

# How do I maximize uptime using power data from the equipment cabinet?



APPLICATION NOTE PR02-001

October 2014

## Learn how the PRO2™ Switched POPS® series PDU with PIPS® provides the ultimate in monitoring for the data center equipment cabinet.

### Typical Application

As the designer of a large critical-operations data center, I am responsible for providing solutions for maximum uptime and efficiency. I believe that measurement and alerting at all levels of the power chain, especially during fault conditions, is critical to meeting this goal.

For complete efficiency analysis and PUE calculation, I am looking for a cabinet PDU that provides accurate measurements for power of each device in the cabinet. Additionally, I need alerts for high current conditions at the input, which equates to the upstream breaker, and at the internal branch breaker to ensure uptime.

I like the idea of reducing IP addresses by linking a pair of PDUs from redundant power feeds, but I don't want to lose measurements or alerts when the main unit loses power during a fault or maintenance condition.

### Our Solution

The Server Technology PRO2 Switched POPS PDU provides amperage measurements at the input, branch, and outlet levels to alert of impending overload through SNMP traps and/or email. PIPS (Per Inlet Power Sensing) and POPS (Per Outlet Power Sensing) technology adds high-accuracy billing-grade measurements of voltage, power, power factor, and energy to be proactive on your power supply management. With multi-level alerting of the various data points, you will remain aware of critical issues in the data center.

Branch Current Thresholds					
Configure branch current hysteresis					
Hysteresis:	<input type="text" value="1.0"/> A				
Configure branch current thresholds					
ID	Branch Name	Low Alarm	Low Warning	High Warning	High Alarm
AA1	AA:Branch_1	<input type="text" value="0.9"/> A	<input type="text" value="1.5"/> A	<input type="text" value="15.5"/> A	<input type="text" value="16.0"/> A
AA2	AA:Branch_2	<input type="text" value="0.9"/> A	<input type="text" value="1.5"/> A	<input type="text" value="15.5"/> A	<input type="text" value="16.0"/> A
AA3	AA:Branch_3	<input type="text" value="0.9"/> A	<input type="text" value="1.5"/> A	<input type="text" value="15.5"/> A	<input type="text" value="16.0"/> A
CA1	CA:Branch_1	<input type="text" value="0.9"/> A	<input type="text" value="1.5"/> A	<input type="text" value="15.5"/> A	<input type="text" value="16.0"/> A
CA2	CA:Branch_2	<input type="text" value="0.9"/> A	<input type="text" value="1.5"/> A	<input type="text" value="15.5"/> A	<input type="text" value="16.0"/> A
DA1	DA:Branch_1	<input type="text" value="0.9"/> A	<input type="text" value="1.5"/> A	<input type="text" value="15.5"/> A	<input type="text" value="16.0"/> A
DA2	DA:Branch_2	<input type="text" value="0.9"/> A	<input type="text" value="1.5"/> A	<input type="text" value="15.5"/> A	<input type="text" value="16.0"/> A
<input type="button" value="Apply"/> <input type="button" value="Cancel"/>		<input type="text" value="All"/> A	<input type="text" value="All"/> A	<input type="text" value="All"/> A	<input type="text" value="All"/> A



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## Designed with high-availability data access in mind.

The PR02 series hot-swappable network card is designed to provide measurement and alert data from the Master PDU and up to three Link PDUs even if power to the master fails. Additionally, as seen in the image below, the link units are wired in a star formation so that failure of any link does not affect communication to the others.

### Key PR02 Benefits

- Hot-swappable, redundantly-powered network card (from link PDU)
- Star architecture multi-linking compared to competition's daisy chain design with single point of failure
- Branch current measurements and multi-level alerts
- Shallower enclosure compared to previous generation PDU
- More alarms and configuration options compared to previous generation PDU

### Key Intelligent PDU Benefits

- PIPS® and/or POPS® high-accuracy measurements of current, voltage, power, and other key power metrics
- Environmental measurements through plug-and-play probes (including link PDUs)
- SNMP traps and email alerts
- Use PowerIQ by Sunbird for data center monitoring



# About Server Technology®

Server Technology, a brand of Legrand, is leading the engineering and manufacturing of customer-driven, innovative and exceptionally reliable power, access and control solutions for monitoring and managing critical IT assets for continual availability.

Server Technology's power strategy experts are trusted to provide Rack PDU solutions for data centers worldwide ranging from small technology startups to Fortune 100 powerhouses. Because power is all we do, Server Technology can be found in the best cloud and colocation providers, forward thinking labs, and telecommunications operations.

Server Technology customers consistently rank us as providing the highest quality PDUs, the best customer support, and most valuable innovation. We have over 12,000 PDU configurations to fit every data center need and most of our PDUs are shipped within 10 days.



## Rack PDU Buying Guide

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