

NX1 SMART PDUs

REVAMPING RACK PDU DEPLOYMENTS

Trusted by the world's largest data center operators, Raritan PDUs benefit from 30+ years of battle tested engineering and have been perfected by our data center experts to ensure uptime and availability.

The new Raritan NX1 PDU line has been carefully designed to adapt to the diversity of our customers' configurations.

Developed on a common platform, it provides solutions that fit your current needs and expectations, while anticipating for maintenance as well as future scaling and upgrades.

BENEFITS

- Easy deployment and maintenance to improve uptime and provide accurate monitoring, with reduced human error
- PDUs based on a DCIM Agnostic and Open API platform
- Intelligent and modular PDU controller platform: each PDU can be configured as a Smart Ready version (without screen) or Smart Node version (with screen, that acts as an IP controller for added network functionalities)
- Highly secure and power-saving radio frequency technology
- Easy rack control & monitoring (wire-free deployment = ease and cost savings)
- Best-in-class in cybersecurity: tested internally and by third party according to stringent compliance audit

INNOVATION

- Wireless sensors
- Daisy chain up to 31 Smart Ready PDUs downstream to a Smart Node PDU with RJ45 patch cables (RS 485 - link)
- Only the Smart Node PDU is connected to your network (less IP addresses needed)
- Smart Node controller aggregates all Smart Ready units' data into its user interface. Thresholds and alerts are configured directly in the Smart Node unit
- Modular design (reduces screens/easy to upgrade PDUs)

SECURITY

- Full-featured network security
- AES256/HTTPS/IPV6/SSH/TLS1.3 support
- Stringent compliant audits

PERFORMANCE

- 60 °C temperature resistance rating
- ±1% accuracy
- Easy to read power data



NX1 SMART PDU's

A modular and intelligent PDU controller platform

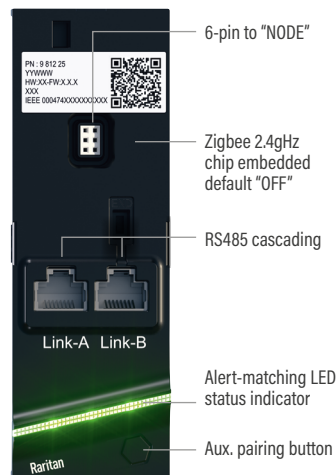
ONE PLATFORM, MULTIPLE POSSIBILITIES

Available in metered, metered HD (high density) and switched versions, the Raritan NX1 Smart PDUs are based on a DCIM Agnostic and Open API platform. Each power configuration can be acquired with either PDU version.



NX1 SMART READY PDU

No controller to be added



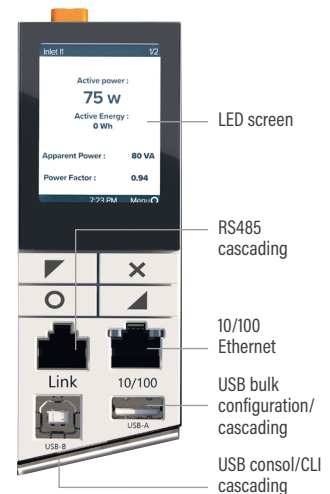
- Field replaceable
- Including RS485 industrial BUS for linking up to 32 units (data pushed to a lead Smart Node unit with RJ45 cable)
- Including RF chip for Zigbee and green power wireless applications



OR

NX1 SMART NODE PDU

Controller to be added for extra connectivity



- Full IP controller
- Cybersecurity tested
- Fully hot-swappable to allow maintenance or replacement without powering down connected equipment
- NODE IP cascading through USB up to 16 units (full data management)

ZIGBEE WIRELESS CONNECTIVITY

Highly secure and power-saving radio frequency technology

- Sensor direct pairing
- Empowering future wireless mesh network deployment
- Providing the highest level of security:
 - encryption and message integrity with application key exchange
 - protection against most challenging internet concerns including Distributed Denial-of-Service attacks (DDoS)

INNOVATION

Optimized and reliable implementation

FACILITATING DEPLOYMENT AND MAINTENANCE

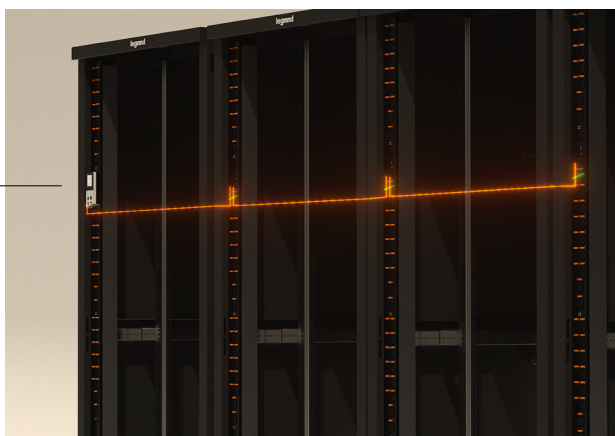
Based on your specific needs, you can opt **for Smart Node-only or Smart Ready + Smart Node configurations.**

The Raritan NX1 Smart PDU range allows various deployment methods to accommodate different data center environments and constraints.

To optimize your IT deployments, the most innovative method is the RS485 cascading. Have one IP address for the daisy chain with a “port forwarding” method or one IP address for each PDU with a “bridging” method.

Only the Smart Node PDU is connected to your network.

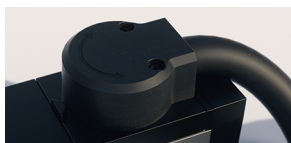
The Smart Node controller aggregates all Smart Ready units' data into its user interface: thresholds and alerts are configured directly in the Smart Node unit.



Daisy-chain up to 31 Smart Ready PDUs downstream to a Smart Node PDU with RJ45 patch cables (RS 485 link).

> **See p.4-5 for installation examples**

The Raritan NX1 Smart PDUs offer very practical features!



330° ROTATING INPUT CORD

It reduces tension on input, and facilitates cable orientation and rack integration.



HOT-SWAPPABLE CONTROLLER

The metering controller can be removed and replaced without turning down the PDU.



HIGH-DENSITY OUTLET MODULES

Providing more compact form factors and better airflow in the rack.

REDUCING HUMAN ERROR



CORD LOCKING SYSTEM

- For absolute safety, our autolocking outlets provide 100 Newton retention force
- No risk of accidental disconnection due to human error or vibration
- Compatible with all standard C14 and C20 plugs: no need for specific cords



NUMBERED OUTLETS

- Individual circuits and power outlets numbered from the input
- Facilitated power cord dressing



PDU COLOR-CODING

- Color-coded circuits and chassis are available on demand when extra identification is needed



POWER CORDS WITH SERVER SIDE LOCKING

- Unique rotary locking mechanisms on C13 and C19 fitting any C14 and C20 server inlets
- Already secured on the Legrand PDU side thanks to the standard cord locking system

INNOVATION

Optimized and reliable implementation (continued)

INSTALLATION EXAMPLES

Traditional installation

Each PDU must be equipped with a controller.



NX1 installation

Only equip the first PDU with a Smart Node controller.
It aggregates all Smart Ready units' data into its user interface.

Daisy-chain up to 31 Smart Ready PDUs



CapEx

Reduce your CapEx
by cutting down the
number of controllers
needed



OpEx

Reduce your OpEx
by diminishing
your running costs
(fewer Ethernet
switch ports)



**Save costs and
improve margin** by
reducing SKU count
and upselling access
to smart features



**Easily upgrade
Smart Ready
to Smart Node
PDUs** upon request
thanks to our
modular design



**Save energy and
limit carbon
footprint** as less
Smart Nodes are
needed

INTRODUCING POD MASTER

Smart Wireless Monitoring

CREATE A FULLY SECURED WIRELESS NETWORK OF PDUS & ENVIRONMENTAL SENSORS

With easy, fast, and safe deployment, monitoring, and control, Legrand Pod Master empowers all stakeholders.

From electrical engineers to data center managers and clients, everyone benefits from bringing this game-changing solution into the data center ecosystem.



FAST DEPLOYMENT



- **No cable routing required:** no need to run cables through cabinets to connect PDUs and sensors.
- **A mobile app to simplify commissioning:** the PodView application makes the commissioning of your installation easy. Just follow the app!
- **Versatile mounting possibilities:** set up your Pod Master where it suits you best. Inside the cabinet thanks to two magnets for tool- and accessory-free integration in cabinet, or with an 19" 1U panel- On top of the pod with accessories for cable trays (Cablofil wiremesh or P31).

RESOURCE-EFFICIENT



- **No more display**
With real-time data accessible directly on your mobile device, there's no longer a need for integrated screens on PDUs — a smart choice for both efficiency and the environment.
- **No more patch cords**
Products communicate with each other by radio. Cords are no longer necessary.

REAL-TIME MONITORING AND CONTROL



- **With a mobile application**
In your data hall and need live information fast? The PodView application on your mobile gives you on-the-spot access on a responsive interface.
- **Using the webUI**
Monitor and supervise your installation from the comfort of your office.
- **DCIM agnostic and API platform**
Connect Pod Master seamlessly with the aggregation and analysis tools of your choice.

SECURE



- **Mesh network**
Zigbee 3.0 uses a mesh network topology, which allows devices to relay signals to one another. This enhances network reliability and scalability, making it suitable for large-scale deployments.
- **Zigbee 3.0 Secure communication**
Zigbee 3.0 offers advanced security features, including encryption and secure authentication, which protect data integrity and prevent unauthorized access.
- **Cyber-secure**
Best-in-class in cybersecurity, it has been tested internally and by a third party in accordance with a stringent compliance audits.
- **Dual AC and POE power supply to prevent power loss**
Pod Master supports redundant power with two C14 inlets and two POE+ Ethernet ports. You can connect only one or up to four of them to proper power sources.

ZIGBEE 3.0 & INTELLIGENT POWER – LEARN MORE ONLINE

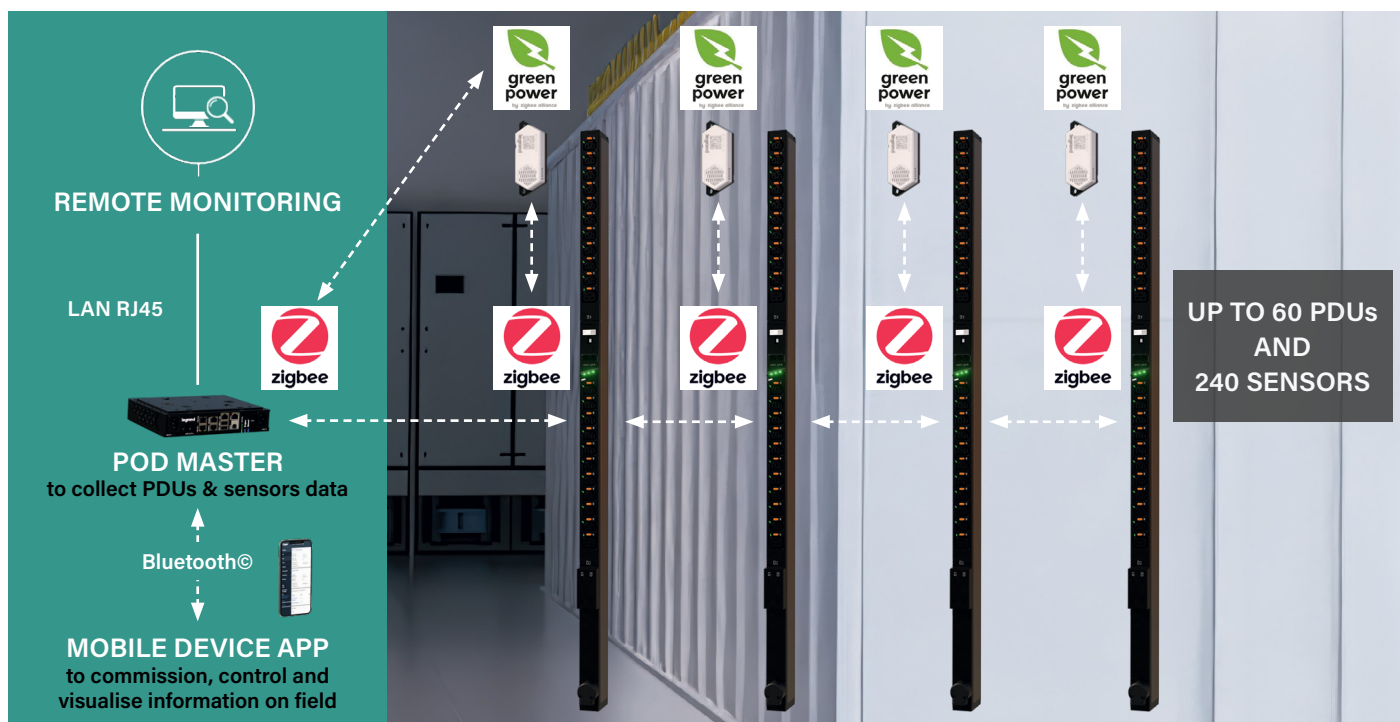
Zigbee 3.0 and our intelligent power management platform combine cybersecurity, energy efficiency, and scalable connectivity to meet the evolving needs of modern data centers. To explore how these technologies can future-proof your infrastructure, visit our website.



FIND THE BEST PERFORMANCE ECOSYSTEM FOR YOUR NEEDS

Aware of the diversity of user needs in data centers, the Pod Master has been specially designed to adapt. From large colocation data centers to edge data centers, whatever your technological preference or regulatory constraints, Pod Master offers a range of uses that are sure to meet your expectations.

Pod Monitoring: Wireless Architecture



Designed to manage a POD, monitor and control up to 60 Base PDUs and 240 wireless sensors in a 15-m range around one Pod Master. PDUs, wireless sensors and Pod Master are linked in a mesh network and communicate wirelessly using Zigbee 3.0.

In large data rooms, connect up to 12 Pod Masters in a loop. This reduces the number of switch ports required and secures your monitoring with LAN access at both ends.



Pod Monitoring: Wired Architecture



In the event of restrictions on the use of radio technology, pair up to 32 PDUs downstream to a Pod Master in wired mode (RS485).

INNOVATION

Providing visibility on your rack conditions

The NX1 Smart PDU has been designed to provide you with the best experience, from installation to effective data measuring and management.

WIRELESS SENSORS TO MONITOR ENVIRONMENTAL RISKS

Our wireless sensors are easy to fix in your racks, collecting data on environmental risk factors that have an impact on uptime, performance, and cost.



Main features



PROTECTION

Protection against environmental risks and human error



ACCURACY

Protection against environmental risks and human error



DETECTION

Easy detection of hot spots and risky environmental conditions



COST EFFECTIVENESS

Reduction of cooling costs and optimization of rack airflow delivery



DURABILITY

5-year minimum battery life on all sensors with replaceable batteries



SIMPLICITY

Easy wire-free deployment and maintenance, with various fixing methods possible



RELIABILITY

Secure and reliable installation



SUSTAINABILITY

Energy-friendly radio communication powered by Zigbee Green power Technology



Main benefits

- Wire-free deployment = ease and cost savings
- Wire-free deployment = reducing cables
- Reduce sensor deployment time and maintenance
- Easily move sensors from rack to rack



Pair up to 8 sensors per PDU.
The Zigbee technology is natively embedded.

NX1 METERED PDUs FOR CONSUMPTION MONITORING

As they incorporate **input metering**, the NX1 metered PDUs:

- allow for **accurate measurement** of the unit's energy consumption
- make it **easy to understand power and to manage your data center growth**

Easier data collection in the cabinet

- No need for technical teams to take on-site measurements
- Easy access to equipment energy consumption

Unit power overview

- Gives an overview of rack power capacity and energy use
- Clearly shows remaining capacity in the cabinet
- Provides insight regarding decisions about future growth

NX1 SWITCHED PDUs FOR EASIER POWER MANAGEMENT

Because they integrate **input metering and output level switching**, the NX1 Smart Node PDUs:

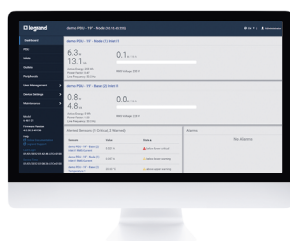
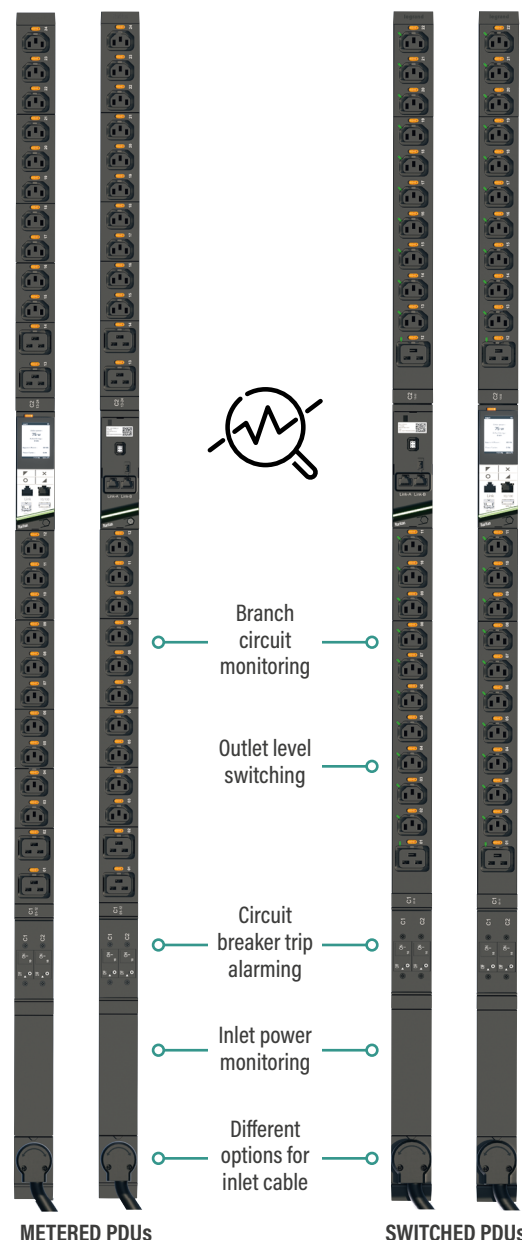
- **provide granular power switching** of each device connected to the PDU
- **improve availability**
- make it easier to **manage multiple facilities remotely**, contributing to avoid financial and environmental costs associated with travel to sites

Remote outlet management

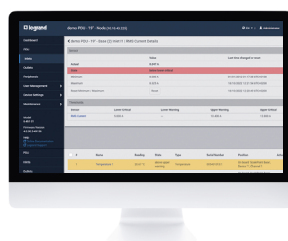
- Prevents human errors
- Prevents overloads by checking that devices are only plugged in on available circuits

Output control

- Configurable outlet rebooting schedule
- Avoided power waste by scheduling power loads
- Remote hard-reboot



Metering, outlet control and peripherals data at glance



See alerts on Web UI and set up alert sending (e.g. emails)



See alerts on the PDU for field technicians

YOUR SITUATION AT A GLANCE

User-friendly and responsive Web User Interface

- Metering, outlet control and peripherals data at glance
- Easy to configure
- No-fuss peripheral commissioning
- Dynamic HTML to support multi devices

Configurable alerts

- 4 thresholds per parameter:
 - measurement: above or below
 - priority: high or low

SECURITY

Delivering utmost protection

The platform used for the NX1 Smart PDUs is a combination of hardware and software technologies benefiting from Raritan's long experience and delivering unparalleled security.

INTELLIGENT PDU FIRMWARE MANAGEMENT & CYBER SECURITY MANDATE



The platform helps to maximize data center efficiency by delivering security, advanced alerting, intelligence, and visibility into your power chain.

- **Best-in-class in cybersecurity**
- **Tested internally and by third party** according to stringent compliance audit

UNIFYING SYSTEM FOR MORE INTELLIGENCE



The platform provides complete visibility to your power chain, making it easier to connect, configure, and manage your data center.

- **Firmware designed and maintained in-house** for complete control
- **Interoperable, open architecture** for quickly future proofing application development

BUILD A FUTURE-PROOF INFRASTRUCTURE



The platform brings reliability to the forefront by focusing on continuous uptime for your data center with battletested hardware and firmware with billions of hours of runtime.

- **Continuous firmware development** to enrich your existing hardware deployment
- **Field-based innovation** from customer feedback to deliver relevant applications and support your business growth with a future-proof solution



DELIVERING UNPARALLELED SECURITY

The platform delivers improved security across your data facility with the latest network security protocols, best in-class data encryption, strong password policies, and login protection.

- Deploy a power infrastructure that **matches your enterprise network and IT security requirements**
- **Ensure secured and encrypted communications**
- **Control user access and safeguard** against errors and malicious intents

256-bit AES encryption

SSH (secure shell)

SSL to TLS 1.3

HTTPS



SIMPLIFYING YOUR PATH TO DCIM

The platform is built on a developer friendly platform which allows for easy automation and seamless transfer of infrastructure insights and alerts directly to BMS and DCIM software.

- **Seamlessly discover, import, manage, and control your NX1 devices** in Energy Management Software
- **Develop more automation and efficient alerting** to help improve data center operations

REDFISH

SNMP and SNMP TRAPS

IPV6/IPV4 support

JSON-RPC MODBUS TCP

**A PDU PLATFORM FOR POWER
AND NETWORK SECURITY**



PERFORMANCE

Ensuring high efficiency at all levels

The Raritan NX1 Smart PDUs have been designed to meet the daily challenges encountered in data centers to improve uptime, to provide accurate monitoring and to ensure reliability.

IMPROVING UPTIME

60°C rating aluminum chassis

The compact aluminum chassis withstands high ambient temperatures.

Hydraulic magnetic circuit protection

The NX1 platform offers hydraulic magnetic miniature circuit breakers with high ambient temperature tolerance for tripping, and high interruption capacity.



PROVIDING ACCURATE MONITORING

Preventing outages in your data center starts with ensuring access to accurate monitoring data.

The NX1 Smart PDUs have **±1% measurement accuracy** with all types of loads, in real time. You can rely on your PDUs supplying the required information as and when needed.



Thanks to the NX1 Smart PDUs, you can monitor your power data with accurate metering and thus have reliable inputs for decision.

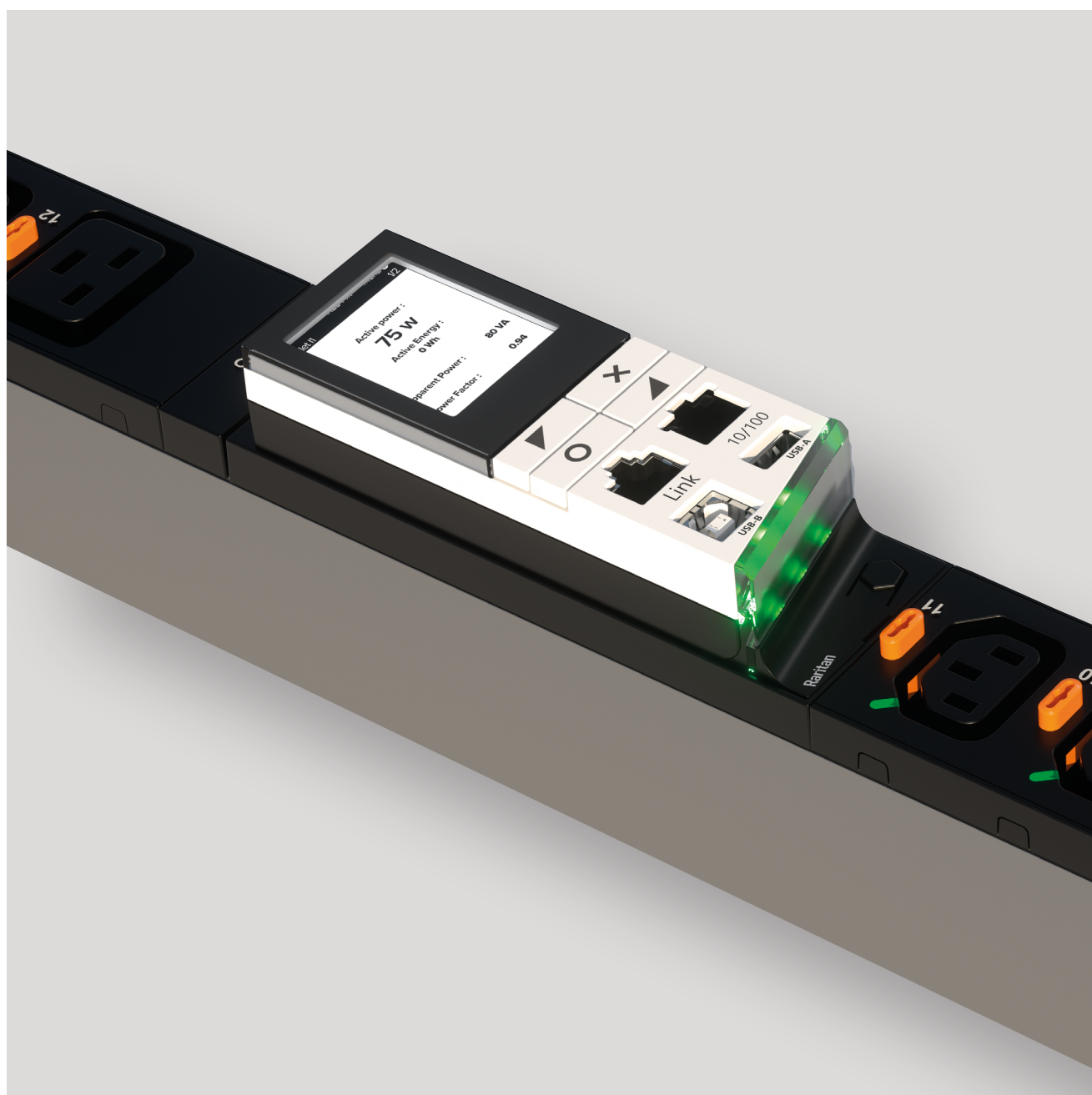
ENSURING RELIABILITY

Increasing MTBF (Mean Time Between Failures) is a major stake for data center operators. Hence, the NX1 Smart Node PDUs undergo **stringent third-party testing and ISO certification** under a CB scheme.

In the manufacturing process, each PDU is individually tested in order to ensure the highest degree of assembly quality and electrical safety, and the longest operating times within harsh environments.



A PDU PLATFORM
FOR DIGITAL EXCELLENCE



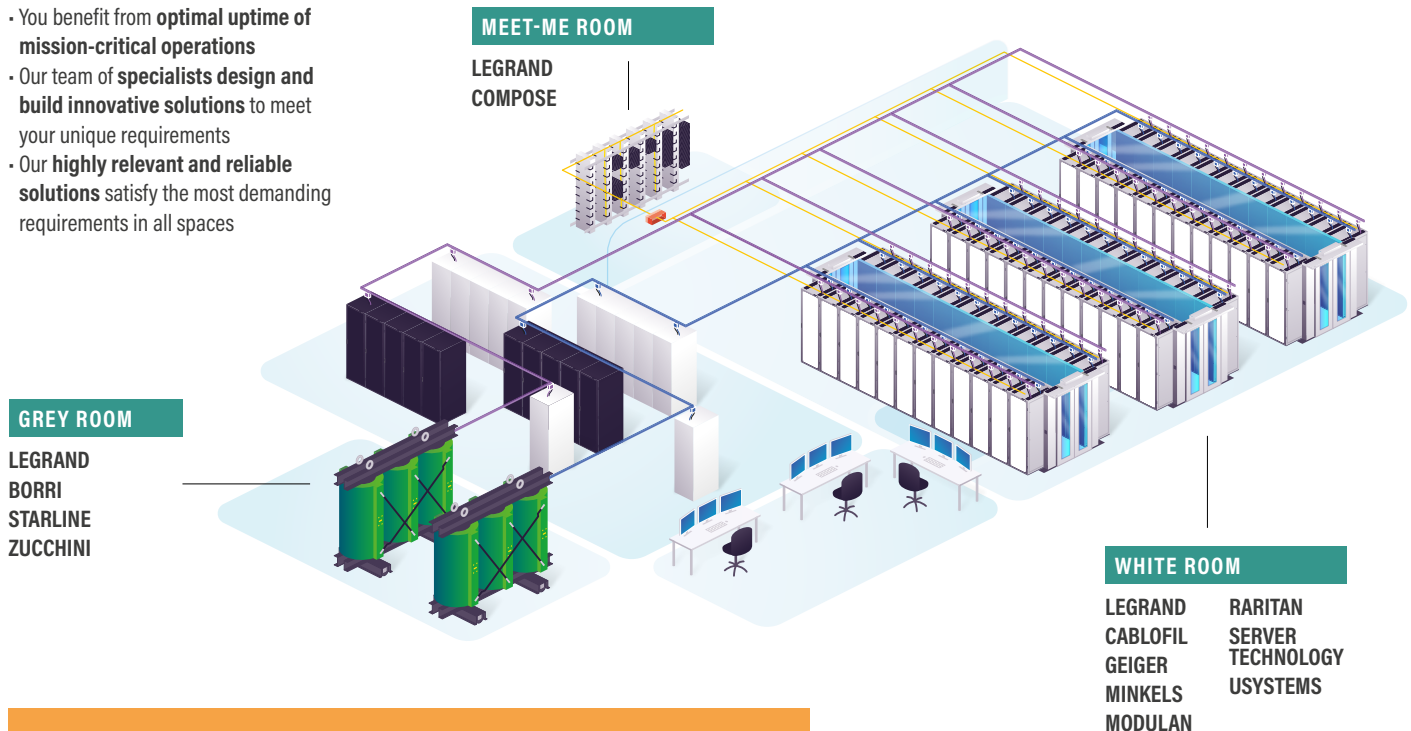
THE LEGRAND GROUP

A skilled and committed data center partner

INFRASTRUCTURES POWERED BY EXPERTS

Trust Legrand to empower your data center infrastructure: its extensive know-how, award-winning solutions, specialist brands and expert teams make the Group a partner of choice.

- You benefit from **optimal uptime of mission-critical operations**
- Our team of **specialists design and build innovative solutions** to meet your unique requirements
- Our **highly relevant and reliable solutions** satisfy the most demanding requirements in all spaces



We provide you with consistent high-quality and effective service operations through **local and central expert teams who work together to deliver you the same level quality wherever you are.**

A STRONG COMMITMENT TO GREEN DATA CENTERS

Sustainability has been everybody's challenge for years.

#LegrandImprovingLives means creating a more sustainable world for everybody. It is the Group's ambition to actively **contribute to the development of a low-carbon society**, in keeping with the RoHS directive (2015/863/UE) and the LEED Green Building Rating System.

In line with its CSR guidelines, not only does Legrand work on **reducing its carbon footprint** to fight climate change, but it gives priority to the **development of a circular economy approach**, limiting the quantity of materials used and promoting the reuse of materials. In connection with professional associations BICSI and The Green Grid, it aims to set the standard for **energy-efficient design**.

Every day, Legrand Group takes more steps on the path to green data centers.

As a proof of our circular economy approach, we provide customers with certified environmental declarations (Product Environmental Profiles - PEP), available on demand.



READ MORE ABOUT
THE LEGRAND GROUP'S
CRS STRATEGY ONLINE

NX1 SMART PDU

INLET METERED, SWITCHED & ACCESSORIES PART NUMBERS

	Form Factor (Size)	Rating (Amp)	Total of locking outlets (C13 & C19)	Phase	Input Plug Type	Notes	Part Number
Inlet Metered PDUs	0U	32 A	36 (24 C13 + 12 C19)	3~	IEC 60309	Metered node, HD Chassis, LSZH cable	NX1-F000222
	0U	32 A	36 (24 C13 + 12 C19)	3~	IEC 60309	Metered smart ready, HD Chassis, LSZH cable	NX1-F000221
	0U	32 A	42 (36 C13 + 6 C19)	3~	IEC 60309	Metered node, HD Chassis, LSZH cable	NX1-F000226
	0U	32 A	42 (36 C13 + 6 C19)	3~	IEC 60309	Metered smart ready, HD Chassis, LSZH cable	NX1-F000225
	0U	32 A	42 (36 C13 + 6 C19)	3~	IEC 60309	Metered node, HD Chassis, LSZH cable	NX1-F000220
	0U	16 A	42 (36 C13 + 6 C19)	3~	IEC 60309	Metered smart ready, HD Chassis, LSZH cable	NX1-F000219
	0U	16 A	36 (24 C13 + 12 C19)	3~	IEC 60309	Metered node, HD Chassis, LSZH cable	NX1-F000215
	0U	32 A	36 (24 C13 + 12 C19)	1~	IEC 60309	Metered smart ready, HD Chassis, LSZH cable	NX1-F000216
	0U	32 A	42 (36 C13 + 6 C19)	1~	IEC 60309	Metered node, HD Chassis, LSZH cable	NX1-F000218
	0U	32 A	42 (36 C13 + 6 C19)	1~	IEC 60309	Metered smart ready, HD Chassis, LSZH cable	NX1-F000217
	0U	32 A	24 (20 C13 + 4 C19)	1~	IEC 60309	Metered node, LSZH cable	NX1-F001074
	0U	16 A	24 (20 C13 + 4 C19)	1~	IEC 60309	Metered smart ready, LSZH cable	NX1-F001071
	1U	16 A	8 (8 C13 + 0 C19)	1~	IEC 60320 C20 inlet	With node	NX1-M1100
	1U	16 A	7 (5 C13 + 2 C19)	1~	IEC 60320 C20 inlet	With node	NX1-M1101
Switched PDUs	0U	32 A	36 (24 C13 + 12 C19)	3~	IEC 60309	Switched node, LSZH cable	NX1-F000423
	0U	32 A	36 (24 C13 + 12 C19)	3~	IEC 60309	Switched smart ready, LSZH cable	NX1-F000422
	0U	16 A	36 (24 C13 + 12 C19)	3~	IEC 60309	Switched node, LSZH cable	NX1-F001065
	0U	16 A	36 (24 C13 + 12 C19)	3~	IEC 60309	Switched smart ready, LSZH cable	NX1-F001066
	0U	32 A	36 (24 C13 + 12 C19)	1~	IEC 60309	Switched node, LSZH cable	NX1-F001067
	0U	32 A	36 (24 C13 + 12 C19)	1~	IEC 60309	Switched smart ready, LSZH cable	NX1-F001068
	0U	16 A	24 (20 C13 + 4 C19)	1~	IEC 60309	Switched node, LSZH cable	NX1-F001072
	0U	16 A	24 (20 C13 + 4 C19)	1~	IEC 60309	Switched smart ready, LSZH cable	NX1-F001073
	1U	16 A	8 (8 C13 + 0 C19)	1~	IEC 60320 C20 inlet	With node	NX1-S1100
	1U	16 A	7 (5 C13 + 2 C19)	1~	IEC 60320 C20 inlet	With node	NX1-S1101

	Notes		Part number
Power cables	IEC 60320 C19 to IEC 60309 - 16 A	1.5 m	6 469 05
		3 m	6 469 06
Brackets	1 set of mounting brackets for Nexpan rack for vertical mounting (0U mounting)		9 812 27
	10 sets of mounting brackets for Nexpan rack for vertical mounting (0U mounting)		9 812 28
Locking caps (light grey RAL 7035)	6 locking caps for C13 outlet + 1 key		6 468 94
	6 locking caps for C19 outlet + 1 key		6 468 95
Power cords C14 to C13 (server side locking)	Set of 10 black power cords	0.5 m	6 441 00
		1 m	6 441 01
		1.5 m	6 441 02
		2 m	6 441 03
	Set of 10 red power cords	0.5 m	6 441 06
		1 m	6 441 07
		1.5 m	6 441 08
		2 m	6 441 09
	Set of 10 blue power cords	0.5 m	6 441 12
		1 m	6 441 13
		1.5 m	6 441 14
		2 m	6 441 15
Power cords C20 to C19 (server side locking)	Set of 10 black power cords	1 m	6 442 01
		1.5 m	6 442 02
		2 m	6 442 03
	Set of 10 red power cords	1 m	6 442 07
		1.5 m	6 442 08
		2 m	6 442 09
	Set of 10 blue power cords	1 m	6 442 13
		1.5 m	6 442 14
		2 m	6 442 15

	Form Factor (Size)	Notes	Part Number
Accessories		Replacement module for NX1 Smart ready	NX1-BASE
		Hot swappable NX1 PDU controller module, stand alone unit to upgrade a Smart Ready PDU to a Node PDU	NX1-NODE
		Wireless Temperature and Humidity Sensor	646003
		Wireless Contact Closure Sensor	646004
		Power Cable IEC 60320 C19 to IEC 60309 - 16A (3 meters)	646906
Pod Master	1U	Collect and control up to 60 Base (Smart-Ready) PDUs, up to 240 wireless sensors (temp/hum. 646003 ; contact closure 646004)	646131

To learn more visit
www.legrand.com/datacenter

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