As of 04.07.2024

AURIX™ TC4xx: 32-Bit Multicore Microcontroller Family (Aurix-3G Third Generation) - Live Online 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

Exercises for download

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

Live-Online-Training

23.09. – 27.09.2024	3.500,00 €	5 Days
03.03. – 07.03.2025	3.500,00 €	5 Days

* Price per attendee, in Euro plus VAT

Training code: LE-AURIX3G

Face-To-Face - English

Date	Duration
16.12. – 20.12.2024	5 days

Live Online - German

Date	Duration
23.09. – 27.09.2024	5 days
03.03. – 07.03.2025	5 days

Face-To-Face - German

As of 04.07.2024

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16.12. – 20.12.2024	5 days

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Content

AURIX-3G System Architecture

A3G Introduction

CPU Subsystem AURIX-3G

Virtual Machine Control - VM

On-Chip Bus Systems and Bridges

- Shared resource interconnect (SRI), flexible peripheral interconnect (FPI / SPB), low latency interconnect (LLI), bus bridges

Memory

Functional Safety and Security Systems

Functional Safety and Security Features

Cyber Security Real-Time Module

Cyber Security Satellite (CSS)

Interrupts and Traps, Direct Memory Access Controller (DMA)

System Control and Management

- System control unit, clock management, system mode management unit (SMM)
- AURIX-3G power management system (PMS)

Peripherals - Ports and Timer Modules

- General purpose I/O ports and peripheral I/O lines
- Timer modules: Generic timer module (GTM), enhanced timer module (eGTM)

Serial Interfaces

Automotive Interfaces

Asynchronous Interface - ASC / Local Interconnect Network (LIN)

CAN Interfaces

- Controller area network interface (MCMCAN),
- Controller area network interface extra long (CANXL)
- FlexRay™ controller (ERAY)
- Standard serial interfaces: Inter-integrated circuit (IIC/I2C), queued serial peripheral interface (QSPI)
- eXpanded serial peripheral interface (xSPI)

Ethernet Modules

- Ethernet (GETH), Lite Ethernet (LETH)

PCIe Module

Analog to Digital Converter

- Versatile ADC, delta-sigma ADC (DSADC)

Parallel Processing Unit (PPU)

On-Chip Debug Support and Emulation Device

Exercises

- Numerous exercises will be conducted on an Infineon AURIX™ board, covering the following aspects: use of low-level drivers, protection mechanisms, interrupt controller, DMA controller, system timer, port, multicore aspects, monitoring, performance measurement etc.

As of 04.07.2024

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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.