

# **Microcontrollers: Market Research Report**

https://marketpublishers.com/r/M0E852E2182EN.html Date: August 2010 Pages: 567 Price: US\$ 3,950.00 (Single User License) ID: M0E852E2182EN

# **Abstracts**

This report analyzes the Global market for Microcontrollers by Bit Cores: 4-Bit Microcontroller, 8-Bit Microcontroller, 16-Bit Microcontroller, and 32-Bit Microcontroller both by volume (Million Units) and by value (US\$ Million).

Annual estimates and forecasts are provided for the period 2006 through 2015.

The report profiles 40 companies including many key and niche players such as Atmel Corporation, Freescale Semiconductors, Inc., Fujitsu Limited, Infineon Technologies AG, Microchip Technology, Inc., NXP Semiconductors, Renesas Electronics Corporation, STMicroelectronics, N.V, Texas Instruments Incorporated, and Toshiba Corporation.

Market data and analytics are derived from primary and secondary research.

Company profiles are mostly extracted from URL research and reported select online sources.



# Contents

### **I.INTRODUCTION, METHODOLOGY & PRODUCT DEFINITIONS**

Study Reliability and Reporting Limitations Disclaimers Data Interpretation & Reporting Level Quantitative Techniques & Analytics Product Definitions and Scope of Study

#### 4-BIT MICROCONTROLLERS

#### 8-BIT MICROCONTROLLERS

### **16-BIT AND 32-BIT MICROCONTROLLERS**

#### **II. EXECUTIVE SUMMARY**

#### **1.INDUSTRY OVERVIEW**

Microcontrollers to Lead the Semiconductor Market Factors Driving Growth in the MCU Market Current and Future Analysis Analysis By Geographic Region Analysis By Bit Cores Impact of Recession on the MCU Market The 8-Bit Microcontroller Market – On the Road to Recovery Transition Towards 16-Bit Devices Automotive and Automobile Markets to Fuel MCU Demand Automotive Sector Automobile Sector Factors/Applications Driving Growth in MCU Market Push Towards Smart Energy Management Technologies Growing Popularity of Touch Sensing Screens Increasing Significance of Smart Sensing Systems **Rising Demand for HEVs** Focus on Product Differentiation MCUs for Enhanced Control of LED Lighting Systems MCUs for Portable Medical Equipment



Asia Offers Vast Growth Opportunities Southeast Asian Market to Propel MCU Growth China's MCU Market Set to Recover from Economic Meltdown Competitive Scenario

**Table 1.** Leading Suppliers in the Chinese Microcontroller Market (2008): PercentageShare Breakdown of Revenues for Renesas Technology, Freescale Semiconductor,Microchip Technology, NEC Electronics, Infineon Technologies, Toshiba, Atmel, andOthers (includes corresponding Graph/Chart)

#### 2.MARKET DYNAMICS

MCU Technology Moves Towards Flash Memory The 8051 Architecture Loses Ground to Competitive Architectures

**Table 2.** Leading Architectures in the Global MCU Market (2007): Percentage ShareBreakdown of Revenues by Core Architecture (includes corresponding Graph/Chart)

Consolidation Around Architecture on the Horizon? Continuous Developments in On-Chip Memory

Table 3. Select 8-, 16- and 32-Bit MCUs with High SRAM

Table 4. Select 8-, 16- and 32-Bit MCUs with High Flash Memory

Vendors Integrate Co-Processors with Main Processors USBs in Microcontrollers Integration of LCD Drivers Future Trends in the MCU Market Improvements in Energy Efficiency Shift Towards Highly Integrated MCUs Rising Demand for Higher Processing Power Need to Reduce Time-to-Market for Products Rising Demand for Smaller Form Factors Essentials of Next-Generation MCUs



## **3.COMPETITIVE LANDSCAPE**

MCU Market: Characterized by Intense Competition

**Table 5.** Leading Suppliers in the Global Microcontroller Market (2008): PercentageShare Breakdown of Revenues for Renesas Technology, Freescale Semiconductor,NEC Electronics, Fujitsu, Infineon Technologies, Microchip Technology,STMicroelectronics, Texas Instruments, Atmel, NXP Semiconductors, and Others(includes corresponding Graph/Chart)

**Table 6.** Leading Suppliers in the Global 8-Bit MCU Market (2008): Percentage Share Breakdown of Revenues for Microchip Technology, Freescale Semiconductor, Renesas Technology, NEC Electronics, Atmel, and Others (includes corresponding Graph/Chart)

**Table 7.** Leading Suppliers in the Global 32-Bit MCU Market (2006): Percentage ShareBreakdown of Revenues for Renesas Technology, NEC Electronics, FreescaleSemiconductor, and Others (includes corresponding Graph/Chart)

**Table 8.** Leading Suppliers in the Global 16-Bit MCU Market (2006): Percentage Share Breakdown of Revenues for Renesas Technology, Infineon, Freescale Semiconductor, and Others (includes corresponding Graph/Chart)

**Table 9.** World Leading MCU Suppliers for Computing End-Use Market (2006):Percentage Share Breakdown of Revenue for Renesas Technology, Infineon,STMicroelectronics, NEC Electronics, Matsushita and Others (includes correspondingGraph/Chart)

**Table 10.** Leading MCU Suppliers for Communications Market (2006): PercentageShare Breakdown of Revenues for Renesas Technology, Microchip Technology, NECElectronics, Freescale, Matsushita and Others (includes corresponding Graph/Chart)

**Table 11.** Leading MCU Suppliers for Consumer Market (2006): Percentage ShareBreakdown of Revenues for Renesas Technology, Microchip Technology, NECElectronics, Matsushita, Toshiba and Others (includes corresponding Graph/Chart)

## 4.PRODUCT OVERVIEW

Microcontroller – An Introduction



Historical Background Characteristics of Microcontrollers Embedded Design **Programming Environment** Interrupts Converters Timers Data Storage Integration Other Characteristics of Microcontrollers **Special Versions of Microcontrollers** Microcontroller Architecture Types of Microcontrollers (Based on Architecture) **4-BIT MICROCONTROLLERS** 8-BIT MICROCONTROLLERS **16-BIT AND 32-BIT MICROCONTROLLERS** 

## **5.APPLICATIONS OVERVIEW**

Introduction Types of Applications MCUs in Automotive Applications

**Table 12.** Automotive Microcontroller Market (2009): Percentage Share Breakdown of

 Revenues by Bit Core (includes corresponding Graph/Chart)

Microcontroller Smartcards Power Grid Applications Touch Sensing Applications MCUs in Medical Sector

## **6.PRODUCT LAUNCHES**

NEC Electronics America Launches 16-bit All Flash<sup>™</sup> Microcontrollers NEC Electronics Unveils Advanced 16-bit All Flash<sup>™</sup> Microcontrollers with USB 2.0 Functionality Nuvoton Technology Introduces NuMicro® Family Microchip Technology Rolls Out PIC12F617 MCU



STMicroelectronics Introduces STM32-XL Density Devices NEC Electronics Launches 14 All Flash<sup>™</sup> 8-bit Microcontrollers NEC Electronics Launches Advanced 32-bit Microcontrollers Microchip Technology Introduces 20-, 14-, and 8-pin PIC® Microcontrollers Infineon Launches XC82x and XC83x Series of Microcontrollers Infineon Launches XC800 150°C Family of MCUs for High Ambient Temperature Fujitsu Microelectronics Launches MB95330H Series of 8-bit MCUs Atmel Introduces AES-128 Immobilizer and AVR® Microcontroller Atmel® Launches AT90SO4 Secure Microcontroller Atmel® Corporation Launches Microcontroller Products NEC Electronics Launches Eight All Flash<sup>™</sup> MCUs NEC Electronics Unveils Six New 8-bit All Flash™ MCUs Microchip Technology Introduces New Range of PIC® Microcontrollers Atmel® Corporation Rolls Out AVR® Wireless Microcontroller Atmel® Introduces Three New 6-pin picoPower® AVR® Microcontroller Range Atmel® Launches AT90SCR050 Line of AVR® MCU Atmel Unveils 32-bit AT32UC3L AVR® 32 Microcontroller Atmel® Corporation Introduces AVR® 8-bit Microcontroller Atmel® Corporation Unveils New Range of tinyAVR® Microcontrollers Microchip Technology Rolls Out 8-bit PIC® Microcontrollers Fujitsu Microelectronics Europe Introduces MB91460P Series Infineon Technologies Rolls Out TriCore<sup>™</sup> 32-bit Microcontroller Series Texas Instruments Unveils MSP430FG47x Ultra-Low Power MCU Series Texas Instruments Introduces MSP430F471xx MCU Series Renesas Technology Launches RS-Dual Interface Series Renesas Technology Introduces Versions of SH7267 and SH7266 Renesas Technology Unveils R8C/33T Group of 16-bit Microcontrollers Renesas Technology Introduces SH72546R Microcontroller Renesas Technology Launches 32-bit RX610 Group Atmel® Corporation Launches New Range of AVR® Microcontrollers STMicroelectronics and Freescale Semiconductor Launch Dual-Core Microcontroller Family Freescale Semiconductor Rolls Out MC9S08LG32 Microcontroller Microchip Technology Introduces PIC16(L)F1826 and PIC16(L)F1827 Microchip Technology Introduces 8-bit PIC® Microcontrollers Fujitsu Microelectronics America Launches MB95200 Series NXP Unveils LPC1300 Series of Microcontrollers Renesas Launches SH7216 Range of Flash Microcontrollers

Toshiba Unveils TMPM370FY Microcontroller



Microchip Unveils 8-Bit PIC18F87J90 LCD MCU Hyperstone Unveils E2 RISC/DSP 32-bit Microcontroller Philips Launches LPC2800 Series of USB Microcontrollers NEC Electronics Unveils Four Novel 8-Bit LCD MCUs Atmel Unveils AT90SDC100/104 Secure Microcontrollers Atmel Unveils Secure Microcontrollers Startup Energy Micro Unveils Gecko Microcontrollers Microchip Unveils ROM PIC® Microcontrollers Atmel Launches ATtiny167 NEC Electronics Introduces All Flash Microcontrollers Maxim Integrated Products Launches MAXQ2010 Microcontroller Melexis Microelectronic Introduces MLX81200 IDC Launches ZB108 Wireless Programmable Microcontroller Tekmos Introduces TK80C51FA Microcontroller NEC Electronics Unveils 32-bit All Flash Microcontrollers NEC Electronics Unveils 32-bit Microcontroller Unit Luminary Micro Launches LM3S9000 Series Microcontrollers Maxim Integrated Products Unveil MAXQ610 16-bit Microcontroller Newark Unveils Piccolo F2802x/F2803x Microcontrollers Renesas Technology Introduces New SuperH Microcontroller Atmel Unveils New AT32UC3A3 MCU Silicon Laboratories Unveils Mixed-Signal MCU Fujitsu Microelectronics America Unveils 8-bit Microcontrollers Microchip Technology Introduces New 8-bit PIC Microcontrollers Microchip Technology Introduces Low Pin Count PIC24F04KA201 Series Cypress Semiconductor Unveils New Microcontrollers NEC Electronics Unveils Latest 32-bit All Flash V850E/Ix4 Microcontrollers Atmel® Unveils 128 KB picoPower® megaAVR® Microcontroller Silicon Laboratories Launches New Range of C8051F5xx Microcontrollers Freescale Semiconductor Expands Embedded Motor Control Product Line Microchip Technology Launches PIC32MX5/6/7 Microcontroller Families Microchip Technology Rolls Out New 16-Bit PIC24F Microcontroller Families Atmel Introduces TwinAVR<sup>™</sup> Microcontrollers NXP Unveils ARM® LPC1100 Microcontrollers NXP Semiconductors Unveils LPC1340 Series of Microcontrollers Atmel® Corporation Introduces AT90SCR100 AVR® Microcontroller Atmel® Corporation Rolls Out AVR® XMEGA<sup>™</sup> Range of Microcontrollers Freescale Semiconductor Unveils S08 MCU Line for Automotive Applications Silicon Storage Technology Unveils FlashFlex SST89C58RC Microcontroller



Analog Devices Launches ADuC706x Family of Microcontrollers Texas Instruments Unveils the MSP430F5xx Low-Power MCUs STMicroelectronics Launches STM8S Microcontrollers Maxim Unveils MAXQ7665/MAXQ7666 SoC Toshiba Unveils TMPA910CRAXBG 32-Bit Microcontroller STMicroelectronics Introduces Flash Microcontrollers Infineon Unveils New Range of Automotive Microcontrollers **NEC Electronics Unveils New Flash Microcontrollers** Freescale Launches Scalable 8-Bit Microcontrollers Freescale Expands 16-Bit Microcontroller Portfolio NEC Electronics Launches HCD/LED Microcontroller Texas Introduces Ultra-Low Power Microcontrollers Freescale Introduces New Power Architecture™ Microcontrollers SST Introduces FlashFlex Microcontroller NEC Electronics Introduces New 16-bit Microcontrollers OKI Electric Industry Develops 8-Bit Flash Microcontroller Renesas Unveils Novel 16-Bit CISC-Type Microcontrollers NXP Semiconductors to Introduce Microcontroller Smart Card IC NEC Electronics Unveils 78K0R/Fx3 Microcontrollers NXP Semiconductors Unveils LPC2900 Microcontroller Series Renesas Technology America Rolls Out R8C/Lx Series of Microcontrollers NXP Semiconductors Unveils New ARM9 Microcontrollers Freescale Semiconductor Launches 8-Bit Microcontroller Series Freescale Semiconductor Rolls Out 16-Bit Microcontrollers Fujitsu Microelectronics Develops Microcontroller with FRAM Maxim Integrated Products Introduces MAXQ 1103 Freescale Semiconductor Introduces S08 MCU Family Renesas Introduces SH74513 and SH74504 MCUs STMicroelectronics Unveils ST23YR80 Microcontroller

## 7.RECENT INDUSTRY ACTIVITY

Renesas Merges with NEC Microchip Technology Takes Over ZeroG Wireless Xirgo Technologies Selects Atmel's Cortex®-M3-based Flash Microcontrollers Atmel® Establishes New Research & Development Facility IXYS Takes Over ZiLOG Intellitech Corporation Selects NEC Electronics' V850ES Microcontrollers Adura Systems Selects FlexRay<sup>™</sup> Automotive Microcontroller



Maxim Integrated Products Acquires Secured Transaction Range from ZiLOG Maxim Integrated Products Acquires Wireless Control Product Line from ZiLOG ASUSTeK Computer Purchases Moore Microprocessor Patent Portfolio License VaST Inks Agreement with NEC Electronics Atmel Acquires MeshNetics' IP Rights **Omron Signs Agreement with Renesas Technology** Roper Industries Purchases Moore Microprocessor Patent<sup>™</sup> Portfolio License Microchip Technology Takes Over R & E International Centre for Railway Information Systems Selects NXP Semiconductors Renesas Technology and NEC Electronics Sign Definitive Agreement ZeroG Enters into Partnership with Future Electronics XStreamHD Deploys Jennic's JN5148 and ZigBee PRO on RF One Remote Control iBiquity® Digital Selects AVR Microcontrollers of Atmel for HD Radio<sup>™</sup> Reference Design **Texas Instruments Acquires Luminary Micro** STMicroelectronics Starts Production of STM8L Product Lines Universal Electronics and Audiovox Accessories Ink Comprehensive Agreement DLP Design Signs Distribution Agreement with Digi-Key Micrel Enters into Partnership with ZiLOG STMicroelectronics Collaborates with Microsystems Industrial Group Avnet EM Japan Acquires Nippon Denso Industry Microchip Technology Collaborates with One-Net Bel Power Opts for Microchip Technology Products STMicroelectronics Enters into Partnership with Gemalto NXP Semiconductors Takes Over Sharp Electronics NXP Takes Over Silicon Laboratories' Cellular Communications Business Operations NXP Semiconductors Purchases BlueStreak<sup>™</sup> from Sharp Microelectronics Microchip Technology Inks Agreement with Teradyne

## **8.FOCUS ON SELECT PLAYERS**

Atmel Corporation (US) Freescale Semiconductors, Inc. (US) Fujitsu Limited (Japan) Infineon Technologies AG (Germany) Microchip Technology, Inc. (US) NXP Semiconductors (The Netherlands) Renesas Electronics Corporation (Japan) STMicroelectronics, N.V. (Switzerland)



Texas Instruments Incorporated (US) Toshiba Corporation (Japan)

## 9.GLOBAL MARKET PERSPECTIVE

**Table 13.** World Recent Past, Current and Future Analysis for Microcontrollers by Geographic Region – North America, Europe, Asia-Pacific (including Japan), and Rest of World Markets Independently Analyzed with Annual Revenue Figures in US\$ Million for Years 2006 through 2015 (includes corresponding Graph/Chart)

**Table 14.** World 10-Year Perspective for Microcontrollers by Geographic Region – Percentage Breakdown of Revenues for North America, Europe, Asia-Pacific (including Japan), and Rest of World Markets for Years 2006, 2010 and 2015 (includes corresponding Graph/Chart)

**Table 15.** World Recent Past, Current and Future Analysis for Microcontrollers by Bit Cores – 4-bit MCU, 8-bit MCU, 16-bit MCU, and 32-bit MCU Markets Independently Analyzed with Annual Sales Figures in Million Units for Years 2006 through 2015 (includes corresponding Graph/Chart)

**Table 16.** World 10-Year Perspective for Microcontrollers by Bit Cores – PercentageBreakdown of Unit Sales for 4-bit MCU, 8-bit MCU, 16-bit MCU, and 32-bit MCUMarkets for Years 2006, 2010 and 2015 (includes corresponding Graph/Chart)

**Table 17.** World Recent Past, Current and Future Analysis for Microcontrollers by Bit Cores – 4-bit MCU, 8-bit MCU, 16-bit MCU, and 32-bit MCU Markets Independently Analyzed with Annual Sales Figures in US\$ Million for Years 2006 through 2015 (includes corresponding Graph/Chart)

**Table 18.** World 10-Year Perspective for Microcontrollers by Bit Cores – PercentageBreakdown of Annual Sales for 4-bit MCU, 8-bit MCU, 16-bit MCU, and 32-bit MCUMarkets for Years 2006, 2010 and 2015 (includes corresponding Graph/Chart)

## **III. COMPETITIVE LANDSCAPE**

Total Companies Profiled: 40 (including Divisions/Subsidiaries - 50) Region/CountryPlayers The United States

Microcontrollers: Market Research Report



Japan Europe Germany The United Kingdom Rest of Europe Asia-Pacific (Excluding Japan)



# I would like to order

Product name: Microcontrollers: Market Research Report

Product link: <u>https://marketpublishers.com/r/M0E852E2182EN.html</u>

Price: US\$ 3,950.00 (Single User License / Electronic Delivery) If you want to order Corporate License or Hard Copy, please, contact our Customer Service: <u>info@marketpublishers.com</u>

# Payment

To pay by Credit Card (Visa, MasterCard, American Express, PayPal), please, click button on product page <u>https://marketpublishers.com/r/M0E852E2182EN.html</u>