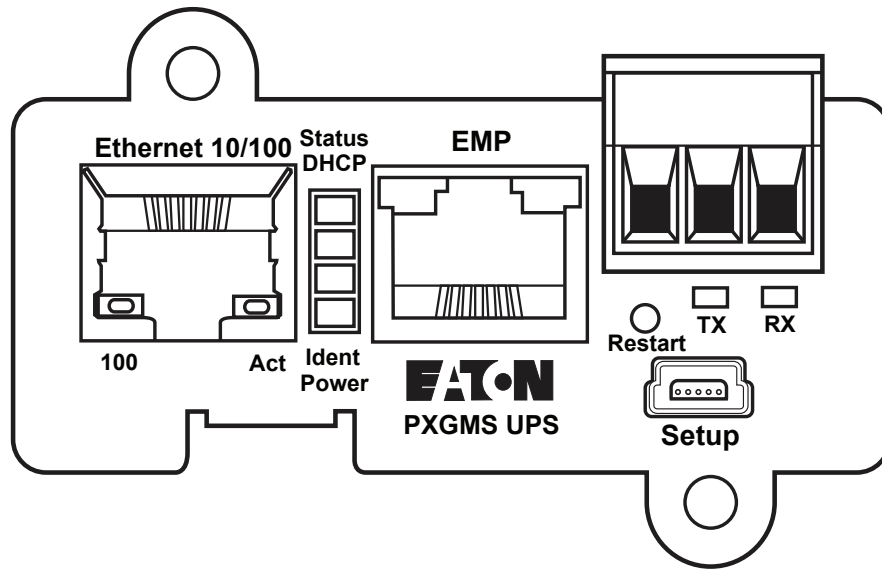


Eaton® Power Xpert® Gateway Minislot (PXGMS) UPS Card

Quick Start Instructions



Package Contents

- Power Xpert Gateway Minislot (PXGMS) UPS Card
- USB Cable
- Quick Start Instructions

Help Desk Numbers

United States	1-800-356-5737 or 1-800-843-9433
Canada	1-800-461-9166 ext 260
All Other Countries	Call your local service representative
Web Site	www.eaton.com/pxgms



NOTE

On the Web site opening page, click **Support** and select the Customer Service link for more information.

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Eaton Power Xpert Gateway Minislot (PXGMS) UPS Card Quick Start Instructions

Installation Checklist

1. Verify that the following items are available:
 - Power Xpert Gateway Minislot (PXGMS) UPS Card package contents (card, cable, Quick Start Instructions)
 - Phillips® screwdriver
 - Available USB port on a computer running Microsoft® Windows®
 - Web browser (Microsoft Internet Explorer® version 11.0 and higher, Mozilla® Firefox®, or Google Chrome™ are recommended)
2. If you are going to use Dynamic Host Configuration Protocol (DHCP), provide your local network administrator with the card's MAC address. The MAC address is located on either the shipping box label or the label on this card.
 - MAC Address _____
3. If you are not going to use DHCP to provide any of the settings listed below, contact your local network administrator for the settings.

In the table below, check the **DHCP** check box or enter the values for manual configuration. This data is referenced later in the procedure.

Item	DHCP*	Manual Configuration
IPv4	<input type="checkbox"/>	Card IP Address: _____ Netmask: _____ Gateway: _____
DNS – Name Servers	<input type="checkbox"/>	Name Server #1: _____ Name Server #2: _____ Name Server #3: _____
DNS – Domain	<input type="checkbox"/>	Domain: _____

* The network administrator normally sets up the DHCP server to provide a static IP address each time the card makes a DHCP request.

4. If you need e-mail functionality, obtain the SMTP mail server's IP address or host name. If using the SMTP host name, verify that you also have the Name Server IP address (see [Step 3](#)).
 - SMTP (mail server) IP Address
or Host Name

Install the Card

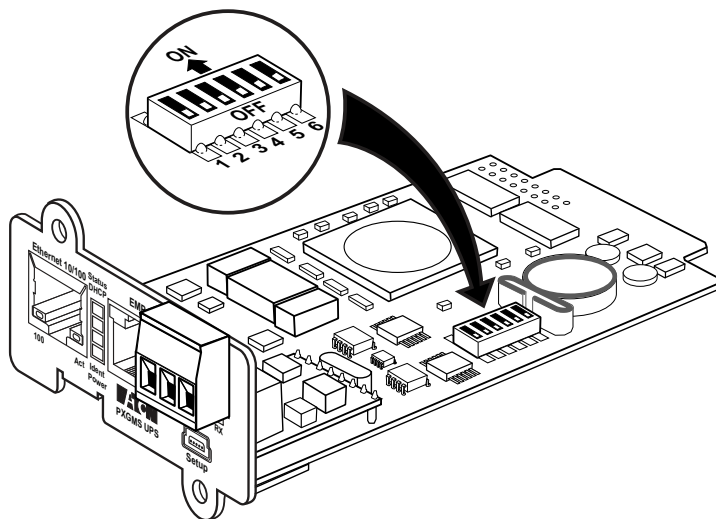
i **NOTE** The hot-swappable PXGMS card can be installed without turning off the UPS or disconnecting the load.

i **NOTE** If your UPS is a 93PM, there may be a metal strip that prevents you from installing the PXGMS card. If so, locate the metal strip bolted to the top of the UPS. Remove the three bolts that attach the metal strip. Then, follow the procedure to install the PXGMS card.

To install the PXGMS card:

1. On the PXGMS card, verify that all six DIP switches are in the **OFF** position (see [Figure 1](#)).

Figure 1. Verify DIP Switches are OFF

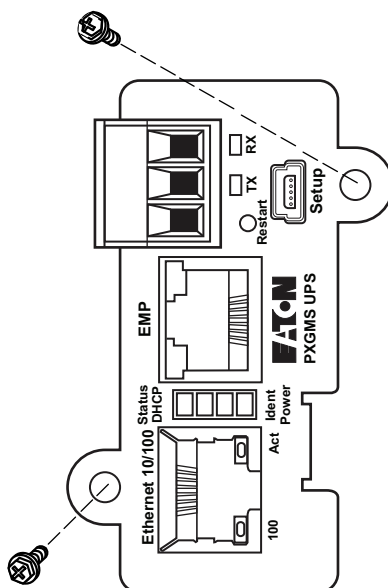


2. If not already done, record the MAC address from either the shipping box label or the label on this card for future reference (see the [Installation Checklist](#) section).
3. Remove the mini-slot cover from the UPS. Retain the screws.

i **NOTE** If another card is already installed with an attached communication cable, disconnect the cable and then remove the card.

4. To prevent electrostatic discharge (ESD), place one hand on a metal surface, such as the UPS rear panel.
5. Slide the card into the open slot and secure it with the screws removed in [Step 3](#) (see [Figure 2](#)).

Figure 2. Secure the PXGMS Card



6. From your laptop, go to www.eaton.com/pxgms.
7. On the **Resources** tab, scroll down and expand the **Software, firmware, and applications** section to download the **Power Xpert Gateway USB Signed Windows Device Driver**.
8. Save the driver configuration file (*eaton-pxgms-firmware.zip*) to the C: drive using the default location or a folder you select. Note the path of the downloaded file on your computer.



NOTE Do not download the file to your desktop.

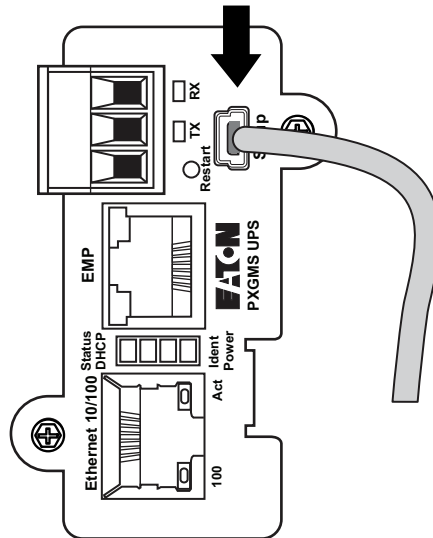
Connect the Card to the Computer

Connect the Card to the Computer

To connect the card to the computer:

1. Plug the small connector at the end of the supplied USB configuration cable into the setup port on the card (see [Figure 3](#)).

Figure 3. Install the USB Cable



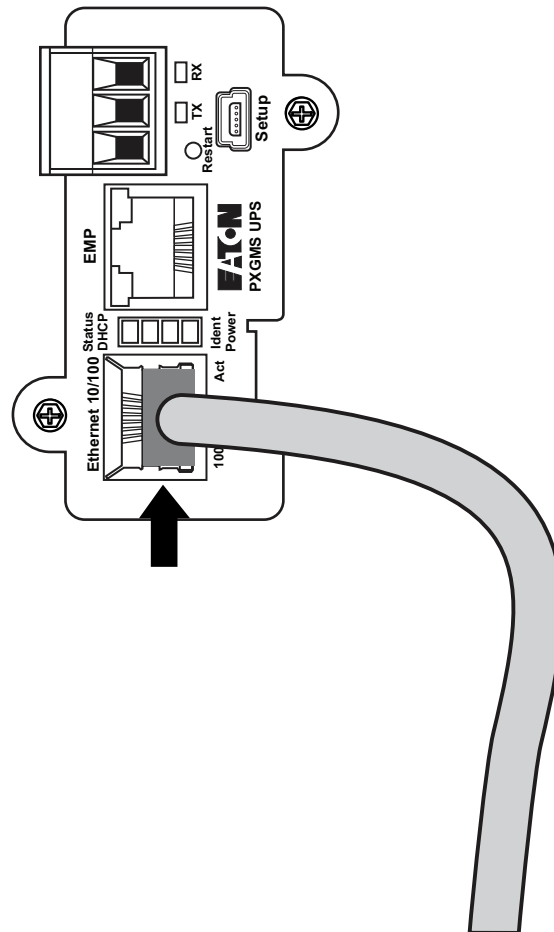
2. Plug the other end of the USB cable into the USB port on the computer. The Windows operating system detects new hardware.

i NOTE If a message indicates that the device driver software was not successfully installed, click **Ignore**.

i NOTE You may see a pop-up message window that shows "Found new hardware." This indicates that the hardware installed successfully.

3. Connect an active Ethernet cable (not supplied) to the Ethernet 10/100 connector on the PXGMS card (see [Figure 4](#)).

Figure 4. Install the Ethernet Cable



4. Wait for the power light and status light on the installed card to illuminate. This takes about two minutes.
5. Open a Web browser and type the default IP address (**https://169.254.0.101** for firmware 2.6.0 or later, **http://192.168.200.101** for earlier firmware versions).
6. Did the Power Xpert Gateway software open to the PXGMS page?
 - If yes, the driver has already been installed automatically. Either verify the IP address assigned through DHCP or manually enter a static (fixed) IP address for the card's network connection:
 - a. To verify the DHCP-assigned IP address, go to [Step 12](#) of the [Obtain a DHCP-Assigned IP Address](#) section.
 - b. To manually enter a fixed IP address, go to [Assign an IP Address Manually](#).
 - If no, the driver has not been installed. Go to the [Install the USB Driver Software](#) section to confirm that you have the most current USB Driver software. If not, install or update the USB Driver software.

Install the USB Driver Software

The steps you use to install the driver software depend on your operating system (OS). This procedure provides instructions for installing driver software on a Windows OS.



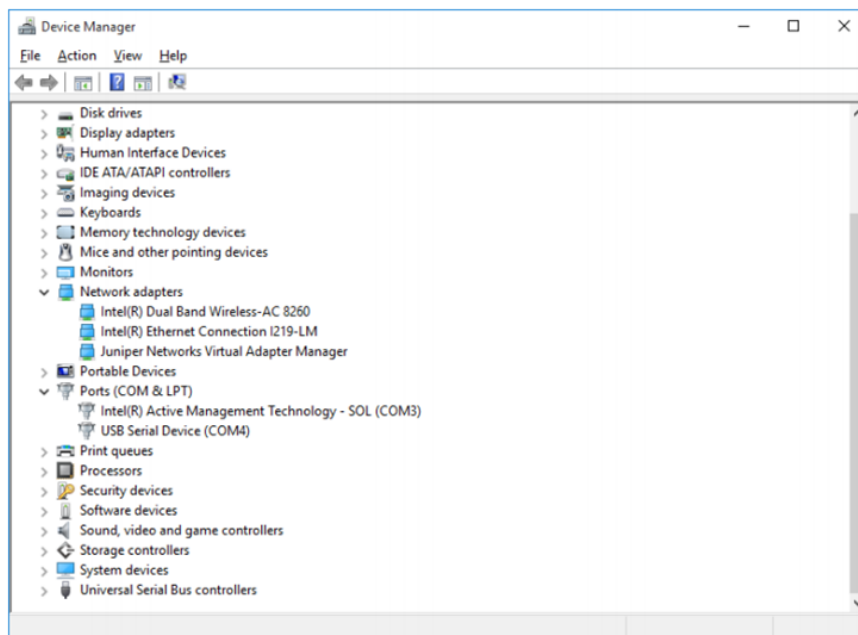
NOTE

You can use either the Device Manager path or the Devices and Printers path to browse for the driver software and install it. This procedure uses the Device Manager.

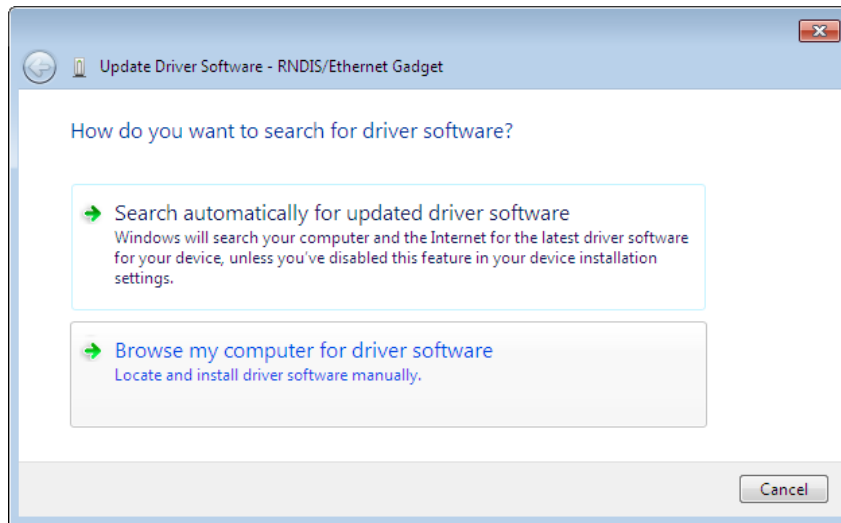
To install the driver from the **Device Manager**:

1. Click **Start** in the Start bar. Type *Device* in the search box.
2. Select **Device Manager** from the list above the search box. The **Device Manager** displays (see [Figure 5](#)).

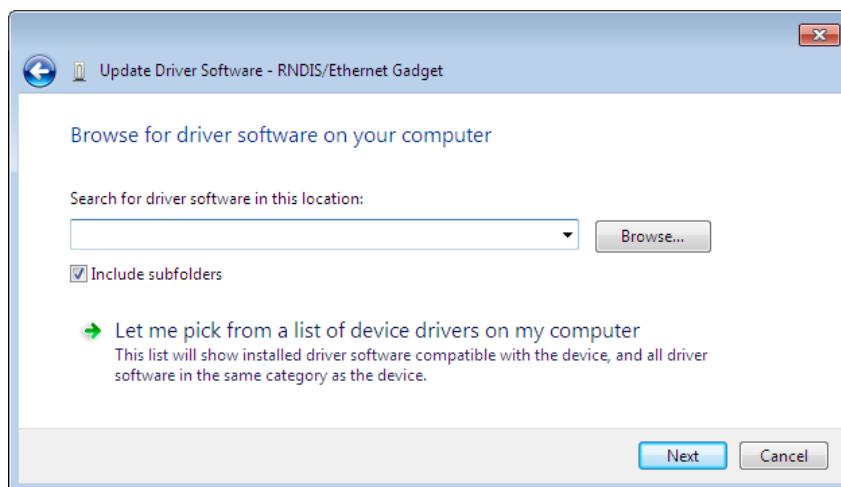
Figure 5. Device Manager



3. Expand the **Network adapters** and **Ports (COM & LPT)** sections as shown in [Figure 5](#).
 - Look for a USB Serial Device with a COM port designation (COM4 in the example shown in [Figure 5](#))
 - Unplug the USB connection to the card to verify the correct COM device in the Device Manager
4. Right-click the **USB Serial Device (COM#)** to display the menu and select **Update Driver Software**.
 - If a pop-up message displays, "The best driver is already installed," click **Close** and go to [Step 10](#).
 - Otherwise, go to [Step 5](#).
5. Select **Browse my computer for driver software** (see [Figure 6](#)). Click **Next**. The next page displays.

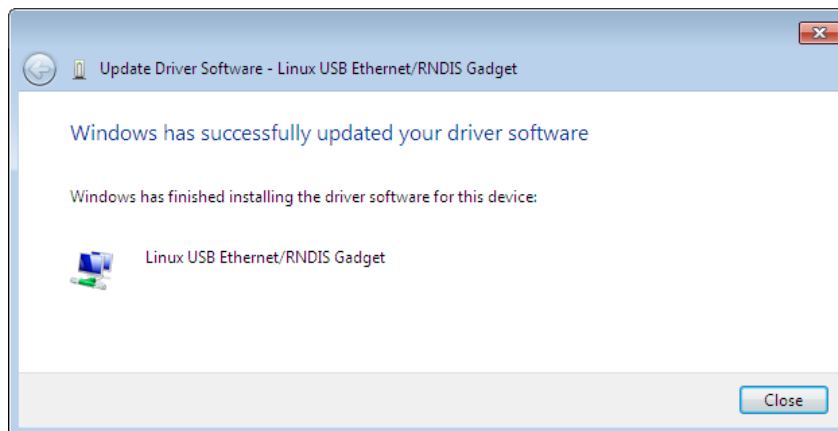
Figure 6. Update Driver Software Window – Search Method

6. Click **Browse**. A “Browse for Folder” dialog displays. Select the folder that contains drivers for your hardware. Click **OK**. A “Browse for driver software on your computer” page displays.
7. The path to the powerxpert.inf file displays in the **Search for driver software in this location** box. Click **Browse** and navigate to the powerxpert.inf file you already downloaded. Select the file and click **Next** (see [Figure 7](#)).
 - If a pop-up message displays, “The best driver is already installed,” click **Close** and go to [Step 10](#).
 - Otherwise, the software begins to install.

Figure 7. Update Driver Software Window – Browse for Driver Software

8. When the driver software is updated successfully, the message “Windows has successfully updated your driver software” displays (see [Figure 8](#)).

Figure 8. Update Driver Software Window – Update Successful



9. Click **Close**.
10. Either obtain the DHCP-assigned IP address or manually enter a fixed IP address:
 - To obtain the IP address assigned through DHCP, continue to the [Obtain a DHCP-Assigned IP Address](#) section.
 - To manually enter a static (fixed) IP address for the card's network connection, go to the [Assign an IP Address Manually](#) section.



NOTE

By default, the PXGMS card requests an IP address through DHCP when connected to a network.

Obtain a DHCP-Assigned IP Address



NOTE

If connecting PredictPulse via an Eaton wireless modem, refer to the document [Connecting a NetComm Wireless NTC-140W Series Router to an Eaton Network Card](#) rather than this section.

To obtain the IP address through DHCP:

1. Ensure the PXGMS card is still connected to the computer over the USB cable. Also ensure that the network cable is connected from the PXGMS card Ethernet port to the network connection.
2. If your Web browser already open to the default IP address, go to step 3. Otherwise, perform the following:
 - a. Open your Web browser.
 - b. Enter: **https://169.254.0.101** for firmware 2.6.0 or later, **http://192.168.200.101** for earlier firmware versions.
 - c. Log on as administrator.
 - For firmware 2.6.5 and higher the username is "admin" and the default password is the card's MAC address (case sensitive with no colons).
For example: Card's MAC address: 00:E0:D8:FF:C0:C4
 - Administrator name: admin
 - Password: 00E0D8FFC0C4

- For firmware versions older than 2.6.5 the default username and password is “admin”.

The PXGMS card Web page displays.

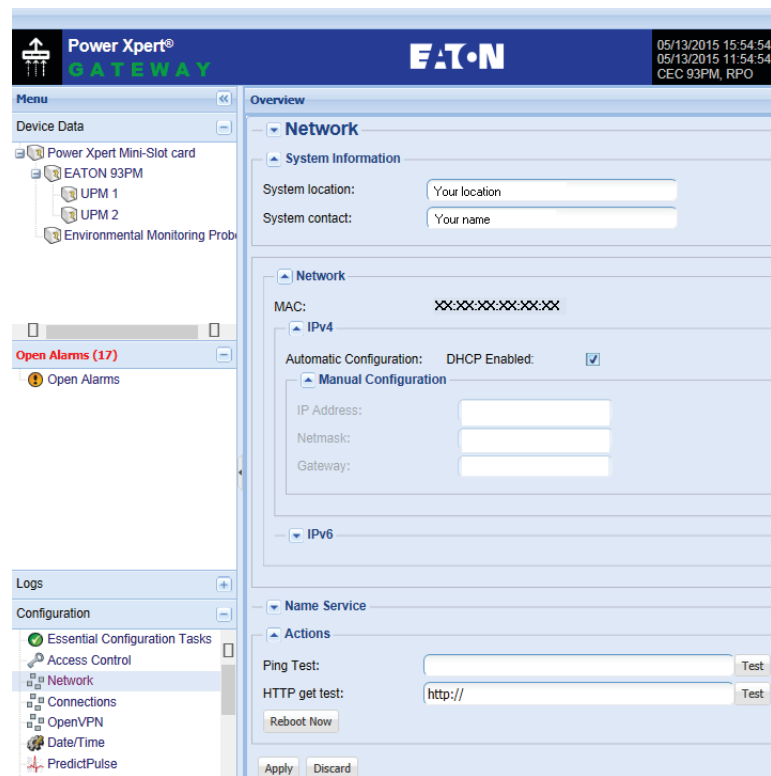


NOTE

If the system is unresponsive and you cannot make any selections, the browser may be running in compatibility mode. To disable compatibility mode, go to the [Enable Browser Compatibility Mode](#) section.

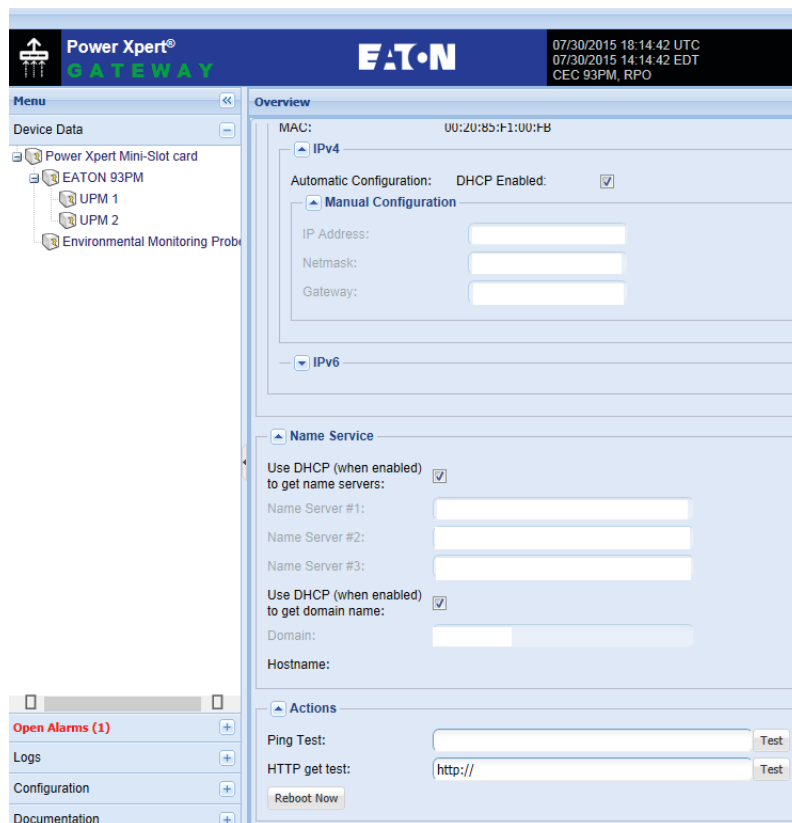
3. Select **Network** from the **Configuration** menu. The **Network** page displays (see [Figure 9](#)).

Figure 9. PXGMS Card Network Page



4. Under IPv4, the **Automatic Configuration: DHCP Enabled** setting checkbox should be enabled by default. Make sure the checkbox is checked (enabled) before continuing.
5. Scroll down to **Name Service** and expand the selection to update the next two DHCP settings (see [Figure 10](#)):
 - Check the checkbox (enable) for **Use DHCP (when enabled) to get name services**.
 - Check the checkbox (enable) for **Use DHCP (when enabled) to get domain name**.
6. Click **Apply**.

Figure 10. Name Services Settings



7. Select **Yes** for the message, “**Do you want to save the Network Configuration?**”
8. Wait for approximately two minutes for the card to reboot. Initially, all lights will be lit. You will know the card has finished rebooting when only the top light (Status) and the bottom light (Power) remain lit.
9. Open a browser and enter the default IP address (**https://169.254.0.101** for firmware 2.6.0 or later, **http://192.168.200.101** for earlier firmware versions).
10. When prompted, log on as administrator:
 - For firmware 2.6.5 and higher the username is “admin” and the default password is the card's MAC address (case sensitive with no colons).
For example: Card's MAC address: 00:E0:D8:FF:C0:C4
 - Administrator name: admin
 - Password: 00E0D8FFC0C4
 - For firmware versions older than 2.6.5 the default username and password is “admin”.

The PXGMS card Web page displays.
11. Click **Network** in the menu list.
12. Does the DHCP-assigned IP address display?
 - If yes, uncheck (disable) the DHCP Enabled box and select **Apply**.



NOTE At this point, the DHCP address is saved as a static IP address.

- If no, go to the [Assign an IP Address Manually](#) section to manually obtain a static IP address for the PXGMS card.



NOTE For detailed information, refer to the [Eaton Power Xpert Gateway Minislot PXGMS UPS Card User's Guide](#).

Assign an IP Address Manually

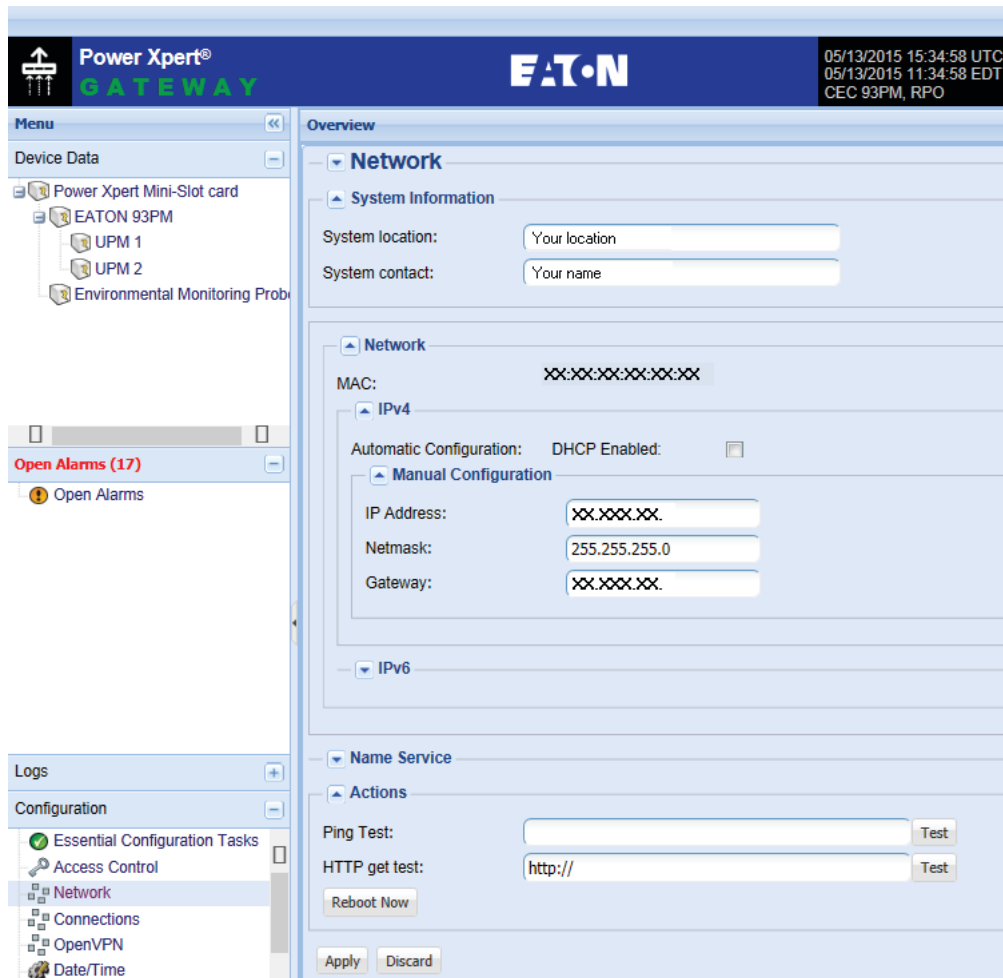


NOTE If connecting PredictPulse via an Eaton wireless modem, refer to the document [Connecting a NetComm Wireless NTC-140W Series Router to an Eaton Network Card](#) rather than this section.

To manually enter a static (fixed) IP address for the card:

1. Ensure the PXGMS card is still connected over the USB cable and the network cable is connected from the PXGMS card Ethernet port to the network connection.
 2. If your Web browser already open, go to step 3. Otherwise, perform the following:
 - a. Open your Web browser.
 - b. Enter: **https://169.254.0.101** for firmware 2.6.0 or later, **http://192.168.200.101** for earlier firmware versions.
 - c. Log on as administrator.
 - For firmware 2.6.5 and higher the username is "admin" and the default password is the card's MAC address (case sensitive with no colons).
For example: Card's MAC address: 00:E0:D8:FF:C0:C4
 - Administrator name: admin
 - Password: 00E0D8FFC0C4
 - For firmware versions older than 2.6.5 the default username and password is "admin".
- The PXGMS card Web page displays.
3. Select **Network** from the **Configuration** menu. The **Network** page displays (see [Figure 11](#)).

Figure 11. Disable DHCP Setting



4. Uncheck the **DHCP Enabled** checkbox to disable DHCP and allow you to manually configure the IP address (see [Figure 11](#)).
5. Refer to the [Installation Checklist](#) section. Enter the IP address, Netmask, and Gateway addresses in the **IPv4 > Manual Configuration** section.
6. Click **Apply**, then click **OK** to confirm.
7. **Optional:** If you are using a host name, or host names, for controlling access to the card:
 - Type the server IP address in the **Name Server** box. (Up to three IP addresses can be entered.)
 - Click **Apply**. Click **OK** to confirm.
8. Open a browser and enter the fixed (static) IP address.
9. Log on as administrator:
 - For firmware 2.6.5 and higher the username is "admin" and the default password is the card's MAC address (case sensitive with no colons).
For example: Card's MAC address: 00:E0:D8:FF:C0:C4

- Administrator name: admin
- Password: 00E0D8FFC0C4
- For firmware versions older than 2.6.5 the default username and password is “admin”.

When the PXGMS card Web page displays, you know the fixed IP Address is working.



NOTE

For detailed information, refer to the [Eaton Power Xpert Gateway Minislot PXGMS UPS Card User's Guide](#).

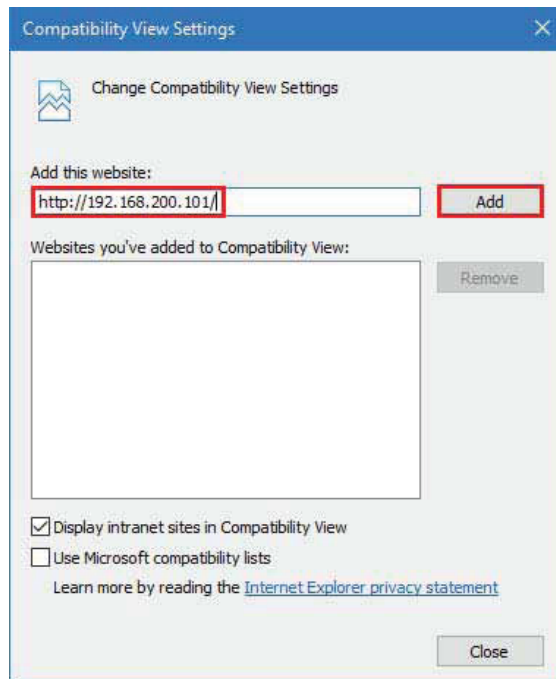
Enable Browser Compatibility Mode

Browser compatibility allows Web pages designed for older versions to display properly. If data does not display properly on your PXGMS card Web page, the browser compatibility mode should be enabled.

To enable the compatibility mode:

1. Open your Web browser.
2. In the Menu bar select **Tools > Compatibility View Settings**. The **Compatibility View Settings** window displays (see [Figure 12](#)).

Figure 12. Compatibility View Settings Window



3. Under “Add this website:” type the IP address of the PXGMS card and click **Add**.



NOTE

Close and re-open your browser so that the changes take effect.

Register a PredictPulse Subscription

PredictPulse™ is a remote monitoring and management subscription service that collects and analyzes data from connected power infrastructure devices, providing Eaton with the insight needed to make recommendations and take action on your behalf. This service has limited availability outside of the United States. For more information go to www.eaton.com/PredictPulse or contact your Eaton service representative.

Login to or create your <https://PredictPulseapp.eaton.com> account.



NOTE

Refer to the [Eaton PredictPulse Quick Start Guide](#) for more information.

Verifying and Updating the Firmware Revision

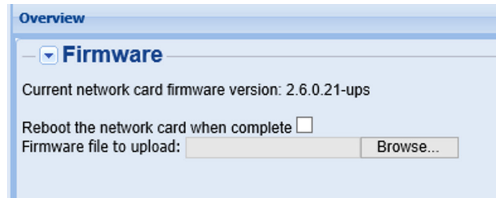
To register an installed PXGMS card for PredictPulse:

1. Verify the firmware loaded onto your connectivity card is current. Open a browser and navigate to the connectivity card's IP address.
2. Scroll down on the **Configuration** menu, located in the bottom left, and click **Firmware** (see [Figure 13](#)).

Figure 13. Configuration Page

The screenshot displays the Eaton Power Xpert Gateway configuration interface. At the top, it shows the date and time (01/07/2021 16:31:38 UTC) and a 'Major Alarm - Immediate Attention Required' notification. The main area is divided into sections: Overview (with a system diagram and status metrics like System Status: Off, Output State: Off, Percent Full Load: 0, Output Demand KW: 0, Output KW Hours: 0, and Battery Capacity Remaining: 95.8008), EATON 9355 (with buttons for Clear grouping, Collapse All, Configure Alarm, Configure Logging, Configure Display, and Show all parameters), Open Alarms (4), Logs, and Configuration (7). The Configuration section is expanded, showing various parameters such as Output VA Rating (15000 volt-amperes), Output Watts Rating (13500 watts), Energy (0 kilowatt-hours), and Identification (7). A red arrow points to the 'Firmware' option in the left-hand navigation menu.

3. The current network card firmware revision displays (see [Figure 14](#)).

Figure 14. Current Firmware Version

4. Open another browser page and navigate to www.eaton.com/networkconnectivity.
5. Scroll down and select your appropriate connectivity card.
6. Select **Resources** in the gray banner (see [Figure 15](#)).

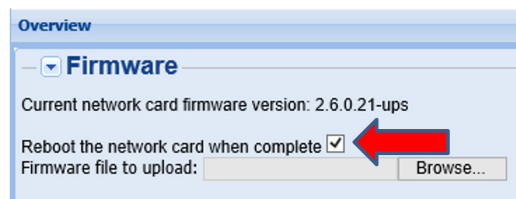
Figure 15. Resources Selection

7. Scroll down and expand the **Software, firmware, and applications** section.
8. Select the firmware and change history file.
9. Choose to Save the file.
10. When the file finishes downloading, navigate to your Downloads folder.
11. Right click the file and select **Extract All**.
12. Extract the files to your preferred destination.
13. Verify if the current revision is greater than that loaded onto your connectivity card.
14. If a firmware update is needed, proceed with the following steps, otherwise skip to the [Configuring the Connectivity Card for PredictPulse](#) section.

**NOTE**

Before updating the firmware, be sure to follow the password behavior and upgrade instructions found in the downloaded firmware file. Upgrading to the latest firmware may change the card's password, and a two step upgrade may be necessary if the card is currently below a certain revision.

15. Select **Reboot the network card when complete** (see [Figure 16](#)).

Figure 16. Firmware Reboot

- Upload the .rom file to your connectivity card. The update can take up to 15 minutes. If the page does not automatically refresh after 15 minutes, manually refresh the page.

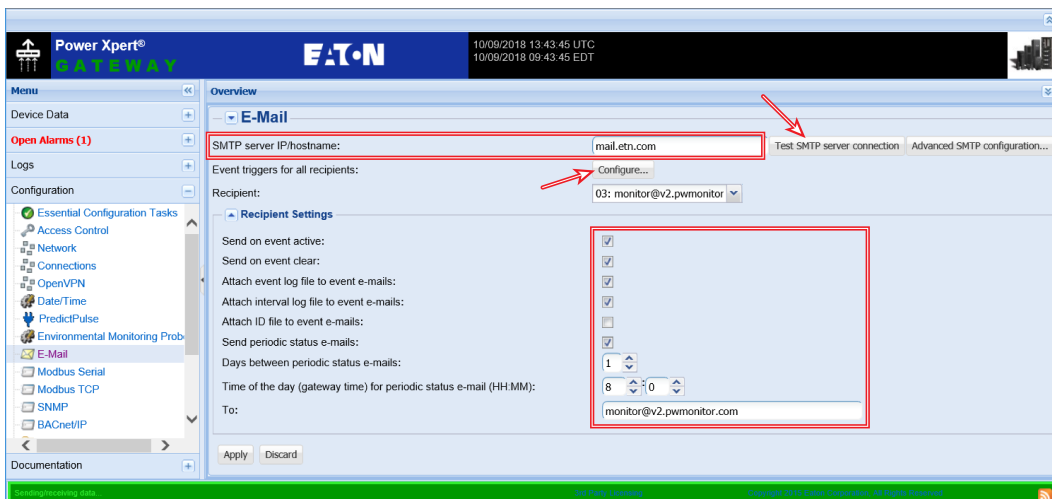
NOTE If an error message is received after attempting the upgrade, reboot the card before attempting the upgrade again; see [Step 9](#) of the [Configuring the Connectivity Card for PredictPulse](#) section for reboot instructions.

Configuring the Connectivity Card for PredictPulse

To configure the Connectivity Card:

- Select E-Mail from the Configuration menu (bottom left). The **E-Mail** page displays (see [Figure 17](#)).

Figure 17. PredictPulse Configuration E-Mail



- Verify that the **SMTP server IP/hostname** name is correct. Note that *mail.etn.com* shown in Figure 18 is only an example; the site SMTP server IP/hostname should be used (for the wireless modem/router use *mail.eaton.com*).
- Click **Test SMTP server connection**. A new browser window or tab opens displaying the test results (see [Figure 18](#)). At the bottom of the results, verify “*Email successfully sent...*” is displayed, then close the window or tab.

Figure 18. E-mail Connection Test

Testing the SMTP connection (note: this may take a while to fail)

. . . (debug lines removed) . . .

Email successfully sent : 250 <1607017567.427936.9391@PowerXpert-00-20-85-F1-83-D4> [InternalId=483113704] Queued mail for delivery

monitor@v2.pwmonitor.com: 250 Recipient OK

end sendOnce()

Info: Exiting...

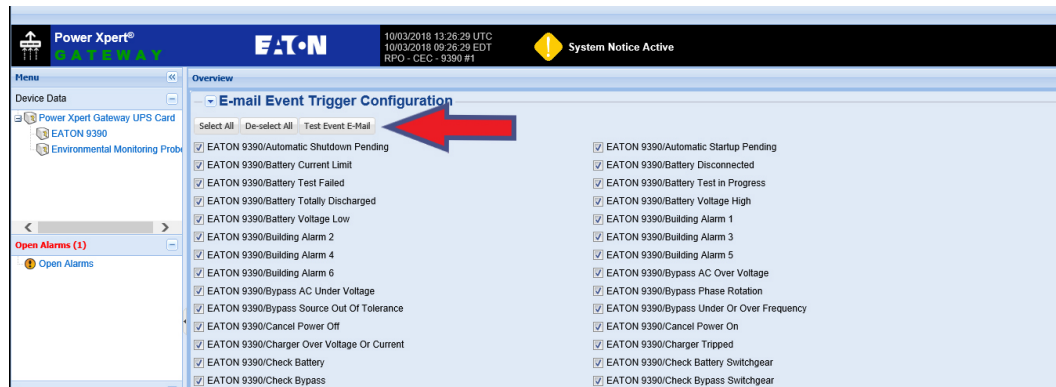
If the results are unsuccessful, verify the Network settings from the **Configuration** menu.

4. In the **Recipient Settings** section of the **E-Mail** page, verify that the checkboxes for recipient **monitor@v2.pwmonitor.com** are setup as shown in [Figure 17](#). If not, add this recipient and setup as shown. If using an Eaton Wireless Modem, ensure no non-Eaton addresses are listed. Click **Apply** after making any changes.

Set the **Days between periodic status emails** to **1** and enter a time of the day in the appropriate boxes.

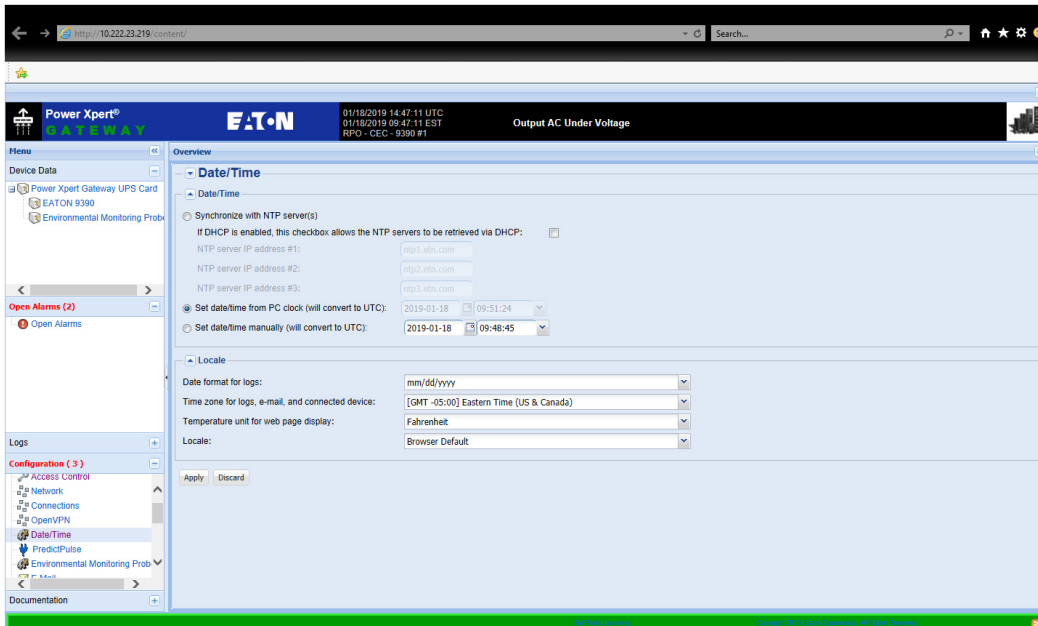
5. Click **Configure** below the SMTP server IP/hostname to display the **E-Mail Event Trigger Configuration** page (see [Figure 19](#)). Verify that some or all alarms are checked. At least one alarm must be selected for PredictPulse to receive all pertinent data. Scroll to the bottom of the page and click **Apply** after making any changes.

Figure 19. E-Mail Event Trigger Configuration



6. Click **Test Event Email** at the top of the page to send a test e-mail to all recipients in the recipient list. A progress message will appear. Each recipient should receive a test email within one to two minutes. If no test email is received, verify the Network settings from the **Configuration** menu and/or verify external relay is enabled for the card's IP.
7. Navigate to the **Date/Time** page from the **Configuration** menu (see [Figure 20](#)).
 - a. **If an NTP server is available**, verify **Synchronize with NTP server(s)** is checked, then enter the time server name or IP address.
 - b. **If no time server is available**, but the connectivity card has internet access, use one of the public time servers from pool.ntp.org.
 - c. **If using the wireless modem provided by Eaton**, use **192.168.1.1** for the NTP server IP address #1. (Ensure the modem is configured for NTP.)
 - d. **If an NTP server is not available or the correct time is not displayed** in the black banner at the top of the card GUI within two minutes of setting the NTP, choose **Set date/time from PC clock**.
 - e. Ensure the correct time zone under Time zone for logs, email, and connected device is selected.
 - f. Click **Apply** after making any changes.

Figure 20. Date/Time Selection



8. Run the PredictPulse Activation wizard from your <https://PredictPulseapp.eaton.com> account.



NOTE

Refer to the [Eaton PredictPulse Quick Start Guide](#) for more information.

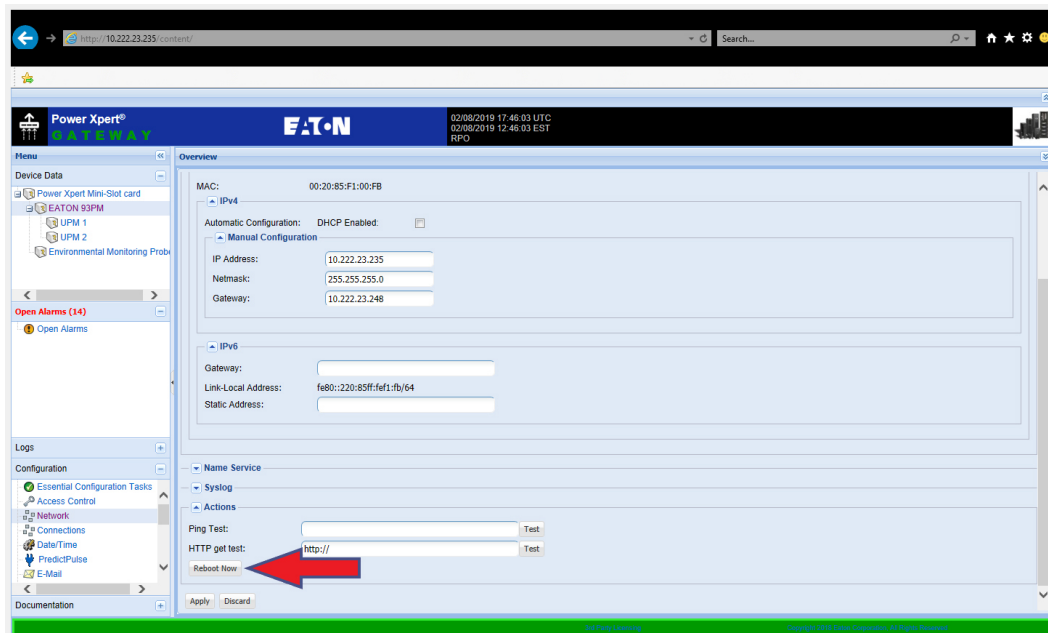


NOTE

The registration process to activate the unit for PredictPulse may take 15 minutes or more. To ensure the PredictPulse activation was successful, call the Eaton Software and Connectivity team at 800-843-9433, option 2, option 5 for assistance.

9. If any changes were made to the connectivity card after activating PredictPulse, reset the card by clicking **Reboot Now** at the bottom of the **Network** page (see [Figure 21](#)). The card will take two to three minutes to reboot.

Figure 21. Reboot Selection



NOTE

If any assistance is needed to perform the actions listed above, the Eaton Software and Connectivity team can remotely walk you through this process. The Connectivity team can be reached Monday-Friday, 8am-6pm est at 800-843-9433, option 2, option 5.

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
- Connectivity card configured for PredictPulse
- Environmental Monitoring Probe connected
- PredictPulse activation wizard run from <https://PredictPulseapp.eaton.com> account
- Call placed to Eaton Software and Connectivity team, 800-843-9433, option 2, option 5 to confirm portal activation and communication receipt

Modem Use Only

- Universal Accessory Power kit installed (if no UPS protected outlet is available for the modem and/or network switch to plug into. Must be installed by an Eaton technician, contact your Eaton service representative for a quote)
- Network switch installed (if multiple UPS are connected to the same modem) (see page two of [Connecting a NetComm Wireless NTC-140W Series Router to an Eaton Network Card](#))
- Modem NTP configured (see page six of [Connecting a NetComm Wireless NTC-140W Series Router to an Eaton Network Card](#))
- PredictPulse activation wizard run from modem connection (see page nine of [Connecting a NetComm Wireless NTC-140W Series Router to an Eaton Network Card](#))

PredictPulse Remote Monitoring Activation Completion Checklist



P-164000208 06