As of 28.03.2024

Generic Timer Module v1 and v3 (Bosch-GTM): Architecture and Programming - Face-to-Face Training

Objectives

You know the functions of GTM v1 and extensions of the v3 version and are able to assess potential application domains as well as the related effort.

You get familiar with the overall concept and potential automotive applications.

Customers coming from a non-automotive sector learn how to make flexible use of the GTM module and know the differences between dedicated features as well as features for arbitrary use.

YOUR BENEFIT:

Efficient and time-saving entry into the GTM topic (Generic Timer Module)

Details on the differences between the v1 architecture and the current v3 version

Exercises are also provided on USB stick

Training documentation combined in a compendium.

Participants

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

Requirements

Experience in microcontroller/microprocessor system programming and architecture is an advantage

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Content

Bosch Semiconductors Generic Timer Module GTM Architecture v1 and v3: Overview

GTM Module

- Clock time base module CTBM
- Clock management unit CMU
- Time base unit TBU
- Digital phase-locked loop DPLL
- Timer input mapping module MAP
- Advanced routing unit ARU
- Timer input module TIM
- Timer output module TOM
- ARU-connected TOM ATOM
- Parameter storage modules PSM (FIFO submodule)
- Broadcast module BRC
- Sensor pattern evaluation SPE
- Monitor unit MON
- Output compare unit CMP

GTM Functionality

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- Timer / counter (free running / reset)
- Capture / compare
- Input signal filtering
- PWM signal measurement
- Duty cycle measurement
- Complex PWM signal generation
- Pulse count modulation PCM
- Global time and/or angle recognition
- Generation of complex angle clock
- BLDC support

GTM µC Interface

- AEI Mux
- Debug
- Interrupt concentrator ICM

Exercises

- This workshop implements hands-on exercises with an AURIX™ board, practicing the following aspects:
- TIM PWM measurement
- TOM PWM generation
- ATOM PWM generation
- MCS programming
- Host-core to GTM-communication

FACE-TO-FACE TRAINING

Price *	Duration
-	2 days

Training code: E-GTM
* Price per attendee, in Euro plus VAT

Live Online - English

Duration

2 days

Face-To-Face - German

Duration

2 days

Live Online - German

Duration

2 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.

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