



FlexRay

FL3X Training

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FlexRay is a deterministic serial communication technology defined by the Standard ISO 17458 which was developed by the FlexRay consortium to ensure high data rates with the aim of providing predictable time-triggered communication architecture.

The fundamental concept of FlexRay is based on the TDMA scheme which operates on a precisely defined communication cycle. Each cycle is divided into static and dynamic segments for time-triggered and event-triggered communications.

The FlexRay Cluster consists of two communication channels, channel A and channel B, where every channel specifies data rates up to 10MBit/s over twisted pair and payloads of up to 254 Bytes per frame. It is used for safety-critical applications and reliable data exchange in an automotive area connecting various electronic control units (ECUs).

AGENDA

09:00 – 09:15	Introduction to FlexRay
09:15 – 10:00	The FlexRay Physical Layer I
10:00 – 10:15	Break
10:15 – 11:00	The FlexRay Physical Layer II
11:00 – 11:15	Practical Part I
11:15 – 12:00	The FlexRay protocol I
12:00 – 13:30	Break
13:30 – 13:45	Practical Part II
13:45 – 15:15	The FlexRay protocol II
15:15 – 15:30	Break
15:30 – 15:45	Practical Part III
15:45 – 16:00	Related Projects
16:00 – 16:30	Results/Summary/open questions

FL3X Training FlexRay

FLEXRAY TRAINING COVERS BOTH THE THEORETICAL & PRACTICAL PARTS

- **FlexRay Overview with respect to Automotive Domain**
- **FlexRay Physical layer**
 - Topology variants
 - Network components
 - Cables, connectors, termination
 - Bus Driver
 - Active Star
 - Communication controller
 - Bus Guardian
- **FlexRay protocol**
 - Components of a FlexRay ECU
 - Transfer structure
 - FlexRay access structure
 - Frame format
 - Frame coding
 - Synchronization
 - FlexRay wakeup
 - FlexRay startup
- **FlexRay – Related Projects**
 - AUTOSAR
 - FIBEX

FACTS/CONDITIONS

	At STAR	At CUSTOMER location	ONLINE
Min. participants	3	6	1
Max. participants	20	20	20
Appointment	by arrangement	by arrangement	by arrangement
Incl. Lunch and drinks	•	-	-
Language	english	english	english
Language documents	english	english	english
Documentation	digital	digital	digital
Certificate	•	•	•
Location	Star Goeppingen	in Germany only	online
Praxis parts	•	•	•

ORDER INFORMATION

Product	Description	Order number
FL3X Training FlexRay (@ STAR)	1 day on FlexRay at STAR ELECTRONICS location	3-00202L01
FL3X Training FlexRay (@ Customer)	1 day on FlexRay at customers location	3-00202M01
FL3X Training FlexRay (Online)	1 day on FlexRay online	3-00202N01