



Association for Standardisation of
Automation and Measuring Systems

ASAM MCD-1 (CCP)

Can Calibration Protocol

Version 2.1.0

Date: 1999-02-18

Base Standard

© by ASAM e.V., 1999

Disclaimer

This document is the copyrighted property of ASAM e.V.
Any use is limited to the scope described in the license terms. The license terms can be viewed at www.asam.net/license

Contents

| | |
|--|-----------|
| 1 Introduction..... | 1 |
| 1.1 ASAP..... | 1 |
| 1.2 CAN Calibration Protocol (CCP)..... | 1 |
| 2 Scope and field of application..... | 2 |
| 3 Related documents..... | 2 |
| 4 Revision history..... | 2 |
| 5 Definitions and Abbreviations..... | 4 |
| 6 Protocol definition..... | 5 |
| 6.1 Generic Control Commands..... | 5 |
| 6.2 Data Acquisition Commands..... | 5 |
| 7 Message Objects..... | 6 |
| 7.1 Organisation of Message Objects..... | 6 |
| 7.2 Description of Message Objects..... | 7 |
| 7.2.1 Command Receive Object CRO..... | 7 |
| 7.2.2 Data Transmission Object DTO..... | 7 |
| 7.3 Organisation of Data Acquisition..... | 9 |
| 8 Version Mechanism..... | 12 |
| 9 Version compatibility..... | 12 |
| 10 Table of Command Codes..... | 13 |
| 11 Table of Command Return Codes..... | 14 |
| 12 Description of Commands..... | 15 |
| 12.1 Connect..... | 15 |
| 12.2 Exchange Station Identifications..... | 16 |
| 12.3 Get Seed for Key..... | 18 |
| 12.4 Unlock Protection..... | 19 |
| 12.5 Set Memory Transfer Address..... | 20 |
| 12.6 Data Download..... | 21 |
| 12.7 Data Download 6 Bytes..... | 22 |
| 12.8 Data Upload..... | 23 |
| 12.9 Short Upload..... | 24 |
| 12.10 Select Calibration Data Page..... | 25 |
| 12.11 Get Size of DAQ list..... | 26 |
| 12.12 Set DAQ list pointer..... | 27 |

| | |
|--|-----------|
| 12.13 Write DAQ list entry..... | 28 |
| 12.14 Start / Stop Data transmission..... | 29 |
| 12.15 Disconnect..... | 30 |
| 12.16 Set Session Status..... | 31 |
| 12.17 Get Session Status..... | 32 |
| 12.18 Build Checksum..... | 33 |
| 12.19 Clear Memory..... | 34 |
| 12.20 Program..... | 35 |
| 12.21 Program 6 Bytes..... | 36 |
| 12.22 Move memory block..... | 37 |
| 12.23 Diagnostic Service..... | 38 |
| 12.24 Action Service..... | 39 |
| 12.25 Test Availability..... | 40 |
| 12.26 Start / Stop Synchronised Data transmission..... | 41 |
| 12.27 Get currently active Calibration Page..... | 42 |
| 12.28 Get implemented Version of CCP..... | 43 |
| 13 Error Handling..... | 44 |
| 14 Example Sequences..... | 45 |
| 14.1 Session log-in..... | 45 |
| 14.2 Block DownLoad..... | 45 |
| 14.3 Block UpLoad..... | 45 |
| 14.4 Calibration Data Initialization..... | 46 |
| 14.5 DAQ List Initialization..... | 46 |
| 14.6 Code Update..... | 46 |
| 15 Expected Performance Ratings..... | 47 |
| 16 Appendices..... | 48 |
| 16.1 Matrix of Error Codes..... | 48 |
| 16.2 Broadcast Techniques in Multi-point Applications..... | 49 |