

Upgrade meter firmware to v2.2.1

This document describes the process to upgrade PowerLogic™ ION9000, PM8000 or ION7400 series meters to the latest firmware version. It also contains information about upgrading analog I/O option module firmware.

This document applies to:

- PowerLogic™ PM8000 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)
- PowerLogic™ ION9000, PM8000 and ION7400 series series meters with firmware version 2.1.0 (V002.100.000)

Go to www.schneider-electric.com and search for Upgrade PM89RD96 display firmware to get assistance with upgrading firmware on a RD96 display.

What’s in This Document

Upgrade overview.....	1
How to get this upgrade.....	2
Upgrade information	2
Before you begin.....	2
Connection requirements	3
Upgrading Meter Firmware to v2.1.0	4
Option 1 (recommended): Upgrade to v2.1.0 using ZIP file.....	4
Option 2: Upgrade to v2.1.0 using individual upgrade files.....	6
Upgrading Meter Firmware to v2.2.1	6
Option 1 (recommended): Upgrade to v2.2.1 using ZIP file.....	6
Option 2: Upgrade to v2.2.1 using individual upgrade files.....	8
Status.....	8
Meter webpages.....	9
Upgrading analog I/O option module firmware	9
Technical assistance.....	9

Upgrade overview

It is recommended to upgrade your meter to firmware version 2.2.1 (V002.002.001).

Before upgrading to the latest version, firmware version 2.1.0 must be installed first.

There are two types of upgrades:

- Meter has firmware v2.0.0 or earlier. See “Upgrading Meter Firmware to v2.1.0” for detailed steps.
- Meter has firmware v2.1.0. See “Upgrading Meter Firmware to v2.2.1” for detailed steps.

How to get this upgrade

Go to www.schneider-electric.com and download the firmware upgrade ZIP file. To find the ZIP file you want to use, search for your meter type and:

- v2.2.1 Firmware and Associated Files.
- v2.1.0 Firmware and Associated Files.

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
<p>UNSUPPORTED FILE TYPE</p> <p>Do not upgrade to firmware version 2.1.0 or later 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.</p> <p>Failure to follow these instructions can result in loss of firmware downgrade functionality.</p>

Upgrade agent

Meter firmware upgrades later than v2.1.0 can proceed only after the meter has been updated with the upgrade agent (.upx) file.

After upgrading the meter firmware to v2.2.1, the v2.1.0 upgrade agent cannot be re-applied.

Display firmware

- Display firmware upgrade files only apply to the PM89RD96 (96 x 96 mm remote display) with firmware v3.2.xxx or earlier.
- PM89RD96 displays that have firmware version v3.2.xxx or earlier are not compatible with meters with firmware v2.1.0 or later.
- Upgrade the PM89RD96 display to firmware v4.0.10 or later to use it with a meter with firmware v2.1.0 or later.
- The display must be connected to the meter and the meter must be connected to the same Ethernet network as the computer running ION Setup.

Go to www.schneider-electric.com and search for Upgrade PM89RD96 display firmware for detailed steps on upgrading display firmware.

Restart requirement

Meter restart is not required.

Before you begin

Back up all meter data and any custom templates, frameworks or files before proceeding with the upgrade.

Download latest ION Setup

To upgrade meter firmware, you need ION Setup version 3.2.

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 recently released version, download the installation file, then run it to upgrade ION Setup.

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, copy the **web** folder to a local folder on your computer using an SFTP client (for v2.1.0 and later) OR FTP client (for v2.0.0 and earlier) log in to your meter.

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.

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

- Use a direct Ethernet TCP connection to prevent delays and upgrade failure risks associated with slower communications connection methods. You cannot perform certain firmware updates over serial or Ethernet gateway.
- The display, webpages and option module firmware updates require an SFTP over Ethernet connection (for v2.1.0 and later) OR FTP over Ethernet connection (for v2.0.0 and earlier).
- Use a computer connected to the same Ethernet network as the meter (physically or through a remote desktop connection).
- To upgrade PM89RD96 or RD192 display firmware, the display must be connected to the meter.
- To upgrade option module firmware, the option module(s) must be connected to the meter.

Upgrading Meter Firmware to v2.1.0

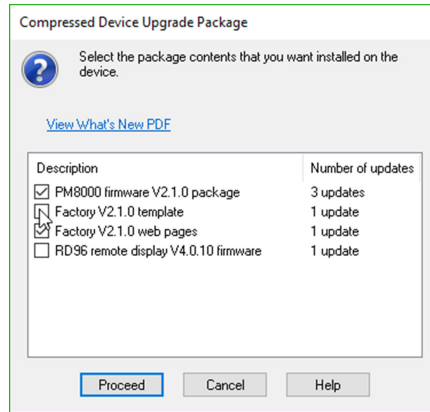
Option 1 (recommended): Upgrade to v2.1.0 using ZIP file

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.

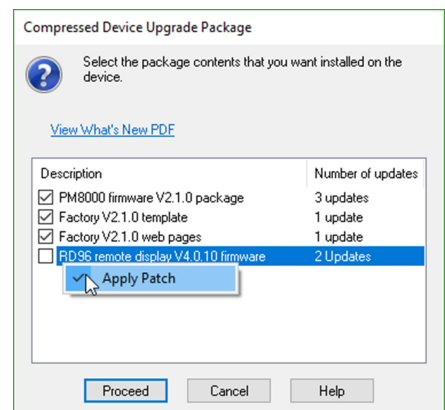
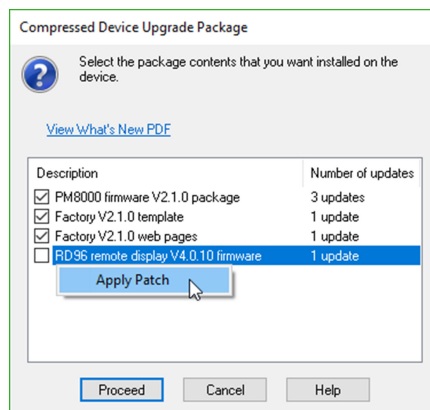
NOTE: Click the **View What's New PDF** link if you want to open and read the document outlining the new and changed features related to the firmware upgrade.

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

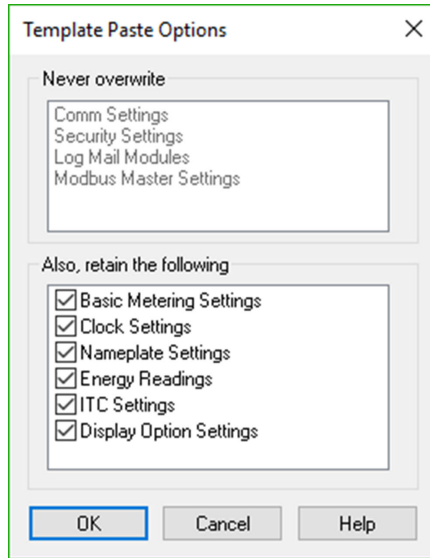


- **PM8000 firmware V2.1.0 package** contains three updates to be applied in the order listed.
 - A. v001.088.000.upg
 - B. v002.001.000.upx
 - C. UpgradeAgent_v002.001.000.upx
- **Factory V2.1.0 template** is the meter template that is programmed to the meter after the firmware upgrade is complete.
- **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 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 V4.0.15 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, if you selected a template component:



- 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 to v2.1.0 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, display and option module firmware.

Meter firmware upgrade

Follow tasks in the order 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.

Upgrading Meter Firmware to v2.2.1

Option 1 (recommended): Upgrade to v2.2.1 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 v2.2.1.

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:

Compressed Device Upgrade Package

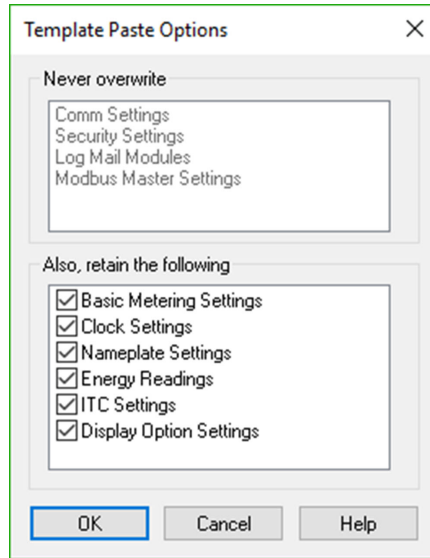
Select the package contents that you want installed on the device.

[View What's New PDF](#)

Description	Number of updates
<input type="checkbox"/> ION9000 V002.001.000 Upgrade Agent fir...	1 update
<input checked="" type="checkbox"/> ION9000 V002.002.001 firmware package	1 update
<input type="checkbox"/> Factory 9000T V2.2.0.0.0 template	1 update
<input type="checkbox"/> Factory 9000 V2.2.0.0.0 template	1 update
<input checked="" type="checkbox"/> RD96 remote display V004.000.015 firmware	1 update
<input checked="" type="checkbox"/> Factory V002.002.001 webpages	1 update

- **PM8000 firmware V2.2.1 package** to be applied in the order listed:
 - A. UpgradeAgent_V002.001.000.upx (not required if already applied)
 - B. v002.002.001.upx
- **Factory V2.2.1 template** is the meter template that is programmed to the meter after the firmware upgrade is complete.
- **Factory V2.2.1 web pages** are the files to be uploaded to the meter's **web** SFTP folder, to update the meter webpages with firmware-related changes.

6. Select the desired settings and readings to be retained, if you selected a template component:



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 to v2.2.1 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, display and option module firmware.

Meter firmware upgrade

Follow tasks in the order listed:

- A. UpgradeAgent_V002.001.000.upx (not required if already applied)
- B. V002.002.001.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.

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.

Meter webpages

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

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

Upgrading analog I/O option module firmware

Firmware v2.1.0 adds 0 to 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 search for METSEPM89M0024 firmware 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.

Technical assistance

Go to www.schneider-electric.com and search for support to get assistance with troubleshooting.