeds	We intend to use our net proceeds from this offering for general
	corporate purposes, including working capital. We will not receive
	any of the proceeds from the sale of shares offered by selling
	shareholders.
Nasdaq National Market symbol	TTMI

The above information is based on 39,869,294 shares outstanding as of June 30, 2003, includes 23,270 shares to be issued upon exercise of options by a selling shareholder in connection with this offering, and excludes:

2,867,483 other shares issuable upon exercise of options outstanding under our management stock option plan at a weighted average exercise price of \$5.50 per share; and

approximately 4,598,239 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 along with "Management's Discussion and Analysis of Financial Condition and Results of Operations" and our consolidated financial statements and related notes included elsewhere in this prospectus.

	Two Quarters Ended
Year Ended December 31,	

Two Quarters Ended

							_			
		2000		2001		2002	July 1, 2002 June 3		30, 2003(1)	
Statement of Operations Data:		2000								
Net sales	\$	203,729	\$	128,989	\$	88,989	\$	47,021	\$	80,681
Cost of goods sold	Ψ	127,137	Ψ	92,235	ψ	79,489	Ψ	42,234	Ψ	69,709
cost of goods sold		127,107		72,200		77,107		.2,20		05,705
Gross profit		76,592		36,754		9,500		4,787		10,972
Operating expenses:										
Selling and marketing		10,156		7,272		6,447		3,246		5,189
General and administrative		8,305		5,435		4,486		2,097		5,580
Amortization of intangibles		4,810		4,808		1,202		601		601
Restructuring charges		4,010		7,000		3,859		907		203
Amortization of deferred retention bonus		5,470				3,639		907		203
Management fees		2,150								
Total operating expenses		30,891		17,515		15,994		6,851		11,573
Operating income (loss)		45,701		19,239		(6,494)		(2,064)		(601)
Interest expense		(12,176)		(2,644)		(1,084)		(542)		(307)
Amortization of debt issuance costs		(742)		(41)		(105)		(21)		(39)
Interest income and other, net		181		629		694		308		165
Income (loss) before income taxes and extraordinary items		32,964		17,183		(6,989)		(2,319)		(782)
Income tax (provision) benefit		1,900		(6,189)		2,278		757		240
Income (loss) before extraordinary item		34,864		10,994		(4,711)		(1,562)		(542)
Extraordinary gain (loss), net of										
income tax		(6,792)				6,296				824
					_					
Net income (loss)	\$	28,072	\$	10,994	\$	1,585	\$	(1,562)	\$	282
					_					
Earnings per common share:										
Basic	\$	0.88	\$	0.29	\$	0.04	\$	(0.04)	\$	0.01
Busic	Ψ	0.00	Ψ	0.27	Ψ	0.0.	Ψ	(0.0.1)	Ψ	0.01
D 11 1	Φ.	0.02	Φ.	0.20	Φ.	0.04	Φ.	(0.04)	Φ.	0.01
Diluted	\$	0.82	\$	0.28	\$	0.04	\$	(0.04)	\$	0.01
Weighted average common shares:										
Basic		31,919		37,482		39,511		39,217		39,808
Diluted		34,166		38,899		39,511		39,217		39,808
Other Financial Data:										
Net cash provided by operating	¢	12 (02	¢	29.245	¢	10.011	¢	5 701	¢	14712
activities Depreciation on property, plant and	\$	43,692	\$	38,245	\$	10,011	\$	5,781	\$	14,713
Debreciation on broberry biancano										

June 30, 2003

	Actual	As Adjusted(2)
Balance Sheet Data:		
Cash and cash equivalents	\$ 32,000	\$ 33,077
Working capital	40,643	41,720
Total assets	197,401	198,478
Long-term debt, including current maturities	10,000	10,000
Shareholders' equity	168,114	169,191

(1) Reflects our December 2002 acquisition of Advanced Circuits.

Adjusted to reflect the sale of 200,000 shares of common stock by us in this offering at an assumed public offering price of \$8.00 per share, the sale of 23,270 shares issuable upon the exercise of options by a selling shareholder in connection with this offering at an exercise price of \$2.63 per share, the deduction of the estimated underwriting discounts and offering expenses and the application of the net proceeds as set forth in "Use of Proceeds."

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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 has been negatively impacted by a contraction in the U.S. economy and worldwide electronics market. Moreover, due to the uncertainty in the end markets served by most of our customers, we have a low level of visibility with respect to future financial results. A lasting economic recession, continued excess manufacturing capacity or an additional decline in the electronics industry could further 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. While we have recently experienced sequential quarterly increases in our net sales, 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 a valuation allowance against our deferred tax assets or recognize an impairment of our long-lived assets including goodwill and other intangible assets.

If excess global manufacturing capacity continues to exist, our gross margins may fall and/or we may have to incur restructuring charges if we choose to close any of our facilities.

Due to continuing fluctuations in demand, our facilities have been operating significantly below capacity. 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.

If we believe we have significant long-term excess capacity, we may decide to permanently close one or more of our facilities and lay off some of our employees. This could result in our recording restructuring charges such 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.

We are dependent upon a small number of 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. Our 10 largest customers accounted for approximately 41.8% of our net sales in 2002 and 65.2% of our sales in the two fiscal quarters ended June 30, 2003. Our 2003 increase in customer concentration was due primarily to our acquisition of Advanced Circuits, which has a small number of large

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customers. If our customers fail to place orders with us at past levels, it would negatively affect 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 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. Some of our customers are electronic manufacturing services 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 grow as a percentage of our total receivables. We do not utilize credit insurance as a risk management tool, but we periodically evaluate our risk management options.

Because of the slowdown in the global economy in 2001 and 2002, our exposure to the credit risks relating to our financing activities described above increased. Although we have programs in place to monitor and mitigate the associated risks, such programs may not be effective in reducing our credit risks. There have been bankruptcies among customers causing us to incur economic or financial losses. Should economic conditions not improve, we may incur additional losses. Although our losses have not been material to date, future losses, if incurred, could harm our business, operating results and financial condition.

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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, 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 will accordingly 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 company's 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 r	nay 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 unanticipated costs; or

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 materially adversely affect 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

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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 industry market share if we are unable to maintain our current competitive position in 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 market.

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

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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. Furthermore, printed circuit board manufacturers are currently experiencing 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 our stock price to decline.

Our quarterly results of operations vary 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 lead time production;

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

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 their own products internally;

variation in demand for our customers' products; and

changes in new product introductions.

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We have 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 electronic manufacturing services providers in the printed circuit board industry could reduce our gross margins, potential sales and customers.

In 2002, approximately 27% of our net sales were to electronic manufacturing services providers. For the two fiscal quarters ended June 30, 2003, approximately 62% of our net sales were to electronic manufacturing services providers. Electronic manufacturing services providers supply electronic product assembly services to original equipment manufacturers. Electronic manufacturing services companies also source on a global basis to a greater extent than original equipment manufacturers. The growth of electronic manufacturing services providers increases the purchasing power of such providers and could result in increased price competition, or the loss of existing original equipment manufacturer customers. In addition, some electronic manufacturing services providers, including several of our customers, have the ability to directly manufacture printed circuit boards. If a significant number of our other electronic manufacturing services 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 original equipment manufacturer customers outsource the production of printed circuit boards to these electronic manufacturing services 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 June 30, 2003, our consolidated balance sheet reflected \$76.8 million of intangible assets, a substantial portion of our total assets at such date. Intangible assets consist primarily of goodwill and other identifiable intangibles relating to our July 1999 acquisition of Power Circuits. Our intangible assets may increase in future periods if we consummate other acquisitions. Amortization or impairment of these additional intangibles would, in turn, have a negative impact on earnings. In addition, we evaluate whether events and circumstances have occurred that indicate the remaining balance of 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 intangible assets, which could harm our results during the periods in which such a reduction is recognized.

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

As of June 30, 2003, we had net deferred tax assets of approximately \$16.5 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.

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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. Similarly, we were advised that we have been added as a defendant in a patent

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infringement lawsuit filed 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 "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. If we do not prevail in any litigation as a result of such 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

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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, negatively impacting 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.

Our indebtedness could adversely affect our financial health, and the restrictions imposed by the terms of our debt instruments may severely limit our ability to plan for or respond to changes in our business.

At June 30, 2003, we had \$10.0 million of indebtedness. In addition, subject to the restrictions under our various debt agreements, we may incur revolving loan indebtedness from time to time to finance acquisitions or capital expenditures or for other purposes.

Our level of debt could have negative consequences. For example, it could:

require us to dedicate a substantial portion of our cash flow from operations to repayment of debt, limiting the availability of cash for other purposes;

increase our vulnerability to adverse general economic conditions by making it more difficult to borrow additional funds to maintain our operations if we suffer revenue shortfalls;

hinder our flexibility in planning for, or reacting to, changes in our business and industry by preventing us from borrowing money to upgrade our equipment or facilities; and

limit or impair our ability to obtain additional financing in the future for working capital, capital expenditures, acquisitions or general corporate purposes.

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 years ended December 31, 2000 and 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 reports. Since Arthur Andersen has ceased

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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

Our major shareholder has significant influence over our business and could delay, deter or prevent a change of control or other business combination.

As of June 30, 2003, Circuit Holdings held approximately 39.3% of our outstanding stock. Thayer Capital Partners controls three entities that together own approximately 60.0% of Circuit Holdings and beneficially own approximately 45.8% of our shares. In addition, two of our directors are representatives of Thayer Capital Partners. Although Thayer Capital does not currently own any interests in our direct competitors, the interests of Thayer Capital Partners may not always coincide with our interests or those of our other shareholders. By virtue of its stock ownership and board representation, Thayer Capital Partners will continue to have a significant influence over all matters submitted to our board and our shareholders, including the election of our directors, and will be able to exercise significant control over our business, policies and affairs. Through its voting power, Thayer Capital Partners could cause us to take actions that we would not consider absent its influence, or could delay, deter or prevent a change of control of our company or other business combination that might otherwise be beneficial to our public shareholders.

Thayer Capital Partners has historically worked closely with Brockway Moran & Partners, Inc. Brockway Moran & Partners Fund, L.P. owns the remaining 40.0% of Circuit Holdings. In addition, one of our directors is a representative of Brockway Moran & Partners. Although there is no legal agreement requiring Thayer Capital Partners and Brockway Moran & Partners to vote their shares together or for their representatives on our board to vote together, given their relationship in the past these two entities may continue to work together, in which case they would exert substantial influence over our board and exercise voting control over approximately 23.5% of our outstanding shares after this offering, or approximately 19.8% if the underwriters' over-allotment option is exercised in full.

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

The market 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 \$8.90 per share on August 1, 2003. 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 market price of our common stock include:

actual and anticipated variations in our operating results;
general economic and market conditions;
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 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 adversely affect the market price of our common stock.

Shares eligible for public sale after this offering could adversely affect our stock price.

The market 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 40.1 million shares that will be outstanding following the completion of this offering:

approximately 30.6 million shares generally will be freely tradable in the public market, including all of the 10.0 million shares offered under this prospectus;

approximately 9.5 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 2.9 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.

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 net sales, gross profit and anticipated 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

We estimate that we will receive net proceeds from the sale of 200,000 shares of our