PredictPulse™ Setup for an Eaton® Gigabit Network (Network-M2) Card

Introduction

This document provides instructions on setting up Predict*Pulse* with an Eaton Gigabit Network (Network-M2) card (see Figure 1).

Figure 1. Network-M2 Card

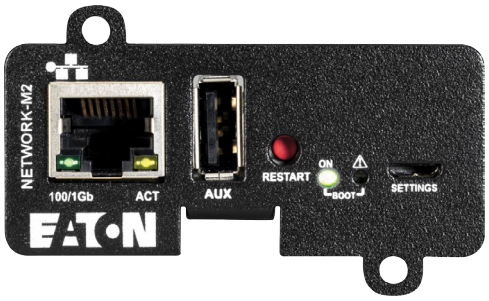
NOTE Eaton 9E and 93E UPS models must be at a minimum firmware version of 1.30.0004 (CSB) and 1.30.0000 (UPM) to be compatible with the Network-M2 card.

Network-M2 Card Installation

To install the Network-M2 card:

1. Install the Network-M2 card into the UPS and wait approximately three minutes for the card to become operational.
   - The red BOOT status LED blinks while the card is booting.
   - When the card is operational, the green BOOT status LED illuminates and begins to blink (see Figure 2).

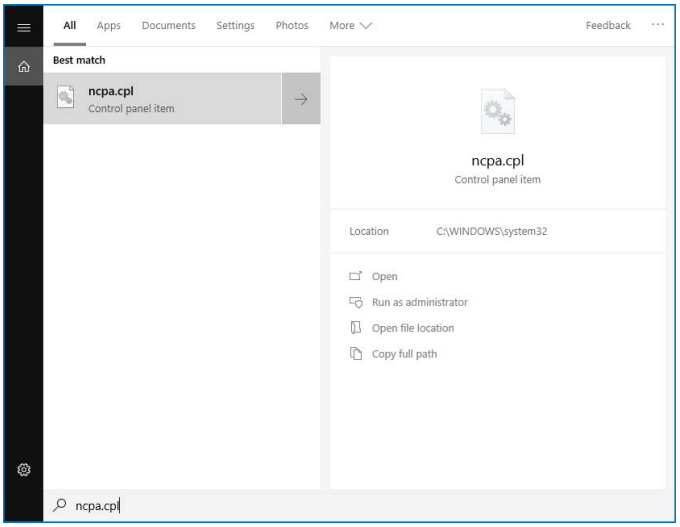
Figure 2. Network-M2 Card Green BOOT Status LED



2. Connect the USB configuration cable from your laptop to the Network-M2 card and allow Windows to detect the device.

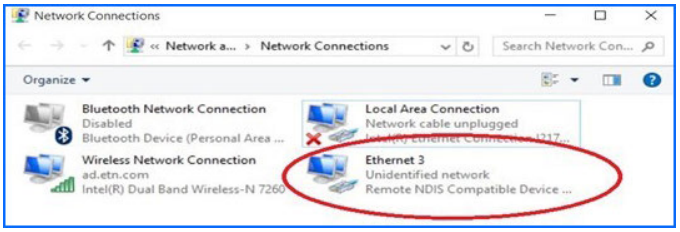
3. Navigate to the **Search** window on your laptop, type *ncpa.cpl*, and then press **Enter** (see Figure 3).
   - If Network Connections is not found in your Search window, type in *control panel*, select *Network and Sharing Center*, and then select *Change adapter settings*.

Figure 3. Run Windows Search for Ncpa.cpl



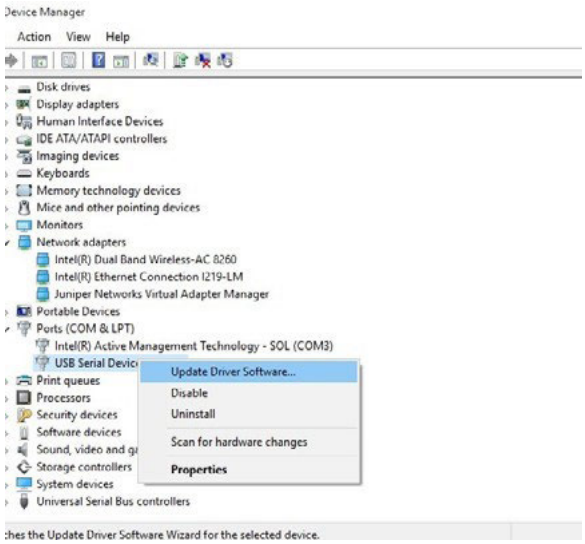
- The **Network Connections** window displays (see Figure 4).

Figure 4. Network Connections Window



4. Verify that there is a Remote NDIS (RNDIS) network device shown.
   - If an RNDIS network device is not shown, call the Brightlayer Data Center at 800-356-5737, option 2, option 2 for assistance.
5. If Windows fails to find the driver automatically, it may because Windows detects the Eaton USB service port as a serial COM port. To resolve this issue:
   a. Navigate to the Eaton Gigabit Network Card Web page.
   b. Expand the **Software, firmware, and applications** section and download the RNDIS driver file.
   c. Manually install the device driver.
   d. With the USB cable connected to the card, open the **Device Manager** and expand the *Network adapters* and *Ports (COM and LPT)* sections (see Figure 5).

Figure 5. Windows Device Manager



e. Find the suspected Eaton USB device in **Device Manager**.

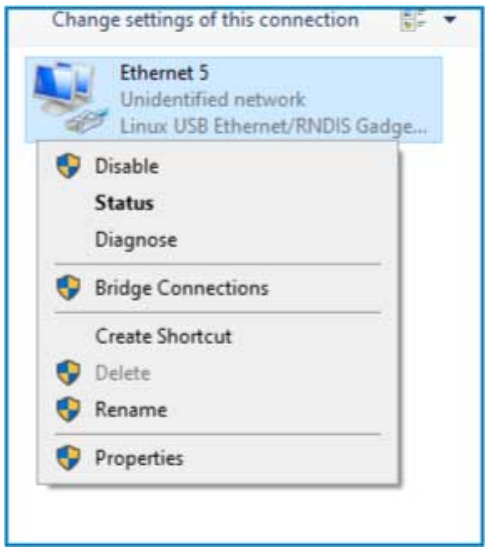
- In this example, it is USB Serial Device (COM4). Unplug and re-plug the USB cable to verify the correct device.

f. Browse to the location where the RNDIS was downloaded and the zipped files were extracted. Select **OK** and **Next** and the driver will be installed. This procedure takes approximately 30 seconds.

g. After the driver update is complete, verify that the COM port is gone and a *USB Ethernet/RNDIS Gadget* is in the *Network adapters* section of the **Device Manager**.

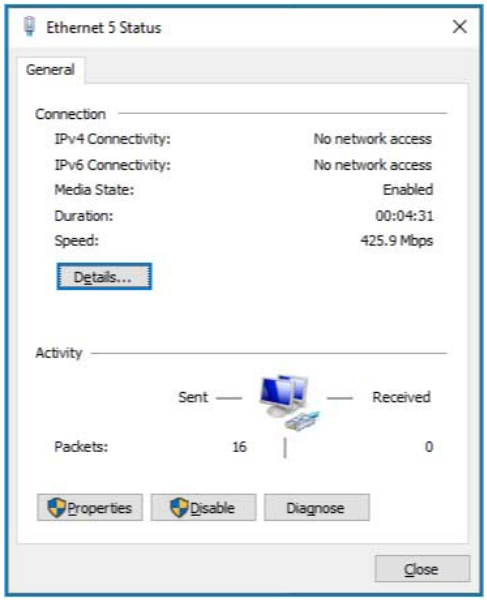
6. In the **Network Connections** window (see Figure 4), right-click the RNDIS network device and choose **Status** (see).

Figure 6. Select the RNDIS Network Device Status Display



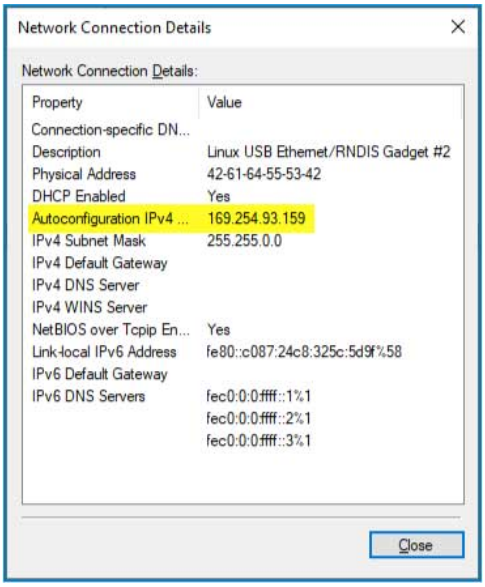
7. The **Ethernet *X* Status** window displays (see Figure 7). Click **Details**.

Figure 7. Ethernet *X* Status Window



8. Click **Details**. The **Network Connection Details** window displays (see Figure 8). Verify that IPv4 address starts with *169.254* as highlighted in the figure.

Figure 8. Network Connection Details



9. Connect the site cable (RJ-45 / CAT 5 [internet]) to the Network-M2 card (see Figure 9).

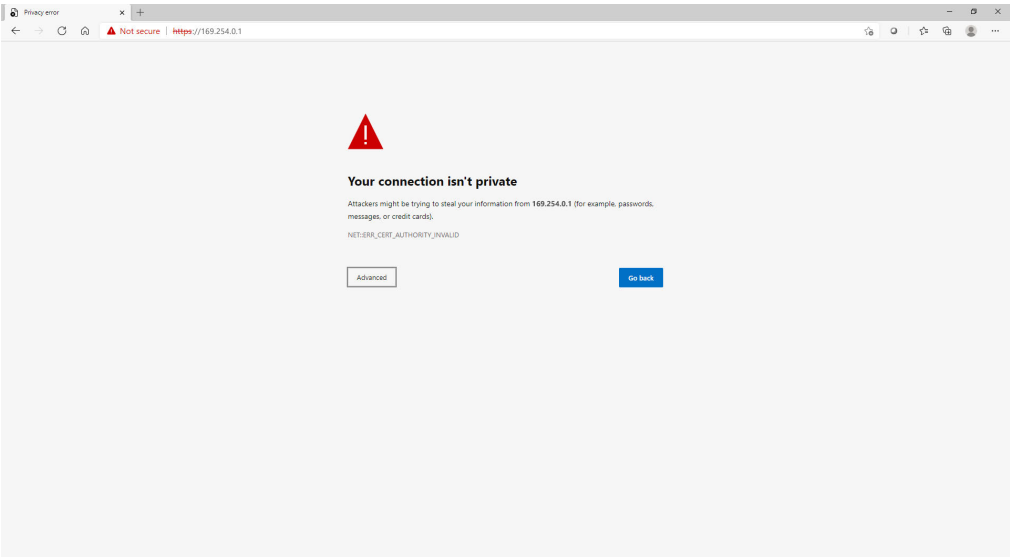
Figure 9. Connect Site Cable to the Network-M2 Card

10. Open an internet browser. Enter the IP address *https://169.254.0.1* and press **Enter**.

NOTE If a network proxy prevents from using APIPA IP address *169.254.0.1*, open the RNDIS driver file downloaded earlier and double-click the *setProxy.bat* file in order to allow *169.254.0.1* APIPA address access. Wait for instructions from the script.

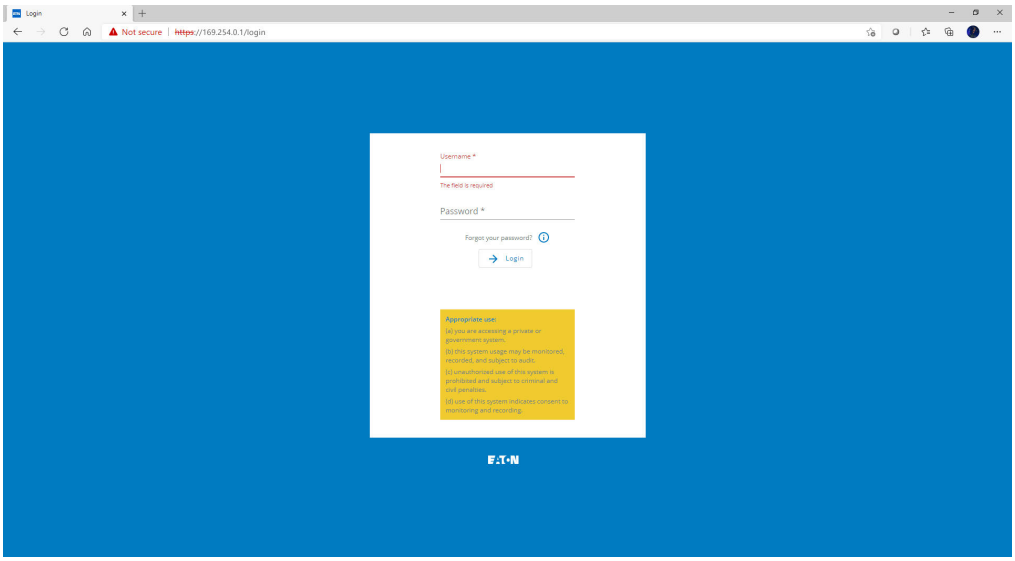
a. The security certificate error warning in Figure 10 displays. Click **Advanced** and then select **Continue to 169.254.0.1 (unsafe)**.

Figure 10. Website Security Certificate Error



b. The login window shown in Figure 11 displays. Enter the following login information and press **Enter**.
Username: *admin*
Password: *admin*

Figure 11. Login Window



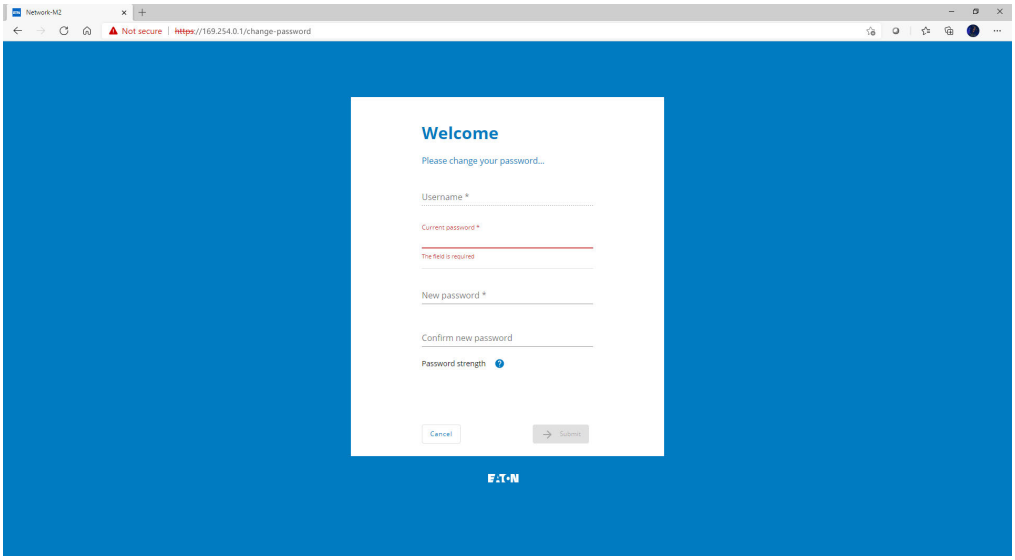
c. The change password window shown in Figure 12 displays.

- In the *Current password* field, enter *admin*.
- In the *New password* field, enter ***Eaton123!***
- In the *Confirm new password* field, re-enter ***Eaton123!***

NOTICE

Entering a password other than *Eaton123!* may cause the PredictPulse activation to fail.

Figure 12. Change Password Window

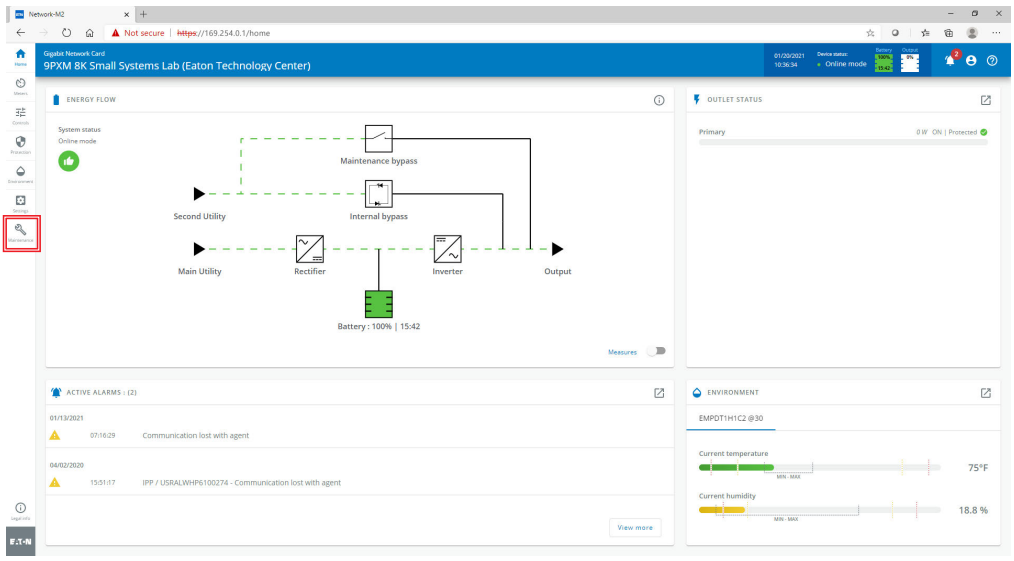


d. Click **Submit**. A **Password changed** window displays requesting the username and new password. Enter the following login information and press **Enter**.
   Username: *admin*
   Password: *Eaton123!*

e. A **Read license agreement** window displays. Read the license agreement, check the **I accept the license agreement** checkbox, and click **Continue**.

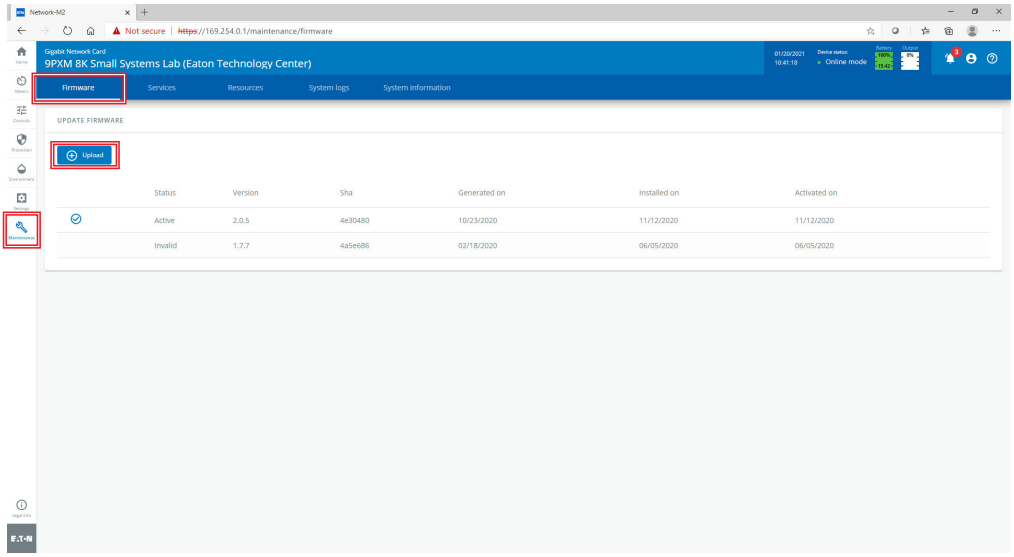
11. The Network-M2 home page displays, indicating communication with the UPS (see Figure 13).

Figure 13. Network-M2 Card Home Page



12. Click on the **Maintenance** icon to verify that the Network-M2 card firmware is the most recent. The **Firmware** tab shown in Figure 14 displays.

Figure 14. Network-M2 Card Firmware Tab



13. The *Version* column shows the firmware version of the card. To be compatible with Predict*Pulse*, verify that firmware level is at the latest revision. Check the latest revision of the firmware on the Eaton Gigabit Network Card Web page. To update the firmware:

    a. Expand the *Software, firmware, and applications* section and download the current firmware.

    b. On the **Firmware** tab, click **+Upload** to upload the firmware to the card (see Figure 14).

    - If you have any difficulty updating the firmware, call the Brightlayer Data Center at 800-356-5737, option 2, option 2 for assistance.

    c. When the firmware update is complete, allow the card to restart and become operational.

    d. Log in to the card and return to the **Firmware** tab (see Figure 14) to confirm that the firmware update was successful.

14. Configure the Eaton Environmental Monitoring Probe (EMP):

    a. Remove the EMP and cable from the box.

    b. Refer to the *EMP Installation Instructions* (located in the bottom of the EMP box).

    c. Set the EMP DIP switches (see Figure 15) to the appropriate settings for your application:

    - For a single-EMP system, set the **1** and **TER** switches to the *1* position.
    - For a multiple-EMP system, set the **MODBUS ADDRESS** (1 – 16) switches to a different address for each EMP in the daisy-chain. Set the **TER** switch to the *1* position on the last EMP in the daisy-chain; set it to *0* on all the other EMPs.

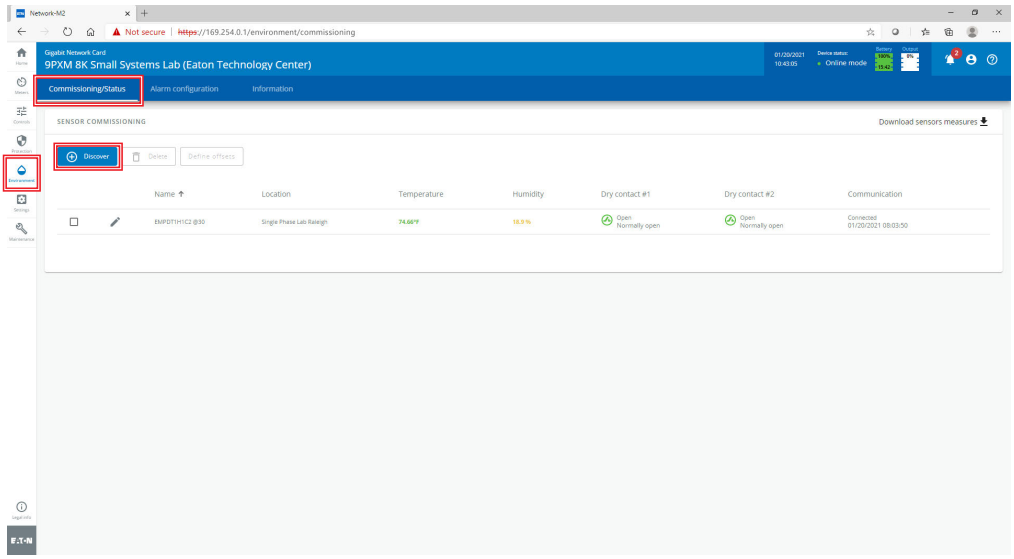
Figure 15. EMP DIP Switches

    d. Connect the USB end of cable to the Network-M2 card and the RJ-45 end of the cable to the **From Device** port on EMP.

15. Select the **Environment** icon on the left side of the menu and select the **Commissioning/Status** tab (see Figure 16). Click **Discover**.

    - The EMP device should be discovered.
    - If the device is not found, verify the EMP settings and connections and then click **Discover** again.

Figure 16. Network-M2 Card Commissioning/Status Tab

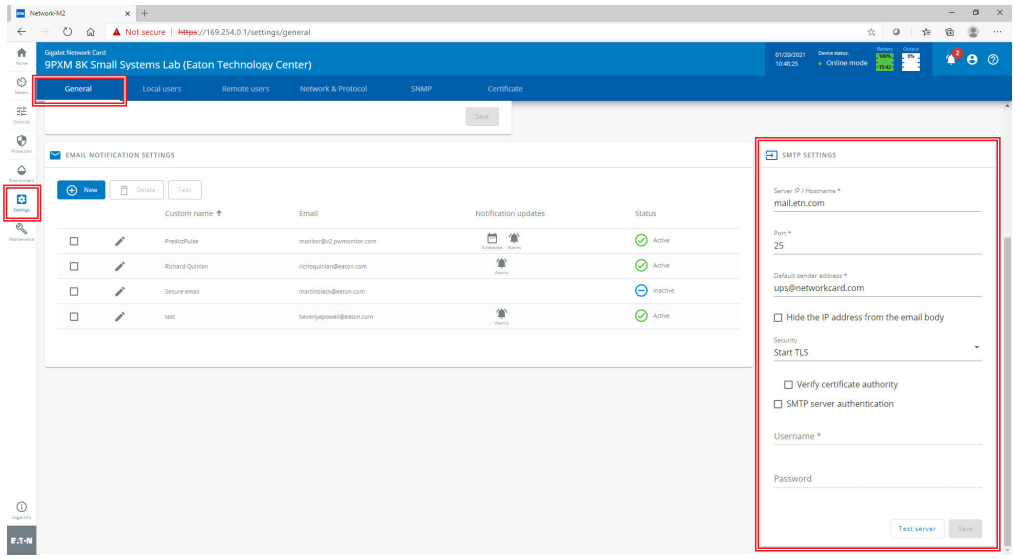


NOTE If connecting PredictPulse via a NetComm Wireless router, refer to document Connecting a NetComm Wireless Router to an Eaton Network Card for the remaining card configuration settings. If connecting via a ***Sierra Wireless LX40 LTE router, refer to document Connecting a Sierra Wireless LTE Router to an Eaton Network Card***.

16. Select the **Settings** icon on the left side of the menu and select the **General** tab. Scroll down to display the *SMTP Settings* (see Figure 17).

    - Configure the SMTP Server IP/Hostname with the customer e-mail server address (for example, *mail.company.com*; note that the *mail.etn.com* in Figure 17 is only an example). Include the recipient's e-mail address in the *Default sender address* field (for example, *John.Doe@company.com*).
    - Click **Save** after any changes.

Figure 17. Network-M2 Card General Tab – SMTP Settings



17. Select the **Network & Protocol** tab (see Figure 18).

    - If the site is using DHCP, the IP addresses are automatically assigned. All the network information should be automatically populated; no other settings need to be configured on this screen.
    - If the site is not using DHCP, click **Edit** in the IPV4 section to display the **IPV4 settings** window (see Figure 19). Change the IPV4 mode to *Manual*; enter the IP Address, Netmask, and Gateway; and click **Save**. Similarly, change the DNS/DHCP mode to *Manual* and enter the Primary and Secondary DNS server addresses. For assistance, call the Brightlayer Data Center at 800-356-5737, option 2, option 2.

Figure 18. Network-M2 Card Network & Protocol Tab

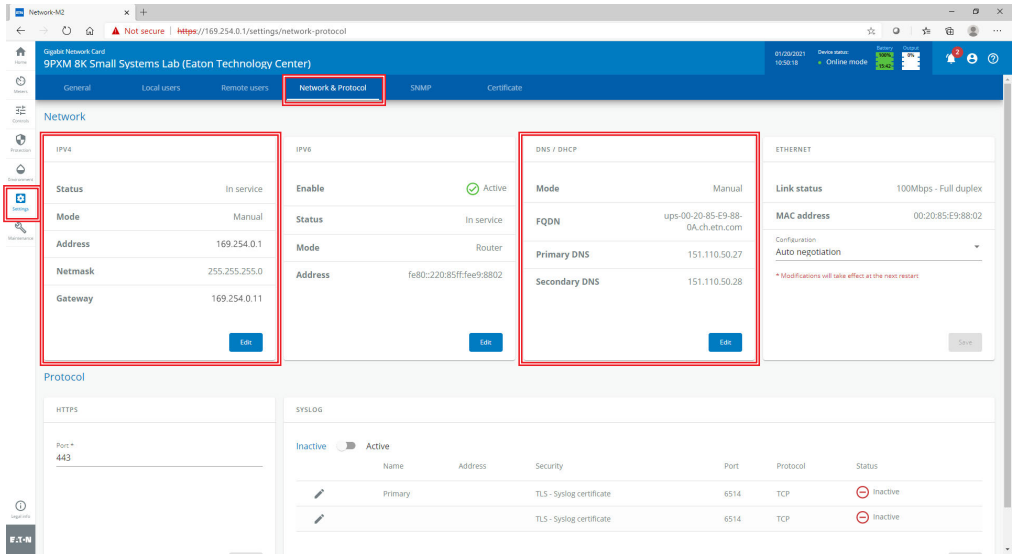
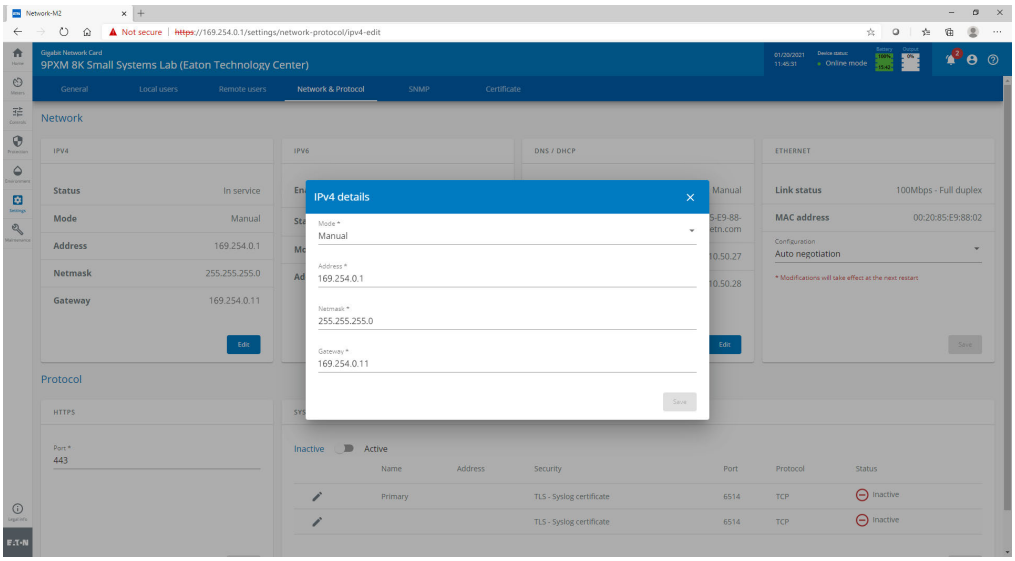
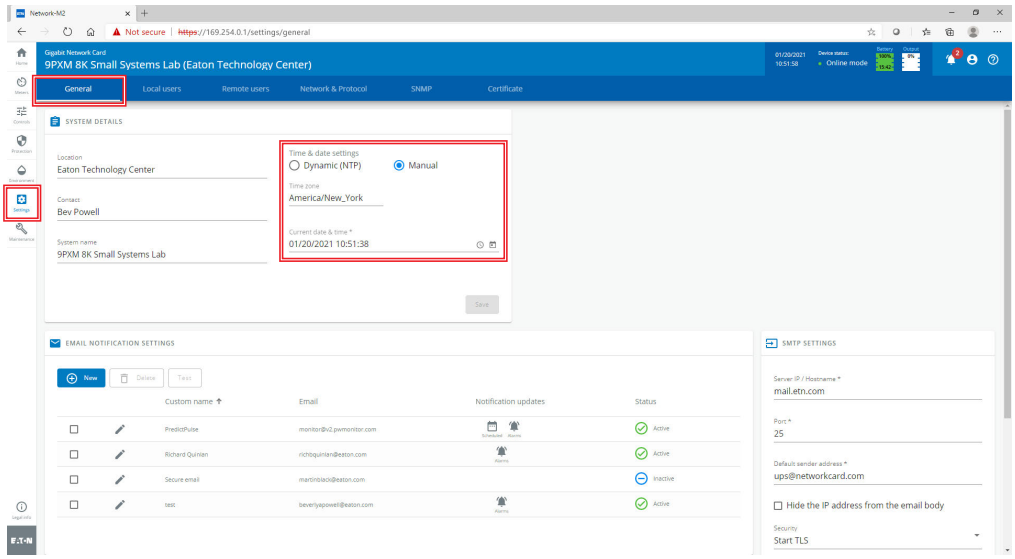


Figure 19. Network M2 Card IPV4 Settings Window



18. Verify that the IP address conforms to the site's internet protocols. If not:
    - Verify the network cable is securely connected to the correct port on the Network-M2 card, then press the **Restart** button for at least six seconds.
    - After the card has rebooted and is back online (approximately three minutes), return to the **Network & Protocol** tab to verify the IP address.
    - If the address is still incorrect, call the Brightlayer Data Center at 800-356-5737, option 2, option 2.
19. Select the **General** tab (see Figure 20).
    a. Select the correct Time zone.
    b. If a Network Time Protocol server is available, select the **Dynamic (NTP)** radio button and enter the server information in the *NTP Server* field.
    c. If NTP is not available, select the **Manual** radio button and select the *Date* field to update the date and time.

Figure 20. Network-M2 Card General Tab



PredictPulse Activation

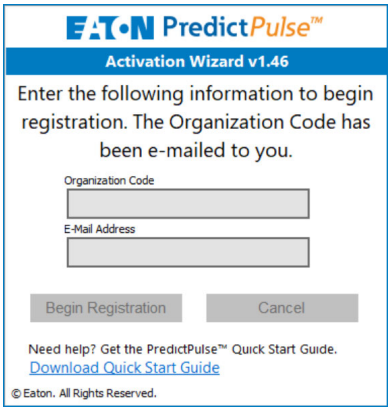
NOTE You must be connected to the site's network to run the PredictPulse wizard.

Before proceeding, ensure that an account was first created at https://predictpulseapp.eaton.com or that your site administrator has invited you to your already-created account so your organization code can be obtained.

To activate PredictPulse:

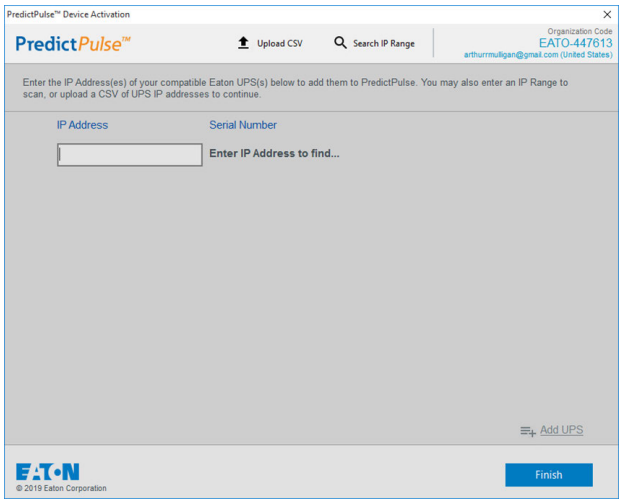
1. Run the PredictPulse Wizard (ActivatePredictPulse.exe). The Eaton PredictPulse window displays (see Figure 21).

Figure 21. PredictPulse Wizard Initial Display



2. Enter the *Organization Code* and customer *E-Mail Address* and click **Begin Registration**. The **PredictPulse Device Activation** window displays (see Figure 22).

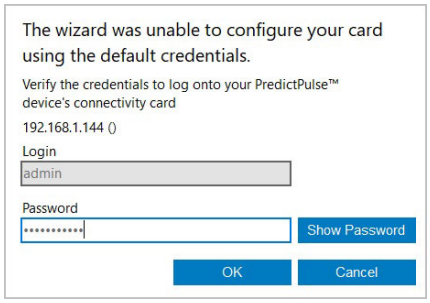
Figure 22. PredictPulse Device Activation Window



3. Enter the IP address or a range of IP addresses to continue. The wizard attempts to connect to a UPS at that address.

NOTE If the wizard displays the configuration error message shown in Figure 23, enter the card's username and password and click **OK**.

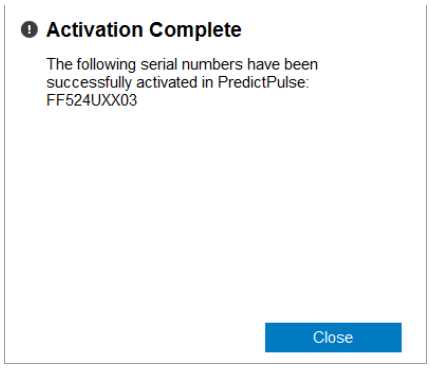
Figure 23. PredictPulse Wizard Card Configuration Error



4. The PredictPulse wizard activates each card. Upon completion, the wizard displays a confirmation message (see Figure 24).

NOTE If the user is running Microsoft Outlook and it is open, an activation email is sent automatically to Eaton's PredictPulse servers. If the user does not have Outlook installed, the email components are saved in the user's *My Documents* folder and instructions are provided for sending the activation email manually.

Figure 24. Activation Complete Window



NOTE The registration process to activate the unit for PredictPulse may take 15 minutes or more. To ensure the PredictPulse activation was successful, call the Brightlayer Data Center at 800-356-5737, option 2, option 2 for assistance.

PredictPulse Remote Monitoring Activation Completion Checklist

- https://PredictPulseapp.eaton.com account enrollment complete
- PredictPulse compatible network connectivity card installed
- Connectivity card upgraded to latest firmware
- Environmental Monitoring Probe connected
- PredictPulse activation wizard run from https://PredictPulseapp.eaton.com account
- Call placed to Brightlayer Data Center at 800-356-5737, option 2, option 2 to confirm portal activation and communication receipt

Modem Use Only

- Network switch installed (if multiple UPS are connected to the same modem) (see Connecting a NetComm Wireless Router to an Eaton Network Card)
- Modem NTP configured (see Connecting a NetComm Wireless Router to an Eaton Network Card)
- PredictPulse activation wizard run from modem connection (see Connecting a NetComm Wireless Router to an Eaton Network Card)
- For an Eaton 9E or 93E UPS model only, a Universal Accessory Power (UAP) kit is required if no UPS-protected electrical outlet is available to power the modem and/or network switch. The UAP must be installed by an Eaton technician. Contact your Eaton service representative for a quote.

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