

RD96 Display upgrade using ION9000 meter

This document describes the process to upgrade RD96 display firmware for use with ION9000 series meters.

The RD96 display firmware upgrade applies to the following products:

Commercial Reference	Description
METSEPM89RD96	96 x 96 mm remote display
METSEION92030	ION9000 series meter, without display
METSEION92830	ION9000 series meter, without display (China)

In this document

Safety information	2
Important information.....	2
Upgrade Overview.....	3
Should I Upgrade My Display Firmware?.....	3
Prerequisites	4
Display Firmware Upgrade Methods.....	5
Upgrade Status	6
Appendix A: Two-Step Display Firmware Upgrade Methods.....	8
Appendix B: Display Troubleshooting Icons	10

Additional Information

- *PowerLogic ION9000 series user manual*
- ION Setup online help

Schneider Electric
2195 Keating Cross Road
Saanichton, BC
Canada V8M 2A5

For technical support, go to
www.schneider-electric.com/b2b/en/support/contacts.jsp

Download our web and digital self-service app at
www.schneider-electric.com/b2b/en/support/myschneider-app/

ION, ION Enterprise, Modbus, Modicon, PowerLogic and Schneider Electric are trademarks or registered trademarks of Schneider Electric in France, the USA and other countries. Other trademarks used are the property of their respective owners.

Electrical equipment should be installed, operated, serviced, and maintained only by qualified personnel. No responsibility is assumed by Schneider Electric for any consequences arising out of the use of this material.

© 2019 Schneider Electric. All rights reserved.

Doc # 7EN72-0202-00



Safety information

Important information

Read these instructions carefully and look at the equipment to become familiar with the device before trying to install, operate, service or maintain it. The following special messages may appear throughout this bulletin or on the equipment to warn of potential hazards or to call attention to information that clarifies or simplifies a procedure.



The addition of either symbol to a “Danger” or “Warning” safety label indicates that an electrical hazard exists which will result in personal injury if the instructions are not followed.



This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.

⚠ DANGER
DANGER indicates a hazardous situation which, if not avoided, will result in death or serious injury.

⚠ WARNING
WARNING indicates a hazardous situation which, if not avoided, could result in death or serious injury.

⚠ CAUTION
CAUTION indicates a potentially hazardous situation which, if not avoided, could result in minor or moderate injury.

NOTICE
NOTICE is used to address practices not related to physical injury. The safety alert symbol shall not be used with this signal word.

Please note

Electrical equipment should be installed, operated, serviced and maintained only by qualified personnel. No responsibility is assumed by Schneider Electric for any consequences arising out of the use of this material.

A qualified person is one who has skills and knowledge related to the construction, installation, and operation of electrical equipment and has received safety training to recognize and avoid the hazards involved.

Upgrade Overview

The ION9000 series meter supports the RD96 remote display. The display firmware must be upgraded to v4.0.x to use with the ION9000 series meters.

Your remote display must be connected to an ION9000 series meter to perform the display firmware upgrade.

Do not perform this display firmware upgrade if you need to use your RD96 with PM8000 or ION7400 series meters with meter firmware version v1.4.x and older.

NOTICE

UNINTENDED DISPLAY FUNCTION

The v4.0.x RD96 display firmware upgrade breaks compatibility with meter firmware versions v1.4.x and older.

FAILURE TO FOLLOW THESE INSTRUCTIONS CAN RESULT IN LOSS OF DISPLAY FUNCTIONALITY

Upgrading your display firmware may take up to 15 minutes to complete.

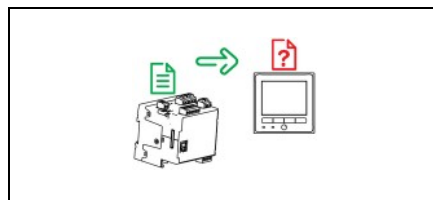
Note: If your meter's remote display loses power during firmware upload, the display will revert to its original firmware and you will have to repeat the display firmware upgrade procedure.

Should I Upgrade My Display Firmware?

The RD96 display firmware upgrade is required under the following conditions:

Display Troubleshooting Icon

The display icon indicates a display firmware update is required.



Refer to [Appendix B: Remote display troubleshooting icons](#) for additional information.

Display Firmware Version

Displays with firmware version v3.x.x or older require a display firmware upgrade for compatibility with your ION9000 series meter.

Use ION Setup to determine the display firmware version and revision.

Navigate to **ION Setup > Advanced Meter Mode > Factory module > Setup registers > RMD Revision.**

Note: If the RD96 is not compatible with the meter it is connected to, the display serial number and display firmware revision will either be N/A or no data will be provided by ION Setup.

Prerequisites

Tools and Equipment

You can upgrade the RD96 display firmware with ION Setup using an Ethernet connection or by using an FTP client. The recommended upgrade method is [Option 1: Upgrade Using ION Setup.](#)

- Computer with Ethernet connection
- ION Setup (v3.1.x or newer)
- FTP access to your meter from the computer running ION Setup
- FTP client such as WinSCP
- Ethernet-connected ION9000 series meter
- RD96 Display connected to the ION9000 series meter

Note: The FTP protocol must be enabled on your meter. Refer to the user manual for instructions on enabling the FTP protocol.

RD96 Display Firmware Upgrade Files

Download the RD96 display firmware upgrade files from www.schneider-electric.com.

Navigate to **Support > Product Documentation & software downloads**, search for RD96 firmware, and download:

- `rmdupg_rd96_004.000.000.bin`
- `rmdupg_rd96s_001.000.000_patch.bin`

Some RD96 displays may require a two-step firmware upgrade for compatibility with the ION9000 series meter. The RD96 display firmware must be upgraded with the `rmdupg_rd96s_001.000.000_patch.bin` file before proceeding with the `rmdupg_rd96_004.000.000.bin` display firmware upgrade file.

Display Firmware Upgrade Methods

There are two display firmware upgrade methods:

- [Option 1: Upgrade Using ION Setup](#)
This is the recommended upgrade method.
- [Option 2: Upgrade Using FTP](#)
Use this option if you do not have ION Setup.

Note: The FTP client does not provide display upgrade status. You need to view the display to determine the upgrade status. Refer to [Display Troubleshooting Icons](#) to determine if the upgrade was completed.

You will not need to restart your device after the display firmware upgrade.

Option 1: Upgrade Using ION Setup

1. Start ION Setup.
2. Open the Setup Assistant for your meter.
3. Select **Template > Upgrade** tab then click **Upgrade**. Enter your meter's password if prompted and click **OK**.
4. Navigate to where you have stored the display firmware upgrade file and select *Remote Display (.BIN)* as the file type.
5. Select the `rmdupg_rd96_004.000.000.bin` firmware file and click **Open**.
6. Click **Yes** to confirm the firmware upgrade. An ION Setup dialog box displays the upgrade progress.

Note: An elapsed timeout is set to 7 minutes.

7. Refer to [Upgrade Status](#) to confirm the display firmware upgrade was completed.
8. If the display upgrade status indicates [Upgrade Not Completed](#), your display may need to be upgraded using the [Two-Step Display Firmware Upgrade Method](#).

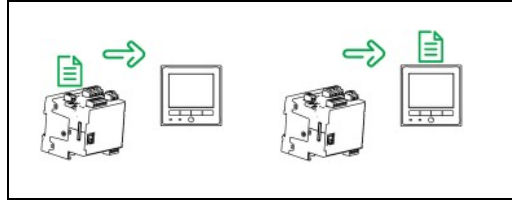
Option 2: Upgrade Using FTP

Load updates to your RD96 display firmware using FTP.

1. Launch the FTP client and connect to your meter's internal FTP site.
2. Copy the `rmdupg_rd96_004.000.000.bin` remote display firmware file to the remote display upgrade folder (*rmDupg*).

Note: The file is immediately transferred to the remote display, and is not stored on the meter.

The following troubleshooting icon indicates that the RD96 firmware upgrade file is being transferred to the display:



3. Wait a minimum of 7 minutes for the RD96 display upgrade to complete.
4. Refer to [Upgrade Status](#) to confirm the display firmware upgrade was completed.
5. If the display upgrade status indicates [Upgrade Not Completed](#), your display may need to be upgraded using the [Two-Step Display Firmware Upgrade Method](#).

Upgrade Status

Upgrade Completed Status

The ION Setup summary screen provides the following information:

- RMD Upgrade Time: <Elapsed RMD upgrade time>
- RMD revision: 004.000.000
- Date and time of the RD96 firmware upgrade
- Additional upgrade details

The RD96 displays the meter Summary screen when the display firmware upgrade is complete.

Upgrade Not Completed Status

The ION Setup summary screen provides the following information:

- RMD Upgrade Time: 7 minutes and 0 seconds
- RMD revision: N/A
- Unable to validate RMD update
- Date and time of the upgrade
- Additional upgrade information

The RD96 displays an icon indicating incompatibility between your meter and display.

Note: The RD96 troubleshooting icon displayed may vary. See Appendix B: Display Troubleshooting Icons for more information.

Technical Support

Contact Technical Support for further assistance.

Appendix A: Two-Step Display Firmware Upgrade Methods

Perform a two-step display firmware upgrade if Option 1 or 2 indicates [Upgrade Not Completed](#).

Two-Step Upgrade Using ION Setup

1. Start ION Setup.
2. Open the Setup Assistant for your meter.
3. Select **Template > Upgrade** tab then click **Upgrade**. Enter your meter's password if prompted and click **OK**.
4. Navigate to where you have stored the display firmware upgrade file and select *Remote Display (.BIN)* as the file type.
5. Select the `rmdupg_rd96s_001.000.000_patch.bin` firmware file and click **Open**.
6. Click **Yes** to confirm the firmware upgrade. An ION Setup dialog box displays the upgrade progress.

Note: An elapsed timeout is set to 7 minutes 0 seconds.

An ION Setup summary screen is displayed when the RD96 display `rmdupg_rd96s_001.000.000_patch.bin` upgrade is complete.

7. Click **Exit**.
8. Repeat steps 4 through 7 using the `rmdupg_rd96_004.000.000.bin` upgrade file.

Note: An elapsed timeout is set to 7 minutes 0 seconds.

9. Refer to [Upgrade Status](#) to confirm the display firmware upgrade was completed.

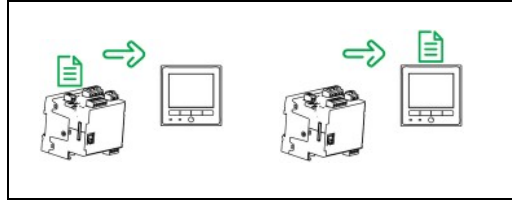
Contact Technical Support if the display upgrade status indicates [Upgrade Not Completed](#).

Two-Step Upgrade Using FTP

1. Launch the FTP client and connect to your meter's internal FTP site.
2. Copy the `rmdupg_rd96s_001.000.000_patch.bin` remote display firmware file into the remote display upgrade (*rmDupg*) folder.

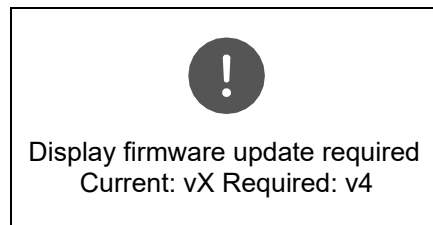
Note: The file is immediately transferred to the remote display, and is not stored on the meter.

3. The following troubleshooting icon indicates that the RD96 firmware upgrade file is being transferred to the display:



4. Wait a minimum of 7 minutes for the RD96 display upgrade to complete.

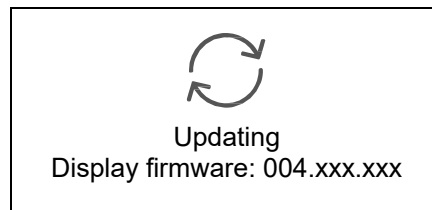
The following screen indicates that the `rmdupg_rd96_004.000.000.bin` can be uploaded.



5. Copy the `rmdupg_rd96_004.000.000.bin` remote display firmware file into the remote display upgrade (*rmdUpg*) folder.

Note: The file is immediately transferred to the remote display, and is not stored on the meter.

6. The following troubleshooting icon indicates that the RD96 firmware upgrade file is being transferred to the display:



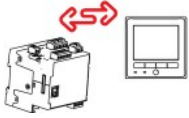

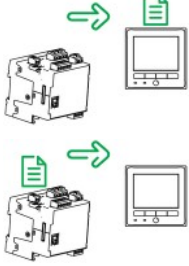
7. Wait a maximum of 7 minutes for the RD96 upgrade to complete.
8. Refer to [Upgrade Status](#) to confirm the display firmware upgrade was completed

Contact Technical Support if the display upgrade status indicates [Upgrade Not Completed](#).






Appendix B: Display Troubleshooting Icons

Use the display troubleshooting icons to determine the display connection status with the meter.

Remote Display Firmware v3.2.x (or older) Icons

Icon	Display Status
	<p>Remote display cannot communicate with your meter. Check the connection between your meter and the display. Check the meter's status LED to confirm that the meter is operating normally.</p>
	<p>Remote display needs updated firmware for compatibility with your meter.</p>
	<p>Remote display is undergoing a firmware upgrade. Do not disconnect your remote display from your meter.</p>

Remote Display Firmware v4.0.x Icons

Icon	Display Status
 Connecting	Remote display is connecting to your meter.
 Error	Remote display cannot communicate with your meter. Check the connection between your meter and the display. Check the meter's status LED to confirm that the meter is operating normally.
 Display firmware update required Current: vX Required: v4	Remote display needs updated firmware for compatibility with your meter. Note: vX is used here to illustrate the current remote display firmware version.
 Updating	Remote display is downloading a firmware upgrade. Do not disconnect your remote display from your meter.
 Updating Display firmware: 004.xxx.xxx	Remote display is undergoing a firmware upgrade. Do not disconnect your remote display from your meter.