



CANaerospace Training Course

Target Group

System designers and software engineers who need to get familiar with the background and implementation of the CANaerospace data bus interface protocol.

Prerequisites

Basic knowledge of serial data communication and the “C” programming language.

Course Description

The CANaerospace Training Course is a two-day course in which the students learn to develop systems using Controller Area Network (CAN) and the CANaerospace protocol. The lecture part includes the rationale behind CANaerospace, its implementation and advanced topics like bus performance calculation and electromagnetic compatibility issues. A laboratory/exercise section provides hands-on experience by developing and testing a sample CANaerospace application.

Course Material

Course lecture notes and sample “C” code.

Lecturer

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Course Topics

Introduction to Controller Area Network (CAN)

- History
- Concept
- Bus Arbitration
- Error Handling
- Bit Timing
- Physical Bus Interface
- Bus Performance

Introduction to CANaerospace

- History
- Concept



- Message Types
- Data Types
- Identifier Distribution
- Node Service Protocol
- Time-Triggered Bus Scheduling
- Redundancy Support
- Connectors & Wiring
- Electromagnetic Compatibility

CAN Controller Programming

- Motorola TOUCAN Controller
- Memory Map
- Registers
- Bit Timing Configuration
- Message Buffers
- Received Message Masking
- Error Handling
- Interrupt Service Routine Design
- Low Power Modes

Sample CANaerospace Application

- Functional Design
- Coding
- Bus Traffic Monitoring & Analysis

Contact Information

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CANaerospace Homepage

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