



GE VERNOVA

Firmware Release Notes

Multilin 650 Family

Version 9.10

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1 Summary

GE Grid Solutions issues the Multilin 650 Family Firmware version 9.10 and EnerVista 650 Setup software 9.10. The firmware is specific to some 650 Family products and does not affect other devices.

The 9.10 firmware and 9.10 software version release for the 650 platform introduces software and firmware improvements that only affect C650 and F650 devices. When using firmware version 9.10, EnerVista 650 setup 9.10 or above must be used.

Highlights of this release include:

1.1 Date of release

- Firmware 9.10: October 8 2024

1.2 Firmware 9.10

Bay Controller & Monitoring System/Feeder Protection Relay - Common Platform functions - F650, C650

- Fixed an issue impacting appearance of Cybersecurity related menus in models non-English language
- Fixed an issue impacting the Logic files downloading from the device
- Added a new setting for bypassing minimum current threshold in 67P element

1.3 EnerVista 650 Setup software 9.10

- Compatibility with 9.10 Firmware version
- Affected products: C650 and F650
- Firmware Release Date: Oct 8th, 2024
- EnerVista Setup Release Date: Oct 8th, 2024

New 650 firmware and EnerVista Setup software can be downloaded from the links below, based on device type.

F650: <https://www.gegridsolutions.com/app/ViewFiles.aspx?prod=f650&type=7>

C650: <https://www.gegridsolutions.com/app/ViewFiles.aspx?prod=c650&type=7>



For existing 650 devices installed with firmware version below 7.0x, you must obtain a new relay to benefit from the enhancements described in this release note. If the new features and enhancements are not needed, no upgrade of the relays is required.

Please contact your local Multilin sales representative or Multilin Customer Service Department (CST) for any questions regarding this upgrade.

2 Release Details

2.1 Multilin 650 Family - Firmware version 9.10 Release Details

2.1.1 Fixed an issue impacting appearance of Cybersecurity related menus in models non-English language

Category: D

Products: F650, C650

Impacted firmware: 9.00

Corrected firmware: 9.10

Workaround: N/A

Description: For models with languages that are not English, Cybersecurity menus are not listed inside Security menu

GE tracking number: FWDILEG-3

2.1.2 Fixed an issue impacting the Logic files downloading from the device

Category: R

Products: F650, C650

Impacted firmware: 9.00

Corrected firmware: 9.10

Workaround: N/A

Description: In FW 9.00, after rebooting the device, settings changed in Logic formulas are not keep in downloaded Logic files, but are correctly applied to device's configuration

GE tracking number: FWDILEG-2

2.1.3 Added a new setting for bypassing minimum current threshold in 67P element

Category: E

Products: F650, C650

Impacted firmware: 7.00 to 9.00

Corrected firmware: 9.10

Workaround: N/A

Description: In FW 9.00 and below, when there is no prefault current 67P function is not activated. A new setting has been included to enable bypass of the minimum current

GE tracking number: FWDILEG-1

2.2 EnerVista 650 Setup - Software version 9.10 Release Details

2.2.1 Compatibility implemented with Firmware 9.10 version

Category: G

Products: EnerVista 650 Setup

Impacted software: 9.00

Corrected software: 9.10

Workaround: N/A

Description: Updated database and configuration files to ensure compatibility with 9.10 Firmware version.

GE tracking number: N/A

3 Upgrade path

3.1.1 Firmware Compatibility

The 9.00 firmware is not compatible with firmware versions below 7.0x, or with any previous F650 CPU hardware, i.e. F650 with order code containing Rear Ethernet Communication Board option B, C, D or E. Existing B, C, D and E options still benefit from the previous CPU hardware. The released firmware version runs only on the new models with Rear Ethernet Communication Board options: G, H, J, K, L & M. The 9.00 firmware requires EnerVista 650 Setup software version 9.00 or higher. GE suggests using the latest version of the software.

Upgrading 650 devices installed with firmware versions below 7.0x requires replacement of the complete relay. New relays require choosing from the new [G, H, J, K, L or M] characters in the order code under the "Rear Ethernet Communication Board 2" option.

EnerVista 650 Setup software can convert settings files from an older version to the latest version. It also provides a tool to compare settings files from different versions, generating a Difference Report. This Difference Report identifies new settings and additional information to assist the user during the upgrade process.

3.1.2 Software Compatibility

The minimum operative system requirements for the EnerVista 650 Setup software are as follows:

- Windows 7
- Windows 8
- Windows 10

4 Appendix

4.1 Change categories

This document uses the following categories to classify the changes.

| Code | Category | Comments |
|------|--|---|
| N | New feature | A separate feature added to the relay. |
| G | Change | A neutral change that does not bring any new value and is not correcting any known problem |
| E | Enhancement | Modification of an existing feature bringing extra value to the application |
| D | Changed, incomplete or false faceplate indications | Changes to, or problems with text messages, LEDs and user pushbuttons |
| R | Changed, incomplete or false relay records | Changes to, or problems with relay records (oscillography, demand, fault reports, etc.) |
| C | Protocols and communications | Changes to, or problems with protocols or communication features |
| M | Metering | Metering out of specification or other metering problems |
| P | Protection out of specification | Protection operates correctly but does not meet published specifications |
| U | Unavailability of protection | Protection not available in a self-demonstrating way so that corrective actions should be taken immediately |
| H | Hidden failure to trip | Protection may not operate when it should |
| F | False trip | Protection may operate when it should not |
| B | Unexpected restart | Relay restarts unexpectedly |

4.2 For Further Assistance

For product support, contact the information and call center as follows:

GE Grid Solutions
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Markham, Ontario
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Worldwide telephone: +1 905 927 7070
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