

NEW PRO3X ENSURES UPTIME



designed to be better™

**Server
Technology**
A brand of **Legrand**

EXECUTIVE SUMMARY

No one can afford downtime in a data center. One way to maximize uptime is by continuously monitoring your system in real-time, which can be done with the intelligent line of rack PDUs from Server Technology, a brand of Legrand. The all-new PRO3X PDU combines the quality components of Server Technology and the exceptional firmware features, technology platform, and LCD display from Raritan®, a brand of Legrand, to give you uptime confidence in an intelligent PDU.

This white paper reviews factors influencing uptime and introduces the new PRO3X PDU by defining how its quality and features can maximize data center uptime.



OVERVIEW

You already know that increased uptime means a greater ROI. Some factors influencing uptime include:

- Physical data center design
 - Redundancy of mains power sources, compute infrastructure, network bandwidth, and storage
 - Fault tolerance in your hardware and software
 - Keeping people out of the data center as much as possible (although we cannot control this, we can provide remote monitoring, alerts, and configuration that does minimize this)
 - Security of the networks, servers, and avoiding being hacked
 - The use of virtualization and containers
 - Automation of data center management systems
 - Tradeoffs in price versus redundancy, as guided by customer expectations and design goals
 - Maintenance performed on the infrastructure, hardware, and software
- Real-time environmental alerts: Stay on top of environmental challenges like hot spots and condensation with advanced temperature and humidity monitoring options.
 - Capacity planning: See exactly how new infrastructure and technologies fit in with your existing equipment to make informed decisions about optimizing current and future rack growth.
 - Power consumption data: When problems do occur, you need to be aware of it. Don't let servers and switches fail for extended periods of time without being noticed. Access advanced power usage information so that you can always keep a close watch on your facility.
 - Remote management: Make critical power adjustments from any location to efficiently utilize power resources, while saving power and money.



Xerus Technology Platform

The Xerus™ Technology Platform is comprised of a state-of-the-art network interface module, pushbutton enabled multi-color LCD display, open source firmware, and a plethora of interface ports all on a hot-swappable card.

Xerus is Legrand's proven technology that ships today in all Raritan power solutions, and is now available in the Server Technology PRO3X. It helps maximize uptime and data center efficiency by delivering security, high compute power, advanced alerting, intelligence, and complete visibility into your power chain.



Power distribution units come with a variety of features and functions. The PRO3X brings together the best features and functionality from Legrand's Server Technology and Raritan power distribution solutions into one intelligent PDU without sacrificing the quality, functionality, and uptime that customers expect from Server Technology.

What goes into making a PRO3X PDU?

In a PRO3X PDU unit you will find an entirely new network interface card, modern display technology, universal HDOT® Cx outlets with our new RamLock mechanical locking mechanism, a fully hot-swappable onboard controller, and our high accuracy PIPS®/POPS® measurement circuitry all combined into a small form factor.

Featuring a rich, multi-color LCD display, the Xerus-enabled controller provides an attractive alternative to plain ammeters. Utilizing the pushbutton interface, PRO3X intelligent PDUs simplify commissioning by displaying every voltage, amperage, energy reading, alarm, and most configuration settings in a high-resolution onboard LCD display.



The latest Xerus Technology Platform brings PRO3X models even more compute power and additional ports and applications to help you manage your data center operation more efficiently and at lower costs. Integrated into PRO3X intelligent PDUs at no extra costs, Xerus ensures more reliability and connectivity, provides a whole new level in access control capabilities, and delivers a forward thinking architecture built to last.

With a fully hot-swappable onboard controller, PRO3X PDUs ensure that servers will never experience downtime when infrastructure repairs are required.

PRO3X products enabled with the Xerus Technology Platform support the ability to add multiple plug and play SmartSensors like temperature, humidity, water, dry contact closure, airflow, differential air pressure, and more. These SmartSensors are a comprehensive set of environmental sensors, engineered to facilitate easy deployment while providing the most accurate data and insight to your operation. When mission critical IT hardware is your responsibility, it's important to be aware of any environmental hazards that could impact or jeopardize the performance and life of your IT assets. SmartSensors enable you to instrument your white space environment with the latest sensor technology directly from any Xerus-enabled controller.

The sensors provide real-time alerts, notifying you immediately when something is astray, decreasing the response time to remedy any critical risks. You can easily recognize hot spots, optimally cool equipment, and prevent costly downtime.

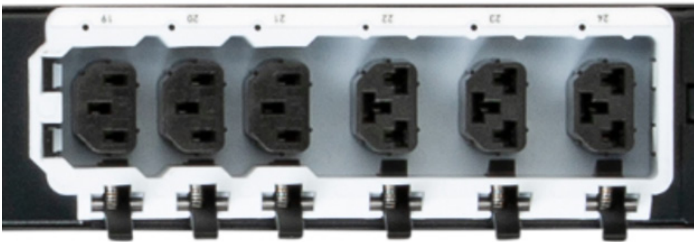
SmartSensors enable a seamless connection directly to your existing rack power infrastructure providing a faster, easier deployment with substantial cost savings. Have a worry-free deployment knowing the sensors can easily retrofit into any power infrastructure. With the highest-level metering accuracy in its class, providing better insights for smarter actionable decisions.

In an IT cabinet having dual power infeeds, the new network controller can power a second PDU controller linked through the expansion port via standard Cat5 cable, ensuring uptime of both controllers in the case of a feed power-loss on either A or B side. With Power Share, your PRO3X PDU will alert you right away of the power outage, displaying a critical red screen and forwarding preconfigured traps and emails for quick remediation. Power Share will also maintain your visibility into downstream daisy chained PDUs, along with full access to connected sensors.

By utilizing the RESTful API available through the Xerus Technology Platform, you will be able to leverage PRO3X's capabilities in most common programming languages and scripting methods to develop your own data center applications! Software development toolkits (SDKs) are available for Perl, Python, JavaScript, Curl and more. And the Xerus platform has already been integrated with most of the common DCIM platforms available on the market.

HDOT Cx

The innovative design of Server Technology's HDOT Cx outlets will be available in PRO3X. With the Cx, you get the flexibility of two outlets in one, combining both a C13 and C19, thus accommodating both C14 and C20 plugs. This reduces complexity, increases flexibility, and allows for the PDU selection process to be simplified while also lowering end costs. With HDOT Cx, you won't have to buy a new set of PDUs when equipment changes in the IT cabinet. HDOT Cx is a patented Server Technology feature that allows you to keep ahead of outlet requirements and changes, keeping you focused on maximizing uptime.



RamLock Locking Outlets

Unique to Server Technology products, RamLock is a lightweight, high strength mechanical locking mechanism built to secure the broadest range of power cords in place. Its lever design eases unplugging with a simple onehanded "squeeze and pull" action. It even supports locking cables like the P-Lock though they are not required.

This new feature in the PRO3X represents quality and design innovation at its finest. RamLock ensures high cord retention strength, whether the user plugs a C14 or C20 style plug into the HDOT Cx outlet, resulting in improved uptime due to the fewer cords coming loose or being bumped out over time. You can be assured that once seated, your cords will remain firmly locked in place.

The advantages are clear. In addition to a quality construction, ease of use, and locking confidence, RamLock totally eliminates the need for custom locking cords.



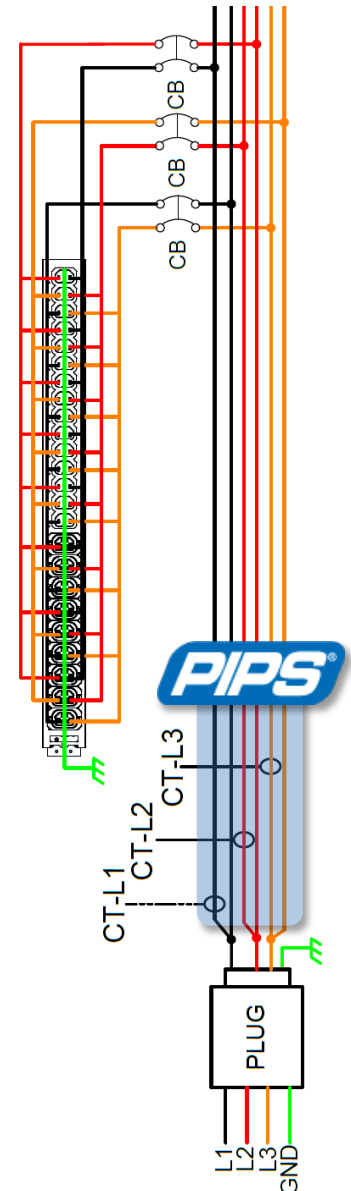
PIPS/POPS

Bringing the best of power sensing technology from current Server Technology products, PIPS® and POPS® will also be available in PRO3X. These features provide the detailed information needed to maximize efficiency and ensure uptime.

PIPS - Per Inlet Power Sensing monitors current, voltage, kW, kWhr, and power factor for each inlet.

The power cable whips coming out of the Remote Power Panel (RPP) are typically called branch circuits and are the power infeeds into the PDUs. At this point in the power chain, you can determine the amount of power used within each cabinet, the amount of available power for new devices, and you can begin to understand key items like capacity planning and identifying stranded capacity. With software tools, the cabinet-level information can be used at the cabinet, zone (a group of cabinets), or location level.

Sometimes this information is monitored by Facilities at the RPP, but this information usually ends up in a Building Management System (BMS) for which the IT group often does not have access. Therefore, PIPS measurements are popular when purchasing PDUs, and are used by both Facilities and IT. In fact, the IT group often has an interest in these measurements because the Facilities group typically does not share monitoring information from the RPP – if power measurements are even taken at that point in the power chain. These measurements can also be used for PUE calculations. How close to 1.0 is your data center?



POPS – Per Outlet Power Sensing monitors current, voltage, kW, kWh, and power factor for each outlet.

Power monitoring at the outlet-level is growing rapidly within data centers as power monitoring increases overall and users better understand the value of the information they are getting. Often monitoring at the outlet in and of itself is not that interesting unless you are looking for a power supply failure, usually shown by the power factor going down, and also depending on the type of power supply failure.

Outlet-level monitoring of more than one outlet can be directly related to a device or server. Device power information has value because it helps you look at the power consumption of a group of similar devices and determine which devices are doing useful work and which ones are just sitting idle and wasting power. This approach is often much more feasible than unplugging the network cable on a device and waiting for an angry user to email or call IT support.

Often multiple devices or servers can relate to the power usage of a particular application or group within your organization. This information is also valuable if your organization has considered billing back to different departments for their power usage to reduce costs. Most departments want the world until they are told that they have to pay for the resources they are using.

Outlet Layout

18 HDOT C13 and 18 HDOT Cx outlets are evenly spread over the entire length of the PRO3X PDU for clean cabling in the cabinet. This allows for shorter cable runs and no more woven mesh of power cables to act as a curtain trapping the heat being rejected at the back of the server equipment. There is also the issue of risk management. As the power and communications cabling gets more entangled, it becomes more difficult to move, add, and change components within the rack. This makes the task of documentation more difficult, and it also makes it more likely that removing equipment will become a risky activity. Keeping cabling close to the source device takes the guesswork out of removing the old and installing the new. This distinct outlet layout is another PRO3X feature that allows you to maximize versatility without sacrificing uptime.

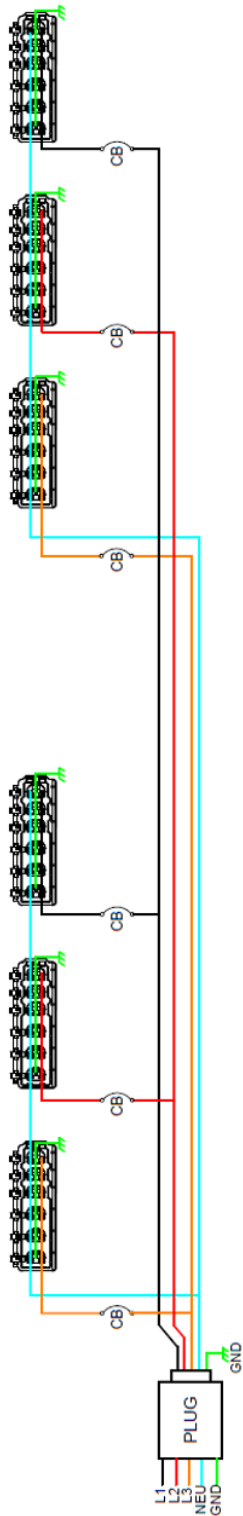


Small Form Factor

The PRO3X maintains the form factor of existing Pro2 and HDOT PDUs from Server Technology. At 2.2" wide x 2.5" deep x 70" tall, this small and compact form factor takes minimal space in your cabinet and is easy to handle.

Alt-Phase Branches

Alternating phase branches are standard on the PRO3X for three phase power infeeds.



Linking

There is access of up to 8 networked PDUs via one IP address. In a departure from the historical "Master + Link" approach for two Server Technology PDUs, the PRO3X linking will be done with *all Master units*. The main PDU GUI/SNMP/CLI will have full access to the link units' information including inlets, outlets, OCP's, diagnostic data, device information and firmware history. Another feature is that if power is lost on the primary unit, redundant power for the primary network interface is supplied from the first linked unit and communication with the primary unit remains intact. Outlet grouping is another benefit available with linked PDUs. Grouping outlets between PDUs ensures that outlets turn on, turn off, and reboot in a synchronized manner. Maximize your uptime using this PRO3X linking capability.



Common Chassis

Because of the flexibility that comes from the Cx outlets, the entire PRO3X line will utilize only 12 chassis, thus simplifying the task of planning and laying out the IT equipment cabinet. This will also allow you to get your product faster.

Available Configurations

PRO3X will include the following configurations (all with 36 outlets):

- BASIC 30A Delta
- BASIC 32A Wye
- BASIC 32A 1PH
- BASIC 60A Delta
- SWITCHED POPS 60A Delta
- SWITCHED POPS 30A Delta
- SWITCHED POPS 32A 1PH
- SWITCHED POPS 32A Wye
- SMART 30A Delta
- SMART 60A Delta
- SMART 32A Wye
- SMART 32A 1PH
- SWITCHED 60A Delta
- SWITCHED 30A Delta
- SWITCHED 32A 1PH
- SWITCHED 32A Wye

CONCLUSION

The PRO3X brings together the best features and functionality from Legrand's Server Technology and Raritan power distribution solutions. Don't allow unexpected outages, unplanned configuration changes, security threats, or the lack of visibility to power management to limit your uptime. Designed with maximum uptime and superior quality in mind, the PRO3X elevates the PDU to a new level of performance. You can be confident that your data center will "Stay Powered".

We have several case studies, reports, and blog posts that go in depth related to data center uptime. Visit our website at www.servertech.com for more information.



WHY SERVER TECHNOLOGY

Server Technology's power strategy experts are trusted to provide rack PDU solutions for demanding data centers worldwide ranging from small technology startups to Fortune 100 powerhouses. Because power is all we do, you will find us 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. Let us show you – we have over 12,000 PDU configurations to fit every need, and over 80% of our PDUs are shipped within 10 days.

Interested in learning more about how Server Technology can help you manage and distribute power in your application?

Visit us online at www.servertech.com

WHY LEGRAND

At Legrand, we build sustainability into everything we do. We are committed to developing solutions that enable high performance buildings (such as data centers), reducing the environmental impact of our own operations and transforming how people live and work — more safely, more comfortably, more efficiently. We were ranked 51st among the Global 100 World's Most Sustainable Corporations in 2018. In addition, Legrand North and Central America was recognized by the Department of Energy (DOE) in 2018 for achieving a 20.3 percent reduction in energy intensity. We are committed to optimizing the way we manage energy, water and waste because these practices are good for the environment and good for business.

www.legrand.us

**Server
Technology**
A brand of  **legrand**

Server Technology Inc. (775) 284-2000 Tel
1040 Sandhill Road (800) 835-1515 Toll Free
Reno, Nevada 89521 (775) 284-2065 Fax
sales@servertech.com

©2020 Server Technology, Inc. Sentry and Server Technology are registered trademarks of Server Technology Incorporated. Information is subject to change without notice. Printed in USA, Server Technology offers a wide range of products for North America and Global markets.