

As of 14.12.2025

# Microcontroller/ Microprocessor Basics - Face-to-Face Training

### **Objectives**

You learn about the function and operation of microcontrollers and microprocessors.

### **Participants**

Hardware developers, software developers

### Requirements

None.

# Microcontroller/ Microprocessor Basics - Face-to-Face Training

## Content

8, 16 and 32 Bit Microcontroller Applications

Comparison: Microprocessors vs. Microcontrollers

#### Microcontroller Set-up

#### **Function and Operation**

- CPU set-up and pipeline
- CPU working register
- Basic instruction set of a microcontroller
- Stack function and access

# Memory Access to RAM (Data Memory) /ROM (Program Memory)

# **Address Space/ Program Model**

- Von Neumann architecture
- Harvard architecture

### **Basics: Microcontroller Programming**

- Assembler
- Comparison: microcontroller-C vs. ANSI-C
- Function of a linker/locator

### **Basic On-chip Periphery**

- Input/output ports
- Timer capture/compare
- Synchronous/asynchronous serial interface

### **Interrupt Controller**

#### **Function**

- Interrupt vectors and service routines

### **Hands-on Exercise**

- Using a microcontroller

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

Price \* Duration
- 4 days

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Training code: E-µC-BASE

\* Price per attendee, in Euro plus VAT

## Face-To-Face - German

### **Duration**

3 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.