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## Top Semiconductor R&D Leaders Ranked for 2014

*Intel's R&D expenditures were 2x greater than nearest competitor; Qualcomm with largest percentage increase; Nvidia with highest R&D/sales ratio.*

***Information in this Research Bulletin comes from The McClean Report 2015, IC Insights' flagship market analysis and forecast report on the IC industry. Details are provided at the end of this bulletin.***

More than any other industry, the semiconductor business is defined by rapid technological change. As a result, a constant and high level of investment in R&D is essential to the competitive positions of semiconductor suppliers.

Figure 1 shows IC Insights' 2014 ranking of semiconductor companies by R&D spending. Among the top 10 R&D spenders in 2014, five were based in the U.S., three from the Asia-Pacific region, and Japan and Europe each had one company represented. The list includes five IDMs, four fabless suppliers, and foundry operator TSMC.

Intel topped all chip companies in R&D spending in 2014, accounting for 36% of the top-10 spending and 21% of the \$56.0 billion in total worldwide semiconductor R&D expenditures. The industry's two largest IDMs—Intel and Samsung—continue to emphasize internal production capacity for advanced ICs in leading-edge wafer fabs. Consequently, spending on R&D programs at the two IC giants has kept growing, but at different rates in recent years. This is partly due to Samsung's ability to hold down some costs by participating in IBM's Common Platform joint development alliance, which also includes GlobalFoundries as an R&D partner.

Fabless IC supplier Qualcomm kept pace with Intel to remain the second-largest spender, a position it first achieved in 2012. Qualcomm showed the largest percentage increase among the top 10 suppliers with a 62% boost in its R&D spending in 2014. Fabless suppliers Nvidia, Qualcomm, and Broadcom had the highest R&D spending as a percent of sales ratios in 2014 at 31.3%, 28.5%, and 28.2%, respectively. Broadcom's spending in 2014 declined for the first time since 2003, while Nvidia's 2014 spending increased just 3%, but both companies have consistently spent in the range of 30% of revenue on R&D the past several years.

### MORE INFORMATION CONTACT

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## 2014 Top Semiconductor R&D Spenders

2014 Rank	2013 Rank	Company	Region	IDM	FABLESS	FOUNDRY	2013			2014			2014/2013 % Change in R&D
							Semi Sales (\$M)	R&D Exp (\$M)	R&D/Sales (%)	Semi Sales (\$M)	R&D Exp (\$M)	R&D/Sales (%)	
1	1	Intel	Americas	•			48,321	10,611	22.0%	51,400	11,537	22.4%	9%
2	2	Qualcomm	Americas		•		17,211	3,395	19.7%	19,291	5,501	28.5%	62%
3	3	Samsung	Asia-Pac	•			34,378	2,820	8.2%	37,810	2,965	7.8%	5%
4	4	Broadcom	Americas		•		8,219	2,486	30.2%	8,428	2,373	28.2%	-5%
5	7	TSMC	Asia-Pac			•	19,935	1,623	8.1%	24,976	1,874	7.5%	15%
6	5	Toshiba	Japan	•			11,958	2,040	17.1%	11,040	1,820	16.5%	-11%
7	6	ST	Europe	•			8,014	1,816	22.7%	7,384	1,520	20.6%	-16%
8	9	Micron	Americas	•			14,294	1,487	10.4%	16,814	1,430	8.5%	-4%
9	14	MediaTek + MStar	Asia-Pac	•			5,723	1,110	19.4%	7,032	1,430	20.3%	29%
10	10	Nvidia	Americas		•		3,898	1,323	33.9%	4,348	1,362	31.3%	3%
<b>Top 10 Total</b>							<b>171,951</b>	<b>28,711</b>	<b>16.7%</b>	<b>188,523</b>	<b>31,812</b>	<b>16.9%</b>	<b>11%</b>

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

**Figure 1**

TSMC's 15% R&D spending increase in 2014, along with a decline in spending at Toshiba and ST, moved the company up two slots to number 5 in the ranking. As a result of the growing number of IC manufacturers adopting the fab-lite business model or becoming completely fabless, TSMC joined the group of top-10 R&D spenders for the first time in 2010. Micron and MediaTek also moved up in the ranking. MediaTek became a top-10 spender following its acquisition of fellow Taiwanese fabless supplier MStar in early 2014 (the ranking shows the combined results of MediaTek and MStar).

Five other IC companies had R&D spending of at least \$1.0 billion in 2014 but did not make the top 10 ranking. These included Texas Instruments, \$1.36 billion; SK Hynix, \$1.33 billion; Marvell, \$1.18 billion; AMD, \$1.06 billion; and Avago, \$1.00 billion.

### Report Details: *The 2015 McClean Report*

Additional details on semiconductor R&D spending and other technology trends within the IC industry are provided in *The McClean Report—A Complete Analysis and Forecast of the Integrated Circuit Industry* (released in January 2015), which features more than 400 tables and graphs in the main report alone. 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 2015 edition of *The McClean Report* is priced at \$3,590 and includes an Internet access password. A multi-user worldwide corporate license is available for \$6,590.

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