RNX

UPDU

Universal Power Distribution Unit

A tradition of engineering excellence

Founded in Freiburg, Switzerland in 2005, RNX has become the benchmark for reliability, innovation and precision engineering in IT infrastructure. Driven by our commitment to excellence in engineering, production and service, our mission is simple; to create most reliable and functional Power Distribution Units for the worlds data centres.

Quality first

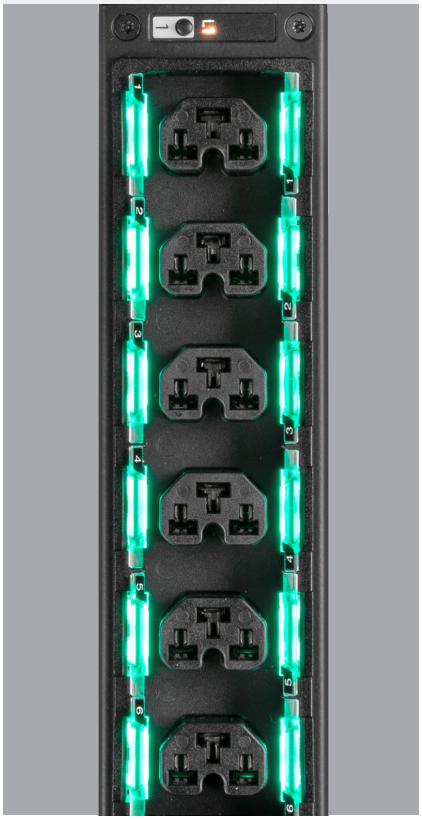
As the data centre landscape evolves, the role of PDUs in providing reliable and controllable power has never been more crucial. 'Quality first' is the design principle that guides all sourcing, engineering and production of the UPDU family of metered and switched PDUs. By building upon generations of proven PDU technology, UPDUs ensure best-in-class flexibility, precision and safety.

Flexibility

By enabling the widest range of network topologies, UPDU delivers the greatest flexibility to your operation in the present and the future.

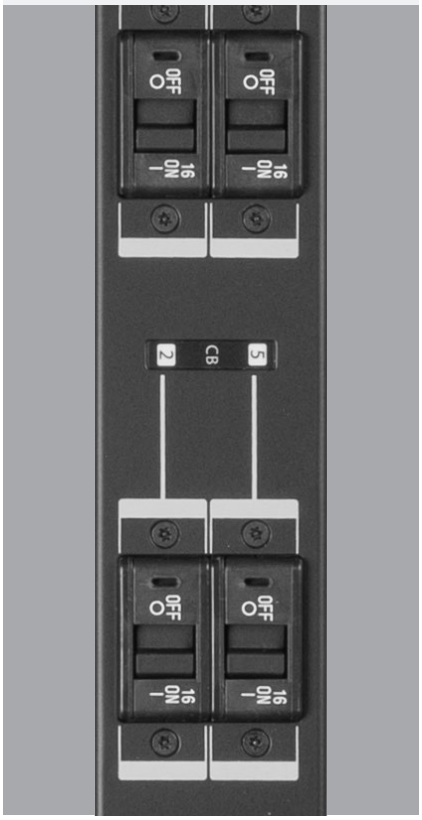
Precision

Individually calibrated outlet channels with +-0.5% billing grade accuracy.



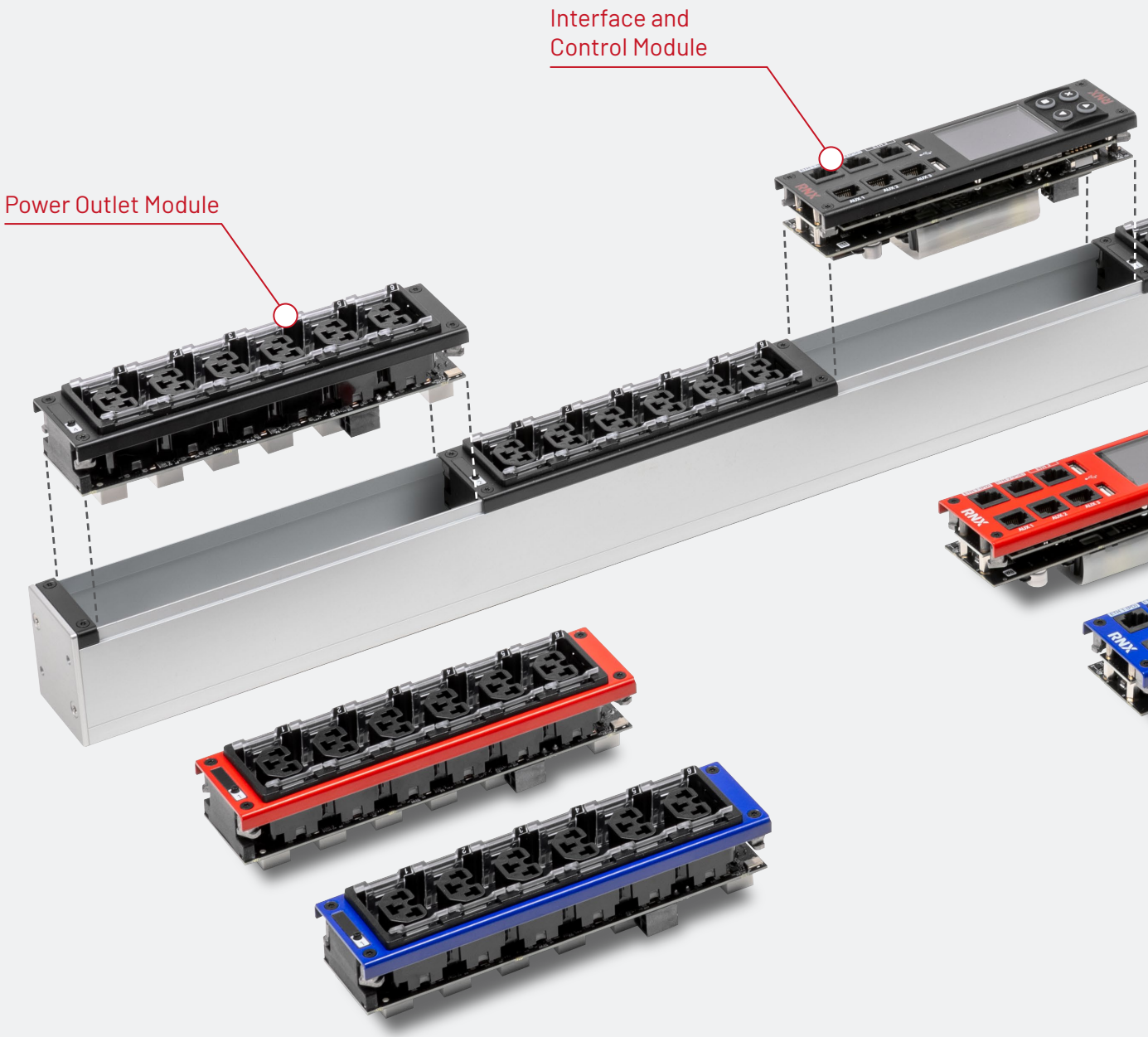
Safety

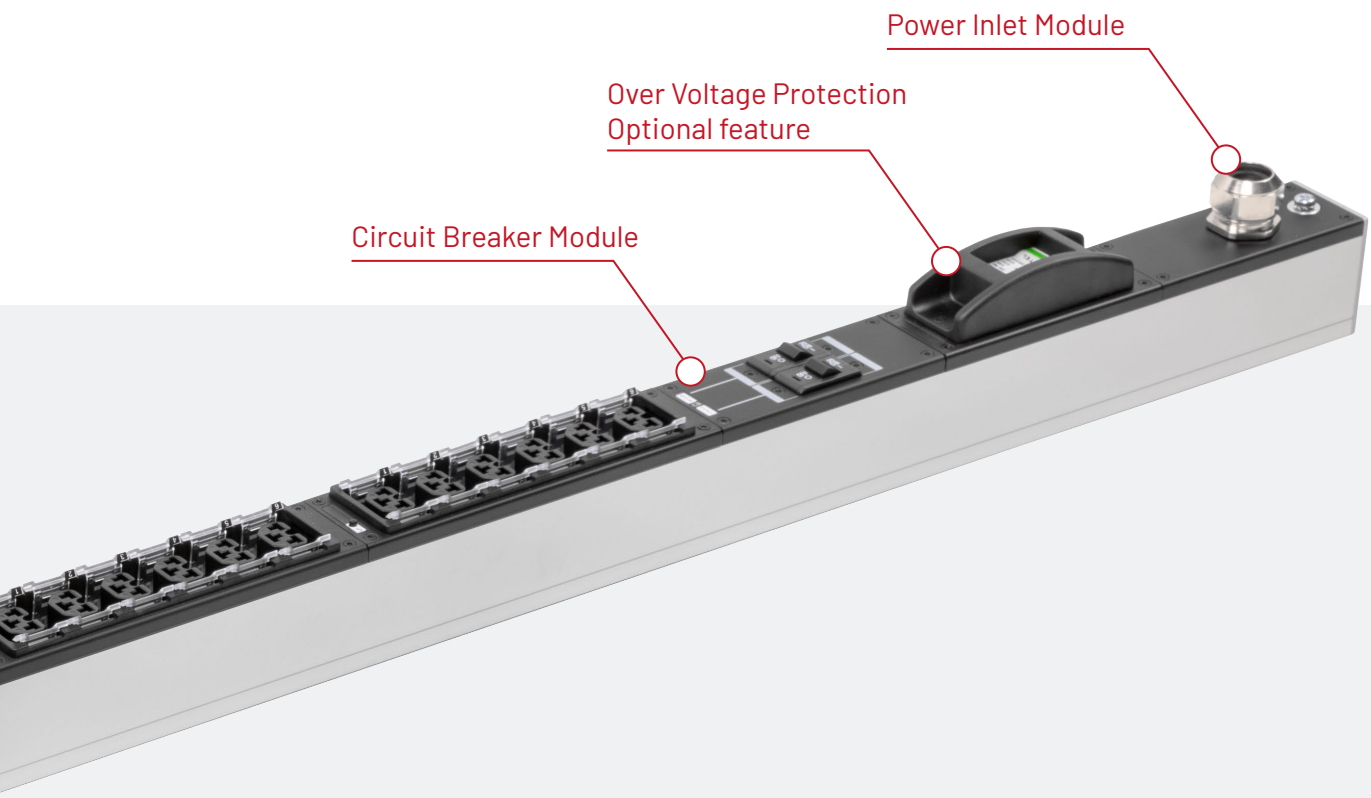
A suite of MCBS, RCM and OVP instruments deliver maximum uptime and protection from short circuit, overloads, and overcurrent.



Ingenuity through modularity

More than a feature of engineering, the modular nature of the UPDU enables a myriad of benefits, while also future proofing your data centre operations.





Configured to your needs

The modular design of the UPDU family enables a wide range of possible configurations without compromising functionality.

Quality assurance

The production of each module is fully automated. Every building block is then individually tested during production, before assembly and after assembly.

Maximized uptime

Front facing module assemblage makes maintenance more convenient and less time consuming.

Driving sustainability through design

Embracing the European Union's 'right to repair initiative', the design of the UPDU allows for sections to be swapped or removed without the need to discard or repurchase the entire PDU.

Interface and Control Module

The Interface and Control Module is the intelligence centre of each UPDU. Housing a full-colour display, computing and a set of ports, the ICM delivers immediate and easy access, insight and control.

Make light work of installation and maintenance with intuitive prompts, clear navigation and readily available information. Alerts can be signaled to users locally via a built-in buzzer, while load curves are stored internally for 60+ days (1-minute intervals), for added security.

Intelligence at your fingertips

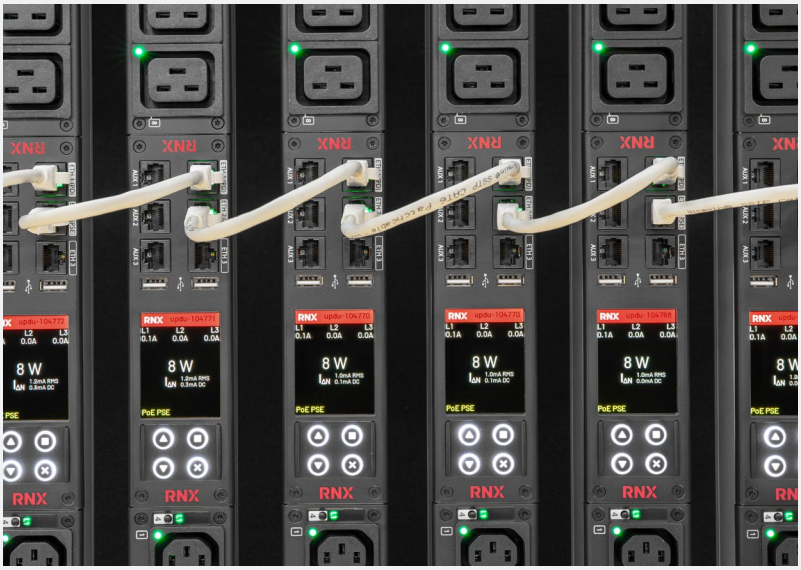
- **2x Gigabit ports**
  with Power over Ethernet (PSE and PD).
- **3x AUX ports**
  Add external sensors, consoles and/or RS232 devices
- **1x 100Mbit port**
  Fully separate from gigabit network
- **2x High-speed USB ports**
  Suitable for multiple uses such as fast pre-configuration and added sensors. connections
- **High visibility colour display**
  A large, auto-orienting 2.4" full color display presents all metered values

Flexibility: Wiring topologies

Wiring topologies vary significantly, with each configuration offering unique advantages and disadvantages. Factors such as cost, installation, scalability, and safety are all influenced by the wiring typology in place, emphasizing the importance of selecting the right configuration for your needs.

Star topology

The classic Gigabit (or 10/100 Mbit) star topology offers the highest level of availability. With each UPDU having a built-in Power over Ethernet PD controller on ETH1, the facility switch can deliver power to each UPDU in the event of AC power failure.



Daisy chain and ring topology

Each UPDU powers the next in the chain via Power over Ethernet PSE on ETH2, should its AC power go down. An unlimited number of PDUs can be added to the chain due to the built-in Gigabit Ethernet Switch.
In ring typology, simply close to loop to establish an uninterrupted path for power transmission. Each UPDU comes with RSTP to support full ring topologies (n-1 redundancy).

Power Outlet Module

Whether opting to future proof your IT infrastructure with the combined C13 / C15 / C19 / C21 outlets, or choosing the traditional C13 and C19 varieties, the Power Outlet Module (POM) ensures the ideal blend of flexibility, security and outlet density.

Avoid unintentional disconnections and downtime with the IEC cable locking system and simplify outlet identification with the help of configurable LED lighting.

Versatility and security

A range of outlet options

C13 and C19 outlets in various configurations

4 in 1 Combo outlets

Simplify and future proof your IT planning with outlets that combine C13 / C15 / C19 / C21 functions

Locking IEC outlets

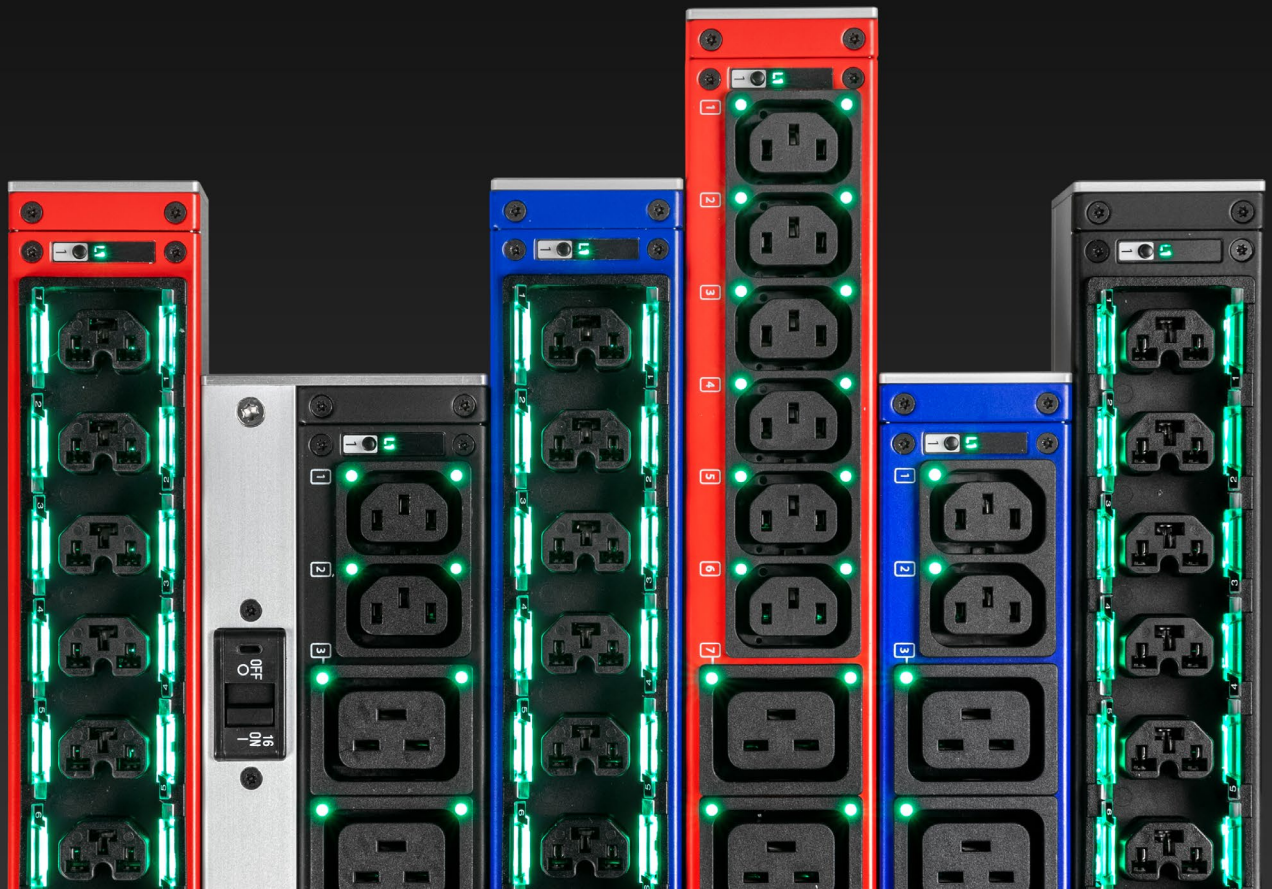
Secure power connections and reduce downtime

LED lighting for each outlet

Allows for modules and outlets to be easily identified

High outlet density

Up to 48 outlets on < 50mm wide housing



Precision: Outlet performance

To ensure the integrity and precision of each POM module, RNX implements a comprehensive multi-stage test, calibration and verification procedure.

1. POM Test Adaptor

Every POM module circuit board undergoes vigorous testing with the POM test adaptor, to verify that all connections and LEDs are functioning correctly.

2. Precision calibration

Each outlet channel is individually calibrated within a precision range of +-0.5%.
The calibration conditions are compliant with, but not certified MID (Measuring Instruments Directive) 2014/32/EU, EN50470-1 (general requirements, test and conditions) and EN50470-3, Class C (static meters for active energy, class C (0.5% precision).

3. Pressure testing

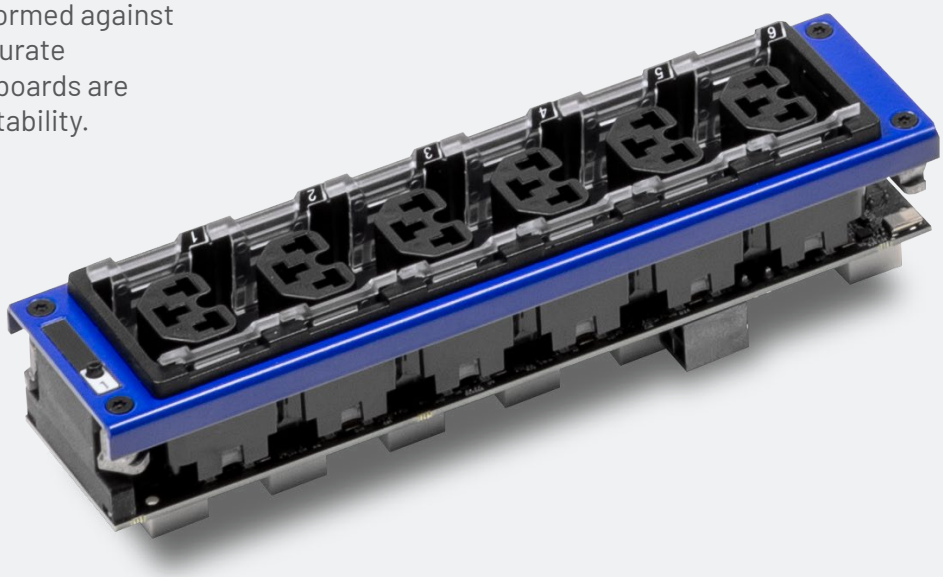
A series of edge cases are performed against the circuit board to confirm accurate calibration. The verified circuit boards are logged internally for full accountability.

4. Module assemblage and testing

Each POM circuit board is configured to its designated outlet set and enclosed within the module casing. To ensure the integrity of all connections and circuits, another round of testing is conducted. After the testing phase, the completed POM module is registered in the POM database.

5. Full PDU testing

A final test is performed after assemblage, to ensure all modules are in perfect working order before dispatching to clients.



Circuit Breaker and Power Inlet Modules

The safety and security of your critical infrastructure is of the utmost importance. Miniature Circuit Breakers used in every UPDU are of the highest quality, with a specified breaking capacity of min. 10kA up to 25kA.

For optional added safety, the type B RCM delivers constant residual current ground (FI) testing, while Over Voltage Protection defends instruments from unexpected over voltage events. Each UPDU can be configured with a 90° or 180° inlet cable.

Enhanced protection for total confidence

Premium quality MCBs

Opt for hydraulic-magnetic or thermal-magnetic circuit breakers, depending on your needs

Over Voltage Protection

Designed to protect instruments from over current events such as lightning strikes.

Type B RCM

All sensitive residual current measurement in input

Power Inlet Module

Your choice of 90° or 180° cable outlet with a wide range of input connectors

Safety:
Miniature Circuit Breakers

Miniature Circuit Breakers (MCBs) safeguard the UPDU's electrical system by defending against overloads and short circuits. When a fault is identified, the MCB automatically cuts off the electrical circuit to prevent damage and reduce fire hazards. Selecting the correct tripping characteristic is important in designing the correct selectivity for upstream circuit breakers. The UPDU offers two different MCBs, each excelling in different conditions.

ABB thermal-magnetic MCB

Thermal-magnetic MCBs use two tripping mechanisms: a delayed thermal mechanism for overload protection and a magnetic mechanism for short circuit protection.

Best suited to environments where temperatures are relatively stable and predictable.

Carling hydraulic-magnetic MCB

Hydraulic-magnetic MCBs are known for their stability and are minimally impacted by variations in ambient temperature.
Their overcurrent sensing mechanism responds solely to changes in the current within the protected circuit, making them ideal for applications where temperature varies significantly.

44kW UPDU RN3586 Outlet Switched and Metered

The 44kW UPDU has been designed specifically to excel in the most challenging HPC and AI computing environments.

Equipped with a 44kW UPDU, you can be confident that your high-performance systems receive consistent power supply, while outlet metering and switching functionalities introduce new levels of control to these environments.

22kW UPDU with Combo Outlets

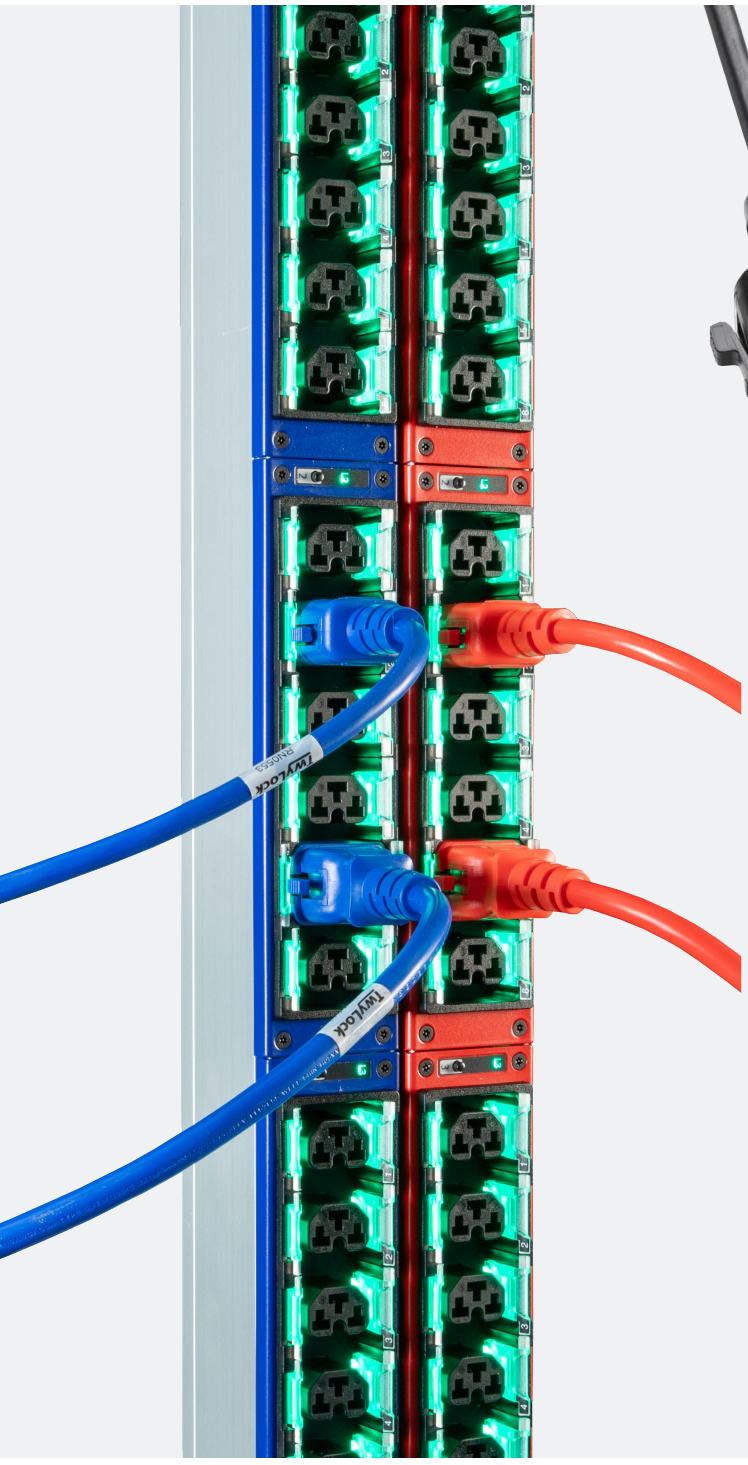
RN3274
UPDU Module/Outlet Metered
3x32A 36 Combo C13/C15/C19/C21 in black

RN3576
UPDU Module/Outlet Switched and Metered
3x32A 36 Combo C13/C15/C19/C21 in blue

- Inlet: 3x32A, 22kW, 2m cable 6mm2, CEE32/5 6h
- Outlets: 36x Combo C13/C15/C19/C21, black module case
- 6 Modules with 6 Combo each, TwyLock compatible
- Metered per Module: Anytime upgradable to Outlet Metered
- RN3576 features outlet switching via bi-stable 20A high quality relays
- 6x high quality compact hydraulic-magnetic MCBs 16A, 10kA Interrupting Capacity
- Industry leading Interface and Control Module
- Tool-less rack mounting
- Length 1'796mm
- Robust yet slim 50x60mm profile
- Metering: Voltage (V), Current (A), Active Power (W), Apparent Power (VA), Reactive Power (var), Active energy (kWh), Reactive energy (kvarh, capacitive and inductive), Frequency (Hz), Power Factor

TwyLock
Locking Cables

A robust and durable locking-cord system, TwyLock enables fast and easy installation and disconnection. Prevent accidental unplugging and minimize unintended downtime with the power of TwyLock cables.



- Locks on both plug and socket ends
- High quality. Certified by TUV and UL All cables certified up to 105°C operating temperature
- Compatible with most snap-in sockets of major PDU manufacturers
- High retention force. Pull force 30lbs (14kg) over 1 minute period
- Multiple colors available: black, red, blue and white. More colors on request
- Available in lengths from 0.5 to 3.0m. Other lengths on request
- Easily identifiable with serial number labels on both ends
- Delivered rolled, not kinked

Accessories

RNX offers a range of complimentary products to the UPDU family. From sensors to mounting options, RNX can help you meet your IT infrastructure requirements.

High accuracy humidity & temperature sensor

- Factory calibrated
- 2 integrated magnets for easy fixation
- 3mm mounting hole
- Flexible cable
- Robust digital interface
- Simple plug-and-play set up

Mounting options

RNX offers mounting brackets and plates to ensure fast and simple installationless of your rack size or set up,.

The slim yet robust profile of the UPDU allows for one or two PDUs to be mounted on each plate or bracket, while maintaining good rack airflow.

Let’s stay connected

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