

Microcontroller Market Tracker

By Tom Hackenberg, Principal Analyst & Adam Loh, Senior Analyst

ACTUALS AND FORECAST

Frequency, Time Period

- 5-year annual forecast (2017 – 2021)
- Base historic years (2013 – 2016)

Measures

- Revenues, Units, ASP and Growth Rates
- Supplier Market Shares
 - By Class, Market and Region
- MCU Revenue per Core IP by Market

Regional Summary

- North America, EMEA, APAC & Japan

Historical Data and Forecast by:

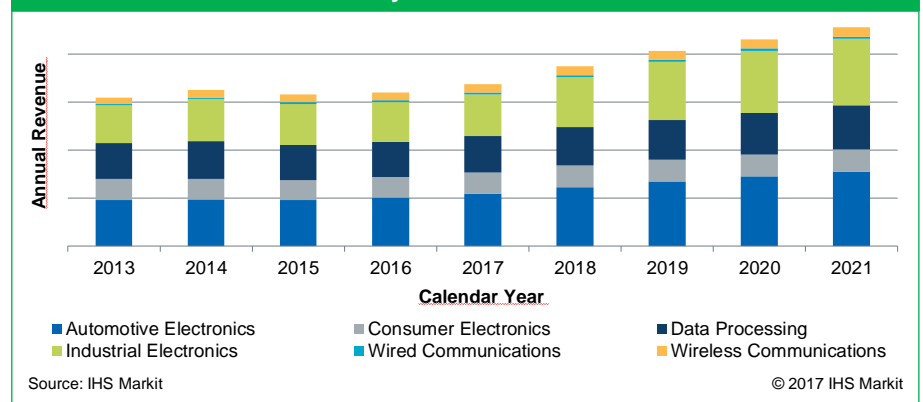
- Class (4-bit, 8-bit, 16-bit and 32-bit)
- Vertical markets
- Region (Europe, Middle East, North America)

VERTICAL MARKETS COVERED

- Automotive Electronics
 - Power Train, Safety & Control, Comfort & Convenience, Body Electronics, Vehicle Security, Infotainment, and Other Automotive
 - Industrial Electronics
 - Medical Electronics, Motors & Drives, Operator Terminals, Programmable Logic Controllers, Distributed Control Systems, Industrial Networking Equipment, I/O Network Cards & Modules, Test & Measurement, Other Automation, CCTV & Video Surveillance, Building & Home Control, Metering, Energy Generation & Distribution, Military & Aerospace, and Other Industrial
 - Data Processing
 - 26 applications
 - Consumer Electronics
 - 21 applications
 - Wired Communications
 - 19 applications
 - Wireless Communications
 - 14 applications
 - IoT Framework
 - 25 applications
- 109 total applications

In terms of unit volume, the microcontrollers (MCU)s market is approximately three times that of all other processors combined. These MCUs are part of the foundation of several of today's technology paradigm shifts. MCUs play a role in IoT, sensor fusion, distributed intelligence, energy management, wearable technologies, secure communications, building and industrial automation, autonomous driving and more.

Microcontroller Market Summary



The Microcontroller Market Tracker is a unique source of semiannual guidance on this valuable and competitive market. Whether you design, manufacture or distribute MCUs, MCU intellectual property, the tools to design them, the software that gives them purpose or just the capital investment to make it all happen, this report is essential for a competitive understanding of the entire microcontroller ecosystem.

In addition to the key market parameters listed on the side bar, this valuable service offers insights into unique features not found in the typical market report – quantitative analysis by function, I/O & subsystems, frequency, memory, node, multicore and more.

Key Issues Addressed

- What are the top MCU markets by market size? By growth opportunity?
- Who are the application market leaders?
- What is a “core IP ecosystem” and why is it important?
- Where can I locate MCU vendors and the kind of products they sell?
- How can I evaluate what regions to target for my 8-bit wireless MCU?
- Are all MCUs migrating to 32-bit? Why or why not?
- What are the top MCU design features?
- Where do MCUs compete with other System-on-Chips? Who's winning?

Applicable To

- MCU suppliers
- Foundry Services
- Embedded and Core IP providers
- Operating system vendors
- Software developers
- Related component suppliers (Sensors, Transceiver, etc.)
- Connectivity solutions specialists
- Portable device designers
- OEM/ODM Design Engineers
- Embedded Security Specialists
- IoT Developers
- Technology Investors
- Automotive, Industrial, Connectivity and other Electronics Standards Bodies.

LEAD ANALYSTS

Tom Hackenberg – Principal Analyst, Embedded Processors

Tom provides expertise on the market for microcontrollers and digital signal processors across a broad range of application specific, multimarket and general-purpose applications. Tom is well versed in all processor components including CPUs, GPUs, MPUs, MCUs, ASICs & ASSPs, FPGAs and configurable processors. He also supports the Automotive Semiconductors group developing a more in-depth perspective in the largest revenue market for microcontrollers.

Tom comes to IHS through IHS acquisition of IMS Research in 2012; at IMS Research his specialization was in semiconductors and embedded processing research since 2006. Tom holds a BSEE specializing in Processors and FPGAs. His background also includes database programming, PC hardware support, IT support, adult education and human resources.

Adam Loh – Senior Analyst, Embedded Processors

Adam Loh joined IHS-Markit as an Analyst for Embedded Processors, and is mainly in charge of updating the Microcontroller (MCU) Tracker system.

Prior to joining IHS-Markit as an Analyst, Adam had 5 years working experience as a Design Engineer in both Audio System and Power Supply sectors.

ABOUT IHS MARKIT

IHS Markit technology, media and telecom solutions include research, analysis and strategic guidance for the technology ecosystem. We help you understand the market's current needs and anticipate its future trends.

From semiconductors and displays to telecommunications and media, we combine deep knowledge with rigorous analysis to reveal the powerful interdependencies among raw materials, components, applications and enabling technologies.

Database Content Summary

Component & Sector Forecasts

MCU Class Annual Summaries

- Rev, Growth & Share
- Rev, Units & ASP

Market Annual Summaries

- Rev, Growth & Share
- Rev, Units & ASP

MCU Class Quarterly Summaries

- Rev, Growth & Share
- Rev, Units & ASP

Market Quarterly Summaries

- Rev, Growth & Share
- Rev, Units & ASP

Six Detailed Market Application Tables

- Automotive Electronics
- Consumer Electronics
- Data Processing
- Industrial Electronics
- Wired Communications
- Wireless Communications
 - Rev, Growth & Share
 - Rev, Units & ASP

Application/Technology Highlights

- IoT Forecast by 8/16-bit & 32-bit
- Top Volume Applications
- Top Growth Opportunities

Report Table of Contents

The Microcontroller Market Tracker Report is presented in presentation layout style with qualitative highlights of the data presented in the associated database. It includes dozens of graphs and key topical discussions as well as a featured topical market dynamic in each edition.

Executive Summary

Microcontroller Tracker Introduction

Featured Topic (varies by edition)

Microcontroller Market Overview

Annual Performance by Market

- Automotive Electronics
- Consumer Electronics
- Data Processing
- Industrial Electronics
- Wired Communications
- Wireless Communications

Competitive Landscape

Supplier Landscape

- Vendor List
- Top 20 Suppliers Overall Share
- Top 5 Suppliers per Class
- Top 5 Suppliers per Market

Core Architecture Ecosystem

- Top Ranked MCU revenue by Core IP
- Regional Market Shares

Regional Highlights

- Regional Class Shares
- Regional Market Shares
- Regional Top 5 Supplier Leaders

Design Highlights

MCU Market Revenue Share by Design Features

- Revenue by Functional Design
 - By Class and Market
- Revenue by I/O Characteristics
 - By Class and Market
- Revenue by Environmental Operations
 - By Class and Market
- Revenue by Integrated Memory
 - By Class and Market
- Revenue by Frequency
 - By Class and Market
- Revenue by Process Node
 - By Class and Market
- Revenue by Multicore
 - By Asymmetric and Symmetric

Additional Tables

- Pivot Table and Forecast Pivot Data
- Market, Application and Class Definitions

Microcontroller Application Trends

Competitive Landscape

Microcontroller Design Trends

Appendix – Market/Class Definitions

For more information [ihsmarket.com/technology](https://www.ihsmarket.com/technology)

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