

# PRO4X RACK PDUS

RENOWNED POWER MEETS REVOLUTIONARY INTELLIGENCE

## Server Technology's PRO4X Rack PDU

integrates 30+ years of customer-driven technology, experience, and innovation to meet your demanding data center specifications for efficient, robust performance.

The new PRO4X builds on our existing rack power distribution technology and pioneering outlet designs with groundbreaking intelligence features. This combination delivers a best-in-class outlet and power density, flexibility, reliability, security, and accurate data collection.

Discover how the PRO4X's renowned power and revolutionary intelligence can help you to meet and anticipate your ever-changing rack power challenges.

## RENOWNED POWER

- High Density Outlet Technology (HDOT®)
- C13 and C19 all-in-one outlets (HDOT Cx®)
- RamLock mechanical outlet and cable locking
- Fully hot-swappable onboard iX9™ Controller
- Alternating phase power distribution
- 45-degree angled infeed

## BENEFITS

- Real-time visibility, reporting, and alerting of power metrics and events
- Best-in-class flexibility to meet and anticipate future requirements
- Engineered for mission-critical uptime
- Unsurpassed outlet and power density
- Easy data collection and export to examine energy utilization
- Secure encrypted communication, by default, for all PDU data

## REVOLUTIONARY INTELLIGENCE

- Advanced power quality monitoring
- Circuit Breaker Trip Forensics with Waveform Capture
- ±0.5% metering accuracy
- Advanced security with new Secure Boot
- Redfish® RESTful API
- Xerus™ Technology Platform

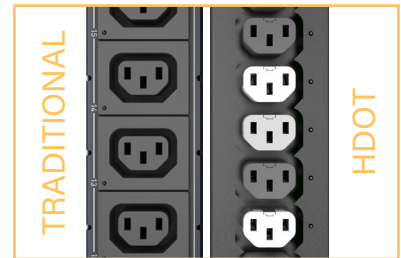
# RENOWNED POWER

## The Intersection of Innovation and Proven Performance

The PRO4X continues the Server Technology legacy of delivering best-in-class, industry-first hardware features. The unmatched feature-set of the PRO4X delivers the most density, flexibility, efficiency, and reliability to drive operational excellence.

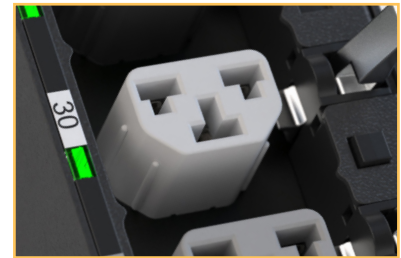
### HDOT OUTLETS

Our patented High Density Outlet Technology (HDOT) removes unnecessary outlet molding to provide the most outlets per PDU form factor to support high-density rack requirements.



### HDOT Cx OUTLETS

A hybrid of C13 and C19 outlets, the HDOT Cx outlet accommodates both C20 and C14 power cables in a single outlet. It reduces complexity, increases flexibility, and simplifies the PDU selection process while lowering costs and future-proofing your installations.



### RAMLOCK LOCKING TECHNOLOGY

A rugged and intuitive outlet and power cord locking system secures power cords to the PRO4X PDU. Its auto-lock and manual release lever allows unplugging with a one-handed "squeeze and pull" action.



### ALTERNATING PHASE OUTLETS

Alternates the different phases down the length of the PDU to evenly distribute power over the entire rack. Advantages include shorter cords, faster installation, and much easier load balancing across the three phases.



## 45-DEGREE ANGLED INFEED

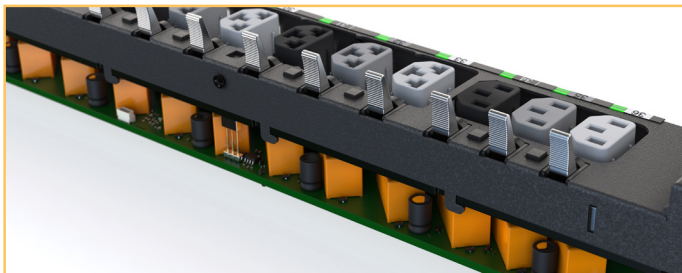
A flexible infeed cord design reduces the number of PDU configurations needed. Bottom or front entries are now supported in this one-size-fits-all feature that saves money and time. The bend radius is suitable for cords rated up to 60A 3-Phase without degrading its performance.

## R/G/B LED OUTLET INDICATORS

Quickly and easily see the health status of the PDU. Color LED indicators show the following conditions: outlet on/off, outlet's power above/below a threshold, circuit breaker on/off, circuit breaker above/below a threshold, and suspect outlet that tripped the circuit breaker.

## BI-STABLE LATCHING RELAYS

Latching relays make outlet switching safer while consuming less energy and minimizing inrush current overloads. Configure relays to retain their on/off state so that critical power is maintained even in the rare case of a PDU failure.



## COLOR OPTIONS

Rather than color the whole PDU, colored stickers allow PDUs to be color-coded to identify the A and B circuits quickly. Stickers can be easily changed for added flexibility.

## INDUSTRIAL GRADE MECHANICAL DESIGN

The PRO4X is built with a 60°C (140°F) standard temperature rating or reliable performance in dense, high-heat environments. Even in the harshest conditions, the PRO4X operates safely and reliably.



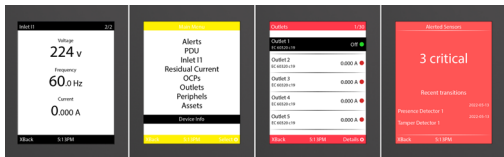
# TECHNOLOGICAL ADVANCES

## Breaking Boundaries in Hardware & Intelligence

**THE IX CONTROLLER** is the PRO4X's center of intelligence that houses high compute power, display, and multiple connectivity ports. The iX Controller offers industrial-grade reliability, user-configurable firmware, disaster recovery support, and hot-swappable capability for maintenance or replacement without powering down connected equipment. The future-proof design helps manage operations more efficiently and at lower costs.

### MULTI-COLOR LCD

Provides information on power usage, outlet status, and critical alerts.



### DUAL NETWORK GIGABIT 10/100/1000 ETHERNET PORTS

Enables connectivity to network infrastructure. Physically cascade 32 PDUs under one ethernet port using bridging mode, or additionally, save IP addresses using a single IP address with port forwarding. For more efficient management and control of your devices, use the Link feature for logical connectivity of up to 8 PDUs.

### SENSOR PORT

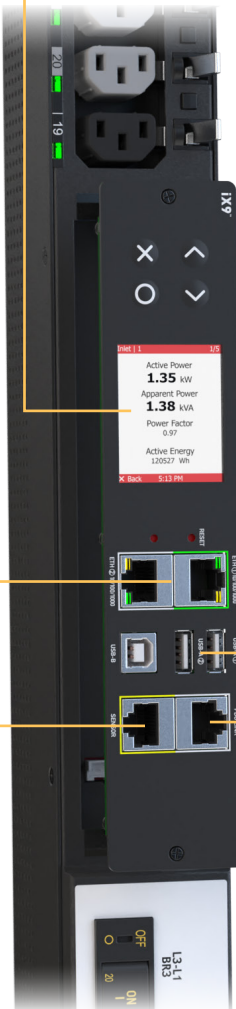
Allows plug-and-play deployment of Legrand® SmartSensors™—up to 32 sensor functions or up to 12 sensor packages supported.

### DUAL USB-A PORTS & SINGLE USB-B PORT

USB-A enables simultaneous connectivity to mobile interfaces, rapid PDU configurations, mass firmware updates, and serial console access. USB-B generates diagnostic logs.

### PDU LINK PORT

Allows the linking of 2 PDUs where the Primary unit has the power information from the Link units. Ensures redundant power for the main Controller for both units, even if the Primary unit loses power.



# REVOLUTIONARY INTELLIGENCE

## A Powerful Leap in Monitoring and Management

### ADVANCED POWER QUALITY METRICS

The PRO4X gives real-time insight into critical power quality, energy efficiency, and equipment health. With the most complete and accurate set of rack power quality monitoring and metrics, you can confidently address capacity planning, environmental optimization, failover planning, and troubleshooting.

#### ±0.5% METERING ACCURACY

- The PDU's inlet and outlets capture minimum, maximum, and average measurements following IEC 62053-21 and IEC 61557-12 standards

#### CIRCUIT BREAKER TRIP FORENSICS

- Identify exactly which outlet caused a circuit breaker to trip
- Use with Outlet Power-On Prevention to restore power to other devices while isolating defective equipment for future maintenance

#### TOTAL HARMONIC DISTORTION

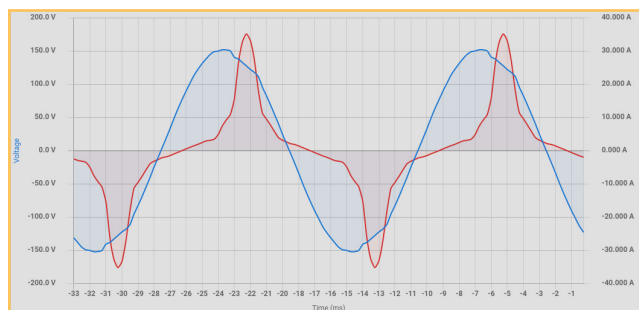
- Monitor harmonic events, voltage dips and swells, crest factor, and power interruptions
- Monitor the power being fed to the PDU and the power distributed to the PDU's outlets

#### PEAK & MIN/MAX VALUES FOR POWER MEASUREMENTS

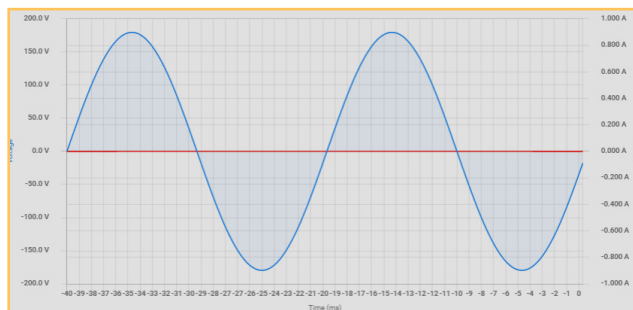
- Values are measured over time and can be used to determine normal loads and failover ratings, plus recommend upgrades based on peak ratings
- Identify stranded capacity and plan for failover

### WAVEFORM CAPTURE

When captured, trended over time, and visualized in the same location, power metrics become more powerful. With Waveform Capture, you can closely monitor quality metrics at the rack, like harmonics or voltage dips and swells, define a threshold to monitor events, and visualize disturbances that may be distorting the PDU's power quality. These visualizations ensure your data center's rack power is running efficiently.



**Harmonics Waveform Example**



**Voltage Dip Example**

*On-demand or event-driven waveform capture can be automated based on specific events through the PRO4X's web GUI or APIs.*

## POWER QUALITY MEASUREMENTS

The PRO4X's rack-based power quality measurements allow you to proactively troubleshoot sources of power issues like power leaks, distortions, or variations before they become more significant problems.

**The PRO4X measures the following types of power quality measurements at the PDU's inlet and/or outlet:**

Power Quality Metric	Measurement	Inlet Measurement	Outlet Measurement
Voltage, RMS	$V_{RMS}$	Y	Y
Voltage, Neutral	$V_N$	Y	N
Voltage, Harmonic Distortion	$V_{THD}$	Y	Y
Voltage, Dip & Swell	$V_{DIP} V_{SWL}$	Y	N
Current, RMS	$A_{RMS}$	Y	Y
Current, Neutral	$A_N$	Y	N
Current, Inrush	$A_{INRUSH}$	N	Y
Current, Harmonic Distortion	$A_{THD}$	Y	Y
Crest Factor	CF	Y	Y
Watts	W	Y	Y
Volt-Amps-Apparent Power	VA	Y	Y
Volt-Amps-Reactive Power	VAR	Y	Y
Power Factor, True	$PF_{true}$	Y	Y
Power Factor, Displacement	$PF_{disp}$	Y	Y
Power Factor, Distortion	$PF_{dist}$	Y	Y
Energy	kWh, kVA	Y	Y

*\*Metrics with Y (yes) in the Outlet Measurement column are only available on units equipped with outlet level monitoring.*

## RACK PDU FAMILIES

	Individual Outlet Control	Per Outlet Power Monitoring	Branch Circuit Protection	Input Current Monitoring	Environmental Monitoring	Access, Security & Communications	Expansion Module
Switched POPS*	■	■	■	■	■	■	■
Smart POPS		■	■	■	■	■	■
Switched	■		■	■	■	■	■
Smart			■	■	■	■	■
Metered			■	■			
Basic			■				

\* POPS = Per Outlet Power Sensing

# OPTIMIZING ENVIRONMENTS

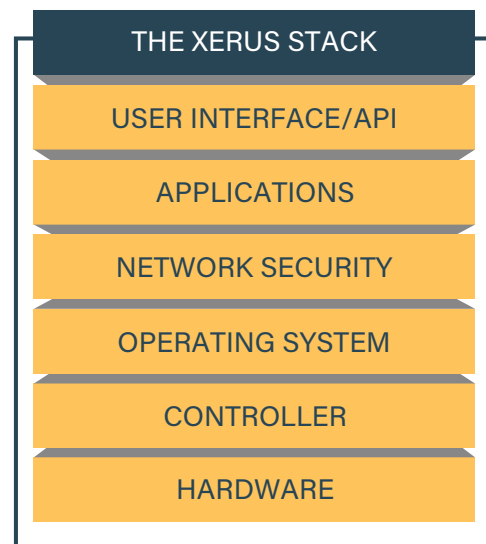
## Technology That Transforms Rack Power Distribution

### THE XERUS TECHNOLOGY PLATFORM

The backbone of the PRO4X Rack PDU is the Xerus Technology Platform. It is a flexible and mature platform that combines robust hardware, software, and communication protocols. Xerus increases the lifecycle of your PDUs by facilitating power management and monitoring, environmental monitoring, capacity planning, asset governance, physical access control, and more.

Xerus helps maximize data center uptime and efficiency with security, advanced power monitoring, metrics and alerting, and complete visibility into your power chain. With Xerus, you receive actionable data to aid in decisions that help safeguard assets and maximize your data center's continuity and performance.

Rather than managing multiple systems using different protocols, the Xerus Technology Platform supports networked SNMP, MODBUS, open REST based API's and a Redfish API, enabling wherever-you-go monitoring and visibility into your data center.



## ENHANCED SECURITY SUITE

### ENCRYPTION

Secure encrypted communication by default for all PDU data at all times:

- HTTPS
- SSH
- SNMPv3
- Smart TLS

### PASSWORD POLICIES

Enforcing strong and updated password policies to control user access:

- Strong Passwords
- Force Password Changes
- Password Expiration

### CERTIFICATES

Valid and updated certificate to secure PDUs on public networks against "Man-in-the-middle" attacks:

- Digital Certificate
- CA Certificates
- Self Signed Certificates
- US-CERT Monitoring

### FIREWALL

Control user access and keep out unauthorized access:

- IP based Access Control Lists (IP ACL) rules
- Role Based Access Control (RBAC) rules

### DEFENSE IN DEPTH

Protect against network breaches by leveraging advanced security measures to stay ahead of the threats:

- Secure Boot
- Repeat Login Block Access
- Timing Out Inactive Sessions
- Limiting Same Login Use from Multiple Clients
- Enforced Restricted Service Agreement Warnings

## UNIQUE SPECIFICATIONS

At Server Technology, we understand that power needs vary from customer to customer. Our power experts will help you find the right PRO4X PDU for your specific application, whether a standard configuration model, a configure-to-order model, or by engineering a custom PDU designed to your specific needs.

## RANGE OF OPTIONS

- 100V, 120V, 200V, 208V, 230V, 240V, 400V, and 415V Inputs
- Single-Phase and Three-Phase Power
- 16A to 100A Input
- Up to 54 Outlets (mix of HDOT Cx and HDOT C13)
- NEMA, IEC, and Other Outlet Types Available
- Zero U Form Factor
- NEMA, IEC, 56 Series, and other Plugs/Receptacles
- Standard Certifications including FCC Part 15 Class A, TUVus and cTUV, IEC 62368, CE, UKCA

## SECURITY PROTOCOLS

- Configurable Strong Passwords
- User and User Group Permissions
- Active Directory®, LDAP/S, RADIUS, TACACS+
- Up to 256-bit AES Encryption
- Secure Boot
- SSH, SSL, TLS, and HTTPS

## OUTLET CONTROLS

- Power-on Sequencing with Customizable Delays
- Outlet Grouping Across Linked PDUs
- PDU-based Load Shedding
- Last Known State Power-On
- Remote Outlet and Outlet Group On/Off
- R/G/B LED Outlet Indicators
- Bi-Stable Latching Relays

## MECHANICAL ENHANCEMENTS

- RamLock Mechanical Locking
- 45-Degree Angled Infeed
- Alternating Phase Outlet Technology
- Adjustable Toolless Mounting

## POWER METERING

- Metering at Outlets, Infeed, Circuit Breakers
- Peak and Min/Max Power Quality Measurements
- Monitor Harmonic Events, Waveform Capture, Voltage Dips & Swells, Crest Factor, Power Interruptions, Energy Usage, and more
- Circuit Breaker Trip Forensics

## COMMUNICATION PROTOCOLS

- Dual 10/100/1000 Base T Ethernet
- USB-A, USB-B
- Email and Syslog
- SNMPv2c, SNMPv3
- SNMP TRAPs and INFORMs
- IPv6/IPv4 Support
- JSON-RPC, MODBUS TCP
- Web Browser (HTTP, HTTPS)
- SSH Command Line Interface
- Xerus Firmware
- Redfish RESTful API
- Perl, Python, JavaScript, and Curl SDKs

## MANAGEMENT CONTROLLER

- True Hot-Swappable
- High-Resolution Full-Color LCD
- Auto Flip Display
- Intuitive Interface Ports for Power Sharing, Failover Power, Cascading, Linking, and Sensors\*
- Zero Touch Provisioning
- USB Mass Configuration

\*Plug-and-play sensor support for Temperature, Humidity, Airflow, Dust/Particle, Differential Air Pressure, Water/Fluid, Vibration, Proximity, Contact Closure, Sensor Hubs, and more sensor types.