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Microcontroller Sales Regain Momentum After Slump

MCUs enter into the next wave of growth as new applications such as the Internet of Things and wearable systems emerge.

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.

The outlook for microcontrollers continues to strengthen following a sharp recovery in smartcards, gradual improvements in the global economy, and the emergence of new embedded-systems applications, such as wearable electronics and the Internet of Things (IoT). These market factors, along with steady growth in automotive and portable electronics, will drive up microcontroller sales by 6% in 2015 to a new record-high level of \$16.8 billion after a 5% increase in 2014, according to IC Insights' 2015 edition of *The McClean Report—A Complete Analysis and Forecast of the Integrated Circuit Industry*.

A new wave of expansion in microcontrollers is underway after the market fell 3% in 2012 and saw 0% growth in 2013, mostly due to a correction in the large smartcard segment and steep price erosion—especially in 32-bit MCUs. The new 2015 *McClean Report* shows worldwide microcontroller sales rising by a compound annual growth rate (CAGR) of 4.2% between 2014 and 2019, reaching \$19.5 billion in the final year of the forecast (Figure 1).

Microcontroller shipments surged 16% in 2014 to a new record high of 18.6 billion units, surpassing the previous annual peak of 17.3 billion set in 2012, based on market data in the 2015 *McClean Report*. Worldwide MCU shipments are forecast to grow 12% in 2015 and climb by a CAGR of 7.9% in the next five years, reaching 27.3 billion units in 2019. The new market report shows the average selling price (ASP) for microcontrollers falling by a CAGR of slightly less than -3.5% in the 2014-2019 period, going from \$0.85 to an average of \$0.72 in the final year of IC Insights' forecast.

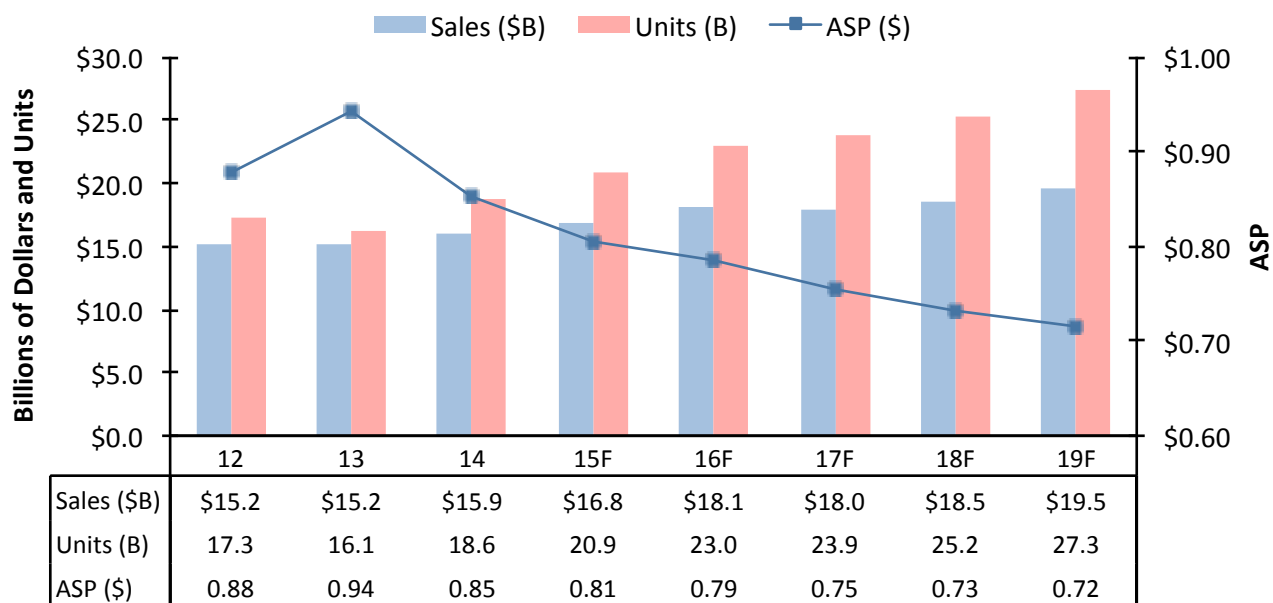
Shipments of smartcard MCUs—which now represent about half of all microcontroller units sold worldwide—surged 25% in 2014 to 9.2 billion after plunging 22% in 2013 due to a correction in this market segment and delays in new government smartcard programs around the world. Revenues for smartcard MCUs also rebounded in 2014 with dollar volumes growing 16% to \$2.6 billion after falling 11%

MORE INFORMATION CONTACT

Rob Lineback
Senior Market Research Analyst
Phone: +1-817-731-0424
Email: rob@icinsights.com

in 2013. While smartcards account for about half of all microcontrollers shipped worldwide, this segment represents less than 20% of total MCU revenues due to razor-thin ASPs for smartcard MCUs.

Microcontroller Market Heads Higher



Source: IC Insights

Figure 1

The new edition of *The McClean Report* also shows unit shipments of 32-bit microcontrollers surpassing 4-/8-bit MCUs for the first time in 2015 as demand increases for higher levels of precision in embedded-processing for clusters of sensors and systems that know their locations and automatically react to operating environments. Many new 32-bit MCU designs also contain support for wireless connections and Internet protocol (IP) communications for contact to the IoT. Counting all types of microcontrollers—8-, 16-, and 32-bit designs—about 1.4 billion MCUs will be used in new systems being attached to the Internet of Things in 2019 compared to 306 million in 2014, according to the 2015 *McClean Report*.

Report Details: *The 2015 McClean Report*

Additional details and forecasts of the MCU market and 32 other IC products categories are provided in IC Insights' highly regarded flagship market analysis and forecast, *The McClean Report—A Complete Analysis and Forecast of the Integrated Circuit Industry*. The report features more than 400 tables and graphs showing information and data covering all aspects of the IC 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 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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