

Technical Note

Replacing the PRO3X NIM8G Network Controller Board

The step-by-step <u>instructions</u> in this Technical Note allow you to replace a defective PRO3X NIM8G network controller board (network interface card, or NIC). Note that the NIM8G can be removed from the PRO3X PDU and replaced without interrupting status of power at the outlets.

Part 1 of 2: Overview of the NIM8G

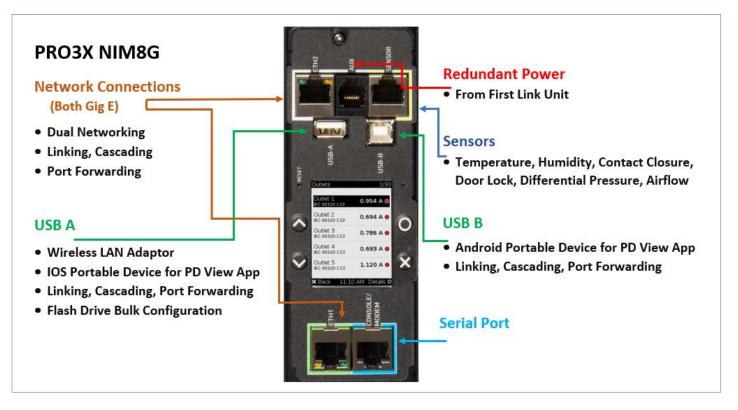
Server Technology's PRO3X PDU was designed with a new NIM8G network controller board, based on the Raritan Xerus Technology Platform, the industry communication standard for many high-density data centers.

The following graphic shows the location of the NIM8G on the PRO3X PDU:

	HDOT* Cx	Hot Swappable	HDOT*
	HDOT +	Network Card	High Density
	Cx Cx Uttets	w/Backup Power	High Outlet Technology
	Cable	IP Access, Security	Cable
	Retention	& Communications	Retention
	High-Temp	Input Current	High-Temp
	Gooc Rating	Monitoring	Gorc Rating
PIPS* Per Inlet Power Sensing	Outlet Control	Star Multi-link Branch Currer Expansion Kit Monitoring	ut Outlet Control
Color Coded PDUs	Alternating Phase	Temperature & Humidity Monitoring	Alternating Phase Flexible Mounting

PRO3X Equipment View

The following graphic zooms in on the NIM8G, showing network features and port connections:



Highlights of the NIM8G Controller Board:

- Hot-swappable (Contact Server Technology Technical Support to coordinate getting a new network card).
- Redundant failover power through the first link PDU.
- V8-based controller designed for Server Technology's PRO3X form factor.
- Color matrix LCD.

NIM8G Specifications:

The definition of a V8-based controller is the micro-controller use of **ARM Cortex A5** (Atmel SAMA5D21) with **Xerus** open firmware architecture.

CMA-NTWK-0024-01/PRG

- Micro-controller: ARM Cortex A5 500 MHz (Atmel SAMA5D21)
- Memory: 32M SPI Flash / 128M DDR2
- Interface (External):
 - o 2x 10/100/1000 Ethernet
 - 1x USB 2.0 type B
 - o 1x USB 2.0 type A
 - 1x Console/Modem
 - o 1x PX Sensor
 - o 1x STI Link Interface
 - Interface (Internal):
 - o 1x STI Internal I2C
- Display: TFT LCD
- No beeper

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Part 2 of 2: How to Replace the NIM8G

Note: The NIM8G controller board in Server Technology's PRO3X PDU can be removed and replaced without interrupting the status of power at the outlets.

- 1. Contact the Server Technology/Raritan Technical Support department by email at support@servertech.com or call 1-800-835-1515) with the following information:
 - **a.** The first (ETH1) and second (ETH2) **Ethernet MAC addresses**, located on the label on the face of the network interface card (NIC) near the ETH1 port:



b. The **serial number** of the PDU, 11-characters (4 letters followed by 7 digits), located on a label on the face of the PDU (not on the NIC):



c. (Optional, not shown) The **full model number of the PDU**, located on the label on the side of the PDU at the end power input end.

- 2. Server Technology will then send a replacement PRO3X NIC, along with a prepaid return shipping document for the defective NIC. Both MAC addresses will match those of the defective NIC, but the firmware may vary as it will be the latest release. Continue as follows once the new NIC is received.
- **3.** Detach all cables from the defective NIC. This includes Ethernet cables, external sensor cables, USB cables, etc.
- **4.** Remove the single screw that secures the NIC to the PDU enclosure. Save the screw for installing the new NIC.







5. Insert one end of an unused Ethernet cable into the ETH2 port on the NIC and gently pull the cable directly away from the PDU until the NIC is partially separated, then simultaneously lift and pull the NIC to fully separate the NIC from the PDU. A slight lift is required due to the design utilizing tabs (circled in yellow below; one on each side) to secure the NIC at the end opposite the screw.





6. Installation of the new NIC is the reverse order of steps 3-5 above. The Ethernet cable is not needed. Start with the NIC at a slight angle and insert the end with the tabs first, proceed to lower the NIC until the screw hole at the opposite end is aligned (circled in green below) with the threaded hole on the PDU, then gently press the face of the NIC until it easily and fully engages and is flush with the face of the PDU.



- 7. Assuming the PDU was energized when the defective NIC was removed, the LCD display on the new NIC should illuminate approximately 7 seconds after insertion. Provided this is the case, proceed to secure the new NIC with the single screw, and then reattach all cables to their respective original locations.
- **8.** Return the defective controller (using the prepaid return shipping document) to Server Technology for failure analysis.

Contact Technical Support



Experience Server Technology's FREE Technical Support

Server Technology understands that there are often questions when installing and/or using a new product. Free Technical Support is provided from 8 a.m. to 5 p.m. Pacific Time, Monday through Friday.

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