



## Dominion PX

### Quick Setup Guide

Thank you for purchasing the Dominion PX intelligent power distribution unit (PDU). The intended use of the Raritan Dominion PX is distribution of power to information technology equipment such as computers and communication equipment where such equipment is typically mounted in an equipment rack located in an information technology equipment room.

This Quick Setup Guide explains how to install and configure the Dominion PX. For additional information on any aspect of Dominion PX, see the Dominion PX User Guide, which can be downloaded from the Firmware and Documentation section (<http://www.raritan.com/support/firmware-and-documentation/>) of Raritan's website. OR you can access the product's online help in the Product Online Help section (<http://www.raritan.com/support/online-help/>). For more detailed information on this release, see the latest release notes, also available from the Firmware and Documentation section.

For the power cord installation of an inline monitor (PX-3nnn series, where nnn are numeric digits), see the Dominion PX Installation Guide accompanying the Dominion PX device.

### Unpacking the Dominion PX

The Dominion PX comes in Zero U, 1U, and 2U sizes. The following describes the equipment shipped with each size. Unpack the components. If any pieces are missing or damaged, report this to Raritan Technical Support at [tech@raritan.com](mailto:tech@raritan.com).

#### Zero U Size

- The Dominion PX device (DPX)
- Tool-less mounting bracket and bracket with screws
- Null modem cable with RJ-45 and DB9F connectors
- Quick Setup Guide
- Warranty card

#### 1U and 2U Size

- The Dominion PX device (DPX)
- 1U or 2U bracket pack and screws
- Null modem cable with RJ-45 and DB9F connectors
- Quick Setup Guide
- Warranty card

### Before You Begin

1. Prepare the installation site. Make sure the installation area is clean and not exposed to extreme temperatures or humidity. Allow sufficient space around the Dominion PX for cabling and outlet connections. Safety instructions are provided in the Dominion PX User Guide.

2. Fill out the Equipment Setup Worksheet found in the Dominion PX User Guide. Record the model, serial number, and use of each IT device connected to the PDU's power outlets.

### Mounting the Dominion PX

#### Circuit Breaker Orientation Limitation

Usually a PDU can be mounted in any orientation. However, when mounting a PDU with circuit breakers, you must obey these rules:

- Circuit breakers CANNOT face down. For example, do not horizontally mount a Zero U PDU with circuit breakers on ceiling.
- If a rack is subject to shock in environments such as boats or airplanes, the PDU CANNOT be mounted upside down. If installed upside down, shock stress reduces the trip point by 10%.

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Note: If normally the line cord is down, upside down means the line cord is up.

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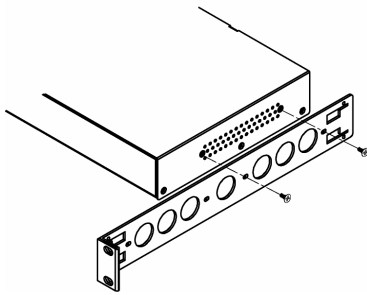
#### Mounting 1U or 2U Models

Using the appropriate brackets and tools, fasten the 1U or 2U Dominion PX device to the rack or cabinet. If your PDU has circuit breakers implemented, read **Circuit Breaker Orientation Limitation** (on page 1) before mounting it.

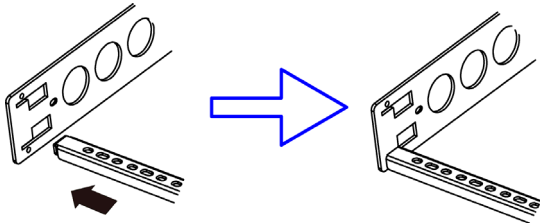
► **To mount the Dominion PX device:**

1. Attach one rackmount bracket to one side of the Dominion PX device.
  - a. Align two oval-shaped holes of the rackmount bracket with two threaded holes on one side of the Dominion PX device.
  - b. Secure the rackmount bracket with two of the Raritan-provided screws.

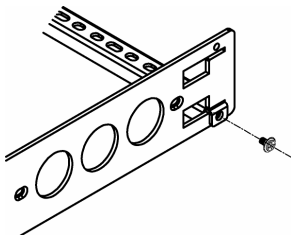
Note: The appropriate oval-shaped hole locations of the rackmount bracket may vary according to the threaded holes on you model.



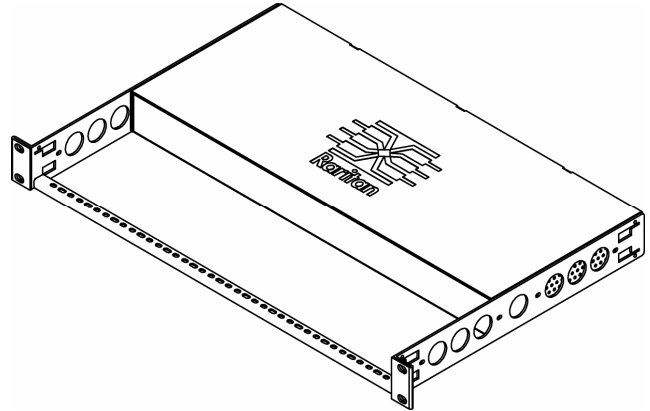
2. Repeat Step 1 for securing the other rackmount bracket to the other side of the Dominion PX.
3. Insert one end of the cable-support bar into the L-shaped hole of the rackmount bracket, and align the hole on the end of the bar with the threaded hole adjacent to the L-shaped hole.



4. Secure the cable-support bar with one of the Raritan-provided cap screws.



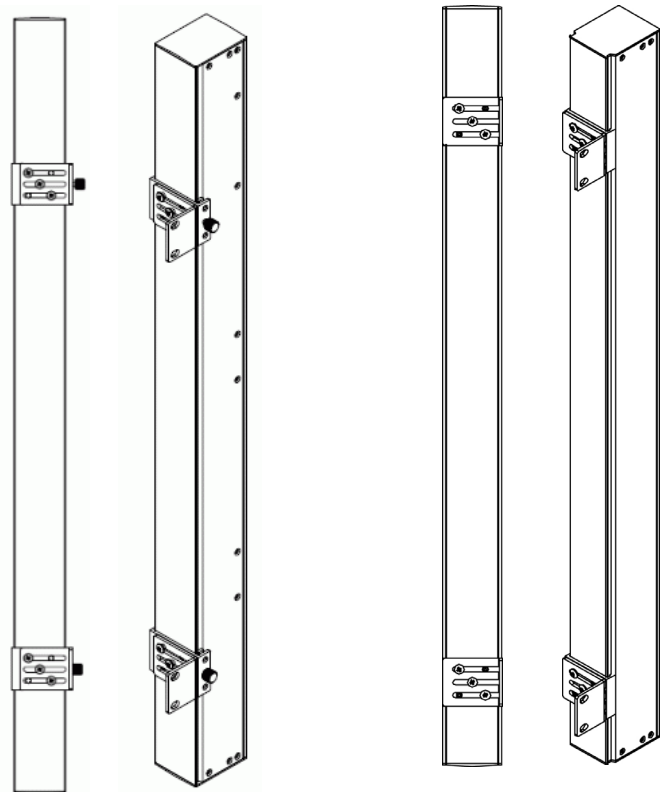
5. Repeat Steps 3 to 4 to secure the other end of the cable-support bar to the other rackmount bracket.



6. Mount the Dominion PX device on the rack by securing the rackmount brackets' ears to the rack's front rails with your own screws, bolts, cage nuts, or the like.

**Mounting Zero U Models Using L-Brackets**

If your PDU has circuit breakers implemented, read **Circuit Breaker Orientation Limitation** (on page 1) before mounting it.

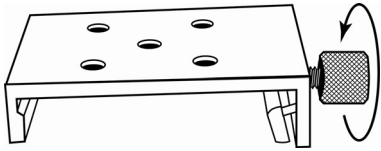


► **To mount Zero U models using L-brackets:**

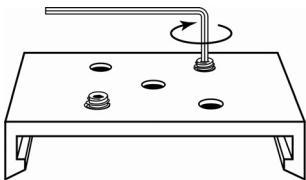
1. Align the baseplates on the rear of the Dominion PX device.

- Secure the baseplates in place. Different models ship with different types of baseplates.

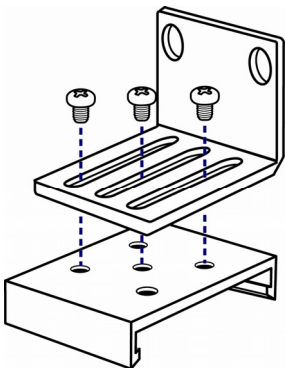
- To secure a baseplate with the thumbscrew, turn the thumbscrew until it is tightened.



- To secure a baseplate without the thumbscrew, use the included L-shaped hex key to loosen the hex socket screws until the baseplate is fastened.



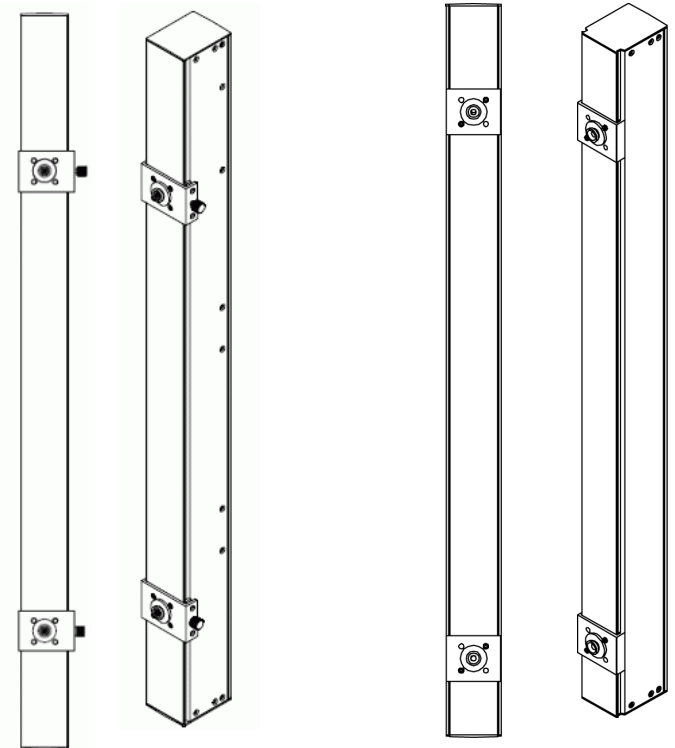
- Align the L-brackets with the baseplates so that the five screw-holes on the baseplates line up through the L-bracket's slots. The rackmount side of brackets should face either the left or right side of the Dominion PX device.
- Fasten the brackets in place with at least three screws (one through each slot). Use additional screws as desired.



- Using rack screws, fasten the Dominion PX device to the rack through the L-brackets.

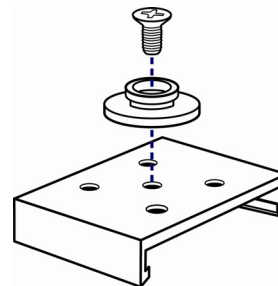
### Mounting Zero U Models Using Button Mount

If your PDU has circuit breakers implemented, read **Circuit Breaker Orientation Limitation** (on page 1) before mounting it.



### ► To mount Zero-U models using button mount:

- Align the baseplates on the rear of the Dominion PX device. Leave at least 24 inches between the baseplates for stability.
- Make the baseplates grasp the Dominion PX device lightly.
  - For a baseplate with the thumbscrew, turn the thumbscrew until it is "slightly" tightened.
  - For a baseplate without the thumbscrew, use the included L-shaped hex key to loosen the hex socket screws until the baseplate is "slightly" fastened.
- Screw each mounting button in the center of each baseplate. The recommended torque for the button is 1.96 N-m (20 kgf-cm).

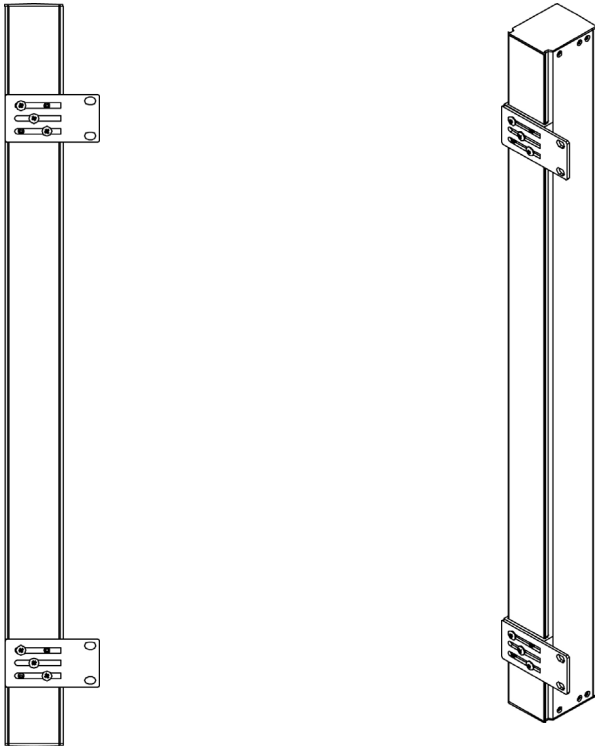


- Align the large mounting buttons with the mounting holes in the cabinet, fixing one in place and adjusting the other.
- Depending on the type of your baseplates, either further tighten the thumbscrews or loosen the hex socket screws until the mounting buttons are secured in their position.

6. Ensure that both buttons can engage their mounting holes simultaneously.
7. Press the Dominion PX device forward, pushing the mounting buttons through the mounting holes, then letting the device drop about 5/8". This secures the Dominion PX device in place and completes the installation.

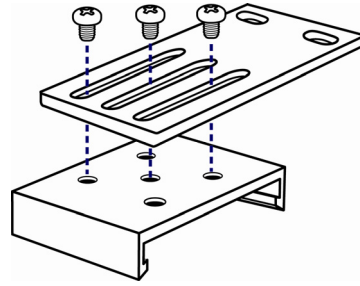
### Mounting Zero U Models Using Claw-Foot Brackets

If your PDU has circuit breakers implemented, read **Circuit Breaker Orientation Limitation** (on page 1) before mounting it.



#### ► To mount Zero U models using claw-foot brackets:

1. Align the baseplates on the rear of the Dominion PX device.
2. Secure the baseplates in place.
  - To secure a baseplate with the thumbscrew, turn the thumbscrew until it is tightened.
  - To secure a baseplate without the thumbscrew, use the included L-shaped hex key to loosen the hex socket screws until the baseplate is fastened.
3. Align the claw-foot brackets with the baseplates so that the five screw-holes on the baseplates line up through the bracket's slots. The rackmount side of brackets should face either the left or right side of the Dominion PX device.
4. Fasten the brackets in place with at least three screws (one through each slot). Use additional screws as desired.



5. Using rack screws, fasten the Dominion PX device to the rack through the claw-foot brackets.

### Connecting the Dominion PX to a Power Source

The distance between a PDU and its power source must be SHORTER than the PDU's line cord to avoid stretching out the cord. A locking connector used at the power source is highly recommended for a secure connection.

#### ► To connect a PDU to the power source:

1. Verify that all circuit breakers on the Dominion PX device are set to ON. If not, turn them ON.  
For a PDU with fuses, ensure that all fuses are inserted and seated properly. If there are any fuse covers, ensure that they are closed.

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Note: Not all Dominion PX devices have overcurrent protection mechanisms.

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2. Connect each Dominion PX device to an appropriately rated branch circuit. See the label or nameplate affixed to your Dominion PX device for appropriate input ratings or range of ratings.
3. With a 1U or 2U model, a blue power LED on the front panel is lit. A Zero U model does not have a similar power LED because it will be mounted in the back of an equipment rack.
4. When a Dominion PX device powers up, it proceeds with the power-on self test and software loading for a few moments. At this time, the outlet LEDs cycle through different colors.
5. When the software has completed loading, the outlet LEDs show a steady color and the LED display illuminates.

### Connecting the Dominion PX to a Computer

1. Connect the RJ-45 end of the null modem cable to the port labeled Serial on the front of the Dominion PX device.
2. Connect the DB9 end of the null modem cable to the serial port (COM) of the computer.

### Connecting the Dominion PX to Your Network

1. Connect a standard Cat 5e UTP cable to the LAN port on the front of the Dominion PX device.

2. Connect the other end of the cable to your LAN.

## Configuring the Dominion PX

1. Go to the computer that you connected to the Dominion PX and open a communications program such as HyperTerminal or PuTTY.
2. Select the appropriate COM port, and make sure the port settings are configured as follows:
  - Bits per second = 9600
  - Data bits = 8
  - Stop bits = 1
  - Parity = None
  - Flow control = None
3. Press Enter. The opening configuration prompt appears.
4. Type `config` and press Enter.
5. The Dominion PX prompts you to assign a device name to the PDU. Type the name and press Enter.
6. Then the Dominion PX prompts you to enter several networking parameters.

<b>IP address</b>	The default IP configuration method is DHCP. To assign the Dominion PX an IP address, choose either: <ul style="list-style-type: none"> <li>▪ Auto configuration: Type <code>dhcp</code> or <code>bootp</code> and let the DHCP or BOOTP server provide the IP address.</li> <li>▪ Static IP address: Type <code>none</code> and when prompted, enter an IP address, network mask and gateway.</li> </ul>
<b>IP access control</b>	Leave this disabled for now. This disables the Dominion PX's firewall. You can enable the firewall and create access control rules after the initial configuration.
<b>LAN interface speed</b>	Leave the default <code>auto</code> , or type <code>10</code> or <code>100</code> for 10 or 100 Mbps.
<b>LAN interface duplex mode</b>	Leave the default <code>auto</code> , or type <code>half</code> or <code>full</code> for half or full duplex.
<b>FIPS mode</b>	Leave the default <code>no</code> to disable the FIPS mode or type <code>yes</code> to enable it. Note that the FIPS mode only supports FIPS approved algorithms that are defined in <b>FIPS PUB 140-2</b> ( <a href="http://www.nist.gov/cmvp/">http://www.nist.gov/cmvp/</a> ).
<b>SNMP agent</b>	Leave the default <code>yes</code> , or type <code>no</code> to disable the SNMP agent implemented on the Dominion PX device.

<b>SNMP v1/v2c protocol</b>	This setting appears only when the SNMP agent is enabled.  Leave the default <code>yes</code> , or type <code>no</code> to disable the SNMP v1/v2c protocol. If enabled, specify the read and write community strings when prompted. The default read community string is "raritan_public," and the default write community string is "raritan_private."
<b>SNMP v3 protocol</b>	This setting appears only when the SNMP agent is enabled.  Leave the default <code>no</code> , or type <code>yes</code> to enable the SNMP v3 protocol. If enabled, determine whether to force the SNMP v3 encryption when prompted.  If the FIPS mode is enabled, the SNMP v3 encryption is forced automatically after enabling the SNMP v3 protocol. In this case, the system does not prompt you to configure the SNMP v3 encryption.

7. When the SNMP agent is enabled, the Dominion PX prompts you to specify the system location and contact person regardless of the SNMP protocol settings. Type appropriate values and press Enter.
8. The Dominion PX now prompts you to configure the NTP settings for date and time. To use LDAP authentication, the PDU's time must be in sync with the LDAP server.

<b>NTP enabled or disabled</b>	There are two options to configure the date and time. <ul style="list-style-type: none"> <li>▪ Synchronization with NTP servers: Type <code>y</code> to have the date and time sync up with the NTP server(s).</li> <li>▪ Date and time customization: Type <code>n</code> to disable the synchronization with NTP servers. Later you can log in to the Dominion PX web interface for setting the date and time manually.</li> </ul>
<b>Time zone</b>	After enabling the NTP synchronization, a list of time zones is displayed on the page. Type the number or the name of the desired time zone.
<b>Daylight savings time</b>	If enabling the NTP synchronization, the system prompts you to set the daylight savings time. When the daylight savings time applies to the selected time zone, type <code>yes</code> to enable the daylight savings time or type <code>no</code> to disable it.



<b>NTP server settings</b>	<p>There are two ways to specify the NTP servers.</p> <ul style="list-style-type: none"> <li>▪ DHCP- or BOOTP-assigned NTP server(s): Type <code>yes</code>, and the Dominion PX will sync up with the NTP server(s) provided by the DHCP or BOOTP server.</li> <li>▪ Manually-specified NTP servers: Type <code>no</code> and then enter the primary and secondary NTP servers when prompted.</li> </ul>
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9. After entering all parameters, you are asked to confirm the values you entered. If any are incorrect, type `n`, press Enter, then go back to change them. When they are correct, type `y` and press Enter.

Note: The default static IP address is 192.168.0.192. The default IP configuration method is DHCP. The default IP address will be replaced by the address assigned by DHCP or BOOTP, or the static IP address you entered, when the configuration process is complete. To use the factory default IP address, type in `none` as the IP auto-configuration command.

Installation and configuration are complete.

**Important: Wait at least 3 minutes for the IP address configuration to take effect.**

## What To Do Next

1. Connect IT equipment to the outlets on the Dominion PX.
2. From a computer connected to your LAN, open a browser and point it at the IP address of the Dominion PX device.
3. Enter `admin` and `raritan` when prompted for a user name and password.
4. You will be prompted to change the admin password. After this is done, the Dominion PX page opens.
5. The Dominion PX is sent from the factory with all the outlets ON. Turn OFF the outlets without devices connected from the web interface.
6. Use the menu at the top of the page to create user profiles, set privileges, set security, and configure outlet thresholds.

Note: Detailed instructions are available in the **Dominion PX User Guide**.

## MAC Address

A label is affixed to a Dominion PX device, near the LED display, showing both the serial number and MAC address of the PDU.



If necessary, you can find the PDU's IP address through the MAC address by using commonly-used network tools. Contact your LAN administrator for assistance.

## Safety and Installation Information

### Notice

This instruction should be used in conjunction with the **Dominion PX User Guide**.

This product must be installed by suitably qualified personnel in accordance with the requirements of relevant legislation and regulations for the region (e.g. the National Electric Code in the USA, the Canadian Electric Code in Canada, the IEE wiring regulations in UK, etc.) as well as accepted practices in industry. Any information about the uses for which these products were designed and tested is available on request. Installation should be in accordance with any appropriate Health & Safety regulations.

### Testing

All PDU's are fully tested and verified to conform to the required standards. Where further system wiring is carried out, or where the modules are integrated into larger systems, the entire installation must be tested prior to use as prescribed by national wiring regulations.

For compliance with certain standards, the installer must test the complete electrical installation prior to use, and, in general use, the products should be subject to regular checking. The frequency of the electrical and visual checks will depend on the nature of the use to which the PDU is put and as such the test frequency must be determined by the installer. Guidelines for normal tests are given below.

### Earth Continuity

A current of 25 amps should be passed from an alternating current (AC) source with a no-load voltage not exceeding 12V, between the earth conductor of the power supply cord and the earth connection of the outlet sockets. This test should be repeated for metal parts surrounding the installation, which should be earthed.

Where the power cord specified exceeds 3M the 100mΩ limit common on many PAT testers may be exceeded. This does not mean the product has failed. The length of the cord should be checked and the appropriate allowance made.

### Conductor Continuity and Polarity

The system should be checked to ensure correct polarity and continuity of all wiring.

### Insulation Resistance

The insulation resistance between LINE/NEUTRAL and EARTH should be measured using a 500VDC test supply. The measured resistance should not be less than 1.0MΩ.

### Flash Test

A flash voltage of 1500VAC between LINE/NEUTRAL and EARTH should exhibit a leakage of under 1mA. Note: where the power cord exceeds 3M, the unit may exhibit higher leakage. The appropriate allowance should be made.

Both insulation and flash testing may ONLY be carried out LN-E. Testing between L-N may give erroneous results due to the Neon indicator (if fitted).

### Notes on units with integral filters

Units with integral filter systems may be LN-E insulation tested at 500VDC but if flash tested at 1500VAC, they will exhibit high leakage readings under insulation tests due to the nature of the filtering components.

The quiescent earth leakage of the filter unit under normal conditions may be checked and should not exceed 0.9mA at 250V~ 50Hz.

L to N flash and insulation tests would be inconclusive due to the presence of the filter system and may damage the surge suppression circuitry.

### Uses

This system has been designed to conform to the latest safety requirements. In addition to compliance with standards for general use, this PDU has been factory configured for use in 19" rack mounting environments. This does NOT preclude their use in other situations.

### Safety Precautions

**WARNING!** Read and understand all sections in this guide before installing or operating this product.

**WARNING!** Connect this product to an AC power source whose voltage is within the range specified on the product's nameplate. Operating this product outside the nameplate voltage range may result in electric shock, fire, personal injury and death.

**WARNING!** Connect this product to an AC power source that is current limited by a suitably rated fuse or circuit breaker in accordance with national and local electrical codes. Operating this product without proper current limiting may result in electric shock, fire, personal injury and death.

**WARNING!** Connect this product to a protective earth ground. Never use a "ground lift adaptor" between the product's plug and the wall receptacle. Failure to connect to a protective earth ground may result in electric shock, fire, personal injury and death.

**WARNING!** This product contains no user serviceable parts. Do not open, alter or disassemble this product. All servicing must be performed by qualified personnel. Disconnect power before servicing this product. Failure to comply with this warning may result in electric shock, personal injury and death.

**WARNING!** Use this product in a dry location. Failure to use this product in a dry location may result in electric shock, personal injury and death.

**WARNING!** Do not rely on this product's receptacle lamps, receptacle relay switches or any other receptacle power on/off indicator to determine whether power is being supplied to a receptacle. Unplug a device connected to this product before performing repair, maintenance or service on the device. Failure to unplug a device before servicing it may result in electric shock, fire, personal injury and death.

**WARNING!** Only use this product to power information technology equipment that has a UL/IEC 60950-1 or equivalent rating. Attempting to power non-rated devices may result in electric shock, fire, personal injury and death.

**WARNING!** Do not use a Raritan product containing outlet relays to power large inductive loads such as motors or compressors. Attempting to power a large inductive load may result in damage to the relay.

**WARNING!** Do not use this product to power critical patient care equipment, fire or smoke alarm systems. Use of this product to power such equipment may result in personal injury and death.

**WARNING!** If this product is a model that requires assembly of its line cord or plug, all such assembly must be performed by a licensed electrician and the line cord or plugs used must be suitably rated based on the product's nameplate ratings and national and local electrical codes. Assembly by unlicensed electricians or failure to use suitably rated line cords or plugs may result in electric shock, fire, personal injury or death.

**WARNING!** This product contains a chemical known to the State of California to cause cancer, birth defects, or other reproductive harm.

### Additional Information

For more information about the Dominion PX™ and the entire Raritan product line, see Raritan's website ([www.raritan.com](http://www.raritan.com)). For technical issues, contact Raritan Technical Support. See

the Contact Support page in the Support section on Raritan's website for technical support contact information worldwide.

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