



ASAM

Association for Standardisation of
Automation and Measuring Systems

ASAM MCD-1 (XCP)

Universal Measurement and Calibration
Protocol

Protocol Layer Specification

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Base Standard

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1 FOREWORD

XCP is short for Universal Measurement and Calibration Protocol. The main purpose is the data acquisition and calibration access from electronic control units. Therefore a generic protocol layer is defined. As transport medium different physical busses and networks can be used. For each authorized transport medium a separate transport layer is defined. This separation is reflected in standard document structure, which looks like follows:

- One Base Standard
- Associated Standards for each physical bus or network type
- Associated Standard for Software Debugging over XCP

The Base standard describes the following content:

- Protocol Layer
- Interface to ASAM MCD-2 MC
- Interface to an external SEED&KEY function
- Interface to an external Checksum function
- Interface to an external A2L Decompression/Decrypting function
- Example Communication sequences

For each transport layer exist an own associated standard. For the version in hand the following transport layers are defined

- XCP on CAN
- XCP on Ethernet (TCP/IP, UDP/IP)
- XCP on Sxl (SPI, SCI)
- XCP on USB
- XCP on FlexRay

The "X" inside the term XCP generalizes the "various" transportation layers that are used by the members of the protocol family. Because XCP is based on CCP the "X" shall also show that the XCP protocol functionality is extended compared to CCP.