

## **AURIX™ TC4xx: 32-Bit Multicore Microcontroller Family (Aurix-3G Third Generation) - Face-to-Face Training**

### **Objectives**

You know the architecture, basic on-chip peripherals and the features (especially related to multicore and safety extensions) of the AURIX™ 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

Download of exercises

### **Participants**

Hardware and software architects, hardware and software developers, test engineers // IMPORTANT NOTE: A valid NDA with the chip vendor is a pre-requirement to attend the Aurix-3G training course.

### **Requirements**

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

## **AURIX™ TC4xx: 32-Bit Multicore Microcontroller Family (Aurix-3G Third Generation) - Face-to-Face Training**

### **Content**

#### **Introduction**

#### **System Architecture**

#### **Internal Infrastructure**

- SRI
- FPI
- LLI

#### **Virtual Machines and Hypervisor**

#### **TriCore™ CPU**

- Context Switching
- New instructions
- Virtualisierung
- Trap system
- MPU
- System timer

#### **Protection Mechanisms**

- PROT
- APU

**Memory**

- NVM
- UCBs
- SOTA
- Cache

**Ports****Interrupt Router (IR)****System Direct Memory Access Controller****Safety Concept**

- CRC engine
- Watch dogs
- BIST
- Clocking
- Voltage monitors
- SMU

**Security Concept**

- CS Real-time module
- CS Satellite

**Power Management System**

- Domains
- Wakup timer
- RTC
- Standby Controller

**System Control and Management**

- Clocking
- NMI
- Reset
- Firmware
- Boot

**Complex Peripherals Overview and Special Features**

- PPU
- GTM
- CAN
- xSPI
- PCIe
- ETH

**Data Routing Engine****Analog to Digital Conversion**

- TMADC
- Fast Compare
- DSADC
- CDSP

**Multicore Debug**

-----  
**IMPORTANT NOTE:** A valid NDA with the chip vendor is a pre-requirement to attend the Aurix-3G training course.

-----  
Please note that the Aurix-3G training does not explicitly cover ADAS specific blocks. If required, please contact our service office prior to the training, phone +49 (0)89 450617-71.

**FACE-TO-FACE TRAINING**

| Date | Price * | Duration |
|------|---------|----------|
|------|---------|----------|

15.12.2025 – 19.12.2025 3.500,00 € 5 days

\* Price per attendee, in Euro plus VAT

Training code: E-AURIX3G

### **Live Online - English**

| <b>Date</b>         | <b>Duration</b> |
|---------------------|-----------------|
| 13.10. – 17.10.2025 | 5 days          |
| 23.02. – 27.02.2026 | 5 days          |

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

| <b>Date</b>         | <b>Duration</b> |
|---------------------|-----------------|
| 15.12. – 19.12.2025 | 5 days          |

### **Live Online - German**

| <b>Date</b>         | <b>Duration</b> |
|---------------------|-----------------|
| 13.10. – 17.10.2025 | 5 days          |
| 23.02. – 27.02.2026 | 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.