elease Notes for Dominion® PX Software Version 1.1
Version: DPX 1.1 Release Notes, Revision 1.0
Date: March 17, 2008

Effective: Immediately.

Applicability:

Dominion PX models:
- All models.

Release Status: GENERAL AVAILABILITY.

Dominion PX Overview:

Dominion PX refers to Raritan's family of intelligent power distribution units.

Release 1.1 Enhancements:

Release 1.1 is a new firmware release for all Dominion PX units, consisting of enhancements in several areas.

A) SNMP support is enhanced- with SNMP SETs and GETs, as well as additional traps. See the MIB for details. After upgrading to PX1.1, the MIB can be retrieved from the unit itself (under Device Settings->SNMP Settings; look for a clickable link "here" towards the bottom of the page and click on it to retrieve the MIB text file).

B) Added temperature and humidity sensor support for Raritan DPX temperature sensors: DPX-T1, DPX-T1H1, and DPX-T2H2. Note that for compatibility reasons, 3rd party (non-Raritan) sensors are not supported with the Dominion PX.

C) Tabular layout for Web-based home page, with additional outlet level information metering added to reduce the need to navigate.

D) Added support for ON and OFF operations for "All outlets" from the Home page. So, all outlets can now be switched off or on together, if required. Note that only an admin, or other user, granted permission to all outlets can perform this function.

E) PX GUI confirmation screen for any single outlet operation (ON/OFF/CYCLE) and "All" outlet operation (ON/OFF). This will cut down on unwanted/accidental one-click power operations.

F) Added online Help link to Raritan Support on the Home page for latest User Guide.

G) Outlet grouping (Outlet Groups tab on the GUI) – on a single PDU, or across multiple PDUs, connected via TCP/IP. This feature is primarily to simplify power (ON/OFF/CYCLE) operations for servers with multiple power feeds for users who prefer to use the Graphical User Interface (GUI). Customers with CC-SG or Dominion series can continue to use outlet grouping and associations with their current systems.

H) Outlet sequencing for power outlets (under Device Setup->Unit Settings). Admin can specify sequenced operation by customer chosen priority for outlets. For example, Outlet 10 can be switched on first, then outlet 5, followed by Outlet 1 – instead of Outlet 1, 2, 3, 4…N in a fixed sequence.

I) The capability to switch outlets On/Off by pressing a certain sequence of buttons on the front panel of the unit has been removed.

J) Multiple simultaneous SMASH CLP sessions over SSH will no longer lock up the unit; previously, this required a software Reset for recovery.

K) Configurable delay (up to 3600 seconds) using the "Power off delay during outlet power cycling" for the entire unit (Global setting), or for each outlet. This allows UPS batteries to recharge after loss of power – before servers are tuned back on.

L) The accuracy of RMS current per outlet is now 5% or better for any load.

M) On the web-based home page, several terms are changed; and now Power Factor is reported. See table below for changes.

Home >Power Outlets> Outlet Detail Page

Releases 1.00.00 through 1.00.03	Release 1.00.04, 1.1 or higher
RMS Current (Amps)	**RMS Current (Amps)**
No equivalent term in these releases	**Power Factor**
Maximum RMS Current (Amps)	**Maximum RMS Current (Amps)**
RMS Voltage (Voltage)	**RMS Voltage (Volts)**
Apparent RMS Power (Watts)	**Active Power (Watts)**
Average RMS Power (VA)	**Apparent Power (VA)**
Real RMS Power (Watts)	**No equivalent term in this release**

Consult the Dominion PX User Guide for more information on the PX features.

For Raritan PX Customers Only

Dominion PX Documentation:

The following user documentation is available for the Dominion PX:

The latest PX1.1 User Guide (PDF format) documentation will be posted on the Raritan website.

Computer Interface Module (CIM) Supported with KXII:

Dominion PX when used with the KX II can use the following CIMs:

- **D2CIM-PWR**: required to connect a Dominion PX to the KX II.

Not Supported with the Dominion PX:
KSX G1 does not support the Dominion PX.

Dominion PX Release 1.1 Compatibility Information:

1. All Dominion PX models.
2. KSX (G1) units do not support the DPX.

Important Notes and Information:

Enable Javascript in your browser before logging into the unit to start the upgrade process.

Known Issues with DPX Release 1.1:

1. When the current loading is close to, or smaller than, 0.1A, the Power Factor always shows something (e.g., 0.208), but RMS current shows "0". This issue will be resolved in a future release.
2. When setting thresholds, the real IPMI sensor data is shown for thresholds, so it is possible that some values – 10.0A cannot be set for a threshold, a value of 9.97A may show when the threshold value is set to 10.0A. This is due to the enhanced accuracy encoding used internally in IPMI.
3. Due to improvements in PX 1.1, you cannot downgrade from Release 1.1 to Release 1.0, 1.0.3, or 1.0.4 or any other release lower than 1.0.3.
4. SMTP logging for login failed and user blocked events are not working. Syslog works fine.
5. Minimum power-on delay displayed by IPMI is greater than one second. The GUI will display and allow values to be less than one second.
6. The Environmental Sensor GUI shows the 1-Wire ID, while the sensor unit itself shows a Raritan serial number. This requires that a label be placed on the sensor unit to allow simple correlation between the GUI (1-Wire ID) and the serial

number. In a future release, the GUI will report the serial number which is on the label on the sensor unit.

7. Unable to uncheck (disable) Eventlog assignments when more than one Eventlog targets are selected. A workaround is to Enable syslog forwarding, uncheck all checkboxes and Apply to save changes. Now you can select/deselect the checkboxes for local event logging. This behavior is not observed for SMTP or NFS logging. This is observed only with Syslog.

8. Only when single the user login restriction is Enabled (which is not the default setting), an attempt to login by a second admin user when one admin user is logged in, may result in the first admin user being logged out. Therefore, it is strongly recommended that the single user limitation not be used in this firmware release (1.01.00), instead assign users to different groups with appropriate access privileges. This limitation will be removed in a subsequent release.

Release Package Details:

The Release 1.1 package for the Dominion PX series has the following components. Note that the binary file is posted as a zip file, and must be unzipped before it can be installed on the Dominion PX unit:

"DominionPXReleaseNotes1_1v1.0" " – this file
A firmware release (binary) - fw-kira-rpc-pdu-raritan_010100-6684.bin

Firmware Upgrade Pre-requisites:

If you have any questions, or cannot follow the instructions below, please STOP and contact Raritan Technical Support for further instructions. Please read the entire instructions (this document) before proceeding.

General Upgrade Instructions (standalone upgrade from the browser based user interface):

1. Ensure no users are logged in; nor are there any active sessions – besides the current admin session.

2. The user upgrading the PX device must be a member of the default Admin Group to have sufficient administrator-level privileges to update the Dominion PX unit.

3. Five to ten minutes are required for the complete update procedure. The update and subsequent reboot time will vary according to the number of outlets in the unit.

4. Upgrade the Dominion PX unit using a wired network only. Loss of packets/dropouts over a wireless network may result in a failed upgrade.

5. If doing the firmware upgrade over a VPN, ensure that the connection is stable and that no inactivity timeouts have been set.

6. The detailed, step-by-step instructions to perform the upgrade are given below.

7. The software upgrades are written to flash memory, and this takes time to complete. Please do not power-off the unit, or disconnect the Ethernet connection, while the upgrade is going on.

8. **Enable Javascript in your browser.**

9. Save the firmware upgrade file on a local or network accessible directory. Unzip the file and save it in an accessible directory.

10. Should you experience any difficulties with the upgrade, call Raritan Technical Support for assistance.

Step-by-Step Upgrade Instructions:

     1. Please ensure that no users are logged into the unit. Note that the upgrade will not interrupt power to the outlets; nor will it change the state of the outlet – outlets that are on will remain on; similarly, outlets that are off will remain off – both during the firmware upgrade and following the (software) reset to load the new firmware into the unit.

     2. In Mozilla Firefox, Internet Explorer (or other supported web browser), type in the IP address of your Dominion PX unit, and wait for the web-based interface to load.

     3. Logon as an administrative user "admin" (or other member of the Admin Group).

     4. Click on the "Unit Reset" command under the "Maintenance" tab. This will clear certain internal debug log files to ensure a smooth upgrade. The delay between a Unit Reset, and a firmware upgrade, should be kept to less than 10 minutes.

     5. When asked to confirm with a "Reset Device" prompt, click on the "Reset" button. Another prompt to "Really reset" will be presented, click on the "Reset" button. Once the device resets – this will take about 1 minute – and you will be logged out and taken to the Login page. Login again, with your admin username and password. Note that the Reset will

NOT change any outlet states – outlets will maintain their previous state; outlets that are ON will remain ON, and outlets that are OFF, will remain OFF.

6. Click on the "Update Firmware" command under the "Maintenance" tab.

7. Browse to locate the .bin file containing the update: fw-kira-rpc-pdu-raritan_010100-6684.bin (Note: this has to be an Unzipped file).

The full path name might look as in an example below (the file path on your system may differ):
 "C:\Documents and Settings\user\My Documents\My Downloads\fw-kira-rpc-pdu-raritan_010100-6684.bin".

Click the "Upload" button.

> The current firmware, and future (after the upgrade) firmware versions, will be displayed. Click the "Upgrade" button to start the upgrade.

8. The firmware upgrade will then proceed:

> a. Other users cannot operate the PX during the upgrade, however, power is NOT interrupted to any outlets.

> b. This upgrade step will take 4-10 minutes, depending on how many outlets are in the unit.

> **DO NOT REBOOT OR POWER CYCLE THE PX DURING THE UPGRADE OR THE REBOOT!**

> c. When the upgrade is completed, the admin user will be logged off.

9. The Dominion PX unit will now reboot and reset, which may take up 1-2 minutes.

10. The user will be taken back to the Login page when the upgrade is completed. IF, and only if, you are not seeing the login page after more than 12 minutes, close ALL web browser sessions, and log back in after the reset completes. (Hint: You may have not turned Javascript off).

11. When the firmware upgrade is complete, check the firmware version on the Home page in the left panel – it should show "Firmware 01.01.00" after the upgrade.

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For Raritan PX Customers Only

12. Due to improvements in PX 1.1, you cannot downgrade from Release 1.1 to Release 1.0.

13. If you have any questions or issues during the update, call Raritan Technical Support for assistance.