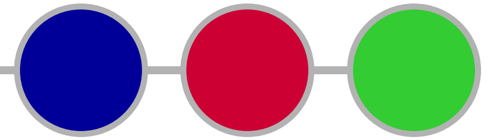

Global and China Semiconductor Package and Test Industry Report, 2011-2012

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STUDY GOAL AND OBJECTIVES

This report provides the industry executives with strategically significant competitor information, analysis, insight and projection on the competitive pattern and key companies in the industry, crucial to the development and implementation of effective business, marketing and R&D programs.

REPORT OBJECTIVES

- To establish a comprehensive, factual, annually updated and cost-effective information base on market size, competition patterns, market segments, goals and strategies of the leading players in the market, reviews and forecasts.
- To assist potential market entrants in evaluating prospective acquisition and joint venture candidates.
- To complement the organizations' internal competitor information gathering efforts with strategic analysis, data interpretation and insight.
- To suggest for concerned investors in line with the current development of this industry as well as the development tendency.
- To help company to succeed in a competitive market, and

METHODOLOGY

Both primary and secondary research methodologies were used in preparing this study. Initially, a comprehensive and exhaustive search of the literature on this industry was conducted. These sources included related books and journals, trade literature, marketing literature, other product/promotional literature, annual reports, security analyst reports, and other publications. Subsequently, telephone interviews or email correspondence was conducted with marketing executives etc. Other sources included related magazines, academics, and consulting companies.

INFORMATION SOURCES

The primary information sources include NBS(National Bureau of Statistics of China), Wind, and Ministry of Industry and Information Technology of the P. R. China etc .

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Abstract

The report revolves around the following aspects:

1. Overview of global semiconductor industry;
2. Status quo of analog semiconductor, MCU, DRAM, NAND and compound semiconductor market;
3. Status quo of IC manufacturing industry;
4. Package & test industry;
5. 24 major package & test vendors

Independent package & test vendors are generally known as OSAT or ASAT. In 1997, the OSAT industry scale was no more than USD5.1 billion or so, making up 19.6% of the semiconductor industry, as opposed to the market size of USD23.6 billion in 2011. Owning to the fact that TS technology advances slowly and that foundries are designed to assume partial package business, the OSAT market scale may see little change but slim growth, with the estimated revenue in 2012 registering USD24.4 billion. In the package & test market, the proportions by revenue of package and test are roughly 78% and 22% respectively. It is estimated that the IC test and wafer test will be more time-consuming, further propelling cost proportion up.

Package & test companies are heavily reliant on foundries and IDMs, especially on foundries. Only count on large foundries can package & test companies capture bigger market share. A case in point is ASE, the world's first largest package & test vendor, which closely collaborates with TSMC, the world's largest foundry. ASE undertakes nearly all the package & test business of TSMC, the market occupancy of which reaches roughly 48% in global foundry market, while the market share of ASE in global package & test market approximates 18%. In addition, the world's second largest package & test company Amkor carries cooperation with Global Foundries; the third largest one SPIL teams up with UMC; the world's fourth largest player, cooperates with INTEL? and Singapore-based Chartered.

The global package & test industry features high concentration, with the combined market share of the top four reaping 46%. This is mainly because of great support from large foundries. The foundry industry in Taiwan is highly developed with the global market occupancy exceeding 60%, which fuels the package & test industry, with a global market share of 56%.

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Driven by Singapore-based Chartered and Japan-based IDM, enterprises in Southeast Asia occupy the second place with the market share of 15%. However, since it was merged by Global foundries, business performance of Chartered was bogged down. Inasmuch as most products made by Southeast Asia-based companies are analog IC package & test, there is a great possibility that the business performance of these enterprises will set back due to limited potential.

America-based counterparts are mainly engaged in package & test of high-end products, and there are a host of foundries and IDMs in America, which makes it the third position with the market occupancy of 13%. As for South Korea, the package & test enterprises rely on Samsung and SK Hynix. In the future, Samsung is expected to embrace positive growth in terms of memory business and System LSI business. Therefore, South Korea-based package & test enterprises enjoy bright prospect.

Revenue of Top 24 Package & Test Companies Worldwide, 2008-2012 (USD mln)

	Headquarters	2010	2011	2012E
ASE	Taiwan	4,080	4,339	4,691
AMKOR	US	2,939	2,776	2,758
SPIL	Taiwan	2,018	2,078	2,158
StatsChippac	Singapore	1,678	1,707	1,898
PTI	Taiwan	1,196	1,339	1,509
UTAC	Malaysia	938	958	952
Shinko	Japan	773	688	660
J-devices	Japan	593	608	656
ChipMOS	Taiwan	569	602	608
JCET	Chinese Mainland	534	582	588
Chipbond	Taiwan	360	449	482
KYEC	Taiwan	450	391	435
FATC	Taiwan	374	402	407
STS Semiconductor	South Korea	317	371	388
Unisem	Malaysia	432	380	360
Carsem	Malaysia	394	332	302
Greatek(merged by PTI)	Taiwan	323	302	
Signetics	South Korea	203	243	296
Hana Micron	South Korea	230	258	295
Nepes	South Korea	243	242	291
Walton	Taiwan	285	278	264
Nantong Fujitsu	Chinese Mainland	254	248	250
Lingsen	Taiwan	201	198	212
TIANSHUI HUATIAN	Chinese Mainland	172	203	208

Source: RIC‹Global and China Semiconductor Package and Test Industry Report, 2011-2012›

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Although there are many foundries in Chinese Mainland, the technology falls far behind. Subsequently, package & test enterprises feature small scale and poor business performance. In 2011, the operating profit of JCET, China's largest package & test enterprise, slumped by 97.3%; while Nantong Fujitsu Microelectronics, the second largest player, sharply dropped by 89.5%. On average, the operating profit of the world's top 4 package & test vendors fell by 18%, approximately.

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Table of contents

1. Global Semiconductor Industry
1.1 Overview
1.2 IC Design Industry
1.3 IC Package and Test Industry
1.4 Chinese IC Market

2. Semiconductor Industry Pattern
2.1 Analog Semiconductor
2.2 MCU
2.3 DRAM Industry
2.3.1 Status Quo
2.3.2 Market Share of DRAM Manufacturers
2.3.3 Market Share of Mobile DRAM Manufacturers
2.4 NAND
2.5 Compound Semiconductor Industry

3. IC Manufacturing Industry
3.1 Capacity
3.2 Foundry
3.3 MEMS Foundry
3.4 China Foundry Industry
3.5 Foundry Market
3.5.1 Global Mobile Phone Market Size
3.5.2 Market Share of Mobile Phone Brands
3.5.3 Smartphone Market
3.5.4 PC Market
3.6 Semiconductor Equipment Market
3.7 Semiconductor Material Market

4. Package & Test Industry
4.1 Market Size
4.2 Industry Pattern
4.3 WLCSP Market
4.4 TSV Package
4.5 Semiconductor Test
4.5.1 Teradyne
4.5.2 Advantest
4.6 Ranking of Package & Test Companies Worldwide

5. Package & Test Companies
5.1 ASE
5.2 Amkor
5.3 SPIL
5.4 STATS ChipPAC
5.5 PTI
5.6 Greatek
5.7 ChipMOS
5.8 KYEC
5.9 Unisem
5.10 FATC
5.11 JCET
5.12 UTAC
5.13 Lingsen Precision.
5.14 Nantong Fujitsu Microelectronics
5.15 Walton Advanced Engineering
5.16 Chipbond
5.17 J-DEVICES
5.18 MPI
5.19 STS Semiconductor
5.20 Signetics
5.21 Hana Micron
5.22 Nepes
5.23 Tianshui Huatian Technology
5.24 Shinko

Selected Charts

- Revenue of Semiconductor Packaging Material Manufacturers Worldwide, 2010-2013
- Chinese IC Market Size, 2007-2011
- Product Distribution of Chinese IC Market, 2011
- Chinese IC Market by Application, 2011
- Market Share of Major IC Companies in China, 2011
- Market Share of Major Analog Semiconductor Companies, 2011
- Market Share of Catalog Analog Semiconductor Companies, 2011
- Ranking of Top 10 Analog Semiconductor Companies, 2011
- Ranking of MCU Companies, 2011
- CAPEX of DRAM Industry, 2000-2012
- Global DRAM Shipment, 2000-2013
- DRAM Contract Price Fluctuations, Oct. 2009-Jan. 2012
- Revenue of DRAM Companies Worldwide, Q1 2005-Q4 2012
- Global Shipment of DRAM Wafer, Q1 2010-Q4 2012
- RAM Demand, 2001-2013
- Ranking of DRAM Brands by Revenue, Q4 2011
- Market Share of Mobile DRAM, 2009-2011
- GaAs-based Device Industry Chain
- Major Manufacturers in GaAs-based Device Industry Chain
- Ranking of GaAs-based Device Companies Worldwide, 2011-2012
- Global 12-inch Fabs Capacity, 2011
- Capacity of 12-inch Fabs by Region Worldwide, 1999-2012
- Expenditure of Major Fabs by Product type, Q4 2011-Q4 2012
- Global Wafer Installed Capacity by Product, Q1 2010-Q4 2013
- Global Wafer Equipment Expenditure by Region, 2010-2012

Selected Charts

- Ranking of Global Foundries by Sales, 2005-2011
- Operating Margins of World's Major Foundries, 2005-2011
- Ranking of World's Top 30 MEMS Companies by Revenue, 2011
- Ranking of World's Top 20 MEMS Foundries, 2011
- Sales of Chinese Foundries, 2011
- Ranking of World's Top 25 IC Design Houses, 2011
- Global Shipment of Mobile Phones, 2007-2014
- Global Mobile Phone Shipment and Growth Rate, Q1 2009-Q4 2011
- 3G/4G Mobile Phone Shipment by Region, 2010-2012
- Quarterly Shipment of Major Mobile Phone Brands Worldwide, 2010-2011
- Shipment of Major Mobile Phone Vendors Worldwide, 2010-2011
- Smartphone Shipment of Major Mobile Phone Vendors Worldwide, 2010-2011
- Market Share of Smartphone OS, 2011
- Global Shipment of CPU and GPU for PC, 2008-2013
- Shipment of Net book, iPad and Tablet PC, 2008-2012
- Global Investment in Wafer Equipment, 2007-2016
- CAPEX of Global Semiconductor Companies, 2011-2016
- WLP Equipment Expenditure Worldwide, 2011-2016
- Die Packaging Equipment Expenditure Worldwide, 2011-2016
- Automatic Test Equipment Expenditure Worldwide, 2011-2016
- CAPEX of Global Top 10 Semiconductor Companies, 2011-2012
- Global Semiconductor Materials Market by Region, 2010-2013
- Semiconductor Back-end Equipment Expenditure by Region Worldwide, 2010-2012
- OSAT Market Size, 2006-2014
- Global IC Packaging Types by Shipment, 2007

Selected Charts

- Global IC Packaging Types by Shipment, 2010
- Global Package & Test Market by Technology, 2007, 2011, 2015
- Global OSAT Output Value by Region, 2012
- Revenue of Taiwanese IC Package & Test Industry, 2007-2011
- WLCSP Market Size, 2010-2016
- WLCSP's Shipment by Application, 2010-2016
- Fan-in WLCSP 2010-2016 unit CAGR by Device Type
- Mobile Phone CPU / GPU Packaging Roadmap
- Revenue and Operating Margin of Teradyne, Q1 2010-Q4 2011
- New Orders of SOC Products of Teradyne, Q1 2005-Q4 2011
- Sales and Backlog Orders of Teradyne by Region, Q4 2011
- Orders of Advantest by Segment and Region, FY2010-FY2011
- Revenue of Advantest by Segment and Region, FY2010-FY2011
- Orders of Advantest by Segment, Q1 2010-Q4 2011
- Orders of Advantest by Region, Q1 2010-Q4 2011
- Revenue of Advantest by Segment, Q1 2010-Q4 2011
- Revenue of Advantest by Region, Q1 2010-Q4 2011
- Sales of Advantest's Semiconductor Test Division by Application, 2000-2011
- Global Presence of Advantest
- Revenue of Top 24 Global IC Package & Test Companies, 2008-2012
- Organizational Structure of ASE
- Revenue and Gross Margin of ASE, 2001-2012
- Revenue Breakdown of ASE by Business, 2010-2011
- Copper Wire Bonding Revenue of ASE, Q1 2010-Q4 2011
- Copper Wire Bonding Conversion Rate of ASE, Q1 2010-Q4 2011

Selected Charts

- ASE's Copper Wire Bonding Revenue by Region, Q1 2010-Q4 2011
- ASE's Copper Wire Bonding Revenue by Client, Q1 2010-Q4 2011
- Revenue and Gross Margin of ASE's Package Segment, Q1 2010-Q1 2012
- Revenue of ASE's Package Segment by Type, Q1 2010-Q1 2012
- Revenue and Gross Margin of ASE's Test Segment, Q1 2010-Q1 2012
- Revenue of ASE's Test Segment by Business, Q1 2010-Q1 2012
- Revenue, Gross Margin and Operating Margin of ASE's Materials Segment, Q1 2010-Q1 2012
- CAPEX and EBITDA of ASE, Q1 2010-Q1 2012
- Top 10 Clients of ASE, Q1 2012
- Revenue of ASE by Application, Q1 2012
- ASE Presence in China
- Package Types of ASE Shanghai
- Revenue of ASE Shanghai, 2004-2011
- Revenue, Gross Margin and Operating Margin of Amkor, 2005-2011
- Amkor's Revenue by Package Type, 2007-2011
- Amkor's Revenue by Package Type, Q4 2008-Q1 2012
- Amkor's Shipment by Package Type, Q4 2008-Q1 2012
- Amkor's CSP Packaging Revenue and Shipment, 2005-Q3 2011
- Amkor's CSP Packaging Revenue by Application, 2011
- Amkor's BGA Packaging Revenue and Shipment, 2005-Q3 2011
- Amkor's BGA Packaging Revenue by Application, 2011
- Amkor's Leadframe Packaging Revenue and Shipment, 2005-Q3 2011
- Amkor's Leadframe Packaging Revenue by Application, Q3 2011
- Amkor's Packaging Capacity Utilization, Q1 2008-Q4 2011
- Revenue, Gross Margin and Operating Margin of SPIL, 2003-2011

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Selected Charts

- Revenue of SPIL by Region, 2005-Q1 2012
- Revenue of SPIL by Application, 2005-Q1 2012
- Revenue of SPIL by Business, 2005-Q1 2012
- SPIL's Capacity Statistics in Q1 2006, Q2-Q3 2007 and Q3-Q4 2011
- Revenue and Gross Margin of STATS ChipPAC Ltd., 2004-2011
- Revenue of STATS ChipPAC Ltd. by Package Type, 2006-Q1 2012
- Revenue of STATS ChipPAC Ltd. by Application, 2006-Q1 2012
- Revenue of STATS ChipPAC Ltd. by Region, 2006-2011
- Revenue and Operating Margin of PTI, 2006-2012
- PTI's Factories
- PTI's TSV Solutions
- PTI's Revenue by Business, Q1 2012
- PTI's Revenue by Product, Q1 2012
- Revenue, Gross Margin and Operating Margin of Greatek, 2002-2011
- Revenue of Greatek by Technology Type, 2007-2010
- Revenue and Gross Margin of ChipMOS, 2003-2011
- Revenue of ChipMOS by Business, 2010-2011
- Revenue of ChipMOS by Product, 2010-2011
- Revenue of ChipMOS by Client, 2011
- Revenue of ChipMOS by Region, 2006-2011
- Revenue and Gross Margin of KYEC, 2002-2012
- Monthly Revenue of KYEC, Apr. 2010-Apr. 2012
- KYEC's Factories
- KYEC's Testing Platforms
- Unisem's Revenue and EBITDA, 2006-2011

Selected Charts

- Organizational Structure of Formosa Plastic Group
- Revenue and Operating Margin of FATC, 2006-2012
- Monthly Revenue of FATC, Apr. 2010-Apr. 2012
- Revenue and Operating Margin of JCET, 2006-2012
- JCET's Roadmap
- JCET's Revenue by Region, 2011
- Revenue and Operating Margin of Lingsen Precision Industries, Ltd., 2007-2012
- Monthly Revenue of Lingsen Precision Industries, Ltd., Apr. 2010-Apr. 2012
- Revenue and Growth Rate of Nantong Fujitsu Microelectronics, 2006-2011
- Net Income and Growth Rate of Nantong Fujitsu Microelectronics, 2006-2011
- Quarterly Revenue and Growth Rate of Nantong Fujitsu Microelectronics, 2006-2011
- Quarterly Net Income and Growth Rate of Nantong Fujitsu Microelectronics, 2006-2011
- Quarterly Gross Margin of Nantong Fujitsu Microelectronics, 2006-2011
- Quarterly Selling, Administrative and R&D Expenses of Nantong Fujitsu Microelectronics, 2006-2011
- Revenue and Operating Margin of WALTON, 2007-2012
- Monthly Revenue and Growth Rate of WALTON, Apr.2010-Apr.2012
- Revenue and Operating Margin of Chipbond, 2006-2012
- Monthly Revenue and Growth Rate of Chipbond, Apr.2010-Apr.2012
- Revenue of Chipbond by Product, Apr.2009-Apr.2012
- Revenue and EBIT of MPI, FY2007-FY2012
- Revenue of MPI by Region
- Revenue of Carsem by Product, Q1 2011-Q1 2012
- Revenue and Operating Margin of STS Semiconductor, 2006-2012
- Equity Structure of Signetics

Selected Charts

- Revenue and Operating Margin of Signetics, 2007-2012
- Capacity Utilization and Operating Margin of Signetics, Q1 2010-Q4 2012
- Revenue of Signetics by Product, 2011
- Revenue of Signetics by Customer, 2011
- Revenue and Operating Margin of Hana Micron, 2006-2012
- Revenue of Hana Micron by Customer, 2011
- Revenue and Operating Margin of Nepes, 2007-2012
- Quarterly Revenue and Operating Margin of Nepes, 2006-2012
- Quarterly Revenue of Nepes by Division, 2006-2012
- Quarterly Operating Income of Nepes by Division, 2006-2012
- Revenue and Operating Margin of Tianshui Huatian Technology, 2006-2012
- Revenue and Net Income of Shinko, FY2007-FY2012
- Revenue of Shinko by Business, FY2011-FY2012

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