REGISTRATION NO. 333-

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SECURITIES AND EXCHANGE COMMISSION WASHINGTON, D.C. 20549

> FORM S-3 REGISTRATION STATEMENT UNDER THE SECURITIES ACT OF 1933

LATTICE SEMICONDUCTOR CORPORATION (Exact name of Registrant as specified in its Charter)

DELAWARE (State or other jurisdiction ٥f incorporation or organization)

5555 N.E. MOORE COURT HILLSBORO, OREGON 97124 (503) 268-8000

93-0835214 (I.R.S. Employer Identification Number)

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

CYRUS Y. TSUI
PRESIDENT, CHIEF EXECUTIVE OFFICER AND CHAIRMAN OF THE BOARD OF DIRECTORS LATTICE SEMICONDUCTOR CORPORATION

5555 N.E. MOORE COURT HILLSBORO, OREGON 97124 (503) 268-8000

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

COPY TO:

JOHN A. FORE WILSON SONSINI GOODRICH & ROSATI, PROFESSIONAL CORPORATION 650 PAGE MILL ROAD PALO ALTO, CALIFORNIA 94304 (650) 493-9300

BRUCE K. DALLAS DAVIS POLK & WARDWELL 1600 EL CAMINO REAL MENLO PARK, CALIFORNIA 94025 (650) 752-2000

APPROXIMATE DATE OF COMMENCEMENT OF PROPOSED SALE TO THE PUBLIC: As soon as possible after this Registration Statement becomes effective.

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

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

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

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

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

CALCULATION OF REGISTRATION FEE

PROPOSED MAXIMUM OFFERING PRICE PER SECURITY(2)

PROPOSED MAXIMUM AGGREGATE OFFERING

\$64.79

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Common stock, \$0.01 par value.....

- (1) Includes 600,000 shares of common stock issuable upon exercise of the underwriters' option to purchase additional shares in this offering.
- (2) Estimated solely for the purpose of determining the registration fee pursuant to Rule 457(c) promulgated under the Securities Act of 1933 and based on the average of the high and low prices of the common stock as quoted on the Nasdaq National Market on July 6, 2000.

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.

# SUBJECT TO COMPLETION. DATED JULY 11, 2000.

THE INFORMATION IN THIS PRELIMINARY PROSPECTUS IS NOT COMPLETE AND MAY BE CHANGED. THESE SECURITIES MAY NOT BE SOLD UNTIL THE REGISTRATION STATEMENT FILED WITH THE SECURITIES AND EXCHANGE COMMISSION IS EFFECTIVE. THIS PRELIMINARY PROSPECTUS IS NOT AN OFFER TO SELL NOR DOES IT SEEK AN OFFER TO BUY THESE SECURITIES IN ANY JURISDICTION WHERE THE OFFER OR SALE IS NOT PERMITTED.

[LOGO]

### Common Stock

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The common stock is quoted on the Nasdaq National Market under the symbol LSCC. The last reported sale price of the common stock on July 10, 2000 was per share.

SEE "RISK FACTORS" BEGINNING ON PAGE 7 TO READ ABOUT FACTORS YOU SHOULD CONSIDER BEFORE BUYING SHARES OF OUR COMMON STOCK.

NEITHER THE SECURITIES AND EXCHANGE COMMISSION NOR ANY STATE SECURITIES COMMISSION HAS APPROVED OR DISAPPROVED OF THESE SECURITIES OR PASSED UPON THE ACCURACY OR ADEQUACY OF THIS PROSPECTUS. ANY REPRESENTATION TO THE CONTRARY IS A CRIMINAL OFFENSE.

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	Per Share	Total
Initial price to public	\$	\$
Underwriting discount		\$
Proceeds, before expenses, to Lattice	\$	\$

If the underwriters sell more than 4,000,000 shares of common stock, the underwriters have the option to purchase up to an additional 600,000 shares from Lattice at the public offering price less the underwriting discount.

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The underwriters expect to deliver the shares to purchasers in New York, New York on July  $\,$  , 2000.

JOINT BOOKRUNNING MANAGERS

GOLDMAN, SACHS & CO.

MORGAN STANLEY DEAN WITTER

PRUDENTIAL VOLPE TECHNOLOGY a unit of Prudential Securities

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Prospectus dated July , 2000.

### PROSPECTUS SUMMARY

THIS SUMMARY HIGHLIGHTS INFORMATION WE PRESENT MORE FULLY ELSEWHERE IN THIS PROSPECTUS AND IN THE DOCUMENTS INCORPORATED BY REFERENCE INTO THIS PROSPECTUS. THIS SUMMARY DOES NOT CONTAIN ALL OF THE INFORMATION THAT YOU SHOULD CONSIDER BEFORE BUYING SHARES IN THE OFFERING. YOU SHOULD READ CAREFULLY THE ENTIRE PROSPECTUS AND ALL OF THE DOCUMENTS INCORPORATED BY REFERENCE INTO THIS PROSPECTUS.

### LATTICE SEMICONDUCTOR CORPORATION

We design, develop and market high performance programmable logic devices and related software. We are the world's leading supplier of in-system programmable logic devices. Programmable logic devices are widely-used semiconductor components that can be configured by the end customer as specific logic circuits, and enable the end customer to shorten design cycle times and reduce development costs. Our end customers are primarily original equipment manufacturers, in the markets of data communications and telecommunications, as well as computing, industrial and military systems. During the March 2000 quarter, we derived approximately 65% of our \$126 million in revenue from the communications markets and approximately 21% from the computing market.

Manufacturers of electronic systems are increasingly challenged to bring differentiated products to market quickly. These competitive pressures often preclude the use of custom-designed application specific integrated circuits which generally entail significant design risks and time delay. Standard logic products, an alternative to custom-designed application specific integrated circuits, limit a manufacturer's flexibility to customize an end system. Programmable logic devices give system designers the ability to quickly create own custom logic circuits, provide product differentiation and rapidly bring products to market.

According to Dataquest, the programmable logic device market in 1999 was approximately \$2.5 billion. The programmable logic device market has two primary segments: high-density programmable logic devices, with more than 1,000 logic gates, and low-density programmable logic devices, with fewer than 1,000 logic gates. High-density programmable logic devices include devices based on both the complex programmable logic device and the field programmable gate array architectures. In 1999, Dataquest estimated that the complex programmable logic device market was \$0.9 billion and the field programmable gate array market was \$1.4 billion.

We offer a full product line in both the high-density complex programmable logic device market and the low-density programmable logic device market. Our strategy has been to continue to increase our market share in the rapidly growing complex programmable logic device market with differentiated proprietary products, software and technology and at present we hold the number two position in this market. Since we introduced our first complex programmable logic device products in 1992, we have continued to focus on increasing the percentage of our total revenue generated by complex programmable logic device products. During the March 2000 quarter, complex programmable logic device revenue accounted for approximately 72% of our total revenue.

Our complex programmable logic device products provide our customers with industry-leading performance, density and number of input/output pins. In addition, we currently offer 29 complex programmable logic device products that operate using a 3.3-volt or 2.5-volt power supply instead of the older 5-volt standard, the largest portfolio of low-voltage complex programmable logic device products in the marketplace. Lower voltage programmable logic devices benefit end users by consuming less power and providing compatibility with other advanced electronic components. We believe that our innovative low-voltage complex programmable logic device products provide us a competitive advantage as our customers transition the power supply of their systems from 5 volts to 3.3 volts.

We pioneered the development of in-system programmability, which has become an industry standard feature in the programmable logic device market. In contrast to standard programmable logic

device programming technologies, in-system programmability allows the system designer to configure and reconfigure a programmable logic device without removing the device from the system board. By enhancing the flexibility of programmable logic devices, in-system programmability provides a number of important benefits to a system manufacturer over the lifecycle of an electronic system product. In-system programmability can allow customers to reduce design cycle times, accelerate time to market, reduce prototyping costs, reduce manufacturing costs, lower inventory requirements and perform simplified and cost-effective field upgrades.

In June 1999, we acquired Vantis Corporation, the programmable logic device subsidiary of Advanced Micro Devices. This acquisition has increased our share of the programmable logic device market, accelerated development of new products and technologies and expanded our penetration into new and existing customers.

Our manufacturing strategy has been to procure silicon wafers for our products from leading manufacturers under current purchase orders and long-term agreements. This has allowed us to avoid the cost of establishing our own wafer fabrication facility.

We sell our products directly to end customers through a network of independent sales representatives and indirectly through a network of distributors. We use a direct sales management and field applications engineering organization together with manufacturers' representatives and distributors to reach a broad base of potential end customers. We believe our distribution channels provide a cost-effective means for reaching end customers.

We were incorporated in Oregon in 1983 and reincorporated in Delaware in 1985. Our principal offices are located at 5555 N.E. Moore Court, Hillsboro, Oregon 97124, our telephone number is (503) 268-8000 and our website can be accessed at www.latticesemi.com. Information contained in our website is not intended to constitute part of this prospectus.

### THE OFFERING

Shares offered	4,000,000 shares.
Shares to be outstanding after this offering	53,446,405 shares.
Nasdaq National Market symbol	LSCC
Use of proceeds	General corporate purposes, including working capital, and potentially for investments to maintain and expand our wafer supply capacity and for acquisition opportunities that may
	arise in the future.

The number of shares to be outstanding after this offering includes:

- 49,446,405 shares of common stock outstanding at June 30, 2000; and
- 4,000,000 shares of common stock offered in this offering.

The number of shares to be outstanding after this offering excludes:

- 7,404,748 shares of common stock issuable upon exercise of stock options outstanding at June 30, 2000, with a weighted average exercise price of \$23.83 per share;
- 3,372,549 shares of common stock available for grant at June 30, 2000 under our 1996 stock option plan;
- 126,000 shares of common stock available for grant at June 30, 2000 under our 1993 directors' stock option plan;
- 319,096 shares of common stock available for issuance at June 30, 2000 under our employee stock purchase plan;
- 313,396 shares of common stock issuable upon exercise of warrants outstanding at June 30, 2000, at a weighted average exercise price of \$24.10 per share; and
- 6,274,131 shares of common stock issuable upon conversion of our 4 3/4% convertible subordinated notes.

Except as otherwise indicated, information in this prospectus assumes no exercise of the underwriters' option to purchase additional shares in the offering.

		ENDED	NINE MONTH FISCAL PERIOD	THREE MONTHS ENDED MARCH 31,		
	MARO	CH 31,	ENDED		DDO FORMA	
	1998	1999	DEC. 31, 1999(1)	1999	PRO FORMA 1999(2)	2000
					(UNAUDITED)	
CONSOLIDATED STATEMENT OF OPERATIONS DATA:						
Revenue	\$245,894	\$200,072	\$269,699	\$53,788	\$100,945	\$126,055
Gross profit	147,011	121,632	161,012	33,045	59,807	76,470
<pre>Income (loss) from operations</pre>	75,065	51,624	(70,350)	14,692	400	18,351
Net income (loss)	56,567	42,046	(48, 146)(3)	11,848	(1,722)	104,821(4)
	=======	=======	=======	======	=======	======
Basic net income (loss) per share	\$ 1.22	\$ .90	\$ (1.01)	\$ .25	\$ (.04)	\$ 2.15
	=======	=======	=======	======	=======	======
Diluted net income (loss) per share	\$ 1.18	\$ .88	\$ (1.01)	\$ .24	\$ (.04)	\$ 1.84
	=======	=======	=======	======	=======	======
Shares used in per share calculations:						
Basic	46,478	46,974	47,714	47,076	47,076	48,738
Diluted	47,788	47,638	47,714	48,398	====== 47,076	58,409
	=======	=======	=======	======	=======	=======

MARCH 31, 2000
ACTUAL AS ADJUSTED(5)
------(UNAUDITED)

CONSOLIDATED BALANCE SHEET DATA:

Cash, cash equivalents and short-term investments \$ 23	37,804 \$
Working capital	9,018
Total assets 1,07	'8,608
Long-term debt	80,000
Stockholders' equity	L9,340

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- (1) In 1999, we changed our fiscal year end from March 31 to December 31. This period includes financial results for our acquisition of Vantis since June 15, 1999. The pro forma results of operations for the period ended December 31, 1999 have been reflected in the Form 8-K filed July 11, 2000, which is incorporated by reference in this prospectus.
- (2) Reflects our acquisition of Vantis Corporation. The pro forma unaudited statement of operations data for the three months ended March 31, 1999 are presented using our unaudited condensed consolidated statement of operations for the three months ended March 31, 1999 combined with Vantis' unaudited condensed consolidated statement of operations for the three months ended March 28, 1999 assuming the transaction occurred on the first day of that period.
- (3) Includes the effects of an \$89.0 million charge for in-process research and development and the related income tax effects incurred and recorded in conjunction with our acquisition of Vantis on June 15, 1999, and an extraordinary loss of \$1.7 million, net of income taxes, for unamortized debt issuance costs related to bank debt retired with the proceeds from our issuance of 4 3/4% convertible subordinated notes during the period. See Notes 4 and 8 to the consolidated financial statements for the period ended December 31, 1999 incorporated by reference in this prospectus.
- (4) Includes the effects of a \$150 million gain (\$92.1 million after-tax) representing the appreciation of investments made in two Taiwanese semiconductor foundry companies. See Note 10 to the unaudited consolidated financial statements for the period ended March 31, 2000 incorporated by reference in this prospectus.
- (5) The as adjusted column gives effect to the sale of 4,000,000 shares of common stock at an assumed offering price to the public of \$ per share and after deducting an assumed underwriting discount and estimated offering expenses payable by us and assuming that the underwriters' option to purchase additional shares in the offering is not exercised.

#### RISK FACTORS

YOU SHOULD CAREFULLY CONSIDER THE RISKS DESCRIBED BELOW BEFORE MAKING AN INVESTMENT DECISION. IF ANY OF THE FOLLOWING RISKS ACTUALLY OCCURS, OUR BUSINESS, FINANCIAL CONDITION AND RESULTS OF OPERATIONS COULD BE HARMED. THIS COULD CAUSE THE TRADING PRICE OF OUR COMMON STOCK TO DECLINE, AND YOU MAY LOSE ALL OR PART OF YOUR INVESTMENT.

### RISKS RELATED TO OUR BUSINESS

OUR WAFER SUPPLY MAY BE INTERRUPTED OR REDUCED, WHICH MAY RESULT IN A SHORTAGE OF FINISHED PRODUCTS AVAILABLE FOR SALE.

We do not manufacture finished silicon wafers. Currently, all of our silicon wafers are manufactured by Seiko Epson in Japan, AMD in the United States and UMC in Taiwan. If Seiko Epson, through its U.S. affiliate Epson Electronics America, AMD or UMC significantly interrupts or reduces our wafer supply, our operating results could be harmed.

In the past, we have experienced delays in obtaining wafers and in securing supply commitments from our foundries. At present, we anticipate that our supply commitments are adequate. However, these existing supply commitments may not be sufficient for us to satisfy customer demand in future periods. Additionally, notwithstanding our supply commitments we may still have difficulty in obtaining wafer deliveries consistent with the supply commitments. We negotiate wafer prices and supply commitments from our suppliers on at least an annual basis. If any of Seiko Epson, Epson Electronics America, AMD or UMC were to reduce its supply commitment or increases its wafer prices, and we cannot find alternative sources of wafer supply, our operating results could be harmed.

Many other factors that could disrupt our wafer supply are beyond our control. Since worldwide manufacturing capacity for silicon wafers is limited and inelastic, we could be harmed by significant industry-wide increases in overall wafer demand or interruptions in wafer supply. Additionally, a future disruption of Seiko Epson's, AMD's or UMC's foundry operations as a result of a fire, earthquake or other natural disaster could disrupt our wafer supply and could harm our operating results.

IF OUR FOUNDRY PARTNERS EXPERIENCE QUALITY OR YIELD PROBLEMS, WE MAY FACE A SHORTAGE OF FINISHED PRODUCTS AVAILABLE FOR SALE.

We depend on our foundries to deliver reliable silicon wafers with acceptable yields in a timely manner. As is common in our industry, we have experienced wafer yield problems and delivery delays. If our foundries are unable to produce silicon wafers that meet our specifications, with acceptable yields, for a prolonged period, our operating results could be harmed.

Substantially all of our revenue is derived from products based on a specialized silicon wafer manufacturing process technology called E(2)CMOS-Registered Trademark-. The reliable manufacture of high performance E(2)CMOS semiconductor wafers is a complicated and technically demanding process requiring:

- a high degree of technical skill;
- state-of-the-art equipment;
- the absence of defects in the masks used to print circuits on a wafer;
- the elimination of minute impurities and errors in each step of the fabrication process; and
- effective cooperation between the wafer supplier and the circuit designer.

As a result, our foundries may experience difficulties in achieving acceptable quality and yield levels when manufacturing our silicon wafers.

WE MAY BE UNSUCCESSFUL IN DEFINING, DEVELOPING OR SELLING NEW PRODUCTS REQUIRED TO MAINTAIN OR EXPAND OUR BUSINESS.

As a semiconductor company, we operate in a dynamic environment marked by rapid product obsolescence. Our future success depends on our ability to introduce new or improved products that meet customer needs while achieving acceptable margins. If we fail to introduce these new products in a timely manner or these products fail to achieve market acceptance, our operating results would be harmed.

The introduction of new products in a dynamic market environment presents significant business challenges. Product development commitments and expenditures must be made well in advance of product sales. The success of a new product depends on accurate forecasts of long-term market demand and future technology developments.

Our future revenue growth is dependent on market acceptance of our new product families and the continued market acceptance of our software development tools. The success of these products is dependent on a variety of specific technical factors including:

- successful product definition;
- timely and efficient completion of product design;
- timely and efficient implementation of wafer manufacturing and assembly processes;
- product performance; and
- the quality and reliability of the product.

If, due to these or other factors, our new products do not achieve market acceptance, our operating results would be harmed.

OUR PRODUCTS MAY NOT BE COMPETITIVE IF WE ARE UNSUCCESSFUL IN MIGRATING OUR MANUFACTURING PROCESSES TO MORE ADVANCED TECHNOLOGIES.

To develop new products and maintain the competitiveness of existing products, we need to migrate to more advanced wafer manufacturing processes that use larger wafer sizes and smaller device geometries. We also may need to use additional foundries. Because we depend upon foundries to provide their facilities and support for our process technology development, we may experience delays in the availability of advanced wafer manufacturing process technologies at existing or new wafer fabrication facilities. As a result, volume production of our advanced E(2)CMOS process technologies at the new fabs of Seiko Epson, UMC or future foundries may not be achieved. This could harm our operating results.

IF OUR ASSEMBLY AND TEST SUBCONTRACTORS EXPERIENCE QUALITY OR YIELD PROBLEMS, WE MAY FACE A SHORTAGE OF FINISHED PRODUCTS AVAILABLE FOR SALE.

We rely on subcontractors to assemble and test our devices with acceptable quality and yield levels. As is common in our industry, we have experienced quality and yield problems in the past. If we experience prolonged quality or yield problems in the future, our operating results could be harmed.

The majority of our revenue is derived from semiconductor devices assembled in advanced packages. The assembly of advanced packages is a complex process requiring:

- a high degree of technical skill;
- state-of-the-art equipment;
- the absence of defects in lead frames used to attach semiconductor devices to the package;
- the elimination of raw material impurities and errors in each step of the process; and

- effective cooperation between the assembly subcontractor and the device manufacturer.

As a result, our subcontractors may experience difficulties in achieving acceptable quality and yield levels when assembling and testing our semiconductor devices.

DETERIORATION OF CONDITIONS IN ASIA MAY DISRUPT OUR EXISTING SUPPLY ARRANGEMENTS AND RESULT IN A SHORTAGE OF FINISHED PRODUCTS AVAILABLE FOR SALE.

Two of our three silicon wafer suppliers operate fabs located in Asia. Our finished silicon wafers are assembled and tested by independent subcontractors located in Hong Kong, Malaysia, the Philippines, South Korea, Taiwan and Thailand. A prolonged interruption in our supply from any of these subcontractors could harm our operating results.

Economic, financial, social and political conditions in Asia have been volatile. Financial difficulties, governmental actions or restrictions, prolonged work stoppages or any other difficulties experienced by our suppliers may disrupt our supply and could harm our operating results.

Our wafer purchases from Seiko Epson are denominated in Japanese yen. The value of the dollar with respect to the yen fluctuates. Substantial deterioration of dollar-yen exchange rates could harm our operating results.

EXPORT SALES ACCOUNT FOR A SUBSTANTIAL PORTION OF OUR REVENUES AND MAY DECLINE IN THE FUTURE DUE TO ECONOMIC AND GOVERNMENTAL UNCERTAINTIES.

- changes in local economic conditions;
- exchange rate volatility;
- governmental controls and trade restrictions;
- export license requirements and restrictions on the export of technology;
- political instability;
- changes in tax rates, tariffs or freight rates;
- interruptions in air transportation; and
- difficulties in staffing and managing foreign sales offices.

For example, our export sales have been affected by regional economic crises. Significant changes in the economic climate in the foreign countries where we derive our export sales could harm our operating results.

OUR FUTURE QUARTERLY OPERATING RESULTS MAY FLUCTUATE AND THEREFORE MAY FAIL TO MEET EXPECTATIONS.

Our quarterly operating results have fluctuated and may continue to fluctuate. Consequently, our operating results may fail to meet the expectations of analysts and investors. As a result of industry conditions and the following specific factors, our quarterly operating results are more likely to fluctuate and are more difficult to predict than a typical non-technology company of our size and maturity:

- general economic conditions in the countries where we sell our products;
- the timing of our and our competitors' new product introductions;
- product obsolescence;
- the scheduling, rescheduling and cancellation of large orders by our customers;

- the cyclical nature of demand for our customers' products;
- our ability to develop new process technologies and achieve volume production at the new fabs of Seiko Epson, UMC or at other foundries;
- changes in manufacturing yields;
- adverse movements in exchange rates, interest rates or tax rates; and
- the availability of adequate supply commitments from our wafer foundries and assembly and test subcontractors.

As a result of these factors, our past financial results are not necessarily a good predictor of our future results.

OUR STOCK PRICE MAY CONTINUE TO EXPERIENCE LARGE SHORT-TERM FLUCTUATIONS.

In recent years, the price of our common stock has fluctuated greatly. These price fluctuations have been rapid and severe and have left investors little time to react. The price of our common stock may continue to fluctuate greatly in the future due to a variety of company specific factors, including:

- quarter-to-quarter variations in our operating results;
- shortfalls in revenue or earnings from levels expected by securities analysts; and
- announcements of technological innovations or new products by other companies.

### RISKS RELATED TO OUR INDUSTRY

THE CYCLICAL NATURE OF THE SEMICONDUCTOR INDUSTRY MAY LIMIT OUR ABILITY TO MAINTAIN OR INCREASE REVENUE AND PROFIT LEVELS DURING FUTURE INDUSTRY DOWNTURNS.

The semiconductor industry is cyclical. Our financial performance has been negatively affected by significant downturns in the semiconductor industry as a result of:

- the cyclical nature of the demand for the products of semiconductor customers;
- general reductions in inventory levels by customers;
- excess production capacity; and
- accelerated declines in average selling prices.

If these or other conditions in the semiconductor industry occur, our operating results could be harmed.

WE MAY NOT BE ABLE TO SUCCESSFULLY COMPETE IN THE HIGHLY COMPETITIVE SEMICONDUCTOR INDUSTRY.

The semiconductor industry is intensely competitive and many of our direct and indirect competitors have substantially greater financial, technological, manufacturing, marketing and sales resources. If we are unable to compete successfully in this environment, our operating results could be harmed.

The current level of competition in the programmable logic market is high and may increase as our market expands. We currently compete directly with companies that have licensed our products and technology or have developed similar products. We also compete indirectly with numerous semiconductor companies that offer products and solutions based on alternative technologies. These direct and indirect competitors are established multinational semiconductor companies as well as emerging companies. We also may experience significant competition from foreign companies in the future.

WE MAY FAIL TO RETAIN OR ATTRACT THE SPECIALIZED TECHNICAL AND MANAGEMENT PERSONNEL REQUIRED TO SUCCESSFULLY OPERATE OUR BUSINESS.

To a greater degree than most non-technology companies or larger technology companies, our future success depends on our ability to attract and retain highly qualified technical and management personnel. As a mid-sized company, we are particularly dependent on a relatively small group of key employees. Competition for skilled technical and management employees is intense within our industry. As a result, we may be unable to retain our existing key technical and management personnel or attract additional qualified employees. If we are unable to retain existing key employees or hire new qualified employees, our operating results could be harmed.

IF WE ARE UNABLE TO ADEQUATELY PROTECT OUR INTELLECTUAL PROPERTY RIGHTS, OUR FINANCIAL RESULTS AND COMPETITIVE POSITION MAY SUFFER.

Our success depends, in part, on our proprietary technology. However, we may fail to adequately protect this technology. As a result, we may lose our competitive position or face significant expense to protect or enforce our intellectual property rights.

We intend to continue to protect our proprietary technology through patents, copyrights and trade secrets. Despite this intention, we may not be successful in achieving adequate protection. Claims allowed on any of our patents may not be sufficiently broad to protect our technology. Patents issued to us also may be challenged, invalidated or circumvented. Finally, our competitors may develop similar technology independently.

Companies in the semiconductor industry vigorously pursue their intellectual property rights. If we become involved in protracted intellectual property disputes or litigation we may use substantial financial and management resources, which could harm our operating results.

We may also be subject to future intellectual property claims or judgements. If these were to occur, we may not be able to obtain a license on favorable terms or without our operating results being harmed.

# YOU SHOULD NOT RELY ON FORWARD-LOOKING STATEMENTS BECAUSE THEY ARE INHERENTLY UNCERTAIN

This prospectus, including the documents that we incorporate by reference, contains forward-looking statements within the meaning of Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934. Any statements about our expectations, beliefs, plans, objectives, assumptions or future events or performance are not historical facts and may be forward-looking. We use words or phrases such as "anticipate," "estimate," "plans," "projects," "continuing," "ongoing," "expects," "management believes," "we believe," "we intend" and similar words or phrases to identify forward-looking statements.

Forward-looking statements involve estimates, assumptions and uncertainties that could cause actual results to differ materially from those expressed in them. Any forward-looking statements are qualified in their entirety by reference to the factors discussed throughout this prospectus. Among the key factors that could cause actual results to differ materially from the forward-looking statements:

- delay in product or technology development;
- change in economic conditions of the various markets we serve;
- lack of market acceptance or demand for our new products;
- dependencies on silicon wafer suppliers and semiconductor assemblers;
- the impact of competitive products and pricing;
- opportunities or acquisitions that we pursue; and
- the availability and terms of financing.

You should not unduly rely on forward-looking statements because our actual results could materially differ from those expressed in any forward-looking statements made by us. Further, any forward-looking statement applies only as of the date on which it is made. We are not required to update any forward-looking statement or statements to reflect events or circumstances after the date on which such statement is made or to reflect the occurrence of unanticipated events.

### USE OF PROCEEDS

The net proceeds we will receive from our sale of the 4,000,000 shares of common stock in this offering are estimated to be \$\text{million}\$, or \$\text{million}\$ million if the underwriters exercise in full their option to purchase additional shares in the offering. These estimates are calculated based on an assumed public offering price of \$\text{per share and after deducting an assumed underwriting discount and estimated offering expenses payable by us.}

We intend to use the net proceeds for general corporate purposes, including working capital, and potentially for investments in order to maintain and expand our wafer supply capacity.

We may, when and if the opportunity arises, use a portion of the net proceeds to acquire complementary products, technologies or businesses. Until we use the net proceeds of this offering, we intend to invest the net proceeds in interest-bearing, investment-grade securities.

### COMMON STOCK PRICE RANGE

Our common stock is quoted on the Nasdaq National Market under the symbol LSCC. The following table sets forth the low and high last reported sale prices for our common stock for the last two fiscal years and for the period since January 1, 2000. On July 10, 2000, the last reported sale price of our common stock was \$ . As of July , 2000, we had approximately stockholders of record.

	LOW	HIGH
Fiscal year ended March 31, 1999		
First quarter	\$13.438	\$26.563
Second quarter	11.875	18.313
Third quarter	9.562	22.953
Fourth quarter	19.125	27.500
Fiscal period ended December 31, 1999		
First quarter	\$19.812	\$31.125
Second quarter	26.938	34.500
Third quarter	28.125	53.750
Fiscal year ending December 31, 2000		
First quarter	\$41.625	\$79.062
Second quarter	51.500	82.688
Third quarter (through July 10, 2000)	63.250	72.500

All share amounts have been adjusted retroactively to reflect the two-for-one stock split effected in the form of a stock dividend of one share of common stock for each share of our outstanding common stock that was paid on September 16, 1999.

### DIVIDEND POLICY

The payment of dividends on our common stock is within the discretion of our board of directors. Currently, we intend to retain earnings to finance the growth of our business. We have not paid cash dividends on our common stock, and the board of directors does not expect to declare cash dividends on the common stock in the near future.

# CAPITALIZATION

The following table sets forth our capitalization as of March 31, 2000 on an actual basis and as adjusted to give effect to the sale of the 4,000,000 shares of common stock, at an assumed offering price to the public of \$ per share and after deducting an assumed underwriting discount and estimated offering expenses payable by us and assuming the underwriters' option to purchase additional shares in the offering is not exercised. This table should be read in conjunction with our consolidated financial statements, related notes and the other information included or incorporated by reference in this prospectus.

	MARCH 31, 2000		
		AS ADJUSTED	
	(IN TH	OUSANDS)	
Long-term obligations: Long-term debt Other long-term liabilities	\$260,000 29,156	\$	
Total long-term obligations	289,156		
adjusted			
adjusted Paid-in capital Other comprehensive income Retained earnings	492 297,290 4,675 316,883		
Total stockholders' equity	619,340		
Total capitalization	\$908,496 ======	\$	

# (1) The table above excludes:

- 7,258,232 shares of common stock issuable upon exercise of stock options outstanding at March 31, 2000, with a weighted average exercise price of \$18.72 per share;
- 3,613,830 shares of common stock available for grant at March 31, 2000 under our 1996 stock option plan;
- 117,000 shares of common stock available for grant at March 31, 2000 under our 1993 directors' stock option plan;
- 319,096 shares of common stock available for issuance at March 31, 2000 under our employee stock purchase plan;
- 313,396 shares of common stock issuable upon exercise of warrants outstanding at March 31, 2000, at a weighted average exercise price of \$24.17 per share;
- 6,274,131 shares of common stock issuable upon conversion of our 4 3/4% convertible subordinated notes.

# SELECTED CONSOLIDATED FINANCIAL DATA

The following selected consolidated financial data should be read in conjunction with our consolidated financial statements, related notes and other financial information incorporated herein by reference and "Management's Discussion and Analysis of Financial Condition and Results of Operations" included elsewhere in this prospectus. The consolidated statement of operations data for the fiscal years ended March 31, 1998 and March 31, 1999, and for the nine months ended December 31, 1999, and the consolidated balance sheet data as of March 31, 1998, March 31, 1999 and December 31, 1999 are derived from the audited consolidated financial statements previously filed with the SEC. The consolidated statement of operations data for the three months ended March 31, 1999 and March 31, 2000 and the consolidated balance sheet data as of March 31, 2000 are derived from our unaudited consolidated financial statements and include, in the opinion of management, all adjustments, including normal recurring adjustments, necessary to present fairly the financial information therein. These results are not necessarily indicative of the results that may be expected for future periods. All per share data below has been adjusted to reflect a two-for-one stock split effected in the form of a stock dividend that was paid on September 16, 1999.

		YEAR ENDED	NINE MONTH FISCAL PERIOD ENDED DECEMBER	THREE MON	NTHS ENDED
	MARCH 31, 1998	MARCH 31, 1999	31, 1999(1)(2)	MARCH 31, 1999	
			NDS, EXCEPT PER	• .	JDITED)
CONSOLIDATED STATEMENT OF OPERATIONS DATA:					
Revenue Costs and expenses:	\$245,894	\$200,072	\$269,699	\$53,788	\$ 126,055
Cost of products sold	98,883	78,440	108,687	20,743	49,585
Research and development	32,012	33,190	45,903	8,877	18, 243
Selling, general and administrative	39,934	36,818	50,676	9,476	19,514
In-process research and development Amortization of intangible assets			89,003 45,780		20,362
Total costs and expenses	170,829	148,448	340,049	39,096	107,704
Income (loss) from operations	75,065	51,624	(70,350)	14,692	18,351
Other income (expense), net	10,643	10,668	(4,120)	2,860	148,799(3)
Income (loss) before provision (benefit) for income					
taxes	85,708	62,292	(74,470)	17,552	167,150
Provision (benefit) for income taxes	29,141	20,246	(27, 989)	5,704	62,329
<pre>Income (loss) before extraordinary item</pre>	56,567	42,046	(46,481)	11,848	104,821
Extraordinary item, net of income taxes			(1,665)	,	
Net income (loss)	\$ 56,567	\$ 42,046	\$(48,146)	\$11,848	\$ 104,821
Net 111001110 (1000)	=======	=======	=======	======	=======
Basic net income (loss) per share, before					
extraordinary item	\$ 1.22	\$ .90	\$ (.97)	\$ .25	\$ 2.15
	=======	=======	=======	======	=======
Diluted net income (loss) per share, before			÷ ( 0=)		
extraordinary item	\$ 1.18 ======	\$ .88 ======	\$ (.97) ======	\$ .24 ======	\$ 1.84 =======
Basic net income (loss) per share	\$ 1.22	\$ .90	\$ (1.01)	\$ .25	\$ 2.15
basis net income (1000) per snaretrititititititi	=======	=======	=======	======	=======
Diluted net income (loss) per share	\$ 1.18	\$ .88	\$ (1.01)	\$ .24	\$ 1.84
	======	======	======	======	=======
Shares used in per share calculations:					
Basic	46,478 ======	46,974 ======	47,714 ======	47,076 =====	48,738 ======
Diluted	47,788	47,638	======= 47,714	48,398	58,409
222000000000000000000000000000000000000	======	======	=======	======	=======

	MARC	H 31,	DECEMBER 31,	MARCH 31,
	1998 1999		1999	2000
			(IN THOUSANDS)	(UNAUDITED)
CONSOLIDATED BALANCE SHEET DATA:				
Cash, cash equivalents and short-term investments	\$267,110	\$319,434	\$214,140	\$ 237,804
Working capital	283,678	324,204	152,758	209,018
Total assets	489,066	540,896	916,155	1,078,608
Long-term debt			260,000	260,000
Stockholders' equity	434,686	483,734	482,773	619,340

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- (2) Includes the effects of an \$89.0 million charge for in-process research and development and the related income tax effects incurred and recorded in conjunction with our acquisition of Vantis on June 15, 1999, and an extraordinary loss of \$1.7 million, net of income taxes, for unamortized debt issuance costs related to bank debt retired with the proceeds from our issuance of 4 3/4% convertible subordinated notes during the period. See Notes 4 and 8 to the consolidated financial statements for the period ended December 31, 1999 incorporated by reference in this prospectus.
- (3) Includes the effects of a \$150 million gain (\$92.1 million after-tax) representing the appreciation of investments made in two Taiwanese semiconductor foundry companies. See Note 10 to the unaudited consolidated financial statements for the period ended March 31, 2000 incorporated by reference in this prospectus.

<sup>(1)</sup> In 1999, we changed our fiscal year end from March 31 to December 31. This period includes financial results for our acquisition of Vantis since June 15, 1999.

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

#### **OVERVIEW**

We design, develop and market high performance programmable logic devices, or PLDs, and related software. We are the world's leading supplier of in-system programmable, or ISP, logic devices. PLDs are widely used semiconductor components that can be configured by the end customer as specific logic circuits, and enable the end customer to shorten design cycle times and reduce development costs. Our products are sold worldwide through an extensive network of independent sales representatives and distributors, primarily to OEMs in the fields of data communications and telecommunications, as well as computing, industrial and military systems. Approximately one-half of our revenue is derived from export sales, mainly to Europe and Asia. We were founded in 1983 and are based in Hillsboro, Oregon.

In June 1999, we acquired Vantis Corporation from Advanced Micro Devices ("AMD") for approximately \$500 million in cash. The transaction is being accounted for under the purchase method in our consolidated financial statements beginning in the period ended July 3, 1999. We have also agreed with AMD to sign a mutual election under the Internal Revenue Code that will allow us to deduct the purchase price for tax purposes over a 15-year period. We believe that this acquisition has increased our share of the PLD market, accelerated development of new products and technologies and expanded our penetration into new and existing customers.

In March 1997, we entered into an advance payment production agreement with Seiko Epson and its affiliated U.S. distributor, Epson Electronics America, Inc., under which we agreed to advance approximately \$85 million, payable upon completion of specific milestones, to Seiko Epson to finance construction of an eight-inch sub-micron wafer manufacturing facility. Under the terms of the agreement, the advance is to be repaid with semiconductor wafers over a multi-year period. The agreement calls for wafers to be supplied by Seiko Epson through Epson Electronics America, Inc. pursuant to purchase agreements with Epson Electronics America, Inc. We also have an option under this agreement to advance Seiko Epson an additional \$60 million for additional wafer supply under similar terms. The first payment pursuant to this agreement, approximately \$17.0 million, was made during fiscal 1997. During fiscal 1998, we made two additional payments aggregating approximately \$34.2 million. The balance of the advance payment is currently anticipated to be made in two installments during fiscal 2000.

In September 1995, we entered into a series of agreements with UMC pursuant to which we agreed to join UMC and several other companies to form a separate Taiwanese company, UICC, for the purpose of building and operating an advanced semiconductor manufacturing facility in Taiwan. Under the terms of the agreement, we invested approximately \$49.7 million between fiscal 1996 and fiscal 1998 for an approximate 10% equity interest in UICC and the right to purchase a percentage of the facility's wafer production at market prices.

In October 1996, we entered into an agreement with Utek Corporation, a public Taiwanese company in the wafer foundry business that became affiliated with the UMC Group in 1998, pursuant to which we agreed to make a series of equity investments totaling approximately \$17.5 million in Utek under specific terms. In exchange for these investments we received the right to purchase a percentage of Utek's wafer production.

On January 3, 2000, UICC and Utek merged into UMC. We own approximately 73 million shares of UMC common stock and have retained our capacity rights. Due to contractual and regulatory restrictions, the majority of our UMC shares may not be sold until July 2000. These regulatory restrictions will gradually expire between July 2000 and January 2004.

In the fourth quarter of calendar 1999, we changed our reporting period to a 52 or 53 week year ending on the Saturday closest to December 31 from a 52 or 53 week fiscal year ending on the Saturday closest to March 31. For purposes of this report and for ease of presentation, December 31 or March 31

has been utilized as the fiscal year end date for all financial statement captions contained herein. Additionally, the nine month fiscal period ended January 1, 2000 is referred to as "the nine months ended December 31, 1999 or "fiscal period 1999." The fiscal period ended April 3, 1999 is referred to as "the fiscal year ended March 31, 1999" or "fiscal year 1999," and the fiscal period ended March 31, 1998 is referred to as "the fiscal year ended March 31, 1998" or "fiscal year 1998."

### RESULTS OF OPERATIONS

The following table sets forth, for the periods indicated, the percentage of revenue represented by selected items reflected in our consolidated statement of operations:

		ENDED H 31,	NINE MONTH FISCAL PERIOD ENDED DECEMBER 31,	THREE MONTHS ENDED MARCH 31,	
	1998	1999	1999	1999	2000
Revenue	100%	100%	100%	100%	100%
Cost of products sold	40	39	40	39	39
Research and development	13	17	17	16	14
Selling, general and administrative	16	18	19	18	16
In-process research and development			33		
Amortization of intangible assets			17		16
Total costs and expenses	69	74	126	73	85
Income (loce) from energtions	31	26	(26)	27	 15
Income (loss) from operations	31 4	26 5	(20)	2 <i>1</i> 5	15 118
Other income (expense), net	4	5	(2)	5	110
Income (loss) before provision (benefit) for income					
taxes	35	31	(28)	32	133
Provision (benefit) for income taxes	12	10	(11)	10	49
( ,					
<pre>Income (loss) before extraordinary item</pre>	23	21	(17)	22	84
Extraordinary item, net of income taxes			(1)		
Net income (loss)	23%	21%	(18)%	22%	84%
	===	===	======	===	===

THREE MONTHS ENDED MARCH 31, 2000 COMPARED TO THREE MONTHS ENDED MARCH 31, 1999

REVENUE. Revenue for the first quarter of 2000 increased \$72.3 million or 134% as compared to the first quarter of 1999. In addition to our acquisition of Vantis, the revenue increase was attributable to increased sales of high density products in all geographies and recovering demand from Asia.

Overall average selling prices increased slightly in the first quarter of 2000 as compared to the first quarter of 1999. Fluctuations in overall average selling prices were due primarily to product mix changes and increased demand. Although selling prices of mature products generally decline over time, this decline is at times offset by higher selling prices of new products. Our ability to achieve revenue growth is in large part dependent on the continued development, introduction and market acceptance of new products.

GROSS MARGIN. Gross margin as a percentage of revenue was 60.7% in the first quarter of 2000 as compared to 61.4% in the first quarter of 1999. The gross margin decline in the first quarter of 2000 as compared to the first quarter of 1999 is attributable to our acquisition of Vantis on June 15, 1999. The decline was partially offset by an improvement in product mix and reductions in our manufacturing costs. Reductions in manufacturing costs resulted primarily from yield improvements, migration of products to more advanced technologies and smaller die sizes, and wafer price reductions.

RESEARCH AND DEVELOPMENT. Research and development ("R&D") expenses increased by approximately \$9.4 million, or 106%, in the first quarter of 2000 when compared to the first quarter of 1999. In addition to the acquisition of Vantis, spending increases resulted primarily from the development of new products. We believe that a continued commitment to research and development is essential in order to maintain product leadership of our existing product families and to provide innovative new product offerings, and therefore we expect to continue to make significant future investments in research and development.

SELLING, GENERAL AND ADMINISTRATIVE. Selling, general and administrative ("SG&A") expenses increased \$10.0 million, or 106%, in the first quarter of 2000 when compared to the first quarter of 1999. This increase was primarily due to our Vantis acquisition, and to a lesser extent, increased variable costs associated with higher revenue levels.

AMORTIZATION OF INTANGIBLE ASSETS. Amortization of intangible assets acquired in the Vantis acquisition was \$20.4 million for first quarter of 2000. The estimated weighted average useful life of the intangible assets for current technology, assembled workforce, customer lists, trademarks, patents and residual goodwill, created as a result of the acquisition, is approximately five years.

GAIN ON APPRECIATION OF FOUNDRY INVESTMENTS. The gain on appreciation of foundry investments in the first quarter of 2000 represents appreciation of foundry investments made in two Taiwanese companies, UICC and Utek. See Note 10 to our consolidated financial statements for the period ended March 31, 2000, which are incorporated by reference into this prospectus.

OTHER INCOME (EXPENSE), NET. Other income (expense), net decreased by approximately \$4.0 million in the first quarter of fiscal 2000 as compared to the first quarter of 1999. This was primarily due to interest expense of approximately \$3.0 million from acquisition related debt and reduced interest income resulting from lower cash and investment balances resulting from our acquisition of Vantis.

PROVISION FOR INCOME TAXES. The provision for income taxes for the first quarter of 2000 is 37.3% of pretax income, as compared to 32.5% for the first quarter of 1999. The rate change for the first quarter of 2000 as compared to the first quarter of 1999 was due primarily to a decrease in the proportion of tax-exempt interest income included in our overall net income and as a result of application of our marginal tax rate on the unrealized gain on appreciation of foundry investments.

FISCAL PERIOD ENDED DECEMBER 31, 1999, FISCAL YEAR 1999 AND FISCAL YEAR 1998

REVENUE. Revenue was \$269.7 million in fiscal period 1999, an increase of 35% from fiscal year 1999. Fiscal year 1999 revenue of \$200.1 million represented a decrease of 19% from the \$245.9 million recorded in fiscal year 1998.

In addition to our acquisition of Vantis, the revenue increase in fiscal period 1999 as compared to fiscal year 1999 was attributable to increased sales of ISP products and recovering demand from Asia. Fiscal year 1999 revenue as compared to fiscal 1998 was negatively impacted by a decline in demand from Asia due to the economic crisis in that region. Furthermore, revenue in all geographies was negatively impacted by a decline in demand for our non-ISP product families.

	YEAR ENDED MARCH 31,		NINE MONTH FISCAL PERIOD ENDED
	1998	1999	DECEMBER 31, 1999
		(IN THOUSAN	DS)
United States Export sales:	\$120,278	\$100,778	\$126,333
Europe	61,243	53,649	70,641
Asia	55,853	34,680	55,003
Other	8,520	10,965	17,722
	\$245,894	\$200,072	\$269,699
	=======	=======	=======

Revenue from export sales as a percentage of total revenue was approximately 53% for fiscal period 1999, 50% for fiscal year 1999 and 51% for fiscal year 1998. We expect export sales to continue to represent a significant portion of revenue

The average selling price of our products decreased slightly in fiscal period 1999 as compared to fiscal year 1999. The average selling price of our products was flat in fiscal year 1999 as compared to fiscal year 1998. The decrease in fiscal period 1999 was due primarily to changes in product mix. Although selling prices of mature products generally decline over time, this decline is at times offset by higher selling prices of new products. Our ability to maintain or increase the level of our average selling price is dependent on the continued development, introduction and market acceptance of new products.

GROSS MARGIN. Our gross margin as a percentage of revenue was 60% for fiscal period 1999, 61% for fiscal year 1999 and 60% for fiscal year 1998. The gross margin decline in fiscal period 1999 as compared to fiscal year 1999 is attributable to our acquisition of Vantis on June 15, 1999. The decline was partially offset by an improvement in product mix and reductions in our manufacturing costs. The improvement in fiscal year 1999 as compared to fiscal year 1998 was primarily due to an improvement in product mix and reductions in our manufacturing costs. Reductions in manufacturing costs resulted primarily from yield improvements, migration of products to more advanced technologies and smaller die sizes, and wafer price reductions.

RESEARCH AND DEVELOPMENT. Research and development expense was \$45.9 million in fiscal period 1999, \$33.2 million in fiscal year 1999 and \$32.0 million in fiscal year 1998. For fiscal period 1999, in addition to our acquisition of Vantis, spending increases resulted primarily from the increased development of new products. Spending increases in fiscal year 1999 as compared to fiscal year 1998 resulted primarily from the increased development of new products. We believe that a continued commitment to research and development is essential in order to maintain product leadership in our existing product families and provide innovative new product offerings, and therefore we expect to continue to make significant future investments in research and development.

SELLING, GENERAL AND ADMINISTRATIVE. Selling, general and administrative expense was \$50.7 million in fiscal period 1999, \$36.8 million in fiscal year 1999 and \$39.9 million in fiscal year 1998. The increase in the 1999 fiscal period as opposed to fiscal year 1999 was primarily due to our Vantis acquisition and to a lesser extent attributable to increased variable costs associated with higher revenue levels. The decrease in fiscal year 1999 expense as compared to fiscal year 1998 was primarily due to decreased variable costs associated with lower revenue levels.

IN-PROCESS RESEARCH AND DEVELOPMENT. On June 15, 1999, we bought from AMD all of the outstanding capital stock of Vantis Corporation for approximately \$500 million in cash in a transaction accounted for under the purchase method of accounting. Including liabilities assumed and purchase

accounting reserves established, the total purchase cost was \$583.1 million, of which \$511.6 million was allocated to intangible assets. A portion of the intangible asset value was in-process research and development, or IPR&D, with a value of approximately \$89 million which was charged to expense on the acquisition date as required by generally accepted accounting principles. The remaining \$422.6 million of intangible asset value consisting of existing technology, assembled workforce, customer lists, patents, trademarks and goodwill, is being amortized to operations over 5 years using the straight-line method.

AMORTIZATION OF INTANGIBLE ASSETS. Amortization of intangible assets acquired in the Vantis acquisition was \$45.8 million for fiscal period 1999. The estimated weighted average useful life of the intangible assets for current technology, assembled workforce, customer lists, trademarks, patents and residual goodwill, created as a result of the acquisition, is approximately five years.

OTHER INCOME (EXPENSE), NET. Other income (expense), net, was (\$4.1) million for fiscal period 1999, a \$14.8 million decrease as compared to fiscal year 1999. This was primarily due to interest expense of approximately \$9.7 million from acquisition related debt and reduced interest income resulting from lower cash and investment balances in conjunction with the acquisition. Other income (expense), net, was approximately flat for fiscal year 1999 as compared to fiscal year 1998, as higher cash and investment balances were offset by lower interest rates for invested balances, particularly in the second half of the fiscal year.

PROVISION FOR INCOME TAXES. The benefit for income taxes for fiscal period 1999 was 37.6% of the loss before benefit for income taxes. This reflects the estimated rate at which income taxes would be recoverable if a loss tax return were filed. The loss before benefit for income taxes is attributable to the IPR&D charge during the period of approximately \$89.0 million and intangible asset amortization of \$45.8 million. If these charges were not present, we would have had taxable income and an income tax rate of approximately 36.5%. Our effective tax rate was 32.5% for fiscal year 1999 and 34.0% for fiscal year 1998. The rate change in fiscal year 1999 as compared to fiscal year 1998 was due primarily to changes in the proportion of tax-exempt interest income included in our overall net income. The fiscal 1999 tax rate was also favorably impacted by reduced state taxes resulting from the increased realization of tax credits.

EXTRAORDINARY ITEM, NET OF INCOME TAXES. The extraordinary item, net of income taxes, represents the writeoff of unamortized loan fees related to the \$220 million term loan repaid in conjunction with the placement of our 4 3/4% convertible subordinated notes.

# QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

As of March 31, 2000 and December 31, 1999, our investment portfolio consisted of fixed income securities of \$213.7 million and \$182.1 million, respectively. As with all fixed income instruments, these securities are subject to interest rate risk and will decline in value if market interest rates increase. If market rates were to increase immediately and uniformly by 10% from levels as of March 31, 2000 and December 31, 1999, the decline in the fair value of the portfolio would not be material. Further, we have the ability to hold its fixed income investments until maturity and, therefore, we would not expect to recognize such an adverse impact in income or cash flows.

We have an international subsidiary and branch operations. Additionally, the majority of our silicon wafer purchases are denominated in Japanese yen. We are, therefore, subject to foreign currency rate exposure. To mitigate rate exposure with respect to yen-denominated wafer purchases, we maintain yen-denominated bank accounts and bill our Japanese customers in yen. The yen bank deposits are used to hedge yen-denominated wafer purchases against specific and firm wafer purchases. If the foreign currency rates fluctuate by 10% from rates at March 31, 2000 and December 31, 1999, the effect on our consolidated financial statements would not be material. However, there can be no assurance that there will not be a material impact in the future.

As of March 31, 2000, our principal source of liquidity was \$237.8 million of cash and short-term investments, an increase of \$23.7 million from the balance of \$214.1 million at December 31, 1999. The increase was due primarily to cash generated from operations and exercises of stock options. During the first quarter of 2000, we generated approximately \$5.2 million of cash and cash equivalents from our operating activities as compared with \$16.1 million during the first quarter of 1999. This change is attributable to non-cash working capital accounts as further described below.

Accounts receivable at March 31, 2000 increased by \$25.1 million, or 74%, as compared to the balance at December 31, 1999. This increase was primarily due to the timing of shipments within the quarter and increased revenue levels. Inventories increased by \$4.6 million, or 18%, as compared to the balance at December 31, 1999 primarily due to increased production in response to higher revenue levels. Prepaid expenses and other current assets increased by \$5.6 million, or 54%, as compared to the balance at December 31, 1999 primarily due to an increase in the current portion of wafer supply advances. Current deferred income tax assets increased \$6.2 million, or 21%, as compared to the balance at December 31, 1999 primarily due to the increase in deferred income for sales to distributors which is recognized currently for income tax purposes, and to a lesser extent the timing of deductions for certain expenses and allowances. Intangible assets, net, decreased by \$21.5 million, or 6%, as compared to the balance at December 31, 1999, primarily due to amortization of goodwill and other intangibles.

The \$3.9 million, or 31%, decrease in income taxes payable as compared to the balance at December 31, 1999 is primarily attributable to the timing of tax deductions and payments. Deferred income increased by \$9.0 million, or 20%, as compared to the balance at December 31, 1999, due primarily to increased billings to distributors associated with higher revenue levels. Deferred income tax liabilities at March 31, 2000 principally represent the \$57.9 million in taxes provided for approximately \$150 million pre-tax gain on appreciation of foundry investments in Taiwan recorded on January 3, 2000 (see note 10 to March 31, 2000 consolidated financial statements on Form 10-Q incorporated by reference into this prospectus) and \$2.9 million provided for the subsequent appreciation of non-restricted foundry shares (see note 10 to March 31, 2000 consolidated financial statements on Form 10-Q incorporated by reference into this prospectus), offset by \$45.4 million in non-current deferred tax assets relating primarily to intangible asset charges. Such deferred tax assets increased by approximately \$6.3 million, or 16%, as compared to the balance at December 31, 1999, due primarily to the increased cumulative temporary differences for book and tax deductions of intangible assets.

On October 28, 1999, we issued \$260 million in 4 3/4% convertible subordinated notes due on November 1, 2006. These notes require that we pay interest semi-annually on May 1 and November 1. Holders of these notes may convert them into shares of our common stock at any time on or before November 1, 2006, at a conversion price of \$41.44 per share, subject to adjustment in certain events. Beginning on November 6, 2002 and ending on October 31, 2003, we may redeem the notes in whole or in part at a redemption price of 102.71% of the principal amount. In the subsequent three twelve-month periods, the redemption price declines to 102.04%, 101.36% and 100.68% of principal, respectively. The notes are subordinated in right of payment to all of our senior indebtedness, and are subordinated to all liabilities of our subsidiaries. At March 31, 2000, we had no senior indebtedness and our subsidiaries had \$17.2 million of other liabilities. Issuance costs relative to the convertible subordinated notes are included in Other Assets and aggregated approximately \$6.9 million and are being amortized to expense over the lives of the notes. Accumulated amortization amounted to approximately \$770,000 at March 31, 2000.

Capital expenditures were approximately \$8.6 million in the first quarter of 2000. We expect to spend approximately \$30 million to \$40 million in capital expenditures for the fiscal year ending December 31, 2000.

In March 1997, we entered into an advance payment production agreement with Seiko Epson and its affiliated U.S. distributor, Epson Electronics America, under which we agreed to advance approximately \$85 million, payable upon completion of specific milestones, to Seiko Epson to finance construction of an eight-inch sub-micron wafer manufacturing facility. Under the terms of the agreement, the advance is to be repaid with semiconductor wafers over a multi-year period. The agreement calls for wafers to be supplied by Seiko Epson through Epson Electronics America, pursuant to purchase agreements with Epson Electronics America. We also have an option under this agreement to advance Seiko Epson an additional \$60 million for additional wafer supply under similar terms. The first payment pursuant to this agreement, approximately \$17.0 million, was made during fiscal 1997. During fiscal 1998, we made two additional payments aggregating approximately \$34.2 million. The balance of the advance payment is currently anticipated to be made in future installments.

We entered into a series of agreements with UMC in September 1995, pursuant to which we agreed to join UMC and several other companies to form a separate Taiwanese company, UICC, for the purpose of building and operating an advanced semiconductor manufacturing facility in Taiwan. Under the terms of the agreements, we invested approximately \$49.7 million for an approximate 10% equity interest in UICC and the right to receive a percentage of the facility's wafer production at market prices.

In October 1996, we entered into an agreement with Utek, a public Taiwanese company in the wafer foundry business that became affiliated with the UMC Group in 1998, pursuant to which we agreed to make a series of equity investments totaling approximately \$17.5 million in Utek under specific terms. In exchange for these investments we received the right to purchase a percentage of Utek's wafer production.

On January 3, 2000, UICC and Utek merged into UMC. We own approximately 73 million shares of UMC common stock and have retained our capacity rights. Due to contractual and regulatory restrictions, the majority of our UMC shares may not be sold until July 2000, or later. These regulatory restrictions will gradually expire between July 2000 and January 2004.

In June 1999, as part of our acquisition of Vantis, we entered into a series of agreements with AMD to support the continuing operations of Vantis. AMD has agreed to provide us with finished silicon wafers through September 2003 in quantities based either on a rolling six-month or an annual forecast. We have committed to buy certain minimum quantities of wafers and AMD has committed to supply certain quantities of wafers during this period. Wafers for our products are manufactured in the United States at multiple AMD wafer fabrication facilities. Prices for these wafers will be reviewed and adjusted periodically.

We believe that our expected net proceeds from this offering, existing cash and cash equivalents, expected cash generation from operations and existing credit facilities combined with our ability to borrow additional funds will be adequate to meet our operating and capital requirements and obligations for the next 12 months.

In an effort to secure additional wafer supply, we may from time to time consider various financial arrangements including joint ventures, equity investments, advance purchase payments, loans, or similar arrangements with independent wafer manufacturers in exchange for committed wafer capacity. To the extent that we pursue any such additional wafer financing arrangements, additional debt or equity financing may be required. We may in the future seek new or additional sources of funding. There can be no assurance that such additional financing will be available when needed or, if available, will be on favorable terms. Any future equity financing will decrease existing stockholders' equity percentage ownership and may, depending on the price at which the equity is sold, result in dilution.

### **BUSINESS**

Lattice Semiconductor Corporation designs, develops and markets high performance programmable logic devices, or PLDs, and related software. We are the world's leading supplier of in-system programmable, or ISP-TM-, logic devices. Programmable logic devices are widely-used semiconductor components that can be configured by the end customer as specific logic circuits, and enable the end customer to shorten design cycle times and reduce development costs. Our end customers are primarily original equipment manufacturers in the markets of data communications and telecommunications, as well as computing, industrial and military systems. During the March 2000 quarter, we derived approximately 65% of our \$126 million in revenue from the communications market and approximately 21% from the computing market.

In June 1999, we acquired Vantis Corporation, the programmable logic device subsidiary of Advanced Micro Devices. This acquisition has increased our share of the PLD market, accelerated development of new products and technologies and expanded our penetration into new and existing customers.

### PLD MARKET BACKGROUND

Three principal types of digital integrated circuits are used in most electronic systems: microprocessors, memory and logic. Microprocessors are used for control and computing tasks, memory is used to store programming instructions and data, and logic is employed to manage the interchange and manipulation of digital signals within a system. Logic contains interconnected groupings of simple logical "and" and logical "or" functions, commonly described as "gates." Typically, complex combinations of individual gates are required to implement the specialized logic functions required for systems applications. While system designers use a relatively small number of standard architectures to meet their microprocessor and memory needs, they require a wide variety of logic circuits in order to achieve end product differentiation.

Logic circuits are found in a wide range of today's digital electronic equipment including communication, computing, industrial and military systems. According to World Semiconductor Trade Statistics, a semiconductor industry association, logic accounted for approximately 27% of the estimated \$130 billion worldwide digital integrated circuit market in 1999. The logic market encompasses, among other segments, standard logic, custom-designed application specific integrated circuits, or ASICs, which include conventional gate-arrays, standard cells and full custom logic circuits, and PLDs.

Manufacturers of electronic equipment are increasingly challenged to bring differentiated products to market quickly. These competitive pressures often preclude the use of custom-designed ASICs, which generally entail significant design risks and time delay. Standard logic products, an alternative to customdesigned ASICs, limit a manufacturer's flexibility to adequately customize an end system. PLDs address this inherent dilemma. PLDs are standard products, purchased by systems manufacturers in a "blank" state, that can be custom configured into a virtually unlimited number of specific logic functions by programming the device with electrical signals. PLDs give system designers the ability to quickly create custom logic functions to provide product differentiation without sacrificing rapid time to market. Certain PLD products, including our own, are reprogrammable, meaning that the logic configuration can be modified, if needed, after the initial programming. ISP PLDs, pioneered by us, extend the flexibility of standard reprogrammable PLDs by allowing the system designer to configure and reconfigure the logic functions of the PLD with standard 5-volt or 3.3-volt power supplies without removing the PLD from the system board.

According to Dataquest, the PLD market in 1999 was approximately \$2.5 billion. The PLD market has two primary segments: low-density PLDs, with fewer than 1,000 logic gates, and high-density PLDs, with more than 1,000 logic gates. High-density PLD devices include devices based on both the CPLD and

field programmable gate array, or FPGA, architectures. In 1999, Dataquest estimated that the CPLD market was \$0.9 billion and the FPGA market was \$1.4 billion.

Products based on these alternative high density PLD architectures are generally optimal for different types of logic functions, although many logic functions can be implemented using either architecture. CPLDs are characterized by a regular building block structure of wide-input logic cells, called macrocells, and use of a centralized logic interconnect scheme. FPGAs are characterized by a narrow-input logic cell and use a distributed interconnect scheme. Although CPLDs and FPGAs are better suited for use in different types of logic applications, we believe that a substantial portion of high-density PLD customers utilize both CPLD and FPGA architectures within a single system design, partitioning logic functions across multiple devices to optimize overall system performance and cost.

A growing percentage of the PLD market is made up of devices which operate using 3.3-volt and 2.5-volt power supplies. Lower voltage PLDs benefit end users by consuming less power and providing compatibility with other advanced electronic components. We believe that our innovative low-voltage CPLD products provide us a competitive advantage in the emerging market for low voltage PLDs.

### **TECHNOLOGY**

We believe that our proprietary E2CMOS technology is the preferred process technology for PLD products due to its inherent performance, reprogrammability and testability benefits. E2CMOS technology, through its fundamental ability to be programmed and erased electronically, serves as the foundation for our ISP products.

We pioneered the development of in-system programmability which has become an industry standard feature in the PLD market. Our ISP devices use either 5-volt or 3.3-volt programming signals and, as a result, can be configured and reconfigured by a system designer without being removed from the printed circuit board. Standard E2CMOS PLDs require a 12-volt programming signal and therefore must be removed from the printed circuit board and programmed using specialized hardware. Our ISP devices offer enhanced flexibility compared to standard PLDs and provide significant benefits to our customers. Our ISP devices can allow customers to reduce design cycle times, accelerate time to market, reduce prototyping costs, reduce manufacturing costs and lower inventory requirements. Our ISP devices can also provide customers the opportunity to perform simplified and cost-effective field reconfiguration through a data file transferred by computer disk or serial data signal.

### **PRODUCTS**

We strive to offer innovative and differentiated programmable solutions based on our proprietary technology.

### HIGH DENSITY CPLD PRODUCTS

Since 1992, we have focused on developing an industry leading portfolio of high density products and increasing the percentage of our overall revenue derived from this attractive market. At present we offer the broadest range of ISP products in the marketplace. During 1999, approximately 68% of our revenues were derived from high density products, as compared to 49% in 1996. In the future, we plan to continue to introduce new families of innovative, high performance and higher density programmable products, as well as improve the performance and reduce the manufacturing cost of our existing product families based on market needs.

	SPEED (MHZ)	PROPAGATION DELAY (NANOSECONDS)	GATES	SURFACE MOUNT PINS
ispLSI-Registered Trademark- 1000/E/EA	200	4.0	2,000- 8,000	44-128
ispLSI 2000E/VE	225	3.5	1,000- 8,000	44-208
ispLSI 3000/E	125	7.5	7,000-20,000	160-432
ispLSI 5000V	125	7.5	12,000-24,000	208-388
ispLSI 8000/V	125	8.5	25,000-50,000	272-492
MACH-Registered Trademark- 1/2	180	5.0	1,000- 5,000	44-100
ispMACH-TM- 4/LV/A	180	5.0	1,000-10,000	44-256
MACH 5/LV	180	5.5	5,000-20,000	100-352

Our newest product families, the ispMACH 4A, ispLSI 2000VE, ispLSI 5000V and ispLSI 8000V, use new innovative architectures and are targeted towards the emerging low voltage portion of the CPLD market.

ISPGDX-REGISTERED TRADEMARK-/V. We recently introduced two new high density product families, ispGDX and ispGDXV, that target a unique aspect of the programmable logic market. These families extend in-system programmability to the circuit board level using an innovative digital cross-point switch architecture. Offered with propagation delays as low as 3.5 nanoseconds, up to 160 input/output pins and complete pin-to-pin signal routing, both the 5-volt ispGDX and the 3.3-volt ispGDXV are targeted towards digital signal interconnect and interface applications.

### MIXED SIGNAL PRODUCTS

We have recently added mixed signal products to our portfolio as we believe these devices provide an opportunity to extend our proprietary technology to an untapped potential market.

ISPPAC-REGISTERED TRADEMARK- PRODUCTS. First introduced in 1999, this three device family extends in-system programmability to the analog market. The innovative architecture of the ispPAC allows designers to quickly and easily program resistor and capacitor values, gain and signal polarity and circuit interconnect to implement a wide variety of analog circuits. The initial ispPAC products are targeted towards filtering and signal conditioning applications and can replace numerous discrete analog components. ispPAC designs are implemented and programmed via a personal computer using our software development tool, PAC-Designer-TM-.

# SOFTWARE DEVELOPMENT TOOLS

All Lattice ISP products are supported by ispDesignEXPERT-TM-, our fourth generation software development tool suite. Supporting both the PC and UNIX platforms, ispDesignEXPERT allows a customer to enter, verify and synthesize a design, perform logic simulation and timing analysis, assign input/output pins and critical speed paths, debug and floorplan a design, execute automatic place and route tasks and download a program to an ISP device. Seamlessly integrated with third-party electronic design automation, or EDA, environments, ispDesignEXPERT leverages customers' prior investments in products offered by Aldec, Cadence, Innoveda, Mentor Graphics, OrCAD, Synopsys, Synplicity and Veribest. In the future, we plan to continue to enhance and expand the capability of our software development tool suite.

We also provide a variety of software algorithms that support in-system programming of our ISP devices via multiple formats and mechanisms. These software products include ispCODE-Registered Trademark-, Turbo ispDOWNLOAD-Registered Trademark-, ispREMOTE-TM-, ispATE-TM-, ispSVF-TM- and ispVM-TM-.

### LOW DENSITY PLD PRODUCTS

We offer the industry's broadest line of low-density CMOS PLDs based on our 22 families of GAL-Registered Trademark- and PALCE-Registered Trademark-products offered in over 200 speed, power, package and temperature range combinations. PALCE products were originally introduced by Vantis and are generally compatible with GAL products. GAL and PALCE devices range in complexity from approximately 200 to 1,000 logic gates and are typically assembled in 20-, 24- and 28-pin standard dual in-line packages and in 20- and 28-pin standard plastic leaded chip carrier packages. We offer standard 610, 16V8, 20V8 and 22V10 architectures in a variety of speed grades, with propagation delays as low as 3.5 nanoseconds, the highest performance in the industry. In addition, we offer several proprietary extension architectures, the isp22V10, 6001/2, 16VP8, 16V8Z, 18V10, 20VP8, 20V8Z, 22V10Z, 24V10, 29M16, 20RA10, 20XV10 and 26V12, each of which is optimized for specific applications. We also offer a full range of 3.3-volt standard architectures, the isp22LV10, 16LV8, 20LV8, 22LV10 and 26CLV12, in a variety of speed grades, with propagation delays as low as 3.5 nanoseconds, the highest performance in the industry.

#### PRODUCT DEVELOPMENT

We place substantial emphasis on new product development and believe that continued investment in this area is required to maintain our competitive position. Our product development activities emphasize new proprietary ISP products, enhancement of existing products and process technologies and improvement of software development tools. Product development activities occur in Hillsboro, Oregon; Silicon Valley, California; Austin, Texas; Colorado Springs, Colorado; Corsham, England; and Shanghai, China.

Research and development expenses were \$32.0 million in fiscal year 1998, \$33.2 million in fiscal year 1999 and \$45.9 million for fiscal period 1999. We expect to continue to make significant future investments in research and development.

### **OPERATIONS**

We do not manufacture our own silicon wafers. We maintain strategic relationships with large semiconductor manufacturers to source our finished silicon wafers. This strategy allows us to focus our internal resources on product, process and market development, and eliminates the fixed cost of owning and operating manufacturing facilities. We are also able to take advantage of the ongoing advanced process technology dedicated development efforts of semiconductor manufacturers. In addition, all of our assembly operations are performed by outside suppliers. We perform certain test operations and reliability and quality assurance processes internally. We have achieved an ISO 9001 quality certification, an indication of our high internal operational standards.

# WAFER FABRICATION

The majority of our silicon wafer requirements have historically been supplied by Seiko Epson in Japan pursuant to an agreement with Epson Electronics America, an affiliated U.S. distributor of Seiko Epson. We negotiate wafer volumes, prices and terms with Seiko Epson and Epson Electronics America on a periodic basis. We also receive silicon wafers from the UMC Group in Taiwan pursuant to a series of agreements entered into in 1995. Wafer prices and other purchase terms related to this commitment are subject to periodic adjustment. Currently, the majority of the silicon wafers for our MACH and PALCE products are manufactured by AMD pursuant to an agreement first entered into in 1996 and subsequently amended and restated at the time of our acquisition of Vantis.

### **ASSEMBLY**

After wafer fabrication and initial testing, we ship wafers to independent subcontractors for assembly. During assembly, wafers are separated into individual die and encapsulated in plastic or ceramic

packages. Presently, we have qualified long-term assembly partners in Hong Kong, Malaysia, the Philippines, Singapore, South Korea, Taiwan and Thailand.

#### **TESTING**

We electrically test the die on each wafer prior to shipment for assembly. Following assembly, prior to customer shipment, each product undergoes final testing and quality assurance procedures. Final testing on certain products is performed by independent contractors in Malaysia, the Philippines, South Korea, Taiwan, Thailand and the United States.

# MARKETING, SALES AND CUSTOMERS

We sell our products directly to end customers through a network of independent manufacturers' representatives and indirectly through a network of independent distributors. We also employ a direct sales management and field applications engineering organization to support our end customers and indirect sales resources. Our end customers are primarily original equipment manufacturers in the fields of communication, computing, industrial and military systems.

At July 2, 2000, we used 23 manufacturers' representatives and three distributors in North America. Arrow Electronics and Avnet provide full distribution coverage. We have also established export sales channels in over 30 foreign countries through a network of over 30 sales representatives and distributors. Approximately one-half of our North American sales and the majority of our export sales are made through distributors.

We protect each of our North American distributors and some of our foreign distributors against reductions in published prices, and expect to continue this policy in the foreseeable future. We also allow returns from these distributors of unsold products under certain conditions. For these reasons, we do not recognize revenue until products are resold by these distributors to an end customer.

We provide technical and marketing support to our end customers with engineering staff based at our headquarters, design centers and selected field sales offices. We maintain numerous domestic and international field sales offices in major metropolitan areas.

Export sales as a percentage of our total revenue were 51% in fiscal year 1998, 50% in fiscal year 1999 and 53% in fiscal period 1999. Both export and domestic sales are denominated in U.S. dollars, with the exception of sales to Japan, which are dominated in yen. If our export sales decline significantly there would be a material adverse impact on our business.

Our products are sold to a large and diverse group of customers. Revenue from one customer, the contract manufacturer Solectron, accounted for approximately 10% of total revenues for the first quarter of 2000. No individual end customer accounted for more than 10% of total revenue in fiscal year 1998 or 1999 or fiscal period 1999.

### COMPETITION

The semiconductor industry is intensely competitive and characterized by rapid rates of technological change, product obsolescence and price erosion. Our current and potential competitors include a broad range of semiconductor companies from large, established companies to emerging companies, many of which have greater financial, technical, manufacturing, marketing and sales resources.

The principal competitive factors in the PLD market include product features, price, customer support, and sales, marketing and distribution strength. The availability of competitive software development tools is also critical. In addition to product features such as density, speed, power consumption, reprogrammability, design flexibility and reliability, competition in the PLD market occurs on the basis of price and market acceptance of specific products and technology. We believe that we

compete favorably with respect to each of these factors. We intend to continue to address these competitive factors by working to continually introduce product enhancements and new products, by seeking to establish our products as industry standards in their respective markets, and by working to reduce the manufacturing cost of our products.

In the high density CPLD market, we directly compete primarily with Altera and Xilinx, both of whom offer competing products. We also indirectly compete with other PLD suppliers as well as other semiconductor companies who provide non-PLD based logic solutions. Although to date we have not experienced significant competition from companies located outside the United States, such companies may become a more significant competitive factor in the future. Competition may also increase as we and our current competitors seek to expand our markets. Any such increases in competition could have a material adverse effect on our operating results.

#### **PATENTS**

We seek to protect our products and wafer fabrication process technologies primarily through patents, trade secrecy measures, copyrights, mask work protection, trademark registrations, licensing restrictions, confidentiality agreements and other approaches designed to protect proprietary information. There can be no assurance that others may not independently develop competitive technology not covered by our intellectual property rights or that measures we take to protect our technology will be effective.

We hold numerous domestic, European and Japanese patents and have patent applications pending in the United States, Japan and Europe. There can be no assurance that pending patent applications or other applications that may be filed will result in issued patents, or that any issued patents will survive challenges to their validity. Although we believe that our patents have value, there can be no assurance that our patents, or any additional patents that may be issued in the future, will provide meaningful protection from competition. We believe that our success will depend primarily upon the technical expertise, experience, creativity and the sales and marketing abilities of our personnel.

Patent and other proprietary rights infringement claims are common in our industry. There can be no assurance that, with respect to any claim made against us, we could obtain a license on terms or under conditions that would not harm our business.

### LICENSES AND AGREEMENTS

# SEIKO EPSON/EPSON ELECTRONICS AMERICA

Epson Electronics America, an affiliated U.S. distributor of Seiko Epson, has agreed to provide us with manufactured wafers in quantities based on six-month rolling forecasts. We have committed to buy certain minimum quantities of wafers per month. Wafers for our products are manufactured in Japan at Seiko Epson's wafer fabrication facilities and are delivered to us by Epson Electronics America. Prices for the wafers obtained from Epson Electronics America are reviewed and adjusted periodically.

In March 1997, we entered into an advance production payment agreement with Seiko Epson and Epson Electronics America under which we agreed to advance approximately \$85.0 million, payable upon completion of specific milestones, to Seiko Epson to finance construction of an eight-inch sub-micron semiconductor wafer manufacturing facility. The timing of the payments is related to certain milestones in the development of the facility. Under the terms of the agreement, the advance is to be repaid with semiconductor wafers over a multi-year period. The agreement calls for wafers to be supplied by Seiko Epson through Epson Electronics America pursuant to purchase agreements concluded with Epson Electronics America. We also have an option under the agreement to advance Seiko Epson an additional \$60.0 million for additional wafer supply under similar terms. The first payment under this agreement,

approximately \$17.0 million, was made during fiscal 1997. During fiscal 1998, we made two additional payments aggregating approximately \$34.2 million.

#### LIMC. GROUP

In September 1995, we entered into a series of agreements with UMC pursuant to which we agreed to join UMC and several other companies to form a separate Taiwanese company, UICC, for the purpose of building and operating an advanced semiconductor manufacturing facility in Taiwan. Under the terms of the agreement, we invested approximately \$49.7 million between fiscal 1996 and fiscal 1998 for an approximate 10% equity interest in UICC and the right to purchase a percentage of the facility's wafer production at market prices.

In October 1996, we entered into an agreement with Utek Corporation, a public Taiwanese company in the wafer foundry business that became affiliated with the UMC Group in 1998, pursuant to which we agreed to make a series of equity investments, totaling approximately \$17.5 million, in Utek under specific terms. In exchange for these investments we received the right to purchase a percentage of Utek's wafer production.

On January 3, 2000 UICC and Utek merged into UMC. We own approximately 73 million shares of UMC common stock and have retained our capacity rights. Due to contractual and regulatory restrictions, the majority of our UMC shares may not be sold until July 2000. These regulatory restrictions will gradually expire between July 2000 and January 2004.

#### VMD

In June 1999, as part of our acquisition of Vantis, we entered into a series of agreements with AMD to support the continuing operations of Vantis. AMD has agreed to provide us with finished silicon wafers through September 2003 in quantities based either on a rolling six-month or an annual forecast. We have committed to buy certain minimum quantities of wafers and AMD has committed to supply certain quantities of wafers during this period. Wafers for our products are manufactured in the United States at multiple AMD wafer fabrication facilities. Prices for these wafers will be reviewed and adjusted periodically.

We have also entered into an agreement with AMD pursuant to which we have cross-licensed Vantis patents with AMD patents, having an effective filing date on or before June 15, 1999, related to PLD products. This cross-license was made on a worldwide, non-exclusive and royalty-free basis.

As part of our acquisition of Vantis Corporation, we have acquired certain third-party license rights held by Vantis prior to the acquisition. Included are rights to use certain Xilinx patents to manufacture, market and sell products.

# LEGAL PROCEEDINGS

In connection with our acquisition of Vantis, we have agreed to assume both the claims against Altera and the claims by Altera against AMD in the case captioned ADVANCED MICRO DEVICES, INC. V. ALTERA CORPORATION (CASE NO. C-94-20567-RMW) proceeding in the United States District Court for the Northern District of California. This litigation, which began in 1994, involves multiple claims and counterclaims for patent infringement relating to Vantis and Altera programmable logic devices and both parties are seeking damages and injunctive relief.

In April 1999, the United States Court of Appeals for the Federal Circuit reversed earlier jury and District Court decisions and held that Altera is not licensed to the eight AMD patents-in-suit. These eight AMD patents were subsequently assigned to Vantis. Also in April 1999, following the decision of the Court of Appeals, Altera filed a petition for rehearing. In June 1999, the Court of Appeals denied Altera's petition for rehearing.

On May 31, 2000, Altera Corporation filed a complaint against us in U.S. District Court in the Northern District of California, alleging infringement of certain Altera patents by unspecified Lattice products. On June 22, 2000, we answered Altera's complaint denying any infringement by Lattice, and simultaneously brought a series of counterclaims alleging infringement by Altera of certain Lattice patents.

Although there can be no assurance as to the results of litigation, based upon information presently known to management, we do not believe that the ultimate resolution of lawsuits will have a material adverse effect on our business. The foregoing statement constitutes a forward-looking statement and the actual results may differ materially depending on a number of factors, including new court decisions and additional counterclaims made by other parties to such litigation.

Except as described above, we are not currently a party to any material legal proceedings.

### MANAGEMENT

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

NAME	AGE	POSITION
Cyrus Y. Tsui	54	President, Chief Executive Officer and Chairman of the Board
Steven A. Laub	41	Senior Vice President and Chief Operating Officer
Stephen A. Skaggs	37	Senior Vice President, Chief Financial Officer and Secretary
Frank J. Barone	60	Corporate Vice President, Product Operations
Stephen M. Donovan	49	Corporate Vice President, Sales
Jonathan K. Yu	59	Corporate Vice President, Business Development
Martin R. Baker	44	Vice President and General Counsel
Randy D. Baker	41	Vice President, Manufacturing
Albert L. Chan	51	Vice President and General Manager, Lattice Silicon Valley
Thomas J. Kingzett	53	Vice President, Reliability and Quality Assurance
Stanley J. Kopec	49	Vice President, Corporate Marketing
Andrew D. Robin	47	Vice President, New Venture Business
Rodney F. Sloss	57	Vice President, Finance
James V. Tortolano	50	Vice President and Co-General Counsel
Kenneth K. Yu	52	Vice President and Managing Director, Lattice Asia
Mark O. Hatfield	78	Director
Daniel S. Hauer	63	Director
Harry A. Merlo	75	Director
Larry W. Sonsini	59	Director

CYRUS Y. TSUI joined Lattice in September 1988 as President, Chief Executive Officer and Director, and in March 1991 was named Chairman of the Board. From 1987 until he joined, Mr. Tsui was Corporate Vice President and General Manager of the Programmable Logic Division of AMD. He was Vice President and General Manager of the Commercial Products Divisions of Monolithic Memories Incorporated (MMI) from 1983 until its merger with AMD in 1987. Mr. Tsui has held technical and managerial positions in the semiconductor industry for over 30 years. He has worked in the programmable logic industry since its inception.

STEVEN A. LAUB joined Lattice in June 1990 as Vice President and General Manager. He was elected Senior Vice President and Chief Operating Officer in August 1996.

STEPHEN A. SKAGGS joined Lattice in December 1992 as Director, Corporate Development. He was elected Senior Vice President, Chief Financial Officer and Secretary in August 1996.

FRANK J. BARONE joined Lattice in June 1999 as a Corporate Vice President as a result of the Vantis acquisition. From September 1997 until he joined, Mr. Barone was Chief Operating Officer of Vantis. Prior thereto, Mr. Barone held various technical and managerial positions at AMD. He has worked in the programmable logic industry since 1978.

STEPHEN M. DONOVAN joined Lattice in October 1989 and has served as Director of Marketing and Director of International Sales. He was elected Vice President, International Sales in August 1993. He was elected Corporate Vice President, Sales, in May 1998. Mr. Donovan has worked in the programmable logic industry since 1982.

JONATHAN K. YU joined Lattice in February 1992 as Vice President, Operations. He was elected Corporate Vice President, Business Development in August 1996. Mr. Yu has held technical and managerial positions in the semiconductor industry for over 30 years.

MARTIN R. BAKER joined Lattice in January 1997 as Vice President and General Counsel. From 1991 until he joined, Mr. Baker held legal positions with Altera Corporation.

RANDY D. BAKER joined Lattice in April 1985 as Manager, Manufacturing and was promoted in 1988 to Director, Manufacturing. He was elected Vice President, Manufacturing in August 1996.

ALBERT L. CHAN joined Lattice in May 1989 as California Design Center Manager and was promoted in 1991 to Director, California Product Development Center. He was elected Vice President, California Product Development in August 1993. He was elected Vice President and General Manager, Lattice Silicon Valley, in August 1997. Mr. Chan has worked in the programmable logic industry since 1983.

THOMAS J. KINGZETT joined Lattice in July 1992 as Director, Reliability and Quality Assurance. He was elected Vice President, Reliability and Quality Assurance in May 1998. Mr. Kingzett has worked in the semiconductor industry for over 25 years.

STANLEY J. KOPEC joined Lattice in August 1992 as Director, Marketing. He was elected Vice President, Corporate Marketing in May 1998. Mr. Kopec has worked in the programmable logic industry since 1985.

ANDREW D. ROBIN joined Lattice in June 1999 as Vice President, New Venture Business as a result of the Vantis acquisition. From March 1998 until he joined, Mr. Robin was Vice President, Marketing at Vantis. Prior thereto, Mr. Robin held various marketing and managerial positions at AMD and MMI. Mr. Robin has worked in the programmable logic industry since 1984.

RODNEY F. SLOSS joined Lattice in May 1994 as Vice President, Finance.

JAMES V. TORTOLANO joined Lattice in June 1999 as a Vice President as a result of the Vantis acquisition. From November 1998 until he joined, Mr. Tortolano was Vice President, General Counsel of Vantis. Prior thereto, Mr. Tortolano held various legal positions at AMD. He has worked in the semiconductor industry since 1983.

KENNETH K YU joined Lattice in January 1991 as Director of Process Technology. He has served as Managing Director, Lattice Asia since November 1992 and was elected Vice President, Lattice Asia in August 1993. Mr. Yu has held technical and managerial positions in the semiconductor industry for over 25 years.

MARK O. HATFIELD has been a member of our board of directors since 1997. Mr. Hatfield is a former U.S. Senator from Oregon.

DANIEL S. HAUER has been a member of our board of directors since 1987. Mr. Hauer is the former Chairman and Chief Executive Officer of Epson Electronics America.

HARRY A. MERLO has been a member of our board of directors since 1983. Mr. Merlo is the President of Merlo Corporation and is the former President and Chairman of Louisiana-Pacific Corporation.

LARRY W. SONSINI has been a member of our board of directors since 1991. Mr. Sonsini is Chairman of the Executive Committee of Wilson Sonsini Goodrich & Rosati, Professional Corporation, a law firm based in Palo Alto, California.

#### DESCRIPTION OF CAPITAL STOCK

Our authorized capital stock consists of 300,000,000 shares of common stock, \$0.01 par value and 10,000,000 shares of preferred stock, \$0.01 par value. As of June 30, 2000, there were 49,446,405 shares of common stock outstanding and no shares of preferred stock outstanding.

#### COMMON STOCK

The holders of common stock are entitled to one vote per share on all matters to be voted upon by the stockholders. Subject to preferences applicable to any outstanding preferred stock, the holders of common stock are entitled to receive ratably such dividends as may be declared from time to time by our board of directors out of funds legally available for distribution and in the event of liquidation, dissolution, or winding up of Lattice, the holders of common stock are entitled to share in all assets remaining after payment of liabilities. The common stock has no preemptive or conversion rights and is not subject to further calls or assessments by Lattice. There are no redemption or sinking fund provisions applicable to the common stock. The common stock currently outstanding is validly issued, fully paid and nonassessable.

### CERTAIN CHARTER PROVISIONS

Our restated certificate of incorporation, as amended, and bylaws, as amended, contain certain procedural provisions that could have the effect of delaying, deferring or preventing a change in control of Lattice. These include:

- a provision classifying the board of directors into three classes; and
- a provision requiring that the affirmative vote of two-thirds of the outstanding voting shares of our capital stock is required to approve certain business combinations.

#### PREFERRED STOCK

Our board of directors has the authority to issue the preferred stock in one or more series and to fix the rights, preferences and privileges, including dividend rights, conversion rights, liquidation rights, voting rights, and the number of shares constituting any series or the designation of such series of preferred stock, without any further vote or action by the stockholders. As of March 31, 2000, there were no outstanding shares of preferred stock or options to purchase preferred stock other than the Rights Agreement described below. Although it has no present intention to do so, our board of directors may, without stockholder approval, issue preferred stock with voting and conversion rights which could adversely affect the voting power of the holders of common stock. The issuance of preferred stock may have the effect of delaying, deferring or preventing a change of control of Lattice.

### RIGHTS AGREEMENT

Effective September 1991, our board of directors approved a Preferred Shares Right Agreement and declared a dividend distribution payable November 14, 1991 of one Preferred Share Purchase Right (called "rights") for each share of its common stock outstanding on November 14, 1991 and each share of its common stock issued thereafter (subject to certain limitations).

Currently, the rights trade with the shares of common stock. When the rights become exercisable, each Right will entitle the holder to buy one-thousandth of a share of Series A Participating Preferred Stock, \$0.01 par value, at an exercise price of \$60 per one one-thousandth of a share. The rights will become exercisable and will trade separately from the common stock (unless postponed by action of the disinterested directors of Lattice) on the earlier of (i) ten (10) days following a public announcement that a person or group has acquired, or obtained the right to acquire, beneficial ownership of 20% or more of our outstanding common stock or (ii) ten (10) days following the commencement or announcement of a

tender 24 offer or exchange offer which, if consummated, would result in the beneficial ownership by a person or group of 20% or more of our outstanding common stock.

In general, if any person or group acquires 20% or more of our common stock without approval of our board of directors, each right not held by the acquiring person will entitle its holder to purchase \$120 worth of our common stock for an effective purchase price of \$60. If, after any person or group acquires 20% or more of our common stock without the approval of our board of directors, we are acquired in a merger or other business combination transaction, each right not held by the acquiring person would entitle its holder to purchase \$120 worth of the common stock of the acquiring company for \$60. Under certain conditions, we may elect to redeem the rights for \$0.01 per right or cause the exchange of each right not held by the acquiring person for one share of our common stock. Additionally, the exercise price, number of rights, and the number of shares of Series A Participating Preferred or common stock that may be acquired for the exercise price are subject to adjustment from time to time to prevent dilution.

The rights are designed to protect and maximize the value of the outstanding equity interests in Lattice in the event of an unsolicited attempt by an acquiror to take over Lattice in a manner or on terms not approved by the board of directors. Takeover attempts frequently include coercive tactics to deprive a corporation's board of directors and its stockholders of any real opportunity to determine the destiny of the corporation. The rights expire on September 11, 2001, unless previously exchanged or redeemed as described above, or terminated in connection with the acquisition of Lattice by consolidation or merger approved by the board of directors and satisfying certain conditions.

The rights are not intended to prevent a takeover of Lattice and will not do so. Nevertheless, the rights may have the effect of rendering more difficult or discouraging an acquisition of Lattice deemed undesirable by the board of directors. The rights may cause substantial dilution to a person or group that attempts to acquire Lattice on terms or in a manner not approved by our board of directors, except pursuant to an offer conditioned upon the negation, purchase or redemption of the rights. The rights have been declared by the board of directors in order to deter such tactics, including a gradual accumulation of shares in the open market of a 20% or greater position to be followed by a merger or a partial or two-tier tender offer that does not treat all stockholders equally.

The description above is qualified in its entirety by reference to the Preferred Shares Right Agreement dated as of September 11, 1991.

#### DELAWARE TAKEOVER STATUTE

We are subject to the provisions of Section 203 of the Delaware General Corporation Law, which prohibits a publicly-held Delaware corporation from engaging in any "business combination" with an "interested stockholder" for three years following the date that such stockholder became an interested stockholder, unless:

- prior to such date, the board of directors of the corporation approved either the business combination or the transaction that resulted in the stockholder becoming an interested stockholder;
- upon consummation of the transaction that resulted in the stockholder becoming an interested stockholder, the interested stockholder owned at least 85% of the voting stock of the corporation outstanding at the time the transaction commenced, excluding, for purposes of determining the number of shares outstanding, those shares owned (a) by persons who are directors and also officers and (b) by employee stock plans in which employee participants do not have the right to determine confidentially whether shares held subject to the plan will be tendered in a tender or exchange offer; or

 on or subsequent to such date, the business combination is approved by the board of directors and authorized at an annual or special meeting of stockholders, and not by written consent, by the 25 affirmative vote of at least 66 2/3% of the outstanding voting stock not owned by the interested stockholder.

Generally, a "business combination" includes a merger, asset or stock sale, or other transaction resulting in a financial benefit to the stockholders. An "interested stockholder" is a person who, together with affiliates and associates, owns (or within three years prior did own) 15% or more of the corporation's voting stock.

# TRANSFER AGENT AND REGISTRAR

The Transfer Agent and Registrar for the common stock is ChaseMellon Shareholder Services, L.L.C. Its address is 50 California Street, 10th Floor, San Francisco, California 94111 and its telephone number is (415) 954-9533.

# UNDERWRITING

Lattice and the underwriters for the offering named below have entered into an underwriting agreement for the shares being offered. Subject to certain conditions, each underwriter has severally agreed to purchase the number of shares indicated in the following table. Goldman, Sachs & Co., Morgan Stanley & Co. Incorporated and Prudential Securities Incorporated are the representatives of the underwriters.

Underwriters	Number of Shares
Goldman, Sachs & Co	
Total	4,000,000

If the underwriters sell more shares than the total number in the table above, the underwriters have an option to buy up to an additional 600,000 shares from Lattice to cover these sales. They may exercise that option for 30 days. If any shares are purchased under this option, the underwriters will severally purchase shares in approximately the same proportion as set forth in the table above.

The following table shows the per share and total underwriting discounts and commissions to be paid to the underwriters by Lattice. Such amounts are shown assuming both no exercise and full exercise of the underwriters' option to purchase additional shares.

	Paid by Lattice	
	No Exercise	Full Exercise
Per Share	\$	\$
Total	\$	\$

Shares sold by the underwriters to the public will initially be offered at the public offering price on the cover of this prospectus. Any shares sold by the underwriters to securities dealers may be sold at a discount of up to \$ per share from the public offering price. Any of these securities dealers may resell any shares purchased from the underwriters to other brokers or dealers at a discount of up to \$ per share from the public offering price. If all the shares are not sold at the offering price, the representatives may change the offering price and the other selling terms.

Lattice and its executive officers and directors have agreed with the underwriters not to dispose of or hedge any of their common stock or any securities convertible into or exchangeable for shares of common stock during the period from the date of this prospectus continuing through the date 90 days after the date of this prospectus without the prior written consent of Goldman, Sachs & Co. Lattice may, without the prior written consent of Goldman, Sachs & Co.:

- issue and sell the shares offered hereby;
- issue stock upon the exercise of options or warrants or upon conversion or exchange of any convertible or exchangeable securities outstanding on the date hereof;
- grant options or issue and sell stock upon the exercise of outstanding stock options or otherwise pursuant to Lattice's and Vantis' stock option or employee stock purchase plans; and
- issue, or agree to issue, securities of Lattice as consideration in connection with any future acquisitions or strategic investments of Lattice or securities of Lattice issuable upon exercise or conversion of the foregoing securities.

Lattice's executive officers and directors may, without the prior written consent of Goldman, Sachs & Co., dispose of or hedge up to 350,000 shares in the aggregate, but not more than 125,000 shares individually.

In connection with the offering, the underwriters may purchase and sell shares of common stock in the open market. These transactions may include short sales, stabilizing transactions and purchases to cover positions created by short sales. Short sales involve the sale by the underwriters of a greater number of shares than they are required to purchase in the offering. Covered short sales are sales made in an amount not greater than the underwriters option to purchase additional shares from Lattice in the offering. The underwriters may close out any covered short position by either exercising their option to purchase additional shares or purchasing shares in the open market. Naked short sales are any sales in excess of the underwriters' option to purchase additional shares from Lattice. The underwriters must close out any naked short position by purchasing shares on 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 common stock in the open market after pricing that could adversely affect investors who purchase in the offering. Stabilizing transactions consist of various bids for or purchases of common stock made by the underwriters in the open market prior to the completion of the offering.

The underwriters also may impose a penalty bid. This occurs when a particular underwriter repays to the underwriters a portion of the underwriting discount received by it because the representatives have repurchased shares sold by or for the account of such underwriter in stabilizing or short covering transactions.

Purchases to cover a short position and stabilizing transactions may have the effect of preventing or retarding a decline in the market price of Lattice's stock, and together with the imposition of the penalty bid, may stabilize, maintain or otherwise affect the market price of the common stock. As a result, the price of the common stock may be higher than the price that otherwise might exist in the open market. If these activities are commenced, they may be discontinued at any time. These transactions may be effected on the Nasdaq National Market, in the over-the-counter market or otherwise. Also and prior to the pricing of the shares, and until such time when a stabilizing bid may have been made, some or all of the underwriters who are market makers in the shares may make bids for or purchases of shares subject to certain restrictions, known as passive market making activities.

Lattice's common stock is quoted on the Nasdaq National Market under the symbol LSCC.

A prospectus in electronic format may be made available on the web sites maintained by one or more underwriters. The underwriters may agree to allocate a number of shares to underwriters for sale to their online brokerage account holders. Internet distributions will be allocated by the lead managers to underwriters that may make Internet distributions on the same basis as other allocations.

Lattice estimates that its share of the total expenses of the offering, excluding underwriting discounts and commissions, will be approximately \$

Lattice has agreed to indemnify the several underwriters against certain liabilities, including liabilities under the Securities Act of 1933.

# VALIDITY OF COMMON STOCK

The validity of the issuance of the common stock in this offering will be passed upon for us by Wilson Sonsini Goodrich & Rosati, Professional Corporation, Palo Alto, California, and for the underwriters by Davis Polk & Wardwell, Menlo Park, California. Larry W. Sonsini, one of our directors and a partner of Wilson Sonsini Goodrich & Rosati, beneficially owned 31,680 shares of our common stock at June 30, 2000, including 27,000 shares subject to options exercisable within 60 days of that date.

#### **EXPERTS**

The consolidated financial statements incorporated in this prospectus by reference to the Annual Report on Form 10-K for the transition period ended December 31, 1999 have been so incorporated in reliance on the report of PricewaterhouseCoopers LLP, independent accountants, given on the authority of said firm as experts in auditing and accounting. The consolidated financial statements of Vantis Corporation as of December 27, 1998 and December 28, 1997, and for the three years in the period ended December 27, 1998, appearing in our current report on Form 8-K filed on June 25, 1999, amended on August 20, 1999 (Form 8-K/A), have been so incorporated in reliance on the report of Ernst & Young LLP, Independent Auditors, given on the authority of said firm as experts in accounting and auditing.

# WHERE YOU MAY FIND ADDITIONAL INFORMATION

We file reports, proxy statements and other information with the Securities and Exchange Commission, or SEC, as required by the Securities Exchange Act of 1934. You may read and copy the reports, proxy statements and other information filed by us at the SEC's public reference room at 450 Fifth Street, N.W., Washington, D.C. 20549. Please call the SEC at 1-800-SEC-0330 for information on the operation of the public reference room.

The SEC allows us to incorporate by reference into this prospectus information that we have filed with the SEC. This means that we can disclose important information by referring you to those documents. The information incorporated by reference is considered to be a part of this prospectus. Information that we file later with the SEC will automatically update and supersede previously filed information. We incorporate by reference the documents listed below and any future filings made by us with the SEC under Sections 13(a), 13(c), 14 or 15(d) of the Securities Exchange Act of 1934 until our offering is complete:

- Our annual report on Form 10-K, as amended, for the transition period beginning April 4, 1999 and ending January 1, 2000, filed on March 30, 2000;
- Our quarterly report on Form 10-Q for the quarter ended April 1, 2000, filed on May 15, 2000;
- Our current report on Form 8-K filed on June 25, 1999, and amended on August 20, 1999;
- Our current report on Form 8-K filed on July 11, 2000.
- The description of our common stock contained in our registration statement on Form 8-A, filed on September 27, 1989, including any amendments or reports filed for the purpose of updating such description; and
- All of our filings pursuant to the Securities Exchange Act of 1934 made after the date of the original filing of the registration statement of which this prospectus is a part and prior to the effectiveness of the registration statement.

You may request a copy of these filings, at no cost, by writing or telephoning us at the following address: Investor Relations Department, Lattice Semiconductor Corporation, 5555 N.E. Moore Court, Hillsboro, Oregon 97124-6421, telephone: (503) 268-8000.

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No dealer, salesperson or other person is authorized to give any information or to represent anything not contained in this prospectus. You must not rely on any unauthorized information or representations. This prospectus is an offer to sell only the shares offered hereby, but only under circumstances and in jurisdictions where it is lawful to do so. The information contained in this prospectus is current only as of its date.

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4,000,000 Shares

LATTICE SEMICONDUCTOR CORPORATION

Common Stock

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[LOGO]

JOINT BOOKRUNNING MANAGERS

GOLDMAN, SACHS & CO.

MORGAN STANLEY DEAN WITTER

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PRUDENTIAL VOLPE TECHNOLOGY
A UNIT OF PRUDENTIAL SECURITIES

# PART II INFORMATION NOT REQUIRED IN THE PROSPECTUS

# ITEM 14. OTHER EXPENSES OF ISSUANCE AND DISTRIBUTION

The following table sets forth the costs and expenses, other than underwriting discounts and commissions, payable by us in connection with the sale of common stock being registered. All amounts are estimates except the Securities and Exchange Commission registration fee and the Nasdaq National Market listing fee.

Securities and Exchange Commission registration ree	\$
Nasdaq National Market listing fee	
Printing and engraving costs	
Legal fees and expenses	
Accounting fees and expenses	
Blue Sky fees and expenses	
Transfer Agent and Registrar fees	
Miscellaneous expenses	
Total	\$
	=====

#### ITEM 15. INDEMNIFICATION OF OUR DIRECTORS AND OFFICERS

#### CERTIFICATE OF INCORPORATION

Article VI of our certificate of incorporation provides that, to the fullest extent permitted by Delaware law, as the same now exists or may hereafter be amended, a director shall not be personally liable to the corporation or its stockholders for monetary damages arising out of his conduct as a director. Delaware law provides that directors of a corporation will not be personally liable for monetary damages for breach of their fiduciary duties as directors, except for liability:

- for any breach of their duty of loyalty to the corporation or its stockholders,
- for acts or omissions not in good faith or that involve intentional misconduct or a knowing violation of law,
- for unlawful payments of dividends or unlawful stock repurchases or redemptions as provided in Section 174 of the Delaware General Corporation Law, or
- for any transaction from which the director derived an improper personal benefit.

# BYLAWS

Our bylaws provide that our directors, officers and agents shall be indemnified against expenses including attorneys' fees, judgments, fines, settlements actually and reasonably incurred in connection with any proceeding arising out of their status as our agent. Our bylaws also allow us to purchase and maintain insurance on behalf of any person who is or was one of our directors, officers, employees or agents, against any liability arising out of the person's status as such, whether or not we would have the power to indemnify the person under Delaware law.

# ITEM 16. EXHIBITS

**EXHIBIT** 

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

NUMBER	EXHIBIT TITLE
1.1*	Underwriting Agreement
3.1	The Company's Certificate of Incorporation, as amended.
5.1*	Opinion of Wilson Sonsini Goodrich & Rosati, Professional Corporation.
23.1	Consent of PricewaterhouseCoopers LLP, independent accountants.
23.2	Consent of Ernst & Young LLP, Independent Auditors.
23.3*	Consent of Wilson Sonsini Goodrich & Rosati, Professional Corporation (included in Exhibit 5.1).
24.1	Power of Attorney (see page II-3 of this Form S-3).

To be filed by amendment.

#### ITEM 17. UNDERTAKINGS

Insofar as indemnification for liabilities arising under the Securities Act of 1933 may be permitted to directors, officers and controlling persons of the registrant pursuant to the provisions described under Item 15 above, or otherwise, the registrant has been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities, other than the payment by the Registrant of expenses incurred or paid by a director, officer or controlling person of the Registrant in the successful defense of any action, suit or proceeding, is asserted by such director, officer or controlling person in connection with the securities being registered, the registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act and will be governed by the final adjudication of such issue.

The undersigned Registrant hereby undertakes:

- (1) 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 Section 15(d) of the Securities Exchange Act of 1934 that is incorporated by reference in this registration statement shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.
- (2) For purposes of determining any liability under the Securities Act of 1933, the information omitted from the form of prospectus filed as part of this registration statement in reliance upon Rule 430A and contained in a form of prospectus filed by the registrant pursuant to Rule 424(b)(1) or (4) or 497(h) under the Securities Act shall be deemed to be part of this registration statement as of the time it was declared effective.
- (3) For the purpose of determining any liability under the Securities Act of 1933, each post-effective amendment that contains a form of prospectus shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

# **SIGNATURES**

Pursuant to the requirements of the Securities Act of 1933, the registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-3 and has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Hillsboro, State of Oregon, on July 11, 2000.

#### LATTICE SEMICONDUCTOR CORPORATION

By: /s/ CYRUS Y. TSUI

Name: Cyrus Y. Tsui Title: PRESIDENT, CHIEF EXECUTIVE OFFICER AND

Title: PRESIDENT, CHIEF EXECUTIVE OFFICER AND CHAIRMAN OF THE BOARD

# POWER OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below hereby constitutes and appoints Cyrus Y. Tsui and Stephen A. Skaggs, and each of them acting individually, as his attorneys-in-fact and agents, each with full power of substitution, for him in any and all capacities, to sign any and all amendments to this Registration Statement on Form S-3 including post-effective amendments or any abbreviated registration statement and any amendments thereto filed pursuant to Rule 462(b) increasing the number of securities for which registration is sought, and to file the same, with all exhibits thereto and all other documents in connection therewith, with the Securities and Exchange Commission, granting unto such attorneys-in-fact and agents, with full power of each to act alone, full power and authority to do and perform each and every act and thing required and necessary to be done in connection therewith, as fully for all intents and purposes as he might or could do in person, hereby ratifying and confirming all that such attorneys-in-fact and agents or any of them, or his or their substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, this Registration Statement has been signed by the following persons in the capacities and on the dates indicated:

NAME	TITLE	DATE
/s/ CYRUS Y. TSUI	President, Chief Executive Officer (Principal Executive Officer) and	July 11, 2000
Cyrus Y. Tsui	Chairman of the Board of Directors	
/s/ STEPHEN A. SKAGGS	Senior Vice President, Chief Financial Officer (Principal	July 11, 2000
Stephen A. Skaggs	Financial and Accounting Officer) and Secretary	
/s/ MARK O. HATFIELD	Director	July 11, 2000
Mark O. Hatfield		
/s/ DANIEL S. HAUER	Director	July 11, 2000
Daniel S. Hauer		
/s/ HARRY A. MERLO	Director	July 11, 2000
Harry A. Merlo		
/s/ LARRY W. SONSINI	Director	July 11, 2000
Larry W. Sonsini		

# EXHIBIT INDEX

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23.2	Consent of Ernst & Young LLP, Independent Auditors.
23.3*	Consent of Wilson Sonsini Goodrich & Rosati, Professional Corporation (included in Exhibit 5.1).
24.1	Power of Attorney (see page II-3 of this Form S-3).

<sup>\*</sup> To be filed by amendment.

#### **RESTATED**

# CERTIFICATE OF INCORPORATION

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#### LATTICE SEMICONDUCTOR CORPORATION

Lattice Semiconductor Corporation, a corporation organized and existing under the General Corporation Law of the State of Delaware (the "Corporation"), does hereby certify:

- 1. The Corporation initially filed its Certificate of Incorporation in the Office of the Secretary of State of the State of Delaware on the first day of March 1985;
- 2. On July 2, 1987, the Corporation filed a voluntary Petition in Bankruptcy under Title 11, Chapter 11 of the United States Code;
- 3. The Corporation's Plan of Reorganization, confirmed by the United States Bankruptcy Court for the District of Oregon on September 16, 1987 (the "Plan of Reorganization"), provided that all of the Corporation's issued and outstanding common and preferred stock at September 28, 1987 (the effective date under the Plan of Reorganization), namely 12,026,109 shares of common stock, 1,980,000 shares of Series A preferred stock, 1,738,531 shares of Series B preferred stock, 1,280,214 shares of Series C preferred stock, and 1,952,107 shares of Series D preferred stock, be cancelled;
- 4. The Plan of Reorganization required amendment to the Certificate of Incorporation, which Certificate of Amendment of Certificate of Incorporation of Lattice Semiconductor Corporation was filed on November 13, 1987 pursuant to Section 303 of the General Corporation Law of the State of Delaware.

THEREFORE, pursuant to Section 245 of the General Corporation Law of the State of Delaware, the undersigned Corporation adopts the following Restated Certificate of Incorporation which shall supersede the original Certificate of Incorporation and all amendments thereto (including but not limited to all certificates or statements of designation of series of preferred stock) filed prior to the effective date of this Restated Certificate of Incorporation. The filing of the Restated Certificate of Incorporation was duly approved at a meeting of the shareholders of the Corporation held on May 16, 1988, in accordance with the requirements of Section 242 of the General Corporation Law of the State of Delaware. The Restated Certificate of Incorporation shall read as follows:

# ARTICLE I

The name of the Corporation is: Lattice Semiconductor Corporation.

# ARTICLE II

The registered office and place of business of the Corporation in the State of Delaware is 1209 Orange Street, City of Wilmington, County of New Castle, and the name of the registered agent of the Corporation in the State of Delaware at such address is The Corporation Trust Company.

# ARTICLE III

The purpose of the Corporation is to conduct any lawful business, to promote any lawful purpose, and to engage in any lawful act or activity for which corporations may be organized under the General Corporation Law of the State of Delaware.

# ARTICLE IV

The total number of shares of all classes of stock that the Corporation shall have authority to issue is Forty Million (40,000,000) shares, par value One Cent (\$.01) each, consisting of Thirty Million (30,000,000) shares of Common Stock, par value One Cent (\$.01) each ("Common Stock") and Ten Million (10,000,000) shares of Preferred Stock, par value One Cent (\$.01) each ("Preferred Stock").

(A) PREFERRED STOCK. The Preferred Stock may be issued from time to time in one or more series. The Board of Directors of the Corporation ("Board of Directors") is hereby expressly authorized by resolution or resolutions adopted from time to time: to divide the Preferred Stock into series; to designate any such series appropriately so as to distinguish the shares of a series from shares of all other series; to fix, determine or alter the voting and other powers, designations, preferences, and rights, and the qualifications, limitations and restrictions granted to or imposed upon any series of Preferred Stock to the fullest extent permitted by law; to fix the number of shares initially constituting any such series; and to increase or decrease the number of shares constituting any such series from time to time subsequent to the issue of shares of that series, but not below the number of shares of such series then outstanding. In case the

number of shares of any series shall be so decreased, the shares constituting such decrease shall resume the status which they had prior to the adoption of the resolution originally fixing the number of shares of such series. Failure of the Board of Directors to specify the powers, rights and preferences in the resolution establishing any series of Preferred Stock shall be deemed a denial of any such powers, rights and preferences so omitted.

Without limitation of the foregoing authority conferred upon the Board of Directors, there follows a statement of the powers, rights and preferences of the Series A Preferred Stock, the Series B Preferred Stock and the Series D Preferred Stock.

I. SERIES A PREFERRED STOCK AND SERIES B PREFERRED STOCK. There is hereby created two series of Preferred Stock of the Corporation, which shall be designated Series A Preferred Stock ("Series A Preferred") and Series B Preferred Stock ("Series B Preferred"), respectively. The Series A Preferred shall initially consist of 2,581,745 shares, and the Series B Preferred shall initially consist of 647,638 shares. The powers, preferences and rights of the shares of such series and the qualifications, limitations and restrictions thereof are as follows:

SECTION 1. DIVIDEND RIGHTS. The holders of the Series A Preferred and Series B Preferred shall be entitled to receive when, as and if declared by the Board of Directors, out of any assets of the Corporation legally available therefor, such dividends as may be declared from time to time by the Board of Directors in respect of such shares. No dividends or other distributions (other than pro rata dividends or distributions payable solely in Common Stock) shall be paid with respect to Common Stock or with respect to any other class or series of Preferred Stock unless an equal dividend or distribution (on a Common Stock equivalent basis) shall have been paid or declared and set apart for payment to holders of Series A Preferred and Series B Preferred.

SECTION 2. LIQUIDATION PREFERENCE. In the event of any liquidation, dissolution or winding up of the Corporation, either voluntary or involuntary, the holders of Series A Preferred and Series B Preferred shall be entitled to be paid out of the assets of the Corporation available for distribution to its stockholders, before any payment or declaration and setting apart for payment of any amount shall be made in respect of the Common Stock or stock of any other class or series ranking junior as to the assets in liquidation to the Series A Preferred or Series B Preferred, an amount equal to One Dollar (\$1.00) per share of Series A Preferred and Twelve Dollars (\$12.00) per share of Series B Preferred, respectively (as adjusted to reflect stock splits, combinations, etc.), plus in each case an amount equal to any declared but unpaid dividends on such share of Preferred Stock, and no more. If upon liquidation, dissolution or winding up of the Corporation, the assets of the Corporation available for distribution to its stockholders shall be insufficient to pay the holders of the Corporation's Series A Preferred and Series B Preferred the full amounts to which they respectively shall be entitled, the holders of the Series B Preferred shall have priority over the holders of the Series A Preferred with respect to any distribution of assets until the holders of the Series B Preferred shall have received the full amounts to which they shall be entitled. If upon liquidation, dissolution or winding up of the Corporation, the assets of the Corporation available for distribution to its stockholders shall be insufficient to pay the holders of the Series B Preferred the full amount to which they shall be entitled, the holders of the Series B Preferred shall share ratably in any distribution of assets available for the holders of Series B Preferred according to the respective amounts which would be payable in respect of the shares held by them upon such distribution if all amounts payable on or with respect to said shares were paid in full. If upon liquidation, dissolution or winding up of the Corporation, the assets of the Corporation available for distribution to its stockholders shall be insufficient to pay the holders

of the Corporation's Series A Preferred the full amounts to which they shall be entitled, the holders of Series A Preferred shall share ratably in any distribution of assets available for holders of Series A Preferred according to the respective amounts which would be payable in respect of the shares held by them upon such distribution if all amounts payable on or with respect to said shares ware paid in full.

SECTION 3. CONVERSION. The holders of Series A Preferred Stock and Series B Preferred shall have conversion rights as follows (the "Conversion Rights").

# (a) RIGHT TO CONVERT.

(i) OPTIONAL CONVERSION. Each share of the Series A Preferred and Series B Preferred shall be convertible, at the option of the holder thereof, at any time after the date of issuance of such share, at the office of the Corporation or any transfer agent for the Preferred Stock, into such number of fully paid and nonassessable shares of Common Stock as is determined by the Conversion Rate, determined as hereinafter provided, in effect at the time of conversion for such series of Preferred Stock. The conversion rate at which shares of Common Stock shall be delivered upon conversion without the payment of any additional consideration by the holder thereof (the "Conversion Rate") shall initially be: (x) for the Series A Preferred, one (1) share of Common Stock with respect to each share of Series B Preferred, one (1) share of Common Stock with respect to each share of Series B Preferred. Such initial Conversion Rate with respect to each such series of Preferred Stock shall be subject to adjustment as set forth in Section 3(c) of this Article IV(A)(I).

(ii) AUTOMATIC CONVERSION. Each share of the Series A Preferred and Series B Preferred shall automatically be converted into shares of Common Stock at the Conversion Rate at the time in effect for such series of Preferred Stock immediately upon the consummation of the

Corporation's sale of its Common Stock in a bona fide, firm commitment underwritten public offering pursuant to an effective registration statement under the Securities Act of 1933, as amended, which results in aggregate cash proceeds (before underwriters' commissions and offering expenses) to the Corporation of \$5,000,000 or more.

(iii) PROCEDURES FOR AUTOMATIC CONVERSION. Upon the occurrence of an event specified in Section 3(a)(ii) of this Article IV(A)(I), the outstanding shares of the Series A Preferred and Series B Preferred to be converted shall be converted automatically without any further action by the holders of such shares and whether or not the certificates representing such shares are surrendered to the Corporation or its transfer agent; provided, however, that the Corporation shall not be obligated to issue certificates evidencing the shares of Common Stock issuable upon such conversion unless certificates evidencing such shares of the Preferred Stock being converted are either delivered to the Corporation or any transfer agent, as hereinafter provided, or the holder notifies the Corporation or any transfer agent, as hereinafter provided, that such certificates have been lost, stolen, or destroyed and executes an agreement satisfactory to the Corporation to indemnify the Corporation from any loss incurred by it in connection therewith. Upon the automatic conversion of the Series A Preferred and Series B Preferred, the holders of such Preferred Stock shall surrender the certificates representing such shares at the office of the Corporation or of any transfer agent for the Preferred Stock. Thereupon, there shall be issued and delivered to such holder, promptly at such office and in his name as shown on such surrendered certificate or certificates, a certificate or certificates for the number of shares of Common Stock into which the shares of the Preferred Stock surrendered were convertible on the date on which such automatic conversion occurred.

(b) MECHANICS OF OPTIONAL CONVERSION. Before any holder of Series A Preferred or Series B Preferred shall be entitled to convert the same into shares of Common Stock pursuant to Section 3(a)(i) of this Article IV(A)(I), he or she shall surrender the certificate or certificates therefor, duly endorsed, at the office of the Corporation or of any transfer agent for the Preferred Stock, and shall give written notice by mail, postage prepaid, to the Corporation at its principal corporate office of the election to convert the same and shall state therein the name or names in which the certificate or certificates for shares of Common Stock are to be issued. The Corporation shall, as soon as practicable thereafter, issue and deliver at such office to such holder of Series A Preferred or Series B Preferred, or to the nominee or nominees of such holder, a certificate or certificates for the number of shares of Common Stock to which such holder shall be entitled as aforesaid. Such conversion shall be deemed to have been made immediately prior to the close of business on the date of such surrender of the shares of Series A Preferred or Series B Preferred to be converted, and the person or person entitled to receive the shares of Common Stock issuable upon such conversion shall be treated for all purposes as the record holder or holders of such shares of Common Stock as of such date. If the conversion is in connection with an underwritten offer of securities registered pursuant to the Securities Act of 1933, the conversion may, at the option of any holder tendering Preferred Stock for conversion, be conditioned upon the closing with the underwriter of the sale of securities pursuant to such offering, in which event the person(s) entitled to receive the Common Stock issuable upon such conversion of the Preferred Stock shall not be deemed to have converted such Preferred Stock until immediately prior to the closing of such sale of securities.

- (c) CONVERSION RATE ADJUSTMENTS OF PREFERRED STOCK. The Conversion Rate of the Series A Preferred and Series B Preferred shall be subject to adjustment from time to time as follows:
- (i) ADJUSTMENTS TO SERIES B PREFERRED FOR SALE OF ADDITIONAL STOCK. (A) If at any time subsequent to the initial issuance of Series B Preferred, the Corporation issues or sells shares of Additional Stock (as defined below) that is convertible into Common Stock for an Effective Price (as defined below) less than \$4.00 per share (as adjusted to reflect stock splits, combinations, etc.), then the Conversion Rate for such Series B Preferred in effect immediately prior to each such issuance shall forthwith (except as otherwise provided in this clause (i)) be increased so as to entitle each holder of Series B Preferred Stock to receive on conversion of such shares that number of shares of Common Stock required to preserve the percentage interest of the Corporation's Common Stock (on an as-converted basis) that such share would have held had shares been issued for the same aggregate consideration but at an Effective Price of \$4.00 per share, such adjustment to be made in accordance with the following formula:

#### where

- X = Series B Conversion Rate, as adjusted.
- A = Number of Shares of Series B Preferred outstanding.
- B = Series B Conversion Rate in effect immediately prior to adjustment.
- C = Number of shares of Additional Stock issued, on an as-converted basis.
- D = Total shares of Common Stock outstanding immediately prior to issuance of Additional Stock (assuming conversion of all outstanding securities convertible into Common Stock).

- E = The aggregate consideration paid for the Additional Stock for which the adjustment is being made.
- F = E divided by 4 (the result being the number of as-converted shares of Common Stock that would have been issued had the Additional Stock been sold at an Effective Price of \$4 per share.)
- (B) No adjustment of the Conversion Rate for the Series A Preferred or Series B Preferred shall be made in an amount less than 1 percent (.01), provided that any adjustments which are not required to be made by reason of this sentence shall be carried forward and shall be taken into account in any subsequent adjustment.
- (C) In the case of the issuance of Additional Stock for cash, the consideration shall be deemed to be the amount of cash paid therefor before deducting any reasonable discounts, commissions or other expenses allowed, paid or incurred by the Corporation for any underwriting or otherwise in connection with the issuance and sale thereof.
- (D) In the case of the issuance of the Additional Stock for a consideration in whole or in part other than cash, the consideration other than cash shall be deemed to be the fair value thereof as determined by the Board of Directors irrespective of any accounting treatment.
- (ii) ADDITIONAL STOCK. "Additional Stock" shall mean any shares of Preferred Stock (including but not limited to Preferred Stock issued upon conversion of debt that is by its terms convertible into Preferred Stock) issued by the Corporation at any time after the initial issuance of the Series A Preferred or Series B Preferred, other than
- (A) Up to 436,837 shares of Preferred Stock subject to warrants to purchase Preferred Stock issued pursuant to the Plan of Reorganization of the Corporation pursuant to

Title 11, Chapter 11 of the United States Code, as confirmed by the United States Bankruptcy Court for the District of Oregon on September 16, 1987 (the "Plan"),

- (B) Up to 131,979 shares of Preferred Stock issued to National Semiconductor Corp. pursuant to the Plan,  $\,$
- (C) Up to 35,380 shares of Preferred Stock issued to VLSI Technology, Inc. pursuant to the Plan,
- (D) Shares of Preferred Stock issued in the first round of equity financing subsequent to September 16, 1987, as approved by the resolution of the Corporation's Board of Directors, which financing shall be designated by the Board of Directors as other than "Additional Stock" pursuant to this Section 3(c)(ii)(D) of this Article IV(A)(I), and
- (E) Such additional Preferred Stock, including any Preferred Stock subject to warrants and options, the issuance of which at an Effective Price below \$4.00 per share is approved by the holders of a majority of the Series B Preferred Stock then outstanding, in each case appropriately adjusted for any stock dividend, stock split or other like change.

The "Effective Price" for any shares of Additional Stock shall mean the quotient determined by dividing the total number of shares of such Additional Stock then issued or sold, into the aggregate consideration received, or deemed to have been received in exchange for such shares by the Corporation under Section 3(c)(i) of this Article IV(A)(I).

(iii) ADJUSTMENTS FOR STOCK SPLITS AND DIVIDENDS. In the event the Corporation should at any time or from time to time after the initial issuance of Series A Preferred and Series B Preferred fix a record date for the effectuation of a split or subdivision of the outstanding shares of Common Stock or the determination of holders of Common Stock entitled to receive a dividend or other distribution payable in additional shares of Common Stock or other securities

or rights convertible into, or entitling the holder thereof to receive directly or indirectly, additional shares of Common Stock (hereinafter referred to as "Common Stock Equivalents") without payment of any consideration by such holder for the additional shares of Common Stock or the Common Stock Equivalents (including the additional shares of Common Stock issuable upon conversion or exercise thereof), then, as of such record date (or the date of such dividend, distribution, split or subdivision if no record date is fixed), the Conversion Rate of the Series A Preferred and Series B Preferred shall be appropriately adjusted so that the number of shares of Common Stock issuable on conversion of each share of such series shall be increased in proportion to such increase in outstanding shares.

- (iv) ADJUSTMENTS FOR CONTRIBUTIONS. If the number of shares of Common Stock outstanding at any time after the initial issuance of Series A Preferred and Series B Preferred is decreased by a combination of the outstanding shares of Common Stock, then, following the record date of such combination, the Conversion Rate for the Series A Preferred and Series B Preferred shall be appropriately adjusted so that the number of shares of Common Stock issuable on conversion of each share of such series shall be decreased in proportion to such decrease in outstanding shares.
- (v) ADJUSTMENT FOR MERGER OR REORGANIZATION, ETC. In case of any consolidation or merger of the Corporation with or into another corporation or the conveyance of all or substantially all of the assets of the Corporation to another corporation, each share of Series A Preferred and Series B Preferred shall thereafter be convertible into the number of shares of stock or other securities or property to which a holder of the number of shares of Common Stock deliverable upon conversion of such Preferred Stock would have been entitled upon such consolidation, merger or conveyance; and, in any such case, appropriate adjustment (as

determined by the Board of Directors) shall be made in the application of the provisions herein set forth with respect to the rights and interest thereafter of the holder of such Preferred Stock, to the end that the provisions set forth herein (including provisions with respect to changes in and other adjustments of the Conversion Rate of the Series A Preferred and Series B Preferred) shall thereafter be applicable, as nearly as reasonably may be, in relation to any shares of stock or other property thereafter deliverable upon the conversion of the Series A Preferred or Series B

- (d) OTHER DISTRIBUTIONS. In the event the Corporation shall declare a distribution payable in securities of other persons, evidences of indebtedness issued by the Corporation or other persons, assets (excluding regular cash dividends) or options or rights not referred to in Section 3(c)(iii) of this Article IV(A)(I), then, in each such case for the purpose of this sentence, the holders of the Series A Preferred and Series B Preferred shall be entitled to a proportionate share of any such distribution as though they were the holders of the number of shares of Common Stock of the Corporation into which their respective shares of Series A Preferred or Series B Preferred are convertible as of the record date fixed for the determination of the holders of Common Stock of the Corporation entitled to receive such distribution.
- (e) RECAPITALIZATIONS. If at any time or from time to time there shall be a recapitalization of the Common Stock (other than a subdivision, combination or merger or sale of assets transaction provided for elsewhere in this Section 3), provision shall be made so that the holders of the Series A Preferred and Series B Preferred shall thereafter be entitled to receive upon conversion of such series of the Preferred Stock the number of shares of stock or other securities or property of the Corporation or otherwise, to which a holder of Common Stock deliverable upon conversion would have been entitled on such recapitalization. In any such case,

appropriate adjustment shall be made in the application of the provisions of this Section 3 with respect to the rights of the holders of the Series A Preferred and Series B Preferred after the recapitalization to the end that the provisions of this Section 3 (including adjustment of the respective Conversion Rates then in effect and the number of shares of Common Stock to which holders are entitled upon conversion of the Series A Preferred and Series B Preferred) shall be applicable after that event on as nearly equivalent terms as may be practicable.

- (f) NO IMPAIRMENT. The Corporation will not, by amendment of this Restated Certificate of Incorporation or through any reorganization, recapitalization, transfer of assets, consolidation, merger, dissolution, issue or sale of securities or any other voluntary action, avoid or seek to avoid the observance or performance of any of the terms to be observed or performed hereunder by the Corporation, but will at all times in good faith assist in the carrying out of all the provisions of this Section 3 and in the taking of all such action as may be necessary or appropriate in order to protect the Conversion Rights of the holders the Series A Preferred and Series B Preferred against impairment.
  - (g) FRACTIONAL SHARES; CERTIFICATE AS TO ADJUSTMENTS.
- (i) No fractional shares shall be issued upon conversion of the Series A Preferred or Series B Preferred, and the number of shares of Common Stock to be issued shall be rounded to the nearest whole share. Whether or not fractional shares are issuable upon such conversion shall be determined on the basis of the total number of shares of Series A Preferred and Series B Preferred the holder is at the time converting into Common Stock and the number of shares of Common Stock issuable upon such aggregate conversion.
- (ii) Upon the occurrence of each adjustment or readjustment of a Conversion Rate of Series A Preferred or Series B Preferred pursuant to this Section 3, the Corporation shall

promptly compute such adjustment or readjustment in accordance with the terms hereof and prepare and furnish to each holder of such series of Preferred Stock a certificate setting forth such adjustment or readjustment and showing in detail the facts upon which such adjustment or readjustment is based. The Corporation shall, upon the written request at any time of a holder of Series A Preferred or Series B Preferred, furnish or cause to be furnished to such holder a like certificate setting forth (A) such adjustments and readjustments, (B) the Conversion Rate at the time in effect with respect to such series, and (C) the number of shares of Common Stock and the amount, if any, of other property which at the time would be received upon the conversion of a share of such series of Preferred Stock.

- (h) NOTICES OF RECORD DATE. In the event of any taking by the Corporation of a record of the holders of any class or series who are entitled to receive any dividend (other than a regular cash dividend) or other distribution, any right to subscribe for, purchase or otherwise acquire any shares of stock of any class or any other securities or property, or to receive any other right, the Corporation shall mail to each holder of Series A Preferred or Series B Preferred, at least 20 days prior to the date specified therein, a notice specifying the date on which any such record is to be taken for the purpose of such dividend, distribution or right, and the amount and character of such dividend, distribution or right.
- (i) RESERVATION OF STOCK ISSUABLE UPON CONVERSION. The Corporation shall at all times reserve and keep available out of its authorized but unissued shares of Common Stock, solely for the purpose of effecting the conversion of the shares of the Series A Preferred and Series B Preferred, such number of its shares of Common Stock as shall from time to time be sufficient to effect the conversion of all outstanding shares of the Series A Preferred and Series B Preferred; and if at any time the number of authorized but unissued shares of Common Stock

shall not be sufficient to effect the conversion of all then outstanding shares of the Series A Preferred and Series B Preferred, in addition to such other remedies as shall be available to the holder of such Preferred Stock, the Corporation will take such corporate action as may, in the opinion of its counsel, be necessary to increase its authorized but unissued shares of Common Stock to such number of shares as shall be sufficient for such purposes.

- (j) NOTICES. Any notice required by the provisions of this Section 3 to be given to the holder of shares of Series A Preferred or Series B Preferred shall be deemed given when personally delivered to such holder or two business days after the same has been deposited in the United States mail, return receipt requested, postage prepaid, and addressed to each holder of record at his or her address appearing on the books of the Corporation.
- (k) TAXES. The Corporation will pay all taxes and other governmental charges that may be imposed in respect of the issue or delivery of shares of Common Stock upon conversion of shares of Series A Preferred or Series B Preferred.

SECTION 4. VOTING RIGHTS. The Corporation shall not issue any share of any class of nonvoting equity securities. The holders of Series A Preferred and Series B Preferred shall be entitled to notice of any stockholders meeting and to vote upon the election of directors or upon any matter submitted to a stockholder for a vote. Each holder of Series A Preferred or Series B Preferred issued and outstanding shall have that number of votes equal to the number of shares of Common Stock into which such holder's shares of Series A Preferred and Series B Preferred could be converted and shall vote as one class with holders of the Common Stock upon any matter submitted to a vote of stockholders except as otherwise required by law.

II. SERIES D PREFERRED STOCK. There is hereby created a third series of Preferred Stock of the Corporation, which shall be designated Series D Preferred Stock (hereinafter called the

"Series D Preferred") and shall consist of 1,250,000 shares. The powers, preferences and relative, participating, optional or other rights and qualifications, limitations or restrictions of shares of such series shall be as follows:

SECTION 1. DIVIDEND RIGHTS. The holders of the Series D Preferred shall be entitled to receive, when, as and if declared by the Board of Directors, out of any assets of the Corporation legally available therefor, such dividends as may be declared from time to time by the Board of Directors in respect of such shares. The Corporation shall not at any time declare or pay any dividend on shares of Common Stock unless dividends shall simultaneously be declared and paid on each outstanding share of the Series D Preferred in an amount equal to the dividend per share then being declared or paid on Common Stock multiplied by the Series D Conversion Rate (as hereafter defined) then in effect.

SECTION 2. LIQUIDATION PREFERENCE. In the event of any liquidation, dissolution or winding up of the Corporation, either voluntary or involuntary, the holders of Series D Preferred shall be entitled to be paid out of the assets of the Corporation available for distribution to its stockholders, before any payment or declaration and setting apart for payment of any amount shall be made in respect of the Common Stock or stock of any other class or series ranking junior as to the assets in liquidation to the Series D Preferred, an amount equal to Two Dollars (\$2.00) per share of Series D Preferred (as adjusted to reflect stock splits, combinations, etc.) plus in each case an amount equal to any declared but unpaid dividends on such share of Series D Preferred, and no more. If upon liquidation, dissolution or winding up of the Corporation the assets of the Corporation available for distribution to its stockholders shall be insufficient to pay the holders of the Corporation's Preferred Stock the full amounts to which they respectively shall be entitled, the holders of the Series D Preferred

and Series B Preferred with respect to any distribution of assets until the holders of the Series D Preferred shall have received the full amounts to which they shall be entitled, and the holders of the Series D Preferred shall be entitled to equal priority with the holders of all other Preferred Stock not expressly made junior to the Series D Preferred on liquidation. If upon liquidation, dissolution or winding up of the Corporation the assets of the Corporation available for distribution to its stockholders shall be insufficient to pay the holders of the Corporation's Series D Preferred and the holders of any other Preferred Stock that is of equal priority on liquidation with the Series D Preferred the full amount to which they shall be entitled, the holders of the Corporation's Series D Preferred shall share ratably in any distribution of assets available for the holders of Series D Preferred and the holders of any other Preferred Stock that is of equal priority on liquidation with the Series D Preferred according to the respective amounts that would be payable in respect of the shares held by them upon such distribution if all amounts payable on or with respect to said shares were paid in full.

SECTION 3. CONVERSION. The holders of Series D Preferred shall have conversion rights as follows:

# (a) RIGHT TO CONVERT.

(i) OPTIONAL CONVERSION. Each share of the Series D Preferred shall be convertible, at the option of the holder thereof, at any time after the date of issuance of such share, at the office of the Corporation or any transfer agent for the Preferred Stock, into such number of fully paid and nonassessable shares of Common Stock as is determined by the Series D Conversion Rate, determined as hereinafter provided, in effect at the time of conversion for such Series D Preferred. The conversion rate at which shares of Common Stock shall be delivered upon conversion without the payment of any additional consideration by the holder

thereof (the "Series D Conversion Rate") shall initially be one (1) share of Common Stock with respect to each share of Series D Preferred. Such initial Series D Conversion Rate with respect to the Series D Preferred shall be subject to adjustment as set forth in Section 3(c) of this Article IV(A)(II).

(ii) AUTOMATIC CONVERSION. Each share of the Series D Preferred shall automatically be converted into shares of Common Stock at the Series D Conversion Rate at the time in effect for such Series D Preferred immediately upon the consummation of the Corporation's sale of its Common Stock in a bona fide, firm commitment underwritten public offering pursuant to an effective registration statement under the Securities Act of 1933, as amended, that results in aggregate cash proceeds (before underwriters' commissions and offering expenses) to the Corporation of \$5,000,000 or more.

(iii) PROCEDURES FOR AUTOMATIC CONVERSION. Upon the occurrence of an event specified in Section 3(a)(ii) of this Article IV(A)II, the outstanding shares of the Series D Preferred to be converted shall be converted automatically without any further action by the holders of such shares and whether or not the certificates representing such shares are surrendered to the Corporation or its transfer agent; provided, however, that the Corporation shall not be obligated to issue certificates evidencing the shares of Common Stock issuable upon such conversion unless certificates evidencing such shares of the Series D Preferred being converted are delivered to either the Corporation or any transfer agent, as hereinafter provided, or the holder notifies the Corporation or any transfer agent, as hereinafter provided, that such certificates have been lost, stolen, or destroyed and executes an agreement satisfactory to the Corporation to indemnify the Corporation from any loss incurred by it in connection therewith. Upon the automatic conversion of the Series D Preferred, the holders of such Series D Preferred

shall surrender the certificates representing such shares at the office of the Corporation or of any transfer agent for the Common Stock. Thereupon, there shall be issued and delivered to such holder, promptly at such office and in his name as shown on such surrendered certificate or certificates, a certificate or certificates for the number of shares of Common Stock into which the shares of the Series D Preferred surrendered were convertible on the date on which such automatic conversion occurred.

(b) MECHANICS OF OPTIONAL CONVERSION. Before any holder of Series D Preferred shall be entitled to convert the same into shares of Common Stock pursuant to Section 3(a)(i) of this Article IV(A)(II), he or she shall surrender the certificate or certificates therefor, duly endorsed, at the office of the Corporation or of any transfer agent for the Series D Preferred and shall give written notice by mail, postage prepaid, to the Corporation at its principal corporate office of the election to convert the same and shall state therein the name or names in which the certificate or certificates for shares of Common Stock are to be issued. The Corporation shall, as soon as practicable thereafter, issue and deliver at such office to such holder of Series D Preferred, or to the nominee or nominees of such holder, a certificate or certificates for the number of shares of Common Stock to which such holder shall be entitled as aforesaid. Such conversion shall be deemed to have been made immediately prior to the close of business on the date of such surrender of the shares of Series D Preferred to be converted, and the person or person entitled to receive the shares of Common Stock issuable upon such conversion shall be treated for all purposes as the record holder or holders of such shares of Common Stock as of such date. If the conversion is in connection with an underwritten offer of securities registered pursuant to the Securities Act of 1933, the conversion may, at the option of any holder tendering the Series D Preferred for conversion, be conditioned upon the closing with the underwriter of the sale of

securities pursuant to such offering, in which event the person(s) entitled to receive the Common Stock issuable upon such conversion of the Series D Preferred shall not be deemed to have converted such Series D Preferred until immediately prior to the closing of such sale of securities.

- (c) CONVERSION RATE ADJUSTMENTS OF SERIES D PREFERRED. The Series D Conversion Rate shall be subject to adjustment from time to time as follows:
- (i) STOCK DIVIDENDS, SUBDIVISIONS AND COMBINATIONS. In case the Corporation shall
- (A) take a record of the holders of its Common Stock for the purpose of entitling them to receive a dividend payable in, or other distribution of, Common Stock, or
- (B) subdivide its outstanding shares of Common Stock into a larger number of shares of Common Stock, or
- (C) combine its outstanding shares of Common Stock into a smaller number of shares of Common Stock,

then the per share Series D Conversion Rate shall be adjusted to that rate determined by multiplying the per share Series D Conversion Rate in effect immediately prior to such event by a fraction (i) the numerator of which shall be the total number of outstanding shares of Common Stock of the Corporation immediately after such event, and (ii) the denominator of which shall be the total number of outstanding shares of Common Stock of the Corporation immediately prior to such event. In the event that the dividend or distribution referenced in subsection 3(c)(i)(A) of this Article IV(A)(II) is lawfully abandoned, the Series D Conversion Rate shall be appropriately readjusted.

(ii) ISSUANCE OF ADDITIONAL SHARES OF COMMON STOCK. In case the Corporation shall (except as hereinafter provided) issue any Additional Shares of Common Stock for a consideration that is either (a) less than the Current Market Price, or (b) less than the Conversion Price, then the Series D Conversion Rate in effect immediately prior to such event shall be adjusted upon each such issuance in accordance with the following formula:

(A) If issued for a consideration per share less than the Current Market Price per share of Common Stock:

where:

C' = the adjusted Series D Conversion Rate.

C = the current Series D Conversion Rate.

O = the number of shares of Common Stock outstanding immediately prior to the issuance of such Additional Shares of Common Stock. N = the number of Additional Shares of Common Stock to be issued.

P = the price per share of the Additional Shares of Common Stock.
M = the Current Market Price per share of Common Stock.

For the purposes of this Section 3(c)(ii), the date as of which the Current Market Price per share of Common Stock shall be computed shall be the earlier of (a) the date on which the consideration per share to be received pursuant to the terms of a firm contract entered into by the Corporation for the issuance of Additional Shares of Common Stock becomes determinable, or (b) the date of actual issuance of such Additional Shares of Common Stock.

(B) If issued for a consideration per share less

than the Conversion Price:

where:

C' = the adjusted Series D Conversion Rate.

C = the current Series D Conversion Rate.

0 = the number of shares of Common Stock outstanding immediately prior to the issuance of such Additional Shares of Common Stock.

N = the number of Additional Shares of Common Stock to be issued.

P = the price per share of the Additional Shares of Common Stock.

P'= the Conversion Price in effect immediately prior to the issuance of such Additional Shares of Common Stock.

If such Additional Shares of Common Stock shall be issued at a price per share less than both the Conversion Price and the Current Market Price per share of Common Stock, the Series D Conversion Rate shall be adjusted in that manner which will result in the greatest increase of the Series D Conversion Rate.

For purposes of this Section 3(c)(ii), the number of shares of Common Stock outstanding shall be deemed to include the maximum number of Additional Shares of Common Stock issuable pursuant to all outstanding warrants or other rights or necessary to effect the conversion or exchange of all such outstanding Convertible Securities of the Corporation. All such warrants, other rights or Convertible Securities shall be deemed to have been issued as of the earlier of (x) the date on which the Corporation shall enter a firm contract or commitment for the issuance of

such warrants, other rights or Convertible Securities or (y) the date of actual issuance of such warrants, other rights or Convertible Securities.

The provisions of this Section 3(c)(ii) shall not apply to any Additional Shares of Common Stock that are (a) issued pursuant to a written consent of a majority of the holders of the Series D Preferred to the effect that such shares shall not be subject to the antidilution provisions of Section 3(c)(ii), or (b) distributed to holders of Common Stock as a stock dividend or subdivision, for which an adjustment is provided under Section 3(c)(i) above. No adjustment of the per share Series D Conversion Rate shall be made under this Section 3(c)(ii) upon the issuance of any Additional Shares of Common Stock that are issued pursuant to the exercise of any warrants or other subscription or purchase rights or pursuant to the exercise of any conversion or exchange rights in any Convertible Securities, if any such adjustment shall previously have been made upon the issuance of such warrants or other rights or upon the issuance of such Convertible Securities (or upon the issuance of any warrants or other rights therefor) pursuant to Section 3(c)(iii) below.

(iii) ISSUANCE OF WARRANTS, OTHER RIGHTS OR CONVERTIBLE SECURITIES. In case the Corporation shall issue any warrants or other rights to subscribe for or purchase any Additional Shares of Common Stock or issue Convertible Securities and the consideration per share for which Additional Shares of Common Stock may at any time thereafter be issuable pursuant to such warrants or other rights or pursuant to the terms of such Convertible Securities shall be less than the Current Market Price or less than the Conversion Price, then the per share Series D Conversion Rate shall be adjusted in accordance with the following formula:

(A) If issuable for a consideration per share less than the Current Market Price per share of Common Stock:

where:

C' = the adjusted Series D Conversion Rate.

- C = the current Series D Conversion Rate.
- 0 = the number of shares of Common Stock outstanding immediately prior to the issuance of such warrants, other rights or Convertible Securities.
- N = the maximum number of Additional Shares of Common Stock issuable pursuant to such warrants or other rights or pursuant to the terms of the Convertible Securities then being issued.
- P = the offering price per share of the Additional Shares of Common Stock (which shall be deemed to be the minimum consideration per share received or receivable by the Corporation for the issuance of such Additional Shares of Common Stock pursuant to such warrants or other rights or pursuant to the terms of such Convertible Securities).
- M = the Current Market Price per share of Common Stock.
  - (B) If issuable for a consideration per share less than the Conversion Price then in effect:

$$C' = C X 0 + N$$
 $0 + N(P)$ 
 $P'$ 

where:

C' = the adjusted Series D Conversion Rate.

- C = the current Series D Conversion Rate.
- 0 = the number of shares of Common stock outstanding immediately prior to the issuance of such warrants, other rights or Convertible Securities.

- N = the number of Additional Shares of Common Stock issuable pursuant to such warrants or other rights or pursuant to the terms of the Convertible Securities then being issued.
- P = the offering price per share of the Additional Shares of Common Stock (which shall be deemed to be the minimum consideration per share received or receivable by the Corporation for the issuance of such Additional Shares of Common Stock pursuant to such warrants or other rights or pursuant to the terms of such Convertible Securities).
- P' = the Conversion Price in effect immediately prior to the issuance of such warrants, other rights or Convertible Securities.

For purposes of this Section 3(c)(iii), the number of shares of Common Stock outstanding shall be deemed to include the maximum number of Additional Shares of Common Stock issuable pursuant to all outstanding warrants or other rights or necessary to effect the conversion or exchange of all such outstanding Convertible Securities of the Corporation. All such warrants, other rights or Convertible Securities shall be deemed to have been issued as of, and the date as of which the Current Market Price per share of Common Stock shall be computed shall be, the earlier of (x) the date on which the Corporation shall enter a firm contract or commitment for the issuance of such warrants, other rights or Convertible Securities or (y) the date of actual issuance of such warrants, other rights or Convertible Securities.

No adjustment of the per share Series D Conversion Rate shall be made under this Section 3(c)(iii) upon the issuance of any Convertible Securities that are issued (a) pursuant to a written consent of a majority of the holders of the Series D Preferred to the effect that such shares shall not be subject to the antidilution provisions of this Section 3(c)(iii), or (b) pursuant to the exercise of any warrants or other subscription or purchase rights therefor if any such

adjustment shall previously have been made upon the issuance of such warrants or other rights pursuant to said paragraph.

(iv) OTHER PROVISIONS APPLICABLE TO ADJUSTMENTS UNDER THIS SECTION. The following provisions shall be applicable to the making of adjustments to the Series D Conversion Rate hereinbefore provided in this Section 3(c):

(A) COMPUTATION OF CONSIDERATION. To the extent that any Additional Shares of Common Stock or any Convertible Securities or any warrants or other rights to subscribe for or purchase any Additional Shares of Common Stock or any Convertible Securities shall be issued for a cash consideration, the consideration received by the Corporation therefor shall be deemed to be the amount of the cash received by the Corporation therefor, or, if such Additional Shares of Common Stock or Convertible Securities or warrants or other rights are offered by the Corporation for subscription, the subscription price, or, if such Additional Shares of Common Stock or Convertible Securities or warrants or other rights are sold to underwriters or dealers for public offering without a subscription offering, the initial public offering price, in any such case excluding any amounts paid or receivable for accrued interest or accrued dividends and without deduction of any compensation, discounts or expenses paid or incurred by the Corporation for and in the underwriting thereof or otherwise in connection with the issue thereof. To the extent that such issuance shall be for a consideration other than cash, then, except as herein otherwise expressly provided, the amount of such consideration shall be deemed to be the fair value of such consideration at the time of such issuance as determined in good faith by the Board of Directors of the Corporation. The consideration for any Additional Shares of Common Stock issuable pursuant to any warrants or other rights to subscribe for or purchase the same shall be the consideration received by the Corporation for issuing such warrants or other rights, plus the

additional consideration payable to the Corporation upon the exercise of such warrants or other rights. The consideration for any Additional Shares of Common Stock issuable pursuant to the terms of any Convertible Securities shall be the consideration received by the Corporation for issuing any warrants or other rights to subscribe for or purchase such Convertible Securities plus the consideration paid or payable to the Corporation in respect of the subscription for or purchase of such Convertible Securities, plus the additional consideration, if any, payable to the Corporation upon the exercise of the right of conversion or exchange in such Convertible Securities. In case of the issuance at any time of any Additional Shares of Common Stock or Convertible Securities in payment or satisfaction of any dividend upon any class of equity securities other than Common Stock, the Corporation shall be deemed to have received for such Additional Shares of Common Stock or Convertible Securities a consideration equal to the amount of such dividend so paid or satisfied.

(B) READJUSTMENT OF SERIES D CONVERSION RATE. Upon expiration of the right of conversion or exchange of any Convertible Securities, or upon the expiration of any rights, options or warrants, or upon any increase in the minimum consideration receivable by the Corporation for the issuance of Additional Shares of Common Stock pursuant to such Convertible Securities, rights, options or warrants, if any such Convertible Securities shall not have been converted or exchanged, or if any such rights, options or warrants shall not have been exercised, the number of shares of Common Stock deemed to be issued and outstanding by reason of the fact that they were issuable upon conversion or exchange of any such Convertible Securities or upon exercise of any such rights, options or warrants shall no longer be computed as set forth above, and the Series D Conversion Rate shall forthwith be readjusted and thereafter be the rate that it would have been (but reflecting any other adjustments in the Conversion Rate

made pursuant to the provisions of this Section 3(c) after the issuance of such Convertible Securities, rights, options or warrants) had the adjustment of the Series D Conversion Rate made upon the issuance or sale of such Convertible Securities or the issuance of such rights, options or warrants been made on the basis of the issuance only of the number of Additional Shares of Common Stock actually issued upon conversion or exchange of such Convertible Securities or upon the exercise of such rights, options or warrants, or upon the basis of such increased minimum consideration, as the case may be, and thereupon only the number of Additional Shares of Common Stock actually so issued or the number thereof issuable upon the basis of such increased minimum consideration shall be deemed to have been issued and only the consideration actually received or such increased minimum consideration receivable by the Corporation (computed as in Section 3(c)(iv)(A) of this Article IV(A)(II)) shall be deemed to have been received by the Corporation.

(v) EXTRAORDINARY DIVIDENDS. In case the Corporation shall declare, to the extent permitted by Section 4 hereof, a dividend upon its Common Stock (except a dividend payable in shares of Common Stock referred to in Section 3(c)(i) or a dividend payable in warrants, rights or Convertible Securities referred to in Section 3(c)(iii) of this Article IV(A)(II)) payable otherwise than out of earnings or surplus (other than revaluation surplus or paid-in surplus), the Corporation shall simultaneously declare a dividend, in cash, upon the Series D Preferred equal to, in the case of a cash dividend, the amount of the per share dividend declared upon the Common Stock times the Series D Conversion Rate then in effect and, in the case of a dividend payable other than in cash, the fair value of such dividend declared upon the Common Stock as determined by the Board of Directors of the Corporation. For the purposes of the foregoing, a dividend payable other than in cash shall be considered payable out of earnings or surplus (other

than revaluation surplus or paid-in surplus) only to the extent that such surplus or earnings are charged an amount equal to the fair value of such dividend as determined by the Board of Directors of the Corporation.

- (vi) MINIMUM ADJUSTMENT. Except as hereinafter provided, no adjustment of the Series D Conversion Rate hereunder shall be made if such adjustment results in a change of the Series D Conversion Rate then in effect of less than 1 percent thereof. Any adjustment of less than 1 percent of any Series D Conversion Rate shall be carried forward and shall be made at the time of and together with any subsequent adjustment that, together with adjustment or adjustments so carried forward, amounts to 1 percent of the Series D Conversion Rate then in effect or more. However, upon the conversion of any share of the Series D Preferred, the Corporation shall make all necessary adjustments not theretofore made to the Series D Conversion Rate up to and including the date upon which the conversion is exercised.
- (vii) NOTICE OF ADJUSTMENTS. Whenever the Series D Conversion Rate shall be adjusted pursuant to this Section 3(c), the Corporation shall promptly make a certificate signed by the President or a Vice President and by the Treasurer or an Assistant Treasurer setting forth, in reasonable detail, the event requiring the adjustment, the amount of the adjustment, the adjusted Series D Conversion Rate, and the method by which such adjustment was calculated (including a description of the basis on which the Board of Directors of the Corporation made any determination hereunder) and shall promptly cause copies of such certificate to be mailed (by first-class mail postage prepaid) to each of the holders of the Series D Preferred.
- (d) MERGERS, CONSOLIDATIONS, SALES. In the case of any consolidation or merger of the Corporation with another entity, or any reorganization or reclassification of the Common Stock or other equity securities of the Corporation (except a split-up or combination, provision for

which is made in Section 3(c)(i) of this Article IV(A)(II), then, as a condition of such consolidation, merger, reorganization or reclassification, lawful and adequate provision shall be made whereby the holders of the Series D Preferred shall thereafter have the right to receive, upon the basis and upon the terms and conditions specified herein and in lieu of the shares of Common Stock immediately theretofore receivable hereunder, such shares of stock, securities or assets as may (by virtue of such consolidation, merger, sale, reorganization or reclassification) be issued or payable with respect to or in exchange for a number of outstanding shares of Common Stock equal to the number of shares of Common Stock immediately theretofore so receivable hereunder had such consolidation, merger, sale, reorganization or reclassification not taken place, and in any such case appropriate provisions shall be made with respect to the rights and interests of the holders of the Series D Preferred to the end that the provisions hereof (including, without limitation, provisions for adjustment of the Series D Conversion Rate) shall thereafter be applicable as nearly as may be, in relation to any shares of stock, securities or assets thereafter deliverable upon conversion of such Series D Preferred.

(e) DISSOLUTION OR LIQUIDATION. In the event of any proposed distribution of the assets of the Corporation in dissolution or liquidation (except under circumstances when the foregoing Section 3(d) shall be applicable), the Corporation shall mail notice thereof to the holders of the Series D Preferred and shall make no distribution to shareholders until the expiration of 30 days from the date of mailing of the aforesaid notice, and in any such case, the holders of the Series D Preferred may exercise the conversion rights with respect to the Series D Preferred within 30 days from the date of mailing such notice and all rights herein granted not so exercised within such 30-day period shall thereafter become null and void.

- (f) NO IMPAIRMENT. The Corporation will not, by amendment of its Restated Certificate of Incorporation or through any reorganization, recapitalization, transfer of assets, consolidation, merger, dissolution, issue or sale of securities or any other voluntary action, avoid or seek to avoid the observance or performance of any of the terms to be observed or performed hereunder by the Corporation, but will at all times in good faith assist in the carrying out of all of the provisions of this Section 3 and in the taking of all such action as may be necessary or appropriate in order to protect the conversion rights of the holders of the Series D Preferred against impairment.
- (g) FULLY PAID STOCK; TAXES. The shares of stock represented by each and every certificate for its Common Stock to be delivered on the exercise of the conversion rights herein provided for shall, at the time of such delivery, be validly issued and outstanding and be fully paid and nonassessable. The Corporation shall pay when due and payable any and all federal and state taxes (other than income taxes) that may be payable in respect of the Series D Preferred or any Common Stock or certificates therefor upon the exercise of the conversion rights herein provided for pursuant to the provisions hereof. The Corporation shall not, however, be required to pay any tax that may be payable in respect of any transfer involved in the transfer and delivery of stock certificates in the name other than that of the holder of the Series D Preferred converted, and any such tax shall be paid by such holder at the time of presentation.
- (h) CLOSING OF TRANSFER BOOKS. The right to convert any of the Series D Preferred shall not be suspended during any period while the stock transfer books of the Corporation for its Common Stock may be closed. The Corporation shall not be required, however, to deliver certificates of its Common Stock upon such exercise while such books are duly closed for any purpose, but the Corporation may postpone the delivery of the certificates for such Common

Stock until the opening of such books, and they shall, in such case, be delivered forthwith upon the opening thereof or as soon as practicable thereafter.

- (i) RESERVATION OF COMMON STOCK. The Corporation will at all times reserve and keep available such number of authorized shares of its Common Stock, solely for the purpose of issue upon the conversion of the Series D Preferred as herein provided for, as shall then be issuable upon the conversion of all outstanding shares of Series D Preferred, and such shares of Common Stock shall at no time have a par value that is in excess of the Conversion Price then in effect.
- (j) DEFINITIONS. In addition to the terms defined elsewhere in this Section 3 of Article IV(A)(II), the following terms have the following respective meanings:

The term "Additional Shares of Common Stock" shall mean all shares of Common Stock issued by the Corporation on and after January 1, 1988, except:

- (i) Common Stock issued upon conversion of the Series A Preferred, Series B Preferred or Series D Preferred, or on conversion of stock that is excluded from the definition of "Additional Shares of Common Stock";
- (ii) Warrants to purchase 18,000 shares of Series A Preferred issued to partners of Lease for Lattice Partners and the shares to be issued on exercise of such warrants;
- (iii) 368,937 shares of Series A Preferred to be issued to Louisiana Pacific Corporation on exercise of a warrant;
- $\,$  (iv) Up to 35,380 shares of Preferred Stock to be issued to VLSI Technology, Inc.
- (v) Shares of Preferred Stock to be issued to National Semiconductor Corp. pursuant to its 1987 agreement with the Corporation;

(vi) 557,740 shares of Common Stock issued to employees of the Corporation pursuant to the Plan of Reorganization of the Corporation Pursuant to Title 11, Chapter 11 of the United States Code, as confirmed by the United States Bankruptcy Court for the District of Oregon on September 26, 1987 (the "Plan");

 $\mbox{(vii)}$  155,000 shares of Common Stock issued to directors of the Corporation;

(viii) Options to purchase 500,000 shares of Common Stock and the shares of common stock issued on exercise thereof pursuant to an employee stock option plan approved by the Board of Directors of the Corporation;

(ix) All shares of Common Stock, Series A Preferred and Series B Preferred issued to creditors who have claims against the Corporation under the Plan in satisfaction or settlement of such claims;

(x) 40,000 shares of Common Stock issued to Alioto & Alioto.

The term "Conversion Price" shall mean the price equal to \$2 divided by the Conversion Rate in effect at the date of determination thereof.

The term "Convertible Securities" shall mean evidences of indebtedness, shares of stock or other securities that are convertible into or exchangeable for Additional Shares of Common Stock, either immediately or upon the arrival of a specified date or the happening of a specified event.

The term "Current Market Price" per share of Common Stock for the purposes of any provision of this Section 3 of Article IV(A)(2) at the date of determination thereof, shall be deemed to be an amount equal to 95 percent of the average of the daily market prices for the period of 10 consecutive business days ending 5 business days prior to the date of issuance of warrants or other rights or Convertible Securities referred to in said Section 3(c)(iii) of this

Article IV(A)(II). The market price for each such business day shall be the last sale price on such day on the New York Stock Exchange, or, if the Common Stock is not then listed or admitted to trading on the New York Stock Exchange, on such other principal stock exchange on which such stock is then listed or admitted to trading, or, if no sale takes place on such day on any such exchange, the average of the closing bid and asked prices on such day as officially quoted on any such exchange, or, if the Common Stock is not then listed or admitted to trading on any stock exchange, the market price for each such business day shall be the average of the reported closing bid and asked prices on such day in the over-the-counter market, as furnished by the National Association of Securities Dealers Automatic Quotation system, or, if such price at the time is not available from such system, as furnished by any similar system then engaged in the business of reporting such prices and selected by the Corporation or, if there is no such system, as determined by resolution of the Board of Directors of the Corporation in good faith, provided that if such valuation by the Board of Directors is contested by a majority of the holders of the Series D Preferred within 20 days after receipt of written notice of the adoption of such resolution, then as determined by any member of the National Association of Securities Dealers, Inc. selected by the Corporation.

SECTION 4. RESTRICTIONS ON CORPORATE ACTION. So long as any shares of the Series D Preferred shall be outstanding and, in addition to any other approvals or consents required by law, without the consent of the holders of at least two-thirds of the shares of Series D Preferred at the time outstanding as of a record date fixed by the Board of Directors, given either by their affirmative vote at a special meeting called for that purpose or, if permitted by law, in writing, without a meeting, the Corporation shall not:

- (a) Notwithstanding anything in Section 3 of Article IV(A)(II) to the contrary, declare or pay a dividend upon its Common Stock (except a dividend payable in shares of Common Stock referred to in Section 3(c)(i) thereof or dividend payable in warrants, rights or Convertible Securities referred to in Section 3(c)(iii) thereof) payable otherwise than out of earnings or surplus (other than revaluation surplus or paid-in surplus); or
- (b) Alter or change the specific rights, preferences, or privileges of its Preferred Stock so as to have an adverse effect on the Series D Preferred; or
- $% \left( \mathbf{c}\right)$  (c) Increase the authorized number of shares of its Preferred Stock; or
- (d) Create any new class or series of shares having preferences over the Series D Preferred as to dividend, liquidation, redemption, sinking fund, or assets, including, without limitation, any class or series of stock that:
- (i) Could be redeemed in whole or in part at a price per share greater than the sum of twice the consideration per share received by the Corporation therefor plus any accrued and unpaid dividends thereon or would be entitled to payment of any redemption price prior to the holders of the Series D Preferred;
- (ii) Would be entitled upon liquidation to receive any amount per share in excess of the sum of the consideration per share received by the corporation therefor plus any accrued and unpaid dividends thereon or would be entitled to receive any liquidating distribution prior to the holders of the Series D Preferred;
- (iii) Would be entitled to payment of any dividend or distribution prior to the holders of the Series D Preferred or would be entitled to any dividend or distribution other than the right to receive a dividend or distribution at the same time as any dividend or distribution is paid with respect to the Series D Preferred or Common Stock and in an amount

that is not greater than the equivalent dividend or distribution paid with respect to the Series D Preferred, such equivalence to be determined (A) if said class or series of stock is convertible into Common Stock, based upon a rate per share calculated using the respective number of shares of Common Stock into which a share of said series or class of stock and a share of Series D Preferred may be converted or (B) if said class or series of stock is not so convertible, based upon the rate of such dividend or distribution as a percentage of the consideration received by the Corporation for said series or class of stock and the Series D Preferred, respectively; or

(iv) Would be convertible into or exchangeable for or carry any option or right to acquire a class or series of stock described in clause (i), (ii) or (iii) above; or

- (e) Merge or consolidate with or into any other corporation, except into or with a wholly owned subsidiary corporation with the requisite shareholder approval and except any merger or consolidation in which the corporation is a surviving corporation and the rights, preferences, privileges and restrictions of the Series D Preferred remain unchanged; or
- (f) Sell, convey, or otherwise dispose of all or substantially all of the property or business of the Corporation; or
- (g) Declare, pay or obligate itself to pay any dividend or make any other distributions (including payments upon redemption or repurchase) relative to any shares of its Common Stock or any other class or series of its capital stock other than the Series D Preferred except as permitted under Section 1 of this Article IV(A)(II) above.

SECTION 5. VOTING RIGHTS. The Corporation shall not issue any share of any class of nonvoting equity securities. The holders of Series D Preferred shall be entitled to notice of any stockholders meeting and to vote upon the election of directors or upon any matter submitted to a stockholder for a vote. Each holder of Series D Preferred issued and outstanding shall have that

number of votes equal to the number of shares of Common Stock into which such holder's shares of Series D Preferred could be converted and shall vote as one class with holders of the Common Stock upon any matter submitted to a vote of stockholders except as otherwise required by law.

## II. COMMON STOCK.

Subject to all of the rights and preferences of the Preferred Stock, the Common Stock shall have the following rights and limitations:

SECTION 1. DIVIDEND RIGHTS. The holders of Common Stock shall be entitled to receive, when, as and if declared by the Board of Directors, out of any assets of the Corporation legally available therefor, such dividends as may be declared from time to time by the Board of Directors. No dividend or other distribution (other than pro rata dividends or distributions payable solely in Common Stock) shall be paid at any time at which the total assets of the Corporation would be less than the sum of its total liabilities, plus that amount that would be needed if the Corporation were to be dissolved at the time of the dividend or distribution to satisfy the preferential rights upon dissolution of shareholders whose preferential rights are superior to those receiving the distribution.

SECTION 2. LIQUIDATION RIGHTS. After the payment or distribution to the holders of the Preferred Stock of their full preferential amounts has been made, all of the remaining assets of the Corporation available for distribution to its stockholders shall be distributed ratably to the holders of the outstanding Common Stock.

SECTION 3. VOTING RIGHTS. Holders of Common Stock shall be entitled to one vote per share on any matter submitted to the stockholders of the Corporation.

ARTICLE V

After the original or other Bylaws of the Corporation have been adopted, amended, or repealed, as the case may be, in accordance with the provisions of Section 109 of the General Corporation Law of the State of Delaware, and, after the Corporation has received any payment for any of its stock, the power to adopt, amend, or repeal the Bylaws of the Corporation may be exercised by the Board of Directors of the Corporation.

#### ARTICLE VI

No director of the Corporation shall be personally liable to the Corporation or its stockholders for monetary damages for conduct as a director; provided that this Article VI shall not eliminate the liability of a director for any act or omission for which such elimination of liability is not permitted under the Delaware General Corporation Law. No amendment to the Delaware General Corporation Law that further limits the acts or omissions for which elimination of liability is permitted shall affect the liability of a director for any act or omission which occurs prior to the effective date of such amendment.

In Witness Whereof, said Lattice Semiconductor Corporation has caused this Restated Certificate of Incorporation to be signed by C. Norman Winningstad, its Chairman and Chief Executive Officer, and attested by Raymond P. Capece, its Secretary, this 20th day of May, 1988.

Lattice Semiconductor Corporation

By /s/ C. NORMAN WINNINGSTAD

C. Norman Winningstad Chairman and Chief Executive Officer

## Attest:

By /s/ RAYMOND P. CAPECE Raymond P. Capece Secretary

CERTIFICATE OF THE DESIGNATIONS, POWERS, PREFERENCES AND RELATIVE, PARTICIPATING, OPTIONAL OR OTHER RIGHTS OF THE SERIES E PREFERRED STOCK OF LATTICE SEMICONDUCTOR CORPORATION

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# PURSUANT TO SECTION 151(g) OF THE GENERAL CORPORATION LAW OF THE STATE OF DELAWARE

We, C. Norman Winningstad, Chairman and Chief Executive Officer, and Raymond P. Capece, Secretary of Lattice Semiconductor Corporation, a corporation organized and existing under the laws of the State of Delaware, do hereby certify, under the seal of said corporation, as follows:

First: That pursuant to the provisions of the Certificate of Incorporation of said corporation, as amended, the Board of Directors of said corporation did adopt a resolution creating a series of Preferred Stock to be designated "Series E Preferred Stock," and that the number of shares of stock of such series authorized to be issued under said resolution is 1,250,000 shares.

Second: That said resolution was duly adopted by said Board of Directors at a meeting properly held and at which a quorum was present on the 16th day of May, 1988.

Third: That the resolution creating said series of Preferred Stock duly adopted by the Board of Directors as stated above reads as follows, to wit:

"WHEREAS, the Certificate of Incorporation of this corporation, as amended, authorized the issuance of Preferred Stock (\$.01 par value) of this corporation in series from time to time with such voting and other powers, designations, preferences, and rights and with the qualifications, limitations and restrictions granted to or imposed upon any series of Preferred Stock as shall be stated and expressed in a resolution or resolutions providing for the creation and issuance of such series adopted by the Board of Directors of this corporation; and

"WHEREAS, it is desired to create an additional series of Preferred Stock in accordance with the provisions of the Certificate of Incorporation of this corporation, as amended, and pursuant to the authority therein contained to designate such series and to fix the terms thereof;

"NOW, THEREFORE, Be it and it is hereby resolved by the Board of Directors of Lattice Semiconductor Corporation, a Delaware corporation (hereinafter in these resolutions referred to as the 'Corporation'), as follows, to wit:

"There is hereby created a new series of Preferred Stock of the Corporation, which shall be designated Series E Preferred Stock (hereinafter called the 'Series E Preferred') and shall consist of 1,250,000 shares. The powers, preferences and relative, participating, optional or other rights and qualifications, limitations or restrictions of shares of such series shall be as follows:

"SECTION 1. DIVIDEND RIGHTS. The holders of the Series E Preferred shall be entitled to receive, when, as and if declared by the Board of Directors, out of any assets of the Corporation legally available therefor, such dividends as may be declared from time to time by the Board of Directors in respect of such shares. The Corporation shall not at any time declare or pay any dividend on shares of Common Stock unless dividends shall simultaneously be declared and paid on each outstanding share of the Series E Preferred in an amount equal to the dividend per share then being declared or paid on Common Stock multiplied by the Series E Conversion Rate then in effect.

"SECTION 2. LIQUIDATION PREFERENCE. In the event of any liquidation, dissolution or winding up of the Corporation, either voluntary or involuntary, the holders of Series E Preferred shall be entitled to be paid out of the assets of the Corporation available for distribution to its stockholders, before any payment or declaration and setting apart for payment of any amount shall be made in respect of the Common Stock or stock of any other class or series ranking junior as to the assets in liquidation to the Series E Preferred, an amount equal to Four Dollars (\$4.00) per share of Series E Preferred (as adjusted to reflect stock splits, combinations, etc.) plus in each case an amount equal to any declared but unpaid dividends on such share of Series E Preferred, and no more. If upon liquidation, dissolution or winding up of the Corporation the assets of the Corporation available for distribution to its stockholders shall be insufficient to pay the holders of the Corporation's Preferred Stock the full amounts to which they respectively shall be entitled, the holders of the Series D Preferred Stock ("Series D Preferred") and of the Series E Preferred shall have priority over the holders of the Series A Preferred Stock ("Series A Preferred") and Series B Preferred Stock ("Series B Preferred") with respect to any distribution of assets until the holders of the Series D Preferred and of the Series E Preferred shall have received the full amounts to which they shall be entitled, and the holders of the Series E Preferred shall be entitled to equal priority with the holders of all other Preferred Stock not expressly made junior to the Series D Preferred and of the Series E Preferred on liquidation. If upon liquidation, dissolution or winding up of the Corporation the assets of the Corporation available for distribution to its stockholders shall be insufficient to pay the holders of the Corporation's Series D Preferred and of the Series E Preferred and the holders of any other Preferred Stock that is of equal priority on liquidation with the Series  ${\tt D}$ Preferred and the Series E Preferred the full amount to which they shall be entitled, the holders of the Corporation's Series E Preferred shall share ratably in any distribution of assets available for the holders of Series D Preferred and of the Series E Preferred and the holders of any other Preferred Stock that is of equal priority on liquidation with the Series D Preferred and the Series E Preferred according to the respective amounts that would be payable in respect of the shares held by them upon such distribution if all amounts payable on or with respect to said shares were paid in full.

"SECTION 3. CONVERSION. The holders of Series E Preferred shall have conversion rights as follows:

## "(a) RIGHT TO CONVERT.

"(i) OPTIONAL CONVERSION. Each share of the Series E Preferred shall be convertible, at the option of the holder thereof, at any time after the date of issuance of such

share, at the office of the Corporation or any transfer agent for the Preferred Stock, into such number of fully paid and nonassessable shares of Common Stock as is determined by the Series E Conversion Rate, determined as hereinafter provided, in effect at the time of conversion for such Series E Preferred. The conversion rate at which shares of Common Stock shall be delivered upon conversion without the payment of any additional consideration by the holder thereof (the 'Series E Conversion Rate') shall initially be one (1) share of Common Stock with respect to each share of Series E Preferred. Such initial Series E Conversion Rate with respect to the Series E Preferred shall be subject to adjustment as set forth in Section 3(c) hereof.

"(ii) AUTOMATIC CONVERSION. Each share of the Series E Preferred shall automatically be converted into shares of Common Stock at the Series E Conversion Rate at the time in effect for such Series E Preferred immediately upon the consummation of the Corporation's sale of its Common Stock in a bona fide, firm commitment underwritten public offering pursuant to an effective registration statement under the Securities Act of 1933, as amended, that results in aggregate cash proceeds (before underwriters' commissions and offering expenses) to the Corporation of \$5,000,000 or more.

"(iii) PROCEDURES FOR AUTOMATIC CONVERSION. Upon the occurrence of an event specified in Section 3(a)(ii) hereof, the outstanding shares of the Series E Preferred to be converted shall be converted automatically without any further action by the holders of such shares and whether or not the certificates representing such shares are surrendered to the Corporation or its transfer agent; provided, however, that the Corporation shall not be obligated to issue certificates evidencing the shares of Common Stock issuable upon such conversion unless certificates evidencing such shares of the Series E Preferred being converted are delivered to either the Corporation or any transfer agent, as hereinafter provided, or the holder notifies the Corporation or any transfer agent, as hereinafter provided, that such certificates have been lost, stolen, or destroyed and executes an agreement satisfactory to the Corporation to indemnify the Corporation from any loss incurred by it in connection therewith. Upon the automatic conversion of the Series E Preferred, the holders of such Series E Preferred shall surrender the certificates representing such shares at the office of the Corporation or of any transfer agent for the Common Stock. Thereupon, there shall be issued and delivered to such holder, promptly at such office and in his name as shown on such surrendered certificate or certificates, a certificate or certificates for the number of shares of Common Stock into which the shares of the Series E Preferred surrendered were convertible on the date on which such automatic conversion occurred.

"(b) MECHANICS OF OPTIONAL CONVERSION. Before any holder of Series E Preferred shall be entitled to convert the same into shares of Common Stock pursuant to Section 3(a)(i), he or she shall surrender the certificate or certificates therefor, duly endorsed, at the office of the Corporation or of any transfer agent for the Series E Preferred and shall give written notice by mail, postage prepaid, to the Corporation at its principal corporate office of the election to convert the same and shall state therein the name or names in which the certificate or certificates for shares of Common Stock are to be issued. The Corporation shall, as soon as practicable thereafter, issue and deliver at such office to such holder of Series E Preferred, or to the nominee or nominees of such holder, a certificate or certificates for the number of shares of Common Stock to which such holder shall be entitled as aforesaid. Such conversion shall be deemed to

have been made immediately prior to the close of business on the date of such surrender of the shares of Series E Preferred to be converted, and the person or person entitled to receive the shares of Common Stock issuable upon such conversion shall be treated for all purposes as the record holder or holders of such shares of Common Stock as of such date. If the conversion is in connection with an underwritten offer of securities registered pursuant to the Securities Act of 1933, the conversion may, at the option of any holder tendering the Series E Preferred for conversion, be conditioned upon the closing with the underwriter of the sale of securities pursuant to such offering, in which event the person(s) entitled to receive the Common Stock issuable upon such conversion of the Series E Preferred shall not be deemed to have converted such Series E Preferred until immediately prior to the closing of such sale of securities.

- "(c) CONVERSION RATE ADJUSTMENTS OF SERIES E PREFERRED. The Series E Conversion Rate shall be subject to adjustment from time to time as follows:
- "(i)  $\,$  STOCK DIVIDENDS, SUBDIVISIONS AND COMBINATIONS. In case after the date hereof the Corporation shall
- "(A) take a record of the holders of its Common Stock for the purpose of entitling them to receive a dividend payable in, or other distribution of, Common Stock, or
- "(B) subdivide its outstanding shares of Common Stock into a larger number of shares of Common Stock, or
- $\hbox{"(C)} \qquad \hbox{combine its outstanding shares of Common} \\ \hbox{Stock into a smaller number of shares of Common Stock,}$

then the per share Series E Conversion Rate shall be adjusted to that rate determined by multiplying the per share Series E Conversion Rate in effect immediately prior to such event by a fraction (i) the numerator of which shall be the total number of outstanding shares of Common Stock of the Corporation immediately after such event, and (ii) the denominator of which shall be the total number of outstanding shares of Common Stock of the Corporation immediately prior to such event. In the event that the dividend or distribution referenced in subsection 3(c)(i)(A) is lawfully abandoned the Series E Conversion Rate shall be appropriately readjusted.

"(ii) ISSUANCE OF ADDITIONAL SHARES OF COMMON STOCK. In case after the date hereof the Corporation shall (except as hereinafter provided) issue any Additional Shares of Common Stock for a consideration that is either (a) less than the Current Market Price, or (b) less than the Conversion Price, then the Series E Conversion Rate in effect immediately prior to such event shall be adjusted upon each such issuance in accordance with the following formula:

"(A) If issued for a consideration per share less than the Current Market Price per share of Common Stock:

## where:

C' = the adjusted Series E Conversion Rate.

- C = the current Series E Conversion Rate.
- = the number of shares of Common Stock outstanding immediately prior to the issuance of such Additional Shares of Common Stock.
- = the number of Additional Shares of Common Stock to be issued.
- = the price per share of the Additional Shares of Common Stock.
- M = the Current Market Price per share of Common Stock.

For the purposes of this Section 3(c)(ii), the date as of which the Current Market Price per share of Common Stock shall be computed shall be the earlier of (a) the date on which the consideration per share to be received pursuant to the terms of a firm contract entered into by the Corporation for the issuance of Additional Shares of Common Stock becomes determinable, or (b) the date of actual issuance of such Additional Shares of Common Stock.

"(B) If issued for a consideration per share less than the Conversion Price:

where:

- C' = the adjusted Series E Conversion Rate.
- C = the current Series E Conversion Rate.
- 0 = the number of shares of Common Stock outstanding immediately prior to the issuance of such Additional Shares of Common Stock.

  = the number of Additional Shares of Common Stock to be issued.
- = the price per share of the Additional Shares of Common Stock.
- P' = the Conversion Price in effect immediately prior to the issuance of such Additional Shares of Common Stock.

If such Additional Shares of Common Stock shall be issued at a price per share less than both the Conversion Price and the Current Market Price per share of Common Stock, the Series E Conversion Rate shall be adjusted in that manner which will result in the greatest increase of the Series E Conversion Rate.

"For purposes of this Section 3(c)(ii), the number of shares of Common Stock outstanding shall be deemed to include the maximum number of Additional Shares of Common

Stock issuable pursuant to all outstanding warrants or other rights or necessary to effect the conversion or exchange of all such outstanding Convertible Securities of the Corporation. All such warrants, other rights or Convertible Securities shall be deemed to have been issued as of the earlier of (x) the date on which the Corporation shall enter a firm contract or commitment for the issuance of such warrants, other rights or Convertible Securities or (y) the date of actual issuance of such warrants, other rights or Convertible Securities.

"The provisions of this Section 3(c)(ii) shall not apply to any Additional Shares of Common Stock that are (a) issued pursuant to a written consent of a majority of the holders of the Series E Preferred to the effect that such shares shall not be subject to the antidilution provisions of Section 3(c)(ii), or (b) distributed to holders of Common Stock as a stock dividend or subdivision, for which an adjustment is provided under Section 3(c)(i) above. No adjustment of the per share Series E Conversion Rate shall be made under this Section 3(c)(ii) upon the issuance of any Additional Shares of Common Stock that are issued pursuant to the exercise of any warrants or other subscription or purchase rights or pursuant to the exercise of any conversion or exchange rights in any Convertible Securities, if any such adjustment shall previously have been made upon the issuance of such warrants or other rights or upon the issuance of such Convertible Securities (or upon the issuance of any warrants or other rights therefor) pursuant to Section 3(c)(iii).

"(iii) ISSUANCE OF WARRANTS, OTHER RIGHTS OR CONVERTIBLE SECURITIES. In case the Corporation shall issue any warrants or other rights to subscribe for or purchase any Additional Shares of Common Stock or issue Convertible Securities and the consideration per share for which Additional Shares of Common Stock may at any time thereafter be issuable pursuant to such warrants or other rights or pursuant to the terms of such Convertible Securities shall be less than the Current Market Price or less than the Conversion Price, then the per share Series E Conversion Rate shall be adjusted in accordance with the following formula:

"(A) If issuable for a consideration per share less than the Current Market Price per share of Common Stock:

where:

- C' = the adjusted Series E Conversion Rate.
- C = the current Series E Conversion Rate.
- 0 = the number of shares of Common Stock outstanding immediately prior to the issuance of such warrants, other rights or Convertible Securities.

- N = the maximum number of Additional Shares of Common Stock issuable pursuant to such warrants or other rights or pursuant to the terms of the Convertible Securities then being issued.
- P = the offering price per share of the Additional Shares of Common Stock (which shall be deemed to be the minimum consideration per share received or receivable by the Corporation for the issuance of such Additional Shares of Common Stock pursuant to such warrants or other rights or pursuant to the terms of such Convertible Securities).
- M = the Current Market Price per share of Common Stock.

"(B) If Issuable for a consideration per share less than the Conversion Price then in effect:  $\ensuremath{\mathsf{E}}$ 

where:

- C' = the adjusted Series E Conversion Rate.
- C = the current Series E Conversion Rate.
- 0 = the number of shares of Common Stock outstanding immediately prior to the issuance of such warrants, other rights or Convertible Securities.
- N = the number of Additional Shares of Common Stock issuable pursuant to such warrants or other rights or pursuant to the terms of the Convertible Securities then being issued.
- P = the offering price per share of the Additional Shares of Common Stock (which shall be deemed to be the minimum consideration per share received or receivable by the Corporation for the issuance of such Additional Shares of Common Stock pursuant to such warrants or other rights or pursuant to the terms of such Convertible Securities).
- P' = the Conversion Price in effect immediately prior to the issuance of such warrants, other rights or Convertible Securities.

"For purposes of this Section 3(c)(iii), the number of shares of Common Stock outstanding shall be deemed to include the maximum number of Additional Shares of Common Stock issuable pursuant to all outstanding warrants or other rights or necessary to effect the conversion or exchange of all such outstanding Convertible Securities of the Corporation. All such warrants, other rights or Convertible Securities shall be deemed to have been issued as of, and the date as of which the Current Market Price per share of Common Stock shall be computed shall be, the earlier of (x) the date on which the Corporation shall enter a firm contract or commitment for the issuance of such warrants, other rights or Convertible Securities or (y) the date of actual issuance of such warrants, other rights or Convertible Securities.

"No adjustment of the per share Series E Conversion Rate shall be made under this Section 3(c)(iii) upon the issuance of any Convertible Securities that are issued (a) pursuant to a

written consent of a majority of the holders of the Series E Preferred to the effect that such shares shall not be subject to the antidilution provisions of Section 3(c)(iii), or (b) pursuant to the exercise of any warrants or other subscription or purchase rights therefor if any such adjustment shall previously have been made upon the issuance of such warrants or other rights pursuant to said paragraph.

"(iv) OTHER PROVISIONS APPLICABLE TO ADJUSTMENTS UNDER THIS SECTION. The following provisions shall be applicable to the making of adjustments to the Series E Conversion Rate hereinbefore provided in this Section 3(c):

"(A) COMPUTATION OF CONSIDERATION. To the extent that any Additional Shares of Common Stock or any Convertible Securities or any warrants or other rights to subscribe for or purchase any Additional Shares of Common Stock or any Convertible Securities shall be issued for a cash consideration, the consideration received by the Corporation therefor shall be deemed to be the amount of the cash received by the Corporation therefor, or, if such Additional Shares of Common Stock or Convertible Securities or warrants or other rights are offered by the Corporation for subscription, the subscription price, or, if such Additional Shares of Common Stock or Convertible Securities or warrants or other rights are sold to underwriters or dealers for public offering without a subscription offering, the initial public offering price, in any such case excluding any amounts paid or receivable for accrued interest or accrued dividends and without deduction of any compensation, discounts or expenses paid or incurred by the Corporation for and in the underwriting thereof or otherwise in connection with the issue thereof. To the extent that such issuance shall be for a consideration other than cash, then, except as herein otherwise expressly provided, the amount of such consideration shall be deemed to be the fair value of such consideration at the time of such issuance as determined in good faith by the Board of Directors of the Corporation. The consideration for any Additional Shares of Common Stock issuable pursuant to any warrants or other rights to subscribe for or purchase the same shall be the consideration received by the Corporation for issuing such warrants or other rights, plus the additional consideration payable to the Corporation upon the exercise of such warrants or other rights. The consideration for any Additional Shares of Common Stock issuable pursuant to the terms of any Convertible Securities shall be the consideration received by the Corporation for issuing any warrants or other rights to subscribe for or purchase such Convertible Securities plus the consideration paid or payable to the Corporation in respect of the subscription for or purchase of such Convertible Securities, plus the additional consideration, if any, payable to the Corporation upon the exercise of the right of conversion or exchange in such Convertible Securities. In case of the issuance at any time of any Additional Shares of Common Stock or Convertible Securities in payment or satisfaction of any dividend upon any class of equity securities other than Common Stock, the Corporation shall be deemed to have received for such Additional Shares of Common Stock or Convertible Securities a consideration equal to the amount of such dividend so paid or satisfied.

"(B) READJUSTMENT OF SERIES E CONVERSION RATE. Upon expiration of the right of conversion or exchange of any Convertible Securities, or upon the expiration of any rights, options or warrants, or upon any increase in the minimum consideration receivable by the Corporation for the issuance of Additional Shares of Common Stock pursuant to such

Convertible Securities, rights, options or warrants, if any such Convertible Securities shall not have been converted or exchanged, or if any such rights, options or warrants shall not have been exercised, the number of shares of Common Stock deemed to be issued and outstanding by reason of the fact that they were issuable upon conversion or exchange of any such Convertible Securities or upon exercise of any such rights, options or warrants shall no longer be computed as set forth above, and the Series E Conversion Rate shall forthwith be readjusted and thereafter be the rate that it would have been (but reflecting any other adjustments in the Series E Conversion Rate made pursuant to the provisions of this Section 3(c) after the issuance of such Convertible Securities, rights, options or warrants) had the adjustment of the Series E Conversion Rate made upon the issuance or sale of such Convertible Securities or the issuance of such rights, options or warrants been made on the basis of the issuance only of the number of Additional Shares of Common Stock actually issued upon conversion or exchange of such Convertible Securities or upon the exercise of such rights, options or warrants, or upon the basis of such increased minimum consideration, as the case may be, and thereupon only the number of Additional Shares of Common Stock actually so issued or the number thereof issuable upon the basis of such increased minimum consideration shall be deemed to have been issued and only the consideration actually received or such increased minimum consideration receivable by the Corporation (computed as in Section 3(c)(iv)(A)) shall be deemed to have been received by the Corporation.

"(v) EXTRAORDINARY DIVIDENDS. In case the Corporation shall declare, to the extent permitted by Section 4 hereof, a dividend upon its Common Stock (except a dividend payable in shares of Common Stock referred to in Section 3(c)(i) or a dividend payable in warrants, rights or Convertible Securities referred to in Section 3(c)(iii)) payable otherwise than out of earnings or surplus (other than revaluation surplus or paid-in surplus), the Corporation shall simultaneously declare a dividend, in cash, upon the Series E Preferred equal to, in the case of a cash dividend, the amount of the per share dividend declared upon the Common Stock times the Series E Conversion Rate then in effect and, in the case of a dividend payable other than in cash, the fair value of such dividend declared upon the Common Stock as determined by the Board of Directors of the Corporation. For the purposes of the foregoing, a dividend payable other than in cash shall be considered payable out of earnings or surplus (other than revaluation surplus or paid-in surplus) only to the extent that such surplus or earnings are charged an amount equal to the fair value of such dividend as determined by the Board of Directors of the Corporation.

"(vi) MINIMUM ADJUSTMENT. Except as hereinafter provided, no adjustment of the Series E Conversion Rate hereunder shall be made if such adjustment results in a change of the Series E Conversion Rate then in effect of less than 1 percent thereof. Any adjustment of less than 1 percent of any Series E Conversion Rate shall be carried forward and shall be made at the time of and together with any subsequent adjustment that, together with adjustment or adjustments so carried forward, amounts to 1 percent of the Series E Conversion Rate then in effect or more. However, upon the conversion of any share of the Series E Preferred, the Corporation shall make all necessary adjustments not theretofore made to the Series E Conversion Rate up to and including the date upon which the conversion is exercised.

"(vii) NOTICE OF ADJUSTMENTS. Whenever the Series E Conversion Rate shall be adjusted pursuant to this Section 3(c), the Corporation shall promptly make a certificate signed by the President or a Vice President and by the Treasurer or an Assistant Treasurer setting forth, in reasonable detail, the event requiring the adjustment, the amount of the adjustment, the adjusted Series E Conversion Rate, and the method by which such adjustment was calculated (including a description of the basis on which the Board of Directors of the Corporation made any determination hereunder) and shall promptly cause copies of such certificate to be mailed (by first-class mail postage prepaid) to each of the holders of the Series E Preferred.

- "(d) MERGERS, CONSOLIDATIONS, SALES. In the case of any consolidation or merger of the Corporation with another entity, or any reorganization or reclassification of the Common Stock or other equity securities of the Corporation (except a split-up or combination, provision for which is made in Section 3(c)(i) hereof), then, as a condition of such consolidation, merger, reorganization or reclassification, lawful and adequate provision shall be made whereby the holders of the Series E Preferred shall thereafter have the right to receive, upon the basis and upon the terms and conditions specified herein and in lieu of the shares of Common Stock immediately theretofore receivable hereunder, such shares of stock, securities or assets as may (by virtue of such consolidation, merger, sale, reorganization or reclassification) be issued or payable with respect to or in exchange for a number of outstanding shares of Common Stock equal to the number of shares of Common Stock immediately theretofore so receivable hereunder had such consolidation, merger, sale, reorganization or reclassification not taken place, and in any such case appropriate provisions shall be made with respect to the rights and interests of the holders of the Series E Preferred to the end that the provisions hereof (including, without limitation, provisions for adjustment of the Series E Conversion Rate) shall thereafter be applicable as nearly as may be, in relation to any shares of stock, securities or assets thereafter deliverable upon conversion of such Series E Preferred.
- "(e) DISSOLUTION OR LIQUIDATION. In the event of any proposed distribution of the assets of the Corporation in dissolution or liquidation (except under circumstances when the foregoing Section 3(d) shall be applicable), the Corporation shall mail notice thereof to the holders of the Series E Preferred and shall make no distribution to shareholders until the expiration of 30 days from the date of mailing of the aforesaid notice, and in any such case, the holders of the Series E Preferred may exercise the conversion rights with respect to the Series E Preferred within 30 days from the date of mailing such notice and all rights herein granted not so exercised within such 30-day period shall thereafter become null and void.
- "(f) NO IMPAIRMENT. The Corporation will not, by amendment of its Certificate of Incorporation or through any reorganization, recapitalization, transfer of assets, consolidation, merger, dissolution, issue or sale of securities or any other voluntary action, avoid or seek to avoid the observance or performance of any of the terms to be observed or performed hereunder by the Corporation, but will at all times in good faith assist in the carrying out of all of the provisions of this Section 3 and in the taking of all such action as may be necessary or

appropriate in order to protect the conversion rights of the holders of the Series E Preferred against impairment.

- "(g) FULLY PAID STOCK; TAXES. The shares of stock represented by each and every certificate for its Common Stock to be delivered on the exercise of the conversion rights herein provided for shall, at the time of such delivery, be validly issued and outstanding and be fully paid and nonassessable. The Corporation shall pay when due and payable any and all federal and state taxes (other than income taxes) that may be payable in respect of the Series E Preferred or any Common Stock or certificates therefor upon the exercise of the conversion rights herein provided for pursuant to the provisions hereof. The Corporation shall not, however, be required to pay any tax that may be payable in respect of any transfer involved in the transfer and delivery of stock certificates in the name other than that of the holder of the Series E Preferred converted, and any such tax shall be paid by such holder at the time of presentation.
- "(h) CLOSING OF TRANSFER BOOKS. The right to convert any of the Series E Preferred shall not be suspended during any period while the stock transfer books of the Corporation for its Common Stock may be closed. The Corporation shall not be required, however, to deliver certificates of its Common Stock upon such exercise while such books are duly closed for any purpose, but the Corporation may postpone the delivery of the certificates for such Common Stock until the opening of such books, and they shall, in such case, be delivered forthwith upon the opening thereafter as soon as practicable thereafter.
- "(i) RESERVATION OF COMMON STOCK. The Corporation will at all times reserve and keep available such number of authorized shares of its Common Stock, solely for the purpose of issue upon the conversion of the Series E Preferred as herein provided for, as shall then be issuable upon the conversion of all outstanding shares of Series E Preferred, and such shares of Common Stock shall at no time have a par value that is in excess of the Conversion Price then in effect.
- "(j) DEFINITIONS. In addition to the terms defined elsewhere in this Section 3, the following terms have the following respective meanings:
- "The term 'Additional Shares of Common Stock' shall mean all shares of Common Stock issued by the Corporation on and after May 1, 1988, except:
- "(i) Common Stock issued upon conversion of the Series A Preferred, Series B Preferred, Series D Preferred or Series E Preferred or on conversion of stock that is excluded from the definition of 'Additional Shares of Common Stock';"
- "(ii) Shares to be issued on exercise of warrants to purchase 18,000 shares of Series A Preferred issued to partners of Lease for Lattice Partners;"
- "(iii) Up to 35,380 shares of Preferred Stock to be issued to VLSI Technology, Inc."  $\,$

"(iv) Shares of Preferred Stock to be issued to National Semiconductor Corp. pursuant to its 1987 agreement with the Corporation;"

"(v) Options to purchase 500,000 shares of Common Stock and the shares of common stock issued on exercise thereof pursuant to an employee stock option plan approved by the Board of Directors of the Corporation;"

"(vi) All shares of Common Stock, Series A Preferred and Series B Preferred issued to creditors who have claims against the Corporation under the Plan in satisfaction or settlement of such claims;"

"The term 'Conversion Price' shall mean the price equal to \$4 divided by the Series E Conversion Rate in effect at the date of determination thereof.

"The term 'Convertible Securities' shall mean evidences of indebtedness, shares of stock or other securities that are convertible into or exchangeable for Additional Shares of Common Stock, either immediately or upon the arrival of a specified date or the happening of a specified event.

"The term 'Current Market Price' per share of Common Stock for the purposes of any provision of this Section 3 at the date of determination thereof, shall be deemed to be an amount equal to 95 percent of the average of the daily market prices for the period of 10 consecutive business days ending 5 business days prior to the date of issuance of warrants or other rights or Convertible Securities referred to in said Section 3(c)(iii). The market price for each such business day shall be the last sale price on such day on the New York Stock Exchange, or, if the Common Stock is not then listed or admitted to trading on the New York Stock Exchange, on such other principal stock exchange on which such stock is then listed or admitted to trading, or, if no sale takes place on such day on any such exchange, the average of the closing bid and asked prices on such day as officially quoted on any such exchange, or, if the Common Stock is not then listed or admitted to trading on any stock exchange, the market price for each such business day shall be the average of the reported closing bid and asked prices on such day in the over-the-counter market, as furnished by the National Association of Securities Dealers Automatic Quotation system, or, if such price at the time is not available from such system, as furnished by any similar system then engaged in the business of reporting such prices and selected by the Corporation or, if there is no such system, as determined by resolution of the Board of Directors of the Corporation in good faith, provided that if such valuation by the Board of Directors is contested by a majority of the holders of the Series E Preferred within 20 days after receipt of written notice of the adoption of such resolution, then as determined by any member of the National Association of Securities Dealers, Inc. selected by the Corporation.

"SECTION 4. RESTRICTIONS ON CORPORATE ACTION. So long as any shares of the Series E Preferred shall be outstanding and, in addition to any other approvals or consents required by law, without the consent of the holders of at least two-thirds of the shares of Series E Preferred at the time outstanding as of a record date fixed by the Board of Directors, given either by their affirmative vote at a special meeting called for that purpose or, if permitted by law, in writing, without a meeting, the Corporation shall not:

- "(a) Notwithstanding anything in Section 3 to the contrary declare or pay a dividend upon its Common Stock (except a dividend payable in shares of Common Stock referred to in Section 3(c)(i) or dividend payable in warrants, rights or Convertible Securities referred to in Section 3(c)(iii)) payable otherwise than out of earnings or surplus (other than revaluation surplus or paid-surplus); or
- "(b) Alter or change the specific rights, preferences, or privileges of its Preferred Stock so as to have an adverse effect on the Series E Preferred; or
- "(c) Increase the authorized number of shares of its Preferred Stock; or  $\ensuremath{\mathsf{C}}$
- "(d) Create any new class or series of shares having preferences over the Series E Preferred as to dividend, liquidation, redemption, sinking fund, or assets, including, without limitation, any class or series of stock that:
- "(i) Could be redeemed in whole or in part at a price per share greater than the sum of twice the consideration per share received by the Corporation therefor plus any accrued and unpaid dividends thereon or would be entitled to payment of any redemption price prior to the holders of the Series E Preferred;
- "(ii) Would be entitled upon liquidation to receive any amount per share in excess of the sum of the consideration per share received by the corporation therefor plus any accrued and unpaid dividends thereon or would be entitled to receive any liquidating distribution prior to the holders of the Series E Preferred;
- "(iii) Would be entitled to payment of any dividend or distribution prior to the holders of the Series E Preferred or would be entitled to any dividend or distribution other than the right to receive a dividend or distribution at the same time as any dividend or distribution is paid with respect to the Series E Preferred or Common Stock and in an amount that is not greater than the equivalent dividend or distribution paid with respect to the Series E Preferred, such equivalence to be determined (A) if said class or series of stock is convertible into Common Stock, based upon a rate per share calculated using the respective number of shares of Common Stock into which a share of said series or class of stock and a share of Series E Preferred may be converted or (B) if said class or series of stock is not so convertible, based upon the rate of such dividend or distribution as a percentage of the consideration received by the Corporation for said series or class of stock and the Series E Preferred, respectively; or
- "(iv) Would be convertible into or exchangeable for or carry any option or right to acquire a class or series of stock described in clause (i), (ii) or (iii) above; or
- "(e) Merge or consolidate with or into any other corporation, except into or with a wholly owned subsidiary corporation with the requisite shareholder approval and except any merger or consolidation in which the corporation is a surviving corporation and the rights, preferences, privileges and restrictions of the Series E Preferred remain unchanged; or

- "(f) Sell, convey, or otherwise dispose of all or substantially all of the property or business of the Corporation; or
- "(g) Declare, pay or obligate itself to pay any dividend or make any other distributions (including payments upon redemption or repurchase) relative to any shares of its Common Stock or any other class or series of its capital stock other than the Series D Preferred or the Series E Preferred except as permitted under Section 1 above.

"SECTION 5. VOTING RIGHTS. The Corporation shall not issue any share of any class of nonvoting equity securities. The holders of Series E Preferred shall be entitled to notice of any stockholders meeting and to vote upon the election of directors or upon any matter submitted to a stockholder for a vote. Each holder of Series E Preferred issued and outstanding shall have that number of votes equal to the number of shares of Common Stock into which such holder's shares of Series E Preferred could be converted and shall vote as one class with holders of the Common Stock upon any matter submitted to a vote of stockholders except as otherwise required by law."

In Witness Whereof, we, C. Norman Winningstad, Chairman and Chief Executive Officer, and Raymond P. Capece, Secretary of Lattice Semiconductor Corporation, have signed this certificate and caused the corporate seal of said corporation to be hereunto affixed this 3rd day of June, 1988.

/s/ C. Norman Winningstad

C. Norman Winningstad Chairman and Chief Executive Officer

Attest: /s/ Raymond C. Capece

Raymond C. Capece, Secretary

#### CERTIFICATE OF AMENDMENT TO

## CERTIFICATE OF INCORPORATION

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#### LATTICE SEMICONDUCTOR CORPORATION

Lattice Semiconductor Corporation, a Delaware corporation, certifies that the following amendments to the Certificate of Incorporation of the corporation have been duly adopted in accordance with the provisions of Section 242 of the General Corporation Law of the State of Delaware:

A. New Article VII is added to the Certificate of Incorporation to read as follows:

## ARTICLE VII

- 1. NUMBER AND TENURE OF DIRECTORS. The number of directors of the corporation shall be as set forth in the bylaws. The directors shall be divided into three classes, as nearly equal in number as possible, with the term of office of the first class ("Class I") to expire at the 1990 annual meeting of shareholders, the term of office of the second class ("Class II") to expire at the 1991 annual meeting of shareholders and the term of office of the third class ("Class III") to expire at the 1992 annual meeting of shareholders. At each annual meeting of shareholders following such initial classification and election, directors elected to succeed those directors whose terms expire shall be elected to serve three-year terms and until their successors are elected and qualified, so that the term of one class of directors will expire each year. When the number of directors is changed, any newly created directorships, or any decrease in directorships, shall be so apportioned among the classes so as to make all classes as nearly equal as possible, provided that no decrease in the number of directors constituting the Board of Directors shall shorten the term of any incumbent director.
- 2. This Article VII may not be amended, altered, changed or repealed in any respect unless such action is approved by the affirmative vote of the holders of not less than 66 2/3 percent of the shares then entitled to vote at an election of directors.
- B. New Article VIII is added to the Certificate of Incorporation to read as follows:

## ARTICLE VIII

- 1. Whether or not a vote of shareholders is otherwise required, the affirmative vote of the holders of not less than 66 2/3 percent of the outstanding shares of "Voting Stock" (as hereinafter defined) of the corporation shall be required for the approval or authorization of any "Business Combination" (as hereinafter defined) with any Substantial Shareholder (as hereinafter defined) or any Business Combination in which a Substantial Shareholder has an interest (except proportionately as a shareholder of the corporation); provided, however, that the 66 2/3 percent voting requirement shall not be applicable if either:
  - (i) The "Continuing Directors" (as hereinafter defined) of the corporation by at least a two-thirds vote (a) have expressly approved in advance the acquisition of the outstanding shares of Voting Stock that caused such Substantial Shareholder to become a Substantial Shareholder, or (b) have expressly approved such Business Combination; or
  - (ii) The cash or fair market value (as determined by at least a majority of the Continuing Directors) of the property, securities or other consideration to be received per share by holders of Voting Stock of the corporation (other than the Substantial Shareholder) in the Business Combination is not less than the "Highest Per Share Price" or the "Highest Equivalent Price" (as those terms are hereinafter defined) paid by the Substantial Shareholder involved in the Business Combination in acquiring any of its holdings of the corporation's Voting Stock acquired in the last two years.
- 2. For purposes of this Article VIII:
  - (i) The Term "Business Combination" shall include, without limitation, (a) any merger, exchange or consolidation of the corporation, or any entity controlled by or under common control with the corporation, with or into any Substantial Shareholder, or any entity controlled by or under common control with such Substantial Shareholder, (b) any merger, exchange or consolidation of a Substantial Shareholder, or any entity controlled by or under common control with such Substantial Shareholder, with or into the corporation or any entity controlled by or under common control with the corporation, (c) any sale, lease, exchange, transfer or other disposition (in one transaction or a series of transactions), including without limitation a mortgage or any other security device, of all or any Substantial Part (as hereinafter defined) of the property and assets of the corporation, or any entity controlled by or under common control with the corporation, to a Substantial Shareholder, or any entity controlled by or under common control with such Substantial Shareholder, (d) any purchase, lease, exchange, transfer or other acquisition (in one transaction or a series of transactions), including without limitation a mortgage or any other security device, of all or any Substantial Part of the property and assets of a Substantial

Shareholder or any entity controlled by or under common control with such Substantial Shareholder, by the corporation, or any entity controlled by or under common control with the corporation, (e) any recapitalization of the corporation that would have the effect of increasing the voting power of a Substantial Shareholder, (f) the issuance, sale, exchange or other disposition of any securities of the corporation, or of any entity controlled by or under common control with the corporation, by the corporation or by any entity controlled by or under common control with the corporation, (g) any liquidation, spinoff, splitoff, split-up or dissolution of the corporation, and (h) any agreement, contract or other arrangement providing for any of the transactions described in this definition of Business Combination.

- (ii) The term "Substantial Shareholder" shall mean and include (a) any "Person" (as that term is defined in Section 2(2) of the Securities Act of 1933, as in effect on October 20, 1989) which, together with its "Affiliates" (as hereinafter defined) and "Associates" (as hereinafter defined), "Beneficially Owns" (as defined in Rule 13d-3 of the General Rules and Regulations, under the Securities Exchange Act of 1934 as in effect at October 20, 1989) in the aggregate 15 percent or more of the outstanding Voting Stock of the corporation, and (b) any Affiliate or Associate (other than the corporation or a wholly owned subsidiary of the corporation) of any such Person. Two or more Persons acting in concert for the purpose of acquiring, holding or disposing of Voting Stock of the Corporation shall be deemed a "Person."
- (iii) Without limitation, any share of Voting Stock of the corporation that any Substantial Shareholder has the right to acquire at any time, notwithstanding that Rule 13d-3 deems such shares to be beneficially owned only if such right may be exercised within 60 days) pursuant to any agreement, contract, arrangement or understanding, or upon exercise of conversion rights, warrants or options, or otherwise, shall be deemed to be Beneficially Owned by such Substantial Shareholder and to be outstanding for the purposes of clause (ii) above.
- (iv) For the purposes of subparagraph (ii) of paragraph 1 of this Article VIII, the term "other consideration to be received" shall include, without limitation, Common Stock or other capital stock of the corporation retained by its existing shareholders, other than any Substantial Shareholder or other Person who is a party to such Business Combination, in the event of a Business Combination in which the corporation is the survivor.
- (v) The term "Voting Stock" shall mean all of the outstanding shares of capital stock of the corporation entitled to vote generally in the election of directors, considered as one class, and each reference to a proportion of shares of Voting Stock shall refer to such proportion of the votes entitled to be cast by such shares.

(vi) The term "Continuing Director" shall mean a director of the corporation who served as a director on October 20, 1989 or who was a member of the board of directors of the corporation immediately prior to the time that the Substantial Shareholder involved in a Business Combination became a Substantial Shareholder.

(vii) A Substantial Shareholder shall be deemed to have acquired a share of the Voting Stock of the corporation at the time when such Substantial Shareholder became the Beneficial Owner thereof. With respect to the shares owned by Affiliates, Associates or other Persons whose ownership is attributed to a Substantial Shareholder under the foregoing definition of Substantial Shareholder, if the price paid by such substantial shareholder for such shares is not determinable by a majority of the Continuing Directors, the price so paid shall be deemed to be the higher of (a) the price paid upon the acquisition thereof by the Affiliate, Associate or other Person or (b) the market price of the shares in question at the time when such Substantial Shareholder became the Beneficial Owner thereof.

(viii) The terms "Highest Per Share Price" and "Highest Equivalent Price" as used in this Article VIII shall mean the following: If there is only one class of capital stock of the corporation issued and outstanding, the Highest Per Share Price shall mean the highest price that can be determined to have been paid at any time by the Substantial Shareholder involved in the Business Combination for any share or shares of that class of capital stock. If there is more than one class of capital stock of the corporation issued and outstanding, the Highest Equivalent Price shall mean, with respect to each class and series of capital stock of the corporation, the amount determined by a majority of the Continuing Directors, on whatever basis they believe is appropriate, to be the highest per share price equivalent to the highest price that can be determined to have been paid at any time by the Substantial Shareholder for any share or shares of any class or series of capital stock of the Corporation. The Highest Per Share Price and the Highest Equivalent Price shall include any brokerage commissions, transfer taxes and soliciting dealers' fees paid by a Substantial Shareholder with respect to the shares of capital stock of the corporation acquired by such Substantial Shareholder. In the case of any Business Combination with a Substantial Shareholder, the Continuing Directors shall determine the Highest Per Share Price or the Highest Equivalent Price for each class and series of the capital stock of the corporation. The Highest Per share Price and Highest Equivalent Price shall be appropriately adjusted to reflect the occurrence of any reclassification, recapitalization, stock split, reverse stock split or other readjustment in the number of outstanding shares of capital stock of the corporation, or the declaration of a stock dividend thereon, between the last date upon which the Substantial Shareholder paid the Highest Per Share Price or Highest Equivalent Price and the effective date of the merger

consolidation or the date of distribution to shareholders of the Corporation of the proceeds from the sale of all or substantially all of the assets of the corporation.

- (ix) The term "Substantial Part" shall mean 15 percent or more of the fair market value of the total assets of the Person in question, as reflected on the most recent balance sheet of such Person existing at the time the shareholders of the Corporation would be required to approve or authorize the Business Combination involving the assets constituting any such Substantial Part.
- (x) The term "Affiliate," used to indicate a relationship with a specified Person, shall mean a Person that directly, or indirectly through one or more intermediaries, controls, or is controlled by, or is under common control with, the Person specified.
- (xi) The term "Associate," used to indicate a relationship with a specified Person, shall mean (a) any entity of which such specified Person is an officer or partner or is, directly or indirectly, the beneficial owner of 10 percent or more of any class of equity securities, (b) any trust or other estate in which such specified Person has a substantial beneficial interest or as to which such specified Person serves as trustee or in a similar fiduciary capacity, (c) any relative or spouse of such specified Person, or any relative of such spouse, who has the same home as such specified Person or who is a director or officer of the corporation or any of its subsidiaries, and (d) any Person who is a director or officer of such specified entity or any of its parents or subsidiaries (other than the corporation or any entity controlled by or under common control with the corporation).
- 3. For the purposes of this Article VIII, a majority of the Continuing Directors shall have the power to make a good faith determination, on the basis of information known to them, of: (i) the number of shares of Voting Stock that any Person Beneficially Owns, (ii) whether a Person is an Affiliate or Associate of another, (ii) whether a Person has an agreement, contract, arrangement or understanding with another as to the matters referred to in subparagraph (2)(1)(h) or (2)(iii) hereof, (iv) whether any Business Combination is one in which a Substantial Shareholder has an interest (except proportionately as a shareholder of the corporation), and (vi) such other matters with respect to which a determination is required under this Article VIII.
- 4. The provisions set forth in this Article VIII may not be amended, altered, changed or repealed in any respect unless such action is approved by the affirmative vote of the holders of not less than a majority of the outstanding shares of Voting Stock (as defined in this Article VIII) of the corporation at a meeting of the shareholders duly called for the consideration of such amendment, alteration, change or repeal; provided, however, that if there is a Substantial Shareholder who is not a Continuing Director, such action must also be approved by the affirmative vote of the holders of not less than 66 2/3 percent of the outstanding shares of Voting Stock.

IN WITNESS WHEREOF, Lattice Semiconductor Corporation has caused this certificate to be signed by its President and attested to by its Secretary on October 25, 1989.

LATTICE SEMICONDUCTOR CORPORATION

ATTEST:

By /s/ Jan Johannessen
Jan Johannessen, Secretary

#### CERTTETCATE

#### OF LATTICE SEMICONDUCTOR CORPORATION

ELIMINATING MATTERS SET FORTH IN
CERTIFICATES OF DESIGNATION
WITH RESPECT TO
SERIES A, SERIES B, SERIES D AND SERIES E

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PURSUANT TO SECTION 151 (g) OF THE GENERAL CORPORATION LAW OF THE STATE OF DELAWARE

We, Cyrus Y. Tsui, President and Chief Executive Officer, and Jan Johannessen, Secretary of Lattice Semiconductor Corporation, a corporation organized and existing under the laws of the state of Delaware (the "Company"), do hereby certify under the seal of said corporation, as follows:

On November 20, 1989 the Board of Directors of the Company approved the following resolutions relating to shares of preferred stock of the corporation authorized under previously filed Certificates of Designation for Series A, Series B, Series D and Series E Preferred Stock:

WHEREAS, under the terms of the Company's Certificate of Incorporation, all of the Company's issued and outstanding shares of Series A, Series B, Series D and Series E Preferred Stock were automatically converted to Common Stock upon the closing of the Company's initial public offering on November 16, 1989, and no shares of Preferred Stock of any class or series remain outstanding; and

WHEREAS, the Company will not issue any shares of its Preferred Stock subject to the Certificates of Designation previously filed with respect to the Series A, Series B, Series D or Series E Preferred Stock (or the provisions of such previously filed Certificates of Designation that have been incorporated into the Company's Restated Certificate of Incorporation); it is hereby

RESOLVED, that the officers of the Company are hereby authorized and directed to execute and file in the Company's name and on its behalf with the Delaware Secretary of State a certificate setting forth the statements in this and the two preceding paragraphs for the purpose of eliminating from the Company's Certificate of Incorporation all matters with respect to the Series A, Series B, Series D or Series E Preferred Stock and restoring such stock to the status of authorized and unissued shares without serial designation.

IN WITNESS WHEREOF, we, Cyrus Y. Tsui, President and Chief Executive Officer, and Jan Johannessen, Secretary of Lattice Semiconductor Corporation, have signed this Certificate and caused the corporate of seal of said corporation to be hereunto affixed this 15th day of February, 1990.

Attest: /s/ Jan Johannessen

Jan Johannessen, Secretary

#### EXHIBIT A

# CERTIFICATE OF DESIGNATION OF RIGHTS, PREFERENCES AND PRIVILEGES OF

#### SERIES A PARTICIPATING PREFERRED STOCK

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#### LATTICE SEMICONDUCTOR CORPORATION

Pursuant to Section 151 of the General Corporation Law of the State of Delaware

We, Cyrus Y. Tsui and Jan Johannessen, the President and the Secretary, respectively, of Lattice Semiconductor Corporation, a corporation organized and existing under the General Corporation Law of the State of Delaware, in accordance with the provisions of Section 103 thereof, DO HEREBY CERTIFY:

That pursuant to the authority conferred upon the Board of Directors by the Restated Certificate of Incorporation of the said Corporation, the said Board of Directors on September 11, 1991 adopted the following resolution creating a series of 100,000 shares of Preferred Stock designated as Series A Participating Preferred Stock:

"RESOLVED, that pursuant to the authority vested in the Board of Directors of the corporation by the Restated Certificate of Incorporation, the Board of Directors does hereby provide for the issue of a series of Preferred Stock, \$0.01 par value, of the Corporation, to be designated "Series A Participating Preferred Stock", initially consisting of 100,000 shares and to the extent that the designations, powers, preferences and relative and other special rights and the qualifications, limitations and restrictions of the Series A Participating Preferred Stock are not stated and expressed in the Restated Certificate of Incorporation, does hereby fix and herein state and express such designations, powers, preferences and relative and other special rights and the qualifications, limitations and restrictions thereof, as follows (all terms used herein which are defined in the Restated Certificate of Incorporation shall be deemed to have the meanings provided therein):

Section 1. DESIGNATION AND AMOUNT. The shares of such series shall be designated as "Series A Participating Preferred Stock", par value \$0.01 per share, and the number of shares constituting such series shall be 100,000.

## Section 2. DIVIDENDS AND DISTRIBUTIONS.

(A) Subject to the prior and superior right of the holders of any shares of any series of Preferred Stock ranking prior and superior to the shares of Series A Participating Preferred Stock with respect to dividends, the holders of shares of Series A Participating

Preferred Stock shall be entitled to receive when, as and if declared by the Board of Directors out of funds legally available for the purpose, quarterly dividends payable in cash on the last day of September, December, March and June in each year (each such date being referred to herein as a "Quarterly Dividend Payment Date"), commencing on the first Quarterly Dividend Payment Date after the first issuance of a share or fraction of a share of Series A Participating Preferred Stock, in an amount per share (rounded to the nearest cent) equal to, subject to the provision for adjustment hereinafter set forth, 1,000 times the aggregate per share amount of all cash dividends, and 1,000 times the aggregate per share amount (payable in kind) of all non-cash dividends or other distributions other than a dividend payable in shares of Common Stock or a subdivision of the outstanding shares of common Stock (by reclassification or otherwise), declared on the Common Stock of the Corporation (the "Common Stock") since the immediately preceding Quarterly Dividend Payment Date, or, with respect to the first Quarterly Dividend Payment Date, since the first issuance of any share or fraction of a share of Series A Participating Preferred Stock. In the event the Corporation shall at any time after September 11, 1991 (the "Rights Declaration Date") (i) declare any dividend on Common Stock payable in shares of Common Stock, (ii) subdivide the outstanding Common Stock, or (iii) combine the outstanding Common Stock into a smaller number of shares, then in each such case the amount to which holders of shares of Series A Participating Preferred Stock were entitled immediately prior to such event under the preceding sentence shall be adjusted by multiplying such amount by a fraction, the numerator of which is the number of shares of Common Stock outstanding immediately after such event and the denominator of which is the number of shares of Common Stock that were outstanding immediately prior to such event.

(B) The Corporation shall declare a dividend or distribution on the Series A Participating Preferred Stock as provided in paragraph (A) above immediately after it declares a dividend or distribution on the Common Stock (other than a dividend payable in shares of Common Stock).

(C) Dividends shall begin to accrue and be cumulative on outstanding shares of Series A Participating Preferred Stock from the Quarterly Dividend Payment Date next preceding the date of issue of such shares of Series A Participating Preferred Stock, unless the date of issue of such shares is prior to the record date for the first Quarterly Dividend Payment Date, in which case dividends on such shares shall begin to accrue from the date of issue of such shares, or unless the date of issue is a Quarterly Dividend Payment Date or is a date after the record date for the determination of holders of shares of Series A Participating Preferred Stock entitled to receive a quarterly dividend and before such Quarterly Dividend Payment Date, in either of which events such dividends shall begin to accrue and be cumulative from such Quarterly Dividend Payment Date. Accrued but unpaid dividends shall not bear interest. Dividends paid on the shares of Series A Participating Preferred Stock in an amount less than the total amount of such dividends at the time accrued and payable on such shares shall be allocated pro rata on a share-by-share basis among all such shares at the time outstanding. The Board of Directors may fix a record date for the determination of holders of shares of Series A Participating Preferred Stock entitled to receive payment of a dividend or distribution declared thereon, which record date shall be no more than 30 days prior to the date fixed for the payment thereof.

Section 3. VOTING RIGHTS. The holders of shares of Series A Participating Preferred Stock shall have the following voting rights:

- (A) Subject to the provision for adjustment hereinafter set forth, each share of Series A Participating Preferred Stock shall entitle the holder thereof to 1,000 votes on all matters submitted to a vote of the stockholders of the Corporation. In the event the Corporation shall at any time after the Rights Declaration Date (i) declare any dividend on Common Stock payable in shares of Common Stock, (ii) subdivide the outstanding Common Stock, or (iii) combine the outstanding Common Stock into a smaller number of shares, then in each such case the number of votes per share to which holders of shares of Series A Participating Preferred Stock were entitled immediately prior to such event shall be adjusted by multiplying such number by a fraction, the numerator of which is the number of shares of Common Stock outstanding immediately after such event and the denominator of which is the number of shares of Common Stock that were outstanding immediately prior to such event.
- (B) Except as otherwise provided herein or by law, the holders of shares of Series A Participating Preferred Stock and the holders of shares of Common Stock shall vote together as one class on all matters submitted to a vote of stockholders of the Corporation.
- (C) Except as required by law, holders of Series A Participating Preferred Stock shall have no special voting rights and their consent shall not be required (except to the extent they are entitled to vote with holders of common stock as set forth herein) for taking any corporate action.

#### Section 4. CERTAIN RESTRICTIONS.

- (A) The Corporation shall not declare any dividend on, make any distribution on, or redeem or purchase or otherwise acquire for consideration any shares of Common Stock after the first issuance of a share or fraction of a share of Series A Participating Preferred Stock unless concurrently therewith it shall declare a dividend on the Series A Participating Preferred Stock as required by Section 2 hereof.
- (B) Whenever quarterly dividends or other dividends or distributions payable on the Series A Participating Preferred Stock as provided in Section 2 are in arrears, thereafter and until all accrued and unpaid dividends and distributions, whether or not declared, on shares of Series A Participating Preferred Stock outstanding shall have been paid in full, the Corporation shall not
- (i) declare or pay dividends on, make any other distributions on, or redeem or purchase or otherwise acquire for consideration any shares of stock ranking junior (either as to dividends or upon liquidation, dissolution or winding up) to the Series A Participating Preferred Stock;
- (ii) declare or pay dividends on, make any other distributions on any shares of stock ranking on a parity (either as to dividends or upon liquidation, dissolution or winding up) with Series A Participating Preferred Stock, except dividends paid ratably on the

Series A Participating Preferred Stock and all such parity stock on which dividends are payable or in arrears in proportion to the total amounts to which the holders of all such shares are then entitled;

(iii) redeem or purchase or otherwise acquire for consideration shares of any stock ranking on a parity (either as to dividends or upon liquidation, dissolution or winding up) with the Series A Participating Preferred Stock, provided that the Corporation may at any time redeem, purchase or otherwise acquire shares of any such parity stock in exchange for shares of any stock of the Corporation ranking junior (either as to dividends or upon dissolution, liquidation or winding up) to the Series A Participating Preferred Stock;

(iv) purchase or otherwise acquire for consideration any shares of Series A Participating Preferred Stock, or any shares of stock ranking on a parity with the Series A Participating Preferred Stock, except in accordance with a purchase offer made in writing or by publication (as determined by the Board of Directors) to all holders of such shares upon such terms as the Board of Directors, after consideration of the respective annual dividend rates and other relative rights and preferences of the respective series and classes, shall determine in good faith will result in fair and equitable treatment among the respective series or classes.

(C) The Corporation shall not permit any subsidiary of the Corporation to purchase or otherwise acquire for consideration any shares of stock of the Corporation unless the Corporation could, under paragraph (A) of this Section 4, purchase or otherwise acquire such shares at such time and in such manner.

Section 5. REACQUIRED SHARES. Any shares of Series A Participating Preferred Stock purchased or otherwise acquired by the Corporation in any manner whatsoever shall be retired and cancelled promptly after the acquisition thereof. All such shares shall upon their cancellation become authorized but unissued shares of Preferred Stock and may be reissued as part of a new series of Preferred Stock to be created by resolution or resolutions of the Board of Directors, subject to the conditions and restrictions on issuance set forth herein.

#### Section 6. LIQUIDATION, DISSOLUTION OR WINDING UP.

(A) Upon any liquidation (voluntary or otherwise), dissolution or winding up of the Corporation, no distribution shall be made to the holders of shares of stock ranking junior (either as to dividends or upon liquidation, dissolution or winding up) to the Series A Participating Preferred Stock unless, prior thereto, the holders of shares of Series A Participating Preferred Stock shall have received an amount equal to accrued and unpaid dividends and distributions thereon, whether or not declared, to the date of such payment, plus an amount equal to the greater of (1) \$1,000 per share, provided that in the event the Corporation does not have sufficient assets, after payment of its liabilities and distribution to holders of Preferred Stock ranking prior to the Series A Participating Preferred Stock, available to permit payment in full of the \$1,000 per share amount, the amount required to be paid under this Section 6(A)(1) shall, subject to Section 6(B) hereof, equal the value of the amount of available assets divided by the number of outstanding shares of Series A Participating Preferred Stock or (2) subject to the provisions for adjustment hereinafter set forth, 1,000 times the aggregate per share amount to be

distributed to the holders of Common Stock (the greater of (1) or (2), the "Series A Liquidation Preference"). In the event the Corporation shall at any time after the Rights Declaration Date (i) declare any dividend on Common Stock payable in shares of Common Stock, (ii) subdivide the outstanding Common Stock, or (iii) combine the outstanding Common Stock into a smaller number of shares, then in each such case the amount to which holders of shares of Series A Participating Preferred Stock were entitled immediately prior to such event under clause (2) of the preceding sentence shall be adjusted by multiplying such amount by a fraction the numerator of which is the number of shares of Common Stock that were outstanding immediately after such event and the denominator of which is the number of shares of Common Stock that were outstanding immediately prior to such event.

(B) In the event, however, that there are not sufficient assets available to permit payment in full of the Series A Liquidation Preference and the liquidation preferences of all other series of Preferred Stock, if any, which rank on a parity with the Series A Participating Preferred Stock, then such remaining assets shall be distributed ratably to the holders of such parity shares in proportion to their respective liquidation preferences.

Section 7. CONSOLIDATION, MERGER, ETC. In case the Corporation shall enter into any consolidation, merger, combination or other transaction in which the shares of Common Stock are exchanged for or changed into other stock or securities, cash and/or any other property, then in any such case the shares of Series A Participating Preferred Stock shall at the same time be similarly exchanged or changed in an amount per share (subject to the provision for adjustment hereinafter set forth) equal to 1,000 times the aggregate amount of stock, securities, cash and/or any other property (payable in kind), as the case may be, into which or for which each share of Common Stock is changed or exchanged. In the event the Corporation shall at any time after the Rights Declaration Date (i) declare any dividend on Common Stock payable in shares of Common Stock, (ii) subdivide the outstanding Common Stock, or (iii) combine the outstanding Common Stock into a smaller number of shares, then in each such case the amount set forth in the preceding sentence with respect to the exchange or change of shares of Series A Participating Preferred Stock shall be adjusted by multiplying such amount by a fraction the numerator of which is the number of shares of Common Stock outstanding immediately after such event and the denominator of which is the number of shares of Common Stock that were outstanding immediately prior to such event.

Section 8. NO REDEMPTION. The shares of Series A Participating Preferred Stock shall not be redeemable.

Section 9. RANKING. The Series A Participating Preferred Stock shall rank junior to all other series of the Corporation's Preferred Stock as to the payment of dividends and the distribution of assets, unless the terms of any such series shall provide otherwise.

Section 10. AMENDMENT. The Restated Certificate of Incorporation of the Corporation shall not be further amended in any manner which would materially alter or change the powers, preference or special rights of the Series A Participating Preferred Stock so as to affect them

adversely without the affirmative vote of the holders of a majority or more of the outstanding shares of Series A Participating Preferred Stock, voting separately as a class.

Section 11. FRACTIONAL SHARES. Series A Participating Preferred Stock may be issued in fractions of a share which shall entitle the holder, in proportion to such holder's fractional shares, to exercise voting rights, receive dividends, participate in distributions and to have the benefit of all other rights of holders of Series A Participating Preferred Stock."

IN WITNESS WHEREOF, we have executed and subscribed this Certificate and do affirm the foregoing as true under the penalties of perjury this 11th day of September, 1991.

ATTEST:

/s/ Jan Johannessen
-----Jan Johannessen, Secretary

CERTIFICATE OF AMENDMENT
OF
CERTIFICATE OF INCORPORATION
OF
LATTICE SEMICONDUCTOR CORPORATION
A Delaware Corporation

Lattice Semiconductor Corporation, a corporation organized and existing under and by virtue of the General Corporation Law of the State of Delaware (the "Corporation"), does hereby certify:

FIRST: That at a regular meeting of the Board of Directors of this Corporation, resolutions were duly adopted (in accordance with Section 242 of the General Corporation Law of the State of Delaware) setting forth the proposed amendment to the Certificate of Incorporation of this Corporation, declaring said amendment to be advisable, and calling for the approval by the stockholders of this Corporation upon consideration thereof. The resolutions setting forth the proposed amendment are as follows:

RESOLVED: That the first paragraph of Article IV of the Certificate of Incorporation of the Company be amended in its entirety to read as follows:

### "ARTICLE IV

The total number of shares of all classes of stock which the Corporation shall have authority to issue is One Hundred Ten Million (110,000,000) shares, par value One Cent (\$0.01) each, consisting of One Hundred Million (100,000,000) shares of Common Stock, par value One Cent (\$0.01) each ("Common Stock") and Ten Million (10,000,000) shares of Preferred Stock, par value One Cent (\$0.01) each ("Preferred Stock")."

SECOND: That thereafter, pursuant to a resolution of its Board of Directors, the Board directed that the amendment be considered at the next annual meeting of the stockholders of this Corporation, and at such meeting, the holders of the necessary number of shares as required by statute voted in favor of said amendment.

THIRD: That said amendment was duly adopted in accordance with the provisions of Section 242 of the General Corporation Law of the State of Delaware.

IN WITNESS WHEREOF, Lattice Semiconductor Corporation has duly caused this Certificate of Amendment of Certificate of Incorporation to be signed by Cyrus Y. Tsui, its Chairman, Chief Executive Officer and President, and attested to by Frances J. Dishman, its Assistant Secretary, this 8th day of September, 1993.

LATTICE SEMICONDUCTOR CORPORATION
A Delaware Corporation
By: /s/ Cyrus Y. Tsui
Cyrus Y. Tsui,

Chairman, Chief Executive
Officer and President

ATTEST:

By: /s/ Frances J. Dishman
Frances J. Dishman,
Assistant Secretary

CERTIFICATE OF AMENDMENT
OF
CERTIFICATE OF INCORPORATION
OF
LATTICE SEMICONDUCTOR CORPORATION
A Delaware Corporation

Lattice Semiconductor Corporation, a corporation organized and existing under and by virtue of the General Corporation Law of the State of Delaware (the "Corporation"), does hereby certify:

FIRST: That at a regular meeting of the Board of Directors of this Corporation, resolutions were duly adopted (in accordance with Section 242 of the General Corporation Law of the State of Delaware) setting forth the proposed amendment to the Certificate of Incorporation of this Corporation, declaring said amendment to be advisable, and calling for the approval by the stockholders of this Corporation upon consideration thereof. The resolution setting forth the proposed amendment is as follows:

RESOLVED: That the first paragraph of Article IV of the Certificate of Incorporation of the Company be amended in its entirety to read as follows:

### "ARTICLE IV

The total number of shares of all classes of stock which the Corporation shall have authority to issue is Three Hundred Ten Million (310,000,000) shares, par value One Cent (\$0.01) each, consisting of Three Hundred Million (300,000,000) shares of Common Stock, par value One Cent (\$0.01) each ("Common Stock") and Ten Million (10,000,000) shares of Preferred Stock, par value One Cent (\$0.01) each ("Preferred Stock")."

SECOND: That thereafter, pursuant to a resolution of its Board of Directors, the Board directed that the amendment be considered at the next annual meeting of the stockholders

of this Corporation, and at such meeting, the holders of the necessary number of shares as required by statute voted in favor of said amendment.

THIRD: That said amendment was duly adopted in accordance with the provisions of Section 242 of the General Corporation Law of the State of Delaware.

IN WITNESS WHEREOF, Lattice Semiconductor Corporation has duly caused this Certificate of Amendment of Certificate of Incorporation to be signed by Stephen A. Skaggs, its Secretary, Senior Vice President and Chief Financial Officer, this 23rd day of June, 2000.

LATTICE SEMICONDUCTOR CORPORATION A Delaware Corporation

By: /s/ Stephen A. Skaggs
Stephen A. Skaggs
Secretary, Senior Vice President
and Chief Financial Officer
and President

## CONSENT OF INDEPENDENT ACCOUNTANTS

We hereby consent to the incorporation by reference in this Registration Statement on Form S-3 of our reports dated January 19, 2000 relating to the financial statements and financial statement schedules, which appear in Lattice Semiconductor Corporation's Annual Report on Form 10-K for the fiscal period ended December 31, 1999. We also consent to the reference to us under the heading "Experts" in such Registration Statement.

/s/ PricewaterhouseCoopers LLP

PricewaterhouseCoopers LLP

Portland, Oregon July 10, 2000

## CONSENT OF ERNST & YOUNG LLP, INDEPENDENT AUDITORS

We consent to the reference to our firm under the caption "Experts" in the Registration Statement (Form S-3) and related Prospectus of Lattice Semiconductor Corporation for the registration of shares of it's common stock and to the incorporation by reference therein of our report dated February 8, 1999, with respect to the consolidated financial statements of Vantis Corporation included in Lattice Semiconductor Corporation's Current Report on Form 8-K, as amended, dated June 15, 1999, filed with the Securities and Exchange Commission.

/s/ ERNST & YOUNG LLP

San Jose, California July 10, 2000