

## **XMC7000 Microcontroller Architecture for Industrial Applications**

### **Objectives**

You know the architecture, basic on-chip peripherals and the features (especially related to multicore and safety extensions) of the XMC7000 device family.

You get to apply low-level drivers for this hardware, adapt examples as required and test them with a debugger.

Numerous exercises make this training a practice-oriented software workshop.

Your benefit:

Efficient and compact jump-start into the overall topic

Practical tips on multicore and safety

### **Participants**

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

### **Requirements**

ANSI-C knowledge; experience in microcontroller/microprocessor system programming and architecture

## **XMC7000 Microcontroller Architecture for Industrial Applications**

### **Content**

**Introduction to the XMC7000 Microcontroller Architecture**

**CPU and CPU Subsystem (CPUSS)**

**On-Chip Flash**

**Address Map**

**Protection Fault-System**

**Crypto Module**

**Inter-Processor Communication (IPC)**

**Ports (GPIO)**

**Interrupt and Exceptions**

**DMA**

**Event Generator (EVTGEN)**

**Trigger Multiplexer (TRIG-MUX)**

**Real-Time Clock Module (RTC)**

**Watchdog Timer (WDT)**

**Timer Counter Pulsewidth Modulator Module (TCPWM)**

**Reset**

**Clock**

**Power**

**ROM Flash Boot**

**CAN-FD**

**Serial Communication Block (SCB)**

**LIN-UART**

**Inter-IC Sound Bus (I2S)**

**Giga Ethernet**

**Serial Memory Interface (SMIF)**

**Analog Digital Converter (ADC)**

**Digital Analog Converter (DAC)**

**Debug Support**

**To intensify the content of the training, exercises will be performed regarding interrupts, timer, serial interface and ADC**

- Exercises will be based on the KIT\_XMC71\_EVK\_LITE\_V1 using ModusToolbox (Visual Studio Code)

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

**Price \*                      Duration**

-                                      5 days

Training code: E-XMC7000

\* Price per attendee, in Euro plus VAT

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

**Date                                      Duration**

20.07. – 24.07.2026 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.