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Fab-Lite/Asset-Lite Business Model Gaining Momentum

Top 10 fab-/asset-lite companies now represent about one-quarter of the worldwide IC market.

Arguably, no other trend has so quickly swept through the IC industry and stirred up so much debate about the future of chip making as the spread of the “fab-lite” (or “asset-lite”) business model, which is being embraced by a growing number of major integrated device manufacturers (IDMs) worldwide. Most recently, large Japanese IC makers—namely Toshiba, Renesas, Sony, and Fujitsu—joined the fab-lite/asset-lite movement several years after U.S. and European IDMs began reining in capital expenditures on expensive new 300mm wafer fabs and increasing their use of third-party foundries. Nearly all IDMs today (excluding giant Intel and memory makers) are now aiming to keep capital spending at or below 10% of annual sales compared to the IC industry’s average of more than 20% in the last decade.

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The advent of fab-/asset-lite strategies led to a rash of predictions that many IDMs were on their way to becoming fabless because they have stopped investing in leading-edge wafer plants and development of next-generation digital CMOS technologies. Indeed, some IDMs have used fab-/asset-lite strategies as steppingstones to going fabless—such as LSI and most recently Integrated Device Technology (IDT), which is now selling its 200mm fab in Oregon—but many other IC manufacturers insist “lite” business models are sustainable over the long term since they’ve narrowed their strategic product focus to categories that do not require 300mm wafer processes or expensive plants.

IC Insights estimates that the top 10 IDMs pursuing fab-lite/asset-lite strategies accounted for 23% of the \$261.3 billion IC market in 2010, or about \$59.8 billion.

Figure 1 lists IC Insights’ top 10 fab-/asset-lite IDMs along with the years that the current strategies were announced, a comparison of recent and historical capex/sales ratios, and summaries of their strategies and objectives. In compiling the top 10 fab-/asset-lite list IC Insights excluded manufacturers primarily focused on memories, fabless companies, Intel, wafer foundries, and IDMs that have historically maintained capex/sales ratios below 10% due to the mix of their product portfolios.

The top 10 fab-/asset-lite IDMs outsourced approximately 21% of their IC production requirements to third-party manufacturers in 2010, which generated nearly \$12.6 billion in sales from devices made by foundry companies last year. Based on current outsourcing targets in IDM-lite company strategies, sales of foundry-made ICs for these 10 companies are projected to reach \$34.0 billion in 2015, which would be a compound annual growth rate (CAGR) of 22% from \$12.6 billion in 2010.

IC Insights estimates that the top 10 IDM fab-/asset-lite companies will outsource about 43% of their IC production requirements in 2015, if current strategies remain in place.

Top 10 IDMs Pursuing Fab/Asset-Lite Strategies

| Fab/Asset-Lite Rank | 2010 IC Sales Rank | Company | Region | Strategy Announced | Capex/Sales Ratios | Current Strategy & Objectives |
|---------------------|--------------------|------------|--------|--|---------------------------------------|---|
| 1 | 4 | TI | U.S. | 2000 initially, expanded in 2007 | 2007-10: 9.9% — 1997-06: 15.4% | About 25% of total wafers are now outsourced, including 60% of advanced CMOS in 2010. |
| 2 | 6 | Toshiba | Japan | Dec. 2010 | FY08-11: 18.7% — FY98-07: 17.3% | Aims to outsource 50% of SoC in 2011 and 80% by 2013. |
| 3 | 7 | Renesas* | Japan | July 2010 | FY09-11: 6.3% — FY05-08: 11.5% | Will outsource all ICs made with 28nm and below processes. |
| 4 | 9 | ST | Europe | 2006 | 2007-10: 9.2% — 1997-06: 23.4% | Aims to make 80% of its wafers overall and outsource about two-thirds of advanced CMOS processes. |
| 5 | 14 | Sony | Japan | 2007 | FY08-11: 9.9% — FY98-07: 28.3% | At least 30% of ICs are now outsourced compared to 10% in 1998. |
| 6 | 16 | Infineon* | Europe | 2005 | FY07-10: 8.9% — FY97-06: 23.6% | Foundries handled 6-7% of its wafers in 2010 and are expected to reach 10% in the long term. |
| 7 | 17 | Fujitsu | Japan | 2009 | FY08-11: 13.3% — FY98-07: 22.2% | Continue making LSI logic down to 45nm feature sizes. |
| 8 | 18 | Freescale* | U.S. | 1998 initially but reset several times | 2007-10: 5.0% — 1997-06: 14.6% | Foundry wafers were 25% of its total in 2010, up from 15% in 2007. |
| 9 | 26 | NXP* | Europe | 2007 | 2007-10: 6.3% — 1997-06: 12.9% | About 25% of its production was outsourced in 2010. |
| 10 | 33 | Atmel | U.S. | 2006 | 2007-11: 3.9% — 1997-06: 21.2% | In 2010, 32% of its production was outsourced compared to 12% in 2009 and 5% in 2006. |

**Capex/sales ratios include historical data prior to spinoffs of Infineon by Siemens in 1999, NXP by Philips in 2006, and Freescale by Motorola in 2003 and merger of NEC Electronics and Renesas Technology to form Renesas Electronics in 2010.*

Source: Companies, IC Insights

Figure 1

Report Details: The New "Half-Year" McClean Report Subscription

IC Insights has released its 250-page *2011 Mid-Year Update*. The *Mid-Year Update* to *The McClean Report* is a part of IC Insights' new *2011 "Half-Year" McClean Report* service. The *2011 Half-Year McClean Report* subscription includes the *Mid-Year Update*, the August, September, October, and November *Monthly Updates*, as well as access to *The McClean Report* subscriber-only Webcasts in August and November. The new *2011 Half-Year McClean Report* subscription is **priced at only \$1,990 for a single user and \$3,290 for a multi-user corporate license**.

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About IC Insights

IC Insights, Inc., based in Scottsdale, Arizona USA, is dedicated to providing high-quality, cost-effective market research for the semiconductor industry. Founded in 1997, IC Insights offers coverage of global economic trends, the semiconductor market forecast, capital spending and fab capacity trends, product market details, and technology trends, as well as complete IC company profiles and evaluations of end-use applications driving demand for ICs.

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