VICOR CORP
Form 10-K
March 08, 2016
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UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

Form 10-K

þ **ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d)**
OF THE SECURITIES EXCHANGE ACT OF 1934
For the fiscal year ended December 31, 2015

¨ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d)**
OF THE SECURITIES EXCHANGE ACT OF 1934
For the transition period from to

Commission file number 0-18277

VICOR CORPORATION

(Exact name of registrant as specified in its charter)

Delaware	**04-2742817**
(State or other jurisdiction of incorporation or organization)	*(IRS employer identification no.)*
25 Frontage Road, Andover, Massachusetts	**01810**
(Address of principal executive offices)	*(Zip code)*

Registrant s telephone number, including area code:

(978) 470-2900

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

Common Stock, $.01 par value	**The NASDAQ Stock Market LLC**
(Title of Class)	*(Name of Each Exchange on Which Registered)*

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

None

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes ¨ No þ

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes ¨ No þ

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

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes þ No ¨

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

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See the definitions of large accelerated filer, accelerated filer and smaller reporting company in Rule 12b-2 of the Exchange Act. (Check one):

Large Accelerated Filer ¨ Accelerated Filer þ Non-accelerated Filer ¨ Smaller Reporting Company ¨
(Do not check if a smaller reporting company)

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes ¨ No þ

The aggregate market value of the voting and non-voting common equity of the registrant held by non-affiliates (for this purpose, persons and entities other than executive officers and directors) of the registrant, as of the registrant s most recently completed second fiscal quarter (June 30, 2015) was approximately $199,714,000.

	Number of Shares of Common Stock
Title of Each Class	*Outstanding as of February 29, 2016*
Class A Common Stock	27,035,328
Class B Common Stock	11,758,218

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the Company s definitive proxy statement (the Definitive Proxy Statement) to be filed with the Securities and Exchange Commission pursuant to Regulation 14A and relating to the Company s 2016 annual meeting of stockholders are incorporated by reference into Part III.

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PART I

In this Annual Report on Form 10-K, unless the context indicates otherwise, references to Vicor®, the Company, our company, we, us, our, and similar references, refer to Vicor Corporation and subsidiaries.

This Annual Report on Form 10-K contains forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended (the Exchange Act). The words believes, expects, anticipates, intend, estimate, plans, assumes, may, wi continue, prospective, project, and other similar expressions identify forward-looking statements. Forward-looking statements also include statements regarding: the transition of our business strategically and organizationally from serving a large number of relatively low volume customers across diversified markets and geographies to serving a small number of relatively large volume customers, typically concentrated in computing and communications; the level of customer orders overall and, in particular, from large customers and the delivery lead times associated therewith; the financial and operational impact of customer changes to shipping schedules; the derivation of a portion of our sales in each quarter from orders booked in the same quarter; our ongoing development of power conversion architectures, switching topologies, packaging technologies, and products; our plans to invest in expanded manufacturing capacity and the timing and location thereof; our continued success depending in part on our ability to attract and retain qualified personnel; our belief cash generated from operations and the total of our cash and cash equivalents will be sufficient to fund operations for the foreseeable future; our belief that we have limited exposure to currency risks; our intentions regarding the declaration and payment of cash dividends; our intentions regarding protecting our rights under our patents; and our expectation that no current litigation or claims will have a material adverse impact on our financial position or results of operations. These statements are based upon our current expectations and estimates as to the prospective events and circumstances that may or may not be within our control and as to which there can be no assurance. Actual results could differ materially from those implied by forward-looking statements as a result of various factors, including our ability to: develop and market new products and technologies cost effectively and on a timely basis; leverage our new technologies in standard products to promote market acceptance of our approach to power system architecture; leverage design wins into increased product sales; continue to meet requirements of key customers and prospects; enter into licensing agreements increasing our market opportunity and accelerating market penetration; realize significant royalties under such licensing agreements; achieve sustainable bookings rates for our products across served markets and geographies; improve manufacturing and operating efficiencies; successfully enforce our intellectual property rights; successfully defend outstanding litigation; hire and retain key personnel; and maintain an effective system of internal controls over financial reporting, including our ability to obtain required financial information for investments on a timely basis, our ability to assess the value of assets, including illiquid investments, and the accounting therefor. These and other factors that may influence actual results are described in this Annual Report on Form 10-K, including but not limited to those described under Part I, Item I Business, under Part I, Item 1A Risk Factors, under Part I, Item 3 Legal Proceedings, and under Part II, Item 7 Management s Discussion and Analysis of Financial Condition and Results of Operations . The discussion of our business contained herein, including the identification and assessment of factors that may influence actual results, may not be exhaustive. Therefore, the information presented should be read together with other documents we file with the Securities and Exchange Commission from time to time, including Forms 10-Q and 8-K, which may supplement, modify, supersede, or update the factors discussed in this Annual Report on Form 10-K. We do not undertake any obligation to update any forward-looking statements as a result of future events or developments, except as required by law.

ITEM 1. *BUSINESS*

Overview

Vicor Corporation designs, develops, manufactures, and markets modular power components and power systems for converting, regulating, and controlling electric current. We consider power components analogous to

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building blocks, and our strategy is based largely on products, performing distinct functions, that can be flexibly combined to enable a complete power system. We serve customers with applications for which the high conversion efficiency (i.e., the ratio of output power in watts to the power consumed by the device) and high power density (i.e., the amount of power in watts divided by the volume of the device) of our products are well suited. We also offer a range of subsystems, utilizing our modular components, to meet the specific needs of certain customers.

In the market segments we serve, we position the Company as a vendor of power components that can be utilized individually, given their market-leading performance, or combined, given their level of integration, to create highly-differentiated power management solutions. We articulate this positioning through our Power Component Design Methodology , which is our approach to providing our customers the modular products, design tools, and support to enable the rapid design of comprehensive power conversion and management systems.

Our website, www.vicorpower.com, sets forth detailed information describing our Power Component Design Methodology, all of our products, the applications for which they may be used, and our suite of design tools. The information contained on our website is not a part of, nor incorporated by reference into, this Annual Report on Form 10-K and shall not be deemed filed under the Exchange Act.

We are headquartered in Andover, Massachusetts, where our manufacturing facility is located. We conduct business primarily through the activities of our Brick Business Unit (BBU), established in 2005, and our two operating subsidiaries, Picor Corporation, established in 2001, and VI Chip Corporation, established in 2007. Picor Corporation is headquartered in North Smithfield, Rhode Island, and also has personnel based in Andover, Massachusetts. VI Chip Corporation also is headquartered in Andover, Massachusetts, where its manufacturing facilities are co-located with those of the BBU.

Our Vicor Custom Power locations are geographically distributed across the United States and all are incorporated in Delaware. In December 2015, we completed the statutory merger of one Vicor Custom Power subsidiary, Mission Power Solutions, Inc., with and into another subsidiary, Northwest Power, Inc., after which we closed the Mission Power Solutions location. Also in December 2015, we sold our 49% ownership interest in Aegis Power Systems, Inc. to Aegis Power Systems, thereby ending our formal relationship with the subsidiary. The consolidated financial statements presented herein reflect these transactions.

Internationally, we conduct business through subsidiaries incorporated in or branch offices established in individual countries. Vicor Japan Company, Ltd. (VJCL), our majority-owned Japanese subsidiary, which is engaged in sales and customer support activities exclusively for the Japanese market, is headquartered in Tokyo, Japan. Vicor B.V., a wholly-owned subsidiary incorporated in the Netherlands, serves as our European distribution center. We have established individual subsidiaries or branch offices to conduct the activities of Technical Support Centers (TSCs) located outside of the United States.

VLT, Inc., incorporated in California, is our wholly-owned licensing subsidiary. VICR Securities Corporation, incorporated in Massachusetts, is a subsidiary established to hold certain investment securities.

Our subsidiaries and their legal domicile are set forth in Exhibit 21.1 to this Annual Report on Form 10-K. The activities of all of the above named entities are consolidated in the financial statements presented herein.

We were incorporated in Delaware in 1981. Shares of our Common Stock were listed on the NASDAQ National Market System in April 1990 under the ticker symbol VICR, and we completed an initial public offering of our shares in May 1991.

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Market Background and Our Strategy

In electrically-powered devices utilizing alternating current (AC) voltage from a primary AC source (for example, a wall outlet), a power system converts AC voltage into the stable direct current (DC) voltage necessary to power subsystems and/or individual applications and devices (known as loads). In many electronic devices, this DC voltage may be further converted to one or more higher or lower voltages required by a range of loads. In equipment utilizing DC voltage from a primary DC source (for example, a battery), the initial DC voltage similarly may require further conversion to one or more voltages. Because numerous applications requiring different DC voltages and varied power ratings may exist within an electronic device, and system power architectures themselves vary, we offer an extensive range of products and accessories in numerous application-specific configurations. We believe our product offering is among the most comprehensive in the market segments we serve.

Since the Company was founded, our product strategy has been driven by innovations in design, largely enabled by our focus on the development of differentiated technologies, often implemented in proprietary semiconductor circuitry. Many of our products incorporate patented or proprietary implementations of high-frequency switching topologies, which enable the design of converter modules much smaller and more efficient than conventional alternatives. Emphasizing the superior power density and performance advantages of this technology, our primary product strategy since our founding has been to offer a comprehensive range of component-level building blocks to configure a power system specific to a customer s needs.

Our strategy, competitive positioning, and product offerings, all based on highly differentiated product performance, have anticipated the evolution of system power architectures. As system designs advanced along with the demands of the loads powered, the inherent limitations of historically accepted system power architectures have caused designers to seek out improved solutions.

In 1984, we introduced a significant enhancement of the standardized DC-DC converter: the fully-encapsulated brick module. Our innovative, patented technology utilized our implementation of zero current soft switching topology to deliver unprecedentedly high switching frequencies and, in turn, unprecedented power density. Superior conversion efficiency, overall performance improvements, and full encapsulation (which provided shielding from environmental influences) contributed to significant enhancement of thermal performance characteristics, an important competitive advantage. Such thermal performance enhancement has been critical to the differentiation of our power converters, as the by-product of voltage conversion is heat, which must be dissipated in order to assure the performance of the converter itself and the overall system to which it is delivering power.

The brick module integrated transformation, regulation, isolation, filtering, and/or input protection into a single device, thereby driving the adoption of the Distributed Power Architecture (DPA). The dominant system power architecture up until that time, the Centralized Power Architecture (CPA), generates all system voltages centrally and distributes these voltages to loads using individual distribution buses (i.e., a conductive circuit, generally made of copper). CPA became expensive and impractical for electronic systems increasingly characterized by widely distributed loads requiring lower voltages, higher currents, and higher speeds. DPA, enabled by the brick concept, allows the distribution of one DC voltage system-wide and downstream conversion of that voltage, with a brick, at a specific load. This approach allows electricity to be distributed through a complex system in the most efficient manner, at a uniform higher voltage (typically 48 volts), thereby dramatically reducing distribution and conversion losses, lowering copper consumption, and significantly increasing design flexibility. With patented advances in switching topology and converter design, Vicor became a leading vendor of brick DC-DC converters in the 1980s and 1990s, particularly within the telecommunications infrastructure segment of the market.

With the advent of enterprise computing in the 1990s, the limitations of DPA became apparent, as the number of different loads on a system board increased beyond the level for which DPA and bricks were well-

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suited. The Intermediate Bus Architecture (IBA), a multi-stage extension of DPA, addressed the space constraints, performance requirements, and cost challenges of highly complex system boards by further separating the functions of DC conversion carried out by the brick, which in IBA is replaced by an isolated bus converter delivering a stepped-down (i.e., reduced), unregulated voltage to a non-isolated point-of-load regulator. For computing and, later, networking applications, IBA was more scalable and cost-efficient, as numerous brick DC-DC converters on a system board were replaced by one brick DC-DC converter, providing one system-wide distributed voltage, accompanied by numerous, lower-cost bus converters providing an intermediate bus voltage, typically from 5 to 14 volts, to point-of-load regulators.

Two significant industry changes coincided with the broad adoption of IBA in the late 1990s and the early 2000s. The first change was the significant decline of the telecommunications infrastructure segment that represented our primary focus, while the second change was a pronounced shift toward product commoditization, primarily driven by globalization. These two changes had an interrelated impact on our strategy, as the primary driver of IBA adoption was initial cost reduction, not system conversion efficiency. As such, IBA was broadly implemented using 12 volt distribution, not the more efficient 48 volt distribution, our core competency.

Unwilling to pursue rapidly commoditized market opportunities, notably in IBA, and unwilling to relocate our manufacturing to lower-cost countries, we shifted our strategy and operations in the 2000s to emphasize mass customization , using highly automated, efficient, domestic manufacturing to serve customers with product design and performance requirements, across a wide range of worldwide market segments, that could not be met by high-volume oriented competitors. We focused on applications, largely implementations of DPA, for which our brick DC-DC converters were well-suited, in market segments such as aerospace and defense electronics, industrial automation and equipment, instrumentation and test equipment, and transportation (e.g., rail). This strategy has been the basis upon which the BBU has competed since this strategic and operational shift. The customers served range from independent manufacturers of highly specialized electronic devices to larger original equipment manufacturers (OEMs) and their contract manufacturers.

During the 2000s, we embarked on a long-term strategy based on our belief that our competitors products and existing system power architectures, notably IBA, would not meet evolving market requirements, notably system conversion efficiency. Over the last decade, we have invested significantly in the development of new power component technologies and product concepts addressing two meaningful market trends, the first toward higher required conversion efficiencies, and the second toward higher currents, more and diverse on-board voltages, and the higher performance demands of numerous complex loads. Reflecting the versatile, building block approach of our Power Component Design Methodology, we introduced our Factorized Power Architecture (FPA), an innovative, component-based approach to flexible, rapid system design, based on separate components optimized to perform a specific function. We continue to believe FPA represents a compelling architectural alternative to other architectural implementations, as it offers superior conversion efficiency, higher power density, improved system responsiveness, and an attractive total cost of ownership, while offering design flexibility FPA increases total system conversion efficiency by separating power conversion stages, reducing the number of stages required (i.e., duplicated functions requiring separate components), reducing system distribution losses, and reducing power dissipation at the point-of-load.

To support implementation of FPA, we introduced our initial range of VI Chip modules exploiting our proprietary expertise in soft switching topologies and control, power semiconductors, materials, and packaging: the PRM® (Pre-Regulator Module), a non-isolated buck-boost regulator; the BCM® (Bus Converter Module), an isolated, fixed ratio intermediate bus voltage converter; and the VTM® (Voltage Transformation Module), an isolated current multiplier (i.e., voltage converter). The VTM and BCM utilize on our Sine Amplitude Converter switching topology, a patented fixed-frequency implementation of zero current / zero voltage soft switching, while the PRM is based on our

proprietary implementation of zero voltage soft switching (ZVS), which is optimized for buck-boost voltage regulation. All three products incorporate technologies for which we have been issued patents or have patent applications pending.

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Beginning in 2011, we began to shift our strategic focus toward higher-volume opportunities with global OEMs and their contract manufacturers, as FPA and VI Chip modules offered superior power density, conversion efficiency, and thermal management characteristics for board-based, rack-mounted point-of-load applications, notably for microprocessors requiring tightly regulated high currents. FPA and our first-generation VI Chip modules were adopted by customers for use in demanding applications, most notably supercomputing, sophisticated test instrumentation, and defense electronics. However, broader adoption was inhibited by cost considerations and, to a lesser extent, a narrow product range.

In response, we undertook development of a substantially improved product platform, which we introduced in 2013. Our ChiP platform (ChiP is an acronym for Converter housed in Package) specifically was designed to be a scalable, leveragable module format with lower manufacturing costs. ChiPs are offered in the same functional families as the earlier VI Chip modules, using the same advanced switching topologies, but, because of the format s design flexibility and improved manufacturability, we are able to offer much broader ranges of performance specifications within existing and new functional families. Because ChiPs were designed to be manufactured with lower costs, we are able to profitably sell ChiPs and ChiP-based solutions at competitive prices, on a cents-per-watt basis, comparable to prices of alternative commodity products. While our first-generation VI Chip modules were designed to facilitate FPA implementations, ChiP modules support all known power distribution architectures, including FPA, thereby expanding our addressable market opportunity (i.e., the range of customer applications across which our products can be used).

At the same time, our Picor subsidiary undertook development of a high-performance family of point-of-load regulators, in SiP (System in Package LGA package) format, to be integrated into our expanded product portfolio, truly enabling comprehensive power management solutions to point(s)-of-load. These Cool-Power® point-of-load regulators have been designed to meet the requirements of high-volume OEMs for cost-effectiveness, design flexibility, and high performance.

In 2014, we introduced the VIA packaging concept (VIA is an acronym for Vicor Integrated Adapter) for a rugged, double-sided package for ChiP modules integrating complementary components, circuitry, and superior thermal management. The VIA package provides customers an advanced, turn-key solution for their demanding power needs, cost-effectively accelerating design cycles and time-to-market, while providing superior power density. The VIA package is particularly differentiated by the flexibility it provides designers, as it offers substantial thermal advantages and its form factor allows a broad range of installation options. We consider the VIA package to be strategically important, as it has been designed to be used in the widest range of power system architectures and applications, as well as serving as the packaging platform for our line of ChiP-based AC-DC front end converters, a critical element of our comprehensive product portfolio enabling highly-differentiated power management solutions from the AC or DC source to the point(s)-of-load. The VIA package enables us to target applications ranging from those addressed by our legacy brick products to the most challenging emerging applications.

With the introduction of innovative new products, we began executing a transitional go-to-market strategy based on our Power Component Design Methodology, exploiting our historical strengths, while addressing both the realities of today s power conversion marketplace and our vision of its long-term direction. This strategy involves maintaining a profitable legacy business in bricks and brick-based system solutions, while investing in and transitioning to a new, advanced product portfolio based largely on the ChiP platform, targeting high growth opportunities.

Today, we target well-defined applications for which the high conversion efficiency and high power density of our products are well suited within the following industrial and military market segments: aerospace and aviation; defense electronics; enterprise and high performance computing (including large scale datacenters); industrial automation, instrumentation, and test equipment; medical diagnostics; telecommunications and network equipment and infrastructure; and vehicles and transportation infrastructure. With our new, advanced products, we also are pursuing

opportunities in emerging market segments, including: hybrid and electric

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vehicles; commercial solid state lighting; and 380 volt DC-based facility infrastructure (also referred to as HVDC (for high voltage DC distribution) or micro-grids).

Our competitive positioning has been, and will continue to be, supported by our long-standing commitment to research and development of power conversion technologies, advanced packaging and manufacturing, and innovative approaches to solving customer problems. We incurred approximately $41,472,000, $41,479,000, and $39,848,000 in research and development expenses in 2015, 2014, and 2013, respectively, representing approximately 18.8%, 18.4%, and 20.0% of revenues in 2015, 2014, and 2013, respectively.

As stated, our strategy involves maintaining high levels of customer engagement and support, which has resulted in significant expansion of our sales and application engineering infrastructure over historical levels, notably in high growth regions of the world such as China, Korea, and India. We incurred approximately $37,336,000, $38,056,000, and $35,478,000 in marketing and sales expenses in 2015, 2014, and 2013, respectively, representing approximately 17.0%, 16.9%, and 17.8% of revenues in 2015, 2014, and 2013, respectively.

We intend to maintain spending in support of research and development and marketing and sales at levels, on an absolute basis, consistent with prior periods. If we successfully execute our strategy, we believe our revenue should increase and, if so, the percentages of revenue represented by spending on research and development and marketing and sales should decline.

Competition

Despite significant consolidation, the growth of large-scale, low-cost competitors, and increased application overlap with vendors of solutions based on semiconductors and discrete components, the global merchant market for AC-DC and DC-DC power conversion solutions remains fragmented, with over 1,000 merchant vendors. The market is made up of many large, diversified manufacturers, as well as many smaller manufacturers focused on specialized products or narrowly defined market segments or geographies. The overall market, including those segments in which we compete, is characterized by rapid commoditization and intense price competition.

Although numerous third party industry studies estimate the total global merchant market for AC-DC and DC-DC switching power supplies to exceed $20 billion of annual revenue, representing approximately two-thirds of the total annual consumption of switching power supplies (i.e., the sum of merchant and captive volumes consumed), the Company competes in smaller, well-defined industrial and military market segments. We believe AC-DC power supplies represent more than 85% of the total merchant market, reflecting a wide range of battery charging applications, primarily in the consumer, mobile device, and office computing segments (commodity segments in which we do not compete, together representing more than 50% of the total merchant market). Based on our own assessment of the segments in which we do compete, we estimate our aggregate addressable market opportunity within the AC-DC portion of the merchant market approaches $1 billion annually, while we estimate our aggregate addressable market opportunity within the DC-DC portion of the merchant market exceeds $3 billion annually.

Despite our relative position in the overall merchant market, our small historical presence in the AC-DC portion of the merchant market, and the competitive presence of numerous, far larger vendors in the market segments we serve, we believe we are consistently among the largest volume vendors of solutions for the conversion, regulation, and control of DC-DC current, particularly in the market segments we serve. However, numerous competitors in these market segments have significantly greater financial and marketing resources and longer operating histories than we do.

The competitive characteristics of market segments we serve with our transitional go-to-market strategy may vary. Generally, competition is based on product price, product performance, design flexibility (i.e., ease of use), and

product availability. We seek to position ourselves with customers across all market segments served in

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a manner that reduces our vulnerability to commoditization. As we shift our strategy to focus more on higher volume OEM opportunities, we are emphasizing what we believe are our sustainable competitive advantages: the differentiation of our products superior performance and power densities; a compelling value proposition based on lower total cost of ownership enabled by superior power conversion efficiencies; and the advantageous design flexibility enabled by our products and tools. The BBU, given its history, continues to compete on the basis of differentiated responsiveness to individual customer requirements enabled by our mass customization capabilities, largely with brick DC-DC converters. However, the BBU is pursuing opportunities for which our new products are appropriate, particularly with VIA packaged ChiPs. Our VI Chip and Picor subsidiaries, given our focus on higher-volume OEM opportunities with our new, innovative products, seek to build customer awareness and acceptance of our products and value propositions through the high levels of customer engagement and support described above. VI Chip and Picor are pursuing applications with these OEMs and their contract manufacturers in market segments for which the advantages of our new products are most compelling. In particular, we are marketing FPA, enabled by our new products, as an alternative to IBA and other distributed architectures, primarily in enterprise computing (notably large-scale datacenters). A complement to this customer-specific effort is the ongoing development of collaborative relationships with influential suppliers to our OEM customers.

Our Products

Reflecting our Power Component Design Methodology, we offer a comprehensive range of individual, highly integrated building blocks enabling design of a power system specific to a customer s needs. Since introducing and popularizing the encapsulated brick package format during the 1980s, our product focus has been on high performance DC-DC switching converters providing the transformation, regulation, isolation, filtering, and/or input protection necessary to power and protect sophisticated electronic loads. With the development of FPA, VI Chip modules, Picor point-of-load regulators, and, most recently, ChiP modules and the VIA packaging platform, we believe we offer the most advanced range of high-performance power components in the industry. A secondary and highly complementary product strategy has been to vertically integrate our component-level building blocks into complete power systems representing turnkey AC-DC and DC-DC solutions for our customers power needs.

Reflecting our history and direction, we broadly categorize our products as either legacy or advanced , generally based on design, performance, and form factor considerations, as well as the range of applications for which the products are appropriate.

Legacy Products

The following product groups include those that historically generated the majority of our revenue. Some of our brick product lines have been in production for over a decade, reflecting the long-established relationships we have with many customers and the long-standing suitability of our products to their demanding applications. Their generally long lifecycles and well-established share of targeted market segments provide the competitive foundation and organizational resources for our transitional go-to-market strategy.

Bricks (Modular DC-DC Converters and Complementary Components)

We offer brick modules as DC-DC converters, as well as complementary components providing AC line rectification, input filtering, power factor correction, and transient protection. All of our brick modules are encapsulated with a dielectric, thermally-conductive material, thereby providing electrical insulation, thermal conductivity, and environmental protection of the electronic circuitry. These products are well-established as important, reliable elements of conventional power systems architectures.

The BBU currently offers seven families of high power density, component-level DC-DC converters, representing the broadest selection of DC-DC converter modules in the industry: the VI-200, VI-

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J00, MI-200, MI-J00, and the FasTrak module line, our highest volume products, made up of the Maxi, Mini, and Micro product families. All of our DC-DC converters are based on our proprietary approach to resonant soft switching, enabling high efficiencies and power densities. Wide ranges of input voltage (from nine to 425 volts), output voltages (from two to 54 volts), and output power (up to 600 watts) are offered, allowing end users to select components appropriate to their individual applications. The products differ in temperature grades, maximum power ratings, performance characteristics, pin configuration, and, in certain cases, characteristics specific to the targeted market. Brick DC-DC converters are offered in sizes, depending on family, ranging from 116.9 x 61.0 x 12.7 mm (full brick), to 57.9 x 61.0 x 12.7 mm (half brick), to 57.9 x 36.8 x 12.7 mm (quarter brick).

Products from our broad line of complementary components are used to condition and/or filter the input and output voltages of the brick DC-DC converter. Generally, these components address customer requirements at the AC current source, upstream from our DC-DC converters, providing rectification of the AC current, input filtering, inrush limiting, and transient protection. An example of such a complementary product is our HAM (Harmonic Attenuator Module), a front end providing power factor correction. The HAM utilizes a proprietary zero current switching boost converter, allowing it to provide output power of up to 675 watts and DC output voltage of 365 volts.

We also offer numerous accessories (for example, base plates and heat sinks) to meet customer requirements.

These products are generally targeted at applications requiring high performance and reliability in the following market segments: aerospace and aviation; defense electronics; industrial automation, instrumentation, and test equipment; medical diagnostics; telecommunications infrastructure; and vehicles and transportation infrastructure.

Open-Frame Intermediate Bus Converters

We offer an extensive line of open-frame (i.e., not encapsulated) intermediate bus converters (IBCs) for implementation of multi-stage power conversion. These devices utilize the same Sine Amplitude Converter switching topology utilized in our VTM and BCM modules in the VI Chip and ChiP formats. These low profile, isolated, fixed-ratio IBCs conform to industry standard quarter-brick and eighth-brick sizes, but offer increased capabilities and exceptional performance.

These devices typically are used in telecommunications and networking equipment applications. Because our IBCs represent pin compatible upgrades for existing designs, a customer, for example, can replace a competitor s quarter-brick unit with our eighth-brick converter, using half the available space, while meaningfully improving system performance.

Cool-Power High Density ZVS DC-DC Converters

We offer a family of isolated DC-DC converters delivering up to 60 watts in a very small (22 x 16.5 x 6.7 mm) surface-mount package. Because these small devices are packaged in the VI Chip over-molded package, they are able to withstand harsh environments in applications for which space is limited and light weight is advantageous (e.g., aerospace, aviation, and defense electronics). These high density converter modules are offered in three input voltages: 48 volt nominal for communication applications; 28 volt nominal for rugged high temperature or military applications; and 24 volt nominal for industrial applications.

Cool-Power converters utilize our proprietary zero voltage soft switching topology (ZVS) to achieve high-switching frequencies enabling best-in-class power density, while reducing input and output filtering requirements.

Configurable Products

Utilizing our modular brick components to drive system function, we offer numerous configurable product families that provide complete power solutions configured to a customer s specific needs, often

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with multiple voltage outputs. These near-custom products exploit the benefits and flexibility of our modular approach to offer higher performance, higher power densities, lower costs, and faster delivery than many competitive offerings. These AC-DC and DC-DC configurable products are designed, developed, and manufactured by the BBU and, for the Japanese market, VJCL.

Our highest volume configurable product, the FlatPAC, is representative of our approach to integrating our power components to create high-performance solutions. FlatPACs, available in thousands of configurations in three package variants based on the number of DC output voltages, are complete, conductively-cooled AC-DC conversion solutions comprised of our VI-200 DC-DC converter modules and our complementary components, described above, providing rectification and filtering of the AC input voltage.

Our configurable products typically are used in a range of CPA and distributed power architecture implementations in industrial and transportation applications, as well as medical instrumentation.

Custom Power Systems

Certain customers rely on us to design, develop, and manufacture custom power systems to meet performance and/or form factor requirements that cannot be met with off-the-shelf system solutions. These low-volume, high value-add products frequently are designed to function reliably in the harsh environments associated with aerospace, aviation, and defense applications, but also are used in applications ranging from industrial equipment to medical instrumentation. By utilizing our modular components to drive system function, we have been able to meet such customers needs with reliable, high power density, turnkey solutions.

Advanced Products

The following product groups include those that reflect our vision of the direction of the market segments we serve with our Power Component Design Methodology. Many of these products are targeted toward FPA implementations, but our more recently introduced products are suitable for other distributed architectures.

ChiPs (Modular Power Components)

In 2013, our VI Chip Corporation subsidiary introduced the ChiP platform, designed to be a scalable, leveragable module format with lower manufacturing costs. We believe the ChiP platform establishes best-in-class standards for a new generation of scalable power modules, while expanding our capability range and, in turn, our addressable market opportunity. Combining advanced magnetic structures, proprietary power semiconductors, and proprietary microcontrollers in a high density interconnect substrate, the ChiP delivers superior thermal management characteristics, allowing customers to achieve low cost power system solutions with previously unattainable system efficiency, size, and weight. ChiP modules also have lower manufacturing costs than our original VI Chips, thereby allowing us to offer highly differentiated products, not only with superior total cost of ownership over time, but at attractive initial price points. Our goal is to offer ChiP modules and solutions on a cents per watt basis near or equivalent to the prices of competitive product offerings, thereby presenting customers with a compelling value proposition.

ChiPs are produced in the same functional families as our earlier VI Chip FPA modules (i.e., PRM, BCM, and VTM), but today we offer five package sizes ranging from 13 by 23 mm to 61 by 23 mm. We currently offer over 100 specific ChiP module variants, reflecting the multiple configurations, based on dimensions, lead formats, and

performance specifications, enabled by the flexible module format. During 2015, we accelerated our introduction of ChiP modules, adding new products and additional variants within the product families. During the year, we introduced 36 new ChiP modules, all of which are available for purchase. Our unprecedented pace of ChiP product development is evidenced further by our completion during 2015 of over 60 additional base and derivative designs that have not yet been released for sale. Based on our current design and development activities, we

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anticipate, in 2016, additional expansion of the range of package sizes, board or chassis mounting alternatives, and performance characteristics of our ChiP product offerings.

Notably, in 2015, we introduced more than two dozen new DCM® (Direct Current Module) variants in ChiP format, in commercial and military grades. We currently offer the ChiP DCM in approximately 45 commercial and military variants in either a 4623 (i.e., 46 x 23 mm) package, capable of up to 600 watts, or a 3623 package, capable of up to 320 watts. ChiP DCMs are offered with nominal input voltages of 24, 28, 48, 270, 290, and 300 volts and nominal output voltages of 48, 36, 28, 24, 15, 12, and 5 volts.

These isolated DC-DC converters are an important element of our competitive positioning. Given their function and form factor, ChiP DCMs should be very familiar to customers currently purchasing our brick DC-DC converters. In addition, the DCM, utilizing our most recent advances in ZVS soft switching and thermal management, offers enhanced performance compared to our legacy bricks. Reflecting our Power Component Design Methodology, DCMs can be integrated easily into complete power management solutions using our complementary components. The flexibility of the ChiP DCM design also allows a designer to array up to eight modules in parallel, without performance derating or the need for additional circuitry. When configured in this manner, a designer can implement a highly efficient conversion solution of up to 4.8 kilowatts, optimized for size and weight.

Also in 2015, we expanded our ChiP BCM family of isolated, fixed ratio bus converters. We offer a low voltage family of ChiP BCMs for board-level IBA implementations and a high voltage family for voltage conversion, either individually or in arrays, in HVDC micro-grid applications (e.g., datacenters). Both families are configured in our 6123 ChiP package and provide peak conversion efficiencies up to 97.9%. The low voltage family accepts input voltages from 36 to 60 volts and generates output voltages from 2.4 to 55 volts, with power up to 1.95 kilowatts. The high voltage family accepts input voltages from 330 to 365 volts (or alternatively, 260 to 410 volts) and generates output voltages from 8.1 to 51.3 volts, with power up to 1.75 kilowatts. We believe ChiP BCMs, with power densities of up to 2,750 W/in^3, deliver the highest efficiency and highest density of any bus converters available. All of our bus converters utilize our Sine Amplitude Converter switching topology, which delivers unmatched conversion efficiency and power density, with low noise and fast speed (i.e., transient response). In addition, the low AC impedance of our bus converter designs enables bulk capacitance, normally located at the input of a point-of-load regulator, to be placed at the high voltage input to our BCM, thereby reducing the bulk capacitance required, while saving board area and system cost. With the wide range of ChiP BCMs we offer, complemented by our expanding offerings of ChiP and SiP point-of-load regulators, we believe we are well-positioned to expand our share of market segments in which IBA implementations are preferred. We also believe we are well-positioned with these products to establish a leadership position in the emerging HVDC market segment.

Our family of NBM bidirectional bus converter modules, a non-isolated BCM derivative introduced in 2015, is representative of the platform leverage afforded by the ChiP concept. Bidirectional power transfer capability is attractive in applications employing batteries and battery chargers, as it allows for less circuitry and management overhead. NBMs enable more efficient transmission of power from low voltage sources to remote, low voltage loads by means of a higher voltage intermediate bus, providing voltage boost (i.e., step-up) and voltage buck (i.e., step-down) at each end of the bus. We are targeting emerging applications in hybrid vehicles, as our 6123 NBM provides up 2.4 kilowatts of power, up to 98.3% operating efficiency, and market-leading power density of up to 3,532 W/in3, making it ideal for space constrained applications in which isolation is managed at the system level (as is the case in hybrid vehicles). Given our expertise in 48 volt applications, we believe our NBM family is extremely well suited for the requirements of the proposed LV148 standard, which has been advanced by major European automotive OEMs in support of industry adoption of the higher efficiency 48 volt bus.

ChiP modules are targeted at applications, regardless of the power distribution architecture, for which their high level of differentiation is appropriate. Across distributed power system architectures, ChiPs

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are targeted at aerospace and aviation (e.g., for use in unmanned aerial vehicles, due to their small form factor and light weight); defense electronics (e.g., for use in airborne, seaborne, or field radar, due to their high power capabilities, conversion efficiencies, ruggedness, and reliability); industrial automation, instrumentation, and test equipment (e.g., for use in semiconductor testing, due to their power density and tight regulation); telecommunications and networking infrastructure (e.g., for use in pole-mounted small-cell base stations in urban environments, due to their form factor, reliability, and cost/performance profile); and vehicles (e.g., in hybrid electric vehicles, due to their form factor, light weight, differentiated performance, and cost/performance profile). As stated, we also are pursuing applications with OEMs and their contract manufacturers in market segments for which the advantages of ChiPs are most compelling. In particular, we are marketing FPA, enabled by our new products, as an alternative to IBA and other distributed architectures, primarily in enterprise computing (notably large-scale datacenters, for which we believe our PRM and VTM combination represents the smallest, most efficient 48 volt to microprocessor solution available).

Our extensive product roadmap for ChiP modules includes the further expansion of product families, in terms of power levels, performance, and dimensions, military grade versions of several products, and the addition of various approaches to chassis and board mounting, all targeted at increasing our addressable market opportunity.

VIAs (Vicor Integrated Adapter Package)

In 2014, we introduced the VIA platform, a rugged, double-sided, copper-alloy package for ChiP modules, integrating complementary components, circuitry, and superior thermal management through conductive cooling. In 2015, we released to production our first VIA-based products and currently offer over 70 VIA packages for ChiP DCMs, BCMs, and PFMs.

We consider the VIA platform to be important to our transitional go-to-market strategy, as it has been designed to enable the use of ChiP modules across the widest range of power system architectures and applications. It is an easy-to-use power management solution, providing customers an advanced, turn-key solution for their demanding power needs, cost-effectively accelerating design cycles and time-to-market, while providing superior power density. The VIA platform is particularly differentiated by the flexibility it provides designers, as it offers substantial thermal advantages and its form factor allows a broad range of installation options. In numerous applications, the package simplifies thermal design considerations and, in some instances, eliminates the need for a fan for convection cooling, improving overall system reliability and further minimizing the power system footprint. Offered in board and chassis mount configurations, all VIA packages have a vertical dimension of 9.3 mm and a width of 35.5 mm, and, depending on the packaged ChiP module and its functionality, range in length from 72.0 to 141.4 mm.

The VIA platform facilitates our latest AC front-end solution, based on the ChiP PFM® (Power Factor Module). The VIA PFM represents a significant improvement over our legacy front-end solutions, thereby enhancing our positioning as a supplier of highly-differentiated power management solutions from the AC source to the point(s) of load. The VIA PFM achieves a market-leading power density of 127 W/in³, supplying an isolated DC output of either 24 or 48 volts, at up to 400 watts, from a universal AC input. It operates with active power factor correction at 93% peak conversion efficiency, which is an unprecedented level for an AC-DC converter of this size and power density. Combining the VIA PFM with our small AIM (AC Input Module), which provides AC rectification, filtering, transient protection, and inrush limiting capabilities, creates a high-performance AC-DC front-end solution with an unmatched size profile. This solution is especially well-suited for emerging applications with size constraints, including small-cell base stations and commercial LED lighting.

The VIA platform also facilitates the VIA DCM, which is an important product for executing our strategic transition. We currently offer seven variants of the VIA DCM. The product family integrates filtering, output voltage regulation, circuitry protection, and a control interface, giving the VIA DCM the function of a conventional brick DC-DC converter, while offering higher conversion efficiency,

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superior power density, and the design flexibility described above. As such, we are positioning the VIA DCM as a successor to our legacy brick DC-DC converters, notably in advanced, challenging applications. However, the VIA DCM also is positioned as an innovative, high-performance element of our Power Component Design Methodology, as it has been designed to be integrated with our other products to facilitate design of comprehensive power system solutions.

In 2015, we introduced a High Voltage VIA BCM, for use in HVDC distribution applications. As with the VIA PFM, this product is differentiated by its small size, very low profile, and thermal advantages, which provide substantial design flexibility.

Cool-Power® ZVS Modules (System-in-Package Point-of-Load Regulators)

First introduced in 2012 by our Picor Corporation subsidiary, the Cool-Power brand of non-isolated, point-of-load regulators currently consists of 31 variants of buck (i.e., the device steps down voltage) regulators, four of which were introduced in 2015, and three variants of buck-boost (i.e., the device lowers or increases voltage) regulators, all of which were introduced in 2015.

We believe Cool-Power buck regulators provide best in class conversion efficiency (up to 98%), allowing customers to deploy more efficient designs, regardless of power system architecture, based on the compatibility of these point-of-load regulators with higher, more efficient input voltages. Operating from nominal input voltages of 12, 24, or 48 volts, these regulators are optimized for applications requiring tight point-of-load regulation, such as computer and video processors, delivering the highest power density possible at an attractive cost.

The high conversion efficiency of our Cool-Power regulators is enabled by the high switching frequencies of our proprietary ZVS topology, which minimizes switching losses, while maximizing dynamic response to line and load transients. Along with ZVS control circuitry, the advanced design of Cool-Power regulators incorporates proprietary sampled feedback control and proprietary power semiconductors, all within a high-density, surface-mount package. The low noise of our ZVS approach also reduces the size of external filtering components, thereby improving overall power density.

Cool-Power regulators are competitively well-positioned to address market trends toward higher required conversion efficiencies and higher currents at the point-of-load. The recent addition of buck-boost variants expands our capabilities to include loads powered by batteries, which are subject to varying voltage delivery over their discharge cycle. We believe these products will be an important contributor to our long-term success, as they represent a meaningful element of our Power Component Design Methodology, enabling comprehensive, highly integrated solutions for FPA and other distributed architectural implementations, fulfilling our strategic commitment to offering integrated solutions all the way to the point-of-load. Our success to date with these products has frequently been when they have been part of an integrated FPA solution, delivering a tightly regulated voltage to a downstream VTM serving as a current multiplier, which in turn delivers low voltage, high amperage, regulated current to the point-of-load, typically a microprocessor.

Power Path Management Components

Our Picor subsidiary offers a limited range of specialized components for circuit protection, all of which are characterized by small size, ease-of-use, and differentiated performance. The highest volume products are QuietPower® filters for input filtering of electro-magnetic interference and output noise (i.e., ripple attenuation). Other

products include: the Cool-Switch®, a load-disconnect switch solution, which functions as a high-speed electronic circuit breaker; the Cool-Swap®, a hot swap circuit breaker controller enabling safe system operation during circuit card insertion; and the Cool-ORing®, a high-density, active ORing solution enabling accurate, fast detection and isolation of circuit faults, while significantly reducing power dissipation and eliminating the need for heat sinking. We also offer numerous families of discrete components, capacitors, and electronic and mechanical accessories, all compatible with our power components.

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We consider these products to be a valuable complement to our Power Component Design Methodology, despite their relatively small sales volumes, as they enable customers, assisted by our application engineers, to source from Vicor their complete solution to power conversion and management.

VI Chips (Modular Power Components)

We continue to offer the first generation of VI Chip PRM, BCM, and VTM modules, in full (32.5 by 22.0 by 6.73 mm) and half (22.0 by 16.5 by 6.73 mm) sizes, targeting FPA implementations. These products remain compelling solutions for certain applications, notably in defense electronics, medical instrumentation, and test and measurement applications.

We also offer a limited number of VI Chips in our VI Brick packaging, which incorporates complementary circuitry and offers superior thermal characteristics, while facilitating a range of board mounting alternatives.

With the introduction of ChiPs and VIA packaging, we anticipate our sales of the first generation of VI Chips and VI Bricks will be limited to shipments to existing customers during the life cycles of the applications into which these products have been designed. We expect the life cycles of many of these applications may continue for several years.

Patents and Intellectual Property

An important element of our strategy is to protect our competitive leadership with domestic and foreign patents and patent applications that cover our products and much of their enabling technologies. We believe our competitive leadership is further protected by proprietary trade secrets associated with our use of certain components and materials of our own design, as well as our significant experience with manufacturing, packaging, and testing these complex devices.

We believe our patents afford advantages by building fundamental and multilayered barriers to competitive encroachment upon key features and performance benefits of our principal product families. Our patents cover the fundamental switching topologies used to achieve the performance attributes of our converter product lines; converter array architectures; product packaging design; product construction; high frequency magnetic structures; as well as automated equipment and methods for circuit and product assembly.

In the United States, as of December 31, 2015, we have been issued 93 total patents, which expire between 2016 and 2034. We also have a number of patent applications pending in the United States and certain countries of Europe and Asia. We have vigorously protected our rights under these patents and will continue to do so. Although we believe patents are an effective way of protecting our technology, there can be no assurances our patents will prove to be enforceable in any given jurisdiction.

In addition to generating revenue from product sales, we seek to license our intellectual property. In granting licenses, we generally retain the right to use our patented technologies and manufacture and sell our products in all licensed geographic areas and fields of use. Licenses are granted and administered through our wholly-owned subsidiary, VLT, Inc., which is the assignee for our patents that may be subject to licensing. Revenues from licensing arrangements have not exceeded 10% of our consolidated revenues in any of the last three fiscal years.

Customers and Backlog

The applications in which our products are used are in the higher-performance, higher-power segments of the market segments we serve. The BBU has customers concentrated in aerospace and aviation, defense electronics, industrial automation and equipment, medical diagnostics, rail transportation, and test and measurement instrumentation. VI Chip and Picor have customers concentrated in the datacenter and

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supercomputer segments of the computing market, although they also target applications in aerospace and aviation, defense electronics, electric and hybrid vehicles, instrumentation and test equipment, networking equipment, and solid state lighting. With our strategic emphasis on larger, high-volume customers, we expect to experience a greater concentration of sales among relatively fewer customers.

For the year ended December 31, 2015, one customer, NuPower Electronic, Ltd., accounted for approximately 16.2% of net revenues, and our five largest customers represented approximately 33.4% of net revenues. For the year ended December 31, 2014, one customer (NuPower Electronic, Ltd.) accounted for approximately 14.7% of net revenues, and our five largest customers represented approximately 32.6% of net revenues. For the year ended December 31, 2013, two customers (NuPower Electronic, Ltd. and Tech-Front Computer, Ltd.) accounted for approximately 10.9% and 10.1% of net revenues, respectively, and our five largest customers represented approximately 29.2% of net revenues.

International revenues, as a percentage of total revenues, were approximately 59.6%, 60.5%, and 59.5% in 2015, 2014, and 2013, respectively. Net revenues from customers in Hong Kong and China accounted for approximately 21.8% and 12.4%, respectively, of total net revenues in 2015, approximately 20.2% and 12.0%, respectively, of total net revenues in 2014 and approximately 16.2% and 11.3%, respectively, of total net revenues in 2013. International sales have increased from historical levels primarily due to higher volumes of shipments to foreign contract manufacturers utilized by domestic and international OEMs. As we have substantially expanded our sales and customer support activities and resources internationally, particularly in Asia, we expect international sales to continue to increase as a percentage of total revenue.

As of December 31, 2015, we had a backlog of approximately $39,073,000, compared to $54,249,000 as of December 31, 2014. Backlog, as presented here, consists of orders for products for which shipment is scheduled within the following 12 months, subject to normal customer cancellation policies. A portion of our revenue in any quarter is, and will continue to be, derived from orders booked and shipped in the same quarter. Over the past two years, the portion of sales booked and shipped in the same quarter has represented less than two-fifths of our quarterly revenue, as we typically only build products to customer specifications upon receipt of a purchase order (i.e., we typically do not maintain significant inventories of finished goods for the BBU and VI Chip). Products sold by the BBU may have a lead time (i.e., the period between receipt of an order and shipment of the product) of up to six weeks, although the average lead time for 2015 was less than four weeks. Products sold by VI Chip typically have a lead time in excess of eight weeks, reflecting higher efficiencies associated with our ChiP modules. Lead times for the BBU and VI Chip may shorten (and have shortened) during periods of sustained volume. Picor, given its fabless model, builds inventories based on expected customer demand and orders from stocking distribution partners. As such, the portion of sales booked and shipped in the same quarter can vary considerably depending on the relative volumes of BBU, VI Chip, and Picor products booked within the quarter.

Sales and Marketing

We reach and serve customers through several channels: a direct sales force world-wide; a network of independent sales representative organizations in North America and South America; independent non-stocking distributors in Europe and Asia; and three stocking distributors, Digi-Key Corporation, Future Electronics Incorporated, and Mouser Electronics, Inc. These channels are supported by regional TSCs, each offering application engineering and sales support for customers and our channel partners. Domestic TSCs are located in: Andover, Massachusetts; Lombard, Illinois; and Santa Clara, California. International TSCs are located in: Hong Kong, China; Shanghai, China; Munich, Germany; Bangalore, India; Milan, Italy; Taipei, Taiwan (Republic of China); Seoul, South Korea; and Camberley, United Kingdom.

Because of the technically complex nature of our products and the applications they address, we maintain an extensive staff of Field Applications Engineers to support our own sales and customer support activities, as well as those of our channel partners. Field Application Engineers, based in our TSCs, provide direct technical support worldwide by reviewing new applications and technical matters with existing and potential customers, as well as

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our channel partners. Product Line Engineers, located in our Andover headquarters, support Field Application Engineers assigned to all of our TSCs.

We utilize an in-house distributor support initiative, Vicor Express , to support our regional distributors in the European Union and small, low volume customers not served by these regional distributors. Vicor Express is focused on new customer lead generation through marketing in local languages, support of small-volume customers targeted for transition to distributors as volumes increase, and close coordination of distributor activities with these customers. Vicor Express customers place orders, denominated in Euros or Pounds Sterling, with Vicor B.V., which serves as importer of record for direct shipments by Vicor from Andover, Massachusetts, to customers in the European Union. European TSCs participating in the Vicor Express initiative do not accept purchase orders from any customers and do not record any revenue associated with shipments from Vicor to Vicor B.V.

Vicor also reaches customers via our electronic commerce capability through our website, www.vicorpower.com. Registered customers in the United States, Canada, and certain European countries are able to purchase prototype quantities of selected products online. Our Internet-based resources are an important element of our efforts to interact and support customers. Within our website, Vicor *PowerBench*™ is a workspace of tools and references allowing engineers to select, architect, and implement power systems using Vicor s products. During 2015, we continued to enhance our highly differentiated *Whiteboard*™ tool, which allows users to configure and analyze their own power system designs or those from an extensive library of designs addressing a wide range of applications. Users can modify the operating condition for each component of their design to match the intended application and perform efficiency and loss analysis of individual components and the full power system. We are aggressively expanding the range and capabilities of engineering tools we make available online to customers and prospective customers.

We generally sell our products on the basis of our standard terms and conditions, and we most commonly warrant our products for a period of two years. In a limited number of circumstances, we have entered into supply contracts with certain high-volume customers calling for extended warranty terms. With our distribution partners, we also enter into contracts. With our stocking distributors, these contracts provide for our product warranties to transfer to the end customer upon final sale of our product(s) by the stocking distributor.

Manufacturing, Quality Assurance, and Supply Chain Management

Our BBU and VI Chip manufacturing facilities are co-located in Andover, Massachusetts, where we are headquartered. Picor, given its fabless model, outsources manufacturing, packaging, and testing of its products under contract to partners in the United States and Asia.

Our primary manufacturing processes consist of assembly of electronic components onto printed circuit boards; automatic testing of components; wave, reflow and infrared soldering of assembled components; encapsulation or over-molding of converter subassemblies and assemblies; final environmental stress screening of certain products; and product inspection and testing using automated equipment. These processes are largely automated, but their labor components require relatively high levels of skill and training.

We pursue a manufacturing strategy based upon the continuous improvement of product quality, volume throughput, and reduced manufacturing costs. Product quality and reliability are critical to our success and, as such, we emphasize quality and reliability in our design and manufacturing activities. We follow industry best practices in manufacturing and are compliant with ISO 9001 certification standards (as set forth by the International Organization for Standardization). Our quality assurance practices include rigorous testing and, as necessary, burn-in and temperature cycling (i.e., extended operation of a product to confirm performance) of our products using automated equipment.

We continue to make investments in automated manufacturing equipment, particularly for our ChiP modules and VIA packaging platforms. Based on current estimates of ChiP and VIA manufacturing volumes and

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our capacity requirements, we do not expect to incur capital expenditures during 2016 materially higher than we incurred during recent years.

Components and materials used in our products are purchased from a variety of domestic and international vendors. Most of the components are available from multiple sources, whether directly from suppliers or indirectly through distributors. In instances of single source items, we maintain levels of inventories we consider to be appropriate to enable meeting the delivery requirements of customers. Incoming components, assemblies, and other parts are subjected to several levels of inspection procedures, and we maintain robust data on our inventories in order to support our quality assurance procedures. Picor, given its fabless model, relies on a limited number of wafer foundries and providers of packaging and test services. Our proprietary switching controllers were designed by and are sourced through Picor, which relies on these wafer foundries and service providers for supply continuity and sufficiency of these critical semiconductor devices.

See Note 17 *Segment Information* to the Consolidated Financial Statements for certain financial information associated with the operations and manufacturing activities of our business segments.

Employees

As of December 31, 2015, we had 964 full time employees and 21 part time employees. None of our employees are subject to a collective bargaining agreement. We believe our continued success depends, in part, on our ability to attract and retain qualified personnel. Although there is strong demand for qualified personnel, we have not to date experienced difficulty in attracting and retaining sufficient engineering and technical personnel to meet our needs (see Part I, Item 1A Risk Factors).

Available Information

We maintain a website with the address www.vicorpower.com and make available free of charge through this website our Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K, and amendments to these reports filed or furnished pursuant to Section 13(a) or 15(d) of the Exchange Act, as soon as reasonably practicable after we electronically file such material with, or furnish such material to, the Securities and Exchange Commission. We also make available on our website our Code of Business Conduct, as well as the charters for the Audit and Compensation Committees of our Board of Directors.

While our website sets forth extensive information, including information regarding our products and the applications in which they may be used, such information is not a part of, nor incorporated by reference into, this Annual Report on Form 10-K and shall not be deemed filed under the Exchange Act.

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ITEM 1A. ***RISK FACTORS***

This Annual Report on Form 10-K contains forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Exchange Act. Actual results could differ materially from those projected in the forward-looking statements as a result of, among other factors, the risk factors set forth below.

Our future operating results are difficult to predict and are subject to fluctuations.

Our operating results, including revenues, gross margins, operating expenses, and net income (loss), have fluctuated on a quarterly and annual basis. Our focus on higher volume opportunities with OEMs and their contract manufacturers has caused the impact of a relative few such customers to disproportionately influence our operating results. Unanticipated delays in purchase orders from and shipments to these customers have resulted in lower revenue, contributing to our recent operating losses. We cannot predict when, or if, we will return to profitability. Our future operating results may be materially affected by a number of factors, many of which are beyond our control, including:

changes in demand for our products and for our customers end-products incorporating our products, as well as our ability to respond efficiently to such changes in demand, including changes in order lead times and the volume of product for which orders are received and the product shipped within an individual quarter;

our ability to manage our supply chain, inventory levels, and our own manufacturing capacity or that of third-party partners in the event of delays or cancellation of significant customer orders;

our ability to effectively coordinate changes in the mix of products we manufacture and sell, while managing our ongoing transition in organizational focus from traditional brick power components to our new products;

our ability to provide and maintain a high level of support to an increasing number of demanding, high volume customers;

the ability of our third party suppliers, service subcontractors, and manufacturers to supply us with sufficient quantities of high quality products, components, or services on a timely basis;

the effectiveness of our efforts to continuously reduce product costs and manage operating expenses;

our ability to utilize our manufacturing facilities and personnel at efficient levels, maintaining production capacity and manufacturing yields;

the timing of our new product introductions and our ability to meet customer expectations for timely delivery of fully qualified products;

the timing of new product introductions or other competitive actions (e.g., product price reductions) by our competitors;

the ability to hire, retain, and motivate qualified employees to meet the demands of our customers;

intellectual property disputes;

potential significant litigation-related costs;

adverse economic conditions in the United States and those international markets in which we operate;

adverse budgetary conditions within the U.S. government, particularly the Department of Defense, which continue to limit spending on current and anticipated programs into which we sell or anticipate to sell our products;

costs related to compliance with increasing worldwide governance, quality, environmental, and other regulations; and

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the effects of events outside of our control, including natural disasters, public health emergencies, terrorist activities, political risks, including international conflicts, information security breaches, communication interruptions, and other *force majeure*.

As a result of these and other factors, we cannot assure you we will not experience significant fluctuations in future operating results on a quarterly or annual basis. In addition, if our operating results do not meet the expectations of investors, the market price of our Common Stock may decline.

Our stock price has been volatile and may fluctuate in the future.

Because of the factors set forth below, among others, the trading price of our Common Stock has fluctuated and may continue to fluctuate significantly:

volatility of the financial markets;

uncertainty regarding the prospects of domestic and foreign economies;

uncertainty regarding domestic and international political conditions, including tax policies;

actual or anticipated fluctuations in our operating performance or that of our competitors;

the performance and prospects of our major customers;

announcements by us or our competitors of significant new products, technical innovations, or litigation;

investor perception of our company and the industry in which we operate;

the absence of earnings estimates and supporting research by investment analysts;

the liquidity of the market for our Common Stock;

the uncertainty of the declaration and payment of future cash dividends on our Common Stock; and

the concentration of ownership of our Common Stock by Dr. Vinciarelli, our Chairman of the Board, Chief Executive Officer, and President.

We do not actively communicate with investment analysts and, as a consequence, there are no earnings estimates or supporting research coverage of Vicor and our Common Stock. While we seek to be transparent in our financial

reporting, public statements, and related disclosures, the absence of research coverage may limit investor interest in our Common Stock. Because our operating results have fluctuated on a quarterly and annual basis, investors may have difficulty in assessing our current and future performance.

In the past, we have declared and paid cash dividends on our Common Stock. The payment of dividends is based on the periodic determination by our Board of Directors that we have adequate capital to fund anticipated operating requirements and that excess cash is available for distribution to stockholders via a dividend. We have no formal policy regarding dividends and, as such, investors cannot make assumptions regarding the possibility of future dividend payments nor the amounts and timing thereof.

The ownership of our Common Stock is concentrated between Dr. Vinciarelli and a limited number of institutional investors. Dr. Vinciarelli owned, as of December 31, 2015, 9,828,271 shares of our Common Stock, as well as 11,023,648 shares of our Class B Common Stock (convertible on a one-for-one basis into Common Stock), together representing 54.8% of total issued and outstanding shares. Accordingly, the market float for our Common Stock and average daily trading volumes are relatively small, which can negatively impact investors ability to buy or sell shares of our Common Stock in a timely manner.

Dr. Vinciarelli owns 93.7% of our issued and outstanding Class B shares, which possess 10 votes per share. Dr. Estia J. Eichten, a member of our Board of Directors, owns the majority of the balance of Class B shares

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issued and outstanding. As such, Dr. Vinciarelli, controlling in aggregate 82.9% of our outstanding voting securities, has effective control of our governance.

The ongoing uncertainty in global economies could materially and adversely affect our business and consolidated operating results.

Disruption and further deterioration of global economic conditions, including relative strength of the U.S. Dollar, may reduce customer purchases of our products, thereby reducing our revenues and earnings. In addition, such adverse conditions may, among other things, result in increased price competition for our products, increased risk of excess and obsolete inventories, increased risk in the collectability of our accounts receivable from our customers, increased risk in potential reserves for doubtful accounts and write-offs of accounts receivable, and higher operating costs as a percentage of revenues.

We compete with many companies possessing far greater resources.

Some of our competitors have greater financial, manufacturing, technical, sales and marketing resources than we have. We compete with domestic and foreign manufacturers of integrated power supplies and power conversion components. With the growth of our VI Chip and Picor product lines, we increasingly are competing with global manufacturers of power management products with far larger organizations and broader semiconductor-based product lines. Competition is generally based on design and quality of products, product performance, features and functionality, and product pricing, availability and capacity, with the relative importance of these factors varying among products, markets and customers. Existing or new competitors may develop products or technologies that more effectively address the demands of our customers and markets with enhanced performance, features and functionality or lower cost. If we fail to develop and commercialize leading-edge technologies and products that are cost effective and maintain high standards of quality, and introduce them to the market on a timely basis, our competitive position and results of operations could be materially adversely affected.

Our future success depends upon our ability to develop and market differentiated, leading-edge power conversion products for larger customers, potentially contributing to lengthy product development and sales cycles that may result in significant expenditures before revenues are generated. Our future operating results are dependent on the growth in such customers businesses and on our ability to profitably develop and deliver products meeting customer requirements.

The power system industry and the industries in which many of our customers operate are characterized by intense competition, rapid technological change, quickened product obsolescence, and price erosion for mature products, each of which could have an adverse effect on our results of operations. We are following a strategy based on the development of differentiated products addressing what we believe to be the long-term limitations of traditional power architectures, while at the same time sustaining the performance of the BBU, which manufactures and markets our lines of legacy brick products. The development of new products is often a complex, time-consuming, and costly process involving significant investment in research and development, with no assurance of return on investment. Although we have introduced many products over the past three years, there can be no assurance we will be able to continue to develop and introduce new and improved products in a timely or efficient manner. Similarly, there can be no assurance recently introduced or to be developed products will achieve customer acceptance.

Our future success depends substantially upon customer acceptance of our innovative products. As we have been in the early stages of market penetration for these products, we have experienced lengthy periods during which we have focused our product development efforts on the specific requirements of a limited number of large customers, followed by further periods of delay before meaningful purchase orders are received. These lengthy development and

sales cycle times increase the possibility a customer may decide to cancel or change product plans, which could reduce or eliminate our sales to that customer. As a result, we may incur significant

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product development expenses, as well as significant sales and marketing expenses, before we generate the related revenues for these products. Furthermore, we may never generate the anticipated revenues from a product after incurring such expenses if our customer cancels or changes its product plans.

We are shifting our go-to-market strategy to focus on larger opportunities with global OEMs and their contract manufacturers. Our growth is therefore dependent on: the pace at which these OEMs develop their own new products, the acceptance of our products by these OEMs, and the success of the OEM products incorporating our new products. If we fail to anticipate changes in our customers businesses and their changing product needs or do not successfully identify and enter new markets, our results of operations and financial position could be negatively impacted. We cannot assure you the markets we serve will grow in the future, our existing and new products will meet the requirements of these markets, or we can maintain adequate gross margins or operating profits in these markets.

Our operating results recently have been influenced by a limited number of customers, and our future results may be similarly influenced.

Since it was established, our VI Chip subsidiary has derived a substantial portion of its revenue in any given year from one customer, whether through sales directly to the customer or indirectly to the customer s contract manufacturers. Similarly, our Picor subsidiary has derived a substantial portion of its third-party revenue from a limited number of customers, including those customers served by VI Chip. This concentration of revenue is a reflection of the relatively early stage of adoption of the technologies, architectures, and products offered by these subsidiaries, and their targeting of market leading innovators as initial customers. Our current sales and marketing efforts, in part, are focused on accelerating the adoption of VI Chip and Picor products by a diversified customer base across a number of identified market segments. However, we cannot assure you our new strategy will be successful and such diversification of customers will be achieved.

Further stagnation of spending by the U.S. Department of Defense or a pronounced shift in the nature of such spending may negatively influence our operating results.

Customers in the defense electronics segment historically have contributed a meaningful portion of our revenue, primarily in the BBU, which sells military-grade brick modules and, through our Vicor Custom Power businesses, customer-specific systems incorporating our brick modules, primarily for C4I (C*ommand*, *Control*, *Communications*, *Computing, and Intelligence*) applications. However, shifts in Department of Defense spending priorities and ongoing budget constraints have contributed to a decline in such revenue as a percentage of our consolidated revenue. An additional risk to our defense electronics volume is associated with the organizational structure, capacity, and ownership of our Vicor Custom Power businesses. In December 2015, we completed the statutory merger of one Vicor Custom Power subsidiary, Mission Power Solutions, Inc. with and into another subsidiary, Northwest Power, Inc., after which we closed the Mission Power Solutions location. Also in December 2015, we sold our 49% ownership interest in Aegis Power Systems, Inc. to Aegis Power Systems, thereby ending our formal relationship with the subsidiary. We undertook these transactions in order to consolidate our custom organization, reduce manufacturing capacity, and reduce our cost structure. Also, Converpower Corporation, in which we hold a 49% ownership interest, ceased operations in December 2015, transferring its inventory and certain fixed assets to Granite Power Technologies, Inc., a wholly-owned subsidiary we established to assume the operations of a previously unincorporated Vicor Custom Power location (i.e., a division). We anticipate the formal transaction with Converpower will be completed during the first quarter of 2016. If the performance of the remaining three Vicor Custom Power subsidiaries does not improve during 2016, we may choose to further consolidate our locations or otherwise rationalize our associated cost structure, which may impact our ability to compete cost effectively in this market segment.

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We may not be able to procure necessary key components for our products, or we may purchase excess raw material inventory or unusable inventory, possibly impacting our operating results.

The power systems industry, and the electronics industry as a whole, can be subject to pronounced business cycles and otherwise subject to sudden and sharp changes in demand. Our success, in part, is dependent on our ability to forecast and procure inventories of raw materials and components to match production schedules and customer delivery requirements. Many of our products require raw materials supplied by a limited number of vendors and, in some instances, a single vendor. During certain periods, key components or materials required to build our products may become unavailable in the timeframe required for us to meet our customers needs. Our inability to secure sufficient materials and components to build products for our customers has, in the past, negatively impacted our sales and operating results and could do so again. We may choose, and have chosen, to mitigate this risk by increasing the levels of inventory for certain materials and components. Such increased inventory levels may increase the potential risk for excess or obsolete inventories, should our forecasts fail to materialize or if there are negative factors impacting our customers end markets, leading to order cancellation. If we identify excess inventory or determine certain inventory is obsolete (i.e., unusable), we may record additional inventory reserves (i.e., expenses representing the write-off of the excess or obsolete inventory), which could have an adverse effect on our gross margins and on our operating results.

We rely on third-party vendors and subcontractors for supply of components, assemblies, and services and, therefore, cannot control the availability or quality of such components, assemblies, and services.

We depend on third-party vendors and subcontractors to supply components, assemblies, and services used in our products, some of which are supplied by a single vendor, and have experienced shortages of certain semiconductor components, incurred additional and unexpected costs to address the shortages, and experienced delays in production and shipping. If suppliers or subcontractors cannot provide their products or services on time or to our specifications, we may not be able to meet the demand for our products and our delivery times may be negatively affected. In addition, we cannot directly control the quality of the products and services provided by third parties. In order to grow revenue, we likely will need to identify and qualify new suppliers and subcontractors to supplant or replace existing suppliers and subcontractors which is a time-consuming and expensive process. In addition, any qualification of new suppliers may require customers of our products utilizing products and services from new suppliers and service providers to undergo a re-qualification process. Such circumstances likely would lead to disruptions in our production, increased production costs, delays in shipping to our customers, and/or increases in prices paid to third parties for products and services.

We are exposed to foreign economic, political, and other external risks.

For the years ended December 31, 2015, 2014, and 2013, our revenues from sales outside the United States were 59.6%, 60.5%, and 59.5%, respectively, of the Company s total revenues. We expect international sales will continue to be a significant component of total sales, since many of the global manufacturers we target as customers increasingly utilize offshore contract manufacturers and rely upon those contract manufacturers to place orders directly with us. We also expect international revenue from our distributors to increase.

While our currency risks are limited, as our sales are denominated in U.S. Dollars worldwide, with the exception of sales by VJCL and Vicor B.V., our international activities expose us to special risks including, but not limited to, regulatory requirements, economic and political instability, transportation delays, foreign currency controls and market fluctuations, trade barriers and tariffs, and unfavorable shifts in foreign exchange rates. In addition, our international customers business may be negatively affected by the ongoing crisis in the global credit and financial markets, or by economic sanctions, as were imposed in 2014 by the U.S. Department of the Treasury against certain Russian entities. Sudden or unexpected changes in the foregoing could have a material adverse effect on our operating

results.

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We may be unable to adequately protect our proprietary rights, which may limit our ability to compete effectively.

We operate in an industry in which the ability to compete depends on the development or acquisition of proprietary technologies that must be protected to preserve the exclusive use of such technologies. We devote substantial resources to establish and protect our patents and proprietary rights, and we rely on patent and intellectual property law to protect such rights. This protection, however, may not prevent competitors from independently developing products similar or superior to our products. We may be unable to protect or enforce current patents, may rely on unpatented technology that competitors could restrict, or may be unable to acquire patents in the future, all of which may have a material adverse effect on our competitive position. In addition, the intellectual property laws of foreign countries may not protect our rights to the same extent as those of the United States. We have been and may need to continue to defend or challenge patents. We have incurred and expect to incur significant financial costs in the defense of our patented technologies and have devoted and expect to devote significant resources to these efforts which, if unsuccessful, may have a material adverse effect on our operating results and financial position.

We face intellectual property infringement claims that could be disruptive to operations and costly to resolve and may encounter similar infringement claims in the future.

The power supply industry is characterized by vigorous protection and pursuit of intellectual property rights. We have in the past and may in the future receive communications from third parties asserting that our products or manufacturing processes infringe on a third party s patent or other intellectual property rights. Such assertions, if publicly disclosed, have in the past and may in the future inhibit the willingness of potential customers to purchase certain of our products. In the event a third party makes a valid intellectual property claim against us and a license is not available to us on commercially reasonable terms, or at all, we could be forced to either redesign or stop production of products incorporating that technology, and our operating results could be materially and adversely affected. In addition, litigation may be necessary to defend us against claims of infringement, and this litigation could be costly, extend over a lengthy period of time, and divert the attention of key personnel. An adverse outcome in these types of matters could have a material adverse impact on our operating results and financial condition.

Please see Part I, Item 3 Legal Proceedings for information regarding current litigation related to our intellectual property.

Any expenses or liability resulting from the outcome of litigation could adversely affect our operating results and financial condition.

From time to time, we may be subject to claims or litigation, including intellectual property litigation as described elsewhere in this Annual Report on Form 10-K. Any such claims or litigation may be time-consuming and costly, divert management resources, require us to change our products, or have other adverse effects on our business. Any of the foregoing could have a material adverse effect on our operating results and could require us to pay significant monetary damages.

The outcomes of legal proceedings and claims brought against us are subject to significant uncertainty. An estimated loss from a loss contingency such as a legal proceeding or claim is accrued by a charge to income if it is probable that an asset has been impaired or a liability has been incurred and the amount of the loss can be reasonably estimated. Disclosure of a contingency is required if there is at least a reasonable possibility that a loss has been incurred. In determining whether a loss should be accrued, we evaluate, among other factors, the degree of probability of an unfavorable outcome and the ability to make a reasonable estimate of the amount of loss. Changes in these factors could materially impact our financial statements. As of December 31, 2015, our evaluation led us to conclude no accrual of a loss contingency was warranted.

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We may face legal claims and litigation from product warranty or other claims that could be costly to resolve.

We have in the past and may in the future encounter legal action from customers, vendors, or others concerning product warranty or other claims. We generally offer a two-year warranty from the date title passes from us for all of our standard products. We invest significant resources in the testing of our products; however, if any of our products contain defects, we may be required to incur additional development and remediation costs, pursuant to our warranty policies. These issues may divert our technical and other resources from other product development efforts and could result in claims against us by our customers or others, including liability for costs associated with product returns, which may adversely impact our operating results. If any of our products contain defects, or have reliability, quality or compatibility problems, our reputation may be damaged, which could make it more difficult for us to sell our products to existing and prospective customers and could adversely affect our operating results. We are currently party to a limited number of supply agreements with certain customers contractually committing us to warranty and indemnification requirements exceeding those to which we have been exposed in the past. While we maintain insurance coverage for such exposure, we could incur significant financial cost beyond the limits of such coverage, as well as operational disruption and damage to our competitive position and image if faced with a significant product warranty or other claim.

Our ability to successfully implement our business strategy may be limited if we do not retain our key personnel and attract and retain skilled and experienced personnel.

Our success depends on our ability to retain the services of our executive officers. The loss of one or more members of senior management could materially adversely affect our business and financial results. In particular, we are dependent on the services of Dr. Vinciarelli, our founder, Chairman of the Board, Chief Executive Officer, and President. The loss of the services of Dr. Vinciarelli could have a material adverse effect on our development of new products and on our results of operations. In addition, we depend on highly skilled engineers and other personnel with technical skills that are in high demand and are difficult to replace. Our continued operations and growth depend on our ability to attract and retain skilled and experienced personnel in a very competitive employment market. If we are unable to attract and retain these employees, our ability to successfully implement our business strategy may be harmed.

Extended interruption of production at our manufacturing facility in Andover, Massachusetts, could materially reduce our revenue and increase costs.

All modular power components, whether for direct sale to customers or for sale to our subsidiaries for incorporation into their respective products, as well as all configurable products, are manufactured at our Andover, Massachusetts, production facility. Substantial damage to this facility due to fire, natural disaster, power loss or other events could interrupt manufacturing. While we have never experienced any meaningful interruption of manufacturing in our history, any prolonged inability to utilize all or a significant portion of our Andover facility could have a material adverse effect on our results of operations.

Disruption of our information technology infrastructure could adversely affect our business.

We depend heavily on our computing and communications infrastructure to achieve our business objectives, particularly for email communications, financial and operational record keeping, and our computer-integrated manufacturing processes that control all aspects of our operations in our manufacturing facility in Andover, Massachusetts. If a problem occurs impairing this infrastructure, the resulting disruption could impede our ability to record or process orders, manufacture and ship in a timely manner, or otherwise carry on business in the normal course. From time to time, we have experienced brief (i.e., periods of several hours) disruptions of our computing and

communications infrastructure due to the effects of inclement weather on our access to the power grid or the public telecommunications infrastructure. To address this specific vulnerability, in 2012 we established our own proprietary fiber optic loop to connect our two facilities in Andover, Massachusetts, and

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invested in expanded data storage capabilities at each location, enabling robust data backup and failover routines. Since 2012, we have experienced no interruption of our computing and communications capabilities. While we carry business interruption insurance that would mitigate financial losses from such an interruption to an extent, such insurance may be insufficient to compensate us for the potentially significant amounts incurred. Any such events, if prolonged, could have a material and adverse effect on our operating results and financial condition.

Our systems are designed to protect us from network security breaches and associated disruptions. However, we remain vulnerable to computer viruses and related software-based challenges to the integrity of our systems, unauthorized or illegal break-ins or malicious network hacking, equipment or software sabotage, acts of vandalism to our systems by third parties, and, in the extreme, forms of cyber-terrorism. Our security measures or those of our third-party service providers may not detect or prevent such network security breaches or associated disruptions. Also, we provide confidential information to third-party business partners in certain circumstances when doing so is necessary to conduct business. While we employ confidentiality agreements to protect such information, our own security measures or those of our third-party service providers may not be sufficient to protect such information in the event the computing infrastructure of these third-party business partners is compromised. Security breaches of our computing and communications infrastructure or that of a third-party business partner could result in the misappropriation or unauthorized release of confidential information belonging to us or to our employees, partners, customers or suppliers, which could result in an interruption to our operations, result in a violation of privacy or other laws, expose us to a risk of litigation, or damage our reputation, any of which could have a material and adverse effect on our operating results and financial condition.

If we fail to maintain an effective system of internal controls over financial reporting or discover material weaknesses in our internal controls over financial reporting, we may not be able to report our financial results accurately or timely or detect fraud, which could have a material adverse effect on our business.

An effective internal control environment is necessary for us to produce reliable financial reports and is an important part of our effort to prevent financial fraud. Section 404 of the Sarbanes-Oxley Act of 2002 requires our management to report on, and our independent registered public accounting firm to attest to, the effectiveness of our internal control over financial reporting. As of year-end 2015, we implemented the new framework for internal control, *Internal Control Integrated Framework (2013)*, as issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).

We have an ongoing program to perform the system and process evaluation and testing necessary to comply with the requirements of the Sarbanes-Oxley Act and to continuously improve and, when necessary, remediate internal controls over financial reporting.

While management evaluates the effectiveness of our internal controls on a regular basis, these controls may not always be effective. There are inherent limitations on the effectiveness of internal controls, including collusion, management override, and failure in human judgment. In addition, control procedures are designed to reduce rather than eliminate business risks. In the event our Chief Executive Officer, Chief Financial Officer, or independent registered public accounting firm determines our internal controls over financial reporting are not effective as defined under Section 404, we may be unable to produce reliable financial reports or prevent fraud, which could materially adversely affect our business. In addition, we may be subject to sanctions or investigation by government authorities or self-regulatory organizations, such as the Securities and Exchange Commission or The NASDAQ Stock Market LLC. Any such actions could affect investor perceptions of the Company and result in an adverse reaction in the financial markets due to a loss of confidence in the reliability of our financial statements, which could cause the market price of our Common Stock to decline or limit our access to capital.

New regulations related to conflict minerals could adversely impact our business.

The Dodd-Frank Wall Street Reform and Consumer Protection Act contains provisions to improve transparency and accountability concerning the supply of certain minerals, known as conflict minerals (including

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gold, tantalum, tin, and tungsten, and their related ores), originating from the Democratic Republic of Congo (DRC) and adjoining countries. As a result, in August 2012 the SEC released final rules for annual disclosure and reporting for those companies who use conflict minerals mined from the DRC and adjoining countries in their products. We began to implement processes within our supply chain to comply these rules beginning in 2012 and filed our initial Form SD in May 2014. There have been and will continue to be costs associated with complying with these disclosure requirements, including due diligence to determine the sources of conflict minerals used in our products and other potential changes to products, processes, or sources of supply as a consequence of such verification activities. The implementation of these rules could adversely affect the sourcing, supply, and pricing of materials used in our products. As there may be only a limited number of suppliers offering conflict free conflict minerals, we cannot be sure that we will be able to obtain necessary conflict minerals from such suppliers in sufficient quantities or at competitive prices. Also, we may face reputational challenges if we determine that certain of our products contain minerals not determined to be conflict free or if we are unable to sufficiently verify the origins for all conflict minerals used in our products through the procedures we may implement.

ITEM 1B. ***UNRESOLVED STAFF COMMENTS***

None.

ITEM 2. ***PROPERTIES***

Our corporate headquarters building in Andover, Massachusetts, which we own, provides approximately 90,000 square feet of office space for our sales, marketing, engineering, and administrative personnel and is used by and supports all business segments. We also own a building of approximately 230,000 square feet in Andover, Massachusetts, which houses all Massachusetts manufacturing activities.

In December 2014, we completed the consolidation of manufacturing Westcor s products, from a single-story industrial building of approximately 31,000 square feet in Sunnyvale, California, to our manufacturing facility in Andover, Massachusetts. The Sunnyvale building was purchased in 1994 and is carried on our consolidated balance sheet at a net book value, as of December 31, 2015, of approximately $700,000. In February 2016, we executed a long-term lease with a corporate tenant, who will occupy the building beginning in June 2016.

All other domestic and foreign facilities are leased from third-party lessors on arms length terms. We believe our owned and leased facilities are adequate for our present needs and expect them to remain adequate for the foreseeable future.

ITEM 3. ***LEGAL PROCEEDINGS***

On January 28, 2011, SynQor, Inc. (SynQor) filed a complaint for patent infringement against Ericsson, Inc. (Ericsson), Cisco Systems, Inc. (Cisco) and Vicor in the U.S. District Court for the Eastern District of Texas (the Texas Action). This immediately followed a complaint filed by us on January 26, 2011, in the U.S. District Court for the District of Massachusetts, in which we sought a declaratory judgment that our bus converter products do not infringe any valid claim of certain of SynQor s U.S. patents, and that the claims of those patents are invalid. With respect to Vicor, SynQor s complaint alleges our products, including, but not limited to, unregulated bus converters used in intermediate bus architecture power supply systems, infringe certain SynQor patents. SynQor seeks, among other items, an injunction against further infringement and an award of unspecified compensatory and enhanced

damages, interest, costs and attorney fees. On February 8, 2011, SynQor filed a motion for preliminary injunction seeking an order enjoining us from manufacturing, using, selling, and offering for sale in the United States and/or importing into the United States certain identified unregulated bus converters, as well as any other bus converters not significantly different from those products. On February 17, 2011, we withdrew our Massachusetts action without prejudice to allow the litigation to proceed in Texas. On May 16, 2011, SynQor announced it was withdrawing its motion for preliminary injunction against

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us. On that date, SynQor also announced it and Ericsson had entered into a definitive settlement agreement, the terms of which were not disclosed. On September 16, 2011, the U.S. District Court for the Eastern District of Texas (the Texas Court) issued an order setting a trial date of July 7, 2014. On September 20, 2011, SynQor filed an amended complaint in the Texas Action. The amended complaint repeated the allegations of patent infringement against us contained in SynQor s original complaint, and included additional patent infringement allegations with respect to U.S. Patent No. 8,023,290 (the 290 patent), which was issued on that day. As with SynQor s original complaint, the amended complaint alleges our products, including but not limited to our unregulated bus converters used in intermediate bus architecture power supply systems, infringe the asserted patents. On October 4, 2011, we filed an answer and counterclaims to SynQor s amended complaint, in which we allege the 290 patent is unenforceable because it was procured through inequitable conduct before the U.S. Patent and Trademark Office and seek damages against SynQor for SynQor s unfair and deceptive trade practices and tortious interference with prospective economic advantage in connection with SynQor s allegations of patent infringement against us. On January 2, 2014, the Texas Court issued its claim construction order following a claim construction hearing held on December 17, 2013. On January 16, 2014, we filed a motion seeking reconsideration of certain aspects of the Texas Court s claim construction ruling. On March 31, 2014, the Texas Court issued an order severing the case against us and Cisco into two separate matters, with separate trials to be held with respect to SynQor s claims against Cisco and SynQor s claims against us. On June 30, 2014, we filed a number of motions seeking summary judgment in this matter, including for a finding of no direct, indirect, or willful infringement and for a finding of indefiniteness with respect to U.S. Patent No. 7,272,021 (the 021 patent), which is one of four related patents at question in the Texas Action. The Texas Court has yet to rule on these motions. On October 23, 2014, the Texas Court issued an order continuing trial in this matter indefinitely. On January 7, 2015, our case and that of Cisco were assigned to a new judge within the Texas Court. On February 6, 2015, SynQor filed a motion to consolidate ours and Cisco s cases for trial, which was subsequently denied. On March 13, 2015, the U.S. Court of Appeals for the Federal Circuit in Washington, D.C. Circuit issued a ruling invalidating certain claims of U.S. Patent No. 7,072,190 (the 190 patent) asserted by SynQor against us. Challenges to the validity of the remaining claims relating to the 190 patent, and to the remaining patents asserted by SynQor against us, remain pending before the U.S. Patent and Trademark Office and in the Texas Action. On March 26, 2015, the Texas Court scheduled pre-trial conferences for September 15, 2015, for Cisco s case and January 13, 2016, for our case. On April 20, 2015, the Patent Trial and Appeal Board of the United States Patent and Trademark Office (the PTAB) issued a decision upholding the validity of all of the claims of SynQor s U.S. Patent No. 7,564,702 (the 702 patent), another of the power converter patents included in the claims asserted against us in the Texas Action. On May 20, 2015, we filed a request for rehearing concerning that decision. The PTAB has not ruled on that request. On May 5, 2015, the PTAB issued a decision invalidating all of the asserted claims of the 021 patent. On June 10, 2015, SynQor filed a request for rehearing concerning that decision. The PTAB has not ruled on that request. We have received no notice from the Texas Court regarding the timing of rulings on our summary judgment motions. On June 19, 2015, the Texas Court issued an order scheduling a jury trial in SynQor s patent infringement action against Cisco beginning on November 30, 2015. SynQor s patent infringement allegations against Cisco include allegations that Cisco is using certain parts supplied by us in infringing circuits. On October 5, 2015, the Texas Court issued an order denying a motion by Cisco seeking a stay of SynQor s case against Cisco pending the resolution of matters concerning the asserted SynQor patents before the PTAB. On November 20, 2015, SynQor and Cisco informed the Texas Court they had reached a confidential settlement of SynQor s case against Cisco. On November 24, 2015, a Magistrate Judge of the Texas Court issued an order staying SynQor s case against us pending the resolution of matters concerning the asserted SynQor patents before the PTAB. SynQor has filed a motion seeking reconsideration of that order, and that request is still pending.

We continue to believe none of our products, including our unregulated bus converters, infringe any valid claim of the asserted SynQor patents, either alone or when used in an intermediate bus architecture implementation, including such use by Cisco. We believe SynQor s claims lack merit and, therefore, continue to vigorously defend ourselves against SynQor s patent infringement allegations. We do not believe a loss is probable for this matter. If a loss were to be

incurred, however, we cannot estimate the amount of possible loss or range of possible loss at this time.

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In addition to the SynQor matter, we are involved in certain other litigation and claims incidental to the conduct of our business. While the outcome of lawsuits and claims against us cannot be predicted with certainty, we do not expect any such current litigation or claims will have a material adverse impact on our financial position or results of operations.

ITEM 4. ***MINE SAFETY DISCLOSURES***

Not Applicable.

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PART II

ITEM 5. *MARKET FOR REGISTRANT S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES*

Our Common Stock is listed on The NASDAQ Stock Market LLC, under the trading symbol VICR. Shares of our Class B Common Stock are not registered with the Securities and Exchange Commission, are not listed on any exchange nor traded on any market, and are subject to transfer restrictions under our Restated Certificate of Incorporation, as amended.

The following table sets forth the quarterly high and low sales prices for the Common Stock as reported by The NASDAQ Stock Market for the periods indicated:

2015	**High**	**Low**
First Quarter	$ 15.79	$ 10.77
Second Quarter	17.21	11.73
Third Quarter	11.89	8.93
Fourth Quarter	10.66	8.96

2014	**High**	**Low**
First Quarter	$ 13.81	$ 9.63
Second Quarter	11.25	6.76
Third Quarter	10.20	7.20
Fourth Quarter	13.96	8.43

As of February 29, 2016, there were 160 holders of record of our Common Stock and 13 holders of record of our Class B Common Stock. These numbers do not reflect persons or entities that hold their shares in nominee or street name through various brokerage firms.

Dividend Policy

We do not have a policy mandating the declaration of cash dividends at any particular time or on a regular basis. We did not pay cash dividends on our Common Stock for the years ended December 31, 2015 or 2014.

Dividends are declared periodically, only at the discretion of our Board of Directors, and any such declaration depends on actual cash from operations, our financial condition and capital requirements, the recommendation of our management, and any other factors the Board of Directors may consider relevant at the time.

From time to time, excess cash held at the subsidiary level is transferred to the Company via cash dividends declared by the subsidiary. Because we have owned less than 100% of the common stock of certain subsidiaries, such subsidiary dividends can result in payments to outside shareholders of those subsidiaries. During the year ended December 31, 2015, one of our subsidiaries paid a total of $250,000 in cash dividends, all of which was paid to us. During the year ended December 31, 2014, two of our subsidiaries paid a total of $3,900,000 in cash dividends, of which an aggregate of $3,738,000 was paid to us and $162,000 was paid to outside shareholders (i.e., paid to certain subsidiary employees who own common stock in the subsidiary). Dividends paid to outside shareholders of our subsidiaries are accounted for as a reduction in noncontrolling interest.

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Issuer Purchases of Equity Securities

Period	Total Number of Shares Purchased	Average Price Paid per Share	Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs	Maximum Number (of Approximate Dollar Value) of Shares that May Yet Be Purchased Under the Plans or Programs
October 1 31, 2015		$		$ 8,541,000
November 1 30, 2015		$		$ 8,541,000
December 1 31, 2015		$		$ 8,541,000
Total		$		$ 8,541,000

In November 2000, our Board of Directors authorized the repurchase of up to $30,000,000 of our Common Stock (the November 2000 Plan). The November 2000 Plan authorizes us to make such repurchases from time to time in the open market or through privately negotiated transactions. The timing and amounts of Common Stock repurchases are at the discretion of management based on its view of economic and financial market conditions.

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Stockholder Return Performance Graph

The graph set forth below presents the cumulative, five-year stockholder return for each of the Company s Common Stock, the Standard & Poor s 500 Index (S&P 500 Index), a value-weighted index made up of 500 of the largest, by market capitalization, listed companies, and the Standard & Poor s SmallCap 600 Index (S&P SmallCap 600 Index), a value-weighted index of 600 listed companies with market capitalizations between $200,000,000 and $1,000,000,000.

The graph assumes an investment of $100 on December 31, 2010, in each of our Common Stock, the S&P 500 Index, and the S&P SmallCap 600 Index, and assumes reinvestment of all dividends. The historical information set forth below is not necessarily indicative of future performance.

Comparison of Five Year Cumulative Return

Among Vicor Corporation, S&P 500 Index

and S&P SmallCap 600 Index

	2010	2011	2012	2013	2014	2015
Vicor Corporation	$100.00	$ 49.15	$ 33.47	$ 82.86	$ 74.71	$ 56.31
S&P 500 Index	$100.00	$ 102.11	$ 118.45	$ 156.82	$ 178.28	$ 180.75
S&P SmallCap 600 Index	$100.00	$ 101.02	$ 117.51	$ 166.05	$ 175.61	$ 172.15

Our equity plan information required by this item is incorporated by reference to the information in Part III, Item 12 of this Annual Report on Form 10-K.

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ITEM 6. ***SELECTED FINANCIAL DATA***

The following selected consolidated financial data with respect to our statements of operations for the years ended December 31, 2015, 2014, and 2013, and with respect to our balance sheet as of December 31, 2015 and 2014, are derived from our audited Consolidated Financial Statements, which appear elsewhere in this Annual Report on Form 10-K. The following selected consolidated financial data with respect to our statements of operations for the years ended December 31, 2012 and 2011, and with respect to our balance sheets as of December 31, 2013, 2012, and 2011, are derived from our Consolidated Financial Statements, which are not included herein. The data should be read in conjunction with the Consolidated Financial Statements, related notes and other financial information included herein.

	Year Ended December 31,				
Statement of Operations Data	**2015**	**2014**	**2013**	**2012**	**2011**
	(In thousands, except per share data)				
Net revenues	$ 220,194	$ 225,731	$ 199,160	$ 218,507	$ 252,968
Income (loss) from operations	(267)	(14,763)	(20,467)	(2,785)	13,686
Consolidated net income (loss)	5,159	(14,070)	(23,504)	(3,798)	9,309
Net income (loss) attributable to noncontrolling interest	232	(183)	136	279	466
Net income (loss) attributable to Vicor Corporation	4,927	(13,887)	(23,640)	(4,077)	8,843
Net income (loss) per share basic and diluted attributable to Vicor Corporation	0.13	(0.36)	(0.60)	(0.10)	0.21
Weighted average shares basic	38,754	38,569	39,195	41,811	41,797
Weighted average shares diluted	39,146	38,569	39,195	41,811	41,856
Cash dividends per share	$	$	$	$	$ 0.15

	As of December 31,				
Balance Sheet Data	**2015**	**2014**	**2013**	**2012**	**2011**
	(In thousands)				
Working capital	$ 94,905	$ 90,321	$ 97,869	$ 128,498	$ 124,386
Total assets	157,545	155,542	165,640	202,581	208,141
Total liabilities	21,460	24,990	23,303	20,608	23,431
Total equity	136,085	130,552	142,337	181,973	184,710

ITEM 7. ***MANAGEMENT S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS***

Overview

We design, develop, manufacture, and market modular power components and complete power systems and have organized our business segments according to our key product lines. The BBU segment designs, develops, manufactures and markets our modular DC-DC converters and configurable products, and also includes the entities comprising Vicor Custom Power, and the BBU operations of VJCL. In December 2014, we completed the consolidation of manufacturing Westcor division products from its facility in Sunnyvale, California to our primary manufacturing facility in Andover, Massachusetts. In December 2015, we completed the statutory merger of one Vicor Custom Power subsidiary, Mission Power Solutions, Inc. with and into another subsidiary, Northwest Power, Inc., after which we closed the Mission Power Solutions location. Also in December 2015, we sold our 49%

ownership interest in Aegis Power Systems, Inc. to Aegis Power Systems, thereby ending our formal relationship with the subsidiary. The VI Chip segment includes VI Chip Corporation, which designs, develops, manufactures, and markets many of our advanced power component products. The VI Chip segment also includes the VI Chip business conducted through VJCL. The Picor segment includes Picor Corporation, which designs, develops, manufactures, and markets integrated circuits and related products for use in a variety of power management and power system applications. Picor develops these products for use in our BBU and VI

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Chip modules, to be sold as complements to our BBU and VI Chip products, or for sale to third parties for separate (i.e., stand-alone) applications, often integrated with VI Chip products to represent a customer solution.

We sell our products primarily to customers in the higher-performance, higher-power segments of the power systems market. The BBU has customers concentrated in aerospace and aviation, defense electronics, industrial automation and equipment, medical diagnostics, rail transportation, and test and measurement instrumentation. VI Chip and Picor have customers concentrated in the datacenter and supercomputer segments of the computing market, although they also target applications in aerospace and aviation, and defense electronics, electric and hybrid vehicles, instrumentation and test equipment, and networking equipment. With our strategic emphasis on larger, high-volume customers, we expect to experience a greater concentration of sales among relatively few customers.

As anticipated, our consolidated revenue for the second half of 2015 was lower than for the first half of 2015, and we incurred an operating loss in the second half of 2015. Our lower revenue in the second half of 2015 was due in part to a transition to a new voltage regulation standard within the datacenter market, which has caused shifts in the timing of revenues and delays in expected bookings for our VI Chip and Picor subsidiaries. On a year over year basis, bookings were 13.2% lower in 2015, as compared to 2014 and, in particular, were 24.1% lower in the second half of 2015, as compared to the second half of 2014.

We continue to face an uncertain outlook in the near term. We believe the transition to the new voltage regulation standard within the datacenter market will approach completion or be completed during 2016, leading to an increase in purchase orders for our products targeted at this substantial opportunity. However, certain markets in which we have historically focused remain weak, notably defense electronics. Geographically, international demand remains weak due to economic uncertainty across certain global regions. Because we are shifting our strategy toward serving fewer, higher volume customers with our innovative new products, we currently are vulnerable to swings in demand from a relatively small number of early adopting customers, although our objective is to diversify our customer base, given the breadth of applications of these new products. Until customer adoption of these new products accelerates, we may not achieve such customer diversification.

For the year ended December 31, 2015, revenues decreased (2.5)% to $220,194,000 from $225,731,000 for 2014. Export sales as a percentage of total revenues were approximately 59.6% in 2015 and 60.5% in 2014. Gross margin increased to $99,518,000 in 2015 from $97,120,000 in 2014. Gross margin, as a percentage of revenue, increased to 45.2% in 2015 from 43.0% in 2014. Gross margin dollars and percentage improved in 2015 over 2014, despite lower revenues, due to improved average selling prices and lower average unit costs across all three segments.

Backlog, representing the total of orders for products received for which shipment is scheduled within the next 12 months, was approximately $39,073,000 at the end of 2015, as compared to $54,249,000 at the end of 2014.

Operating expenses for 2015 decreased $12,098,000, or (10.8)%, to $99,785,000 from $111,883,000 in 2014, due to a decrease in selling, general, and administrative expenses of $9,884,000. The primary components of the decrease in selling, general, and administrative expenses were declines in legal fees of $8,621,000, compensation expenses of $1,064,000, and commissions expense of $310,000. The decrease in legal fees is due to reduced activity with our ongoing patent infringement litigation (See Part I, Item 3 Legal Proceedings). As addressed elsewhere, we intend to continue our vigorous defense of intellectual property claims against us and cannot predict the ultimate cost of such defense or when the claims might be resolved. The lower costs of this ongoing litigation continued the trend begun in the fourth quarter of 2014 associated with continued delays in the expected trial date. An additional cause of lower operating expenses was the absence, in 2015, of severance and other costs associated with the consolidation of Westcor manufacturing, for which we recorded a pre-tax charge of $2,207,000 during the second half of 2014.

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In September 2015, Intersil Corporation (Intersil) acquired Great Wall Semiconductor Corporation (GWS). At that time, our gross investment in non-voting convertible preferred stock of GWS totaled $4,999,719, representing an approximately 27% ownership preference in GWS. We received cash consideration from Intersil of $4,999,719, representing full preference value of the non-voting convertible preferred stock of GWS we owned. Since the investment in GWS had previously been written down to zero, the full amount of the consideration was recorded as a gain from sale of equity method investment in the third quarter of 2015. See Note 8 to the Consolidated Financial Statements for additional information.

We reported net income in 2015 of $4,927,000, as compared to a net loss of $(13,887,000) in 2014, and net income per diluted share of $0.13 in 2015, as compared to a net loss per share of $(0.36) in 2014.

In 2015, depreciation and amortization totaled $9,142,000, and capital additions were $9,090,000, compared to $9,805,000 and $7,128,000, respectively, for 2014.

Inventories decreased by approximately $2,886,000, or (11.0)%, to $23,442,000 at the end of 2015, as compared to $26,328,000 at the end of 2014. This decrease was primarily associated with decreases in VI Chip and BBU inventories of $1,298,000 and $1,253,000, respectively.

The following table sets forth certain items of selected consolidated financial information as a percentage of net revenues for the years shown, ended December 31. This table and the subsequent discussion should be read in conjunction with the selected financial data and the Consolidated Financial Statements and related footnotes contained elsewhere in this report.

	Year Ended December 31,		
	2015	2014	2013
Net revenues	100.0%	100.0%	100.0%
Gross margin	45.2%	43.0%	40.9%
Selling, general and administrative expenses	26.5%	30.2%	30.5%
Research and development expenses	18.8%	18.4%	20.0%
Loss before income taxes	(0.1)%	(6.4)%	(10.3)%

Critical Accounting Policies and Estimates

Management s Discussion and Analysis of Financial Condition and Results of Operations is based upon our Consolidated Financial Statements, which have been prepared in accordance with accounting principles generally accepted in the United States. The preparation of these financial statements requires management to make estimates and assumptions that affect the reported amounts of assets, liabilities, revenues, expenses, and related disclosures of contingent assets and liabilities. On an ongoing basis, we evaluate our estimates and assumptions, and our associated judgments, including those related to inventories, impairment of long-lived assets, income taxes, contingencies, and litigation. We base our estimates, assumptions, and judgments on historical experience, knowledge of current conditions, and on various other factors we believe to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying value of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates under different assumptions or conditions. We also have other policies we consider key accounting policies, such as our policy for revenue recognition, including the deferral of revenue on sales to distributors until the products are sold to the end user. However, the application of these other policies does not require us to make significant estimates and assumptions difficult to support quantitatively.

Inventories

We employ a variety of methodologies to estimate allowances for our inventory for estimated obsolescence or unmarketable inventory, based upon our existing backlog, historical consumption, and assumptions about

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future demand and market conditions. For BBU products produced at our Andover facility, our principal manufacturing location, the methodology used compares on-hand quantities to projected demand and historical consumption, such that amounts of inventory on hand in excess of a three-year projected consumption or three-year historical consumption, whichever is higher, are fully reserved. VI Chip uses a one-year projected consumption assumption. Historical consumption assumptions are one-year for VI Chip and two-year for Picor, since their products are still at a relatively early stage. While we have used our best efforts and believe we have used the best available information to estimate future demand, due to uncertainty in the economy and our business and the inherent difficulty in predicting future demand, it is possible actual demand for our products will differ from our estimates. If actual future demand or market conditions are less favorable than those projected by management, additional inventory reserves for existing inventories may need to be recorded in future periods.

Long-Lived Assets

We review property, plant, and equipment and finite-lived intangible assets for impairment whenever events or changes in circumstances indicate the carrying value of such assets may not be recoverable. We determine whether the carrying value of an asset or asset group is recoverable based on comparison to the undiscounted expected future cash flows the assets are expected to generate over their remaining economic lives. If the value of an asset is considered not recoverable, the impairment loss is equal to the amount by which the carrying value of the asset exceeds its estimated fair value, which is determined by either a quoted market price, if any, or a value determined by utilizing a discounted cash flow technique. Evaluation of impairment of long-lived assets requires estimates of future operating results that are used in the preparation of the expected future undiscounted cash flows. Actual future operating results and the remaining economic lives of our long-lived assets could differ from the estimates used in assessing the recoverability of the carrying value of these assets. These differences could result in impairment charges, which could have a material adverse impact on our results of operations.

Income Taxes

We make certain estimates, assumptions, and judgments in determining income tax expense for financial statement reporting purposes. These estimates, assumptions, and judgments occur in the calculation of tax credits, benefits, and deductions, and in the calculation of certain assets and liabilities that arise from differences in the timing and of the recognition of revenue and expense for tax and financial statement purposes, as well as the interest and penalties relating to uncertain tax positions. Significant changes to these estimates, assumptions, and judgments may result in an increase or decrease to our tax provision in a subsequent period.

Significant management judgment also is required in determining whether deferred tax assets will be realized in full or in part. We assess the need for a valuation allowance on a quarterly basis. We record a valuation allowance to reduce our deferred tax assets to the amount we believe is more likely than not to be realized. In assessing the need for a valuation allowance, we consider all positive and negative evidence, including scheduled reversals of deferred tax liabilities, projected future taxable income, tax planning strategies, and past financial performance. In 2013, we recorded an increase to the valuation allowance to cover all domestic net deferred tax assets. The valuation allowance against these deferred tax assets may require adjustment in the future based on changes in the mix of temporary differences, changes in tax laws, and operating performance. If and when we determine the valuation allowance should be released (i.e., reduced), the adjustment would result in a tax benefit reported in that period s Consolidated Statements of Operations, the effect of which would be an increase in reported net income. A portion of such an adjustment may be accounted for through an increase to Additional paid-in capital , a component of Stockholders Equity. The amount of any such tax benefit associated with release of our valuation allowance in a particular quarter may be material.

We follow a two-step process to determine the amount of tax benefit to recognize in our financial statements for tax positions taken on tax returns. The first step is to evaluate the tax position to determine the likelihood it would be sustained upon examination by a tax authority. If the tax position is deemed more-likely-than-not to be sustained, the second step is to assess the tax position to determine the amount of tax benefit to recognize in

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the financial statements. The amount of the benefit that may be recognized is the largest amount that has a greater than 50 percent likelihood of being realized upon ultimate settlement. If the tax position does not meet the more-likely-than-not threshold then it is not recognized in the financial statements. We accrue interest and penalties, if any, related to unrecognized tax benefits as a component of income tax expense. If the estimates, assumptions, and judgments made by us change, the unrecognized tax benefits may have to be adjusted, and such adjustments may be material.

Contingencies

From time to time, we receive notices of product failure claims, notices of infringement of patent or other intellectual property rights of others, or notices associated with other claims. In January 2011, we were named in a lawsuit for patent infringement (See Part I, Item 3 Legal Proceedings) that is ongoing. We assess each notice and associated matter to determine if a contingent liability should be recorded. In making this assessment, we may consult, depending on the nature of the matter, with external legal counsel and technical experts. Based on the information we obtain, combined with our judgment regarding all the facts and circumstances of each matter, we determine whether it is probable a contingent loss may be incurred and whether the amount of such loss can be reasonably estimated. Should a loss be probable and reasonably estimable, we record such a loss (i.e., we establish a loss contingency). In determining the amount of the loss to be recorded, we consider advice received from experts in the specific matter, current status of legal proceedings (if any), prior case history, comparable precedent litigation, and other factors. Should the estimates, assumptions, and judgments made by us change, we may need to record additional losses (i.e., add to our loss contingency) that may be material.

New Accounting Pronouncements

From time to time, new accounting pronouncements are issued by the Financial Accounting Standards Board (FASB) that we adopt as of the specified effective date. Unless otherwise discussed, we believe the impact of recently issued accounting standards will not have a material impact on our future financial condition and results of operations. See Note 2 *Impact of recently issued accounting standards*, to the Consolidated Financial Statements for a description of recently issued and adopted accounting pronouncements, including the dates of adoption and expected impact on our financial position and results of operations.

Year ended December 31, 2015 compared to Year ended December 31, 2014

Net revenues for 2015 were $220,194,000, a decrease of $5,537,000 or (2.5)%, as compared to $225,731,000 for 2014.

The components of revenue for the years ended December 31 were as follows (dollars in thousands):

			Increase (decrease)	
	2015	**2014**	**$**	**%**
BBU	$ 173,108	$ 184,224	$ (11,116)	(6.0)%
VI Chip	35,198	32,929	2,269	6.9%
Picor	11,888	8,578	3,310	38.6%
Total	$ 220,194			