

RESEARCH BULLETIN

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Seven Top-15 1H18 Semi Suppliers Register $\geq 20\%$ Gains

Samsung extends its number one ranking and sales lead over Intel to 22%.

IC Insights released its *August Update* to the 2018 *McClean Report* earlier this month. This *Update* included a discussion of the top-25 semiconductor suppliers in 1H18 (the top-15 1H18 semiconductor suppliers are covered in this research bulletin) and Part 1 of an extensive analysis of the IC foundry market and its suppliers.

The top-15 worldwide semiconductor (IC and O-S-D—optoelectronic, sensor, and discrete) sales ranking for 1H18 is shown in Figure 1. It includes seven suppliers headquartered in the U.S., three in Europe, two each in South Korea and Taiwan, and one in Japan. After announcing in early April 2018 that it had successfully moved its headquarters location from Singapore to the U.S. IC Insights now classifies Broadcom as a U.S. company.

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1H18 Top-15 Semiconductor Sales Leaders (\$M, Including Foundries)

1H18 Rank	2017 Rank	Company	Headquarters	1Q18 Tot IC	1Q18 Tot O-S-D	1Q18 Tot Semi	2Q18 Tot IC	2Q18 Tot O-S-D	2Q18 Tot Semi	2Q18/1Q18 % Change	1H18 Tot Semi	1H17 Tot Semi	1H18/1H17 % Change
1	1	Samsung	South Korea	18,491	910	19,401	19,434	950	20,384	5%	39,785	29,181	36%
2	2	Intel	U.S.	15,832	0	15,832	16,753	0	16,753	6%	32,585	28,839	13%
3	4	SK Hynix	South Korea	8,016	125	8,141	9,421	192	9,613	18%	17,754	11,393	56%
4	3	TSMC (1)	Taiwan	8,473	0	8,473	7,839	0	7,839	-7%	16,312	14,601	12%
5	5	Micron	U.S.	7,486	0	7,486	7,920	0	7,920	6%	15,406	10,653	45%
6	6	Broadcom Ltd. (2)	U.S.	4,125	434	4,559	4,150	435	4,585	1%	9,144	8,404	9%
7	7	Qualcomm (2)	U.S.	3,897	0	3,897	4,087	0	4,087	5%	7,984	7,728	3%
8	9	Toshiba/Toshiba Memory	Japan	3,517	310	3,827	3,575	315	3,890	2%	7,717	6,159	25%
9	8	TI	U.S.	3,339	227	3,566	3,535	245	3,780	6%	7,346	6,595	11%
10	10	Nvidia (2)	U.S.	3,108	0	3,108	3,135	0	3,135	1%	6,243	4,083	53%
11	15	WD/SanDisk	U.S.	2,350	0	2,350	2,375	0	2,375	1%	4,725	3,715	27%
12	13	Infineon	Europe	1,360	907	2,267	1,388	926	2,314	2%	4,581	3,896	18%
13	11	NXP	Europe	2,017	252	2,269	2,035	255	2,290	1%	4,559	4,413	3%
14	12	ST	Europe	1,696	518	2,214	1,724	526	2,250	2%	4,464	3,732	20%
15	16	MediaTek (2)	Taiwan	1,696	0	1,696	2,032	0	2,032	20%	3,728	3,726	0%
Top-15 Total				85,403	3,683	89,086	89,403	3,844	93,247	4.7%	182,333	147,118	24%

(1) Foundry (2) Fabless

Source: Company reports, IC Insights' *Strategic Reviews* database

*Custom devices for internal use.

Figure 1

As shown, all but four of the top 15 companies had double-digit year-over-year growth in 1H18. Moreover, seven companies had $\geq 20\%$ growth, including the five big memory suppliers (Samsung, SK Hynix, Micron, Toshiba/Toshiba Memory, and Western Digital/SanDisk) as well as Nvidia and ST.

The top-15 ranking includes one pure-play foundry (TSMC) and four fabless companies. If TSMC were excluded from the top-15 ranking, U.S.-based Apple would have been ranked in the 15th position. Apple is an anomaly in the top company ranking with regards to major semiconductor suppliers. The company designs and uses its processors only in its own products—there are no sales of the company’s MPUs to other system makers. IC Insights estimates that Apple’s custom ARM-based SoC processors and other custom devices had a “sales value” of \$3.5 billion in 1H18.

IC Insights includes foundries in the top-15 semiconductor supplier ranking since it has always viewed the ranking as a top supplier list, not a marketshare ranking, and realizes that in some cases the semiconductor sales are double counted. With many of our clients being vendors to the semiconductor industry (supplying equipment, chemicals, gases, etc.), excluding large IC manufacturers like the foundries would leave significant “holes” in the list of top semiconductor suppliers. Foundries and fabless companies are identified in the Figure. In the *April Update to The McClean Report*, marketshare rankings of IC suppliers by product type were presented and foundries were excluded from these listings.

Overall, the top-15 list shown in Figure 1 is provided as a guideline to identify which companies are the leading semiconductor suppliers, whether they are IDMs, fabless companies, or foundries.

In May 2018, Toshiba completed the \$18.0 billion sale of its memory IC business to the Bain Capital-led consortium. Toshiba then repurchased a 40.2% share of the business. The Bain consortium goes by the name of BCPE Pangea and the group owns 49.9% of Toshiba Memory Corporation (TMC). Hoya Corp. owns the remaining 9.9% of TMC’s shares. The new owners have plans for an IPO within three years. Bain has said it plans to support the business in pursuing M&A targets, including potentially large deals.

As a result of the sale of Toshiba’s memory business, the 2Q18 sales results shown in Figure 1 include the combined sales of the remaining semiconductor products at Toshiba (e.g., Discrete devices and System LSIs) and the new Toshiba Memory’s NAND flash sales. The estimated breakdown of these sales in 2Q18 is shown below:

- **Toshiba System LSI: \$468M**
- **Toshiba Discrete: \$315M**
- **Toshiba Memory Corporation: \$3,107M**
- **Total Toshiba/Toshiba Memory Corporation 2Q18 Sales: \$3,890M**

In total, the top-15 semiconductor companies’ sales surged by 24% in 1H18 compared to 1H17, four points higher than the total worldwide semiconductor industry 1H18/1H17 increase of 20%. Amazingly, the Big 3 memory suppliers—Samsung, SK Hynix, and Micron, each registered greater than 35% year-over-year growth in 1H18. Fourteen of the top-15 companies had sales of at least \$4.0 billion in 1H18,

three companies more than in 1H17. As shown, it took just over \$3.7 billion in sales just to make it into the 1H18 top-15 semiconductor supplier list.

Intel was the number one ranked semiconductor supplier in 1Q17 but lost its lead spot to Samsung in 2Q17 as well as in the full-year 2017 ranking, a position it had held since 1993. With the continuation of the strong surge in the DRAM and NAND flash markets over the past year, Samsung went from having only 1% more total semiconductor sales than Intel in 1H17 to having 22% more semiconductor sales than Intel in 1H18!

It is interesting to note that memory devices are forecast to represent 84% of Samsung's semiconductor sales in 2018, up three points from 81% in 2017 and up 10 points from 71% just two years earlier in 2016. Moreover, the company's non-memory sales in 2018 are expected to be only \$13.5 billion, up 8% from 2017's non-memory sales level of \$12.5 billion. In contrast, Samsung's memory sales are forecast to be up 31% this year and reach \$70.0 billion.

Report Details: *The 2018 McClean Report*

Additional details on IC foundry trends are provided in the *August Update to The McClean Report—A Complete Analysis and Forecast of the Integrated Circuit Industry*. A subscription to *The McClean Report* includes **free** monthly updates from March through November (including a 250+ page *Mid-Year Update*), and **free** access to subscriber-only webinars throughout the year. An individual-user license to the 2018 edition of *The McClean Report* is priced at \$4,290 and includes an Internet access password. A multi-user worldwide corporate license is available for \$7,290.

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