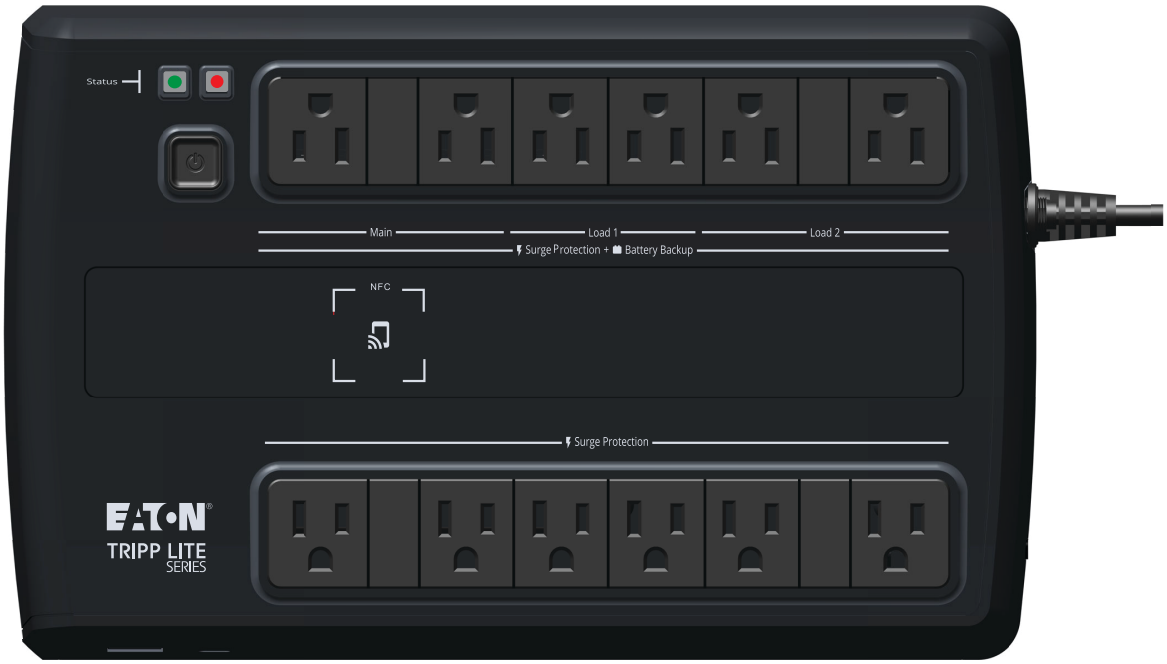
Eaton Tripp Lite Series Cloud Connected UPS System

Advanced User's Guide

AVR750UNC (AG-0786)



Powering Business Worldwide

p/n: 934927
Revision B

Safety Instructions

SAVE THESE INSTRUCTIONS.

This manual contains important instructions **that should be followed during the installation and maintenance of the UPS and batteries.**

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Suppliers Declaration of Conformity

Unique Identifier: EATON, AVR750UNC (AG-0786)

Responsible Party:

EATON
10000 Woodward Ave
Woodridge, IL 60517 USA
773–869–1111

tripplite.eaton.com

FCC Compliance Statement:

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference, and
2. this device must accept any interference received, including interference that may cause undesired operation.

Innovation, Science and Economic Development Canada Notice

This Class A digital device apparatus complies with Canadian ICES-003.

CAN-ICES-003A / NMB-003A

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Special Symbols

The following are examples of symbols used on the product to alert you to important information:

Danger: Dangerous voltage levels are present within the UPS. The UPS has an internal power source (the battery). Consequently, the power outlets may be energized even if the UPS is disconnected from the AC power source.

Important instructions that must always be followed.
CAUTION: Batteries present a risk of energy or electric shock or burn from high short circuit currents. Observe proper precautions. Batteries may contain HIGH VOLTAGE and CORROSIVE, TOXIC, and EXPLOSIVE substances. Do not dispose of batteries in a fire, as they may explode.

This symbol indicates that you should not discard the UPS or the UPS batteries in the trash. This product contains sealed, lead-acid batteries and must be disposed of properly. For more information, contact your local recycling/reuse or hazardous waste center.

This symbol indicates that you should not discard waste electrical or electronic equipment (WEEE) in the trash. For proper disposal, contact your local recycling/reuse or hazardous waste center for more information.

Battery Warning Instructions

- Risk of electric shock. All repairs and service should be performed by AUTHORIZED SERVICE PERSONNEL ONLY. There are NO USER-SERVICEABLE PARTS inside the UPS. The battery circuit is not isolated from AC Mains Input.
- Remove watches, rings, and other metal objects from the hands.
- Wear rubber gloves and boots.
- Use tools with insulated handles.
- The battery supplied with the system contains small amounts of toxic materials. To avoid accidents, observe the following directives:
  - Servicing of batteries should be performed or supervised by personnel knowledgeable about batteries and the required precautions.
  - When replacing batteries, replace them with the same type and number of batteries or battery packs.
  - Do not dispose of the batteries in a fire. The batteries may explode.
  - Batteries constitute a danger (electrical shock and burning). The short-circuit current may be very high. The internal battery voltage is non-isolated 12VDC. Sealed, lead-acid, 6-cell battery.
- Precautions must be taken for all handling. A battery can present a risk of electric shock and high short circuit current. The following precautions should be observed when working on batteries:
  - Do not lay tools or metal parts on top of batteries.
  - Disconnect the charging source prior to connecting or disconnecting battery terminals.
  - Remove battery grounds during installation and maintenance to reduce the likelihood of shock.
  - Determine if the battery is inadvertently grounded. If inadvertently grounded, remove the source from the ground. Contact with any part of a grounded battery can result in electrical shock. The likelihood of such shock can be reduced if such grounds are removed during installation and maintenance (applicable to equipment and remote battery supplies not having a grounded supply circuit).

Product Safety

- Changes or modifications not expressly approved by the party responsible for compliance can void the user's authority to operate the equipment.
- To connect the UPS, the instructions and operations described in the manual must be followed in the indicated order.
- Check that the indications on the rating plate correspond to your AC-powered system and to the actual electrical consumption of all the equipment to be connected to the system.
- This uninterruptible power supply has a pre-installed battery and is ready for use.
- The input plug on the UPS is considered to be the AC Mains disconnect. The socket outlet shall be installed near the equipment and shall be easily accessible.
- Never install the system near liquids or in an excessively damp environment. This equipment should only be used in a dry, indoor environment.
- During the installation of this equipment, that the sum of the leakage currents of the UPS and the connected loads should not exceed 3.5 mA.
- This unit is intended for installation in a controlled environment (temperature-controlled, indoor area free of conductive contaminants). Avoid installing the UPS in locations with standing or running water or excessive humidity.
- Connection to any type of receptacle other than a two-pole, three-wire grounded receptacle may result in shock hazards and violate local electrical codes.
- Ensure that the system is free of contaminants, the surrounding area is free of debris, and there are no foreign substances within the system.
- In the event of an emergency, press the "OFF" button and disconnect the power cord from the AC power supply to properly disable the UPS.
- Never block the cooling vents of the system.
- Do not allow any liquids to enter the UPS. Do not place beverages or any other liquid-containing vessels on or near the unit.
- Never expose the system to direct sunlight or to a heat source.
- Store the system in a dry place before installing, if storage is required.
- Do not plug the UPS input into its own output.
- Do not attach a power strip or surge suppressor to the UPS.
- Do not attach non-computer-related items, such as medical equipment, life-support equipment, microwave ovens, or vacuum cleaners, to a UPS.
- Unplug the UPS prior to cleaning, and do not use liquid or spray detergent.
- To reduce the risk of overheating the UPS, do not cover the unit's cooling vents and avoid exposing the UPS to direct sunlight or installing the unit near heat-emitting appliances such as space heaters or furnaces.

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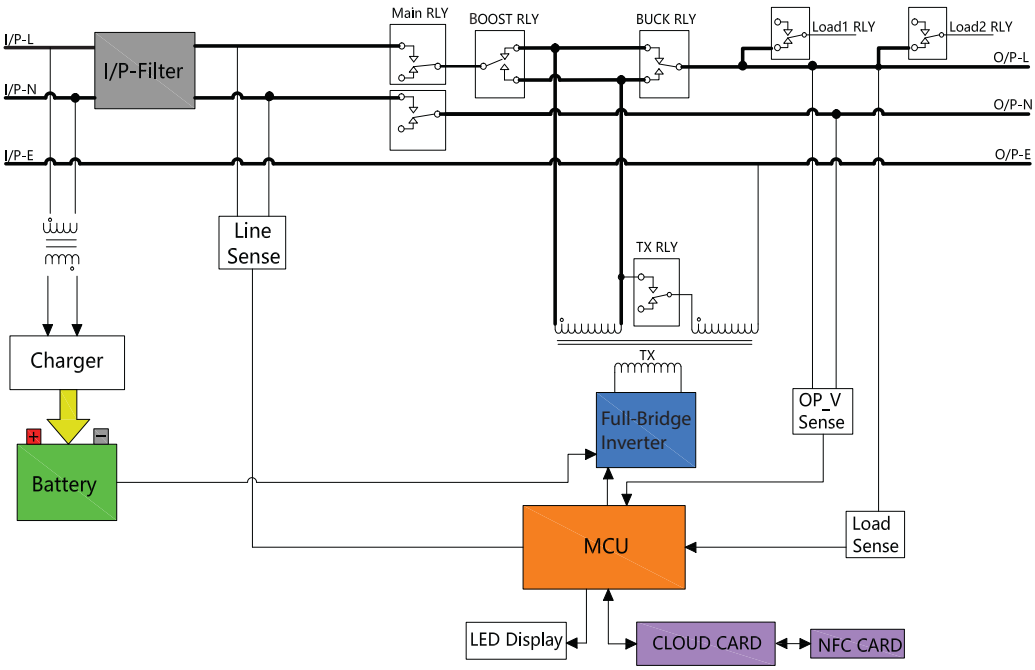
Chapter 1 Introduction

1.1 Overview



The AVR750UNC line interactive UPS system provides reliable battery backup and AC power protection against blackouts, brownouts, over-voltages, surges, and line noise that can damage valuable electronics or destroy data. The AVR750UNC battery backup is the ideal protection for your home office, media center or professional kiosk, security and small-business phone applications, computers, routers, printers, HDTVs, Blu-ray players, game consoles, ATMs, security systems, and digital signage equipment.

Backup support allows you to work through short power failures and gives you enough time to save files safely and shut down your system in case of a prolonged blackout. Backup time varies according to load, but the UPS should keep an energy-efficient desktop computer with a small LCD monitor powered for as long as 11 minutes. In Line Mode, incoming utility power keeps the replaceable internal battery fully charged, so backup power will always be available.

Various electromagnetic and radio sources in virtually every home and business can cause disruptive interference on the AC line. Known as electromagnetic interference (EMI) and radio frequency interference (RFI), this line noise is a common cause of performance problems. It can lead to incremental hardware damage, data corruption, and audio/video transmission problems. The UPS incorporates technology that filters out disruptive line noise so it won't affect your equipment.

The Eaton Tripp Lite Series AVR750UNC line interactive cloud-connected UPS system utilizes the Eaton Remote Monitoring Application supported by Eaton's Brightlayer platform so that users can connect to their UPS anywhere. Receive alerts, control outlets, or shutdown devices – all from the touch of a mobile device or desktop computer.

Other key features include:

- Replaceable battery.

- Compact housing with easy desktop or wall mount installation option.
- Auto-restart during AC recovery.
- Overload protection when operating on AC and Battery modes.
- Input voltage out-of-range protection.

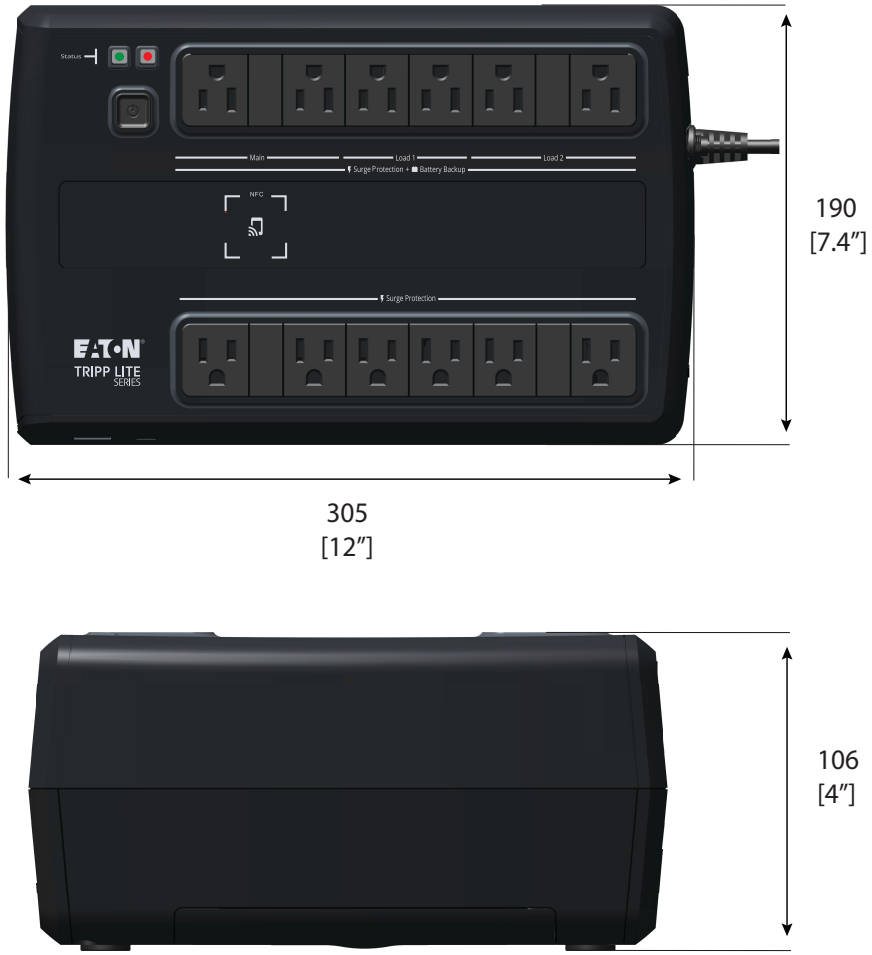
1.2 Package Contents

Table 1. Package Contents

Contents
UPS
Quick start manual

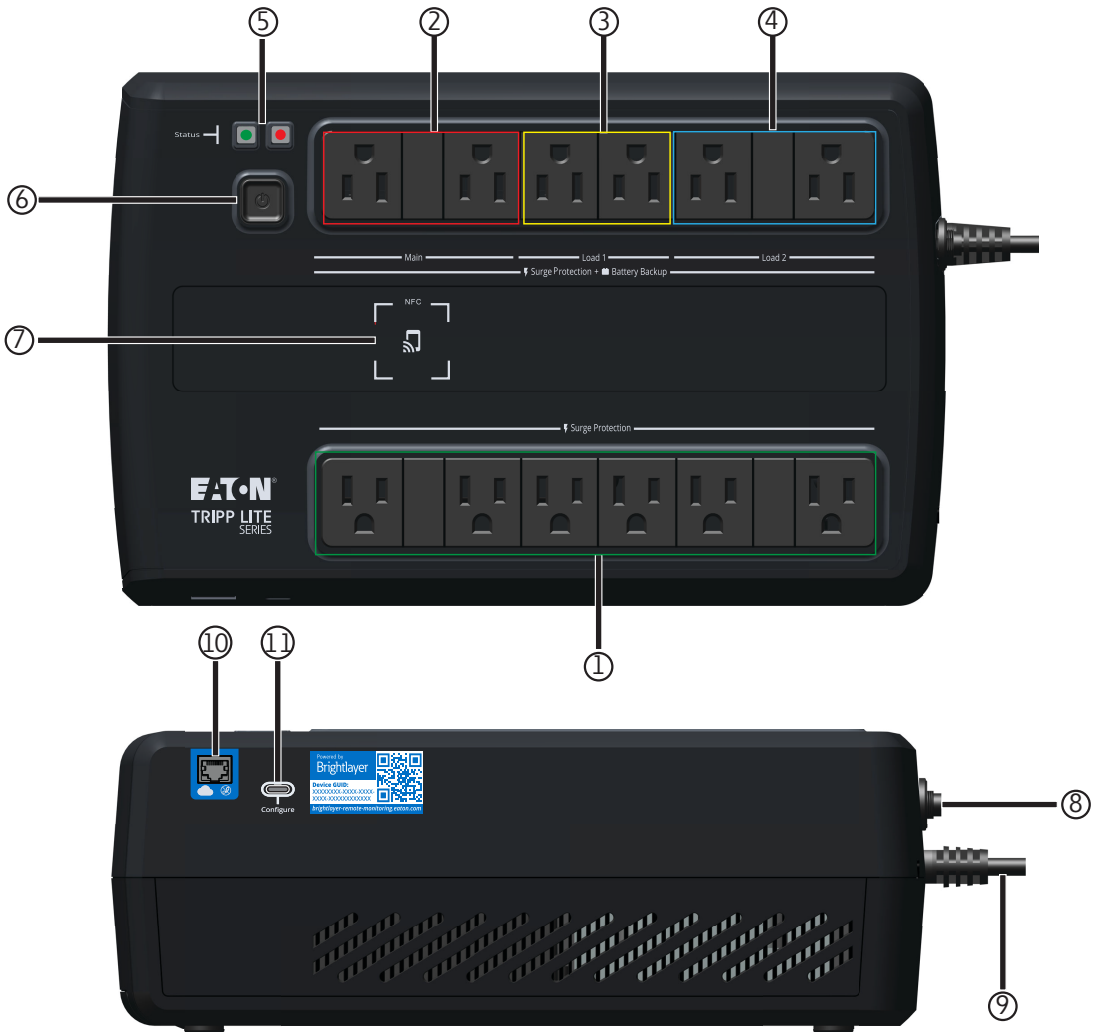
1.3 Dimensions

Figure 1. AVR750UNC (AG-0786) Dimensions



1.4 Physical Features

Figure 2. AVR750UNC(AG-0786)



① Surge-only protected outlets
② Battery-protected outlets- Main
③ Switched battery-protected outlets- Load 1
④ Switched battery-protected outlets- Load 2
⑤ Line and alarm status indicators
⑥ Power button
⑦ Near Field Communication location (NFC)
⑧ Circuit breaker
⑨ Input line cord
⑩ Ethernet port
⑪ USB-C configuration port

Chapter 2 Installation and Operation

2.1 UPS Installation

The Eaton Tripp Lite Series AVR750UNC UPS System is easily installed on a desktop or a shelf. Keyhole mounting tabs on the rear of the UPS allow for easy wall-mount installation.

Remove the UPS from its packaging and inspect it for damage that may have occurred during shipping. If any damage is discovered, re-pack the UPS and contact your **Local Distributor** or **Eaton Support.**

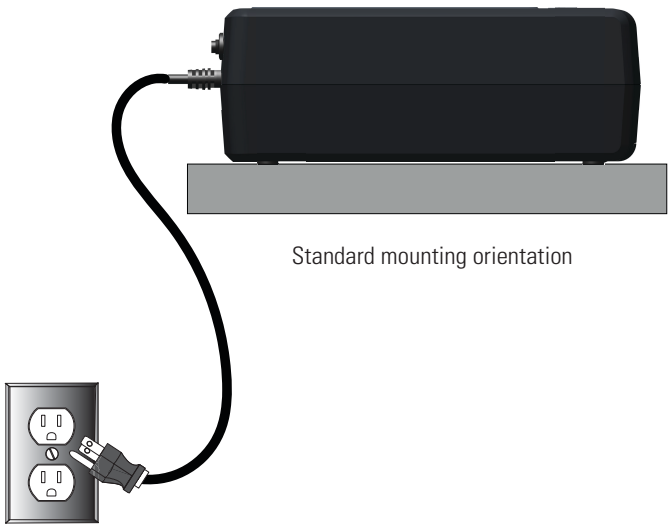
2.2 Standard Mounting Installation

The Tripp Lite Series AVR750UPS UPS system, can be installed in the following standard mounting orientation.

NOTE 1 Do not install the unit on its sides. The UPS can become unstable and tip over, causing damage to the product.

NOTE 2 Install the UPS on a hard, flat, smooth surface to avoid blocking the air vents next to the battery compartment.

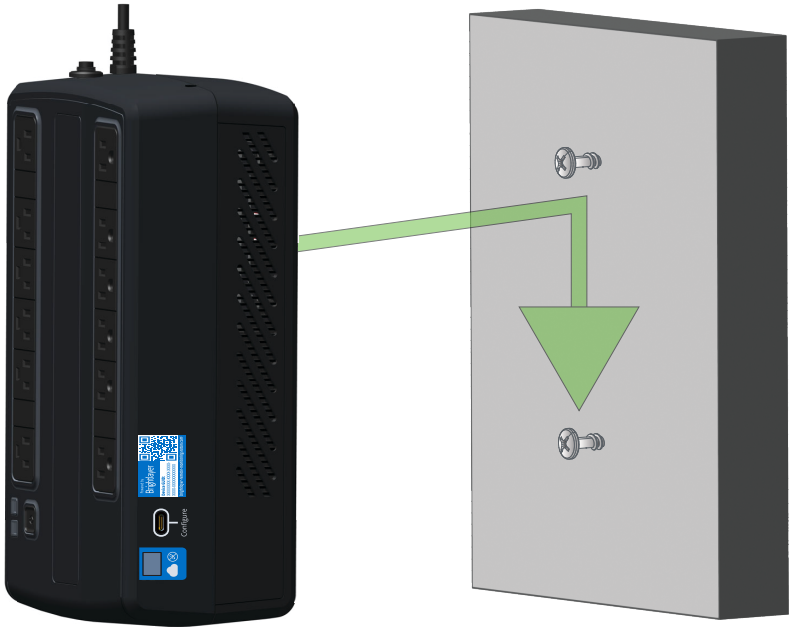
Figure 3. Standard Mounting



2.3 Wall Mount Installation

⚠WARNING

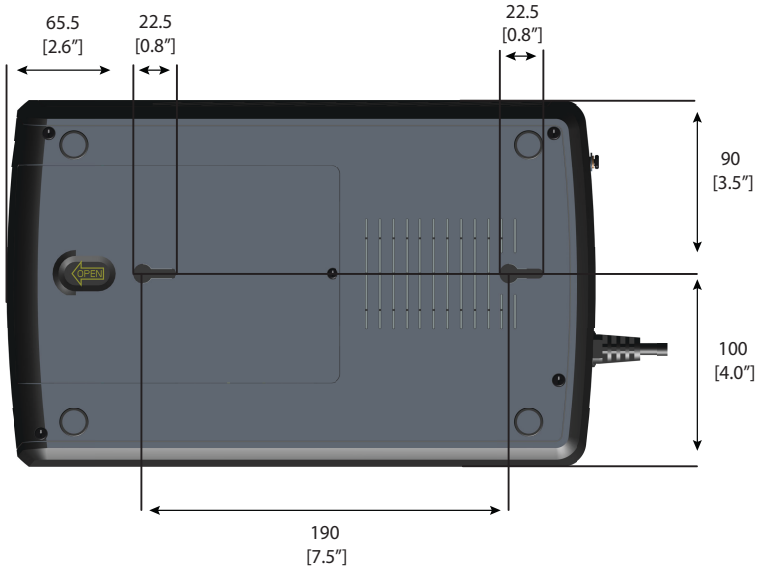
The Tripp Lite Series AVR750UNC UPS system should be installed directly into the center of a wood wall stud for mounting the UPS in a vertical orientation. Use the appropriate anchoring methods for other wall material types to ensure the UPS is securely mounted and supported.



To secure the UPS, follow the below steps:

1. Measure and mark the hole locations on the wall. Use a screwdriver to install the screws in the wall, leaving the screws extended 0.28 inches.

Figure 4. AVR750UNC (AG-0786) Wall Mounting Hole Dimensions



2. Center the UPS keyhole openings over the screw heads, push towards the wall, and then down lightly to lock the UPS onto the screws.

3. To detach the UPS from the wall, lightly push up on the bottom of the UPS to release it from the wall.
4. Carefully lift the UPS off the wall.

2.4 Turning the UPS On

For normal AC startup of the UPS, follow these steps:

1. Connect the UPS AC power cord to a properly grounded NEMA 5–15R wall outlet.

NOTE Once the UPS is plugged into a wall outlet, the battery charger will engage as necessary, and the SURGE ONLY outlets will begin passing power.

2. Press the power button for half a second to turn on the UPS. The UPS will beep, and the green LED will turn on and stay illuminated. The charger will engage as necessary, and the BATTERY BACKUP outlets will begin passing line power.
3. Plug your load equipment into the outlets on the UPS. There are two sets of outlets on your UPS. The outlets marked SURGE ONLY do not provide battery backup power during power outages. Connect everyday desktop items like printers, scanners, and other accessories not requiring battery support to these outlets. The outlets marked BATTERY BACKUP offer UPS battery backup support during power failures. The main outlet group, load one and two switched outlets, can be controlled via the Eaton Remote Monitoring Application. Connect your vital computer equipment to these outlets.

NOTE The Tripp Lite Series AVR750UNC UPS system is designed to support electronic equipment only. You will overload the UPS if the total volt-amp (VA) ratings for all the equipment connected to the outlets exceeds the UPS output capacity. To find your equipment's VA ratings, look at its nameplate. If the equipment is listed in amps (A), multiply the number of amps by 120 to determine VA. For example 1A × 120 = 120VA. If you suspect you have overloaded the outlets, remove some equipment.

4. Register your UPS at tripplite.eaton.com .

2.5 Outlet Control

The Eaton Tripp Lite Series AVR750UNC UPS System outlets can be switched on and off to control connected equipment remotely. The outlet control is located in the Device Summary Screen of the Eaton Remote Monitoring Application. (See Figure 38).

- **Surge-only protected outlets-** no On/Off control available.
- **Main battery protected outlets-** controlled by the Device control option button.
- **Switched battery protected outlet Load one / Load two–** controlled by the *UPS output control* button.

2.6 Turning the UPS Off

To turn off the UPS, hold the power button on the front panel for half a second; the UPS will beep, indicating it is in Standby Mode. Unplug the UPS from the power source.

NOTE If the UPS is not unplugged from the wall receptacle, it remains in Standby Mode, and the SURGE ONLY outlets will still pass line power.

2.7 LED Indicators

The Tripp Lite Series UPS system panel indicates the UPS status via the red and green LED indicators.

Table 2. LED Status Indicators

Description	Green LED	Red LED	Alarm Tone	Notes
Line Mode	On	Off	Off	Operating in normal line mode and the battery is fully charged.
Battery Mode	Flashes every 10 seconds	Off	Off	Set default is no alarm until the event occurs (e.g., battery low, overload, etc.
Battery Low	Flashed solid every second	On	Beeps every second	
Line Mode Overload Alert*	On	Off	Beeps every 0.5 second	
Battery Mode Overload Alert**	Flashes	Off	Beeps every 0.5 second	
Line Mode Overload Fault*	Off	On	Continuously beeps	
Battery Mode Overload Fault**	Off	Off	Off	
Replace Battery	On	Flashes every minute	Beeps every minute	
Fault Condition	Off	On	Continuously beeps	1. Overcharge fault 2. Output short fault
*Line Mode Overload Alert Condition - 110%±10%, goes to fault after 5 minutes; Overload Fault Condition - 120%±10%, goes to fault immediately				
**Battery Mode Overload Alert Condition - 110%±10%, shuts down in 5 seconds; Battery Mode Overload Fault Condition - 120% ±10%, shuts down immediately				

Chapter 3 Communications

3.1 Communication Ports

NFC Functionality

The NFC tag on the UPS enables users to collect and configure UPS settings using the Eaton Remote Monitoring application by placing the NFC-enabled mobile device flush with the indicated NFC area on the UPS. (See 4.1 *Welcome to the Eaton Remote Monitoring Application*).

Ethernet Port

The Ethernet Port allows the UPS to connect via a local network and managed using the Eaton Remote Monitoring application. (See 4.1 *Welcome to the Eaton Remote Monitoring Application*).

USB-C Port Functionality

The USB-C Port allows for local access to UPS Command Line Interface (CLI) for configuration and discovery of the local network settings and other features. (See 3.2 *Command Line Interface*).

3.2 Command Line Interface

The Command Line Interface (CLI) is intended mainly for automated configuration of the network and time settings of the Eaton Tripp Lite Series UPS. It can also be used for troubleshooting and remote reboot/reset of the network interface in case the web user interface is not accessible.

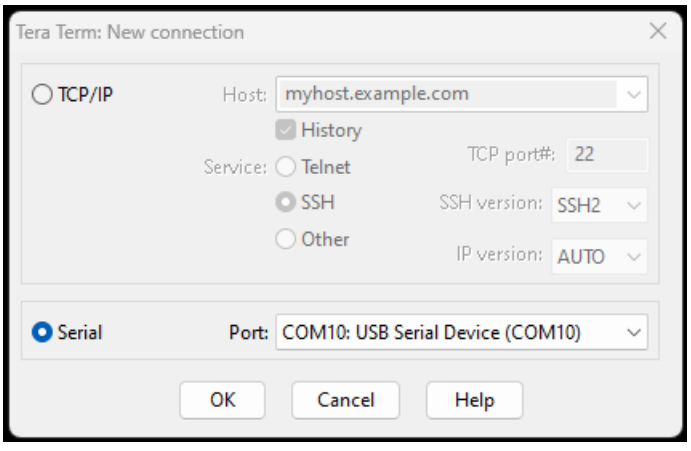
⚠WARNING

Changing network parameters may cause the card to become unavailable remotely. If this happens it can only be reconfigured locally through USB-C configuration port.

To log into the command line interface:

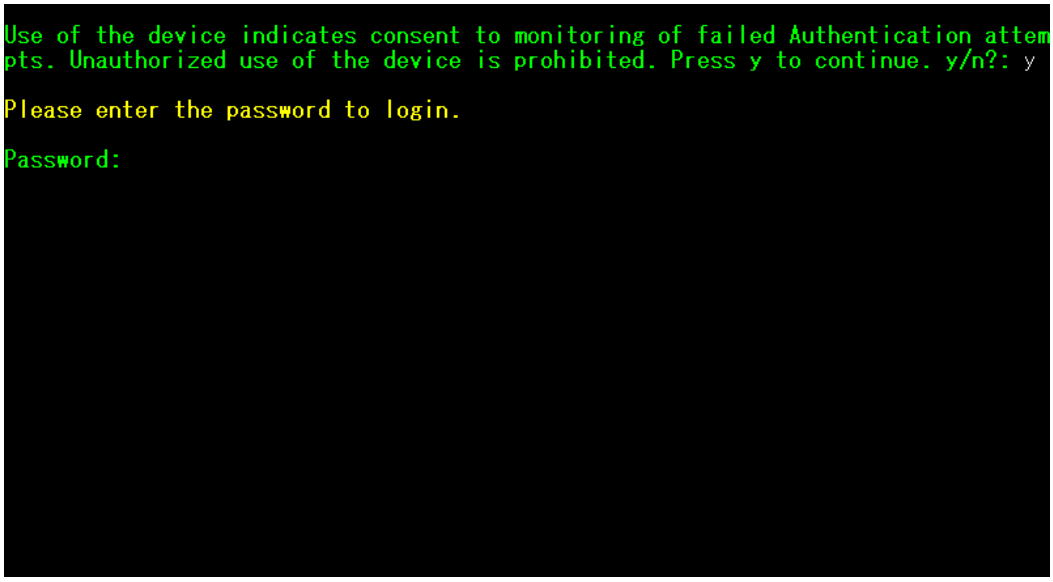
1. Plug a cable into the USB port of the UPS and launch a terminal emulation program.

Figure 5. Terminal Emulation Program



2. Press "y" to continue onto the login screen and enter the device password.

Figure 6. Enter Password



3. Enter a User Command from Table 3 and press the Enter button.
4. The information will be displayed on the screen.

Figure 7. Command Output

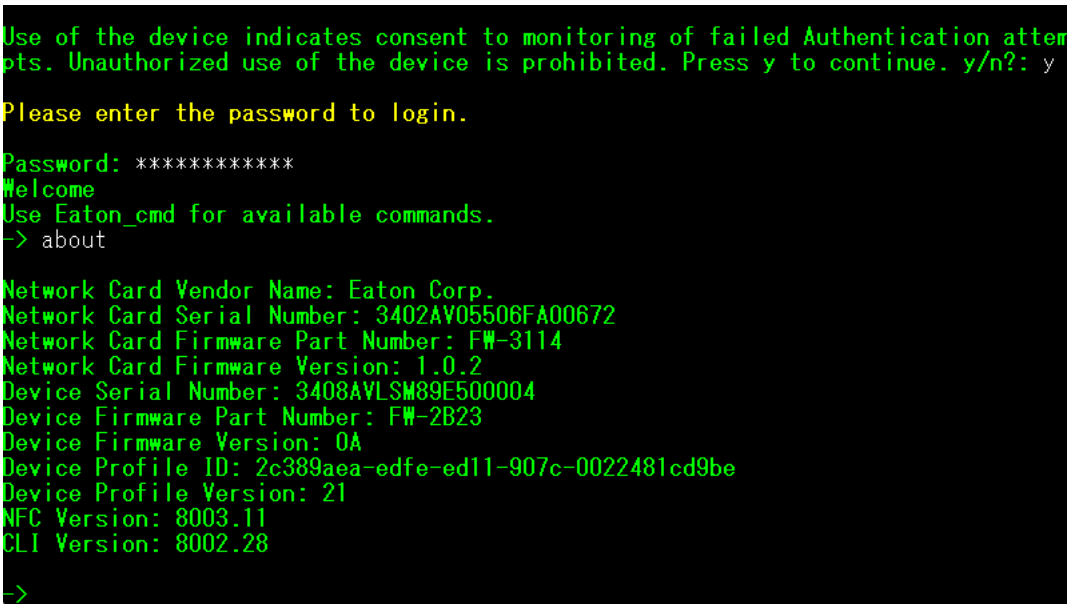


Table 3. CLI Commands

User Command Name	Description	Sample Input/Output	Note
login	login to the shell	<password>	Only used for entering to shell It gets the current password as input
logout	logout of the shell	N/A	This command prompt you to login after logout
set_new_password	Set a new password	"Pa$sw0rd"	The default value is "password". New Password has following limits: 1. The length must be at least 8 and max 16 characters. 2. The string is alphanumeric case sensitive. 3. The new password must at least have one digit, one upper case, one lower case, and one special case characters. 4. The previous password is required to enter. 5. The new password must be entered twice.
set_ipv4_maskaddr	Set the subnet mask address	255.255.255.0	This value will initialize as “0.0.0.0” if the device is not connected to the internet. The default restore IP address is "192.168.1.254".
get_ipv4_maskaddr	Get the assigned subnet mask address	255.255.255.0	
set_ipv4_addr	Set the assigned IP address	192.168.0.133	
get_ipv4_addr	Get the assigned IP address	192.168.0.133	
set_ipv4_gateway	Set the IP gateway	192.168.0.1	
get_ipv4_gateway	Get the IP gateway	192.168.0.1	
get_ipv4_method	Get the IP method	IP Method set as static/ DHCP.	The default value is DHCP.
set_ipv4_method_dhcp	Set DHCP IP	IP Method set as DHCP	
get_mac_addr	Get MAC Address	00:00:00:00:00:00	
get_proxy_addr	Get the assigned proxy address	PROXY Address is - proxy.apac.etn.com	
set_proxy_addr	Set the proxy address	Proxy address reconfigured successfully.	The length must be less than 20 characters
get_proxy_port	Get the port	PROXY port is - 8080	
set_proxy_port	Set the port	Proxy port number reconfigured successfully.	Any range between 0-65535

Table 3. CLI Commands (Continued)

User Command Name	Description	Sample Input/Output	Note
get_proxy_status	Get the status of proxy	PROXY is not enabled.	
set_proxy_disable	Disable proxy	PROXY is disabled.	
set_proxy_enable	Enable proxy	PROXY is enabled.	
set_proxy_username	Set the proxy username	<username>	Sets the username for proxy. The length of username must not exceed 21 characters.
set_proxy_password	Set the proxy password	<password>	Sets the username for proxy. The length of username must not exceed 21 characters.
get_proxy_username	Get the proxy username	PROXY username is <username>	
get_proxy_password	Get the proxy password	PROXY password is <password>	This will print out stars(*) only after commissioning
get_sntp_server1	Get the SNTP Server 1 IP address or Host Name	SNTP server 1 IP Address/Domain name: 129.6.15.28	
get_sntp_server2	Get the SNTP Server 2 IP address or Host Name	SNTP server 2 IP Address/Domain name: 132.163.96.1	
get_sntp_server3	Get the SNTP Server 3 IP address or Host Name	SNTP server 3 IP Address/Domain name: 132.163.97.1	
get_sntp_status	Get SNTP Server status	SNTP service enabled.	
get_sntp_service	Get SNTP Server connection	SNTP service connected to server 1.	
set_sntp_disable	Set SNTP Server disable	SNTP server disabled successfully.	
set_sntp_enable	Set SNTP Server enable	SNTP server enabled successfully.	
get_primary_dns	Get the primary dns	Primary DNS: 8.8.8.8	
get_secondary_dns	Get the secondary dns	Secondary DNS: 192.168.0.1	
get_time	Get the current time of system	Epoch Time from RTC (seconds) - 1692282558	Time since epoch
get_iot_connection_ status	Get IOT connection status	IOT Connection is enabled.	
get_iot_connection	Get IOT DPS connection	IOT Connected.	
get_iot_connection_ reason	Get IOT Connection status and reason.	IoT initial state.	
get_iot_dps_endpoint	Get IOT DPS endpoint.	IOT DPS endpoint - global.azure-devices-provisioning.net	

Table 3. CLI Commands (Continued)

User Command Name	Description	Sample Input/Output	Note
about	Print out versions and serial numbers	Network Card Serial Number Network Card Firmware Part Number: FW-3114 Network Card Firmware Version: 0.9.0 Device Serial Number: 3302AVLBC884A00019 Device Firmware Part Number: FW-2B13 Device Firmware Version: 02 Device Profile ID: 2c389aea-edfe-ed11-907c-0022481cd9be Device Profile Version: 16 NFC Version: 8003.6 CLI version: 8002.22	Network Card Serial number will be shown once it's set.
get_device_connection	Get the deviceID and ConnectionString	Device GUID/UUID - <device GUID/UUID> Device Connection String - <Connection String>	This will print out stars(*) for connection string only after commissioning
dump_json_formatted_logs	DEBUG: Dump JSON formatted logs		Output size might be bigger than 200 characters
clear_logs	Clear all logs from NV		
show_logs	Show all logs	Event Log is currently Empty!	Output size might be bigger than 200 characters
reboot_card	Reboot the card	N/A	Keep the last changes(if any) to the network settings(IPV4) and password intact. This command reboots the card to complete the network settings configuration.
factory_reset_card	Factory reset the card	N/A	Returns the network settings (IPV4) and password back to default values.

Chapter 4 Remote Monitoring Application

4.1 Welcome to the Eaton Remote Monitoring Application

The Eaton Tripp Lite Series cloud-connected UPS systems are managed by the Eaton Remote Monitoring Application supported by Eaton's Brightlayer platform so that users can connect to their UPS anywhere. Receive alerts, control outlets, or shutdown devices – all from the touch of a mobile device or desktop computer. Whether a user is setting up one or several units, commissioning has never been more straightforward. The Eaton Remote Monitoring Application can be downloaded from the Apple or Android app stores.

4.2 User Enrollment and Activation

1. Locate and scan the QR code on the left-hand side of the UPS cover or visit the direct link Eaton Brightlayer Remote Monitoring Application to launch the application in a web browser or to download it to a remote Device.

Figure 8. QR Code Location

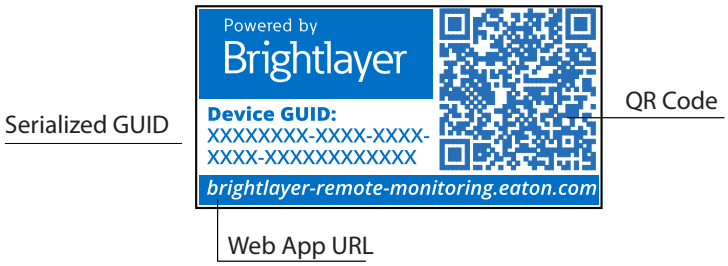
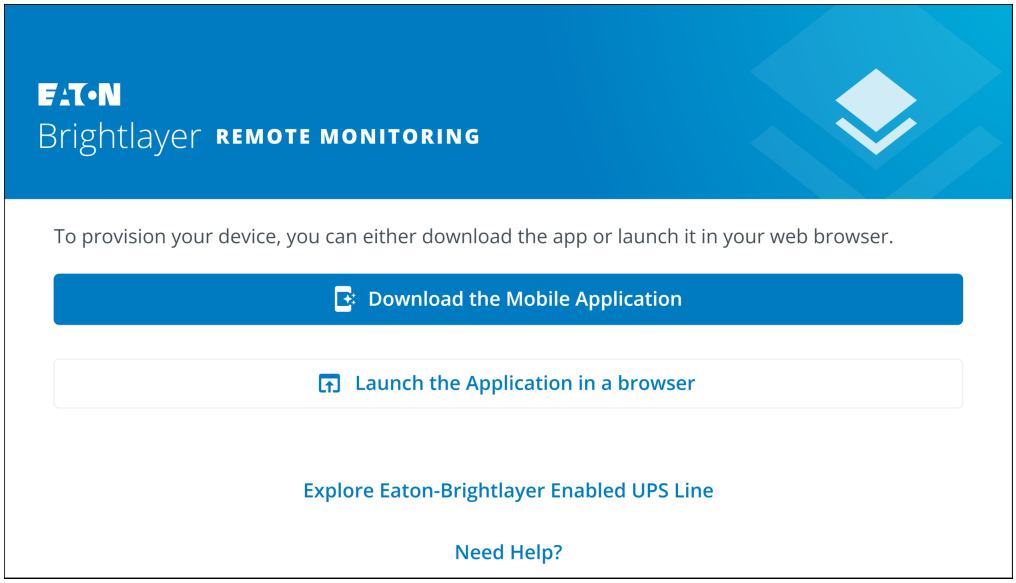


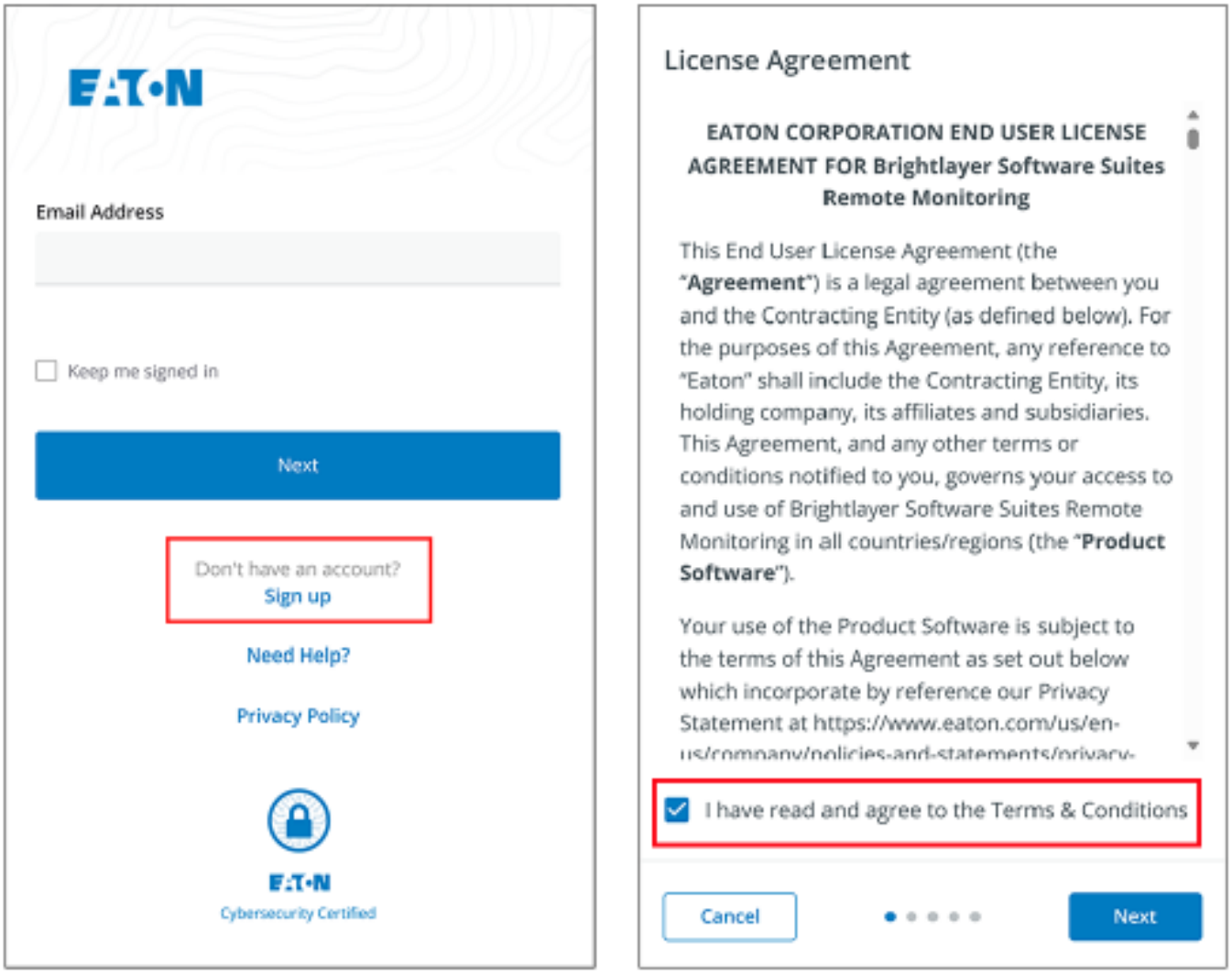
Figure 9. Web Application Page



NOTE Chrome, Firefox, Edge, and Safari are the supported internet browsers. Do not use Microsoft Internet Explorer.

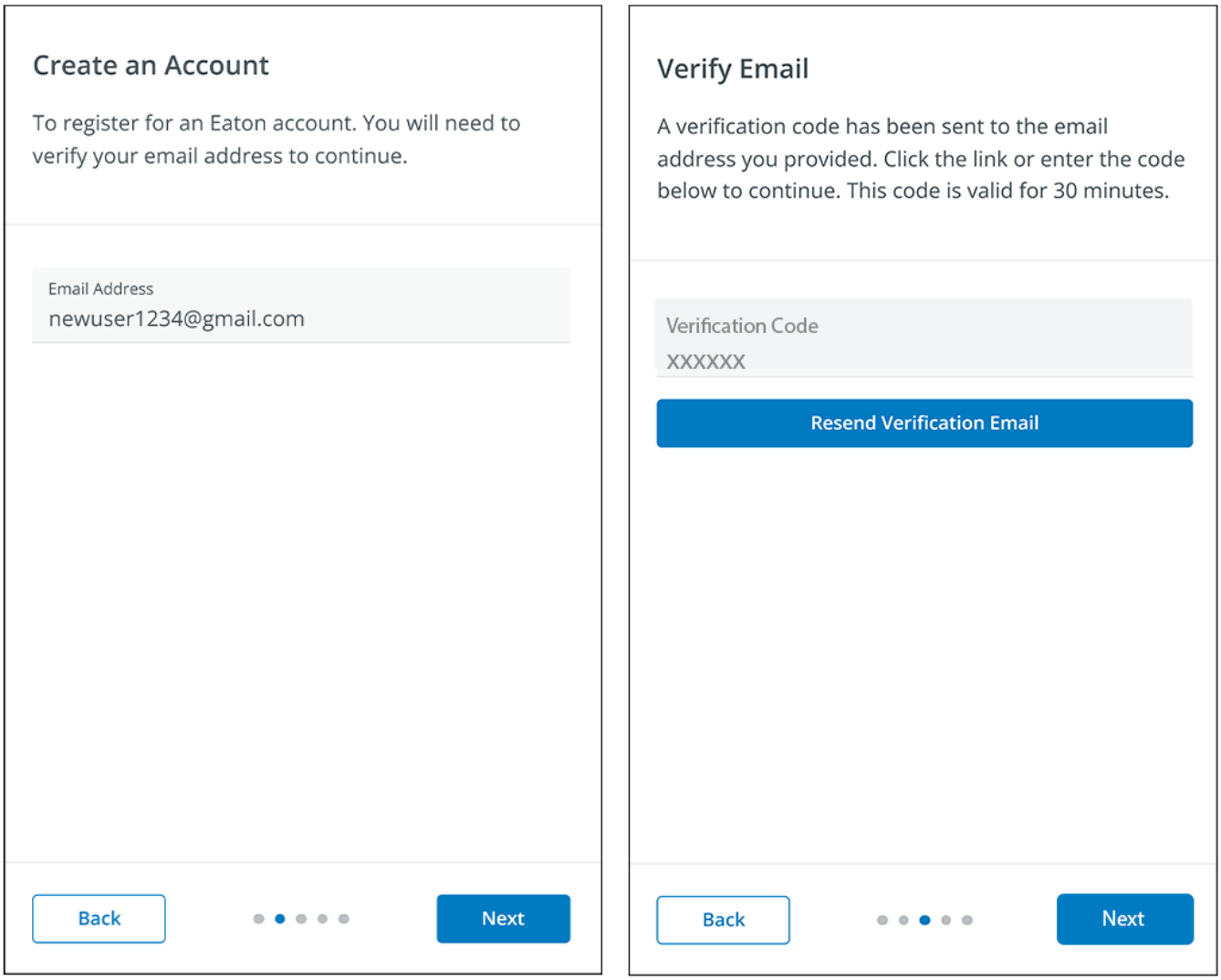
2. Click the *Sign-Up* link on the login screen.
3. Please read and check the box agreeing to the EATON CORPORATION END USER LICENSE AGREEMENT FOR Brightlayer Software Suites Remote Monitoring. Then click *Next*.

Figure 10. Sign In Screen and End User License Agreement



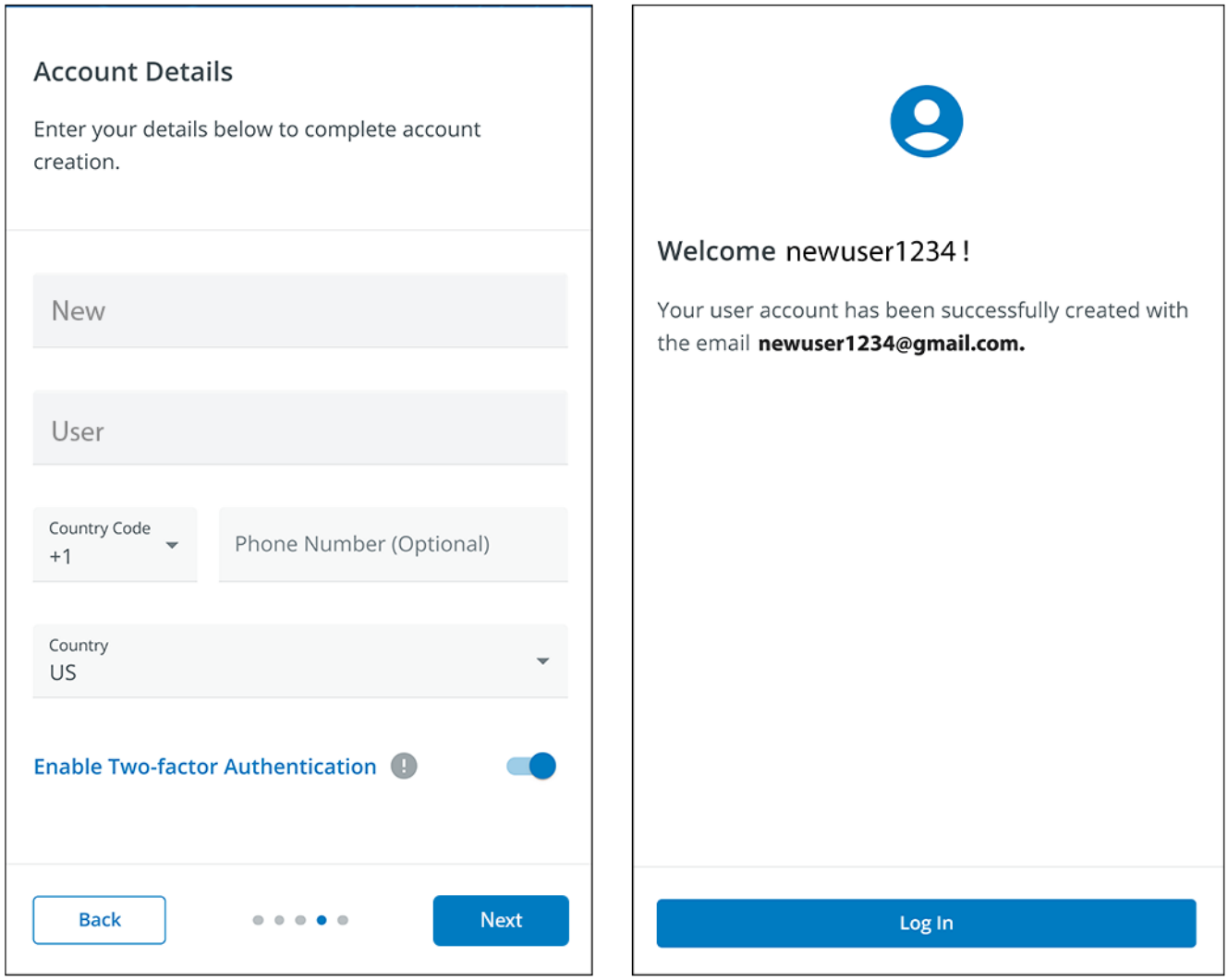
4. Enter a valid email address to verify your account. A verification code will then be sent to your email account. Click Next. Click *Next*.
5. Enter the verification code and click *Next*.

Figure 11. Create an Account and Verify Code



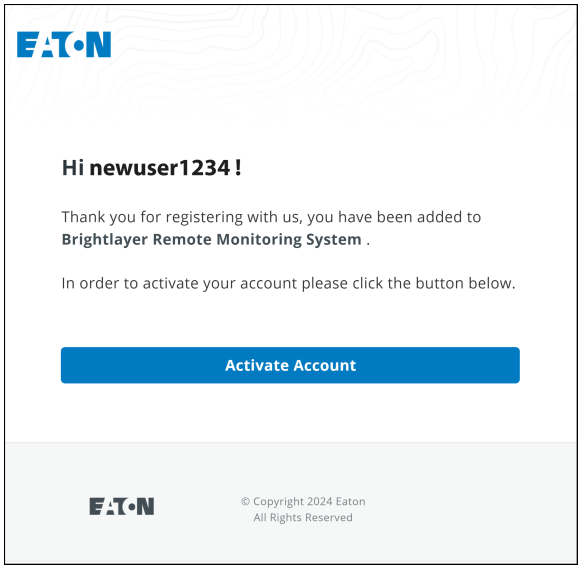
6. Enter the account information to complete the account creation. Eaton recommends that the Two-factor Authentication option remain enabled to prevent unauthorized access to the account. When finished, click *Next*.
7. The new user account has now been created; press. Press the log-in button, and an email notification will be sent to activate the account.

Figure 12. Account Details



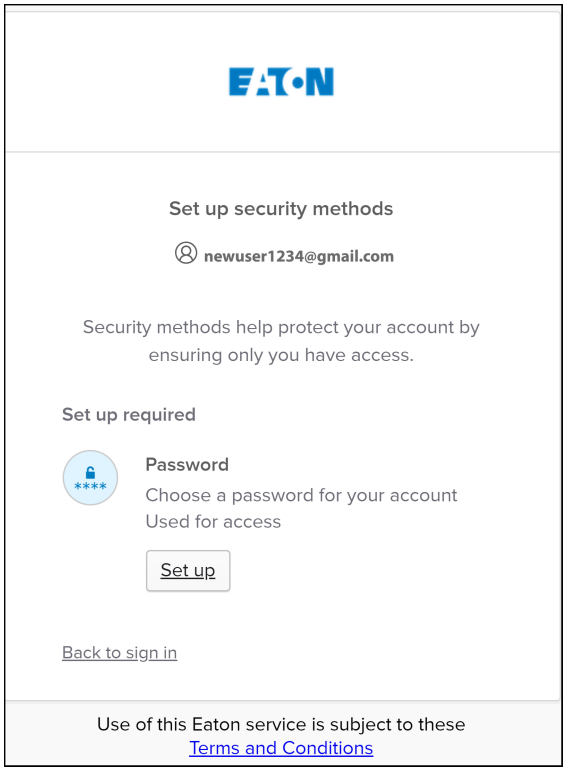
8. Click the *Activate Account* button provided in the email notification.

Figure 13. Email Activation Notification



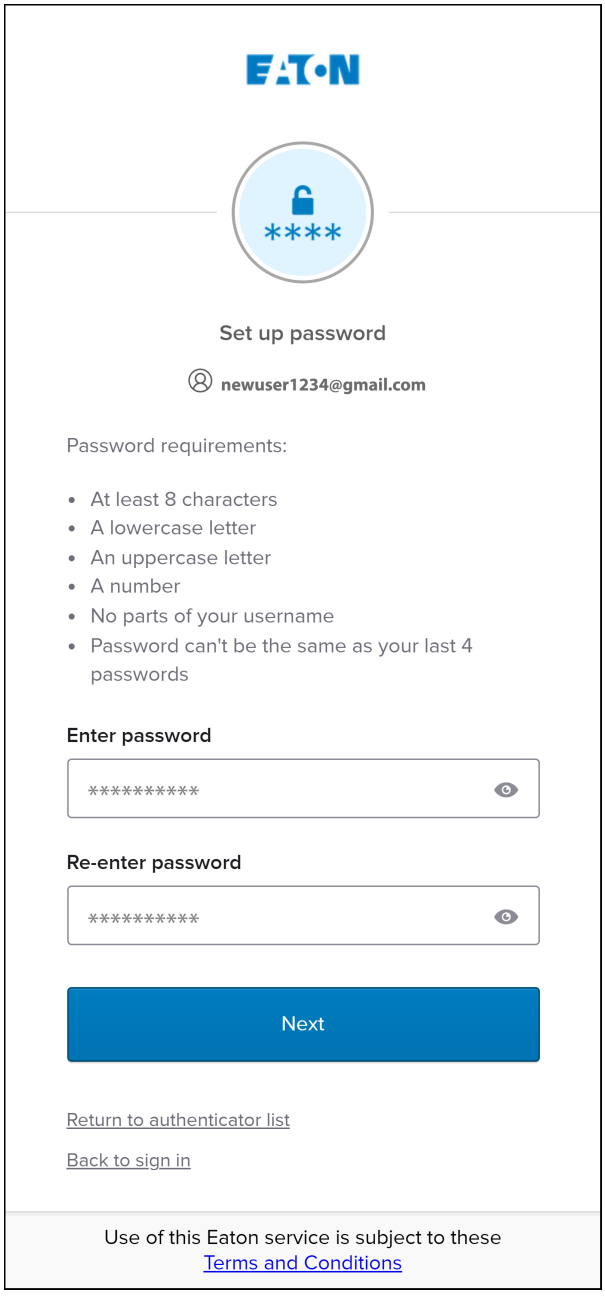
9. Click on *Set up* to set up an account password.

Figure 14. Set Up Password Screen



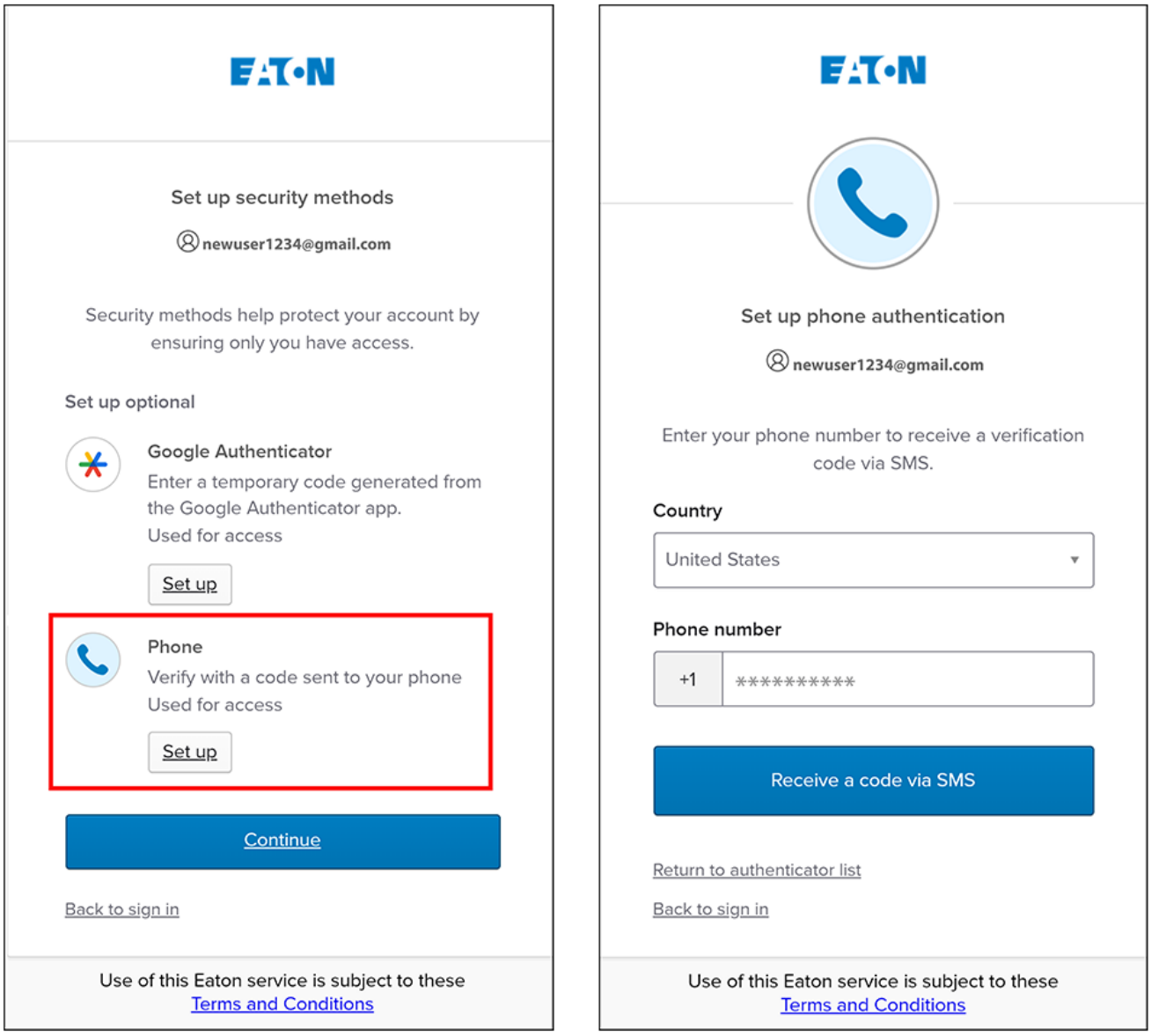
10. Create a password that meets the requirements to log into the application. When finished, click *Next*.

Figure 15. Set Up Password



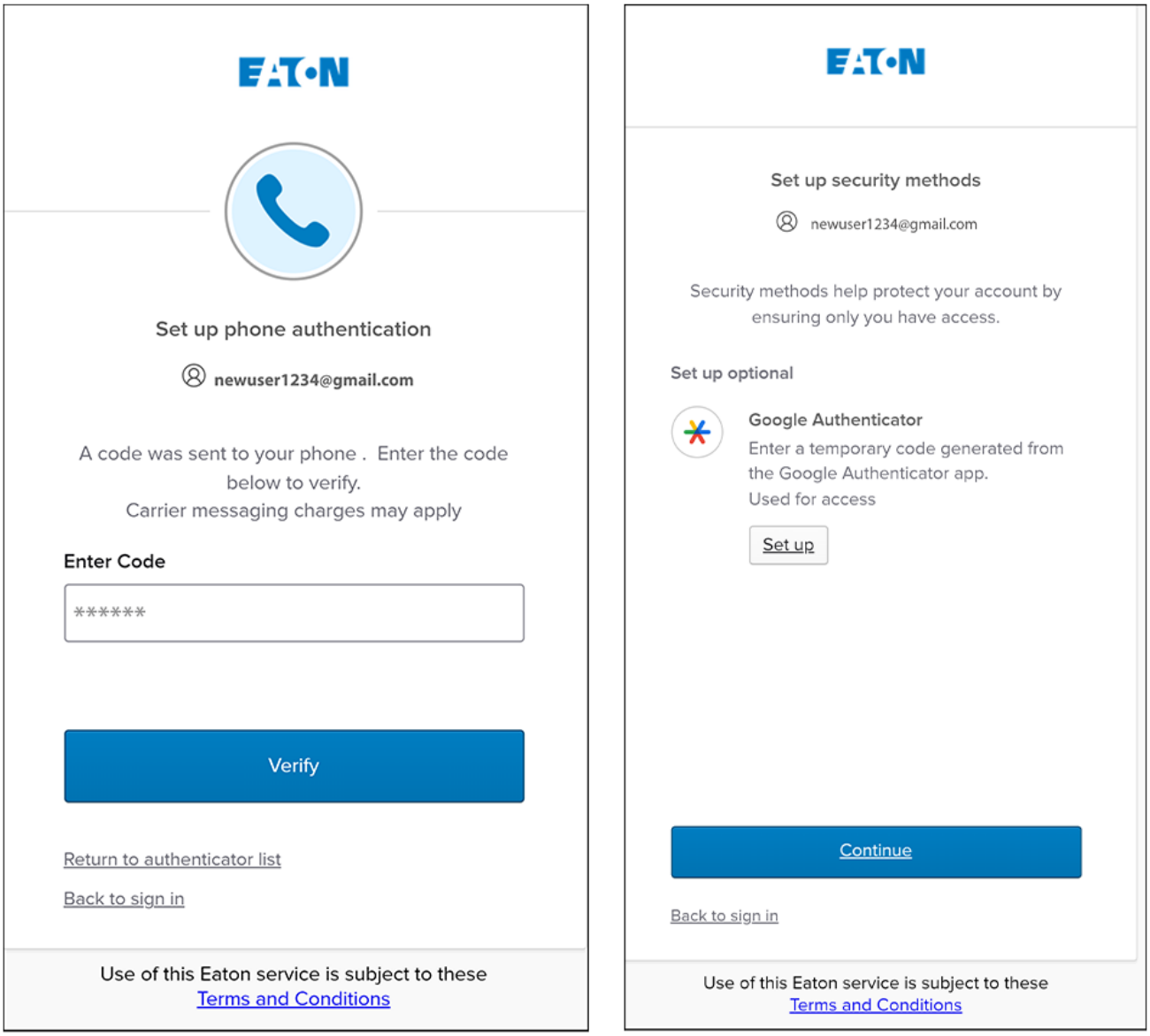
11. Set up the authentication method that is available to access the account. Click *Setup*.
12. Enter a phone number and click *Receive a Code via SMS*.

Figure 16. Security Authentication Setup



13. Enter the code received via SMS. Click *Verify*.
14. Click *Continue* once the code has been accepted.

Figure 17. Continue Setup

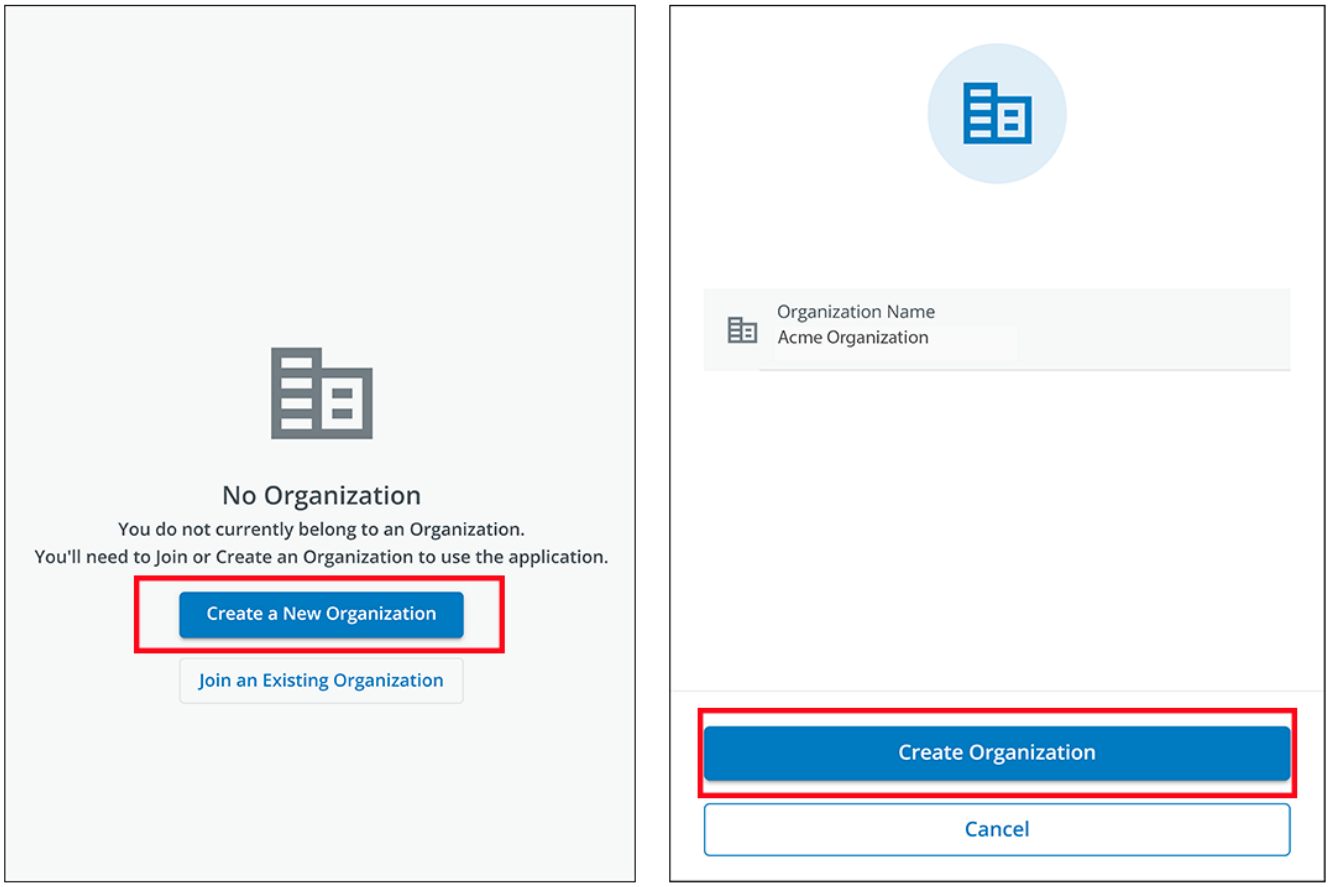


15. Click *Create a New Organization* .

NOTE If joining an existing organization, contact the administrator to obtain the organizational code and click*Join and Existing Organization*.

16. Enter the name of the new organization. Click *Create Organization*.

Figure 18. Create a New Organization



17. The new organization has been created, and the initial enrollment has been completed. Click *Finish*,

Figure 19. Organization Created Successfully

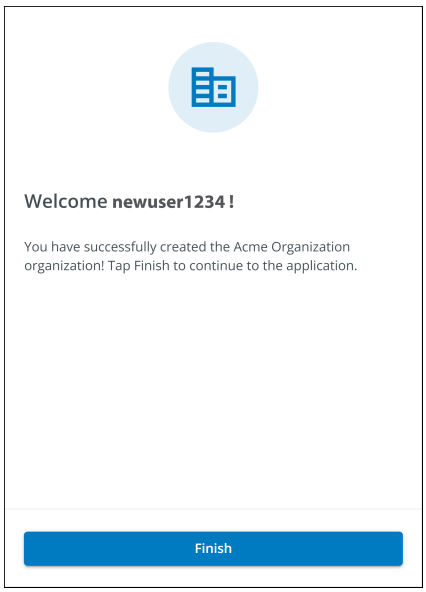
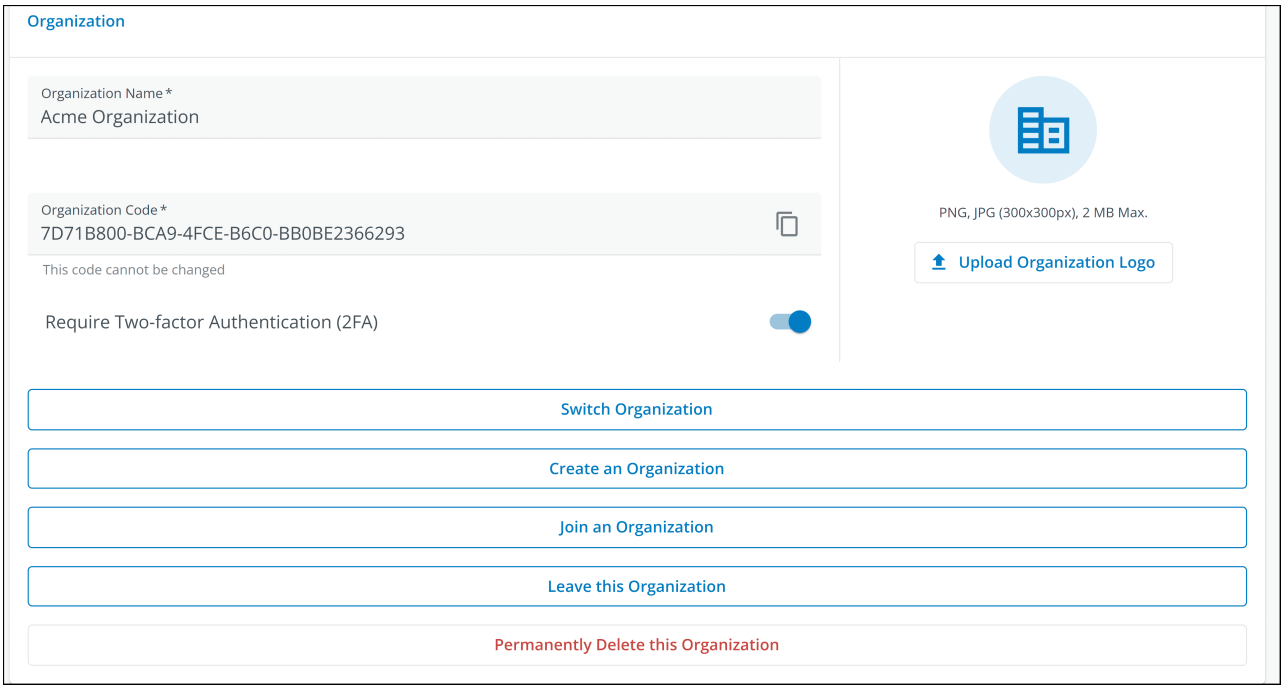


Figure 20. Organization Management Screen



4.3 User Interface

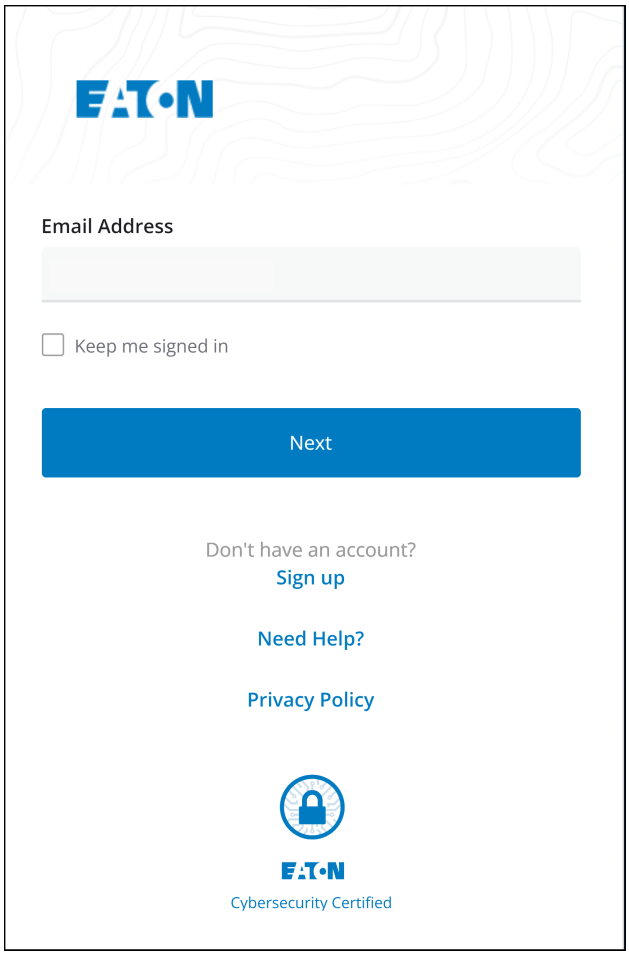
The Eaton Remote Monitoring Application includes a simple summary and detailed views of the connected devices. You can view it with a computer browser, such as Google Chrome™, or any mobile device.

NOTE Occasionally clear the browser cache, click the reload button to refresh the Remote Monitoring app, or adjust your browser resolution settings. New features and updates will be released over time, and clearing the browser cache or adjusting the browser resolution settings corrects login or data visibility issues.

4.4 Login Screen

Figure 21 shows the Eaton Remote Monitoring Application login screen viewed on an internet browser. From the login screen, the user can enter a new enrollment, reset the password, or log in to open the application's overview (home) screen.

Figure 21. Login Screen



4.5 Organizational Summary Screen

The Organizational Summary Screen displays information for all organizational groups and devices, providing easy-to-navigate paths to display information.

Figure 22. Organizational Summary Screen

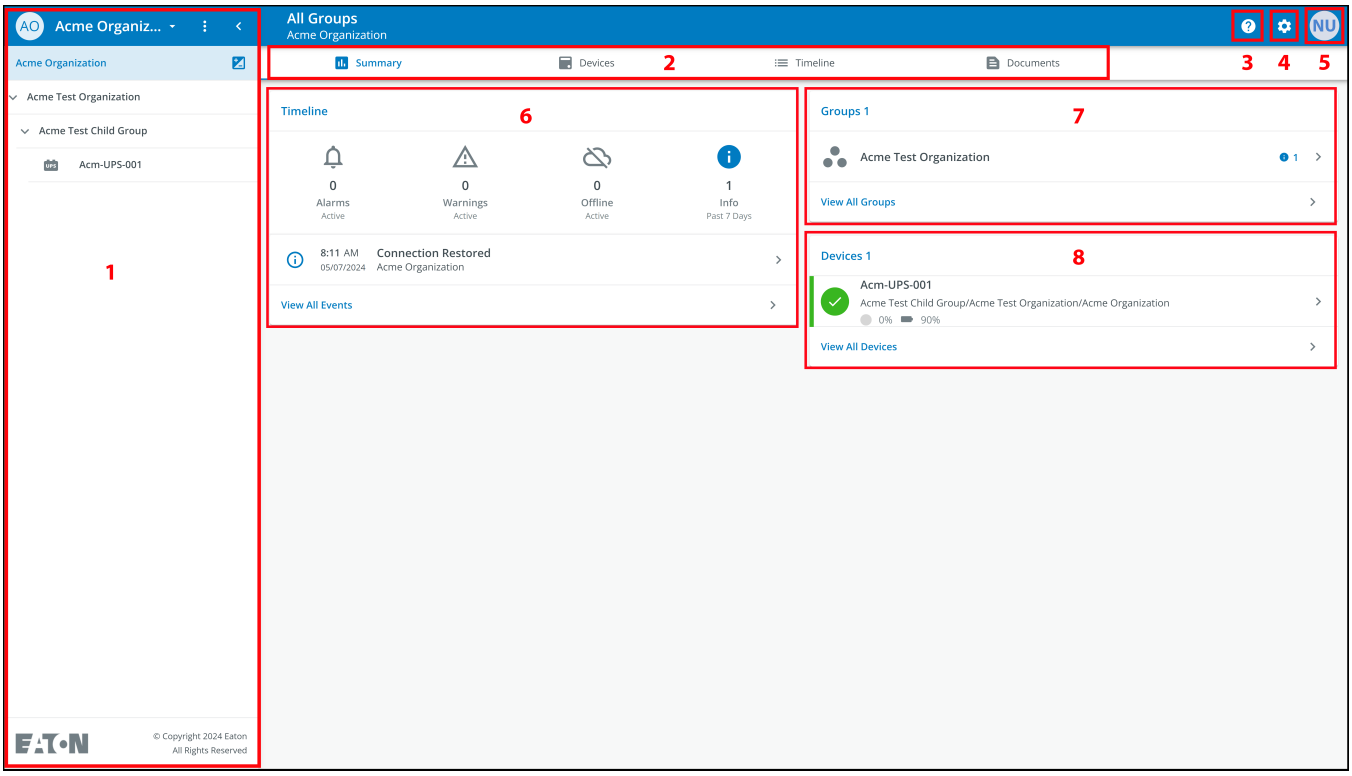


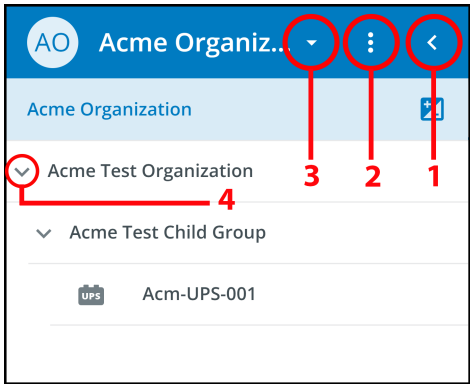
Table 4. Organizational Summary Screen Sections

① Organizational Hierarchy Menu	⑤ User Menu
② Tabs Menu	⑥ Timeline Widget
③ Help Menu	⑦ Groups Widget
④ Settings Menu	⑧ Devices Widget

4.5.1 Organizational Hierarchy Menu

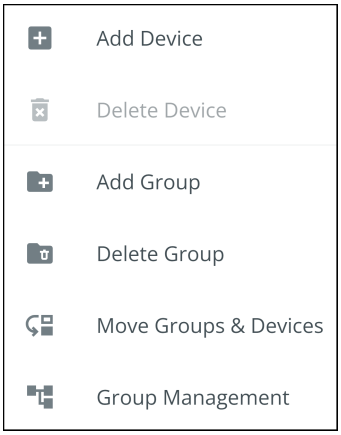
The Organizational Hierarchy Menu manages organizational hierarchy and Devices and allows users to switch between Organizations and Groups.

Figure 23. Organizational Hierarchy Menu



1. Hides or displays the Organizational Hierarchy.
2. Displays the Organizational Hierarchy function to manage Groups and Devices.

Figure 24. Organizational Hierarchy Menu Options



3. Switches between Organizations if more than one exists.
4. Displays the Organizational Hierarchy.

Selecting a Group in the Organizational Hierarchy Menu will display the Organizational Summary Screen see Figure 22 .

Selecting a Device in the Organizational Hierarchy Menu will display the Device Summary Screen, which provides essential information on the status of the UPS. See Figure 38 .

4.5.2 Tabs Menu

The Tabs Menu summarize all of the data for the selected Organization, Group, or Device, as selected in the Organizational Hierarchy Menu.

Figure 25. Tabs Menu

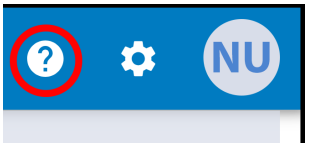
- **Summary Tab-** displays information for each Organization, Group, or Device as selected in the Organizational Hierarchy Menu.
- **Devices Tab-** when selected, the Device Management Screen displays all devices set up within an Organization and controls

  adding or editing those devices.
- **Timeline Tab-** provides an overall summary of events for a specific Organization or Group that can be exported into a .csv file.
- **Documents Tab-** displays Eaton's Cloud-Connected User's Guide and sales brochure files.

4.5.3 Help Menu

Help Menu- clicking on this menu will explain how to contact Eaton for help and the privacy policy.

Figure 26. Help Menu Location



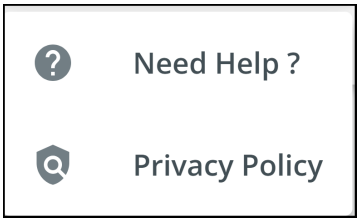
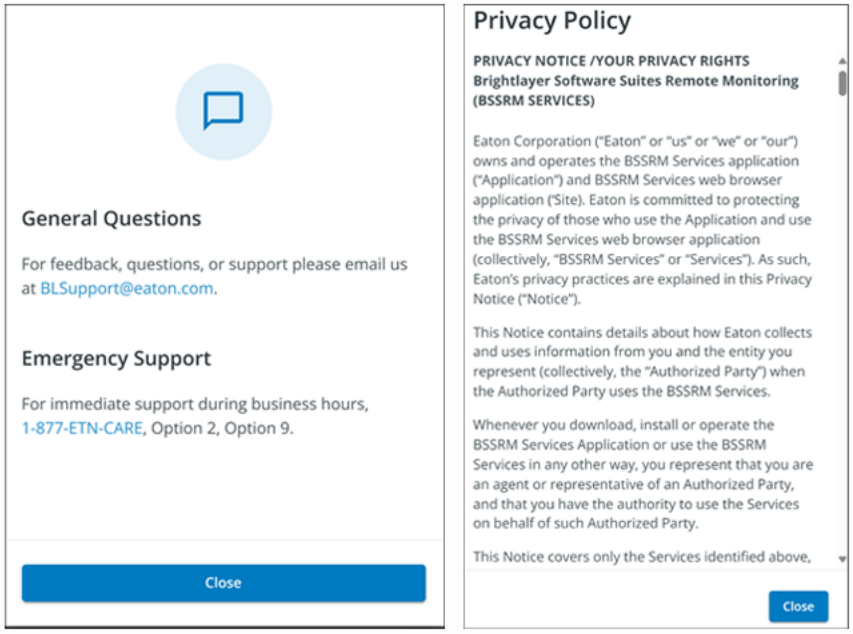


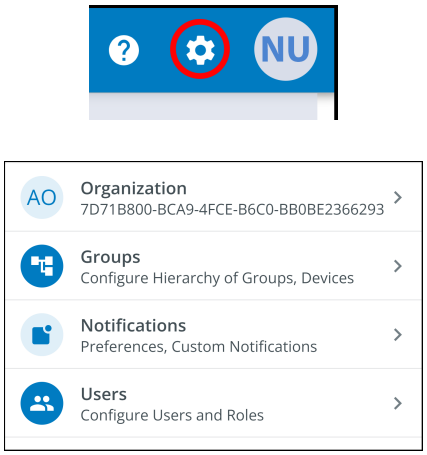
Figure 27. Help Menu Information



4.5.4 Settings Menu

Settings Menu- provides access to all application user settings and configuration settings.

Figure 28. Settings Menu



- **Organizational Management Settings-** displays all of the settings available to manage an Organization (see Figure 20).
- **Group Management-** add, edit, move, or delete Groups within an Organization (see *4.7 Creating a Group Within An Organization*).
- **Notification Settings-** set and configure alarm, warning, and event notifications via email or text (SMS). Custom Notifications can also be set (see Figure 55 and Figure 56).
- **User Management Settings-** allows administrators to invite other users or coworkers to enroll in the Eaton Remote Management Application either as users or as administrators. It also provides control over deleting, disabling, or enabling user accounts (see *4.6 Managing Users*).

4.5.5 User Menu

The User Menu can be accessed by clicking on the User avatar in the upper right-hand corner of the Main Organization Screen providing an option to view or edit profile settings or to log out of the application.

The first section of the user profile page includes general profile information, such as email, phone number, country, an option to enable multi-factor authentication, and a location to upload an image.

The second section is the role that the User holds within the Organization.

The third section displays customizable language, time zone, and date format options.

Figure 29. User Menu

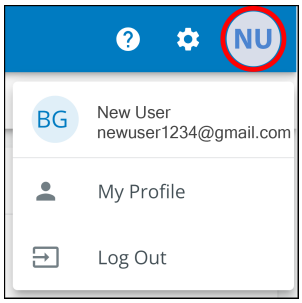
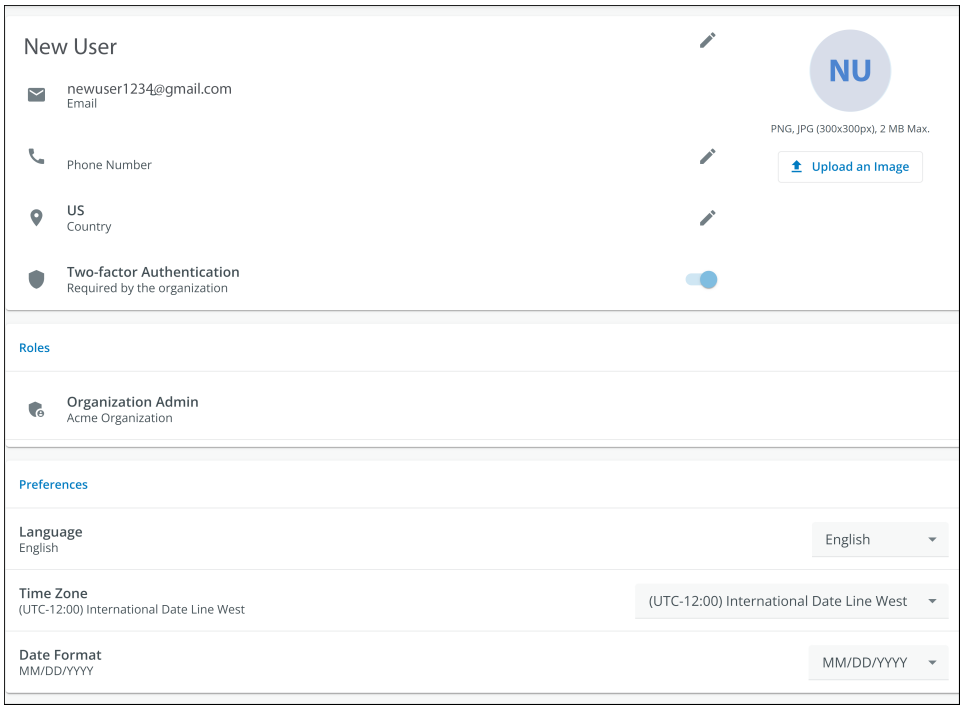


Figure 30. User Profile Screen



4.5.6 Timeline Tab

The Timeline information section is a valuable tool that displays active or inactive alarms and events for the whole Organization. It provides a link to the specific event details and a crucial link to the Event Management screen. This screen is where you can export events into a .csv file, a feature that greatly aids in data analysis and reporting. This comprehensive feature helps keep track of all critical events and alarms and can be accessed via the Timeline navigation tab.

Figure 31. Timeline Widget

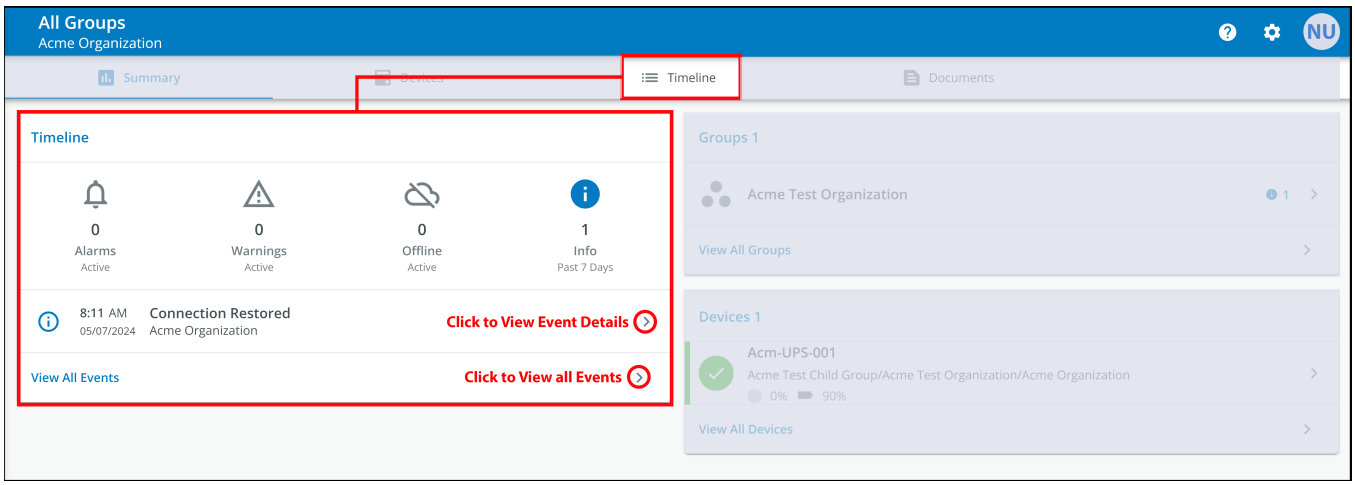


Figure 32. Event Details

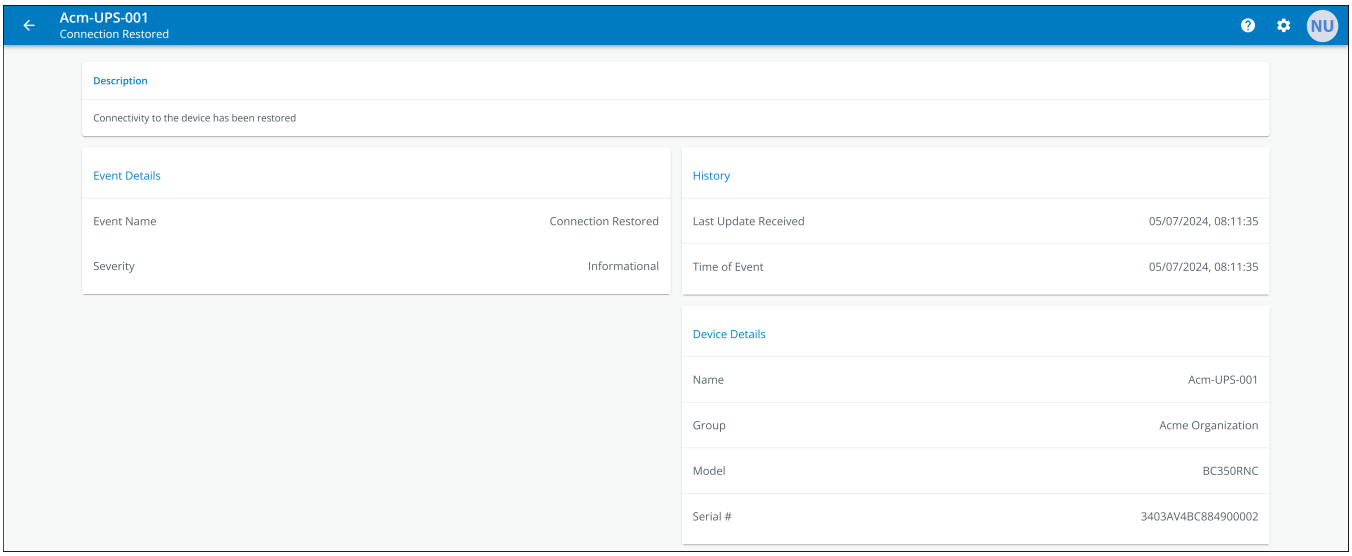
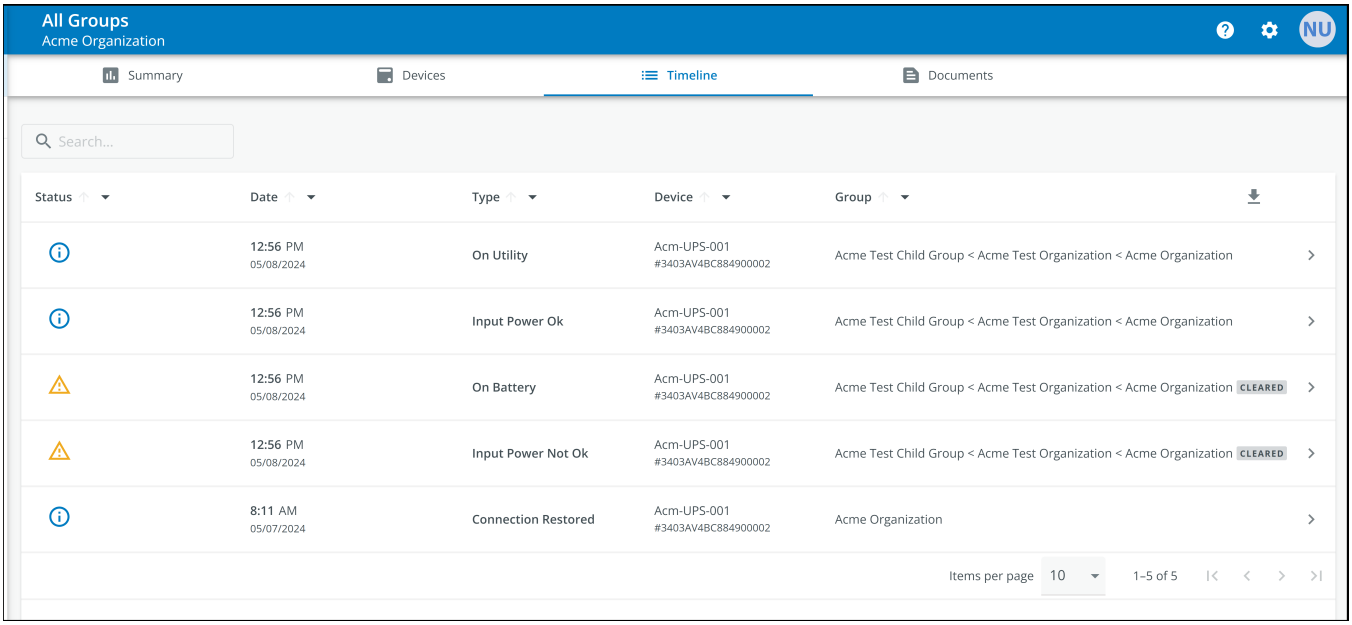


Figure 33. Timeline Screen



4.5.7 Groups Widget

The Groups Widget provides a view of Groups or Child Groups within an Organizational hierarchy and allows users to view all Groups within an Organization.

Figure 34. Groups Widget

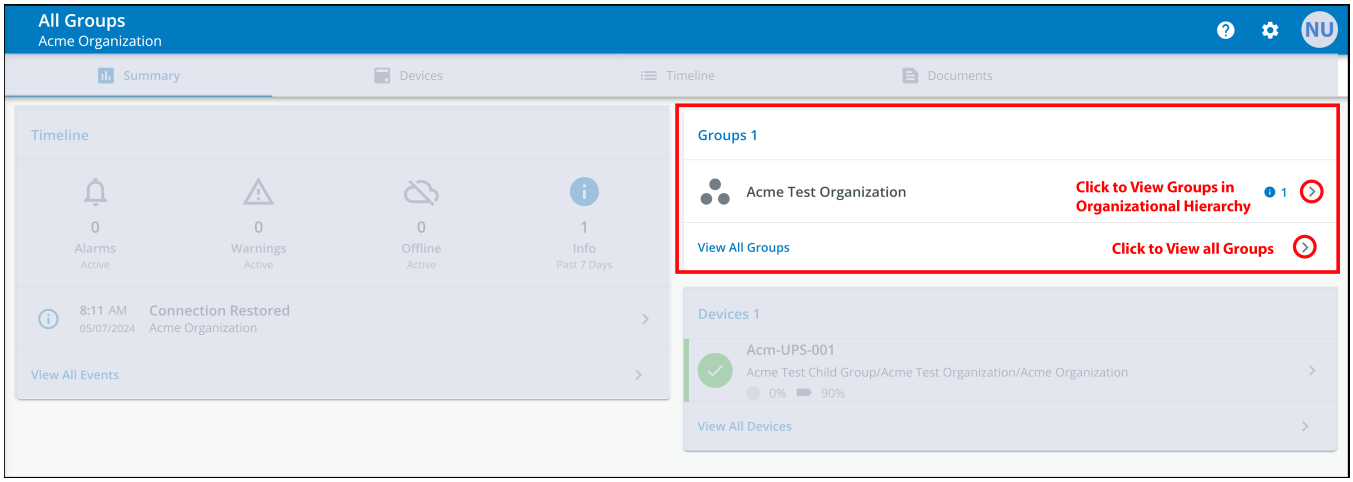
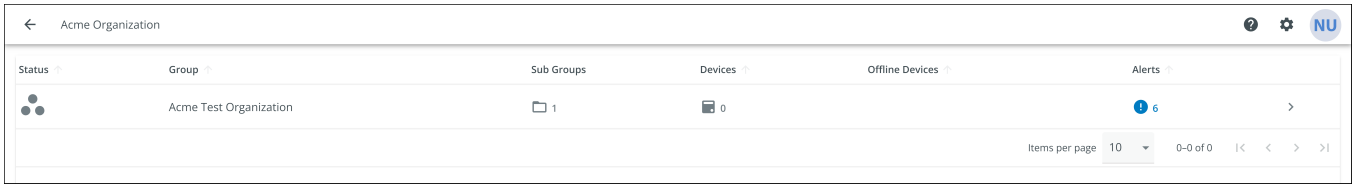


Figure 35. View All Groups



4.5.8 Device Widget

Devices can be viewed and managed by selecting the options on the Main Application Page or utilizing the Organizational Hierarchy.

Viewing Devices Main Application Page

Click on any of the following areas to view a specific screen to view or manage a Device:

1. Navigates to the Device Management Screen, which lists the Devices associated with the Organization account and allows users to move, add, or delete Devices. (See Figure 37).
2. Navigates to the Device Summary Screen and allows users to display all the details for a specific Device. (See Figure 37).

Figure 36. Device Widget

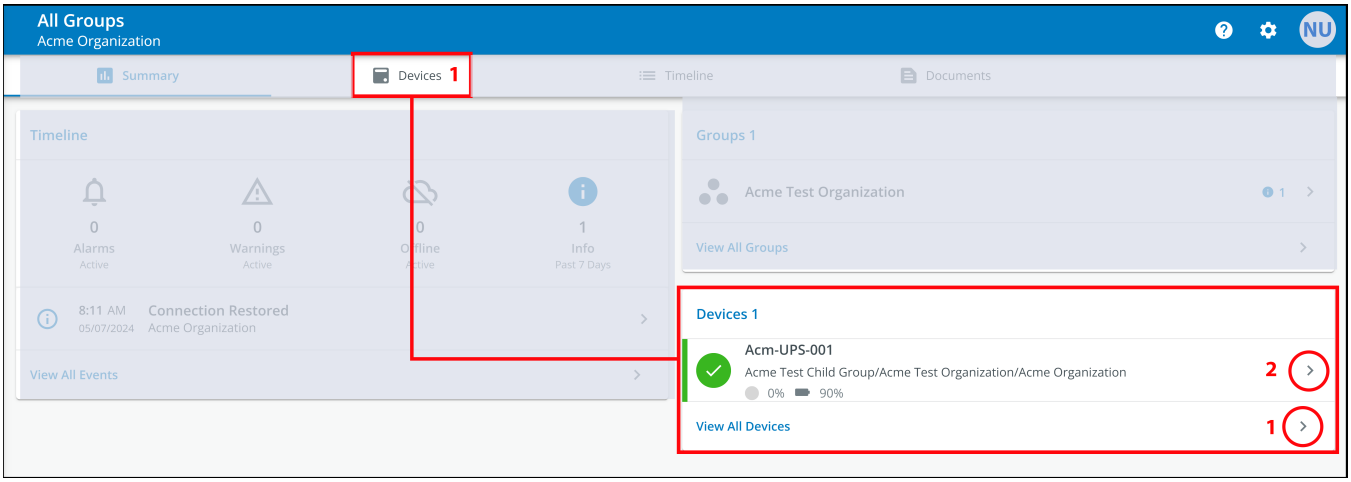
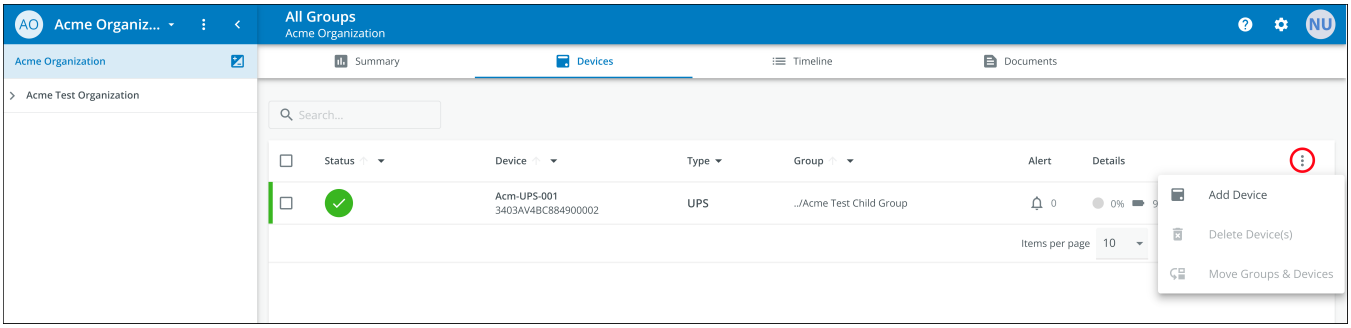


Figure 37. Device Management



The Device Management Screen

The Device Summary Screen provides a real-time operational snapshot of all Organization specific Devices - Status, Device (Name, Serial Number), Type, Group, Alert, and its Details.

Figure 38. Device Summary Screen

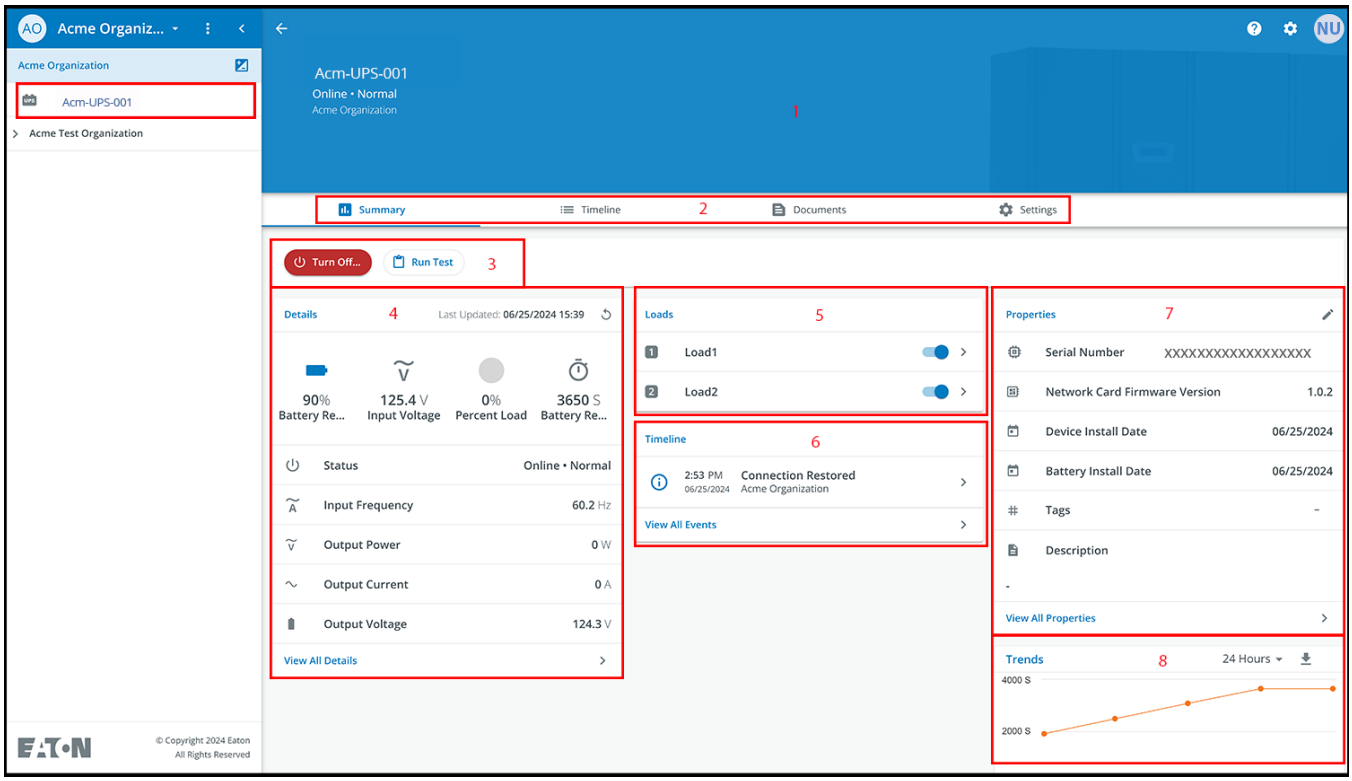
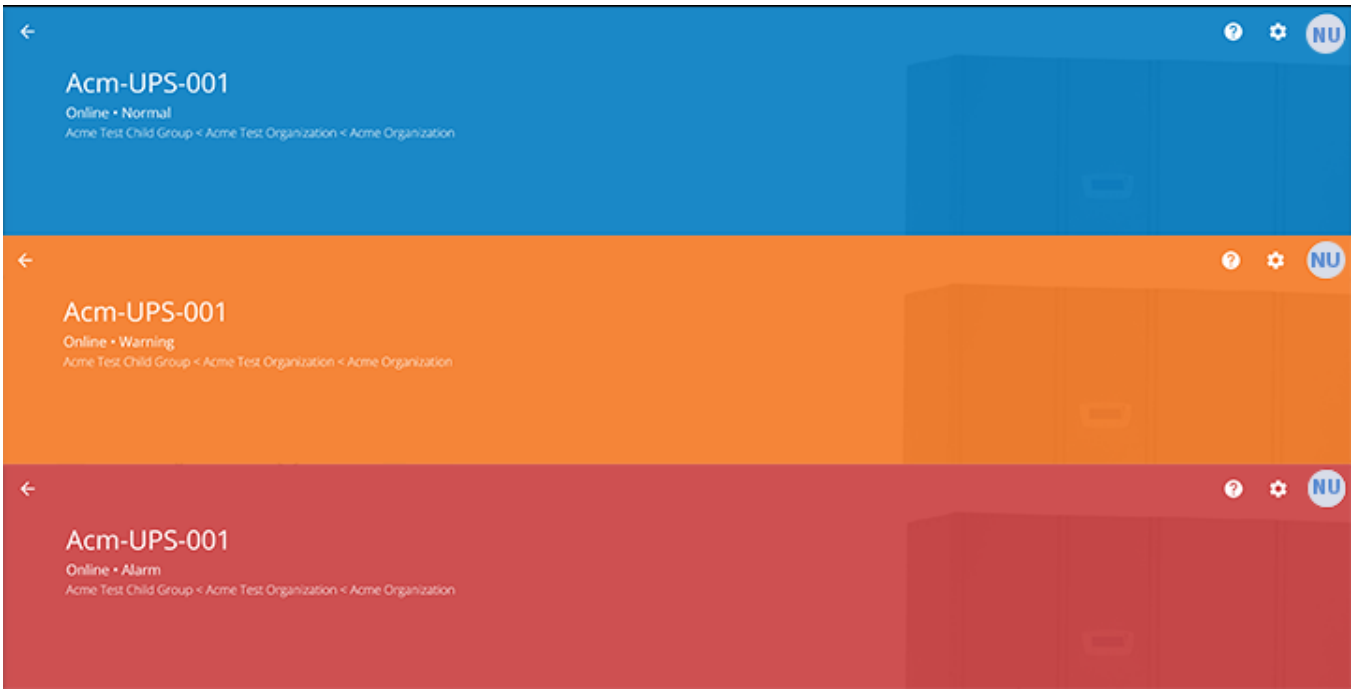


Table 5. Device Summary Screen Areas

① Device Summary Screen Banner	⑤ UPS Output Control
② Tabs Menu	⑥ Timeline
③ Device Control	⑦ Device Properties
④ Device Details	⑧ Trends

1. **Device Summary Screen Banner-** changes colors, indicating the different UPS operational modes.
   - Blue- Online Normal Mode.
   - Orange- Online Warning
   - Red- Online Alarm

Figure 39. Device Summary Screen Banner

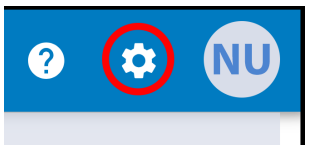


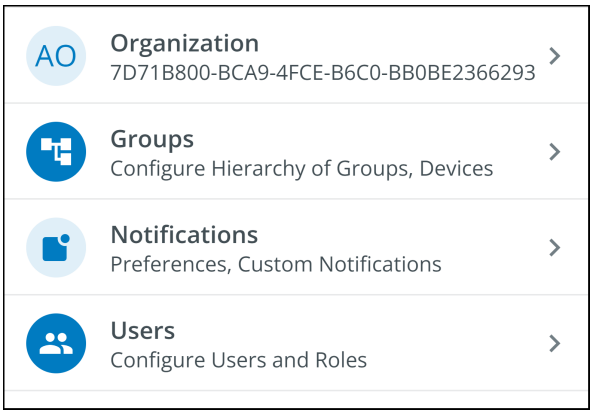
2. **Tabs Menu:**
   - Summary- displays the Device Summary Screen.
   - Timeline- provides an overall summary of events for the Device that can be exported into a .csv file.
   - Documents-displays the Eaton Cloud-Connected User's Guide and sales brochure files.
   - Settings- general settings that can be set on the UPS.
3. **Device control-** provides limited control over the Device, such as turning the Device ON/OFF/CYCLE, running a battery test.
4. **Device details-** displays an overview of the Device's operating status, trends, and properties.
5. **Device load control-** gives control over the output load segment(s) associated with the selected Device.
6. **Timeline-** displays active or inactive alarms and events that can be exported into a .csv format(see Figure 63) .
7. **Device Properties-**provides the ability to edit or view the Device information.
8. **Trends-** displays specific UPS performance data that can be customized and downloaded over a 31-day time interval.

4.6 Managing Users

The Users Management Screen allows the administrator or other users to add, invite, or remove inactive members from an Organization.

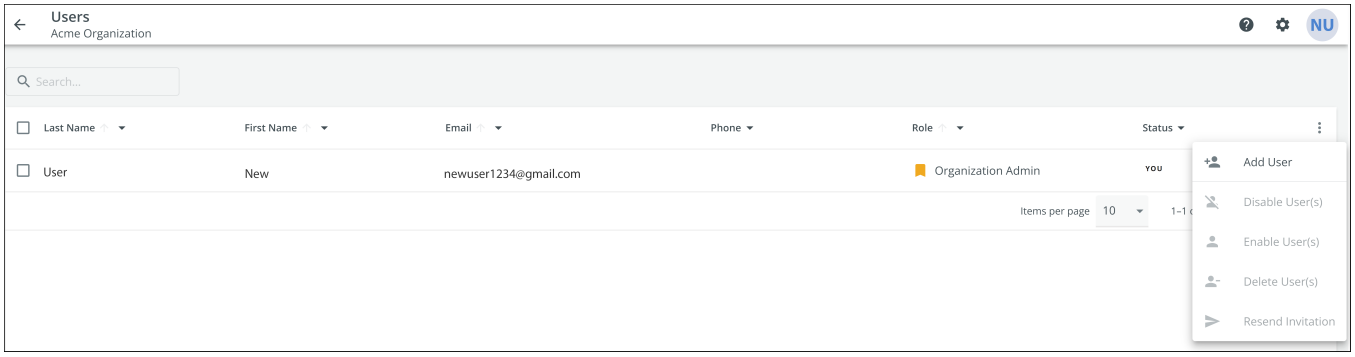
To access the User Management Screen, click on the Settings Menu then Users (Configure Users and Roles).





To add a User, click on the three dots to the right of the page, then select Add User.

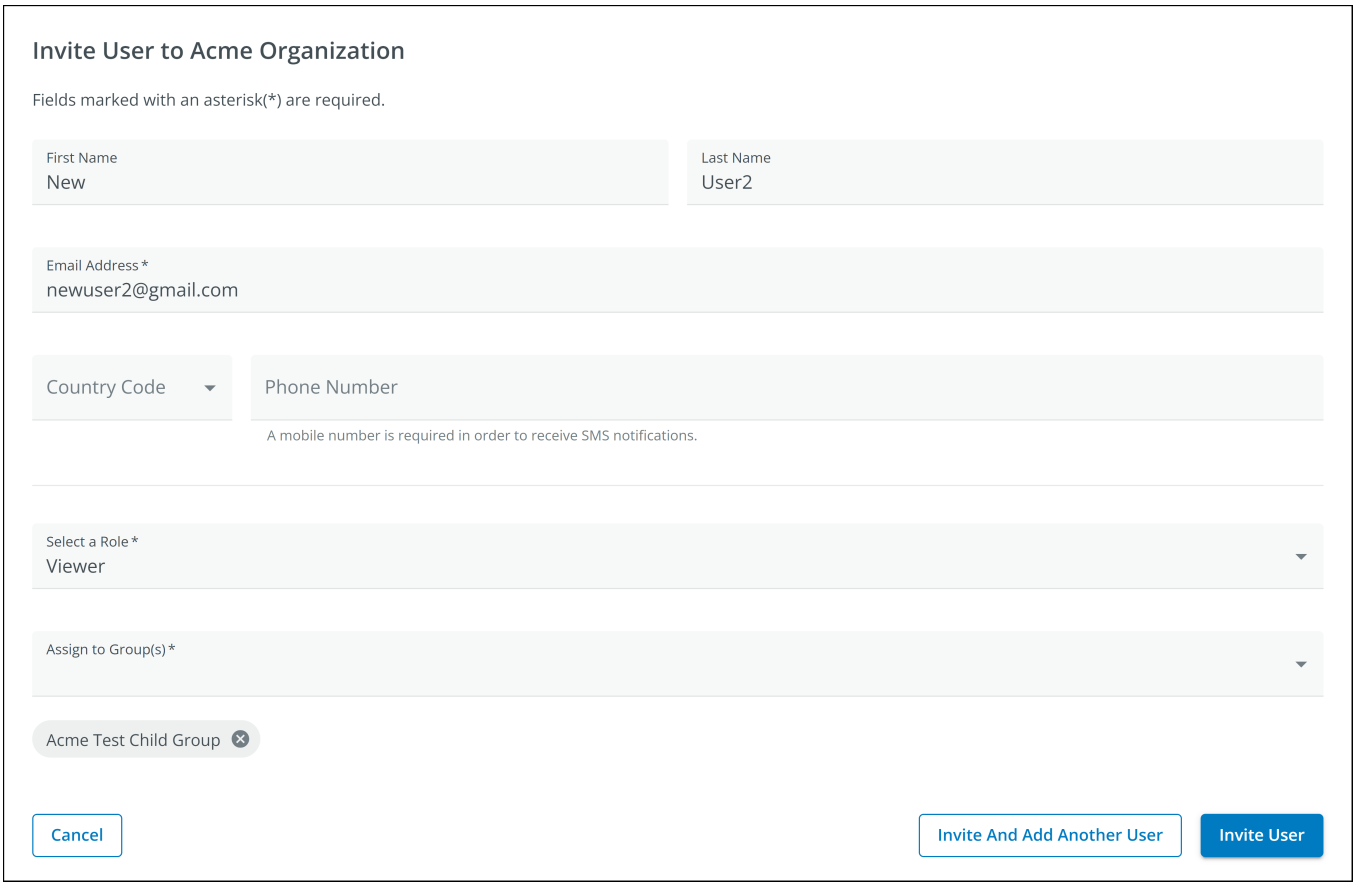
To delete or Enable/Disable/or Delete a User, select the User and then the three dots to being up the User Management Menu.



Fill out the User information. Then select the Invite User button. An email will be sent to invite the new User to the Organization.

NOTE The new Users will have to set up an account if they do not have one. See User Enrollment and Activation .

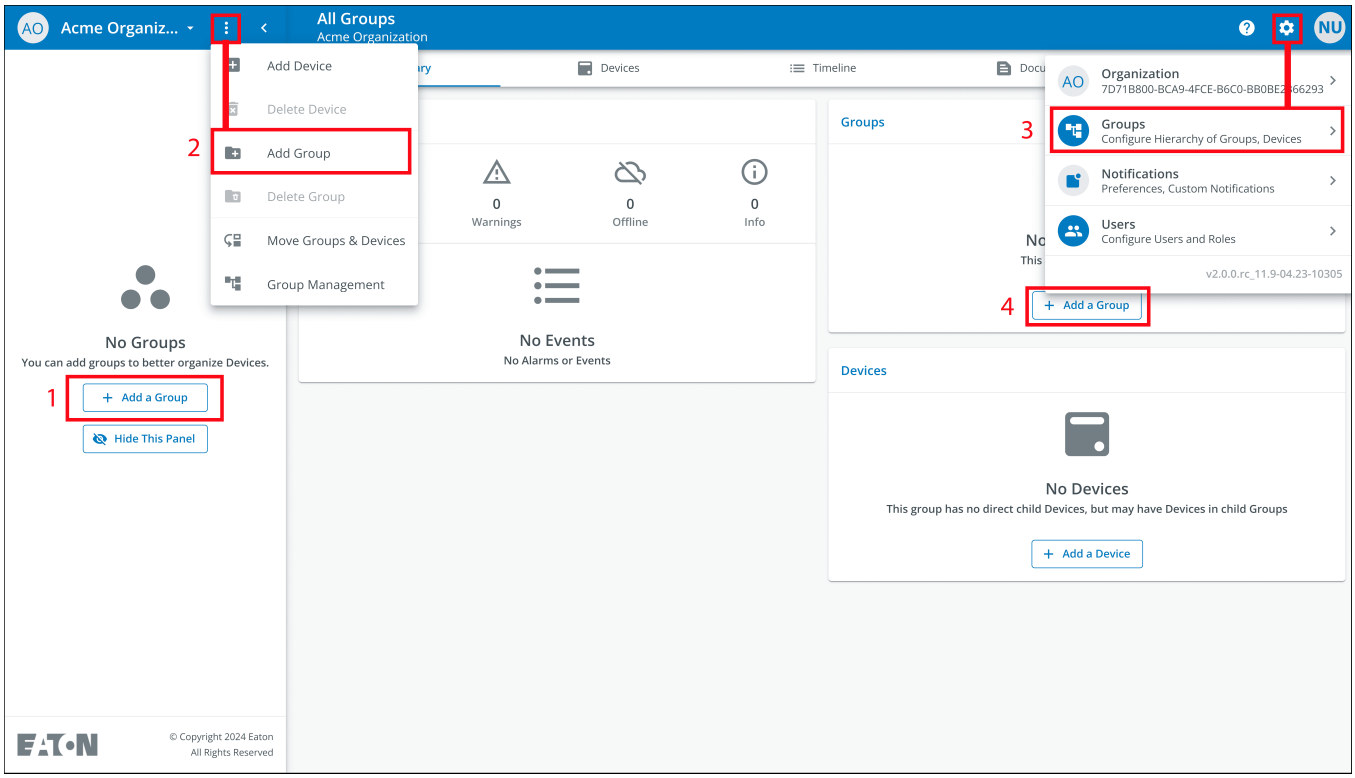
Figure 40. Invite New User



4.7 Creating a Group Within An Organization

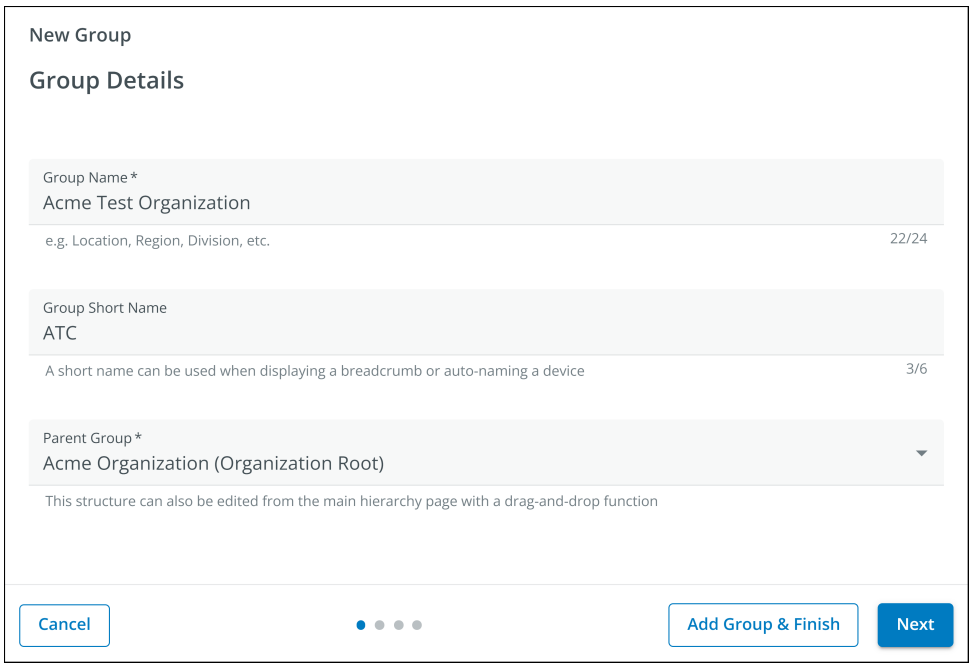
1. Click on the *Add a Group* option on any one of the four areas on the summary screen.

Figure 41. Adding a Group



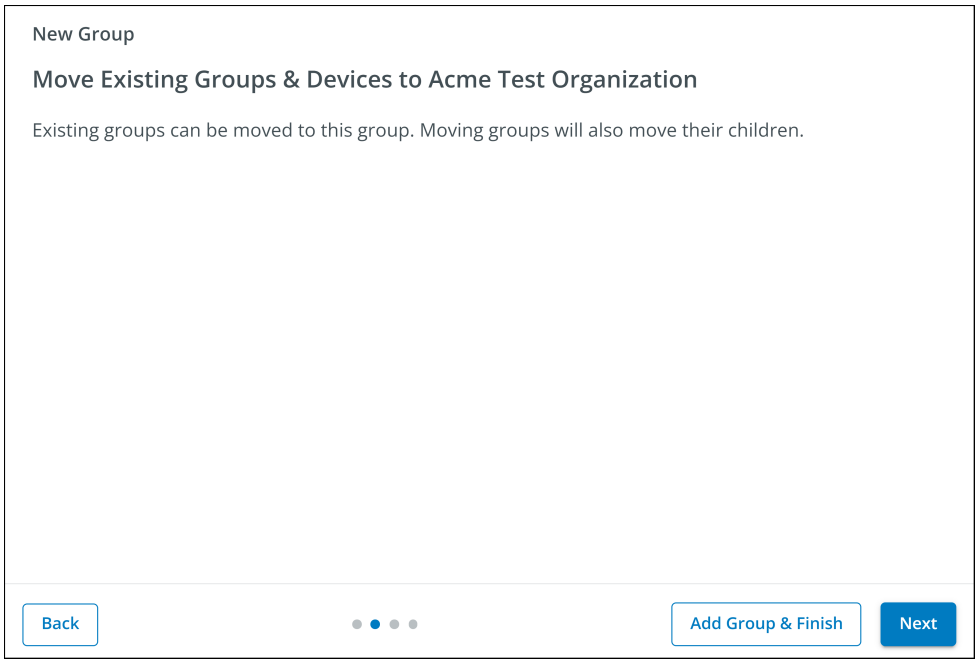
2. Enter in a name and then select the parent organization where the new Group will reside. Click *Next.*

Figure 42. Group Details



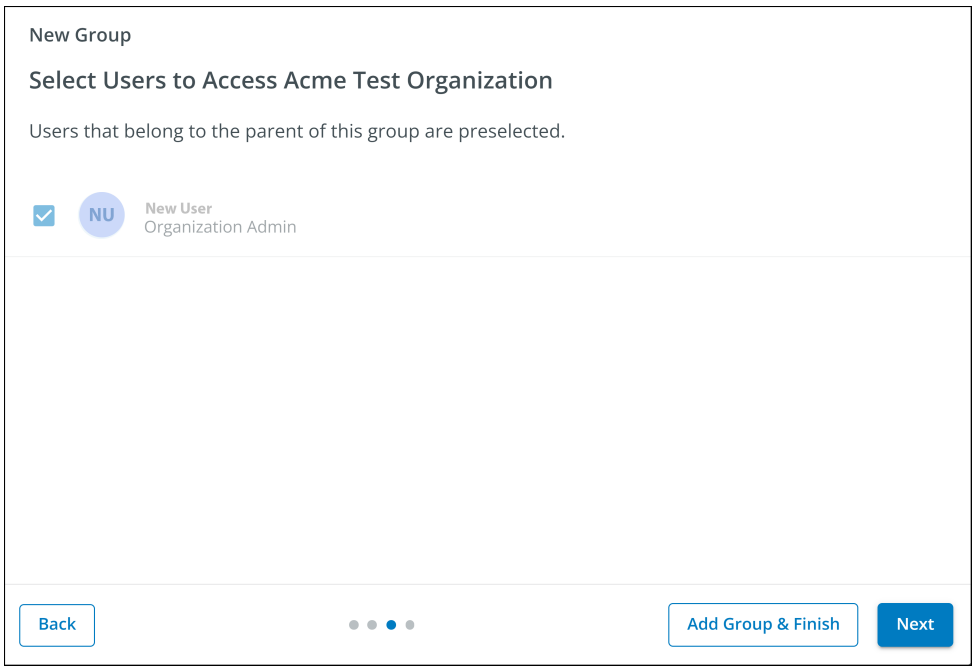
3. Move any existing Groups to the newly created Group (if applicable).

Figure 43. Move Groups



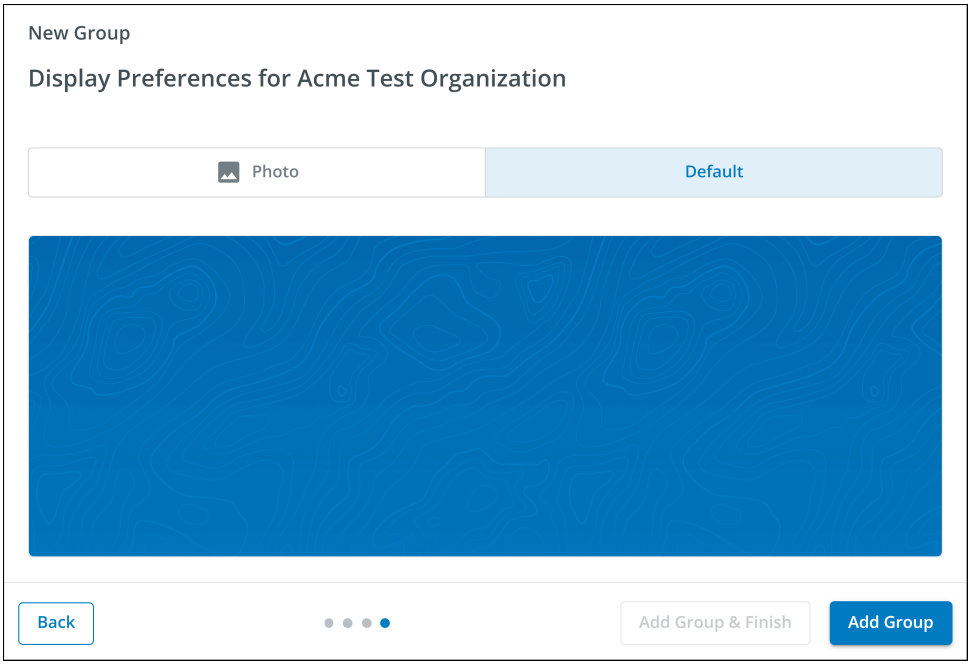
4. Assign users to the newly created Group.

Figure 44. Select Users



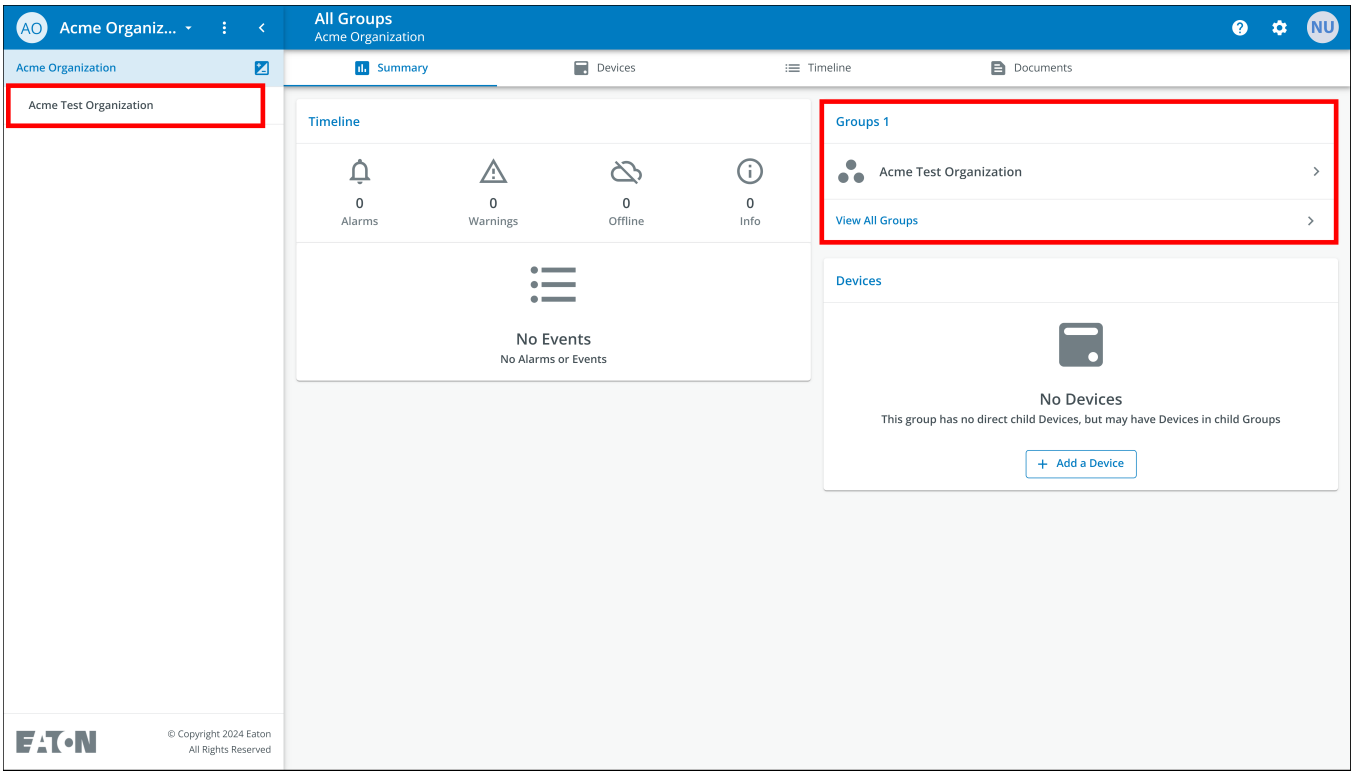
5. Choose between the default image or upload a new photo to help identify the Group. Click *Add Group* when finished.

Figure 45. Display Preferences



6. The newly created Group has now been created under the Acme Organization and can now be viewed on the application Organizational Hierarchy Screen.

Figure 46. New Group

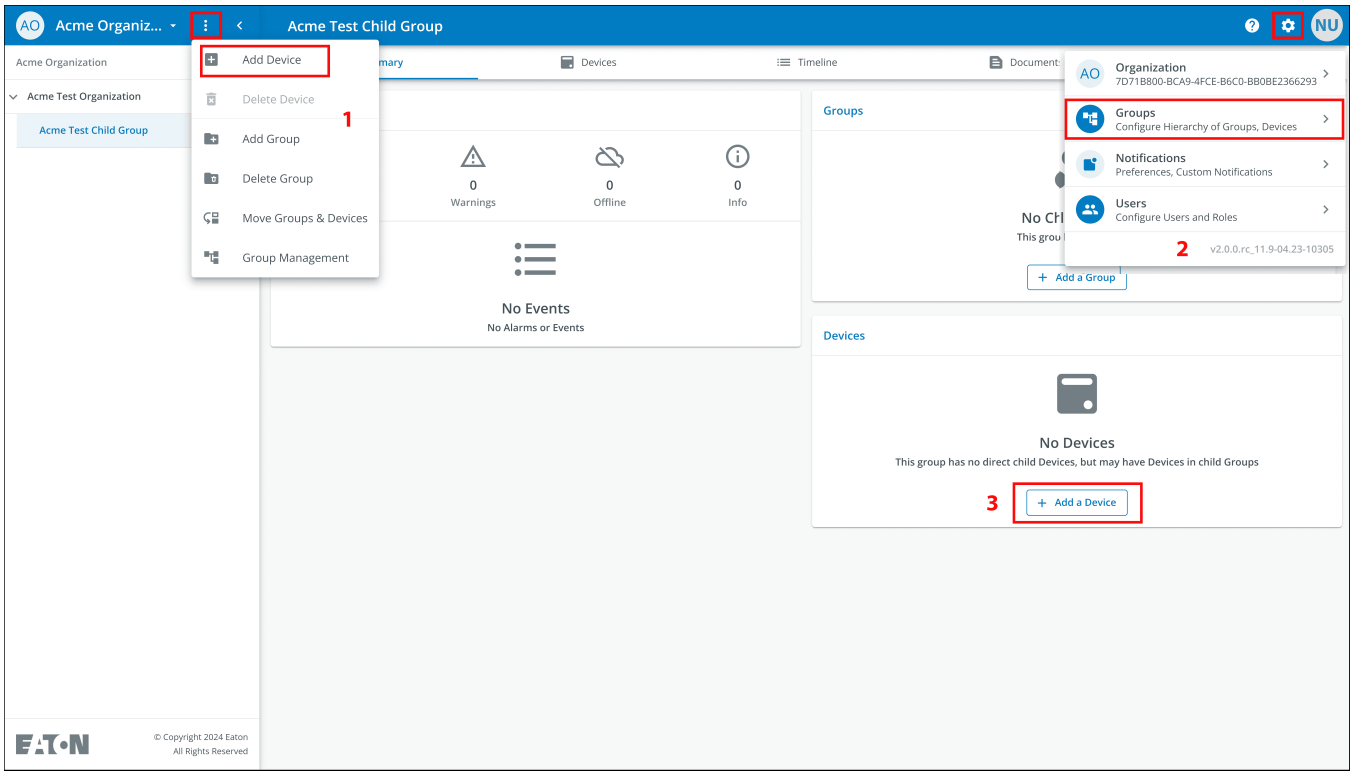


4.8 Adding a Device

Adding a Device Manually

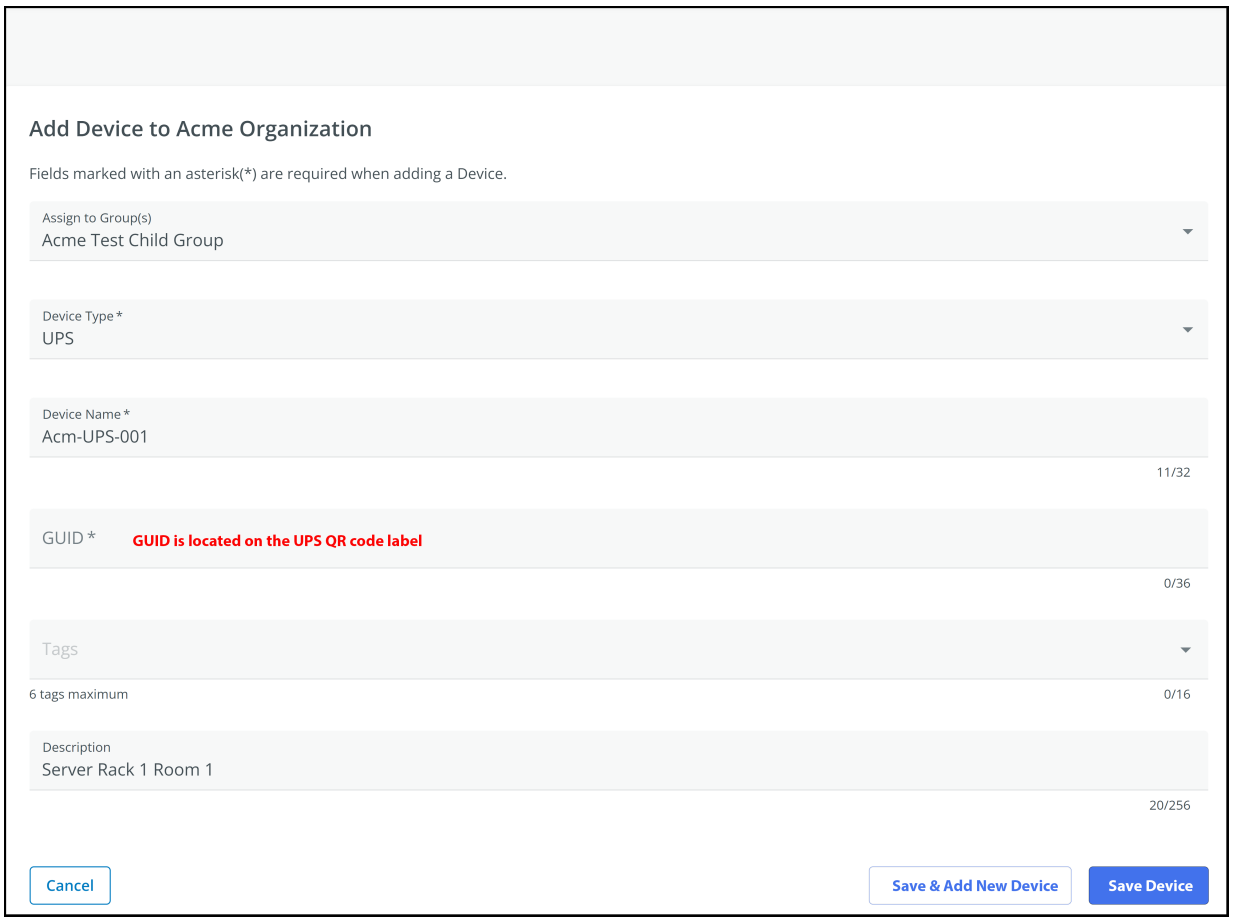
1. Power the UPS ON and verify it is in Online Mode.
2. Connect an Ethernet cable (not supplied) from an active network connection to the port on the UPS.
3. Click on the organization or the group to which the device will be added in the Organizational Hierarchy Menu.
4. Click one of the three areas of the Group Screen or in the Device Management Screen (see Figure 37).

Figure 47. Add Device Options

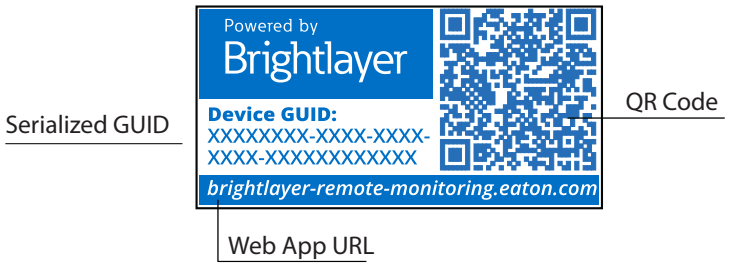


5. Enter all of the required information about the device. Click *Save Device*.

Figure 48. Add Device

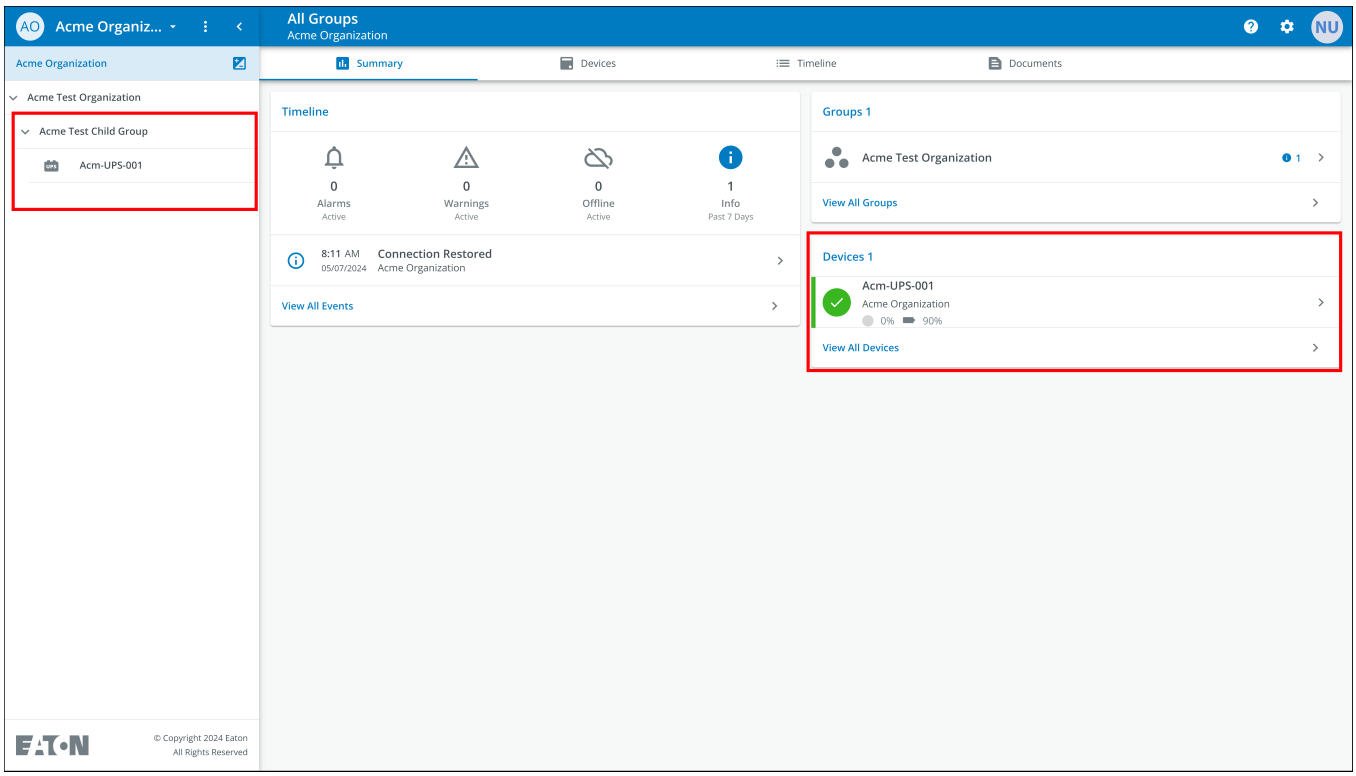


NOTE The GUID can be found on the QR code sticker on the UPS cover.



6. The device will now show that it is attached to the group or organization.

Figure 49. Organization Summary Screen



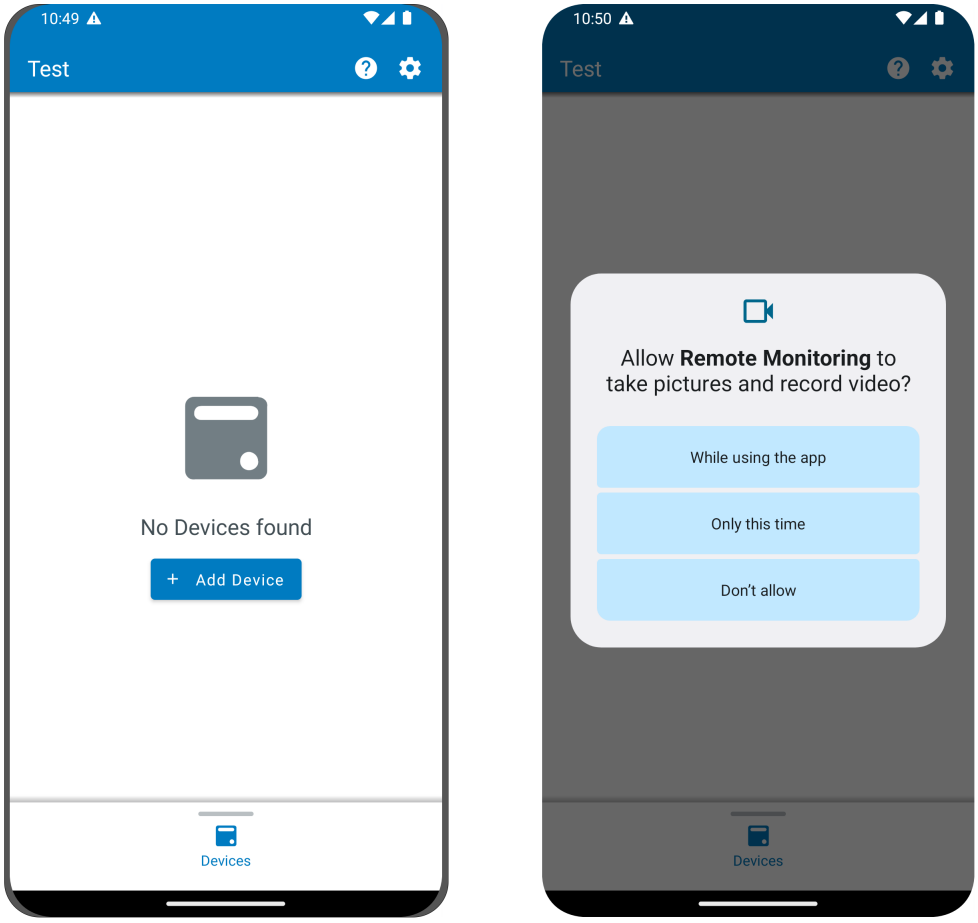
4.8.1 Adding a Device with the Mobile Application

1. Download the Remote Monitoring Application and create an account or log into your existing account.

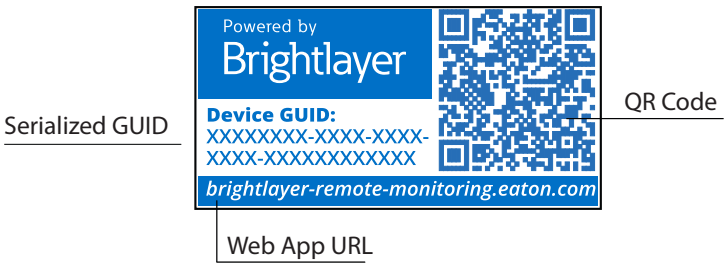
NOTE If the Remote Monitoring Application has been downloaded to the mobile device, the QR code will automatically redirect to the add device screen within the Application. If it was not previously downloaded, scanning the QR code will redirect the user to the app store to download it and set up a user account.

2. Power the UPS ON and verify it is in Online Mode.
3. Connect an Ethernet cable (not supplied) from an active network connection to the port on the UPS.
4. Navigate to the Organizational Summary screen and click on devices.
5. Select the *Add Device* icon button.
6. Select OK to allow camera access.

Figure 50. Adding a Device

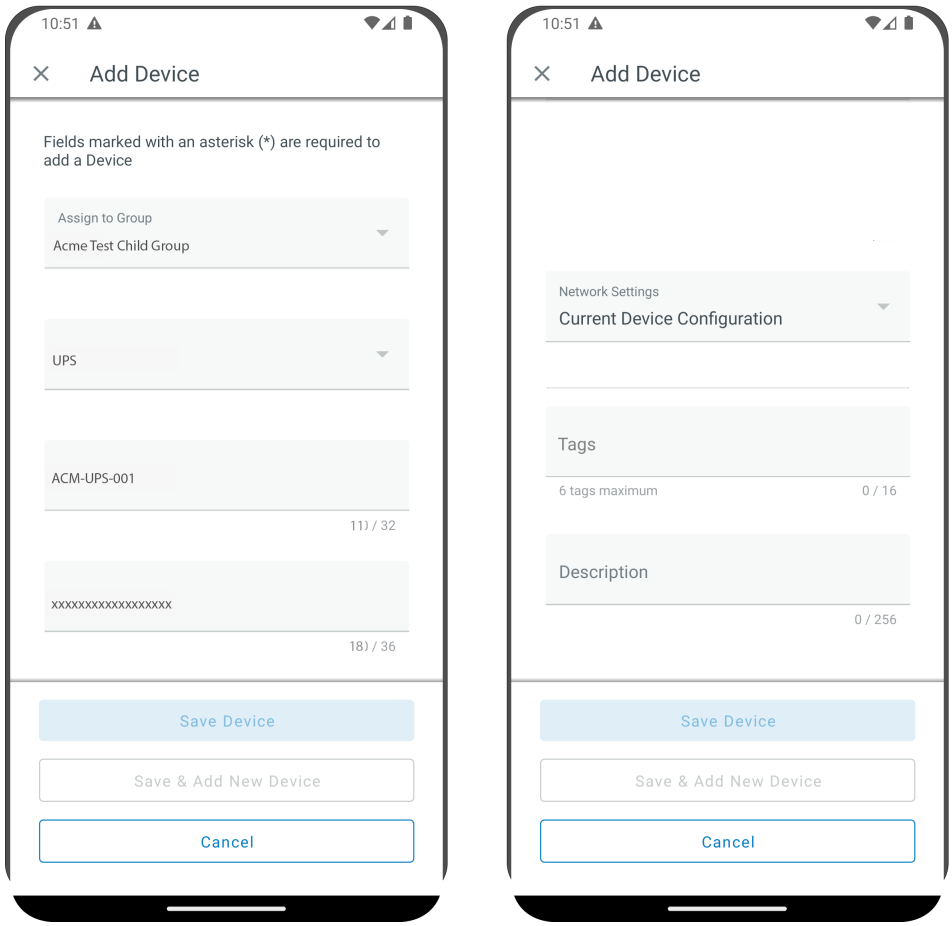


7. Scan the QR code on the UPS cover.



8. Edit the Device Name, Tags, and Description. The Product ID, Serial Number, and GUID information will automatically populate. Click Save Device.

Figure 51. Device Information

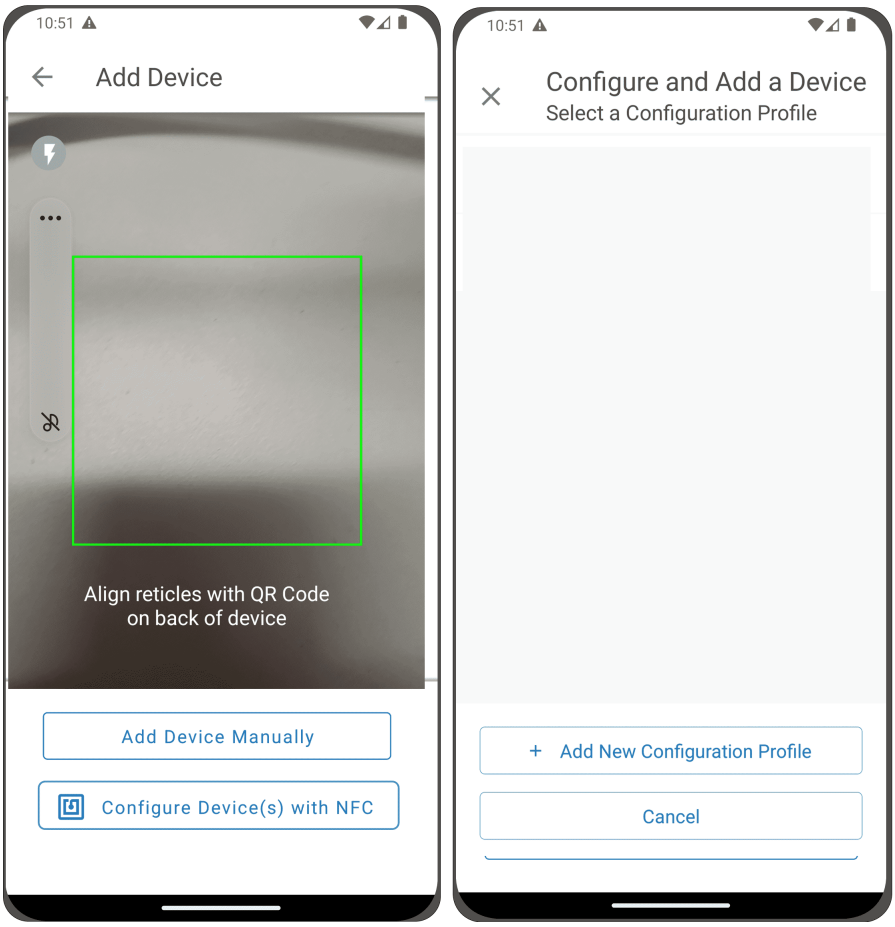


9. Check the Organizational Summary Screen within the Application to ensure the Device was successfully added.

4.8.2 Device Configuration via NFC

1. Power the UPS ON and verify it is in Online Mode.
2. Connect an Ethernet cable (not supplied) from an active network connection to the port on the UPS.
3. Scan the QR code label on the UPS with an NFC enabled smartphone or tablet device and create an account if needed.
4. Navigate to the Eaton Remote Monitoring Organizational Summary Screen.
5. Select the *Add Device* icon button

Figure 52. Add and Configure Device



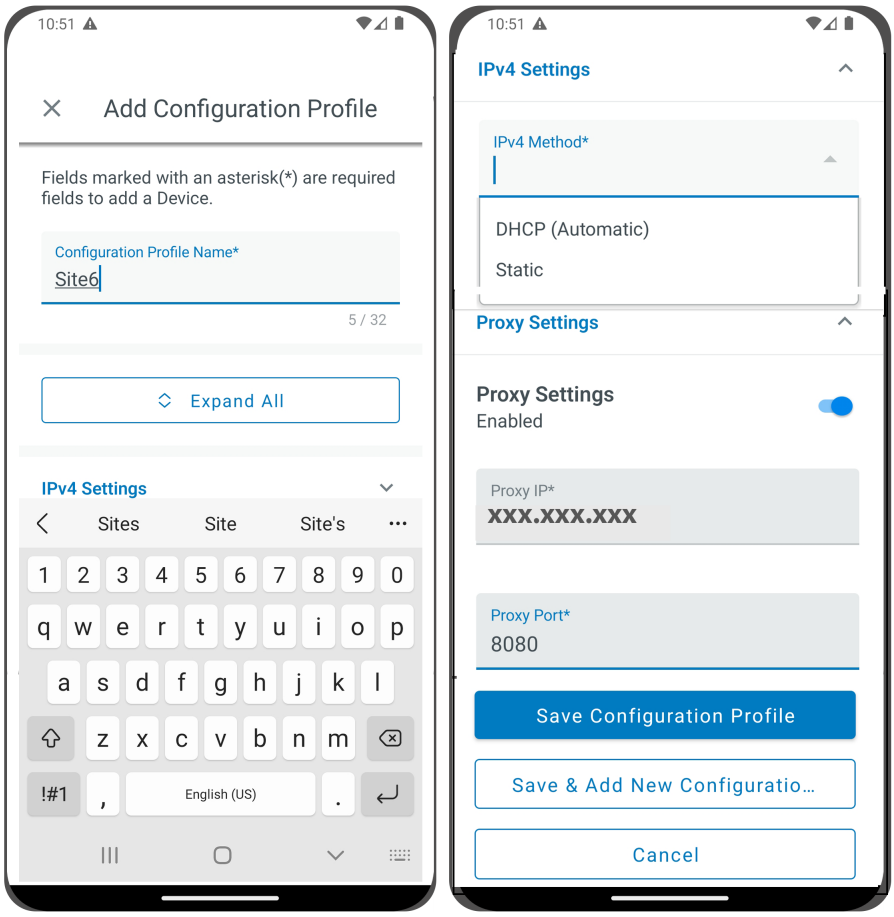
6. Click on Configure Device(s) with NFC.
7. Click on + Add New Configuration Profile.
8. Enter in a Configuration Profile Name.
9. Select the IPv4 Method, DHCP (Automatic) or Static.

NOTE If the IPv4 method selected is Static then the subnet mask and default gateway address must be entered.

10. Set the Proxy IP address and the Proxy Port number.

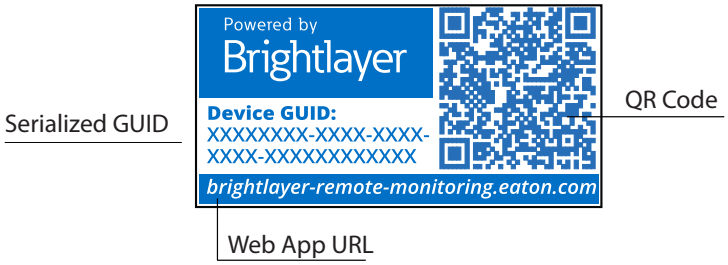
NOTE An additional proxy user name and password may be required.

11. Click Save Configuration Profile. The Profile is now saved and ready to apply to the UPS.



12. Select a NFC profile.

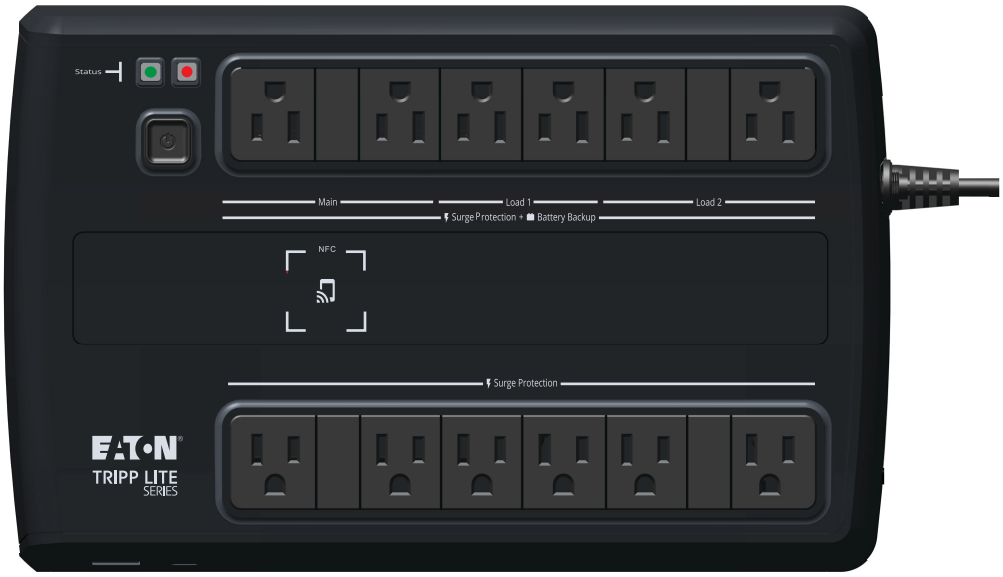
13. Scan the QR code on label of the UPS to obtain the GUID.



14. Align the phone with the NFC label location on the UPS. A popup will appear if the configuration is updated. If there is a problem, an error popup will appear with the option to scan again.

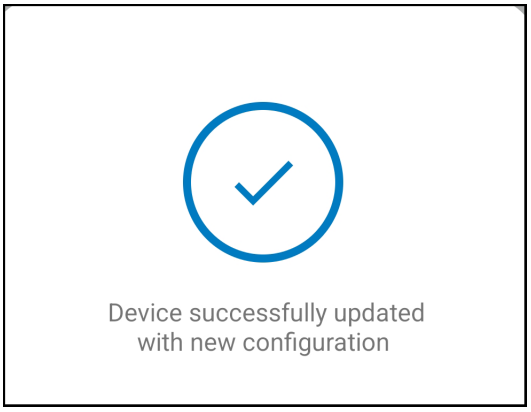
NOTE The NFC label location may vary depending on the UPS model.

Figure 53. UPS NFC Label Location Example



15. The device is now updated with the configuration.

Figure 54. Application Update Success



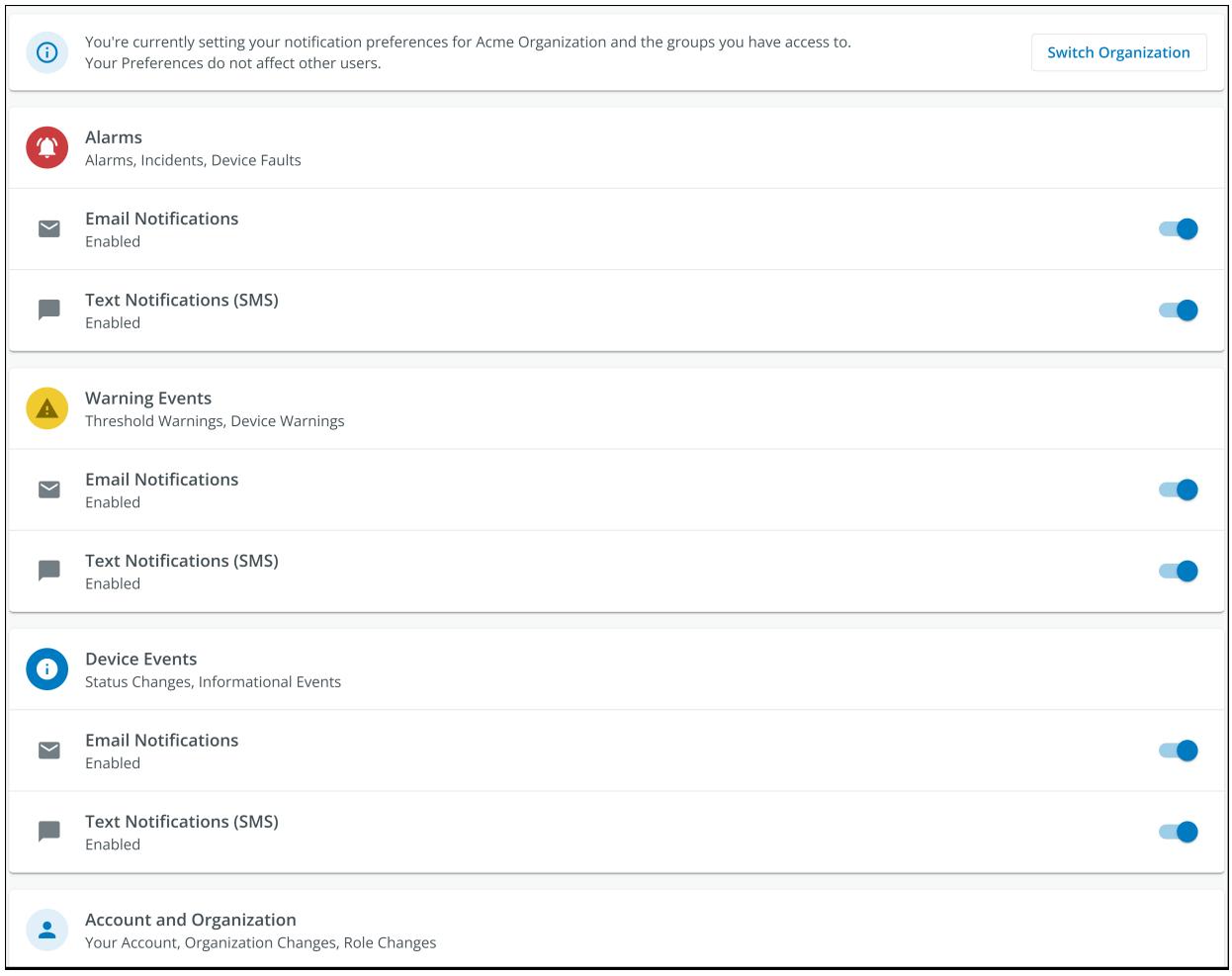
4.9 Setting Alerts and Notifications

The Notifications page allows a user to set up individual preferences for receiving notifications of device events via email and SMS text messages.

Three categories of notifications can be enabled or disabled.

1. **Alarms-** Alarms, Incidents, Device Faults
2. **Warning Events-** Threshold Warnings, Device Warnings
3. **Device Events-** Status Changes, Informational Events

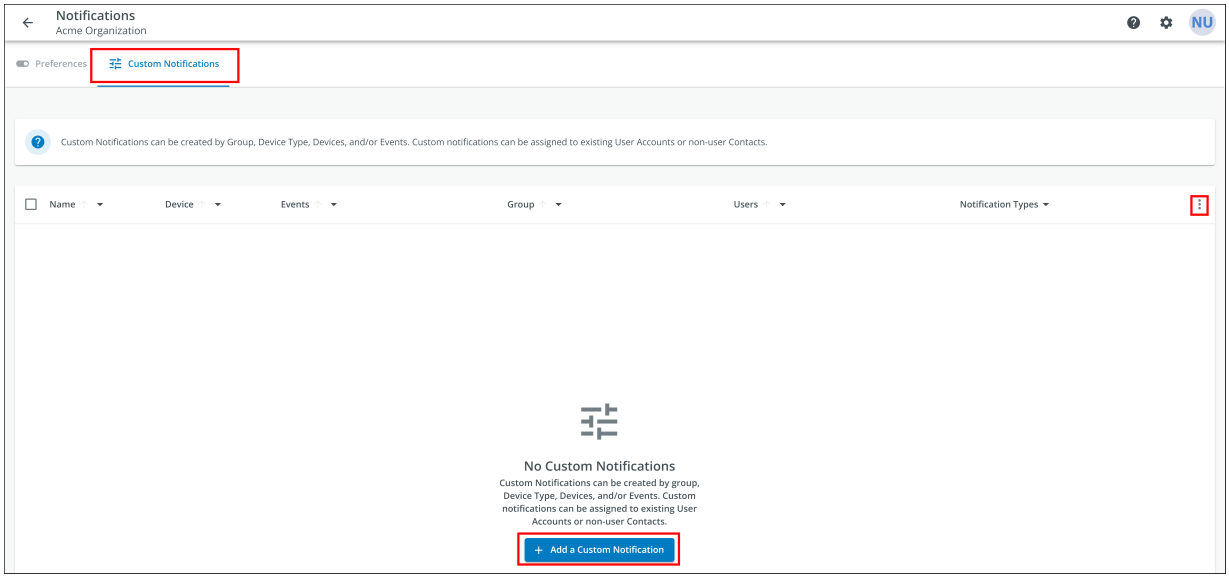
Figure 55. Preferences Notifications Screen



4.10 Setting Custom Notifications

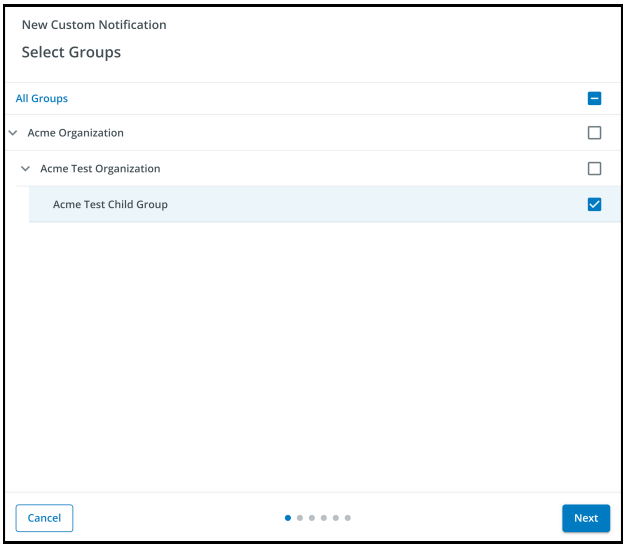
1. Click on Custom Notifications in the top left corner of the page.
2. Click on the Add Custom Notification button at the bottom of the page or the three dots on the right hand side of the page to add a Custom Notification.

Figure 56. Add Custom Notification



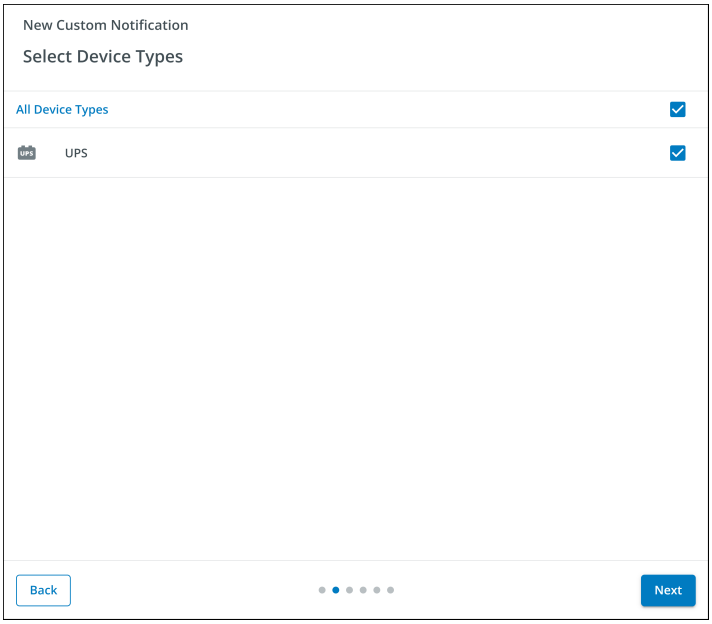
3. Select the Group or Organization.

Figure 57. Select Groups



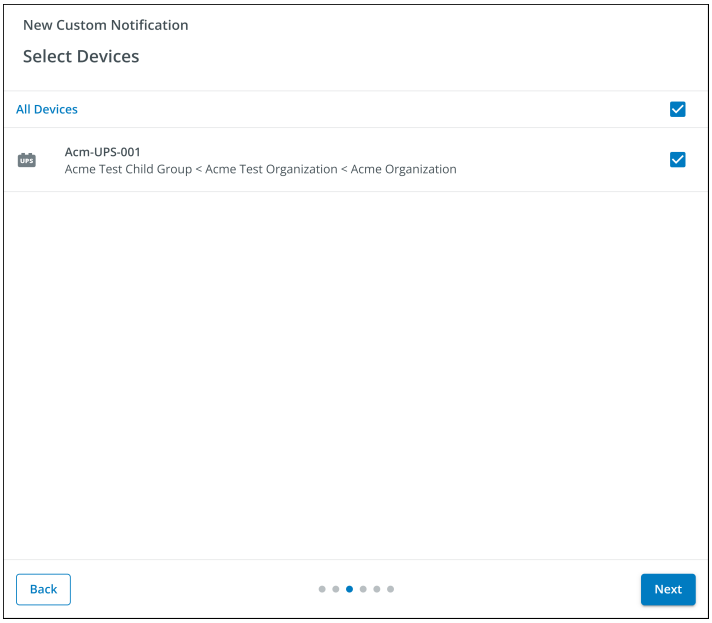
4. Select the Device Type.

Figure 58. Device Type



5. Choose the Device.

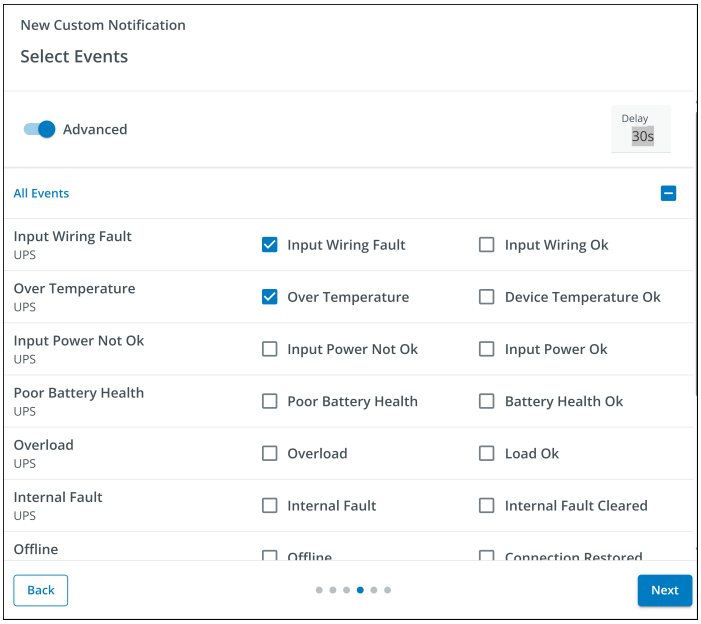
Figure 59. Select the Device



6. Select the specific event types for the notification.

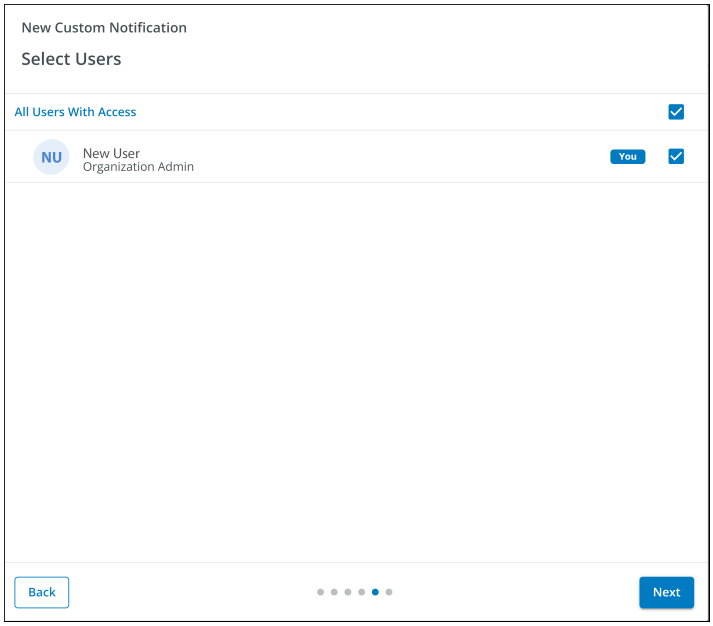
NOTE Enable the Advanced feature in the top left corner to set a custom notification delay.

Figure 60. Select Event Types



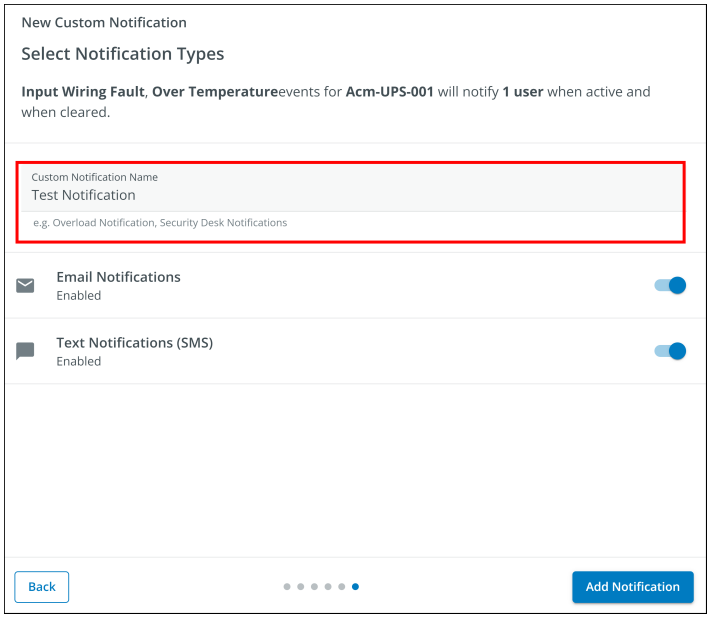
7. Select the User that will receive the notifications.

Figure 61. Add Users



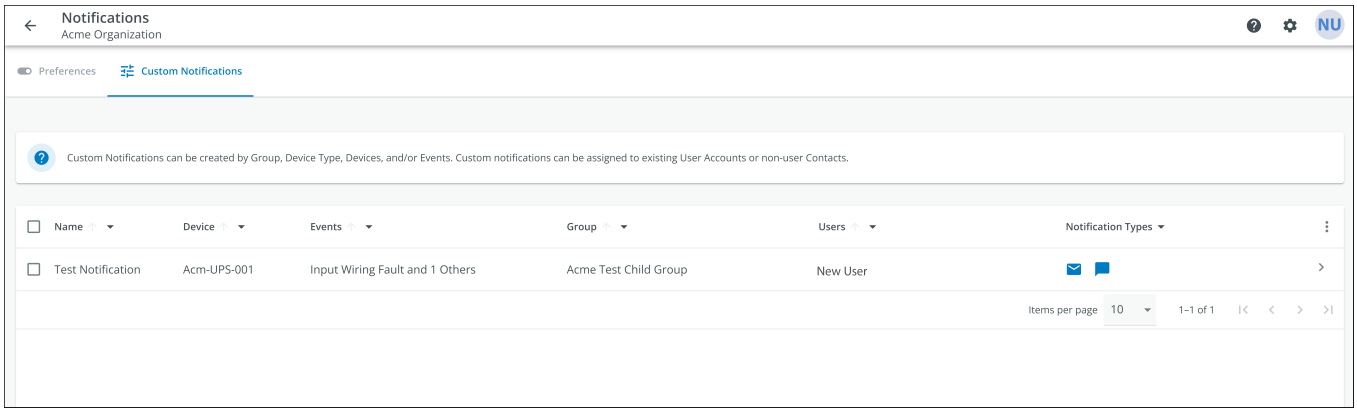
8. Give the Notification a name and enable email or text notifications. Click *Add Notification*.

Figure 62. Set Name of Notification



9. The notification is now created and active.

Figure 63. Custom Notification Success



Chapter 5 UPS Maintenance and Troubleshooting

5.1 Battery Replacement

⚠ DANGER

Risk of electric shock. All repairs and service should be performed by QUALIFIED SERVICE PERSONNEL ONLY. There are NO USER-SERVICEABLE PARTS inside the UPS. The battery circuit is not isolated from AC Mains Input.

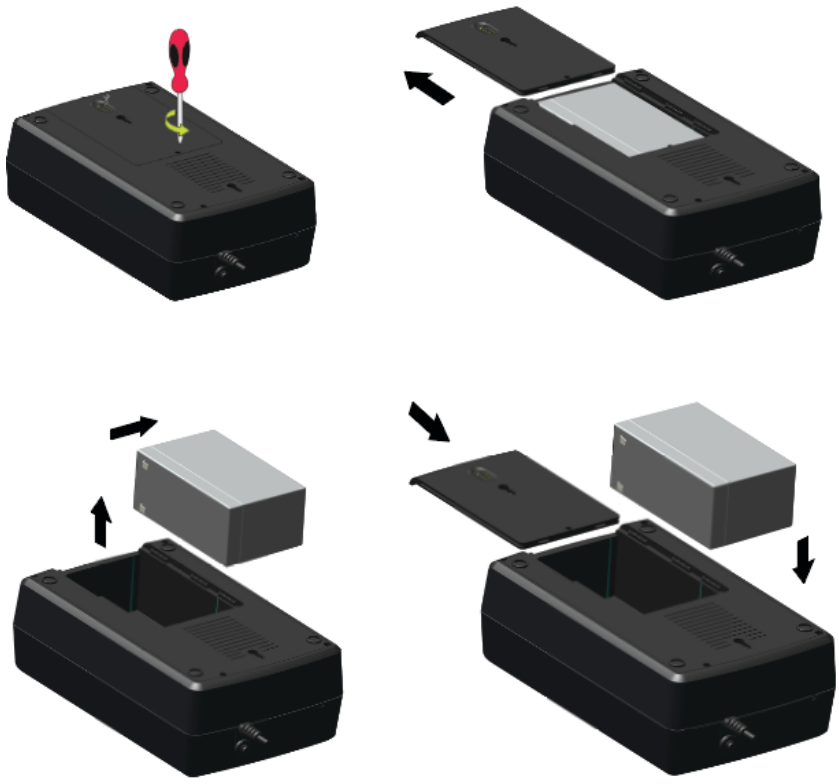
⚠ WARNING

Replace the UPS battery with an Eaton-supplied battery ONLY! Ensure the UPS has been powered off and safely isolated from AC input power before replacing the battery. Although the UPS may be disconnected from the utility power, a hazardous voltage may still be present through the UPS battery. Use tools with insulated handles.

Do not connect or disconnect the battery unless the area is known to be free of ignitable sources.

The battery in the UPS is rated for a 3–5 year service life. The length of service life varies, depending on the frequency of use and ambient temperature. Batteries used beyond expected service life will often have severely reduced runtimes. Replace batteries at least every five years to keep your UPS running at peak efficiency.

Figure 64. AVR750UNC (AG-0786) Battery Replacement



⚠CAUTION

Safely secure the battery cables out of the way when removing and installing the battery so that they do not get damaged during the battery replacement process. Use properly insulated tools when removing and installing the battery.

1. Remove the screw that holds the battery cover in place and set the screw aside in a safe place to avoid dropping it inside the UPS, then remove the battery cover.
2. Gently slide the battery from the UPS to access the negative battery terminal and disconnect the wire connected to the negative battery terminal.
3. Slightly pull the battery out to access the positive battery terminal and disconnect the wire from the positive battery terminal.
4. Carefully remove the battery from the UPS.
5. Carefully slide the new battery into the UPS. Connect the battery wires firmly to the new battery terminals; red to positive (+) followed by black to negative (–).
6. Slide the battery cover back onto the UPS and secure it with the battery compartment screw.

5.2 Storage

The ideal ambient temperature range is 5°F to 122°F (-15°C to 50°C). It is recommended to charge the UPS for at least eight hours, then store the UPS covered and upright in a cool, dry location. Remove any accessories and disconnect any cables connected to the UPS to avoid unnecessary draining of the battery.

Extended Storage

During extended storage in environments where the ambient temperature is 5°F to 86°F (-15°C to 30°C), charge the UPS battery every six months.

During extended storage in environments where the ambient temperature is 86°F to 113°F (30°C to 45°C), charge the UPS battery every three months.

5.3 Recycling Used Equipment

Contact your local recycling or hazardous waste center for information regarding proper the disposal of used equipment.

Danger: Dangerous voltage levels are present within the UPS. The UPS has an internal power source (the battery). Consequently, the power outlets may be energized even if the UPS is disconnected from the AC power source.

This symbol indicates that you should not discard the UPS or the UPS batteries in the trash. This product contains sealed, lead— acid batteries and must be disposed of properly. For more information, contact your local recycling/reuse or hazardous waste center.

This symbol indicates that you should not discard waste electrical or electronic equipment (WEEE) in the trash. For proper disposal, contact your local recycling/reuse or hazardous waste center for more information.

5.4 Troubleshooting

The Tripp Lite Series AVR750UNC UPS system has an audible alarm feature to alert you of potential power problems. When activated, the alarm sounds at different intervals according to a particular condition. Use Table 6 to determine and resolve the UPS alarms and conditions. See Table 2 for the various LED indicators and alarms tones that can be active on the UPS.

Table 6. Troubleshooting

Problem	Possible Cause	Solutions
No LEDs are displayed on the front panel	The UPS is not turned on	Verify that the UPS is connected to a valid power source and press the power button again.
	Battery Voltage is to too low	Charge the battery for at least six hours.
	Battery fault	Replace the battery.
The UPS is always in battery mode	The power cord is disconnected	Verify that the UPS is connected to a valid power source.
The UPS alarm sounds continuously	Overload in Line mode	Remove any unnecessary load and verify that the load does not exceed the defined UPS specifications. If the problem persists, contact Eaton support.
	Output short fault	Disconnect the load. Check the equipment for potential issues. Plug the devices back in, one at a time. If the problem persists, contact Eaton support.
	Overcharge fault	Disconnect the load. Check the equipment for potential issues. Plug the devices back in, one at a time. If the problem persists, contact Eaton support.
Backup time too short	Battery voltage is too low	Charge the battery at least six hours.
	Battery is defective	Replace the battery.

5.5 Service and Support

If you have any questions or problems with the UPS, call your **Local Distributor** or **Eaton Support** at one of the following telephone numbers and ask for a UPS technical representative.

United States:	**1–800–356–5737**
Canada:	**1–800–461–9166 ext 260**
All other countries:	**Call your local service representative**

Please have the following information ready when you call Eaton Support:

- Model number
- Serial number
- Version number (if available)
- Date of failure or problem
- Symptoms of failure or problem
- Customer return address and contact information

If repair is required, you will be given a Returned Material Authorization (RMA) Number. This number must appear on the outside of the package and on the Bill Of Lading (if applicable). Use the original packaging or request packaging from Eaton Support or your local distributor. Units damaged in shipment as a result of improper packaging are not covered under warranty. A replacement or repair unit will be shipped, and freight prepaid for all warrantied units.

NOTE For critical applications, immediate replacement may be available. Call **Eaton Support** for the dealer or distributor nearest you.

Chapter 6 Specification

6.1 Product Specifications

Table 7. Input Characteristics

	AVR750UNC (AG-0786)
Capacity VA/Watts	750/450
Voltage AC	120 V
AC voltage range	89–145VAC High line set 145V +/- 5% High line reset 142V +/- 5% Low line set 89V +/- 5% Low line reset 92V +/- 5%
AC amps	10A
frequency	50 or 60 Hz +/- 5 Hz (default 60Hz)
AC input protection	(1) Thermal breaker 10A
Line efficiency at full load	98.4%(meets energy star 2.0)
Line efficiency at half load	98.4%(meets energy star 2.0)

Table 8. Output Characteristics

	AVR750UNC (AG-0786)
Nominal output voltage	120V
AC amps out	6.3A
AC output voltage (Line Mode)	120V (follows input voltage 89–145VAC)
AC output voltage (Battery Mode)	120V +/- 10%
Output AC waveform (Line Mode)	Sine wave
Output AC waveform (Battery Mode)	Sine wave
Frequency	50 or 60 Hz follows the AC input frequency Battery cold start is 60Hz only
Transfer time AC to DC	4 ~ 6 ms (Max < 10 ms)

Table 9. Protection Characteristics

	AVR750UNC (AG-0786)
UPS AC suppression joule rating	316 (AC)
UPS AC suppression response time	Instantaneous
Overload protection	Line Mode Overload Alert Condition - 110%±10%, goes to fault after 5 minutes; Overload Fault Condition - 120%±10%, goes to fault immediately Battery Mode Overload Alert Condition - 110%±10%, shuts down in 5 seconds; Battery Mode Overload Fault Condition - 120%±10%, shuts down immediately

Table 10. Battery Characteristics

	AVR750UNC (AG-0786)
Battery type	Sealed, maintenance-free, lead acid batteries.
Battery voltage / AH	Qty (1) 12V / 9AH
Battery charge current	1A (1.5A Max)
Battery float voltage	13.7 VDC
Recharge time	8 hours From 10% to 90% capacity
Backup time	3 minutes at full load 11 minutes at half load
Low voltage shutdown voltage	9.6V all load levels
Min voltage for cold start	10.6V
Hot-swappable battery	No

Table 11. Environment

	AVR750UNC (AG-0786)
Humidity	0-90% RH @ 0-40 C (non-condensing)
Storage temperature	-15 to +50 ℃
Operating temperature	0 to +40 ℃
Operating elevation	0-2000 meters

Table 12. Weights and Dimensions

	AVR750UNC (AG-0786)
Net Weight, lb. (kg)	17 lbs (7.3 kg)
H x W x D, in. (cm)	4.0 × 7.4 × 12 (10.6 × 19.0 × 30.5)

Table 13. Standards and Compliance

	AVR750UNC (AG-0786)
Product certifications	CSA C22.2 NO. 107.3 (CAN); UL1778 (US) ; NOM (Mexico)
Compliance	Energy Star; ROHS; FCC Class A, DOE

Table 14. Electrical Input Connections

	AVR750UNC (AG-0786)
Line cord	5ft NEMA 5–15P ; straight plug

Table 15. Electrical Output Connections

	AVR750UNC (AG-0786)
Receptacle quantity and type	Qty (6) battery and surge protected 5–15 outlets, with two switched outlet groups Quantity two main 5–15 outlets Quantity four switched 5–15 outlets Quantity six surge-only protected 5–15 outlets

934927 B