



Release Presentation

ASAM AE MCD-2 NET FIBEX 4.1.2

Data Model for ECU Network Systems

Field Bus Data Exchange Format

2017 / 06 / 28

Deliverables

- ▶ New Base Standard FIBEX_V4_1_2.pdf
- ▶ XML schema and example files
- ▶ HTML documentation
- ▶ Baseline
- ▶ Release notes

Introduction

- ▶ During the implementation of ECU software, the correct configuration of the operating system's network stack is a fundamental requirement in ensuring the interoperability of ECUs within automotive networks.
- ▶ The configuration includes the definition of
 - exchanged signals,
 - datatypes,
 - and their explicitly defined declarations for various automotive communication systems.
- ▶ This information is typically provided in interface descriptions created by OEMs and forwarded to their ECU suppliers.
- ▶ The ASAM MCD-2 NET standard (called FIBEX) provides a uniform, XML-based interface description for configuring the software of automotive networks.

Introduction cont.

- ▶ The standard allows the definition of network topologies, consisting of ECUs with network ports and gateways.
- ▶ The standard consists of a generic interface description and technology-specific extensions for FlexRay, MOST, CAN, TTCAN, LIN and Ethernet.
- ▶ Technology-specific properties are described for each network port. For example, addresses as well as transport protocols and the reserved ports are described for Ethernet and IP.
- ▶ Furthermore, the interface description contains a list of sent and received signals for each ECU. In the case of service-oriented communication, service provider instances and consumers are listed for each ECU.

What's New?

Changes from FIBEX 4.1.1 to 4.1.2

▶ Small Extensions

- Support for arrays with minimum length of 0
- Allow to describe whether byte order mark is used for strings
- Add name details for identifiable elements

▶ New Features / AUTOSAR harmonization

- Specification of service discovery configuration
- Allow to specify that eventgroups are transferred via multicast communication
- Inheritance of serialization attributes / serialization attributes for methods
- Allow data Ids for complex datatype members and parameters
- Specification of timing parameters for events and methods
- Configuration of SOME/IP transport protocol
- Configuration of CAN-FD

▶ Clarifications

- Usage of strings

Compatibility

▶ FIBEX

- The changes are compatible with FIBEX 4.1.2.

▶ AUTOSAR

- Compatible to Classic AUTOSAR 4.3 / Adaptive AUTOSAR R03-17 / AUTOSAR Foundation 1.1

▶ HDO (Harmonized Data Objects)

- Compatible to HDO 1.1.