September 2018
Version 2.6.0

Thank you for choosing HBM for your test, analysis and measurement task. This document shows the released product package of SomatXR. Please always check whether an updated version is available at: http://www.hbm.com. Please note that the firmware has been optimized. We recommend installing the latest firmware on all existing modules.

What's new?

Modules / Firmware
- **Firmware**
    - CX23-R Firmware Version 2.6.0
    - MX Module Firmware Version 4.12.20.0
        - Included in CX23-R firmware to update from the Web Interface.
- **New Module Support**
    - None

Software Tools / Libraries
- **Software Updates**
    - SomatXR Emulator v2.6.0
    - XR Download Manager v1.2.2

Documentation
- **New Documentation**
    - None
- **Updated Documentation**
    - CX23-R / EX23-R User Manual   Version 10.0
    - CX23-R Quick Start Guide   Version 3.0
    - EX23-R Quick Start Guide   Version 2.0
    - SomatXR Accessories Data Sheet (English / German)   Version 7.1
    - MX Modules User Manual (English / German)   Version 6.0

Accessories
- **New Accessories**
    - None
- **Updated Accessories**
    - None

A complete listing of all supported modules, accessories, and documentation of the SomatXR line is available at the end of these release notes.

RELEASEnotes

SOMAT XR

Notes about the CX23-R firmware v2.6.0

- **New Features**

  - **Vector CAN Database Editor.** CAN databases that are imported which are Vector format are now editable within the same dialog if changes to the database are necessary. This eliminates the need to change the dbc file, and reimporting it in order to make changes. The user can now make direct changes to the Vector CAN database as imported.
  - **System Information / Status Page.** A new system information and system status page has been added for technical information of the system in use.
  - **New Single Channel Editor.** The Single Channel Editor dialog has been enhanced significantly to provide user feedback on channel configurations, live data read out when performing tasks such as calibrations, shunts, and editing database parameters. Also the single channel editor has been redesigned to improve usability, and optimized for performance.
  - **Zero channel on every normal SIE test start.** A new feature has been added to support zeroing channels on every normal SIE test start. More information can be found in the help system.

- **Optimizations**

  - **Plotter supporting greater user customization of legends rendering.** Users now have added customizability control over the rendering of plot legends.
  - **Over Range Detector extended to support user configurable metering parameters.** The user can now configure the Over Range Detector metering parameters. See the help system for more information.
  - **Default bridge factor is set as a function of bridge type.** The default bridge factor will now be changed depending on whether the user is using a quarter bridge, half bridge, or full bridge.
  - **Remote control functionality improved.** The suspend mode has been removed as a part of the remote control test start and stop functionality.
  - **Live update start and stop extended to the test control page.** Previously the live update start and stop feature was only available in the Setup page. Now it is available in the test control page to aid the user in making changes to charts as they configure them.
  - **Usability enhancements in adding input channels.** Significant usability improvement made for adding input channels from the XR system resident SXR file set. The SXR file resident input channel can be added even when the defined connection has already been used in the open SXR file being edited. In this case, one of the channels with the duplicate connection will be red lined; however, the user can use the Change device task to reassign the connection to clear the conflict.
  - **Improved chart creation, removal, and switching of chart type.** Significant enhancements were made in how to create charts, remove charts, and switch an existing chart from one type to another type of chart.

- **Bugs Fixed / Issues Resolved**

  - **"Sava data file as" field issue with certain extensions.** Previously when attempting to put a filename with extension ".sie", the result would be an undeletable SIE file. This issue has been corrected.
  - **MX840 with Pulse or Encoder Frequency channels issue.** Fixed an issue with data spikes occurring on MX840 channels using Pulse or Encoder frequency channels. Previously, spikes would occur on MX840 channels configured as Pulse frequency or Encoder frequency channels whenever there were no pulses from the sensor for a period of

approximately 107 seconds. The magnitude of the spikes would vary and were not deterministic.

o **Customer service package export when storage is full.** Previously when the system storage was full, it was not possible to export a customer service package. This issue has been resolved.

o **Test issue when MX Units Parameter is empty.** Previously when a setup contained an empty Units parameter for MX units, the test would not start properly. This issue has been resolved.

o **Issue with filenames on systems with large numbers of SIE files.** When a large number of SIE files exist on the system by means of running cyclical tests, the SIE file names can become all the same in certain situations. This issue has been resolved.

o **Message Logger DataMode and trigger issue.** When using the Message Logger DataMode, and a trigger to instigate data collection, the test would stop on error. This issue has been resolved.

o **Burst Message Logger DataMode and test end issue.** In certain configurations when using the Burst Message Logger DataMode, there would be missing data from the trigger point to the end of the test. This issue has been resolved.

- **New or revised issues and advisories**

  o **Limitations on using MX471 modules.** The MX471 can be overloaded and not able to keep up with the processing required if there are too many CAN channels assigned. This is significantly affected by the CAN bus load – specifically the broadcast rate of the CAN messages. For example, the following test scenario will result in an overload. Test using all 4 ports with 128 channel assigned to each port (using 32 CAN messages per port) broadcast at 100 messages per second. In most cases, the XR system will reset on an overload situation, but always. As such, users are strongly advised to avoid MX471 overload situations – particularly for unattended testing.

  o **Issue with renaming a Vector CAN database:** If a Vector CAN database file has been edited and has errors that are red lined, the user will not be able to edit the name of the database file. If the user attempts to edit the name, the first character typed in will be accepted; however, other characters will typically not be accepted unless the user clicks outside of the edit control box and then clicks on the edit control box again. The suggested way to proceed is to fix the errors, save the changes, and then refresh the browser.

- **Errata (advisories)**

  o **Recommended browsers.** The recommended browsers when using the eDAQXR web interface are up to date versions of Chrome and Firefox. The web interface may work on other browsers but may result in degraded or undesirable operation.

  o **SIE file naming conventions when using FTP upload.** Please note that file naming conventions and special character usage can affect whether the FTP server you are uploading to, will accept the file. There are characters that are illegal file name characters in Windows systems, and likewise for Linux systems. Please avoid these illegal characters when considering what operating system your FTP server is running on.

- **Errata (known issues)**

  o **Web browser exceptions.** The web browser interface will sometimes lock up or not properly reflect the actual states of the hardware or test. Refreshing the browser will usually correct this.

  o **Potential loss of data sync issue when using Firewire with MX modules.** In certain usage scenarios, MX modules can lose PTP sync when a test run is restarted after a reboot.

  o **EX23-R PTP Synchronization with MX modules using ports 5 and 6.** Using a system connected with MX modules connected to ports 5 or 6 on the EX23-R can result in the MX

modules losing sync with the eDAQXR until the EX23-R is rebooted or power cycles. This can be problematic for long term unattended testing - particularly in scenarios where power is never cycled. As such, it is strongly advised that any PTP timing devices (i.e., eDAQXR or MX modules) are not connected to ports 5 or 6 in long term unattended tests. Network sources such as Axis cameras can be connected to port 6 (or port 5 when routed through a commercial PoE switch).

o **Push notifications on iOS devices.** There is a known issue with the iOS HBM Push application, where notifications will not be pushed, but instead have to be fetched by closing or reopening the app on your iOS device, or performing a pull down refresh of the notification list.

o **Setups utilizing multiple video channels from a multi-channel video encoder is not supported.** Although the eDAQXR will allow the user to specify multiple video streams from a multi-channel encoder, using more than one channel from a multi-channel encoder is not supported, and configuring a test with this configuration may in not as-configured results, and is at the user's own risk. It is recommended the user only use one channel on a multi-channel video encoder.

o **Live video displays when using the Axis m7001 video encoder.** The Axis m7001 encoder can be used, but there are limitations on video display capabilities with this old and now discontinued Axis product. Video frames will be properly stored in the SIE file; however, viewing of the video frames is supported in the Hardware view only. As such, video frames cannot be displayed when the SIE test is running.

Complete Listing of Modules, Accessories, Documentation and available Support Software Tools / Libraries

Modules

• SomatXR: Data Processor with 64 GB memory	1-CX23-R-64-2
• SomatXR: Ethernet Switch PTP	1-EX23-R
• SomatXR: Standard Amplifier	1-MX1601B-R
• SomatXR: Bridge Amplifier	1-MX1615B-R
• SomatXR: Thermo Amplifier	1-MX1609KB-R
• SomatXR: Universal Amplifier	1-MX840B-R
• SomatXR: Highly Dynamic Amplifier	1-MX411B-R
• SomatXR: CAN module	1-MX471B-R
• SomatXR: Frequency Amplifier	1-MX460B-R
• QuantumX: Measuring Amplifier / 16 channels	1-MX1601B
• QuantumX: Bridge Amplifier / 16 channels	1-MX1615B
• QuantumX: Thermocouple Type K / 16 channels	1-MX1609KB
• QuantumX: CAN Module / 4 channels	1-MX471B
• QuantumX: Analog Voltage Output	1-MX878B
• QuantumX: Digital Dynamic	1-MX460B
• QuantumX: Universal Amplifier	1-MX840B

Documentation

• CX23-R / EX23-R User Manual	Version 10.0
• CX23-R Quick Start Guide	Version 3.0
• EX23-R Quick Start Guide	Version 2.0
• SomatXR Accessories Data Sheet (English / German)	Version 7.1
• CX23-R Data Sheet (English / German)	Version 2.2
• EX23-R Data Sheet (English / German)	Version 1.2 (1.1)
• SomatXR Safety Manual	Version 2.1
• MX1601B-R Data Sheet (English / German)	Version 3.0
• MX1609KB-R Data Sheet (English / German)	Version 3.0
• MX1615B-R Data Sheet (English / German)	Version 4.0
• MX840B-R Data Sheet (English / German)	Version 1.0
• MX878B Data Sheet (English / German)	Version 2.0
• MX411B-R Data Sheet (English / German)	Version 1.0
• MX471B-R Data Sheet (English / German)	Version 1.0
• MX Modules User Manual (English / German)	Version 6.0
• MX Modules Quick Start Guide (English / German)	Version 3.0
• NTX003 Data Sheet	Version 1.1
• 1-UPX00x-2 UPS Data Sheet (English / German)	Version 2.0
• 1-SCM-R-TCX-2 Data Sheet (English)	Version 1.3
• Reference Manual For libsie	Version 1.0
• 1-SCM-R-SG120-300-1000-2 Data Sheet	Version 1.2
• 1-CON-S3005-2 Adapter Data Sheet	Version 1.1
• 1-CASEMOUNT-UMB-2 Data Sheet	Version 1.0
• 1-CASEMOUNT2-2/3-2 Data Sheet	Version 1.0

Software Tools / Libraries

• HBM Device Manager	v1.0.0.1
• XR Download Manager	v1.2.2
• SomatXR Emulator	v2.6.0
• libsie SIE library	v1.1.5

Accessories

• Xcode to Xcode Adapter w/Mount	1-CON-S3005-2
• Fastener CaseLink-Rug, 160mmx80mmx12mm	1-CASELINK-RUG-2
• 2 Unit Mounting System, 200mmx130mmx50mm	1-CASEMOUNT2-2
• 3/4 Unit Mounting Syst,295mmx130mmx50mm	1-CASEMOUNT3-2
• Universal Mounting Bracket	1-CASEMOUNT-UMB-2
• Voltage conditioner .3M 840BR adapter	1-SCM-R-VC60-2
• ¼ bridge 1000 .3M 840BR Adapter	1-SCM-R-SG1000-2
• ¼ bridge 350 .3M 840BR adapter	1-SCM-R-SG350-2
• ¼ bridge 120 .3M 840BR adapter	1-SCM-R-SG120-2
• K type thermal couple .3M 840BR adapter	1-SCM-R-TCK-2
• E type thermal couple .3M 840BR adapter	1-SCM-R-TCE-2
• ICP, with BNC .3M 840BR adapter	1-KAB430-0.3
• AC/DC power supply unit (24 V, 120 W)	1-NTX003-2
• Power supply cable (CX23-R to MX module)	1-KAB2110
• Power supply cable (low loss) with exposed wires	1-KAB2115
• Mounting brackets	1-CASEMOUNT
• Ethernet cable (CX23-R / EX23-R to MX module)	1-KAB2100
• Ethernet cable (CX23-R / EX23-R to PC / access point)	1-KAB2106
• Ethernet cable (CX23-R to EX23-R)	1-KAB2107
• Push-pull sensor cable	1-KAB183
• Break away sensor cable	1-KAB184
• Digital I/O cable with exposed wires	1-KAB2101
• GPS/AUX adapter (CX23-R to EGPS-5Hz)	1-KAB2102
• CAN adapter (CX23-R to SomatCR KAB292)	1-KAB2104
• GPS/AUX cable with exposed wires	1-KAB2108
• CAN cable with exposed wires	1-KAB2109
• Precision GPS Receiver-200Hz	1-EGPS-200-B-2
• Precision GPS Receiver-200Hz-PLUS	1-EGPS-200-P-2
• EGPS-200 GPS Antenna	1-EGPS-200-ANT-2
• EGPS-200 GPS Template – RTK	1-EGPS-200-TEM-2
• Trigger Cable for EGPS-200	1-SAC-GPSTRIG-2
• Cable Extensions	1-SAC-EXT-MF

RELEASEnotes SOMAT XR

Accessories (cont'd)

- Full-bridge adapter (to eDAQ M8 connector)   1-KAB2117
  (4 wire - no sense line)
- Quarter-bridge adapter (to eDAQ M8 connector)   1-KAB2118
  (3 wire - no sense line)
- Voltage adapter (to eDAQ M8 connector)   1-KAB2119
- ¼ Bridge Adapter (ODU 14 pin to M8F connector)   1-KAB2122-0.3
- CX23 + eDAQ sync cable (M12 to LEMO)   1-KAB2111-2
- GPS Receiver - 5Hz Update   1-EGPS-5HZ-2
- Pelican Case - eDAQ-lite/SXR   1-PEL1520-2
- Pelican Case - eDAQ/eDAQ-lite/SXR   1-PEL1600-2
- AC/DC Power Supply (24 V, 30 W) ODU 4p   1-NTX002
- Plug (ODU 4p push-pull)   1-CON-P1001
- Power supply (ODU, 5 m, open)   1-KAB294-5
- Connecting elements   1-CASELINK
- Carrying handle   1-CASECARRY
- 4 protective caps for ODU sensors   1-CON-A2013
- 2 protective caps for ODU system   1-CON-A2014
- FireWire ExpressCard adapter   1-IF-002
- FireWire intermodule (ODU, IP68, 2 m)   1-KAB272
- FireWire PC (ODU / FW, IP68, 3 m)   1-KAB276-3
- FireWire (module to PC, IP68, 5 m)   1-KAB293-5
- Ethernet cable (IP65/5m)   1-KAB273-5
- Connector (ODU, 14 pol, IP68)   1-CON-P1007
- Plug (ODU 14p break-away)   1-CON-P1016
- 1-wire-EEPROM DS24B33   1-TEDS-PAK
- 10 Connectors thermo mini (type K, RFID)   1-THERMO-MINI
- QuantumX: UPS   1-UPX001-2
- SomatXR Uninterruptable Power Supply   1-UPX002-2