RESEARCH BULLETIN

FEBRUARY 18, 2014

Semiconductor Unit Shipments To Exceed One Trillion Devices in 2016

Demand marches on; shipments in excess of one trillion units to be new "normal."

Total semiconductor unit shipments (integrated circuits and opto-sensor-discrete, or O-S-D, devices) are forecast to grow annually through the current cyclical upturn and top one *trillion* units for the first time in 2016 according to forecast data presented in the new 2014 edition of *The McClean Report—A Complete Analysis and Forecast of the Integrated Circuit Industry*. Semiconductor shipments in excess of one trillion units are forecast to be the "new normal" beginning in 2016.

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As seen in Figure 1, semiconductor unit shipments are forecast to increase to 1,005.8 billion devices in 2016 from 32.6 billion in 1978, which amounts to average annual growth of 9.4% over the 38-year period and demonstrates how increasingly dependent the world is on semiconductors. From 2008 to 2013, the average annual growth rate of semiconductor units cooled to only 5% due to global economic doldrums, but stronger 8% annual growth is forecast from 2013 to 2018 as global economies regain momentum and a healthier market prevails for electronic systems.

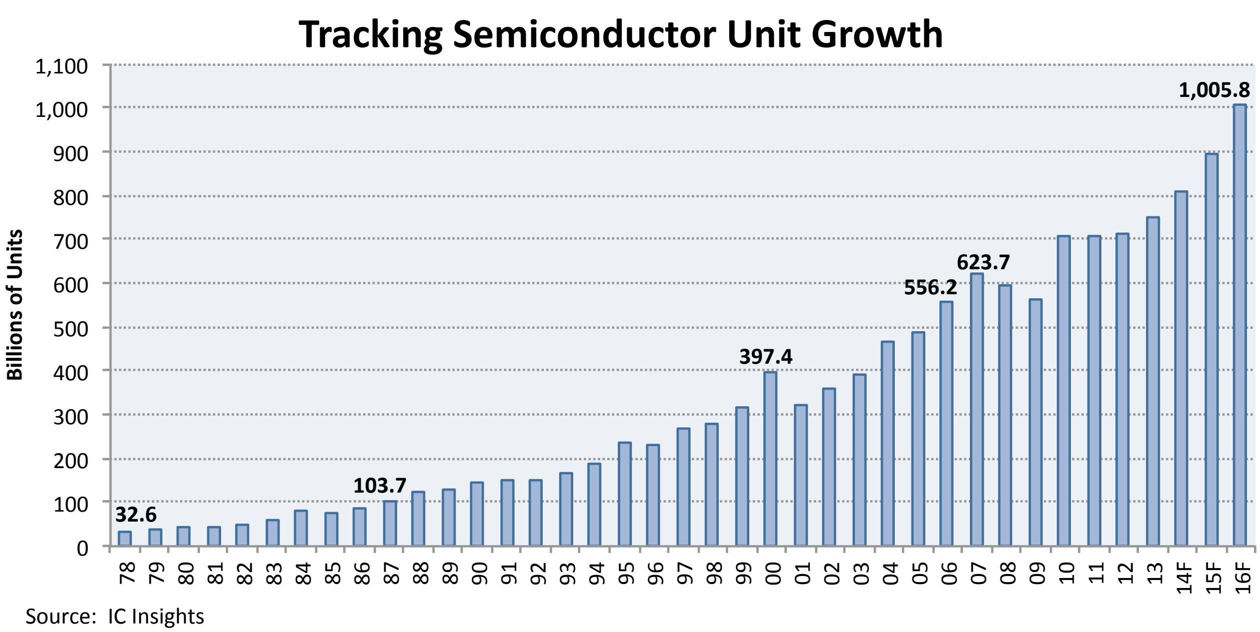
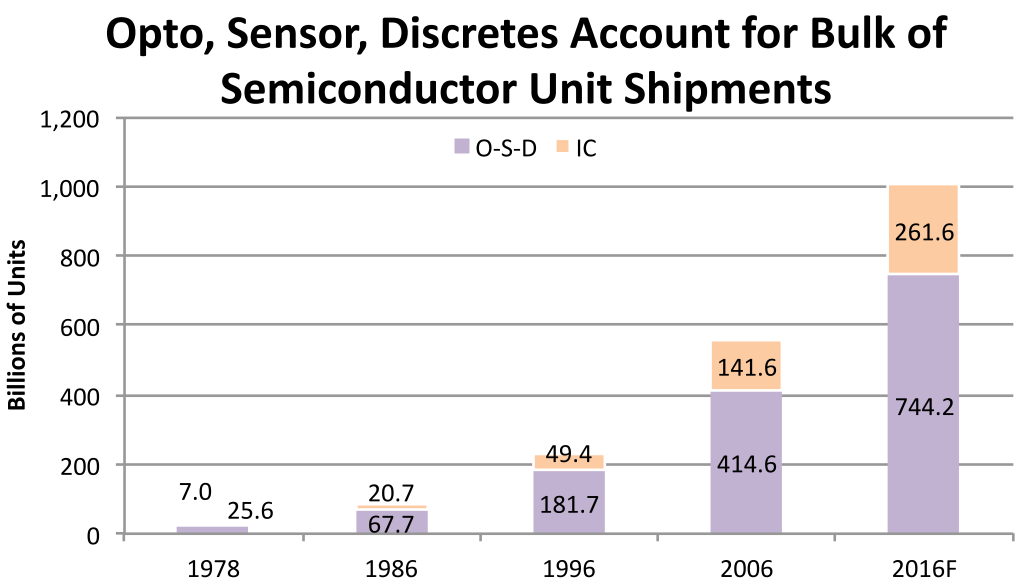


Figure 1

The strongest increase in semiconductor unit growth over the time span shown in Figure 1 was 34% in 1984; the biggest decline was 19% in 2001 following the dot-com bust. Semiconductor unit shipments first topped the 100-billion mark in 1987, exceeded 500-billion units for the first time in 2006 and then surpassed 600-billion units in 2007 before the global financial meltdown and recession caused semiconductor shipments to fall in 2008 and 2009, the only time the industry has experienced a back-to-back decline in unit shipments. Semiconductor unit growth then surged 25% in 2010, the second-highest growth rate since 1978. IC Insights forecasts semiconductor unit growth of 8% in 2014, 11% in 2015, and 12% in 2016, which will result in annual shipments surpassing one trillion devices for the first time in 2016.

Interestingly, the percentage split of IC and O-S-D devices within total semiconductor units has remained fairly constant despite advances in integrated circuit technology and the blending of functions to reduce chip count within systems. In 1978, O-S-D devices accounted for 79% of semiconductor units and ICs represented 21%. Almost 40 years later in 2016, O-S-D devices are forecast to account for 74% of total semiconductor units, compared to 26% for ICs (Figure 2).



Source: IC Insights

Figure 2

Report Details: ***The 2014 McClean Report***

Further details on IC supplier and foundry trends are provided in the 2014 edition of IC Insights' flagship report, *The McClean Report—A Complete Analysis and Forecast of the Integrated Circuit Industry.* This highly regarded service features more than 900 pages and more than 400 tables and graphs that provide the user with a thorough analysis of IC industry trends throughout the year. 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 2014 edition of *The McClean Report* is priced at $3,490 and includes an Internet access password. A multi-user worldwide corporate license is available for $6,490.

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