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# THE MERCHANT EMBEDDED COMPUTING MARKET 2016 EDITION

**A Comprehensive Report on the Latest  
Embedded Computing Technologies  
Plus Forecasts of Key Markets**

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- ◆ AdvancedTCA
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# The Merchant Embedded Computing Market - 2016 Edition

## Synopsis

**The Merchant Embedded Computing Market - 2016 Edition** report analyzes the performance of the industry from 2007 - 2020. Although there are several hundred companies, most are fairly small in revenue and highly specialized, focusing on specific application segments with unique product requirements. The report tracks and analyzes five application markets, nine bus architectures and four board functions. Specific trends and issues of the forecast by application, bus architecture and board function are covered in detail in the report.

The overall MEC market has fully recovered from the trauma of 2008/2009 economic meltdown and the performance of various market segments, bus architectures, and companies are continuing to find new applications. Total revenue was nearly \$7 billion in 2015, an increase of \$2 billion since our last report of 2013. With the worldwide electronics manufacturing market again thriving, the MEC industry is projected to grow at 5.5 percent through 2020 to approximately \$9.1 billion.

The MEC report targets five specific application markets: Communications, Industrial, Medical, Military/Aerospace and "All Other" categories that includes transportation, security, surveillance, point-of-sale/kiosk applications, etc. The Communication wireless segment is being driven by the exploding smart phone and tablet traffic and the four billion devices connected to the internet. 3G/4G services are where the money is for carriers going forward and the wireline and optical networks are gearing up for upgrades to support the ever increasing traffic. The Industrial market is expanding into a variety of process control and industrial automation applications including robotics as well as test & measurement and the semiconductor capital equipment industry.

The Medical segment was hit hard by the healthcare cutbacks but new applications are emerging in diagnostic imaging and surgical hardware. The usually healthy Military/Aerospace segment is now facing a rapidly declining defense department budget in the USA. Counter to this, the military is trying to use more and more electronics for the Internet enabled soldier and robotic weapons.

Each of the nine unique architectures has a different rate of adoption depending on the needs of individual application segments. Overall key trends concern power supply and usage, green technologies and system size reduction. The new 28- and 32-nm silicon for microprocessors, graphics, DSPs and high integration I/O IV chip packs provide a lot of processing power while greatly reducing power consumption. These powerful devices are changing the landscape of the embedded board market. High integration silicon and serial buses enable more smaller form factors than in the past and are making many older, parallel bus structures, such as PCI, look obsolete. New bus structures continue to proliferate around the major and long established legacy bus architectures but the number of variances are shrinking.

The MEC industry can be segmented into four board functions defined as: single-board computers (SBC), digital signal processor (DSP) boards, I/O boards and an 'All Other' category that incorporates a huge number of diverse and specific functions. In some applications I/O boards are proliferating and are customized to the wide spectrum of I/O functions that different applications use. In other applications, single-board computers are becoming the trend as they incorporate more and more functionality with advanced silicon and draw in DSP, graphics and many advanced I/O functions.

## About NVR

**New Venture Research Corp. (NVR)** was established in 1988 to provide advanced business research services for the high technology electronics sector. Today, the company publishes a number of syndicated reports related to electronics manufacturing services, IC packaging and embedded board level products. NVR maintains the only industry newsletter dedicated to EMS, and conducts private client research involving a wide variety of subjects.

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Cyclone Microsystems	Pentek
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Data Modul	Portwell
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Dialogic	RTD Embedded Tech
Diamond Systems	SECO
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