

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

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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.