RELEASEnotes

Version 8.48

1. Update information

These release notes describe changes between Perception (including GEN series firmware) versions V8.46 and V8.48.23109.

2. Mid- and long-term support roadmap

Starting with Perception V8.00 some legacy features, mainframe and card support are no longer present. (A Perception V7.6x maintenance version is available for critical bug fix support.)

Supported on latest Windows versions

Including all updates until June 2022:
- Windows 10 Pro 1607 and higher (64 bit only)
- Windows 11 Pro

Installation requirements:
- Dot Net Framework V4.8
  (distributed with the install CD and available for download on the internet)
- Microsoft Direct3D® capable graphics card.

Downgrade

Perception V8.48 can be downgraded to the following versions.

> ⚠ **Note**: When an EtherCAT card is installed, a downgrade to any version before V8.28 must go through version V8.28 first. ⚠

- Perception V8.4x
- Perception V8.3x
- Perception V8.2x
- Perception V8.1x
- Perception V8.0x
- Perception V7.6x
- Perception V7.5x

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3. Perception versions

Version	Description	
	Perception Standard	Free
1-PERC-AD-0x	Perception Advanced	Paid
1-PERC-VA-0x	Perception Viewer Enterprise	Paid
1-PERC-E64-0x	Perception Enterprise	Paid

Perception supports the following application extensions:

Version	Description	
1-PERC-OP-EDR	eDrive application (setup, live and efficiency mapping table)	Paid
1-PERC-OP-STL	Advanced High Voltage/High Power analysis according STL standards	Paid
1-PERC-OP-HIA	High Voltage Impulse Analysis	Paid
1-PERC-OP-CSI	CSI Runtime extensions (Customized Software Interfaces)	Paid

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4. Known Issues

Below table lists known issues.

Perception settings	Mainframe settings changed via the Fieldbus remote control are not updated in the UI. Reconnecting to the mainframe will show the changes.

5. New Features

Perception – General new Features

Perception – New ePower Suite Features

New Features for Hardware

Switched to absolute recorder indexing for fieldbus remote control ⚠	Currently, in CAN remote control, relative addressing is used for recorders. This means that: if we use the address x in a CAN command, this refers to the x-th occupied recorder slot. This means that the address of a recorder may change when recorders are added or removed. Because this is inconvenient and error prone, we implemented the following change: **From this release onward, absolute addressing will be used for all recorders in a mainframe.** In the 1-byte address available to address recorders, the range 1…127 is used for physical recorders and the range 128…255 for CAN recorders, irrespective of a physical recorder being present or not and a CAN recorder being used or not. **NOTE: With this change, users already using a setup and using the old relative addressing may have to change their setup**
EtherCAT Compliance	New EEPROM contents will be applied when ESI file generation is triggered by Perception. • Set unused FMMUs in EEPROM to 0xFF • Removed unused Sync Managers from EEPROM (SM 4, 5, 6, 7) • Added dynamic generation of default length for SM3. Saving ESI file will regenerate EEPROM to match configuration.
GN815 new flash	Added support for MT25Q FLASH on the GN815 card.

6. Improvements

Improvements in Perception

Phasor Display fixes	The Phasor display used the wrong signals to display the phasors. this problem is solved (solves SUPEPT-220).

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Resolution for Perception crash with multiple HA displays	Resolution for Perception crash when loading a PNRF file containing multiple Harmonic Analysis displays. (Solves SUPEPT-254)
Applying a virtual workbench to identical mainframe	A problem with applying a virtual workbench to an identical but different mainframe. (solves SUPEPT-257)
Not all information for virtual workbench always saved	In some situations it could happen that modifications made in Perception were not saved in a virtual workbench. This problem is now solved. (solves SUPEPT-261)
Some setpoints not saved	In some special situations, not all setpoints were stored in the setpoint table. This is now solved. (solves SUPEPT-253)
Sequencer Sheet bug	The Duration entry bug in the Sequence Setup dialog has been fixed.

Improvements in the Perception ePower Suite

Add explanation of the averaging method in ePower	In the ePower suite additional informationwas added concerning the difference between the different types of avaraging that are now available (solves SUPEPT-223).
The average value of current and voltage is calculated incorrectly with n-phase setup	In some situations in the ePower suite, the average value of current and voltage was calculated incorrectly with an n-phase setup where n was not 3. The values are now correctly calaculated for any n (solves SUPEPT-224)

Improvements for CAN and GEN DAQ API

Separate CMD_PREVIEW from CMD_PAUSE	• Separate CMD_PREVIEW from CMD_PAUSE • Update remote controls to use new methods

Improvements for Hardware

Local storage is considered for configure boot	Fixed issue while reloading the retrieved configured boot settings independent of the mainframe local storage capability.
Assigned CAN signals aren't assigned properly to CAN Recorder	A problem where in some cases, CAN signals were incorrectly shown as analog channels was solved (solves SUPEPT-233).
Accept more jitter on EtherCAT DC	Genesis mainframes can be synced to a more jittering EtherCAT DC clock.
Restarting a mainframe with user settings	A problem with restarting a mainframe with specific user settings was solved. (solves SUPEPT-256)
Internal disk support	The following disk can be used within the GHS mainframes. • Samsung SSD 990 PRO 1TB

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Support items and requests

Add explanation of the averaging method in ePower	In the ePower suite additional informationwas added concerning the difference between the different types of avaraging that are now available (solves SUPEPT-223).
Phasor Display fixes	The Phasor display used the wrong signals to display the phasors. this problem is solved (solves SUPEPT-220).
The average value of current and voltage is calculated incorrectly with n-phase setup	In some situations in the ePower suite, the average value of current and voltage was calculated incorrectly with an n-phase setup where n was not 3. The values are now correctly calaculated for any n (solves SUPEPT-224)
Assigned CAN signals aren't assigned properly to CAN Recorder	A problem where in some cases, CAN signals were incorrectly shown as analog channels was solved (solves SUPEPT-233).
Improved stability when using GEN DAQ API on longer timeframes	The system reliability and stability has been improved for the situation the system is running for a long time
Problems with publishing on CAN and EtherCAT solved	There was a problem with enabling settings for CAN and EtherCAT when a Settings sheet was loaded after a connection to a mainframe was made. This is now solved (solves SUPEPT-236)
Resolution for Perception crash with multiple HA displays	Resolution for Perception crash when loading a PNRF file containing multiple Harmonic Analysis displays. (Solves SUPEPT-254)
Restarting a mainframe with user settings	A problem with restarting a mainframe with specific user settings was solved. (solves SUPEPT-256)
Applying a virtual workbench to identical mainframe	A problem with applying a virtual workbench to an identical but different mainframe. (solves SUPEPT-257)
Not all information for virtual workbench always saved	In some situations it could happen that modifications made in Perception were not saved in a virtual workbench. This problem is now solved. (solves SUPEPT-261)
Some setpoints not saved	In some special situations, not all setpoints were stored in the setpoint table. This is now solved. (solves SUPEPT-253)

7. Deprecated support

The following is no longer supported within Perception.
- GPS2750

8. Supported Genesis HighSpeed Mainframes

The following Genesis HighSpeed Mainframes are supported:

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- GEN2tB
- GEN3t
- GEN4tB
- GEN7tA
- GEN17tA
- GEN3i
- GEN3iA
- GEN7i
- GEN7iA
- BE3200

9. Supported QuantumX Modules

⚠️ **Note**: The support of QuantumX Modules in Perception will stop with future versions of Perception!

QuantumX modules can be integrated in systems with tethered mainframes using the CAN-interface together with a QuantumX MX471C. ⚠️

The following QuantumX models are supported:
- MX1609KB
- MX1609TB
- MX471B
- MX809B
- CX27B as single network access point only, no setup or control of CX27B

Data streaming is available for all other B type QuantumX modules.

Note: Former Release notes mentioned to support MX471B / MX471C, but this should have been only the MX471B. The MX471C might work in some cases, but this is not guaranteed.

Note: Perception includes and only works with the following QuantumX software components:
- QuantumX firmware: V4.12.32.0
- HBM common API: V4.0.0.56

Patents no: 7,868,886

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