RELEASEnotes

PMX industrial amplifier platform

Thank you for choosing HBM's industrial amplifier platform series PMX. and the related software.

Your feedback is important for HBM. If you encounter any problems or suggestions to improve the PMX industrial amplifier, please let us know.

You can contact our team of support engineers directly at http://www.hbm.com/support

Please always use the latest firmware version, available on HBM.com's download section:
https://www.hbm.com/en/1256/software-and-firmware-downloads-for-industrial-amplifiers/

Note: Please unzip the PMX-firmware download-file to get a .tgz file which than directly can be uploaded into PMX via the PMX-webserver (menu: Firmware update in the admin level).

Version Overview

Prodname: PMX	New
	• The measuring-range-control "Range-Check" can be deactivated/activated for each measuring-channel separately via GUI.
Version: 4.6	
Date: 14.01.2021	Changed
	• "Automatic-Mean" renamed to "Checkweigher" and status of CW-steps added. Now the CW-calculated-channel of PMX and ClipX are named and acting the same.
	BugFix
	• CASMA-Calculation for extreme log-term measurements corrected.
	• Several minor text- and GUI changes.
	• Update of manual, webserver-help, datasheet and manual.

Prodname: PMX	BugFix
	• Login and language selection error in GUI fixed, effected by Japanese language
Version: 4.4	• Correction of smaller GUI-writing errors
	• Boot-loader error of firmware 4.00 corrected (when firmware 4.00 is loaded in PMX, it is not possible to load another firmware via the PMX web-server. If you need to make an update from 4.00 to a higher firmware, please contact HBM Technical-Support-Center or your local HBM contact).
Date: 08.11.2019	
	Important:

HBM

RELEASEnotes

- With PMX hardware 2.0 and higher a new processor-board is implemented which needs firmware 4.40 and higher.
- Firmware 4.40 and higher can also be loaded in older PMX hardware to get the features and bugfix update.

Prodname: PMX

Version: 4.00

Date: 03.07.2019

New
- Calc.channel: automatic mean
- GUI-languages: JP (now 6 languages available)
- Update of the Web-server help (de, en, fr, it, cn, jp)

Changed
- CAN protocol: error indication for CODESYS application deleted due to better performance for running CODESYS applications
- Update of the documentation: data-sheets (de, en, fr, it, es, pt, cn, kr, jp) and user-manual (de, en, fr)

BugFix
- Unit-correction in adjustment-assistant
- Text correction in Teds-error indication

Prodname: PMX

Version: 3.04

Date: 18.12.2017

Changed
- PLC channels (from fieldbus master) are initialized with zero. Update with first valid value from fieldbus.
- TEDS setup is restored from the parameters file (defaults.pmx) (before, was restored from device local). Now TEDS setup can be moved from one unit to another with the file defaults.pmx.
- SSI encoder value limits ±31 bits (was ±23 bits)

BugFix
- Calculated channels filter doesn't get stuck any more in NaN
- Device scan visibility bug fixed

Prodname: PMX

Version: 3.02

Date: 14.11.2016

New
- Object Dictionary with amplifier and calculated channels settings. Access via Ethernet-port and fieldbus interfaces.
- Creation and storage of Object Dictionary description via PMX-WebServer in the formats: CSV, C, C# for PC applications

RELEASEnotes

and (ST) Structured-Text for PLC applications.

- Optional temporary user-password disable via data object for external locking systems.

Changed

- PROFINET: Process data update improved with IRT 1ms cycle: no duplicate data up to 28 channels on PROFINET;
  RT is not effected

BugFix

- TEDS supports unit Nm

Prodname: PMX

Version: 3.00

Date: 11.03.2016

New

- CODESYS dialog box for all CODESYS related functions and operations:
  - Start/ stop/ delete application
  - Backup/Restore application to/from PC
  - CODESYS restart
- CODESYS Package 0.9 (compatible with CODESYS IDE 4.3.3.7)
    - Access to sensor scale, zero value, and zero target value
    - Access to 2x 64 bits GUI / fieldbus master status words
      - PX460 shunt status
      - Signal status Test Signal
      - Diskfree
      - LED flash
      - PX878 output #5 available
- PX460 shunt control via fieldbus
- PROFINET address locally changeable

- Button for sensor recalibration in PX455 dialog
- Fieldbus Device Control Word bit 2 start saving parameters
  (same function as disk symbol on the webpage)
- Stress analysis support 0/60/120° rosette
- Restart-PMX via Browser-button
- TEDS-dialog extended: Sensor-ID, Sensorname, TEDS-S/N

Changed

- Peak block now with capture option (2th input-signal) and "New Peak" output flag
- Tolerance Window block with capture option (2th input-signal)

RELEASEnotes

- Log file available as text file
- Log file extended with error-messages from CAN-communication
- Adjustment Assistant extended from 2 to 4 (adjustable) sensor-signals for calibration
- Clearer presentation of calculated channels output (connected/ not connected)
- Update of PMX-online-help

BugFix
- Sub-parameterset handling corrected

Prodname: PMX

Version: 2.04

Date: 14.09.2015

New
- Testsignal indication in overview and amplifier dialog
- Testsignal bit (bit 4 = 0x10) in value's status byte (fieldbus) (in CODESYS, the bit is called 'bit 5' so far)
- Command STD Set Time and Date
- Optional feature Display Step (user defined resolution of the displayed value)
- Calibration Assistant for easy calibration of built-in sensors
- Menu item Restart for reboot of the system

Changed
- Fixed CODESYS overload when unit is sync slave
- Order of functions in Select Function Type dialog (calculated channels)
- Maximum two connections on port 55000 (API, catman)

BugFix
- The system time dialog (Ora Sistema) does not work when language setting is Italian.

Prodname: PMX

Version: 2.02

Date: 27.05.2015

New
- EtherNet/IP : Button "Create EDS File"
- EtherCAT: Button "Create ESI File"; Optional setting of fixed node address
- Calcuated Channels:
  - New function block "RTD 100 at PX455" (temperatur measurement with PX455).
  - New constant signals Pi/2, Pi, and 2*Pi.
- Button "Delete CODESYS Application" stops and deletes the CODESYS application and visualisation if running in PMX

RELEASEnotes

Changed

- Calcuated Channels:
    - Function block Polynomial with optional second set of coefficients (the set is selected by the sign of the input signal)
    - Multiplexer 2:1 expanded to Multiplexer 4:1
    - Signal generator with enable input and with adjustable number of periods to play

BugFix

- Factory setting function corrected
- Parameter Backup/Restore function corrected

Prodname: PMX

Version: 2.00

Date: 05.01.2015

New

- 8 CPU-channels (format REAL) in WGX002 to send data from PLC to PMX via fieldbuses for usage in calculated channels of PMX (not available in WGX001 with CODESYS)

    Use new device desciption files
    PROFINET:
    `GSDML-V2.3-HBM-PMX_IRT-PLC-20141215.xml` (PROFINET firmware V3.5)
    or `GSDML-V2.3-HBM-PMX_IRT-PLC-V3.4-20141216.xml` (PROFINET firmware V3.4)
    or use generated file

    EtherCAT®:
    `HBM_PMX_rev2.xml`

    EtherNet/IP™:
    `HBM_PMX_024.eds`

- Automatic creation of Device-Description-File for PROFINET interface-board (PX01PN) with actual PMX-configuration and names of measuring channels

Changed

- catman / API interface supports analog output channels (DAC).
    Note: with firmware 2.00 catman 4.0 is necessary (cantman 3.5 or 3.4 user, have to run PMX with firmware 1.46)

BugFix

- File-download from USB-stick fixed

RELEASEnotes

Prodname: PMX

Version: 1.46

Date: 04.12.2014

New
- Calculated channel: Moving Average
- Calculated channel: Tolerance Window
- Calculated channels: Polar To Cartesian Coordinates
- CODESYS: USB and NAND memory access
- Menu item Upload Certificate
- display serial-no. of boards in browser

Changed
- Calculated channel Peak: NaN is not given out any more
- Pulse Width Measurement is edge sensitive (was level sensitive)
- High pass filter can be switched off
- HBM scan family and type name order fixed
- CODESYS boot project is maintained over firmware update

BugFix
- ---

Prodname: PMX

Version: 1.44

Date: 31.07.2014

New
- API commands "NTP" and "NTP?"
- Rotation Sync Filter filter with new parameter Minimum Speed [rpm]
- Display of card's serial number in amplifier view
- The online help in German, English, French, Italien, and Chinese updated

Changed
- Default names of subparameter sets "Default SENS", "Default DAQ", "Default IO", "Default LS"
- Channels names from CODESYS to CPU "CPU-1", "CPU-2"...
- API command "SAF" with optional parameter p12 "Interpolation" (not yet in manual)

BugFix
- ---

Prodname: PMX

Version: 1.42

Date: 16.04.2014

New
- ---

Changed
- Flash memory driver patch (important)

BugFix
- ---

RELEASEnotes

Prodname: PMX

Version: 1.40

Date: 02.04.2014

New
- Sub parameterset delete button
- Language support French, Italian, and Chinese (menus only, online help still English)
- Events reported in log: measval status valid/invalid; sensor supply overload; command interface buffer overflow; factory settings error

Changed
- Improved Device Scan dialog
- Matrix3x3 replaced by Matrix6x6 (stored PMX settings that use Matrix3x3 can not be reused)
- Peak function with discharge option (envelope function)
- Multiplier with four inputs (was 2) (stored PMX settings that use Multiplier can not be reused)
- EtherNet/IP more robust against corrupted non-volatile settings
- EtherCAT: The PDO names in object dictionary are taken from the current signal names

BugFix
- ---

Prodname: PMX

Version: 1.36

Date: 18.12.2013

New
- NTP server address can be set via command API (command NTP)
- EtherCAT module provides CoE object dictionary (However, PDOs are not configurable, PMX delivers either all PDOs or none. With TwinCAT, CoE is even more convenient than configuration of modules.)
- Calculated channel function block for "Rotation Synchronous Filter"

Changed
- Rectification of memory chip issue to overcome sporadic deadlock while booting
- Web server based UI improved for slow networks
- Some improvements around PX460 (SSI interface, filters, glitch filter)
- Line Writer completed

BugFix
- Online help of the new features is not yet complete

Prodname: PMX

New

RELEASEnotes

Version: 1.34

Date: 16.10.2013

- Function blocks Trigger (pulse) and Edge Detect
- Support of PX01EP (EtherNet/IP)
- Command tdd (transmit device data)

Changed
- Function block Stress Analysis now with input of apparent strain
- Switching of parameter set with digital input is now debounced (20 ms)

BugFix
- Wrong sign at output of function block Differentiator (the value itself is ok)
- PX460 parameter Offset was not stored (relevant with sensor type Count only)
- SlotIdentString with wrong slot enumeration, restoring of the device setup may lead to problems
- Stress analysis function block: Output channel was not copied when copying datasets
- Hold (digital) block did not work when the hold input is high for not more than one calculation cycle

----

Prodname: PMX

Version: 1.32

Date: 23.08.2013

New
- CODESYS with CANopen master (WGX001 only)
- Access policy dialog (user-level-management)
- Parameter-set switching by digital inputs

Changed
- PX460 glitch filter 1 micro_sec as per default (was filter off)
- Function block Connector now with delay option. (When updating from V1.30 the connectors might be deleted, please check.)
- Online help update (English)

BugFix
- Wrong sign at output of function block Differentiator (the value itself is ok)
- PX460 parameter Offset was not stored (relevant with type Count only)

Prodname: PMX

Version: 1.30

Date: 16.07.2013

New
- CODESYS with WebVisu and CAN-interface (only available with part number WGX001)
- TEDS status and settings dialog
- PX460 support
- Bits 16..23 "Digital Output" from fieldbus appear as "Digital Inputs 17..24" in the calculated channels. That enables control of function blocks via fieldbus.

Changed
- Improvement of setting limit switch thresholds

RELEASEnotes

via fieldbus: The value did not need to change to be applied.
- Function block Stress Analysis requires strain input in unit µm/m. New output "von Mises stress"
- Bug fix: PROFINET is robust against quick changes of number of calculated channels

----

Prodname: PMX

Version: 1.28

Date: 27.05.2013

New
- Function blocks CONNECTOR, TIMER, INTEGRATOR, DIFFERENTIATOR, DEADBAND, MODULUS
- Online help extended in german and English language, also for PARAMETERSET dialog

Changed
- Smaller bug-fixes

Prodname: PMX

Version: 1.26

Date: 19.04.2013

Hint: New filter settings are available. It is strongly recommended to check the filter settings after update!

New
- Dialog PARAMETERSET and sub parameterset selection from all views
- Dialogs BACKUP TO PC and RESTORE FROM PC
- Function blocks COUNTER, TRIGGER, and LOGIC
- Filter settings for sample rate 38.4kHz (available with PX460 only)
- Logging options extended

Changed
- Visualization in InternetExplorer

Next version
- Online help of PARAMETERSET is not yet available

Prodname: PMX

Version: 1.24

Date: 18.01.2013

New
- Calculated Channels dialog: Both peak and hold block with reset button;
  tare block with trigger and reset button
- Function blocks Mean and Cartesian-to-Polar
- Reset of admin password facility with magic file from HBM

Changed
- Some improvement in user interface

HBM

RELEASEnotes

Prodname: PMX

Version: 1.22

Date: 01.12.2012

New:
- menu Settings – System – Device - System Options with update rate settings
- dialog Calculated Channels
- TEDS events are signalized in the footer bar

Changed:
- Maintenance user level cannot reset to factory defaults
- GSDML file: Names of 64 bit values put into the right order, hi / lo exchanged; new file GSDML-V2.25-HBM-PMX_IRT-20121008.xml
- Reduced CPU load of fieldbus card with PROFINET
- Limit Switch dialog: Live status of switches 17..32 fixed; the status of 1..16 were shown
- fixed bugs: storage of gateway IP address; display of auto IP address

Bug Fix:
- Function block Pulse Width only output type Time[s] was selectable
- sometimes Catman cannot find PMX (when PMX is in DHCP mode AND a DHCP server was not available and thus an auto IP address is obtained)
- Vulnerability: When updating the firmware by a peer-to-peer connected PC, the firmware may not be programmed properly and fail to boot. The device is "dead" with a probability of approx. 10%.

----

* The first Firmware Release for the PMX industrial amplifier was version 1.20 *

Please always use the latest firmware and software version, available on HBM.com's download section: → Service&Support → Downloads → Firmware&Software → Industrial amplifiers

-- End of file -

RELEASEnotes

measure and predict with confidence

HBM