AMKOR TECHNOLOGY INC
Form 10-K/A
October 06, 2006

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UNITED STATES SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549
Form 10-K/ A
ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d)
OF THE SECURITIES EXCHANGE ACT OF 1934
For the Fiscal Year Ended December 31, 2005
Commission File Number 000-29472
Amkor Technology, Inc.
(Exact name of registrant as specified in its charter)

Delaware	**23-1722724**
(State of incorporation)	*(I.R.S. Employer Identification Number)*

1900 South Price Road
Chandler, AZ 85248
(480) 821-5000
(Address of principal executive offices and zip code)
Securities registered pursuant to Section 12(b) of the Act:
None
Securities registered pursuant to Section 12(g) of the Act:
Common Stock, $0.001 par value

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

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

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

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

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

Large accelerated filer o Accelerated filer þ Non-accelerated filer o

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

The aggregate market value of the voting and non-voting common equity held by non-affiliates computed by reference to the price at which the common equity was last sold as of the last business day of the registrant s most recently completed second fiscal quarter, June 30, 2005, was approximately $463,099,763

The number of shares outstanding of each of the issuer s classes of common equity, as of February 28, 2006, was as follows: 176,835,422 shares of Common Stock, $0.001 par value.

DOCUMENTS INCORPORATED BY REFERENCE: NONE

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All references in this Annual Report to Amkor, we, us, our or the company are to Amkor Technology, Inc. a subsidiaries. We refer to the Republic of Korea, which is also commonly known as South Korea, as Korea. All references in this Annual Report to ASI are to Anam Semiconductor, Inc. and its subsidiaries. As of December 31, 2005, we owned 2% of ASI s outstanding voting stock. PowerQuad®, *Super*BGA®, *fle*XBGA®, ChipArray®, PowerSOP®, *Micro*LeadFrame®, ETCSP®, TapeArray®, VisionPak®, Unitive®, Amkor® and Amkor Technology® are registered trademarks of Amkor Technology, Inc. All other trademarks appearing herein are held by their respective owners. MultiMediaCard®, MMCMobile® and MMCplus® are a registered trademarks of MMCA. MicroSD™ and miniSD™ are a trademarks of SDA.

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EXPLANATORY NOTE

We are amending our Annual Report on Form 10-K for the year ended December 31, 2005 as filed on March 16, 2006 (the Original Filing), to restate our consolidated financial statements for the years ended December 31, 2005, 2004 and 2003 and the related disclosures. This amended Annual Report on Form 10-K/A (the Form 10-K/A) also includes the restatement of selected consolidated financial data as of and for the years ended December 31, 2005, 2004, 2003, 2002 and 2001, and the unaudited quarterly financial data for each of the quarters in the years ended December 31, 2005 and 2004. See Note 2, Restatement of Consolidated Financial Statements, of the Notes to Consolidated Financial Statements for a detailed discussion of the effect of the restatement.

The restatement of the Original Filing reflected in this amended Annual Report on Form 10-K/ A includes adjustments arising from the determinations of a Special Committee, consisting of independent members of the Board of Directors, which was formed on July 24, 2006, to conduct an internal investigation into the Company s past stock option granting practices, as well as our internal review relating to our historical financial statements.

For more information on these matters, please refer to, Management s Discussion and Analysis of Financial Condition and Results of Operations Restatement of Consolidated Financial Statements, Special Committee and Company Findings , Note 2 of the Notes to the Consolidated Financial Statements, and Item 9A, Controls and Procedures .

As a result of the findings of the Special Committee as well as our internal review, we concluded that we needed to amend our Original Filing, to restate our consolidated financial statements for the years ended December 31, 2005, 2004 and 2003 and the related disclosures as well as Management s Report on Internal Control Over Financial Reporting as of December 31, 2005. This Form 10-K/ A also includes the restatement of selected consolidated financial data as of and for the years ended December 31, 2005, 2004, 2003, 2002 and 2001, and the unaudited quarterly financial data for each of the quarters in the years ended December 31, 2005 and 2004. We also concluded that we needed to amend the Quarterly Report on Form 10-Q for the quarter ended March 31, 2006, originally filed on May 9, 2006, to restate our condensed consolidated financial statements for the quarters ended March 31, 2006 and 2005 and the related disclosures. We have also restated the June 30, 2005 financial statements included in the Quarterly Report on Form 10-Q for the quarter ended June 30, 2006. We will restate the September 30, 2005 financial statements with the filing of our September 30, 2006 Form 10-Q; however, Exhibit 99.1 to this Form 10-K/A includes information concerning our unaudited consolidated financial data as of and for the three and nine month periods ended September 30, 2005. We have not amended and we do not intend to amend any of our other previously filed annual reports on Form 10-K or quarterly reports on Form 10-Q for the periods affected by the restatement or adjustments other than (i) the amended Quarterly Report on Form 10-Q/A for the quarter ended March 31, 2006 and (ii) this Form 10-K/A for the year ended December 31, 2005.

All of the information in this Form 10-K/ A is as of December 31, 2005 and does not reflect events occurring after the date of the Original Filing, other than the restatement, or modify or update disclosures (including the exhibits to the Original Filing, except for the updated Exhibits 31.1, 31.2, 32.1, and 32.2 described below) affected by subsequent events. For the convenience of the reader, this Form 10-K/ A sets forth the Original Filing in its entirety, as amended by and to reflect the restatement. The following sections of this Form 10-K/ A were adjusted to reflect the findings of the Special Committee as well as our internal review:

- Part I Item 1A Risk Factors;
- Part I Item 3 Legal Proceedings;
- Part II Item 5 Market for Registrant s Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities;
- Part II Item 6 Selected Consolidated Financial Data;
- Part II Item 7 Management s Discussion and Analysis of Financial Condition and Results of Operations;
- Part II Item 8 Financial Statements and Supplementary Data;

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Part II Item 9A Controls and Procedures; and
Part IV Item 15 Exhibits and Financial Statement Schedules.

This Form 10-K/ A should be read in conjunction with our periodic filings made with the SEC subsequent to the date of the Original Filing, including any amendments to those filings such, as the amended Quarterly Report on Form 10-Q/A for the quarter ended March 31, 2006, as well as any Current Reports filed on Form 8-K subsequent to the date of the Original Filing. In addition, in accordance with applicable SEC rules, this Form 10-K/ A includes updated certifications from our Chief Executive Officer (CEO) and Chief Financial Officer (CFO) as Exhibits 31.1, 31.2, 32.1 and 32.2.

PART I

Item 1. ***Business***

DISCLOSURE REGARDING FORWARD-LOOKING STATEMENTS

This business section contains forward-looking statements. In some cases, you can identify forward-looking statements by terminology such as may, will, should, expects, plans, anticipates, believes, estimates, p potential, continue, intend or the negative of these terms or other comparable terminology. These statements are only predictions. Actual events or results may differ materially. In evaluating these statements, you should specifically consider various factors, including the risks outlined under Risk Factors that May Affect Future Operating Performance in Item 1A of this Annual Report. These factors may cause our actual results to differ materially from any forward-looking statement.

OVERVIEW

Amkor is one of the world s largest subcontractors of semiconductor packaging (sometimes referred to as assembly) and test services. Amkor pioneered the outsourcing of semiconductor packaging and test services through a predecessor in 1968, and over the years has built a leading position by:

- Providing a broad portfolio of packaging and test technologies and services;
- Maintaining a leading role in the design and development of new package and test technologies;
- Cultivating long-standing relationships with customers, including many of the world s leading semiconductor companies;
- Developing expertise in high-volume manufacturing processes to provide our services; and
- Providing a broadly diversified operational scope, with production capabilities in China, Korea, Japan, the Philippines, Singapore, Taiwan and the United States (U.S.).

Packaging and test are integral parts of the process of manufacturing semiconductor devices. This process begins with silicon wafers and involves the fabrication of electronic circuitry into complex patterns, thus creating large numbers of individual chips on the wafers. The fabricated wafers are probed to ensure the individual devices meet design specifications. The packaging process creates an electrical interconnect between the semiconductor chip and the system board through wire bonding or bumping technologies. In packaging, individual chips are separated from the fabricated semiconductor wafers, attached to a substrate and then encased in a protective material to provide optimal electrical connectivity and thermal performance. The packaged chips are then tested using sophisticated equipment to ensure that each packaged chip meets its design specifications. Increasingly, packages are custom designed for specific chips and specific end-market applications. We are able to provide turnkey solutions including semiconductor wafer bumping, wafer probe, wafer backgrind, package design, packaging, test and drop shipment services. The packaging and test services provided by Amkor are more fully described below under Packaging and Test Services.

The semiconductors that we package and test for our customers ultimately become components in electronic systems used in communications, computing, consumer, industrial and automotive applications. Our customers include, among others: Altera Corporation; Avago Technologies, Pte; Freescale Semiconduc-

tor, Inc.; Intel Corporation; International Business Machines Corporation (IBM); Samsung Electronics Corporation, Ltd.; Sony Semiconductor Corporation; ST Microelectronics, Pte, Ltd.; Texas Instruments, Inc.; and Toshiba Corporation. The outsourced semiconductor packaging and test market is very competitive. We also compete with the internal semiconductor packaging and test capabilities of many of our customers.

AVAILABLE INFORMATION

Amkor files annual, quarterly and current reports, proxy statements and other information with the U.S. Securities and Exchange Commission (the SEC). You may read and copy any document we file at the SEC s Public Reference Room at Room 1580, 100 F Street, NE, Washington, D.C. 20549. Please call the SEC at 1-800-SEC-0330 for information on the Public Reference Room. The SEC maintains a Web site that contains annual, quarterly and current reports, proxy statements and other information that issuers (including Amkor) file electronically with the SEC. The SEC s Web site is *http://www.sec.gov.*

Amkor s web site is *http://www.amkor.com.* Amkor makes available free of charge through its internet site, its annual reports on Form 10-K; quarterly reports on Form 10-Q; current reports on Form 8-K; Forms 3, 4 and 5 filed on behalf of directors and executive officers; and any amendments to those reports filed or furnished pursuant to the Securities Exchange Act of 1934 as soon as reasonably practicable after such material is electronically filed with, or furnished to, the SEC. These documents are not available on our site as soon as they are available on the SEC s site. The information on Amkor s web site is not incorporated by reference into this report.

As discussed in the Explanatory Note, we concluded that we needed to amend our Annual Report on Form 10-K for the year ended December 31, 2005, originally filed on March 16, 2006, to restate our consolidated financial statements for the years ended December 31, 2005, 2004 and 2003 and the related disclosures as well as Management s Report on Internal Control Over Financial Reporting as of December 31, 2005. This Annual Report on Form 10-K/ A also includes the restatement of selected consolidated financial data as of and for the years ended December 31, 2005, 2004, 2003, 2002 and 2001, and the unaudited quarterly financial data for each of the quarters in the years ended December 31, 2005 and 2004. We also concluded that we needed to amend the Quarterly Report on Form 10-Q for the quarter ended March 31, 2006, originally filed on May 9, 2006, to restate our condensed consolidated financial statements for the quarters ended March 31, 2006 and 2005 and the related disclosures. We have also restated the June 30, 2005 financial statements included in the Quarterly Report on Form 10-Q for the quarter ended June 30, 2006. We will restate the September 30, 2005 financial statements with the filing of our September 30, 2006 Form 10-Q. We have not amended and we do not intend to amend any of our other previously filed annual reports on Form 10-K or quarterly reports on Form 10-Q for the periods affected by the restatement or adjustments other than (i) the amended Quarterly Report on Form 10-Q/A for the quarter ended March 31, 2006 and (ii) this amended Annual Report on Form 10-K/A for the year ended December 31, 2005.

INDUSTRY BACKGROUND

Semiconductor devices are the essential building blocks used in most electronic products. As semiconductor devices have evolved, there have been three important consequences: (1) an increase in demand for computers and consumer electronics fostered by declining prices for such products; (2) the proliferation of semiconductor devices into diverse end products such as consumer electronics, wireless communications equipment and automotive systems; and (3) an increase in the semiconductor content within electronic products. These consequences have fueled the growth of the overall semiconductor industry, as well as the market for outsourced semiconductor packaging and test services.

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Outsourcing Trends

Historically, semiconductor companies packaged semiconductors primarily in their own factories and relied on subcontract providers to handle overflow volume. In recent years, semiconductor companies have increasingly outsourced their packaging and test to subcontract providers, such as us, for the following reasons:

Subcontract providers have developed expertise in advanced packaging and test technologies.

Semiconductor companies face increasing demands for miniaturization, increased functionality and improved thermal and electrical performance in semiconductor devices. This trend, along with greater complexity in the design of semiconductor devices and the increased customization of interconnect packages, has led many semiconductor companies to view packaging and test as an enabling technology requiring sophisticated expertise and technological innovation. As packaging and test technology becomes more advanced, many semiconductor companies have had difficulty developing adequate internal packaging and test capabilities and are relying on subcontract providers of packaging and test services as a key source of new package design and production.

Subcontract providers can offer shorter time-to-market for new products because their resources are dedicated to packaging and test solutions.

We believe that semiconductor companies, together with their customers, are seeking to shorten the time-to-market for their new products, and that having the appropriate packaging technologies and capacity in place is a critical factor in facilitating product introductions.

Semiconductor companies frequently do not have sufficient time to develop their packaging and test capabilities or deploy the equipment and expertise to implement new packaging technology in volume. For this reason, semiconductor companies are leveraging the resources and capabilities of subcontract packaging and test companies to deliver their new products to market more quickly.

Many semiconductor manufacturers do not have the economies of scale to offset the significant costs of building packaging and test factories.

Semiconductor packaging is a complex process requiring substantial investment in specialized equipment and factories. As a result of the large capital investment required, this manufacturing equipment must operate at a high capacity level for an extended period of time to be cost effective. Shorter product life cycles, faster introductions of new products and the need to update or replace packaging equipment to accommodate new package types have made it more difficult for semiconductor companies to maintain cost effective utilization of their packaging and test assets. Subcontract providers of packaging and test services, on the other hand, can typically use their equipment to support a broad range of customers, potentially generating greater economies of scale.

The availability of high quality packaging and test services from subcontractors allows semiconductor manufacturers to focus their resources on semiconductor design and wafer fabrication.

As semiconductor process technology migrates to larger wafers and smaller feature size, a state-of-the-art wafer fabrication facility costs billions of dollars. Subcontractors have demonstrated the ability to deliver advanced packaging and test solutions at a competitive price, thus allowing semiconductor companies to focus their capital resources on core wafer fabrication activities rather than invest in advanced packaging and test technology.

There are many semiconductor companies without factories, known as fabless companies, which design semiconductor chips and outsource all of the associated manufacturing.

Fabless semiconductor companies focus exclusively on the semiconductor design process and outsource virtually every step of the manufacturing process. We believe that fabless semiconductor companies will continue to be a significant driver of growth in the subcontract packaging and test industry.

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These outsourcing trends, combined with the growth in the number of semiconductor devices being produced and sold, are increasing demand for subcontracted packaging and test services. Today, nearly all of the world s major semiconductor companies use packaging and test service subcontractors for at least a portion of their needs.

COMPETITIVE STRENGTHS

We believe our competitive strengths include the following:

Broad Offering of Package Design, Packaging and Test Services

Integrating advanced semiconductor technology into electronic end products often poses unique thermal electrical and other design challenges, and Amkor employs a large number of package design engineers to solve these challenges. Amkor produces more than 1,000 package types, representing one of the broadest package offerings in the semiconductor industry. We provide customers with a wide array of packaging solutions including leadframe and laminate packages, using wirebond and flip chip formats. We are a leading assembler of 3D packages, in which the individual chips are stacked vertically to provide greater performance while preserving space on the system board, and multi-chip modules used in cell phones and other handheld end-products. We are also a leading provider of wafer bumping services used in the production of flip chip and wafer level packages. We are one of the world s largest producers of packages for micro-electromechanical system (MEMS) devices used in a variety of end markets including automotive, industrial and personal entertainment. We also offer an extensive line of test services for analog, digital, logic, mixed signal and radio frequency semiconductor devices. We believe that the breadth of our design, packaging and test services is important to customers seeking to reduce the number of their suppliers.

Leading Technology Innovator

We believe that we are one of the leading providers of advanced wafer bumping, and semiconductor packaging and test solutions. We have also been at the forefront in developing environmentally friendly (Green) IC packaging, which involves the elimination of lead and certain other materials. We have designed and developed several state-of-the-art leadframe and laminate package formats including our *Micro*LeadFrame®, PowerQuad®, *Super* BGA®, *fle*XBGA® and ChipArray® packages. Through Unitive, Inc. (Unitive) and Unitive Semiconductor Taiwan (UST), companies that we acquired in August 2004, we offer advanced, electroplated wafer bumping and wafer level processing technologies. To maintain our leading industry position, we have 600 employees engaged in research and development focusing on the design and development of new semiconductor packaging and test technologies. We work closely with customers and technology partners to develop new and innovative package designs.

Long-Standing Relationships With Prominent Semiconductor Companies

Our customer base consists of more than 200 companies, including most of the world s largest semiconductor companies. Over the last three decades, Amkor has developed long-standing relationships with many of our customers. In 2004, we entered into a long-term supply agreement with IBM in which we expect to provide a substantial majority of IBM s outsourced semiconductor packaging and test through 2010.

Advanced Processing Capabilities

We believe that our processing excellence has been a key factor in our success in attracting and retaining customers. We have worked with our customers and our suppliers to develop proprietary process technologies to enhance our existing capabilities, reduce time-to-market, increase quality and lower our costs. We believe our cycle times are among the fastest available from any subcontractor of packaging and test services.

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Geographically Diversified Operational Base

Since 2000, we have expanded our historical base of packaging and test operations in Korea and the Philippines to include China, Japan, Singapore, Taiwan and the U.S., and as a result, we now have a broad geographical base strategically located in many of the world s important electronics manufacturing regions.

COMPETITIVE DISADVANTAGES

You should be aware that our competitive strengths may be diminished or eliminated due to certain challenges faced by us and which our principal competitors may or may not face, including the following:

High Leverage We have substantial indebtedness, and the associated interest expense significantly increases our cost structure. Our substantial indebtedness could limit our ability to fund future working capital, capital expenditures, research and development and other general corporate requirements.

Difficulties Integrating Acquisitions During 2004, we acquired test operations from IBM located in Singapore and acquired Unitive and UST. We face challenges as we integrate new and diverse operations and try to attract qualified employees to support our expansion plans.

In addition, we and our competitors face a variety of operational and industry risks inherent to the industry in which we operate. For a complete discussion of risks associated with our business, please read Risk Factors that May Affect Future Operating Performance in Item 1A Risk Factors of this Annual Report.

STRATEGY

To build upon our industry position and to remain a preferred subcontractor of semiconductor packaging and test services, we are pursuing the following strategies:

Capitalize on Outsourcing Trend

We believe there is a long-term trend towards more outsourcing on the part of semiconductor companies and that this trend generally transcends the cyclical nature of the semiconductor industry. We believe that many vertically integrated semiconductor companies reduce their investments in advanced packaging and test technology during industry downturns and increase their reliance on outsourced packaging and test suppliers for advanced package and test requirements. We also believe that as the semiconductor content of electronic end products increases in complexity, so will the need for the advanced package and test solutions. Accordingly, we expect semiconductor companies will continue to expand their outsourcing of advanced semiconductor packaging and test services and we intend to capitalize on this growth. We believe semiconductor companies will increasingly outsource packaging and test services to companies who can provide advanced technology and high-quality, high-volume packaging and test expertise.

Leverage Scale and Scope of Packaging and Test Capabilities

We plan to accommodate the long-term outsourcing trend by expanding the scale of our operations and the scope of our packaging and test services. We believe that our scale and scope allow us to provide cost-effective solutions to our customers in the following ways:

We have the capacity to absorb large orders and accommodate quick turn-around times;

We use our size and industry position to obtain favorable pricing, where possible, on materials and equipment; and

We offer an exceptionally broad range of packaging and test services and can serve as the primary supplier of such services for many of our customers.

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Maintain Our Technology Leadership

We intend to continue to develop and commercialize leading-edge packaging technologies, including flip chip, system-in-package, package-on-package, stacked chip, chip scale and wafer level packaging. We believe that our focus on research and product development will enable us to enter new markets early, capture market share and promote the adoption of our new package designs as industry standards. We seek to enhance our in-house research and development capabilities through the following activities:

- Collaborating with integrated device manufacturer customers, such as IBM, to gain access to technology roadmaps for next generation semiconductor designs and to develop new packages that satisfy their future requirements;

- Collaborating with original equipment manufacturers (OEMs), such as Toshiba Corporation, Sony Ericsson Corporation and Nokia Group, to design new packages that function with the next generation of electronic products; and

- Collaborating with wafer foundry companies on future package needs for new wafer technologies.

Enhance the Geographical Scope of our Operations

Prior to 2001, our operations were centered in Korea and the Philippines. In order to diversify our operational footprint and better serve our customers, we adopted a strategy of expanding our operational base to other key microelectronic areas of Asia. During 2001, we commenced a joint venture with Toshiba Corporation in Japan and we established a presence in Taiwan and China. In January 2004, we purchased the remaining interest in our joint venture from Toshiba Corporation. In May 2004, we acquired from IBM a testing facility in Singapore. In August 2004, we acquired Unitive, and approximately 60% of UST, leading providers of wafer bumping and wafer level packaging services, with operations in North Carolina and Taiwan, respectively. In January 2006, we acquired 39.6% of UST and now own 99.6%. Our goal is to build operational scale in China, Singapore and Taiwan and capitalize on growth opportunities that may arise from our presence in these markets.

Provide Integrated Turnkey Solutions

We are able to provide turnkey solutions including semiconductor wafer bumping, wafer probe, wafer backgrind, package design, packaging, test and drop shipment services. We believe that our turnkey capabilities facilitate the outsourcing model by enabling our customers to achieve faster time-to-market for new products and improved cycle times.

Strengthen Customer Relationships

We intend to enhance our long-standing customer relationships and develop collaborative supply agreements. We believe that shorter technology life cycles and faster new product introductions require integrated communications within the supply chain. We have customer support personnel located near or at the facilities of major customers and in important technology centers. Our support personnel work closely with our customers and suppliers to plan production for existing packages as well as to develop requirements for the next generation of packaging technology. In addition, we implement direct electronic links with our customers to enhance communication and facilitate the flow of real-time engineering data and order information.

Pursue Strategic Acquisitions

We evaluate candidates for strategic acquisitions to strengthen our business and expand our geographic reach. We believe that there are opportunities to acquire in-house packaging operations of our customers and competitors. To the extent we acquire operations of our customers, we intend to structure any such acquisition to include long-term supply contracts with those customers. For example, in May 2004 we acquired the Singapore test operations of IBM and contemporaneously entered into a long-term supply agreement with IBM. Under this long-term supply agreement, we will receive a majority of IBM s outsourced semiconductor packaging and test business through 2010.

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PACKAGING AND TEST SERVICES

Packaging Services

We offer a broad range of package formats and services designed to provide our customers with a full array of packaging solutions. Our package services are divided into three families: leadframe, laminate and other.

In response to the increasing demands of today s high-performance electronic products, semiconductor packages have evolved from traditional leadframe packages and now include advanced leadframe and laminate formats. The differentiating characteristics of these package formats include (1) the size of the package, (2) the number of electrical connections the package can support, (3) the thermal and electrical characteristics of the package, and (4) in the case of our System-in-Package family of laminate packages, the integration of multiple active and passive components in a single package.

As semiconductor devices increase in complexity, they often require a larger number of electrical connections. Leadframe packages are so named because they connect the electronic circuitry on the semiconductor device to the system board through metal leads on the perimeter of the package. Our laminate products, typically called ball grid array (BGA), use balls on the bottom of the package to support larger numbers of electrical connections.

Evolving semiconductor technology has allowed designers to increase the level of performance and functionality in portable and handheld electronics products and this has led to the development of smaller package sizes. In some leading-edge packages, the size of the package is reduced to approximately the size of the individual chip itself in a process known as chip scale packaging.

The following table sets forth by product type, for the periods indicated, the amount of our net sales in millions of dollars and the percentage of such net revenues:

	Year Ended December 31,					
	2005		2004		2003	
Packaging						
Leadframe	$ 834	39.7%	$ 844	44.4%	$ 794	49.5%
Laminate	987	47.0%	838	44.1%	640	39.9%
Other	82	3.9%	44	2.3%	34	2.1%
Test	197	9.4%	175	9.2%	136	8.5%
Total net sales	$ 2,100	100.0%	$ 1,901	100.0%	$ 1,604	100.0%

Leadframe Packages

Traditional leadframe-based packages are the most widely used package family in the semiconductor industry and are typically characterized by a chip encapsulated in a plastic mold compound with metal leads on the perimeter. Two of our most popular traditional leadframe package types are SOIC and QFP, which support a wide variety of device types and applications. The traditional leadframe package family has evolved from through hole design, where the leads are plugged into holes on the circuit board to surface mount design, where the leads are soldered to the surface of the circuit board. We offer a wide range of lead counts and body sizes to satisfy variations in the size of customers semiconductor devices.

Through a process of continuous engineering and customization, we have designed several advanced leadframe package types that are thinner and smaller than traditional leadframe packages, with the ability to accommodate more leads on the perimeter of the package. These advanced leadframe packages typically have superior thermal and electrical characteristics, which allow them to dissipate heat generated by high-powered semiconductor devices while providing enhanced electrical connectivity. We plan to continue to develop increasingly smaller versions of these

packages to keep pace with continually shrinking semiconductor device sizes and demand for miniaturization of portable electronic products.

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We are an industry leader in providing complete solutions to lower the total cost for our customers. One example is the integration of high-density leadframe packaging, in which nearly 200 leadframe packages can be produced at one time, with strip test, a process of massive parallel testing, in which large numbers of leadframe package can be tested at one time. With strip test, electronically isolated packaged units are tested in parallel, resulting in faster handler index times and higher throughput rates, thus reducing test cost and increasing test yield. In 2005, we strip tested approximately 923 million units.

One of our most successful advanced leadframe package offerings is the *Micro*LeadFrame® family of QFN, or Quad Flat No-lead packages. This package family is particularly well suited for radio frequency (RF) and wireless applications.

Laminate Packages

The laminate family typically employs the ball grid array design, which utilizes a plastic or tape laminate substrate rather than a leadframe substrate, and places the electrical connections on the bottom of the package rather than around the perimeter.

The ball grid array format was developed to address the need for higher lead counts required by many advanced semiconductor devices. As the number of leads on leadframe packages increased, leads were placed closer to one another in order to maintain the small size of the package. The increased lead density resulted in shorting and other electrical challenges, and required the development of increasingly sophisticated and expensive techniques for producing circuit boards to accommodate the high number of leads.

The ball grid array format solved this problem by effectively creating leads on the bottom of the package in the form of small bumps or balls that can be evenly distributed across the entire bottom surface of the package, allowing greater distance between the individual leads.

Our first package format in this family was the plastic ball grid array (PBGA). We have subsequently designed or licensed additional ball grid array package formats that have superior performance characteristics and features that enable low-cost, high-volume manufacturing. These laminate products include:

- *Super*BGA®, which includes a copper layer to dissipate heat and is designed for low-profile, high-power applications; and

- TEPBGA-2, which is a standard PBGA with thicker copper layers plus an integrated heat slug and is designed for enhanced thermal performance in high power applications.

Our Laminate package service offering also includes System-in-Package (SiP) modules. SiP modules integrate various system elements into a single-function block, thus enabling space and power efficiency, high performance and lower production costs. Our SiP technology is being used to produce a variety of devices including power amplifiers for cellular phones and other portable communication devices, wireless local area network (WLAN) modules for networking applications, camera modules, sensors, such as fingerprint recognition devices, and memory cards. Our memory cards are used for a variety of detachable non-volatile memory applications. Manufactured formats include, MultiMediaCard®, SecureDigital Cardtm, MMCMobile®, MMCplus®, microSD™ and miniSD™.

We have also designed a variety of packages, commonly referred to as chip scale packages (CSP), which are not much larger than the chip itself. Chip scale packages are becoming widely adopted as designers and manufacturers of consumer electronics seek to achieve higher levels of performance while shrinking the product size. Some of our chip scale packages include ChipArray® and TapeArray®, in which the package is only 1.5mm larger than the chip itself.

Advances in packaging technology now allow the placing of two or more chips on top of each other within an individual package. This concept, known as stacked packaging, permits a higher level of semiconductor density and more functionality. In addition, advanced wafer thinning technology has fostered the creation of

extremely thin packages that can be placed on top of each other within standard height restrictions used in microelectronic system boards. Some of our stacked packages include:

- Stacked CSP (S-CSP), which is similar to our ChipArray®, except that S-CSP contains two or more chips placed on top of each other; and

- Package-on-Package (POP), which are extremely thin chip scale packages that can be stacked on top of each other.

Other

Our customers are creating smaller and more powerful versions of semiconductor devices to meet demands for miniaturization of portable electronic products, higher performance applications and converging functionality. For many of these devices, the optimal packaging solutions use solder bumps instead of gold wire to form the electrical interconnect between the device and the package. These forms of packaging are called flip chip and wafer level packaging. We offer our customers turnkey flip chip solutions, including wafer probe, wafer bumping, packaging, test and drop ship, on 200mm and 300mm wafers. An increasing number of devices, from diodes to DRAMs, use wafer level packaging. Most of these devices are small in size, with hundreds or thousands fabricated on each wafer. Our Wafer Level Chip Scale Packaging (WLCSP) service allows chip designers to integrate more technology at the wafer level, on a smaller footprint, with exceptional performance and reliability.

We are also a leading outsourced provider of packages based on MEMS that are used in a broad range of industrial and consumer applications, including automobiles and home entertainment.

Test Services

Amkor provides a complete range of test solutions including wafer probe, final test, strip test, marking, bake, dry pack, and tape and reel as well as drop shipment to final users as directed by our customers. A significant portion of units tested at Amkor are drop shipped to the end user. Direct ship eliminates one extra inspection step and improves overall cycle time. The devices we test encompass nearly all technologies produced in the industry today including digital, linear, mixed signal, memory, RF and integrated combinations of these technologies. In 2005, we tested over 2.9 billion units making us one of the highest volume testing companies in the subcontract packaging and test business. We tested 39%, 33% and 28% of the units that we packaged in 2005, 2004 and 2003, respectively. In 2005 we expanded our operations in Taiwan to offer turnkey services including wafer bumping, wafer probe, packaging, final test and drop ship. Amkor test operations compliment traditional wire bond as well as flip chip packaging technologies.

We are also an industry leader in providing innovative testing solutions for cellular and wireless connectivity products that help to lower the total cost of test for our customers. An example of this innovation is our low cost radio frequency tester (RFT). We have developed a variety of test services that covers the range from low level integration RF only to highly integrated, front end transmit (power amplifier) modules on up to multi-chip SiP modules that encompass entire radio systems. For low level integration RF only devices, Amkor s RFT tester continues to offer a low cost test platform. In late 2004 and 2005, investments were made to bring in a comprehensive line of automated test equipment (ATE) from: Agilent Technologies, Inc.; Teradyne, Inc.; LTX Corporation and Credence Systems Corporation to address the growing cellular and wireless connectivity products. We also offer RF probe services, which can be critical in lowering overall module costs.

Amkor provides value added engineering services in addition to basic device testing. These services include conversion of single site to multisite, test program development, test hardware development, and test program conversion to lower cost test systems. We can provide the test engineering services needed by our customers to get their products ready for high volume production. We believe that these services will continue to become more valuable to our customers as they face resource constraints not only in their production testing, but also in their test engineering and development areas.

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RESEARCH AND DEVELOPMENT

Our research and development efforts focus on developing new package products, test services and improving the efficiency and capabilities of our existing production processes. We believe that we have a distinct advantage in technology development which is one of the key success factors in the semiconductor packaging and test market in this area. Our focus on research and development efforts enable us to enter markets early, capture market share and promote the adoption of our new package offerings as industry standards. These efforts also support our customers needs for smaller packages, increased performance, and lower cost. In addition, we license our leading edge technology, such as *Micro*LeadFrame®, to customers and competitors. We continue to invest our research and development resources to further the development of flip chip interconnection solutions, chip scale and stack packages, *Micro*LeadFrame® and System-in-Package technologies.

As of December 31, 2005, we have 600 employees in research and development activities. In addition, we involve management and operations personnel in research and development activities. In 2005, 2004 and 2003, we spent $37.3 million, $36.7 million and $30.2 million, respectively, on research and development.

MARKETING AND SALES

Our marketing offices manage and promote our packaging and test services while key customer and technical support is provided through our network of international sales offices. To better serve our customers, our offices are located near our largest customers or areas where there is customer concentration. Our marketing and sales office locations include sites in the U.S. (Chandler, Arizona; Irvine, Santa Clara and San Diego, California; Boston, Massachusetts; Greensboro, North Carolina; and Austin and Dallas, Texas), China, France, Japan, Korea, the Philippines, Singapore, Taiwan and the United Kingdom.

To provide comprehensive sales and customer service, we typically assign each of our customers a direct support team consisting of an account manager, technical program manager, test program manager and both field and factory customer support representatives. We also support our largest multinational customers from multiple office locations to ensure that we are aligned with their global operational and business requirements.

Our direct support teams are further supported by an extended staff of product, process, quality and reliability engineers, as well as marketing and advertising specialists, information systems technicians and factory personnel. Together, these direct and extended support teams deliver an array of services to our customers. These services include:

- Managing and coordinating ongoing manufacturing activity;
- Providing information and expert advice on our portfolio of packaging and test solutions and related trends;
- Managing the start-up of specific packaging and test programs thus improving customers time-to-market;
- Providing a continuous flow of information to our customers regarding products and programs in process;
- Partnering with customers on concurrent design solutions;
- Researching and assisting in the resolution of technical and logistical issues;
- Aligning our technologies and research and development activities with the needs of our customers and OEMs;
- Providing guidance and solutions to customers in managing their supply chains;
- Driving industry standards;
- Providing design and simulation services to insure package reliability; and

Collaborating with our customers on continuous quality improvement initiatives.

Further, we implement direct electronic links with our customers to:

- Achieve near real time and automated communications of order fulfillment information, such as inventory control, production schedules and engineering data, including production yields, device specifications and quality indices, and

- Connect our customers to our sales and marketing personnel worldwide and to our factories.

Web-enabled tools provide our customers real time access to the status of their products, the performance of our manufacturing lines, and technical data they require to support their new product introductions.

CUSTOMERS

As of February 28, 2006, we had more than 200 customers, including many of the largest semiconductor companies in the world. More than half of our overall net sales come from outside of the United States. The table below lists our top 25 customers in 2005 based on net sales:

Altera Corporation
AMI Semiconductor
Analog Devices, Inc.
Atmel Corporation
Avago Technologies, Pte
Broadcom Corporation
Conexant Systems, Inc.
Freescale Semiconductor, Inc.
Infineon Technologies AG
Intel Corporation
International Business Machines Corporation (IBM)
LSI Logic Corporation
Maxim Integrated Products, Inc.
Mediatek, Inc.
Mtekvision Co., Ltd.
Nvidia Corporation
Philips Electronics
RF Micro Devices, Inc.
Renesas Technology Corp. (Hitachi)
Samsung Electronics Corporation, Ltd.
Sony Semiconductor Corporation
ST Microelectronics, Pte
Texas Instruments, Inc.
Toshiba Corporation
Xilinx, Inc.

For a discussion of risks attendant to our foreign operations, see Risk Factors That May Affect Future Operating Performance Risks Associated with International Operations We Depend on Our Factories and Operations in China, Japan, Korea, the Philippines, Singapore and Taiwan. Many of Our Customers and Vendors Operations Are Also Located and Operations Outside of the U.S. in Item 1A Risk Factors of this Annual Report.

Toshiba Corporation accounted for 11.6% of our consolidated net sales in 2003. No customer accounted for more than 10% of our consolidated net sales in either 2005 or 2004.

MATERIALS AND EQUIPMENT

Our packaging operations depend upon obtaining adequate supplies of materials and equipment on a timely basis. The principal materials used in our packaging process are leadframes or laminate substrates, gold wire and mold compound. We purchase materials based on customer forecasts, and our customers are generally responsible for any unused materials which we purchased based on such forecasts.

We work closely with our primary material suppliers to insure that materials are available and delivered on time. Moreover, we also negotiate worldwide pricing agreements with our major suppliers to take advantage of the scale of our operations. We are not dependent on any one supplier for a substantial portion of our material requirements.

Our packaging operations depend on obtaining manufacturing equipment on a timely basis. We work closely with major equipment suppliers to insure that equipment is delivered on time and that the equipment meets our stringent performance specifications.

For a discussion of additional risks associated with our materials and equipment suppliers, see Risk Factors that May Affect Future Operating Performance in Item 1A Risk Factors of this Annual Report.

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ENVIRONMENTAL MATTERS

The semiconductor packaging process uses chemicals and gases and generates byproducts that are subject to extensive governmental regulations. For example, we produce liquid waste when silicon wafers are diced into chips with the aid of diamond saws, then cooled with running water. Federal, state and local regulations in the U.S., as well as environmental regulations internationally, impose various controls on the storage,