RESEARCH BULLETIN

IC Insights

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Despite 38% Sales Decline, DRAM Expected to Remain Largest IC Market

NAND flash sales forecast to slide 32%, still ranked third-largest IC market this year.

IC Insights recently released its *Mid-Year Update* to *The McClean Report 2019*. The update included IC Insights' ranking of the 33 largest IC product categories based on their expected sales and unit shipment volumes for 2019. The 33 IC product categories are those defined by the World Semiconductor Trade Statistics (WSTS) organization. The five largest IC product categories are shown in Figure 1.

MORE INFORMATION CONTACT

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Despite a 38% sales decline expected this year, the DRAM market is forecast to remain the largest of all IC product categories again in 2019 with sales reaching $62.0 billion, down from $99.4 billion in 2018. IC Insights believes the DRAM market will account for 17% of total IC sales in 2019. By comparison, DRAM sales accounted for 23.6% of the total IC market in 2018.

Largest IC Product Categories, 2019F

Revenue	$Millions	19/18 % Chg
DRAM	$62,000	-37.6%
Std PC, Server MPU	$52,496	-2.5%
NAND Flash	$40,600	-31.7%
Computer and Periph—Spcl Purp Logic	$25,383	-7.0%
Cellphone Application MPUs	$22,212	-6.0%
Unit Shipments	**Millions**	**19/18 % Chg**
Power Management Analog	63,969	-7.6%
Industrial—App Specific Analog	25,985	9.3%
Wireless Comm—App Specific Analog	24,040	-7.9%
General Purpose Logic	18,641	-8.3%
Automotive—App Specific Analog	17,230	9.0%

Source: IC Insights

Figure 1

The NAND flash market is forecast to slip from second to third position in the ranking this year with total sales falling 32% to $40.6 billion. Taken together, the DRAM and NAND flash memory categories are forecast to account for 29% of the total $357.7 billion IC market in this year compared to 38% of the total IC market in 2018.

Over the past decade, DRAM typically accounted for 14-16% of IC sales and NAND flash memory about 11-12%, but tight supplies of those memories caused average selling prices to climb, which led to surging sales in both segments in 2017 and 2018. For the first time since the 1990s, DRAM revenues surpassed MPU sales in 2018.

Expected to replace NAND flash at the number two spot in 2019 is the large, mainstream category of microprocessors for traditional PCs, servers, large computers, and a wide range of embedded-processing applications. Sales in this MPU category climbed 11.0% in 2018 to a record-high $53.8 billion as PC shipments grew for the first time in five years, and strong demand raised server shipments to cloud-computing data centers and Internet-based businesses.

The nearly 2.5% slowdown expected in this MPU category for 2019 is mainly the result of a drop-off in global economic growth; uncertainty and market disruptions caused by the U.S.-China trade war, and an oversupply of inventory in data center servers after high growth in 2018.

Computer and Peripheral—Special Purpose Logic and Cellphone Application Processor segments are forecast to round out the top five largest categories, maintaining the same positions each held in 2018. None of the top five largest IC categories is forecast to see sales growth in 2019.

In terms of unit shipments, four of the five largest categories are forecast to be some type of analog device this year. Total analog units are expected to account for 55% of the total 301.7 billion ICs forecast to ship in 2019. Power management analog devices are projected to account for 21% of total IC units and are forecast to exceed the combined unit shipment total of the next two categories on the list. Shipments of Automotive and Industrial—Application-Specific Analog devices are each expected to rise at least 9% this year, even as total analog units are forecast to slide 5%.

The 200-page Mid-Year Update to the 2019 edition of The McClean Report further describes IC Insights' IC market rankings and forecasts for 2019-2023.

Report Details: *The 2019 McClean Report*

Additional details on semiconductor and IC market trends are provided in the *Mid-Year 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 the 200-page *Mid-Year Update*), and **free** access to subscriber-only webinars throughout the year. An individual-user license to *The McClean Report* is priced at $4,990 and includes an Internet access password. A multi-user worldwide corporate license is available for $7,990.

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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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