

KULICKE & SOFFA INDUSTRIES INC

Form 10-K

December 08, 2011

UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 10-K

(Mark One)

☒ ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES
EXCHANGE ACT OF 1934

For the fiscal year ended October 1, 2011

OR

☐ 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 0-121

KULICKE AND SOFFA INDUSTRIES, INC.

(Exact Name of Registrant as Specified in Its Charter)

PENNSYLVANIA

23-1498399

(State or other jurisdiction of incorporation or organization)

(IRS Employer Identification No.)

6 Serangoon North Avenue 5, #03-16, Singapore

554910

(Address of principal executive offices)

(Zip Code)

(215) 784-6000

(Registrants telephone number, including area code)

N/A

(Former name, former address and former fiscal year, if changed since last report)

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

None

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

COMMON STOCK, WITHOUT PAR VALUE

(Title of each class)

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

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

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

Indicate by check mark 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 ☒ No ☐

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

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

Large accelerated filer <input type="checkbox"/>	Accelerated filer <input checked="" type="checkbox"/>	Non-accelerated filer <input type="checkbox"/>	Smaller reporting company <input type="checkbox"/>
		(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 ☒

As of April 1, 2011, the aggregate market value of the registrant's common stock held by non-affiliates of the registrant was approximately \$646.9 million based on the closing sale price as reported on The NASDAQ Global Market (Reference is made to Part II, Item 5 herein for a statement of assumptions upon which this calculation is based).

As of December 2, 2011 there were 73,658,871 shares of the registrant's common stock, without par value, outstanding.

Documents Incorporated by Reference

Portions of the registrant's Proxy Statement for the 2012 Annual Meeting of Shareholders to be filed on or about December 30, 2011 are incorporated by reference into Part II, Item 5 and Part III, Items 10, 11, 12, 13 and 14 herein of this Report. Such Proxy Statement, except for the parts therein which have been specifically incorporated by reference, shall not be deemed "filed" for the purposes of this Report on Form 10-K.

KULICKE AND SOFFA INDUSTRIES. INC.
2011 Annual Report on Form 10-K
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PART I

Forward-Looking Statements

In addition to historical information, this filing contains statements relating to future events or our future results. These statements are forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended (the “Securities Act”) and Section 21E of the Securities Exchange Act of 1934, as amended (the “Exchange Act”), and are subject to the safe harbor provisions created by statute. Such forward-looking statements include, but are not limited to, our future revenue, sustained, increasing, continuing or strengthening demand for our products, the continuing transition from gold to copper wire bonding, replacement demand, our research and development efforts, our ability to identify and realize new growth opportunities, our ability to control costs and our operational flexibility as a result of (among other factors):

- projected growth rates in the overall semiconductor industry, the semiconductor assembly equipment market, and the market for semiconductor packaging materials; and
 - projected demand for ball, wedge and die bonder equipment and for expendable tools.

Generally, words such as “may,” “will,” “should,” “could,” “anticipate,” “expect,” “intend,” “estimate,” “plan,” “continue,” “believe,” or the negative of or other variations on these and other similar expressions identify forward-looking statements. These forward-looking statements are made only as of the date of this filing. We do not undertake to update or revise the forward-looking statements, whether as a result of new information, future events or otherwise.

Forward-looking statements are based on current expectations and involve risks and uncertainties. Our future results could differ significantly from those expressed or implied by our forward-looking statements. These risks and uncertainties include, without limitation, those described below and under the heading “Risk Factors” within this Annual Report on Form 10-K for the fiscal year ended October 1, 2011 and our other reports and registration statements filed from time to time with the Securities and Exchange Commission. This discussion should be read in conjunction with the Consolidated Financial Statements and Notes included in this report, as well as our audited financial statements included in this Annual Report.

We operate in a rapidly changing and competitive environment. New risks emerge from time to time and it is not possible for us to predict all risks that may affect us. Future events and actual results, performance and achievements could differ materially from those set forth in, contemplated by or underlying the forward-looking statements, which speak only as of the date on which they were made. Except as required by law, we assume no obligation to update or revise any forward-looking statement to reflect actual results or changes in, or additions to, the factors affecting such forward-looking statements. Given those risks and uncertainties, investors should not place undue reliance on forward-looking statements as predictions of actual results.

Item 1. BUSINESS

Kulicke and Soffa Industries, Inc. (the “Company” or “K&S”) designs, manufactures and sells capital equipment and expendable tools used to assemble semiconductor devices, including integrated circuits (“IC”), high and low powered discrete devices, light-emitting diodes (“LEDs”), and power modules. We also service, maintain, repair and upgrade our equipment. Our customers primarily consist of semiconductor device manufacturers, outsourced semiconductor assembly and test providers (“OSATs”), other electronics manufacturers and automotive electronics suppliers.

We operate two main business segments, Equipment and Expendable Tools. Our goal is to be the technology leader and the lowest cost supplier in each of our major product lines. Accordingly, we invest in research and engineering projects intended to enhance our position at the leading edge of semiconductor assembly technology. We also remain

focused on our cost structure, through consolidating operations to Asia, moving manufacturing and other operations to Asia, moving our supply chain to lower cost suppliers and designing higher performing, lower cost equipment. Cost reduction efforts are an important part of our normal ongoing operations, and are expected to generate savings without compromising overall product quality and service levels.

K&S was incorporated in Pennsylvania in 1956. Our principal offices are located at 6 Serangoon North Avenue 5, #03-16, Singapore 554910 and our telephone number in the United States is (215) 784-6000. We maintain a website with the address www.kns.com. We are not including the information contained on our website as a part of, or incorporating it by reference into, this filing. We make available free of charge (other than an investor's own Internet access charges) on or through our website our annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, and any amendments to these reports, as soon as reasonably practicable after the material is electronically filed with or otherwise furnished to the Securities and Exchange Commission ("SEC"). Our annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, and amendments to those reports are also available on the SEC website at www.sec.gov and at the SEC's Public Reference Room at 100 F Street, NE, Washington, DC 20549 or by calling the SEC at 1-800-SEC-0330.

Our year end for fiscal 2011, 2010 and 2009 was October 1, 2011, October 2, 2010, and October 3, 2009, respectively.

Business Environment

The semiconductor business environment is highly volatile, driven by internal dynamics, both cyclical and seasonal, in addition to macroeconomic forces. Over the long term, semiconductor consumption has historically grown, and is forecast to continue to grow. This growth is driven, in part, by regular advances in device performance and by price declines that result from improvements in manufacturing technology. In order to exploit these trends, semiconductor manufacturers, both integrated device manufacturers ("IDMs") and OSATs, periodically invest aggressively in latest generation capital equipment. This buying pattern often leads to periods of excess supply and reduced capital spending — the so called semiconductor cycle. Within this broad semiconductor cycle there are also, generally weaker, seasonal effects that are specifically tied to annual, end-consumer purchasing patterns. Typically, semiconductor manufacturers prepare for heightened demand by adding or replacing equipment capacity by the end of the September quarter. Occasionally this results in subsequent reductions in the December quarter. This annual seasonality can occasionally be overshadowed by effects of the broader semiconductor cycle. Macroeconomic factors also affect the industry, primarily through their effect on business and consumer demand for electronic devices, as well as other products that have significant electronic content such as automobiles, white goods, and telecommunication equipment.

Our Equipment segment is primarily affected by the industry's internal cyclical and seasonal dynamics in addition to broader macroeconomic factors which positively and negatively affect our financial performance. The sales mix of IDM and OSAT customers in any period, also impacts financial performance, as this mix can affect our products' average selling prices and gross margins due to differences in volume purchases and machine configurations required by each customer type.

Our Expendable Tools segment is less volatile than our Equipment segment. Expendable Tools sales are more directly tied to semiconductor unit consumption rather than capacity requirements and production capability improvements.

We continue to position our business to leverage our research and development leadership and innovation and to focus our efforts on mitigating volatility, improving profitability and ensuring longer-term growth. The current economic environment is uncertain and we may experience typical industry seasonality during the first quarter of fiscal 2012. Our visibility into future demand is generally limited and forecasting is difficult.

To limit potential adverse cyclical, seasonal and macroeconomic effects on our financial position, we have de-leveraged and strengthened our balance sheet. During fiscal 2010, we reduced our debt by \$49.0 million, and we presently intend to repay our 0.875% Convertible Subordinated Notes with cash up to the principal amount of \$110.0 million at maturity in fiscal 2012. As of October 1, 2011, our total cash, cash equivalents and investments was \$384.6 million, which exceeded the face value of our total debt by \$274.6 million, a \$203.2 million increase from the prior fiscal year end. This strong cash position better enables continual investment in product development as well as in

production capability improvements throughout the semiconductor cycle.

Technology Leadership

We compete largely by offering our customers among the most advanced equipment and expendable tools available for the wire, wedge and die bonding processes. Our equipment is typically the most productive, has the highest levels of process capability, and as a result, has the lowest cost of ownership available in its markets. Our expendable tools are designed to optimize the performance of the equipment in which they are used. We believe our technology leadership contributes to the leading market share positions of our various wire bonder and expendable tools products. To maintain our competitive advantage, we invest in product development activities designed to produce a stream of improvements to existing products and to deliver next-generation products. These investments often focus as much on improvements in the semiconductor assembly process as on specific pieces of assembly equipment or expendable tools. In order to generate these improvements, we often work in close collaboration with customers, end users, and other industry members. In addition to producing technical advances, these collaborative development efforts strengthen customer relationships and enhance our reputation as a technology leader and solutions provider.

In addition to gold and aluminum wire, our leadership in the industry's use of copper wire for the bonding process is an example of the benefits of collaborative efforts. By working with customers, material suppliers, and other equipment suppliers, we have developed a series of robust, high-yielding production processes that have made copper wire commercially viable, significantly reducing the cost of assembling an integrated circuit. During fiscal 2010, many of our customers began converting their output to copper wire, and we believe the conversion was initiated through fabless companies in the consumer segment. Gradually, the level of confidence and the reliability of data collected have enabled a larger segment of the customer base to increase copper capabilities. Since this initial conversion, a significant portion of our wire bonder sales have become copper capable. We believe this is the first phase of the gold-to-copper migration, and we expect this conversion process to continue throughout the industry for the next several years. This could potentially drive a significant wire bonder replacement cycle as we believe much of the industries' installed base is not currently suitable for copper bonding. Based on our industry leading copper bonding processes and the continued high price of gold, we believe the total available market for copper configured wire bonders is likely to continue demonstrating solid growth.

Our leadership has allowed us to maintain a competitive position in the latest generations of gold and copper ball bonders, which enable our customers to handle the leading technologies in terms of pitch and bond size. We have recently seen increased demand for our large bondable area ("LA") configured machines. This LA option is now available on all of our Power Series ("PS") models and allows our customers to gain added efficiencies and to reduce the cost of packaging.

We also leverage the technology leadership of our equipment by optimizing our bonder platforms, and we deliver variants of our products to serve emerging high-growth markets. For example, we have developed extensions of our main ball bonding platforms to address opportunities in LED assembly. The LED backlights for flat-screen displays have been the main driver of the LED market in the last few years where we have successfully competed in LED assembly equipment. We expect the next wave of growth in the LED market to be high brightness LED for general lighting, and we believe we are well positioned for this trend.

Furthermore, we gain synergies by leveraging technologies between our unique platforms. Our leading technology for wedge bonder equipment uses aluminum ribbon or heavier wire as opposed to fine gold and fine copper wire used in ball bonders. In addition, we are currently developing the next generation platform for our power semiconductor wedge bonder. We intend to initiate design of our next power module wedge bonder. In both cases, we are making a conscious effort to develop commonality of subsystems and design practices, in order to improve performance and design efficiencies. We believe this will benefit us in maintaining our leadership position in the wedge bonding market and increase synergies between the various engineering product groups. Furthermore, we continually research adjacent market segments where our technologies could be used. As an example, we are reviewing the use of wedge

bonding in the fabrication of solar panels. Many of these initiatives are in the early stages of development and may become business opportunities in the future.

Another example of our developing equipment for high-growth niche markets is our AT Premier. This machine utilizes a modified wire bonding process to mechanically place bumps on devices, while still in a wafer format, for variants of the flip chip assembly process. Typical applications include complimentary metal-oxide semiconductor (“CMOS”) image sensors, surface acoustical wave (SAW) filters and high brightness LEDs. These applications are commonly used in most, if not all, smartphones available today in the market.

Our focus on technology leadership also extends to die bonding. Our state of the art iStackPS die bonder for advanced stacked die applications offers best-in-class throughput and accuracy.

We bring the same technology focus to our expendable tools business, driving tool design and manufacturing technology to optimize the performance and process capability of the equipment in which our tools are used. For all our equipment products, expendable tools are an integral part of their process capability. We believe our unique ability to simultaneously develop both equipment and tools is a core strength supporting our products’ technological differentiation.

Products and Services

The Company operates two segments: Equipment and Expendable Tools. The following table reflects net revenue by business segment for fiscal 2011, 2010, and 2009:

	Fiscal								
(dollar amounts in thousands)	2011 net revenue	% of net revenue		2010 net revenue	% of net revenue		2009 net revenue	% of net revenue	
Equipment	\$759,331	91.4	%	\$691,988	90.7	%	\$170,536	75.7	%
Expendable Tools	71,070	8.6	%	70,796	9.3	%	54,704	24.3	%
Total	\$830,401	100.0	%	\$762,784	100.0	%	\$225,240	100.0	%

See Note 10 to our Consolidated Financial Statements included in Item 8 of this report for our financial results by business segment.

Equipment Segment

We manufacture and sell a line of ball bonders, heavy wire wedge bonders, stud bumpers, and die bonders that are sold to semiconductor device manufacturers, OSATs, other electronics manufacturers and automotive electronics suppliers. Ball bonders are used to connect very fine wires, typically made of gold or copper, between the bond pads of the semiconductor device, or die, and the leads on its package. Wedge bonders use either aluminum wire or ribbon to perform the same function in packages that cannot use gold or copper wire because of either high electrical current requirements or other package reliability issues. Stud bumpers mechanically apply bumps to die, typically while still in the wafer format, for some variants of the flip chip assembly process. Die bonders are used to attach a die to the substrate or lead frame which will house the semiconductor device. We believe our equipment offers competitive advantages by providing customers with high productivity/throughput, superior package quality/process control, and as a result, a lower cost of ownership.

Our principal Equipment segment products include:

Business Unit	Product Name (1)	Typical Served Market
Ball bonders	IConnPS	Advanced and ultra fine pitch applications using either gold or copper wire
	IConnPS ProCu	High-end copper wire applications demanding advanced process capability and high productivity
	IConnPS ProCu LA	Large area substrate and matrix applications for copper wire
	IConnPS LA	Large area substrate and matrix applications
	ConnXPS	Cost performance, low pin count applications using either gold or copper wire
	ConnXPS LED	LED applications
	ConnXPS VLED	Vertical LED applications
	ConnXPS LA	Cost performance large area substrate and matrix applications
	AT Premier	Stud bumping applications (high brightness LED and image sensor)
Wedge bonders	3600Plus	Power hybrid and automotive modules using either heavy aluminum wire or PowerRibbon®
	3700Plus	Hybrid and automotive modules using thin aluminum wire
	7200Plus	Power semiconductors using either aluminum wire or ribbon
	7200HD	Smaller power packages using either aluminum wire or ribbon
	7600HD	Power semiconductors including smaller power packages using either aluminum wire or ribbon
Die bonder	iStackPS	Advanced stacked die and ball grid array applications
	(1)	Power Series (“PS”)

Ball Bonders

Automatic ball bonders represent the largest portion of our semiconductor equipment business. Our main product platform for ball bonding is the Power Series (“PS”) — a family of assembly equipment that is setting new standards for performance, productivity, upgradeability, and ease of use. Our Power Series consists of our IConnPS high-performance ball bonders, and our ConnXPS cost-performance ball bonders, both of which can be configured for either gold or copper wire. In addition, targeted specifically at the fast growing LED market, the Power

Series includes our ConnX PS LED and our ConnX PS VLED. Targeted for large bondable area applications, the Power Series includes our IConnPS LA and ConnXPS LA. In November 2010 and January 2011, we introduced the IConnPS ProCu and IConnPS ProCu LA, respectively, which offer a significant new level of capability for customers transitioning from gold to copper wire bonding.

Our Power Series products have advanced industry performance standards. Our ball bonders are capable of performing very fine pitch bonding, as well as creating the sophisticated wire loop shapes needed in the assembly of advanced semiconductor packages. Our ball bonders can also be converted for use to copper applications through kits we sell separately, a capability that is increasingly important as bonding with copper continues to grow as an alternative to gold.

Our AT Premier machine utilizes a modified wire bonding process to mechanically place bumps on devices, while still in a wafer format, for variants of the flip chip assembly process. Typical applications include CMOS image sensors, SAW filters and high brightness LEDs. These applications are commonly used in most, if not all, smartphones available today in the market.

Heavy Wire Wedge Bonders

We are the leaders in the design and manufacture of heavy wire wedge bonders for the power semiconductor and automotive power module markets. Wedge bonders may use either aluminum wire or aluminum ribbon to connect semiconductor chips in power packages, power hybrids and automotive modules for products such as motor control modules or inverters for hybrid cars. In addition, we see some potential use for our wedge bonder products in select solar applications.

Our portfolio of wedge bonding products includes:

- The 3600Plus: high speed, high accuracy wire bonders designed for power modules, automotive packages and other heavy wire multi-chip module applications.
 - The 3700Plus: wire bonders designed for hybrid and automotive modules using thin aluminum wire.
 - The 7200Plus: dual head wedge bonder designed specifically for power semiconductor applications.
 - The 7200HD: wedge bonder designed for smaller power packages using either aluminum wire or ribbon.
 - The 7600HD: wedge bonder targeted for small power packages.

While wedge bonding traditionally utilizes aluminum wire, all of our wedge bonders are also available modified to bond aluminum ribbon using our proprietary PowerRibbon® process. Aluminum ribbon offers device makers performance advantages over traditional round wire and is being increasingly used for high current packages and automotive applications.

Die Bonders

Our die bonder, the iStackPS, focuses on stacked die applications for both memory and subcontract assembly customers. iStackPS is targeted at stacked die and high-end ball grid array (BGA) applications. In these applications, we expect up to 40% productivity increases compared to current generation machines. In addition, iStackPS has demonstrated superior accuracy and process control.

Other Equipment Products and Services

We also sell manual wire bonders, and we offer spare parts, equipment repair, training services, and upgrades for our equipment through our Support Services business unit.

Expendable Tools Segment

We manufacture and sell a variety of expendable tools for a broad range of semiconductor packaging applications. Our principal Expendable Tools segment products include:

- **Capillaries:** expendable tools used in ball bonders. Made of ceramic, a capillary guides the wire during the ball bonding process. Its features help control the bonding process. We design and build capillaries suitable for a broad range of applications, including for use on our competitors' equipment. In addition, our capillaries are used with both gold and copper wire.
- **Bonding wedges:** expendable tools used in wedge bonders. Like capillaries, their specific features are tailored to specific applications. We design and build bonding wedges for use both in our own equipment and in our competitors' equipment.
- **Saw blades:** expendable tools used by semiconductor manufacturers to cut silicon wafers into individual semiconductor die and to cut semiconductor devices that have been molded in a matrix configuration into individual units.

Customers

Our major customers include IDMs and OSATs, industrial manufacturers and automotive electronics suppliers. Revenue from our customers may vary significantly from year-to-year based on their respective capital investments, operating expense budgets, and overall industry trends.

The following table reflects our top ten customers, based on net revenue, for each of the last three fiscal years:

Fiscal 2011	Fiscal 2010	Fiscal 2009
1. Advance Semiconductor Engineering *	1. Advance Semiconductor Engineering *	1. Advance Semiconductor Engineering *
2. Siliconware Precision Industries, Ltd.	2. Siliconware Precision Industries, Ltd. *	2. Amkor Technology, Inc.
3. STATS Chippac Ltd	3. Haoseng Industrial Co., Ltd. **	3. Siliconware Precision Industries, Ltd.
4. First Technology China, Ltd. **	4. Amkor Technology, Inc.	4. Haoseng Industrial Co., Ltd. **
5. Haoseng Industrial Co., Ltd. **	5. Texas Instruments, Inc.	5. Texas Instruments, Inc.
6. ST Microelectronics	6. United Test And Assembly Center	6. First Technology China, Ltd. **
7. Super Power International Ltd **	7. First Technology China, Ltd. **	7. Techno Alpha Co. **
8. Hynix Semiconductor	8. ST Microelectronics	8. ST Microelectronics
9. Samsung	9. HANA Micron	9. Samsung
10. Renesas Semiconductor	10. Renesas Semiconductor	10. Micron Technology Incorporated

* Represents more than 10% of our net revenue for the applicable fiscal year.

** Distributor of our products.

Approximately 97.8%, 98.6%, and 97.0% of our net revenue for fiscal 2011, 2010, and 2009, respectively, were for shipments to customer locations outside of the U.S., primarily in the Asia/Pacific region, and we expect sales outside of the U.S. to continue to represent a substantial majority of our future net revenue.

See Note 10 to our Consolidated Financial Statements included in Item 8 of this report for sales to customers by geographic location.

Sales and Customer Support

We believe long-term customer relationships are critical to our success, and comprehensive sales and customer support are an important means of establishing those relationships. To maintain these relationships, we utilize multiple distribution channels using either our own employees, manufacturers' representatives, distributors, or a combination of the three, depending on the product, region, or end-use application. In all cases, our goal is to position our sales and customer support resources near our customers' facilities so as to provide support for customers in their own language and consistent with local customs. Our sales and customer support resources are located primarily in Taiwan, China, Korea, Malaysia, the Philippines, Japan, Singapore, Thailand, the U.S., and Germany. Supporting these local resources, we have technology centers offering additional process expertise in China, Singapore, Japan, Israel, Switzerland and the U.S.

By establishing relationships with semiconductor manufacturers, OSATs, and vertically integrated manufacturers of electronic systems, we gain insight into our customers' future semiconductor packaging strategies. These insights assist us in our efforts to develop products and processes that address our customers' future assembly requirements.

Backlog

Our backlog consists of customer orders scheduled for shipment within the next twelve months. A majority of our orders are subject to cancellation or deferral by our customers with limited or no penalties. Also, customer demand for our products can vary dramatically without prior notice. Because of the volatility of customer demand, possibility of customer changes in delivery schedules or cancellations and potential delays in product shipments, our backlog as of any particular date may not be indicative of net revenue for any succeeding period.

The following table reflects our backlog as of October 1, 2011 and October 2, 2010:

(in thousands)	As of	
	October 1, 2011	October 2, 2010
Backlog	\$ 103,000	\$ 252,000

Manufacturing

We believe excellence in manufacturing can create a competitive advantage, both by producing at lower costs and by providing superior responsiveness to changes in customer demand. To achieve these goals, we manage our manufacturing operations through a single organization and believe that fewer, larger factories allow us to capture economies of scale and generate cost savings through lower manufacturing costs.

Equipment

Our equipment manufacturing activities consist mainly of integrating outsourced parts and subassemblies and testing finished products to customer specifications. While we largely utilize an outsource model, allowing us to minimize our fixed costs and capital expenditures, for certain low-volume, high customization parts, we manufacture subassemblies ourselves. Just-in-time inventory management has reduced our manufacturing cycle times and lowered our on-hand inventory requirements. Raw materials used in our equipment manufacturing are generally available from multiple sources; however, many outsourced parts and components are only available from a single or limited number of sources.

Our ball bonder, wedge bonder and die bonder manufacturing and assembly is performed at our facility in Singapore. In addition, we operate a subassembly manufacturing and supply management facility in Malaysia. During fiscal 2011, we completed the transition of our wedge bonder manufacturing from Irvine, California to Asia.

We have ISO 9001 certification for our equipment manufacturing facilities in Singapore, Irvine, California, and Switzerland (legacy model die bonders and spares manufacturing), and our subassembly manufacturing facility in Malaysia. In addition, we have ISO 14001 certifications for our equipment manufacturing facilities in Singapore and Irvine, California.

Expendable Tools

We manufacture saw blades, capillaries and a portion of our bonding wedge inventory at our facility in Suzhou, China. The capillaries are made using blanks produced at our facility in Yokneam, Israel. We outsource the production of our bonding wedges. Both the Suzhou and Yokneam facilities are ISO 9001 and ISO 14001 certified.

Research and Product Development

Many of our customers generate technology roadmaps describing their projected packaging technology requirements. Our research and product development activities are focused on delivering robust production solutions to those projected requirements. We accomplish this by regularly introducing improved versions of existing products or by developing next-generation products. We follow this product development methodology in all our major product lines. Research and development expense was \$65.1 million, \$56.7 million, and \$53.5 million during fiscal 2011, 2010, and 2009, respectively.

Intellectual Property

Where circumstances warrant, we apply for patents on inventions governing new products and processes developed as part of our ongoing research, engineering, and manufacturing activities. We currently hold a number of U.S. patents, many of which have foreign counterparts. We believe the duration of our patents often exceeds the life cycles of the technologies disclosed and claimed in the patents. Additionally, we believe much of our important technology resides in our trade secrets and proprietary software.

Competition

The market for semiconductor equipment and packaging materials products is intensely competitive. Significant competitive factors in the semiconductor equipment market include price, speed/throughput, production yield, process control, delivery time and customer support, each of which contribute to lower the overall cost per package being manufactured. Our major equipment competitors include:

- Ball bonders: ASM Pacific Technology and Shinkawa
- Wedge bonders: ASM Pacific Technology, Cho-Onpa, F&K Delvotec, and Hesse & Knipps
- Die bonders: ASM Pacific Technology, BE Semiconductor Industries N.V., Canon, Hitachi, and Shinkawa

Significant competitive factors in the semiconductor packaging materials industry include performance, price, delivery, product life, and quality. Our significant expendable tools competitors include:

- Capillaries: PECO and Small Precision Tools, Inc.
- Saw blades: Disco Corporation
- Bonding wedges: Small Precision Tools, Inc.

In each of the markets we serve, we face competition and the threat of competition from established competitors and potential new entrants, some of which may have greater financial, engineering, manufacturing, and marketing resources.

Environmental Matters

We are subject to various federal, state, local and foreign laws and regulations governing, among other things, the generation, storage, use, emission, discharge, transportation and disposal of hazardous materials and the health and safety of our employees. In addition, we are subject to environmental laws which may require investigation and cleanup of any contamination at facilities we own or operate or at third-party waste disposal sites we use or have used.

We have incurred in the past, and expect in the future to incur costs to comply with environmental laws. We are not, however, currently aware of any material costs or liabilities relating to environmental matters, including any claims or actions under environmental laws or obligations to perform any cleanups at any of our facilities or any third-party waste disposal sites, that we expect to have a material adverse effect on our business, financial condition or operating results. However, it is possible that material environmental costs or liabilities may arise in the future.

Employees

As of October 1, 2011, we had approximately 2,200 regular full-time employees and 700 temporary workers worldwide.

Item 1A. RISKS RELATED TO OUR BUSINESS AND INDUSTRY

Our operating results and financial condition are adversely impacted by volatile worldwide economic conditions.

Though the semiconductor industry's cycle can be independent of the general economy, global economic conditions may have direct impact on demand for semiconductor units and ultimately demand for semiconductor capital equipment and expendable tools. Accordingly, our business and financial performance is impacted, both positively and negatively, by fluctuations in the macroeconomic environment. During the first half of fiscal 2009, we saw a dramatic deterioration in the global economy and a corresponding reduction in semiconductor production activity; however, business conditions in the semiconductor industry began to improve by the end of fiscal 2009 and continued to accelerate in fiscal 2010 and 2011. Our visibility into future demand is generally limited and forecasting is difficult. There can be no assurances regarding levels of demand for our products and we believe historic industry-wide volatility will persist.

Erratic corporate spending due to uncertainties in the macroeconomic environment could adversely affect our net revenue and profitability.

We depend upon demand from our customers including IDMs and OSATs, industrial manufacturers and automotive electronics suppliers. Our net revenue and profitability is based upon corporate spending. Reductions or other fluctuations in corporate spending as a result of uncertain conditions in the macroeconomic environment, such as government economic or fiscal instability, restricted global credit conditions, reduced demand, unbalanced inventory levels, fluctuations in interest rates, higher energy prices, or other conditions, could adversely affect our net revenue and profitability. The impact of general economic slowdowns could make our customers cautious and delay orders until the current economic environment becomes clearer.

The semiconductor industry is volatile with sharp periodic downturns and slowdowns. Cyclical industry downturns are made worse by volatile global economic conditions.

Our operating results are significantly affected by the capital expenditures of semiconductor manufacturers, both IDMs and OSATs. Expenditures by our customers depend on the current and anticipated market demand for semiconductors and products that use semiconductors, including personal computers, telecommunications equipment, consumer electronics and automotive goods. Significant downturns in the market for semiconductor devices or in general economic conditions reduce demand for our products and can materially and adversely affect our business, financial condition and operating results.

The semiconductor industry is volatile, with periods of rapid growth followed by industry-wide retrenchment. These periodic downturns and slowdowns have adversely affected our business, financial condition and operating results. Downturns have been characterized by, among other things, diminished product demand, excess production capacity, and accelerated erosion of selling prices. Historically these downturns have severely and negatively affected the industry's demand for capital equipment, including assembly equipment and, to a lesser extent, expendable tools. There can be no assurances regarding levels of demand for our products. In any case, we believe the historical volatility of our business, both upward and downward, will persist.

We may experience increasing price pressure.

Typically our average selling prices have declined over time. We seek to offset this decline by continually reducing our cost structure by consolidating operations in lower cost areas, reducing other operating costs, and by pursuing product strategies focused on product performance and customer service. These efforts may not be able to fully offset price declines; therefore, our financial condition and operating results may be materially and adversely affected.

Our quarterly operating results fluctuate significantly and may continue to do so in the future.

In the past, our quarterly operating results have fluctuated significantly. We expect quarterly results will continue to fluctuate. Although these fluctuations are partly due to the volatile nature of the semiconductor industry, they also reflect other factors, many of which are outside of our control.

Some of the factors that may cause our net revenue and operating margins to fluctuate significantly from period to period are:

- market downturns;
- the mix of products we sell because, for example:
 - o certain lines of equipment within our business segments are more profitable than others; and
 - o some sales arrangements have higher gross margins than others;
- cancelled or deferred orders;
- seasonality;
- competitive pricing pressures may force us to reduce prices;
- higher than anticipated costs of development or production of new equipment models;

- the availability and cost of the components for our products;
- delays in the development and manufacture of our new products and upgraded versions of our products and market acceptance of these products when introduced;

- customers' delay in purchasing our products due to anticipation that we or our competitors may introduce new or upgraded products; and
- our competitors' introduction of new products.

Many of our expenses, such as research and development, selling, general and administrative expenses, and interest expense, do not vary directly with our net revenue. Our research and development efforts include long-term projects lasting a year or more, which require significant investments. In order to realize the benefits of these projects, we believe that we must continue to fund them during periods when our revenue has declined. As a result, a decline in our net revenue would adversely affect our operating results as we continue to make these expenditures. In addition, if we were to incur additional expenses in a quarter in which we did not experience comparable increased net revenue, our operating results would decline. In a downturn, we may have excess inventory, which could be written off. Some of the other factors that may cause our expenses to fluctuate from period-to-period include:

- timing and extent of our research and development efforts;
- severance, restructuring, and other costs of relocating facilities;
- inventory write-offs due to obsolescence; and
- an increase in the cost of labor or materials.

Because our net revenue and operating results are volatile and difficult to predict, we believe consecutive period-to-period comparisons of our operating results may not be a good indication of our future performance.

We may not be able to rapidly develop, manufacture and gain market acceptance of new and enhanced products required to maintain or expand our business.

We believe our continued success depends on our ability to continuously develop and manufacture new products and product enhancements on a timely and cost-effective basis. We must introduce these products and product enhancements into the market in a timely manner in response to customers' demands for higher performance assembly equipment and leading-edge materials customized to address rapid technological advances in integrated circuits, and capital equipment designs. Our competitors may develop new products or enhancements to their products that offer improved performance and features, or lower prices which may render our products less competitive. The development and commercialization of new products requires significant capital expenditures over an extended period of time, and some products we seek to develop may never become profitable. In addition, we may not be able to develop and introduce products incorporating new technologies in a timely manner that will satisfy our customers' future needs or achieve market acceptance.

Substantially all of our sales and manufacturing operations are located outside of the U.S., and we rely on independent foreign distribution channels for certain product lines; all of which subject us to risks, including risks from changes in trade regulations, currency fluctuations, political instability and war.

Approximately 97.8%, 98.6%, and 97.0% of our net revenue for fiscal 2011, 2010, and 2009, respectively, were for shipments to customers located outside of the U.S., primarily in the Asia/Pacific region. Our future performance will depend on our ability to continue to compete in foreign markets, particularly in the Asia/Pacific region. Some of these economies have been highly volatile, resulting in significant fluctuation in local currencies, and political and economic instability. These conditions may continue or worsen, which may materially and adversely affect our business, financial condition and operating results.

We also rely on non-U.S. suppliers for materials and components used in our products, and substantially all of our manufacturing operations are located in countries other than the U.S. We manufacture our ball, wedge and die bonders in Singapore, our saw blades and capillaries in China, certain bonder subassemblies in Malaysia and capillary blanks in Israel. We manufacture wedge bonder components in Singapore and Malaysia. In addition, our corporate headquarters is in Singapore and we have sales, service and support personnel in China, Israel, Japan, Korea, Malaysia, the Philippines, Singapore, Switzerland, Taiwan, Thailand, the U.S. and Germany. We also rely on independent foreign distribution channels for certain of our product lines. As a result, a major portion of our business is subject to the risks associated with international, and particularly Asia/Pacific, commerce, such as:

- risks of war and civil disturbances or other events that may limit or disrupt manufacturing and markets;
- seizure of our foreign assets, including cash;
- longer payment cycles in foreign markets;
- international exchange restrictions;
- restrictions on the repatriation of our assets, including cash;
- significant foreign and U.S. taxes on repatriated cash;
- difficulties of staffing and managing dispersed international operations;
- possible disagreements with tax authorities;
- episodic events outside our control such as, for example, outbreaks of influenza;
- natural disasters such as earthquakes, fires or floods;
- tariff and currency fluctuations;
- changing political conditions;
- labor work stoppages and strikes in our factories or the factories of our suppliers;
- foreign governments' monetary policies and regulatory requirements;
- less protective foreign intellectual property laws; and
- legal systems which are less developed and may be less predictable than those in the U.S.

In addition, there is a potential risk of conflict and instability in the relationship between Taiwan and China. Conflict or instability could disrupt the operations of our customers and/or suppliers in both Taiwan and China. Additionally, our manufacturing operations in China could be disrupted by any conflict.

Our international operations also depend upon favorable trade relations between the U.S. and those foreign countries in which our customers, subcontractors and materials suppliers have operations. A protectionist trade environment in either the U.S. or those foreign countries in which we do business, such as a change in the current tariff structures, export compliance or other trade policies, may materially and adversely affect our ability to sell our products in

foreign markets.

We are exposed to fluctuations in currency exchange rates that could negatively impact our financial results and cash flows.

Because most of our foreign sales are denominated in U.S. dollars, an increase in value of the U.S. dollar against foreign currencies will make our products more expensive than those offered by some of our foreign competitors. In addition, a weakening of the U.S. dollar against foreign currencies could make our costs in non-U.S. locations more expensive to fund. Our ability to compete overseas may be materially and adversely affected by a strengthening of the U.S. dollar against foreign currencies.

Because nearly all of our business is conducted outside the U.S., we face exposure to adverse movements in foreign currency exchange rates which could have a material adverse impact on our financial results and cash flows. Historically, our primary exposures have related to net working capital exposures denominated in currencies other than the foreign subsidiaries' functional currency, and remeasurement of our foreign subsidiaries' net monetary assets from the subsidiaries' local currency into the subsidiaries' functional currency. In general, an increase in the value of the U.S. dollar could require certain of our foreign subsidiaries to record translation and remeasurement gains. Conversely, a decrease in the value of the U.S. dollar could require certain of our foreign subsidiaries to record losses on translation and remeasurement. An increase in the value of the U.S. dollar could increase the cost to our customers of our products in those markets outside the U.S. where we sell in U.S. dollars, and a weakened U.S. dollar could increase the cost of local operating expenses and procurement of raw materials, both of which could have an adverse effect on our cash flows. Our primary exposures include the Japanese Yen, Singapore Dollar, Malaysian Ringgit, Chinese Yuan, Swiss Franc, Philippine Peso, Taiwan Dollar, South Korean Won, Israeli Shekel and Euro. Our board of directors has granted management with limited authority to enter into foreign exchange forward contracts and other instruments designed to minimize the short term impact currency fluctuations have on our business. We have not entered into foreign exchange forward contracts but may enter into foreign exchange forward contracts or other instruments in the future. Our attempts to hedge against these risks may not be successful and may result in a material adverse impact on our financial results and cash flows.

We may not be able to consolidate manufacturing and other facilities without incurring unanticipated costs and disruptions to our business.

As part of our ongoing efforts to reduce our cost structure, we have migrated manufacturing and other facilities to Asia. Because of unanticipated events, including the actions of governments, suppliers, employees or customers, we may not realize the synergies, cost reductions and other benefits of any consolidation to the extent we currently expect.

Our business depends on attracting and retaining management, marketing and technical employees as well as on the succession of senior management.

Our future success depends on our ability to hire and retain qualified management, marketing, finance, accounting and technical employees, including senior management, primarily in Asia. During fiscal 2011, in connection with the relocation of our headquarters to Singapore, Bruno Guilmart joined the Company as CEO and President and Jonathan H. Chou joined us as Senior Vice President, CFO and Principal Accounting Officer. In addition, other senior management and finance and accounting positions have been transitioned to Singapore. If we are unable to continue to attract and retain the managerial, marketing, finance, accounting and technical personnel we require, and if we are unable to effectively provide for the succession of senior management, our business, financial condition and operating results may be materially and adversely affected.

Difficulties in forecasting demand for our product lines may lead to periodic inventory shortages or excesses.

We typically operate our business with limited visibility of future demand. As a result, we sometimes experience inventory shortages or excesses. We generally order supplies and otherwise plan our production based on internal forecasts for demand. We have in the past, and may again in the future, fail to accurately forecast demand for our products. This has led to, and may in the future lead to, delays in product shipments or, alternatively, an increased risk of inventory obsolescence. If we fail to accurately forecast demand for our products, our business, financial condition and operating results may be materially and adversely affected.

Alternative packaging technologies may render some of our products obsolete.

Alternative packaging technologies have emerged that may improve device performance or reduce the size of an integrated circuit ("IC") package, as compared to traditional wire bonding. These technologies include flip chip and chip scale packaging. Some of these alternative technologies eliminate the need for wires to establish the electrical connection between a die and its package. The semiconductor industry may, in the future, shift a significant part of its volume into alternative packaging technologies, such as those discussed above, which do not employ our products. If a significant shift to alternative packaging technologies were to occur, demand for our equipment and related packaging materials may be materially and adversely affected.

Because a small number of customers account for most of our sales, our net revenue could decline if we lose a significant customer.

The semiconductor manufacturing industry is highly concentrated, with a relatively small number of large semiconductor manufacturers and their subcontract assemblers and vertically integrated manufacturers of electronic systems purchasing a substantial portion of our semiconductor assembly equipment and packaging materials. Sales to a relatively small number of customers account for a significant percentage of our net revenue. Sales to our largest customers as a percent of net revenue were 21.8%, 33.3%, and 17.7%, for fiscal 2011, 2010, and 2009, respectively.

We expect a small number of customers will continue to account for a high percentage of our net revenue for the foreseeable future. Thus, our business success depends on our ability to maintain strong relationships with our customers. Any one of a number of factors could adversely affect these relationships. If, for example, during periods of escalating demand for our equipment, we were unable to add inventory and production capacity quickly enough to meet the needs of our customers, they may turn to other suppliers making it more difficult for us to retain their business. Similarly, if we are unable for any other reason to meet production or delivery schedules, particularly during a period of escalating demand, our relationships with our key customers could be adversely affected. If we lose orders from a significant customer, or if a significant customer reduces its orders substantially, these losses or reductions may materially and adversely affect our business, financial condition and operating results.

We depend on a small number of suppliers for raw materials, components and subassemblies. If our suppliers do not deliver their products to us, we would be unable to deliver our products to our customers.

Our products are complex and require raw materials, components and subassemblies having a high degree of reliability, accuracy and performance. We rely on subcontractors to manufacture many of these components and subassemblies and we rely on sole source suppliers for many components and raw materials. As a result, we are exposed to a number of significant risks, including:

- decreased control over the manufacturing process for components and subassemblies;

- changes in our manufacturing processes, in response to changes in the market, which may delay our shipments;
- our inadvertent use of defective or contaminated raw materials;
- the relatively small operations and limited manufacturing resources of some of our suppliers, which may limit their ability to manufacture and sell subassemblies, components or parts in the volumes we require and at acceptable quality levels and prices;
- the inability of suppliers to meet customer demand requirements during volatile cycles;
- the reliability or quality issues with certain key subassemblies provided by single source suppliers as to which we may not have any short term alternative;
- shortages caused by disruptions at our suppliers and subcontractors for a variety of reasons, including work stoppage or fire, earthquake, flooding or other natural disasters;
- delays in the delivery of raw materials or subassemblies, which, in turn, may delay shipments to our customers;
- loss of suppliers as a result of consolidation of suppliers in the industry; and
- loss of suppliers because of their bankruptcy or insolvency.

If we are unable to deliver products to our customers on time for these or any other reasons, or we are unable to meet customer expectations as to cycle time, or we are unable to maintain acceptable product quality or reliability, our business, financial condition and operating results may be materially and adversely affected.

We may acquire or divest businesses or enter into joint ventures or strategic alliances, which may materially affect our business, financial condition and operating results.

We continually evaluate our portfolio of businesses and may decide to buy or sell businesses or enter into joint ventures or other strategic alliances. We may be unable to successfully integrate acquired businesses with our existing businesses and successfully implement, improve and expand our systems, procedures and controls to accommodate these acquisitions. These transactions place additional constraints on our management and current labor force. Additionally, these transactions require significant resources from our legal, finance and business teams. In addition, we may divest existing businesses, which would cause a decline in revenue and may make our financial results more volatile. If we fail to integrate and manage acquired businesses successfully or to manage the risks associated with divestitures, joint ventures or other alliances, our business, financial condition and operating results may be materially and adversely affected.

The market price of our common shares and our earnings per share may decline as a result of any acquisitions or divestitures.

The market price of our common shares may decline as a result of any acquisitions or divestitures made by us if we do not achieve the perceived benefits of such acquisitions or divestitures as rapidly or to the extent anticipated by financial or industry analysts or if the effect on our financial results is not consistent with the expectations of financial or industry analysts. In addition, the failure to achieve expected benefits and unanticipated costs relating to our acquisitions could reduce our future earnings per share.

We may be unable to continue to compete successfully in the highly competitive semiconductor equipment and packaging materials industries.

The semiconductor equipment and packaging materials industries are very competitive. In the semiconductor equipment industry, significant competitive factors include performance, quality, customer support and price. In the semiconductor packaging materials industry, competitive factors include price, delivery and quality.

In each of our markets, we face competition and the threat of competition from established competitors and potential new entrants. In addition, established competitors may combine to form larger, better capitalized companies. Some of our competitors have or may have significantly greater financial, engineering, manufacturing and marketing resources. Some of these competitors are Asian and European companies that have had, and may continue to have, an advantage over us in supplying products to local customers who appear to prefer to purchase from local suppliers, without regard to other considerations.

We expect our competitors to improve their current products' performance, and to introduce new products and materials with improved price and performance characteristics. Our competitors may independently develop technology similar to or better than ours. New product and material introductions by our competitors or by new market entrants could hurt our sales. If a particular semiconductor manufacturer or subcontract assembler selects a competitor's product or materials for a particular assembly operation, we may not be able to sell products or materials to that manufacturer or assembler for a significant period of time. Manufacturers and assemblers sometimes develop lasting relationships with suppliers and assembly equipment providers in our industry and often go years without requiring replacement. In addition, we may have to lower our prices in response to price cuts by our competitors, which may materially and adversely affect our business, financial condition and operating results. If we cannot compete successfully, we could be forced to reduce prices and could lose customers and experience reduced margins and profitability.

Our success depends in part on our intellectual property, which we may be unable to protect.

Our success depends in part on our proprietary technology. To protect this technology, we rely principally on contractual restrictions (such as nondisclosure and confidentiality provisions) in our agreements with employees, subcontractors, vendors, consultants and customers and on the common law of trade secrets and proprietary "know-how." We also rely, in some cases, on patent and copyright protection. We may not be successful in protecting our technology for a number of reasons, including the following:

- employees, subcontractors, vendors, consultants and customers may violate their contractual agreements, and the cost of enforcing those agreements may be prohibitive, or those agreements may be unenforceable or more limited than we anticipate;
- foreign intellectual property laws may not adequately protect our intellectual property rights; and
- our patent and copyright claims may not be sufficiently broad to effectively protect our technology; our patents or copyrights may be challenged, invalidated or circumvented; or we may otherwise be unable to obtain adequate protection for our technology.

In addition, our partners and alliances may have rights to technology developed by us. We may incur significant expense to protect or enforce our intellectual property rights. If we are unable to protect our intellectual property rights, our competitive position may be weakened.

Third parties may claim we are infringing on their intellectual property, which could cause us to incur significant litigation costs or other expenses, or prevent us from selling some of our products.

The semiconductor industry is characterized by rapid technological change, with frequent introductions of new products and technologies. Industry participants often develop products and features similar to those introduced by others, creating a risk that their products and processes may give rise to claims they infringe on the intellectual property of others. We may unknowingly infringe on the intellectual property rights of others and incur significant liability for that infringement. If we are found to have infringed on the intellectual property rights of others, we could

be enjoined from continuing to manufacture, market or use the affected product, or be required to obtain a license to continue manufacturing or using the affected product. A license could be very expensive to obtain or may not be available at all. Similarly, changing or re-engineering our products or processes to avoid infringing the rights of others may be costly, impractical or time consuming.

Occasionally, third parties assert that we are, or may be, infringing on or misappropriating their intellectual property rights. In these cases, we defend, and will continue to defend, against claims or negotiate licenses where we consider these actions appropriate. Intellectual property cases are uncertain and involve complex legal and factual questions. If we become involved in this type of litigation, it could consume significant resources and divert our attention from our business.

We may be materially and adversely affected by environmental and safety laws and regulations.

We are subject to various federal, state, local and foreign laws and regulations governing, among other things, the generation, storage, use, emission, discharge, transportation and disposal of hazardous material, investigation and remediation of contaminated sites and the health and safety of our employees. Increasingly, public attention has focused on the environmental impact of manufacturing operations and the risk to neighbors of chemical releases from such operations.

Proper waste disposal plays an important role in the operation of our manufacturing plants. In many of our facilities we maintain wastewater treatment systems that remove metals and other contaminants from process wastewater. These facilities operate under permits that must be renewed periodically. A violation of those permits may lead to revocation of the permits, fines, penalties or the incurrence of capital or other costs to comply with the permits, including potential shutdown of operations.

Compliance with existing or future, land use, environmental and health and safety laws and regulations may: (1) result in significant costs to us for additional capital equipment or other process requirements, (2) restrict our ability to expand our operations and/or (3) cause us to curtail our operations. We also could incur significant costs, including cleanup costs, fines or other sanctions and third-party claims for property damage or personal injury, as a result of violations of or liabilities under such laws and regulations. Any costs or liabilities to comply with or imposed under these laws and regulations could materially and adversely affect our business, financial condition and operating results.

We have the ability to issue additional equity securities, which would lead to dilution of our issued and outstanding common shares.

The issuance of additional equity securities or securities convertible into equity securities will result in dilution of our existing shareholders' equity interests in us. Our board of directors has the authority to issue, without vote or action of shareholders, preferred shares in one or more series, and has the ability to fix the rights, preferences, privileges and restrictions of any such series. Any such series of preferred shares could contain dividend rights, conversion rights, voting rights, terms of redemption, redemption prices, liquidation preferences or other rights superior to the rights of holders of our common shares. In addition, we are authorized to issue, without shareholder approval, up to an aggregate of 200 million common shares, of which approximately 72.7 million shares were outstanding as of October 1, 2011. We are also authorized to issue, without shareholder approval, securities convertible into either common shares or preferred shares.

Weaknesses in our internal controls and procedures could result in material misstatements in our financial statements.

Pursuant to the Sarbanes-Oxley Act, management is responsible for establishing and maintaining adequate internal control over financial reporting. Our internal controls over financial reporting are processes designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements in accordance with U.S. generally accepted accounting principles. A material weakness is a control deficiency, or combination of control deficiencies, that results in a more than remote likelihood that a material misstatement of annual or interim financial statements will not be prevented or detected.

Our internal controls may not prevent all potential errors or fraud. Any control system, no matter how well designed and implemented, can only provide reasonable and not absolute assurance that the objectives of the control system will be achieved. We or our independent registered public accountants may identify material weaknesses in our internal controls which could adversely affect our ability to ensure proper financial reporting and could affect investor confidence in us and the price of our common shares.

Other Risks

Our ability to recognize tax benefits on future domestic U.S. tax losses and our existing U.S. net operating loss position may be limited.

We have generated net operating loss carry-forwards and other tax attributes for U.S. tax purposes (“Tax Benefits”) that can be used to reduce our future federal income tax obligations. Under the Tax Reform Act of 1986, the potential future utilization of our Tax Benefits for U.S. tax purposes may be limited following an ownership change. An ownership change is generally defined as a greater than 50% point increase in equity ownership by 5% shareholders in any three-year period under Section 382 of the Internal Revenue Code. An ownership change may significantly limit our ability to fully utilize our net operating losses which could materially and adversely affect our financial condition and operating results. As of October 1, 2011, we have foreign net operating loss carryforwards of \$87.9 million, state net operating loss carryforwards of \$178.4 million, and tax credit carryforwards of \$4.6 million.

Potential changes to U.S. and foreign tax laws could increase our income tax expense.

We are subject to income taxes in the U. S. and many foreign jurisdictions. There have been proposals to reform U.S. tax laws that would significantly impact how U.S. multinational corporations, such as us, are taxed on foreign earnings. It is unclear whether these proposed tax revisions will be enacted, or, if enacted, what the scope of the revisions will be. Changes in U.S. and foreign tax laws, if enacted, could materially and adversely affect our financial condition and operating results.

Anti-takeover provisions in our articles of incorporation and bylaws, and under Pennsylvania law may discourage other companies from attempting to acquire us.

Some provisions of our articles of incorporation and bylaws as well as Pennsylvania law may discourage some transactions where we would otherwise experience a fundamental change. For example, our articles of incorporation and bylaws contain provisions that:

- classify our board of directors into four classes, with one class being elected each year;
- permit our board to issue “blank check” preferred shares without shareholder approval; and
- prohibit us from engaging in some types of business combinations with a holder of 20% or more of our voting securities without super-majority board or shareholder approval.

Further, under the Pennsylvania Business Corporation Law, because our shareholders approved bylaw provisions that provide for a classified board of directors, shareholders may remove directors only for cause. These provisions and some other provisions of the Pennsylvania Business Corporation Law could delay, defer or prevent us from experiencing a fundamental change and may adversely affect our common shareholders’ voting and other rights.

Terrorist attacks, or other acts of violence or war may affect the markets in which we operate and our profitability.

Terrorist attacks may negatively affect our operations. There can be no assurance that there will not be further terrorist attacks against the U.S. or U.S. businesses. Terrorist attacks or armed conflicts may directly impact our physical facilities or those of our suppliers or customers. Our primary facilities include administrative, sales and research and development facilities in Singapore and the U.S. and manufacturing and research and development facilities in China, Israel, Malaysia, and Switzerland. Additional terrorist attacks may disrupt the global insurance and reinsurance industries with the result that we may not be able to obtain insurance at historical terms and levels for all of our facilities. Furthermore, additional attacks may make travel and the transportation of our supplies and products more difficult and more expensive and ultimately affect the sales of our products in the U.S. and overseas. Additional attacks or any broader conflict, could negatively impact our domestic and international sales, our supply chain, our production capability and our ability to deliver products to our customers. Political and economic instability in some regions of the world could negatively impact our business. The consequences of terrorist attacks or armed conflicts are unpredictable, and we may not be able to foresee events that could have an adverse effect on our business.

Item 1B. UNRESOLVED STAFF COMMENTS

None.

Item 2. PROPERTIES

The following table reflects our major facilities as of October 1, 2011:

Facility	Approximate Size	Function	Business Segment and Products Manufactured	Lease Expiration Date
Singapore	134,661 sq. ft. (1)	Corporate headquarters, manufacturing, technology center, sales and service	Equipment: wire, wedge and die bonders	July 2016 (3)
Suzhou, China	155,123 sq. ft. (1)	Manufacturing, technology center	Expendable Tools: capillaries, dicing blades	November 2022 (3)
Irvine, California	121,805 sq. ft. (1)	Manufacturing, technology center	Equipment: wedge bonders	September 2013
Fort Washington, Pennsylvania	88,000 sq. ft. (1)	Technology center, sales and service, U.S. financial reporting	Not applicable	September 2028 (3)
Berg, Switzerland	65,208 sq. ft. (2)	Technology center	Equipment: die bonders	N/A
Petaling Jaya, Malaysia	37,200 sq ft (1)	Subassembly manufacturing and supply chain management	Equipment subassembly	September 2015 (3)
Yokneam, Israel	20,877 sq. ft. (1)	Manufacturing, technology center	Expendable Tools: capillary blanks (semi-finish)	January 2018 (3)
Damansara Uptown, Malaysia	12,314 sq ft (1)	Shared service center	Not applicable	July 2016 (3)

(1) Leased.

(2) Owned.

(3) Includes lease extension periods at the Company's option. Initial lease expires as follows:

Singapore in July 2013;

Suzhou, China in November 2017;

Fort Washington, Pennsylvania in September 2018;
Petaling Jaya, Malaysia in September 2012;
Yokneam, Israel in January 2015; and
Damansara Uptown, Malaysia in July 2013.

In addition, we rent space for sales and service offices and administrative functions in Taiwan, China, Korea, Malaysia, the Philippines, Japan, Thailand, and Germany. We believe our facilities are generally in good condition and suitable to the extent of utilization needed.

Item 3. LEGAL PROCEEDINGS

From time to time, we may be a plaintiff or defendant in cases arising out of our business. We cannot be assured of the results of any pending or future litigation, but we do not believe resolution of these matters will materially or adversely affect our business, financial condition or operating results.

Item 4. [REMOVED AND RESERVED]

PART II

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

Our common stock is traded on The Nasdaq Global Market ("Nasdaq") under the symbol "KLIC." The following table reflects the ranges of high and low sale prices for our common stock as reported on Nasdaq for the periods indicated:

	Fiscal 2011		Fiscal 2010	
	High	Low	High	Low
First Quarter	\$ 7.82	\$ 5.51	\$ 6.30	\$ 4.03
Second Quarter	\$ 10.58	\$ 7.16	\$ 7.67	\$ 4.55
Third Quarter	\$ 12.72	\$ 7.92	\$ 9.58	\$ 6.13
Fourth Quarter	\$ 11.90	\$ 7.42	\$ 8.87	\$ 5.27

On December 2, 2011, there were approximately 351 holders of record of the shares of outstanding common stock. The payment of dividends on our common stock is within the discretion of our board of directors; however, we have not historically paid any dividends on our common stock. In addition, we do not expect to declare dividends on our common stock in the near future, since we intend to retain earnings to finance our business.

For the purpose of calculating the aggregate market value of shares of our common stock held by non-affiliates, as shown on the cover page of this report, we have assumed all of our outstanding shares were held by non-affiliates except for shares held by our directors and executive officers. However, this does not necessarily mean that all directors and executive officers of the Company are, in fact, affiliates of the Company, or there are no other persons who may be deemed to be affiliates of the Company. Further information concerning the beneficial ownership of our executive officers, directors and principal shareholders will be included in our Proxy Statement for the 2012 Annual Meeting of Shareholders to be filed with the Securities and Exchange Commission on or about December 30, 2011.

Equity Compensation Plan Information

The information required hereunder will appear under the heading “EQUITY COMPENSATION PLAN INFORMATION” in our Proxy Statement for the 2012 Annual Meeting of Shareholders which information is incorporated herein by reference.

Recent Sales of Unregistered Securities and Use of Proceeds

None.

Purchases of Equity Securities by the Issuer and Affiliated Purchasers

None.

Item 6. SELECTED CONSOLIDATED FINANCIAL DATA

The following tables reflect selected historical consolidated financial data derived from the consolidated financial statements of Kulicke and Soffa Industries, Inc. and subsidiaries as of and for each of the five fiscal years ended 2011, 2010, 2009, 2008, and 2007.

As of October 4, 2009, we adopted Financial Accounting Standards Board (“FASB”) Accounting Standards Codification (“ASC”) No. 470.20, Debt, Debt With Conversion Options (“ASC 470.20”) on a retrospective basis for all prior periods. Fiscal 2009 includes the assets of Orthodyne Electronics Corporation which were acquired on October 3, 2008. During fiscal 2008, we sold our Wire business; therefore, fiscal 2008 and 2007 have been reclassified to reflect our Wire business as a discontinued operation.

This data should be read in conjunction with our consolidated financial statements, including notes and other financial information included elsewhere in this report or current reports on Form 8-K filed previously by us in respect of the fiscal years identified in the column headings of the tables below.

(in thousands)	2011	2010	Fiscal 2009	2008	2007
Statement of Operations Data:					
Net revenue:					
Equipment	\$759,331	\$691,988	\$170,536	\$271,019	\$316,718
Expendable Tools	71,070	70,796	54,704	57,031	53,808
Total net revenue	830,401	762,784	225,240	328,050	370,526
Cost of sales:					
Equipment	412,914	399,042	111,103	165,499	188,055
Expendable Tools	29,578	28,069	25,294	28,758	27,035
Total cost of sales	442,492	427,111	136,397	194,257	215,090
Operating expenses:					
Equipment	189,631	155,625	135,465	122,302	113,444
Expendable Tools	28,218	32,013	24,193	26,971	24,480
Impairment of goodwill: Equipment	-	-	2,709	-	-
U.S. pension plan termination: Equipment	-	-	-	9,152	-
Total operating expenses (1)	217,849	187,638	162,367	158,425	137,924
Income (loss) from operations:					
Equipment	156,786	137,321	(78,741)	(25,934)	15,219
Expendable Tools	13,274	10,714	5,217	1,302	2,293
Interest income (expense), net	(7,632)	(7,930)	(7,082)	(3,869)	2,346
Gain on extinguishment of debt	-	-	3,965	170	2,802
Income (loss) from continuing operations before income tax	162,428	140,105	(76,641)	(28,331)	22,660
Provision (benefit) for income taxes from continuing operations (2)	34,818	(2,037)	(13,029)	(3,610)	5,448
Income (loss) from continuing operations	127,610	142,142	(63,612)	(24,721)	17,212
Income from discontinued operations, net of tax (3)	-	-	22,011	23,441	18,874
Net income (loss)	\$127,610	\$142,142	\$(41,601)	\$(1,280)	\$36,086

(1) During fiscal 2011, 2010 and 2009, we recorded \$2.5 million, \$2.4 million and \$7.4 million, respectively, in operating expense for restructuring-related severance.

During fiscal 2011, 2010, 2009, 2008 and 2007, we recorded \$24.3 million, \$17.4 million, \$2.7 million, \$2.2 million and \$4.4 million, respectively, in operating expense for incentive compensation.

(2)The following are the most significant factors which affect our provision for income taxes: implementation of our international restructuring plan in fiscal 2011, 2010, 2008 and 2007; volatility in our earnings each fiscal year and variation in earnings among various tax jurisdictions in which we operate; changes in assumptions regarding repatriation of earnings; changes in tax legislation and our provision for various tax exposure items.

(3)Reflects the operations of the Company's Wire business, which was sold in fiscal 2009.

(in thousands, except per share amounts)	2011	2010	Fiscal 2009	2008	2007
Per Share Data:					
Income (loss) per share from continuing operations: (1)					
Basic	\$1.77	\$2.01	\$(1.02)	\$(0.46)	\$0.31
Diluted	\$1.73	\$1.92	\$(1.02)	\$(0.46)	\$0.27
Income per share from discontinued operations, net of tax:					
Basic	\$-	\$-	\$0.35	\$0.44	\$0.33
Diluted	\$-	\$-	\$0.35	\$0.44	\$0.28
Net income (loss) per share: (2)					
Basic	\$1.77	\$2.01	\$(0.67)	\$(0.02)	\$0.64
Diluted	\$1.73	\$1.92	\$(0.67)	\$(0.02)	\$0.55
Weighted average shares outstanding: (2)					
Basic	71,820	70,012	62,188	53,449	56,221
Diluted	73,341	73,548	62,188	53,449	68,274

(1)For fiscal 2011 and 2010, \$0.7 million and \$1.5 million, respectively, of net income applicable to participating securities and the related participating securities were excluded from the computation of basic income per share.

(2)For fiscal 2011, 2010 and 2007 the exercise of dilutive stock options and expected vesting of performance-based restricted stock (fiscal 2010 and 2007 only) and conversion of the Convertible Subordinated Notes were assumed. In addition for fiscal 2010 and 2007, \$0.3 million and \$1.3 million, respectively, of after-tax interest expense related to our Convertible Subordinated Notes was added to the Company's net income to determine diluted earnings per share. Due to the Company's net loss from continuing operations for fiscal 2009 and 2008, potentially dilutive shares were not assumed since the effect would have been anti-dilutive.

(in thousands)	2011	2010	Fiscal 2009	2008	2007
Balance Sheet Data:					
Cash, cash equivalents, investments and restricted cash	\$384,552	\$181,334	\$144,841	\$186,081	\$169,910
Working capital excluding discontinued operations	405,659	347,560	172,401	165,543	219,755
Total assets excluding discontinued operations	728,391	580,169	412,635	335,614	383,779
Long-term debt and current portion of long-term debt	105,224	98,475	92,217	151,415	222,446
Shareholders' equity	\$469,877	\$322,480	\$170,803	\$125,396	\$111,286

Item 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

In addition to historical information, this filing contains statements relating to future events or our future results. These statements are forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended (the "Securities Act") and Section 21E of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), and are subject to the safe harbor provisions created by statute. Such forward-looking statements include, but are not limited to, our future revenue, sustained, increasing, continuing or strengthening demand for our products, the continuing transition from gold to copper wire bonding, replacement demand, our research and development efforts, our ability to identify and realize new growth opportunities, our ability to control costs and our operational flexibility as a result of (among other factors):

- projected growth rates in the overall semiconductor industry, the semiconductor assembly equipment market, and the market for semiconductor packaging materials; and
 - projected demand for ball, wedge and die bonder equipment and for expendable tools.

Generally, words such as "may," "will," "should," "could," "anticipate," "expect," "intend," "estimate," "plan," "continue," "believe," or the negative of or other variations on these and other similar expressions identify forward-looking statements. These forward-looking statements are made only as of the date of this filing. We do not undertake to update or revise the forward-looking statements, whether as a result of new information, future events or otherwise.

Forward-looking statements are based on current expectations and involve risks and uncertainties. Our future results could differ significantly from those expressed or implied by our forward-looking statements. These risks and uncertainties include, without limitation, those described below and under the heading "Risk Factors" within this Annual Report on Form 10-K for the fiscal year ended October 1, 2011 and our other reports and registration statements filed from time to time with the Securities and Exchange Commission. This discussion should be read in conjunction with the Consolidated Financial Statements and Notes included in this report, as well as our audited financial statements included in this Annual Report.

We operate in a rapidly changing and competitive environment. New risks emerge from time to time and it is not possible for us to predict all risks that may affect us. Future events and actual results, performance and achievements could differ materially from those set forth in, contemplated by or underlying the forward-looking statements, which speak only as of the date on which they were made. Except as required by law, we assume no obligation to update or revise any forward-looking statement to reflect actual results or changes in, or additions to, the factors affecting such forward-looking statements. Given those risks and uncertainties, investors should not place undue reliance on forward-looking statements as predictions of actual results.

Introduction

Kulicke and Soffa Industries, Inc. (the "Company" or "K&S") designs, manufactures and sells capital equipment and expendable tools used to assemble semiconductor devices, including integrated circuits ("IC"), high and low powered discrete devices, light-emitting diodes ("LEDs"), and power modules. We also service, maintain, repair and upgrade our equipment. Our customers primarily consist of semiconductor device manufacturers, outsourced semiconductor assembly and test providers ("OSATs"), other electronics manufacturers and automotive electronics suppliers.

We operate two main business segments, Equipment and Expendable Tools. Our goal is to be the technology leader and the lowest cost supplier in each of our major product lines. Accordingly, we invest in research and engineering projects intended to enhance our position at the leading edge of semiconductor assembly technology. We also remain focused on our cost structure, through consolidating operations to Asia, moving manufacturing and other operations to

Asia, moving our supply chain to lower cost suppliers and designing higher performing, lower cost equipment. Cost reduction efforts are an important part of our normal ongoing operations, and are expected to generate savings without compromising overall product quality and service levels.

Business Environment

The semiconductor business environment is highly volatile, driven by internal dynamics, both cyclical and seasonal, in addition to macroeconomic forces. Over the long term, semiconductor consumption has historically grown, and is forecast to continue to grow. This growth is driven, in part, by regular advances in device performance and by price declines that result from improvements in manufacturing technology. In order to exploit these trends, semiconductor manufacturers, both integrated device manufacturers (“IDMs”) and OSATs, periodically invest aggressively in latest generation capital equipment. This buying pattern often leads to periods of excess supply and reduced capital spending — the so called semiconductor cycle. Within this broad semiconductor cycle there are also, generally weaker, seasonal effects that are specifically tied to annual, end-consumer purchasing patterns. Typically, semiconductor manufacturers prepare for heightened demand by adding or replacing equipment capacity by the end of the September quarter. Occasionally this results in subsequent reductions in the December quarter. This annual seasonality can occasionally be overshadowed by effects of the broader semiconductor cycle. Macroeconomic factors also affect the industry, primarily through their effect on business and consumer demand for electronic devices, as well as other products that have significant electronic content such as automobiles, white goods, and telecommunication equipment.

Our Equipment segment is primarily affected by the industry’s internal cyclical and seasonal dynamics in addition to broader macroeconomic factors which positively and negatively affect our financial performance. The sales mix of IDM and OSAT customers in any period, also impacts financial performance as this mix can affect our products’ average selling prices and gross margins due to differences in volume purchases and machine configurations required by each customer type.

Our Expendable Tools segment is less volatile than our Equipment segment. Expendable Tools sales are more directly tied to semiconductor unit consumption rather than capacity requirements and production capability improvements.

We continue to position our business to leverage our research and development leadership and innovation and to focus our efforts on mitigating volatility, improving profitability and ensuring longer-term growth. The current economic environment is uncertain and we may experience typical industry seasonality during the first quarter of fiscal 2012. Our visibility into future demand is generally limited and forecasting is difficult.

To limit potential adverse cyclical, seasonal and macroeconomic effects on our financial position, we have de-leveraged and strengthened our balance sheet. During fiscal 2010, we reduced our debt by \$49.0 million, and we presently intend to repay our 0.875% Convertible Subordinated Notes with cash up to the principal amount of \$110.0 million at maturity in fiscal 2012. As of October 1, 2011, our total cash, cash equivalents and investments was \$384.6 million, which exceeded the face value of our total debt by \$274.6 million, a \$203.2 million increase from the prior fiscal year end. This strong cash position better enables continual investment in product development as well as in production capability improvements throughout the semiconductor cycle.

Technology Leadership

We compete largely by offering our customers among the most advanced equipment and expendable tools available for the wire, wedge and die bonding processes. Our equipment is typically the most productive, has the highest levels of process capability, and as a result, has the lowest cost of ownership available in its markets. Our expendable tools are designed to optimize the performance of the equipment in which they are used. We believe our technology leadership contributes to the leading market share positions of our various wire bonder and expendable tools products. To maintain our competitive advantage, we invest in product development activities designed to produce a stream of improvements to existing products and to deliver next-generation products. These investments often focus as much on improvements in the semiconductor assembly process as on specific pieces of assembly equipment or expendable tools. In order to generate these improvements, we often work in close collaboration with customers, end users, and

other industry members. In addition to producing technical advances, these collaborative development efforts strengthen customer relationships and enhance our reputation as a technology leader and solutions provider.

In addition to gold and aluminum wire, our leadership in the industry's use of copper wire for the bonding process is an example of the benefits of collaborative efforts. By working with customers, material suppliers, and other equipment suppliers, we have developed a series of robust, high-yielding production processes that have made copper wire commercially viable, significantly reducing the cost of assembling an integrated circuit. During fiscal 2010, many of our customers began converting their output to copper wire, and we believe the conversion was initiated through fabless companies in the consumer segment. Gradually, the level of confidence and the reliability of data collected have enabled a larger segment of the customer base to increase copper capabilities. Since this initial conversion, a significant portion of our wire bonder sales have become copper capable. We believe this is the first phase of the gold-to-copper migration, and we expect this conversion process to continue throughout the industry for the next several years. This could potentially drive a significant wire bonder replacement cycle as we believe much of the industries' installed base is not currently suitable for copper bonding. Based on our industry leading copper bonding processes and the continued high price of gold, we believe the total available market for copper configured wire bonders is likely to continue demonstrating solid growth.

Our leadership has allowed us to maintain a competitive position in the latest generations of gold and copper ball bonders, which enable our customers to handle the leading technologies in terms of pitch and bond size. We have recently seen increased demand for our large bondable area ("LA") configured machines. This LA option is now available on all of our Power Series ("PS") models and allows our customers to gain added efficiencies and to reduce the cost of packaging.

We also leverage the technology leadership of our equipment by optimizing our bonder platforms, and we deliver variants of our products to serve emerging high-growth markets. For example, we have developed extensions of our main ball bonding platforms to address opportunities in LED assembly. The LED backlights for flat-screen displays have been the main driver of the LED market in the last few years where we have successfully competed in LED assembly equipment. We expect the next wave of growth in the LED market to be high brightness LED for general lighting, and we believe we are well positioned for this trend.

Furthermore, we gain synergies by leveraging technologies between our unique platforms. Our leading technology for wedge bonder equipment uses aluminum ribbon or heavier wire as opposed to fine gold and fine copper wire used in ball bonders. In addition, we are currently developing the next generation platform for our power semiconductor wedge bonder. We intend to initiate design of our next power module wedge bonder. In both cases, we are making a conscious effort to develop commonality of subsystems and design practices, in order to improve performance and design efficiencies. We believe this will benefit us in maintaining our leadership position in the wedge bonding market and increase synergies between the various engineering product groups. Furthermore, we continually research adjacent market segments where our technologies could be used. As an example, we are reviewing the use of wedge bonding in the fabrication of solar panels. Many of these initiatives are in the early stages of development and may become business opportunities in the future.

Another example of our developing equipment for high-growth niche markets is our AT Premier. This machine utilizes a modified wire bonding process to mechanically place bumps on devices, while still in a wafer format, for variants of the flip chip assembly process. Typical applications include complimentary metal-oxide semiconductor ("CMOS") image sensors, surface acoustical wave ("SAW") filters and high brightness LEDs. These applications are commonly used in most, if not all, smartphones available today in the market.

Our focus on technology leadership also extends to die bonding. Our state of the art iStackPS die bonder for advanced stacked die applications offers best-in-class throughput and accuracy.

We bring the same technology focus to our expendable tools business, driving tool design and manufacturing technology to optimize the performance and process capability of the equipment in which our tools are used. For all our equipment products, expendable tools are an integral part of their process capability. We believe our unique ability

to simultaneously develop both equipment and tools is a core strength supporting our products' technological differentiation.

Products and Services

We supply a range of bonding equipment and expendable tools. The following table reflects net revenue by business segment for fiscal 2011, 2010, and 2009:

	Fiscal								
(dollar amounts in thousands)	2011 net revenue	% of net revenue		2010 net revenue	% of net revenue		2009 net revenue	% of net revenue	
Equipment	\$759,331	91.4	%	\$691,988	90.7	%	\$170,536	75.7	%
Expendable Tools	71,070	8.6	%	70,796	9.3	%	54,704	24.3	%
Total	\$830,401	100.0	%	\$762,784	100.0	%	\$225,240	100.0	%

Equipment Segment

We manufacture and sell a line of ball bonders, heavy wire wedge bonders, stud bumpers, and die bonders that are sold to semiconductor device manufacturers, OSATs, other electronics manufacturers and automotive electronics suppliers. Ball bonders are used to connect very fine wires, typically made of gold or copper, between the bond pads of the semiconductor device, or die, and the leads on its package. Wedge bonders use either aluminum wire or ribbon to perform the same function in packages that cannot use gold or copper wire because of either high electrical current requirements or other package reliability issues. Stud bumpers mechanically apply bumps to die, typically while still in the wafer format, for some variants of the flip chip assembly process. Die bonders are used to attach a die to the substrate or lead frame which will house the semiconductor device. We believe our equipment offers competitive advantages by providing customers with high productivity/throughput, superior package quality/process control, and as a result, a lower cost of ownership.

Our principal Equipment segment products include:

Business Unit	Product Name (1)	Typical Served Market
Ball bonders	IConnPS	Advanced and ultra fine pitch applications using either gold or copper wire
	IConnPS ProCu	High-end copper wire applications demanding advanced process capability and high productivity
	IConnPS ProCu LA	Large area substrate and matrix applications for copper wire
	IConnPS LA	Large area substrate and matrix applications
	ConnXPS	Cost performance, low pin count applications using either gold or copper wire
	ConnXPS LED	LED applications
	ConnXPS VLED	Vertical LED applications
	ConnXPS LA	Cost performance large area substrate and matrix applications
	AT Premier	Stud bumping applications (high brightness LED and image sensor)
Wedge bonders	3600Plus	Power hybrid and automotive modules using either heavy aluminum wire or PowerRibbon®
	3700Plus	Hybrid and automotive modules using thin aluminum wire
	7200Plus	Power semiconductors using either aluminum wire or ribbon
	7200HD	Smaller power packages using either aluminum wire or ribbon
	7600HD	Power semiconductors including smaller power packages using either aluminum wire or ribbon
Die bonder	iStackPS	Advanced stacked die and ball grid array applications

(1) Power Series (“PS”)

Ball Bonders

Automatic ball bonders represent the largest portion of our semiconductor equipment business. Our main product platform for ball bonding is the Power Series (“PS”) — a family of assembly equipment that is setting new standards for performance, productivity, upgradeability, and ease of use. Our Power Series consists of our IConnPS high-performance ball bonders, and our ConnXPS cost-performance ball bonders, both of which can be configured for either gold or copper wire. In addition, targeted specifically at the fast growing LED market, the Power Series includes our ConnX PS LED and our ConnX PS VLED. Targeted for large bondable area applications, the Power Series includes our IConnPS LA and ConnXPS LA. In November 2010 and January 2011, we introduced the IConnPS ProCu and IConnPS ProCu LA, respectively, which offer a significant new level of capability for customers transitioning from gold to copper wire bonding.

Our Power Series products have advanced industry performance standards. Our ball bonders are capable of performing very fine pitch bonding, as well as creating the sophisticated wire loop shapes needed in the assembly of advanced semiconductor packages. Our ball bonders can also be converted for use to copper applications through kits we sell separately, a capability that is increasingly important as bonding with copper continues to grow as an alternative to gold.

Our AT Premier machine utilizes a modified wire bonding process to mechanically place bumps on devices, while still in a wafer format, for variants of the flip chip assembly process. Typical applications include CMOS image sensors, SAW filters and high brightness LEDs. These applications are commonly used in most, if not all, smartphones available today in the market.

Heavy Wire Wedge Bonders

We are the leaders in the design and manufacture of heavy wire wedge bonders for the power semiconductor and automotive power module markets. Wedge bonders may use either aluminum wire or aluminum ribbon to connect semiconductor chips in power packages, power hybrids and automotive modules for products such as motor control modules or inverters for hybrid cars. In addition, we see some potential use for our wedge bonder products in select solar applications.

Our portfolio of wedge bonding products includes:

- The 3600Plus: high speed, high accuracy wire bonders designed for power modules, automotive packages and other heavy wire multi-chip module applications.
 - The 3700Plus: wire bonders designed for hybrid and automotive modules using thin aluminum wire.
 - The 7200Plus: dual head wedge bonder designed specifically for power semiconductor applications.
 - The 7200HD: wedge bonder designed for smaller power packages using either aluminum wire or ribbon.
 - The 7600HD: wedge bonder targeted for small power packages.

While wedge bonding traditionally utilizes aluminum wire, all of our wedge bonders are also available modified to bond aluminum ribbon using our proprietary PowerRibbon® process. Aluminum ribbon offers device makers performance advantages over traditional round wire and is being increasingly used for high current packages and automotive applications.

Die Bonders

Our die bonder, the iStackPS, focuses on stacked die applications for both memory and subcontract assembly customers. iStackPS is targeted at stacked die and high-end ball grid array (BGA) applications. In these applications,

we expect up to 40% productivity increases compared to current generation machines. In addition, iStackPS has demonstrated superior accuracy and process control.

Other Equipment Products and Services

We also sell manual wire bonders, and we offer spare parts, equipment repair, training services, and upgrades for our equipment through our Support Services business unit.

Expendable Tools Segment

We manufacture and sell a variety of expendable tools for a broad range of semiconductor packaging applications. Our principal Expendable Tools segment products include:

- **Capillaries:** expendable tools used in ball bonders. Made of ceramic, a capillary guides the wire during the ball bonding process. Its features help control the bonding process. We design and build capillaries suitable for a broad range of applications, including for use on our competitors' equipment. In addition, our capillaries are used with both gold and copper wire.
- **Bonding wedges:** expendable tools used in wedge bonders. Like capillaries, their specific features are tailored to specific applications. We design and build bonding wedges for use both in our own equipment and in our competitors' equipment.
- **Saw blades:** expendable tools used by semiconductor manufacturers to cut silicon wafers into individual semiconductor die and to cut semiconductor devices that have been molded in a matrix configuration into individual units.

Critical Accounting Policies

The preparation of consolidated financial statements requires us to make assumptions, estimates and judgments that affect the reported amounts of assets and liabilities, net revenue and expenses during the reporting periods, and disclosures of contingent assets and liabilities as of the date of the consolidated financial statements. On an on-going basis, we evaluate estimates, including but not limited to, those related to accounts receivable, reserves for excess and obsolete inventory, carrying value and lives of fixed assets, goodwill and intangible assets, valuation allowances for deferred tax assets and deferred tax liabilities, repatriation of un-remitted foreign subsidiary earnings, equity-based compensation expense, restructuring, and warranties. We base our estimates on historical experience and on various other assumptions that we believe to be reasonable. As a result, we make judgments regarding the carrying values of our assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates under different assumptions or conditions.

We believe the following critical accounting policies, which have been reviewed with the Audit Committee of our Board of Directors, affect our more significant judgments and estimates used in the preparation of our consolidated financial statements.

Revenue Recognition

In accordance with Accounting Standards Codification ("ASC") No. 605, Revenue Recognition, we recognize revenue when persuasive evidence of an arrangement exists, delivery has occurred or services have been rendered, the price is fixed or determinable, the collectibility is reasonably assured, and equipment installation obligations have been completed and customer acceptance, when applicable, has been received or otherwise released from installation or customer acceptance obligations. In the event terms of the sale provide for a customer acceptance period, revenue is recognized upon the expiration of the acceptance period or customer acceptance, whichever occurs first. Our standard terms are Ex Works (our factory), with title transferring to our customer at our loading dock or upon embarkation. We

have a small percentage of sales with other terms, and revenue is recognized in accordance with the terms of the related customer purchase order. Revenue related to services is recognized upon performance of the services requested by a customer order. Revenue for extended maintenance service contracts with a term more than one month is recognized on a prorated straight-line basis over the term of the contract.

Our business is subject to contingencies related to customer orders as follows:

- **Right of Return:** A large portion of our revenue comes from the sale of machines used in the semiconductor assembly process. Other product sales relate to consumable products, which are sold in high-volume quantities, and are generally maintained at low stock levels at our customer's facility. Customer returns have historically represented a very small percentage of customer sales on an annual basis.
- **Warranties:** Our equipment is generally shipped with a one-year warranty against manufacturing defects. We establish reserves for estimated warranty expense when revenue for the related equipment is recognized. The reserve for estimated warranty expense is based upon historical experience and management's estimate of future expenses.
- **Conditions of Acceptance:** Sales of our consumable products generally do not have customer acceptance terms. In certain cases, sales of our equipment have customer acceptance clauses which may require the equipment to perform in accordance with customer specifications or when installed at the customer's facility. In such cases, if the terms of acceptance are satisfied at our facility prior to shipment, the revenue for the equipment will be recognized upon shipment. If the terms of acceptance are satisfied at our customers' facilities, the revenue for the equipment will not be recognized until acceptance, which typically consists of installation and testing, is received from the customer.

Shipping and handling costs billed to customers are recognized in net revenue. Shipping and handling costs are included in cost of sales.

Allowance for Doubtful Accounts

We maintain allowances for doubtful accounts for estimated losses resulting from our customers' failure to make required payments. If the financial condition of our customers were to deteriorate, resulting in an impairment of their ability to make payments, additional allowances may be required. We are subject to concentrations of customers and sales to a few geographic locations, which could also impact the collectibility of certain receivables. If global economic conditions deteriorate or political conditions were to change in some of the countries where we do business, it could have a significant impact on our results of operations, and our ability to realize the full value of our accounts receivable.

Inventories

Inventories are stated at the lower of cost (on a first-in first-out basis) or market value. We generally provide reserves for obsolete inventory and for inventory considered to be in excess of demand. In addition, inventory purchase commitments in excess of demand are generally recorded as accrued expense. Demand is generally defined as eighteen months future consumption for equipment, twenty-four months consumption for all spare parts, and twelve months consumption for expendable tools. Forecasted demand is based upon internal projections, historical sales volumes, customer order activity and a review of consumable inventory levels at customers' facilities. We communicate forecasts of our future demand to our suppliers and adjust commitments to those suppliers accordingly. If required, we reserve the difference between the carrying value of our inventory and the lower of cost or market value, bas