



# **Global and China Wafer Foundry Industry Report, 2010-2011**

**July 2011**

## ***This report***

- ◆ **Analyzes the semiconductor market and industry in China .**
- ◆ **Focuses on Wafer Foundries**

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## Abstract

The wafer foundries boomed in 2010 when the output value of wafer foundry industry rose 34% to US\$26.88 billion. A lot of manufacturers turned loss into profit, including SMIC, Dongbu HiTek, VIS, ASMC, CRMTech, Towerjazz, and X-Fab; hereinto, SMIC made the most rapid progress with the operating margin leaping to 1.4% from -90.1%.

Consequently, the wafer foundries are fully confident and substantially raise the capital expenditure to improve the capacity. For instance, SMIC brings forward the investment of RMB46 billion for capacity enhancement; while Global Foundries under Abu Dhabi SWF tries to beat UMC and takes the global No.2 position by doubling its capex in 2011 against that in 2010.

The flourish of smart phone and tablet PC is unlikely to benefit the entire wafer foundry industry, only TSMC and Samsung can enjoy the priority. TSMC, the leader in global wafer foundry industry, holds the market share of over 50%, with the technology at least half a year superior to that of other manufacturers and 1-3 years

ahead of that of most manufacturers. 95% of the highest-end ICs worldwide are OEMed by TSMC, and the other manufacturers are merely the secondary or tertiary suppliers. Samsung relies on Apple, yet the conflict between Apple and Samsung has continued to escalate recently, so, it is certainly that partial A5 orders will go for TSMC and it is probable for TSMC to manage all the A6 orders.

Wafer foundry is by no means the OEM of ordinary electronic products, several tens of thousands of accumulated IP library compose the insuperable threshold, the investment can easily reach billions of US dollars, and the support from the huge and excellent talent teams is a must; as a result, wafer foundry is far more difficult than the fabrication of single IC. It is easy for Samsung to pose competition against the potential clients in that Samsung is the electronics giant and it also engages in some types of IC, yet TSMC, UMC, and SMIC turn out to be pure foundries, which limits the revenue scale of Samsung. In 2012, the revenue of Samsung will decline sharply as Apple transfers its orders to TSMC.

## Revenue of 17 Wafer Foundries Worldwide, 2007-2011E (Unit: US\$ mln)

| Foundries        | 2005 | 2006 | 2007 | 2008  | 2009 | 2010  | 2011E |
|------------------|------|------|------|-------|------|-------|-------|
| TSMC             | 8217 | 9748 | 9813 | 10556 | 8989 | 13307 | 14288 |
| UMC              | 3259 | 3670 | 3430 | 3070  | 2815 | 3965  | 4096  |
| Global Foundries |      |      |      |       | 2641 | 3510  | 3626  |
| Chartered        | 1132 | 1528 | 1458 | 1743  | 1540 |       |       |
| SMIC             | 1171 | 1465 | 1550 | 1353  | 1070 | 1555  | 1588  |
| Dongbu HiTek     | 347  | 456  | 510  | 490   | 378  | 495   | 529   |
| VIS              | 353  | 398  | 486  | 511   | 382  | 505   | 506   |
| MagnaChip        |      |      | 322  | 290   | 263  | 420   | 466   |
| IBM              |      |      | 570  | 400   | 335  | 430   | 420   |
| SAMSUNG          |      |      | 355  | 370   | 325  | 400   | 680   |
| GRACE            | 110  | 191  | 214  | 230   | 180  | 260   | 266   |
| HEJIAN           | 250  | 290  | 330  | 222   | 195  | 205   | 208   |
| TOWERJAZZ        | 301  | 400  | 438  | 252   | 299  | 509   | 566   |
| HHNEC            | 313  | 315  | 345  | 290   | 240  | 295   | 302   |
| X-FAB            | 202  | 290  | 410  | 370   | 223  | 320   | 376   |
| ASMC             | 114  | 170  | 170  | 137   | 94   | 144   | 156   |
| CSMC             | 78   | 114  | 155  | 138   | 141  | 178   | 188   |
| SSMC             | 280  | 325  | 350  | 340   | 280  | 330   | 339   |

1/3 revenue of Global Foundries is contributed by AMD, its biggest client. Severely impacted by smart phones and table PCs, traditional PCs and notebook PCs have witnessed great decrease margin. Year 2011 will be arduous for AMD because of the powerful beat from Intel. Abu Dhabi SWF is still groping the way of controlling Global Foundries, so, perhaps it is inevitable for making losses in consecutive several years or even more than a decade.

As for the OEM fields of high-end products like 28nm node and of such special products as High Voltage/MEMS, they feature not so evident overcapacity; however, other fields will be amid overcapacity till 2013, and a majority of foundries will see the unavoidable loss.

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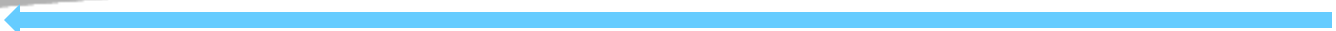
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