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## Worldwide Semiconductor Foundry Market Grew 16.2 Per Cent in 2012, According to Final Results by Gartner

STAMFORD, Conn., April 24, 2013 — The worldwide semiconductor foundry market totalled $34.6 billion in 2012, a 16.2 per cent increase from 2011, according to final results by Gartner, Inc.

"2012 was the first year that the semiconductor revenue for mobile devices surpassed that of PCs and notebooks," said Samuel Wang, research vice president at Gartner. "It also marked the first year that advanced technology for mobile applications drove the foundry revenue. Furthermore, 2012 saw not only major foundries improve the yield of 28 nanometer (nm) technology, but also many foundries fine-tuned the device performance of legacy nodes."

TSMC maintained the No. 1 spot due to its success of advanced technology nodes (see Table 1). Strong performance on 32 nm yields and the availability of sub-45-nm wafer capacity at the Dresden, Germany, fabs allowed Globalfoundries to advance to the No. 2 position, while UMC's market share decreased due to reduced wafer shipments. Driven by the wafers consumed by Apple's A6 and A6X chips, Samsung moved up four spots to the No. 5 position with 175.5 per cent growth in 2012.

**Table 1**
**Top 12 Worldwide Semiconductor Foundries by Revenue (Millions of US Dollars)**

| 2012 Rank | 2011 Rank | Company | 2012 Revenue | 2012 Market Share (%) | 2011 Revenue | 2011-2012 Growth (%) |
|---|---|---|---|---|---|---|
| 1 | 1 | TSMC | 17,130 | 49.5 | 14.533 | 17.9 |
| 2 | 3 | Globalfoundries | 4,200 | 12.1 | 3,580 | 17.3 |
| 3 | 2 | UMC | 3,602 | 10.4 | 3,604 | -0.1 |
| 4 | 4 | SMIC | 1,702 | 4.9 | 1,319 | 29.0 |
| 5 | 9 | Samsung* | 1,295 | 3.7 | 470 | 175.5 |
| 6 | 5 | TowerJazz | 639 | 1.8 | 613 | 4.2 |
| 7 | 6 | IBM Microelectronics | 634 | 1.8 | 545 | 16.3 |
| 8 | 10 | Powerchip Technology | 614 | 1.8 | 431 | 42.5 |
| 9 | 11 | Hua Hong NEC** | 602 | 1.7 | - | NM |
| 10 | 7 | Vanguard International | 580 | 1.7 | 516 | 12.4 |
| 11 | 8 | Dongbu HiTek | 478 | 1.4 | 483 | -1.0 |
| 12 | 12 | MagnaChip Semiconductor | 390 | 1,1 | 338 | 15.4 |
| | | Others | 2,711 | 7.8 | 3,322 | -18.4 |
| | | **Total Market** | **34,577** | **100.0** | **29,754** | **16.2** |

*Samsung revenue includes classic foundry ($600 million) and revenue of Apple's A6 and A6X chips, but not A4, A5 and A5X chips
**Hua Hong NEC and Grace Semiconductor Manufacturing completed their merger in 2011, and the new company continues to use Hua Hong NEC.
Source: Gartner (April 2013)

The increase in the foundry business was attributed to the restocking of inventory by customers, along with the increased demand of smartphones, in which wafers for advanced technology are required. In the

second half of 2012, foundries performed better than the seasonal norm due to the need of 40 nm wafers as a result of the unexpected fast rise of low-cost smartphones in China and other emerging countries. Those foundries with sufficient wafer capacity and a good yield of 40 nm and 28 nm technologies have achieved solid revenue growth.

Besides the increased shipment of advanced nodes, there were market share shifts in the more mature nodes, with some foundries reporting near-record-high shipments of wafers of 65 nm to 0.18 micron serving power management integrated circuits (PMICs), high voltage, embedded flash, complementary metal-oxide semiconductor (CMOS) image sensors and micro-electromechanical systems (MEMS). The market share gain was due to the continuous improvement of device performance and cost savings as a result of process tuning of the legacy process nodes.

In 2012, most foundries reported an increase of revenue from fabless customers, while the percentage of revenue contribution by integrated device manufacturer (IDM) customers was flat or even declined, indicating that the chips for mobile devices have been supplied primarily by the fabless companies.

Additional information is provided in the Gartner report "Market Share Analysis: Semiconductor Foundry, Worldwide, 2012." The report provides rankings and market share for the top 12 vendors. The report is available on Gartner's web site at http://www.gartner.com/resId=2412315**.**

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