

RELEASE NOTE 1MRG040292 | 2021-08-12

IED Connectivity Package version 2.4.1 for Relion[®] 650 series

The evolution of Relion 650 series continues with this release.

Release authorized by:

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Introduction



We are pleased to announce the release of IED Connectivity Package version 2.4.1 for the Relion® 650 series. With this release, we bring several new features and enhancements with focus on digital substation applications.

The update covers customized and pre-configured IEDs covering all application areas within the products REB/REC/RED/REL/REQ and RET650. The Relion® 650 series covers a complete set of applications from transformer protection to busbar protection, line protection, breaker protection and bay control. With the introduction of version 2.2 of the 650 series, we further expand the application areas especially for digital substations, enhancing the system functionality and flexibility.

Key system features such as support for several Ethernet communication ports, PRP, HSR and Rapid Spanning Tree Protocol (RSTP) according IEEE 802 redundancy method, COMTRADE-2013 format and precision time synchronization following the IEC/IEEE 61850-9-3 profile have been introduced in place since the launch of version 2.2. Also, process bus sampled values via IEC/UCA 61850-9-2LE are now supported in all products of the Relion® 650 series family. A number of system and cyber security features bring enhancements to these already available features.

New features and benefits



This new version of the IED Connectivity Package for Relion® 650 series enables the interaction between the Relion® 650 series version 2.2 IEDs and the Protection and control IED manager PCM600 version 2.10 or later.

The new IED connectivity package enables handling of enhanced flexible product naming, extended Ethernet and protocol configuration, and easy GOOSE engineering from the Relion® 650 series version 2.2.

The new connectivity package enables support for the following new features in PCM600 version 2.10 and Relion® 650 series version 2.2:

- Support for projects with IEDs that have flexible product naming enabled and IEDs with regular IEC 61850 data model.
- Easy configuration of the, up to four, Ethernet ports.
- Easy and simple protocol configuration for enhanced defense in depth protection.
- GOOSE engineering made efficient with the easy GOOSE engineering feature
- Simple configuration of merging units for IEC/UCA 61850-9-2LE
- An easy way to configure routes for the TCP/IP protocols of the IED
- Account management tool (support for active directory)
- Enhanced session management
- FIPS compliance support
- Mixed IEC 61850 edition 1 and 2 support
- Extended UDN length support
- COMTRADE 2013 support *
- Rapid Spanning Tree Protocol (RSTP) according IEEE 802 *

The new connectivity package also contains fix for PCM600 timeout error while reading disturbance recordings. In case you face this issue, we strongly recommend that you update to this version of Connectivity Package.

For detailed information on what is new in the Relion® 650 series version 2.2 IEDs, please refer to the release note 1MRG040291

Supported products

The IED Connectivity Package version 2.4.1 for 650 series is compatible with, and supports, the following products:

- 650 series IEDs version 2.2
- 650 series IEDs version 2.1
- 650 series IEDs version 1.3
- 650 series IEDs version 1.2
- 650 series IEDs version 1.1
- 650 series IEDs version 1.0
- Protection and Control IED Manager PCM600 version 2.10 or later

Installation of this IED Connectivity Package

To install the IED connectivity package for Relion® 650 series, please follow the instruction below:

1. Ensure that PCM600 version 2.10 with PCM600 2.10 Hotfix 20210804 or later has been installed
2. Install the IED Connectivity Package version 2.4.1 for Relion® 650 series
3. Install required IED modules

The connectivity package and IED modules can be installed from the USB memory delivered with the Relion® 650 series IED or from the PCM600 version 2.10 update manager. Please note that this IED connectivity package must be installed to be able to interact with the Relion® 650 series IEDs via PCM600.

Support for PCM600 version 2.10

The connectivity package for Relion® 650 series IEDs contains object types and methods for the PCM600 tool. Modules for REB650, REC650, RED650, REG650, REL650, REQ650 and RET650 provide support for the following functionalities:

- Application configuration
- Parameter setting with graphical support
- Signal matrix
- Graphical display editor
- Signal monitoring
- Disturbance handling (COMTRADE 1999/2013 format disturbance recordings)

- Event viewer (internal, process and security events)
- Communication management
- Ethernet configuration (protocol, IEC/UCA 61850-9-2LE and route configuration)
- User management
- IED configuration migration
- IED summary
- Flexible product naming
- Easy GOOSE engineering

IED configuration migration

This revision of the IED Connectivity Package for Relion® 650 series products features IED configuration migration tool support for migrating a Relion® 650 series release 1.x to any later Relion® 650 series version 1.x, or from version 2.1 to 2.2. There is no migration possible for version 1.x to 2.x. For more information, please refer to the "Configuration Migration for 650 series in PCM600 version 2.10 and later", 1MRG040229.

Known issues and limitations

There are known issues and limitations related to the new IED connectivity package and the data migration. For more information, please refer to the "Relion® 650 series IED Connectivity Package version 2.4.1 Read me", 1MRG040230.

IED Connect – a unique concept

The IED Connect provides you an IED specific connectivity package that contains a complete description of the protection and control IEDs you have ordered. This description consists, for instance, of data signals, parameters, addresses and IED documentation.

The signal data is configured based on the information provided by the connectivity package, which allows you to efficiently establish connection between the IED and the IED tools (e.g. Protection and control IED manager PCM600). Additionally, the IED Connect simplifies the system engineering and minimizes the risk of errors in integration of the IEDs in ABB's system products and tools (e.g. MicroSCADA Pro, SDM600 and COM600 Station Automation series).

Documentation and marketing material

The product guides, technical manuals, technical summary sheets and brochures are available via hitachi-powergrids.com/protection-control.

Ordering and delivery

The IED Connect USB memory containing the IED Connectivity Package version 2.4.1 for Relion® 650 series is always included in the Relion® 650 series product delivery. The

USB memory contains the complete technical documentation of the Relion® 650 series version 1.1, 1.2, 1.3, 2.1 and 2.2.

The new version of the IED connectivity package can also be downloaded via the PCM600 update manager, together with the required IED modules for the above-mentioned product releases.

Kind regards,

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