

## **XMC4000 / XMC1000 Workshop: 32-Bit Industrial Microcontroller Arm® Cortex®-M4/ Arm® Cortex®-M0 - Face-to-Face Training**

### **Objectives**

Based on the knowledge of the Arm® Cortex™-M4 Architecture (see training "Cortex™-M4, M3, M1, M0: Architecture and Embedded Programming"), you know the on-chip periphery (basic and special peripheral modules) and features of the XMC4000 family. You are able to program low-level drivers for this hardware and test them with a debugger. Moreover, you can generate routines for DMA, interrupts and exceptions.

### **Participants**

Hardware and software architects, hardware and software developers, test engineers

### **Requirements**

Knowledge of ANSI-C as well as experience with programming and the set-up of the Arm® Cortex™-M4 architecture. Knowledge of DSP is an advantage.

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### **Content**

Infineon XMC4000 Architecture: Overview

XMC4000 Arm® Cortex™-M4, M3, M1, M0 Core: Overview

Memory Units SRAM, Program Memory Unit (PMU), PFlash, BROM

Interrupt und Exception Handling, NVIC

Event Request Unit (ERU)

Direct Memory Access Controller (DMA)

CRC (FCE)

System Control Unit (SCU), System Timer Module (STM), Window

Watchdog Timer (WDT), Real-time Clock (RTC)

DAvE® 4

Ports

Special Timers and PWM Units

High-resolution PWM, POSIF

ADC; Delta-Sigma ADC DSD, DAC

Overview: USIC, UART, CAN, LIN, SPI, I2C, I2S

Debug and Trace

Overview: CMSIS

### **Exercises**

- Exercises are performed with an XMC4000 starter kit, focusing on the aspects interrupt controller, DMA

controller, basic peripheral modules.

**EXTRA: Participants get a FREE Infineon XMC4500 Relax Kit (Cortex™-M4).**

## **FACE-TO-FACE TRAINING**

**Price \*                      Duration**

-                              5 days

Training code: E-XMC4000

\* Price per attendee, in Euro plus VAT

### **Face-To-Face - German**

**Duration**

5 days

### **Live Online - German**

**Duration**

5 days

## **Coaching**

Our coaching services offer a major advantage: our specialists introduce their expertise and experience directly in your solution process, thus contributing to the success of your projects.

We will be happy to provide you with further information or submit a quotation tailored to your requirements.