

Upgrade devices to firmware v2.1.0

In addition to new feature support, firmware version 2.1.0 (V002.001.000) enhances meter performance, memory architecture and firmware upgrade speeds.

This document applies to:

- PowerLogic™ PM8000 series and ION7400 series meters with firmware version 1.4.3 (V001.004.003) or earlier
- PowerLogic™ ION9000 series meters with firmware version 2.0.0 (V002.000.000)
- ION Setup 3.1 or later

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Overview

The firmware version 2.1.0 (V002.001.000) upgrade package consists of the following items:

Meter firmware

The meter firmware upgrade must be performed in the following order:

- **v001.088.000.upg** (PM8000 series and ION7400 series only) or **v002.000.100.upg** (ION9000 series only)

This is the firmware upgrade file that restructures the memory and file system architecture for more efficient file handling and storage, and prepares the meter for the v2.1.0 firmware upgrade.

- **v002.001.000.upx**

This is the firmware upgrade file that updates your meter to firmware version 2.1.0. Future meter firmware upgrades support only the UPX file format.

- **UpgradeAgent_V002.001.000.upx**

This firmware upgrade file preserves the integrity of the meter firmware and conditions the meter to facilitate more efficient upgrades in the future. Meter firmware upgrades later than v2.1.0 can proceed only after the meter has been updated with the upgrade agent firmware.

Factory meter template

The meter template is typically selected with the meter firmware files.

- **v2.1.0_FAC-PQ_V2.0.0.1.1.dcf**

This meter template provides updated ION modules and links to support the new features in the meter with firmware v2.1.0.

Remote display firmware

After upgrading your DIN rail-mount meter to firmware version 2.1.0, the remote display screen shows a troubleshooting icon indicating a firmware update is required.

- **rmdupg_rd96_004.000.010.bin**

This display firmware upgrade updates the PM89RD96 remote display to be compatible with DIN rail-mount meters with firmware v2.1.0 or later.

- **rmdupg_rd96s_001.000.000.patch.bin**

Some PM89RD96 displays require a two-step firmware upgrade for compatibility with the ION9000 series meter or PM8000/ION7400 series DIN rail-mount meters with firmware v2.1.0 or later. The PM89RD96 display must be upgraded with the `rmdupg_rd96s_001.000.000.patch.bin` file before proceeding with the `rmdupg_rd96_004.000.010.bin` display firmware upgrade file.

How to get this upgrade

Download the firmware version 2.1.0 ZIP upgrade file

Go to www.se.com and use the keyword search box to find the V002.001.000 ZIP upgrade file for your meter. For example, start typing PM8000 firmware to display the search results, then download the file to your computer.

Upgrade information

Meter firmware

A meter that has been upgraded to firmware version 2.1.0 or later cannot be downgraded to an earlier firmware version. All subsequent meter firmware upgrades must use an upgrade file with the UPX file type extension.

NOTICE
UNSUPPORTED FILE TYPE Do not upgrade to firmware version 2.1.0 if you need to downgrade the meter in the future. Firmware version 2.1.0 and later is not compatible with the previous UPG meter firmware upgrade file format. Failure to follow these instructions can result in loss of firmware downgrade functionality.

Remote display firmware

The remote display firmware upgrade only applies to the PM89RD96 (96 x 96 mm remote display) with firmware version 3.x.x or earlier. The remote display must be

connected to the DIN rail-mount meter, and the meter must be connected to the same Ethernet network as the computer running ION Setup.

Restart requirement

There are no manual power-down/power-up requirements for the meter firmware upgrade. Meter automatically restarts as required.

Before you begin

Download latest ION Setup

To upgrade your meter to firmware version 2.1.0, you must use ION Setup version 3.1 or later.

1. Start ION Setup.
2. Click **Help > About ION Setup** to determine your ION Setup version.
3. Open a web browser and go to https://www.se.com/en/download/document/ION_Setup_Latest_Release/ to locate the latest version of ION Setup.
4. If you do not have the most recent released version, download the installation file, then run it to upgrade ION Setup.

Ensure you back up all your meter data and any custom templates, frameworks or files before proceeding with the upgrade.

Back up custom meter webpages

If you added new meter webpages or if you have customized the meter's existing webpages, back up the webpage files.

NOTICE

LOSS OF CUSTOM WEBPAGES

Back up your custom webpages before upgrading the meter firmware. The webpages upgrade process overwrites all existing meter webpages.

Failure to follow these instructions can result in loss of custom webpage functionality.

To back up your meter webpages, use an FTP client to log in to your meter, then copy the **web** folder to a local folder on your computer.

Back up custom meter frameworks

If your meter uses a custom meter template or if you have customized any of your meter frameworks, it is recommended that you back up your meter template in case you need to recreate or relink ION modules.

NOTICE

LOSS OF CUSTOM FRAMEWORKS

Back up your custom frameworks before upgrading the meter firmware. The upgrade process overwrites existing meter frameworks.

Failure to follow these instructions can result in loss of custom framework functionality.

To back up your meter template

1. Start ION Setup and connect to your meter.
2. Navigate to **Setup Assistant > Template > Save to PC**.
3. Click **Save**.
4. Navigate to the desired location and click **Save**.

Connection requirements

Upgrading over serial or Ethernet gateway is not recommended.

Firmware version 2.1.0 upgrade is intended to be used over a direct Ethernet TCP connection to prevent delays and upgrade failure risks associated with slower communications connection methods.

Remote display, webpages and option module firmware updates require an FTP over Ethernet connection. You cannot perform firmware updates over serial or Ethernet gateway.

- Ensure the computer you are using to upgrade the meter is connected to the same Ethernet network as the meter (physically or through a remote desktop connection).
- To upgrade the PM89RD96 remote display firmware, the display must be connected to the meter.
- To upgrade option module firmware, the option modules must be connected to the meter.

Upgrading your meter

Do not interrupt the upgrade process until all updates have been completed.

<i>NOTICE</i>
UPGRADE FAILURE Do not interrupt the upgrade process or disconnect the meter or any connected components while ION Setup is performing the firmware upgrades. Failure to follow these instructions can result in loss of meter functionality.

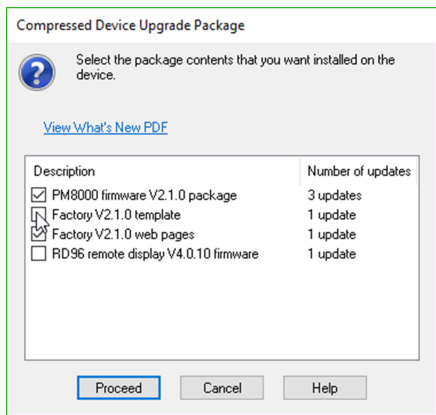
Option 1 (recommended): Upgrade firmware using ZIP file

In addition to device firmware upgrades using individual files such as UPG, BIN and S19 file formats, ION Setup also supports sequential device upgrades using a packaged ZIP file. This is the preferred method of upgrading your meter to firmware v2.1.0.

1. Start ION Setup and connect to your meter.
2. Open **Setup Assistant** and navigate to **Template > Upgrade**.
3. Click **Upgrade** and navigate to the saved upgrade ZIP file.
4. Select the upgrade ZIP file and click **Open**. The **Compressed Device Upgrade Package** window displays the updates to be installed in the order listed.

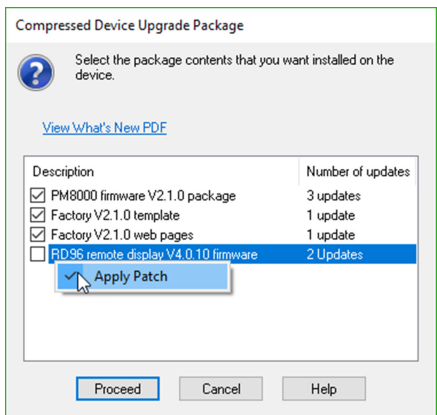
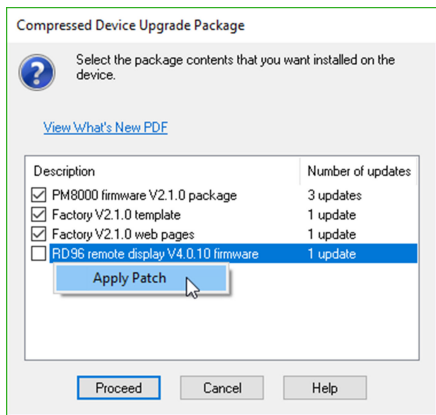
NOTE: Click the **View What's New PDF** link if you want to open and read the document outlining the new and changed features related with the firmware upgrade.

5. Select the components you want to upgrade. For example:

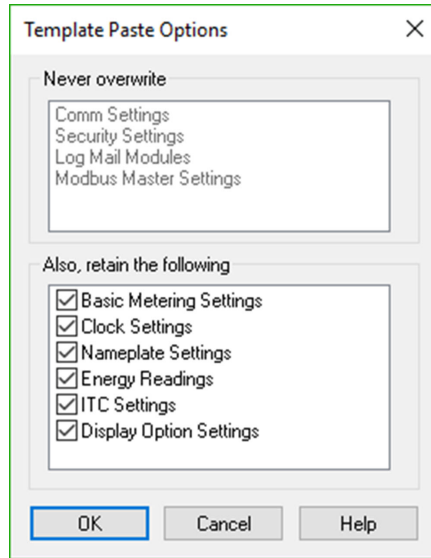


- **PM8000 firmware V2.1.0 package** contains three updates to be applied in the order listed.
 - A. v001.088.000.upg
 - B. v002.001.000.upx
 - C. UpgradeAgent_v002.001.000.upx
- **Factory V2.1.0 template** is the meter template that is programmed to the meter after the firmware upgrade is complete.
- **Factory V2.1.0 web pages** are the files to be uploaded to the meter’s web ftp folder, to update the meter webpages with firmware-related changes.
- **PM89RD96 remote display firmware** is for DIN rail-mounted meters only. This firmware updates the connected 96 x 96 mm remote display, to make it compatible with the meter with upgraded firmware v2.1.0.

Number of updates column displays whether the patch will be applied or not. To apply the `rmdupg_rd96s_001.000.000_patch.bin` file, right-click **RD96 remote display V4.0.10 firmware** and ensure **Apply Patch** is selected. Right-click to toggle between selected (2 updates) and cleared (1 update).



6. Select the desired settings and readings to be retained



7. Click **OK**. Click **Proceed** to start the upgrade process. Do not interrupt the process until all the selected components have been upgraded.

Option 2: Upgrade firmware using individual upgrade files

Refer to the “Firmware and templates” section in the meter’s user manual for detailed instructions on how to upgrade the meter, remote display and option module firmware.

Meter firmware upgrade to version 2.1.0

The meter firmware upgrade sequence must be strictly followed, as listed:

- A. v001.088.000.upg (PM8000 or ION7400) or v002.000.100.upg (ION9000 series meters)
- B. V002.001.000.upx
- C. UpgradeAgent_V002.001.000.upx

To retain your meter settings and readings, select a meter template file (DCF) to paste into the meter when performing the first two firmware upgrades.

<i>NOTICE</i>
LOST SETTINGS Always select a template file when upgrading the meter firmware. Failure to follow these instructions can result in loss of meter settings.

Use the **Template Paste Options** box to specify what you want to retain after the upgrade.

Meter webpages

The firmware upgrade process deletes the meter webpages. After the meter firmware upgrade is complete, you must upload the webpages to the meter.

Refer to the “Loading webpages using ION Setup” topic in your meter’s user manual for detailed instructions.

Remote display firmware version 4.0.10

PM89RD96 remote displays that have firmware version 3.x.x or earlier are not compatible with meters with firmware version 2.1.0 or later.

To use the PM89RD96 remote display with the meter, you must first upgrade the PM89RD96 firmware to version 4.0.10 (rmdupg_rd96_004.000.010).

For a detailed procedure on upgrading the PM89RD96 remote display firmware, download the *PM89RD96 Display firmware upgrade* technical note at www.schneider-electric.com/en/download/document/7EN72-0202

Status

After the first meter firmware upgrade is completed:

- The LED status indicator will be set to steady green.
- For meters with an integrated display, the screen will turn OFF.
- For meters with a connected PM89RD96 remote display, the screen will display the troubleshooting icon indicating that a display firmware upgrade is required.

After all required meter firmware updates are complete, ION Setup continues to perform the remaining updates.

- If you selected to upgrade the template, ION Setup will paste the template into the meter.
- If you selected to upgrade PM89RD96 remote display firmware, ION Setup will perform the display upgrade through the connected DIN rail-mounted meter.

Additional information

Analog I/O option module firmware update

Firmware v2.1.0 adds 0-20 mA support for the Analog I/O option module.

Before you can use this feature, the METSEPM89M0024 analog I/O option module must be updated to firmware version 1.2.0 or later. You can upgrade the option module firmware using ION Setup.

Go to www.se.com and use the keyword search box to find the AIO_V001.002.000 S19 file for your meter, then download the file to your computer.

Refer to the “Loading option module firmware using ION Setup” topic in your meter’s user manual for detailed instructions.

Support

If you have questions or comments, please contact Schneider Electric Technical support.

<https://www.se.com/b2b/en/support/contacts.jsp>