New Infineon 32-bit Microcontroller Family XMC4000 for Industrial Applications Combines Powerful Application-optimized Peripherals and ARM® Cortex™-M4 processor; Samples Available in March 2012

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Neubiberg, Germany – January 23, 2012 – Today Infineon Technologies introduced its new XMC4000 **› 32-bit microcontroller family (/cms/en/product/microcontroller/32-bit-tricore-tm-microcontroller/channel.html?channel=ff80808112ab681d0112ab6b64b50805)** , which uses the Cortex™-M4 processor from ARM®. Infineon applied more than 30 years of experience in the development of microcontrollers with application-optimized peripherals and outstanding real-time capability in its design of the XMC4000 family, and combines this with the advantages of a widely distributed core architecture. The XMC4000 family supports three main trends in industrial applications: It helps to improve energy efficiency, supports a large number of communication standards and reduces software complexity during development. The target applications of the XMC4000 family include electric drives, solar inverters and the automation of manufacturing and buildings.

“Savings play an important role to satisfy the increasing energy demands of a growing world population,” said Peter Bauer, CEO of Infineon Technologies AG. “With our market-leading **› power semiconductors (/cms/en/product/power/power-mosfet/power-mosfet/channel.html?channel=ff80808112ab681d0112ab6a579104b6)** and now the new ARM based microcontroller family XMC4000, Infineon enables energy efficient control of a wide range of industrial applications.”

XMC4000 Family: One microcontroller platform with countless solutions

XMC stands for “Cross-Market Microcontroller” and means that, due to its configurability, the **› XMC4000 (/cms/en/product/microcontrollers/development-tools,-software-and-kits/xmc4000-development-tools,-software-and-kits/channel.html?channel=db3a304335b504400135be64c7da68b0)** family is suitable for a wide range of industrial applications. Infineon is using this product to close the performance gap between the 16-bit XE166 family and the 32-bit **› TriCore™ (/cms/en/product/microcontroller/32-bit-tricore-tm-microcontroller/channel.html?channel=ff80808112ab681d0112ab6b64b50805)** family. The XMC4000 family is designed to enable scalable, compatible solutions with a high degree of software reusability. The XMC4000 portfolio consists of five series: XMC4100, XMC4200, XMC4400, XMC4500 and XMC4700. These series mainly differ in terms of core frequency, memory capacity and

peripheral functions and number of I/O's.

The XMC4000 family has a powerful CPU subsystem, DSP functionality, a floating point unit, a fast Flash memory with only 22ns read time and error correction code (ECC), large SRAM and extended peripheral functions. The extensive range of peripherals includes new timer modules, up to four parallel 12-bit A/D converters with a sampling rate of 70ns and a conversion time of 500ns, up to two 12-bit D/A converters, up to four high-resolution PWM channels (150 ps), integrated delta-sigma
› **demodulator (/cms/en/product/tuner-ics-and-demodulators/omnivia!22-rf-tuner-+-demodulator-ic/channel.html?channel=ff80808112ab681d0112ab6ba29408d0)**
modules and touch button modules. Powerful communication is provided by an IEEE 1588-compatible Ethernet MAC (Media Access Control for Ethernet with time stamp), USB 2.0, CAN and SD/MMC interfaces and up to six serial communication channels which can be individually configured as UART, SPI, Quad SPI, IIC, IIS or LIN using software. In addition, the XMC4000 family offers a fast external bus interface that supports synchronous standards such as SDRAM or Burst Flash, and asynchronous standards such as SRAM, NAND Flash and NOR Flash.

DAVE™ 3 and Third Party Tools – comprehensive and efficient development support for XMC4000

The integrated development environment DAVE™ 3 makes convenient, fast and application-oriented software development possible. The Eclipse-based environment with free GNU compiler, debugger and data display utilities can be extended using third party tools. DAVE 3 also supports automatic code generation based on predefined software components, the so-called "DAVE Apps". The DAVE Apps are configured in a user-friendly way via the graphical user interface. DAVE 3 therefore ensures that developers of industrial applications can make full use of the functionality of XMC4000 microcontrollers with only little programming effort. The code that is generated can be directly compiled, debugged and displayed in DAVE 3 – or imported into third party tools for further processing. Infineon cooperates with more than 20 partners, who provide other specific development tools, software solutions, training and consulting services for the XMC4000 family.

"Our XMC4000 family combines optimized peripherals with the advantages of the widespread ARM architecture for industrial applications", said Dr. Stephan Zizala, Senior Director, Industrial and Multimarket
› **Microcontrollers (/cms/en/product/microcontroller/channel.html?channel=ff80808112ab681d0112ab6b2dfc0756)**
at Infineon Technologies AG. "Our customers in industrial electronics benefit from our many years of application experience that result in convincing novelties: flexible timers, fast ADC's, fast and robust Flash memory and extended temperature ranges of up to 125 °C. Using the development environment DAVE makes familiarization with the XMC4000 family convenient, time-saving and free of charge."

XMC4500 for industrial applications in the medium performance range

The first device in the 32-bit XMC4000 family that Infineon is bringing to market is the XMC4500 series. These microcontrollers offer a 120-MHz-CPU, up to 1 MByte of embedded Flash memory, 160 Kbytes of RAM and a comprehensive range of peripheral and interface functions. The peripherals include four parallel fast 12-bit A/D converter modules, two 12-bit D/A converters, four delta sigma

demodulator modules, six capture/compare units (CCU4 and CCU8), two positioning interface modules, and a module for eight touch buttons. Communication functions comprise interfaces for Ethernet, USB, and SD/MMC. In addition, the XMC4000 family offers three CAN modules, six serial communication channels and one external bus interface for communication. The package options are LQFP-144, LQFP-100 and LFBGA-144.

Availability of XMC4500 and other family members

Samples of the XMC4500 series and DAVE 3 will be available from March 2012. High-volume production of the XMC4500 products starts in May 2012. For development support Infineon offers a modular design kit with which up to three additional application boards can be connected to the basic design board, depending on the respective application requirements. Samples of the XMC4400, XMC4200 and XMC4100 series will be available from the fourth quarter of 2012. Depending on the XMC4000 series and package selected, the unit price for a XMC4000 microcontroller ranges between Euro 1 and Euro 7.

Other information

More information about the XMC family can be found at
› **www.infineon.com/xmc (/cms/en/product/promopages/32-bit_industrial_microcontroller/)** .

Infineon will present the XMC4500 series and the development environment DAVE 3 at its booth #142 in hall 4 at the “Embedded World 2012” trade show (Nuremberg, Germany, February 28, to March 1, 2012).

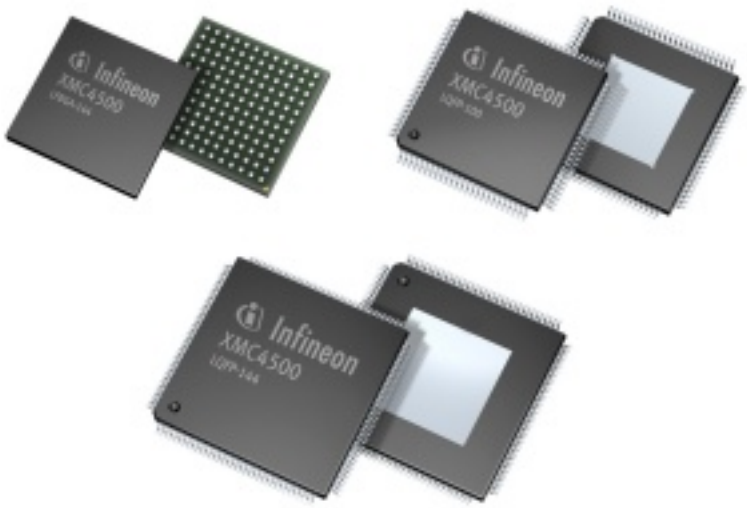
About Infineon

Infineon Technologies AG, Neubiberg, Germany, offers semiconductor and system solutions addressing three central challenges to modern society:
› **energy efficiency (/cms/en/focus-areas/energy-efficiency/)**,
› **mobility (/cms/en/focus-areas/mobility/)**, and › **security (/cms/en/focus-areas/security/)**. In the 2011 fiscal year (ending September 30), the company reported sales of Euro 4.0 billion with close to 26,000 employees worldwide. Infineon is listed on the Frankfurt Stock Exchange (ticker symbol: IFX) and in the USA on the over-the-counter market OTCQX International Premier (ticker symbol: IFNNY). Further information is available at › **www.infineon.com (/cms/en/product/)**.

Information Number

INFATV201201.019

Press Photos



The XMC4500 series is the first device in the 32-bit XMC4000 family on to market. It uses the ARM® Cortex™-M4 processor.

XMC4500_LQFP-100_LQFP-144_LFBGA-144 (/export/sites/default/media/press/Image/press_photo/XMC4500_LQFP-100_LQFP-144_LFBGA-144.jpg)
JPG | 427 kb | 2100 x 1481 px

The XMC4000 32-bit microcontroller family, which uses the Cortex™-M4 processor from ARM® is suited for electric drives, solar inverters and the automation of manufacturing and buildings.

Logo_XMC (/export/sites/default/media/press/Image/press_photo/Logo_XMC.jpg)
JPG | 3.19 mb | 4134 x 3050 px

Peter Bauer, Chief Executive Officer of Infineon Technologies AG

Peter_Bauer (/export/sites/default/media/press/Image/press_photo/Peter_Bauer.jpg)
JPG | 149 kb | 775 x 935 px

Dr. Stephan Zizala, Senior Director, Industrial and Multimarket Microcontrollers of Infineon Technologies AG

Stephan_Zizala (/export/sites/default/media/press/Image/press_photo/Stephan_Zizala.jpg)
JPG | 1.63 mb | 1535 x 2126 px

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Presentation at Press Conference "Microcontroller Family XMC4000"
Jan 23, 2012 | PDF | 2.85 mb

(/dgdl/XMC4000_PressConference_23-01-2012.pdf?fileId=db3a304334fac4c601350a01d8f011d4)

Related Links

› Audio presentation of XMC4000 family (http://www.mexperts.tv/infineon/xmc/)

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