VERTIV.

Product brochure

Vertiv™ PowerIT rPDU for High Density Applications

Advanced power management for Artificial Intelligence and High-Performance Computing

Why choose Vertiv's High-Density rPDUs?

Meeting modern demands:

As data centers evolve, configurations exceeding 25 kW are becoming more common, necessitating higher-density rack PDUs to efficiently manage power distribution and thermal management. Vertiv™ PowerIT High-Density rPDUs are specifically designed to address these needs, allowing your data center to handle increasing power demands

Engineered for high performance:

The Vertiv™ PowerIT High Density rPDU is built to meet the rising power requirements of modern data centers, particularly those supporting high-performance computing (HPC) and artificial intelligence (AI) applications. With the capability to deliver up to 57.6 kW per unit, these rPDUs provide dependable power distribution for high-density environments, maintaining optimal performance, and reliability.

Beyond power distribution:

Our comprehensive portfolio of rPDUs offers more than just power distribution. Seamlessly integrating with your data center infrastructure management systems, they enhance resilience, boost performance, and provide the technological support necessary to meet the demands of AI and high-performance computing.

Advanced monitoring and management:

Vertiv™ PowerIT offers a wide range of monitored and switched rPDUs equipped with network interfaces for remote monitoring, management, and automated alerts. These rPDUs provide critical insights into improving data center energy efficiency while preventing downtime by notifying you when user-specified thresholds for power and environmental conditions are breached.

Three-phase power:

Three-phase power systems are particularly significant for meeting the high power demands of AI and HPC environments. These systems connect three voltage sources or loads to balance power distribution efficiently. The two most commonly used configurations, 208V Delta and 240-415V WYE, enable optimal power delivery and management.

This makes three-phase power systems exceptionally well-suited for supporting the intensive power requirements of high-performance computing applications.

	208V Delta (UL Model Only)	240/415V WYE
Voltage levels	Provides voltage levels ranging from 200-240V, with the most common being 208V.	Provides voltage range of 200-240/346-415V, with the most common being 240V (USA) or 230V (EMEA) Line-to-Neutral output.
Configurations	Employs a triangular connection of three phases (AB, BC, and CA) without a neutral wire	Three phases joined in a Y-shaped pattern and connected by a neutral wire.
Applications	Legacy servers, blade servers and micro servers.	High-performance servers, storage arrays, and networking equipment.
Advantages	Power Efficiency: Well-suited for high-power applications due to its voltage range.	Global Availability: WYE power systems operating at 240/415V are more commonly used than 208V Delta systems. This widespread adoption standardizes components and simplifies maintenance and replacements, streamlining installation and upkeep.
	Cost-Effectiveness: Existing installations can use it without major infrastructure changes.	Scalable Power: Accommodates increased demands as a data center expands or adds new equipment.
	Compatibility with Legacy Equipment: In retrofit scenarios, where older equipment is still in use, the 208V Delta system provides continuity.	

Enhanced features for high-density demands

Vertiv offers a diverse line of high-density rPDUs, tailored to enhance performance and management in high-density environments. The two major types to consider are monitored and switched models.

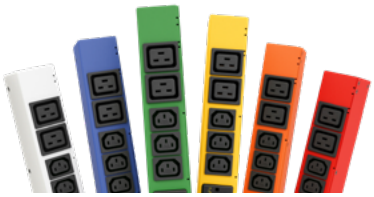
Monitored rPDUs provide comprehensive power usage data, making them ideal for optimizing energy efficiency and power distribution in high-density settings. These rPDUs offer detailed insights into power consumption, helping to maintain operational efficiency.

Switched rPDUs offer the same benefits with the added advantage of controlling individual outlets. This allows for remote management of power loads and the ability to reboot unresponsive equipment, providing greater flexibility and control.

Both types integrate seamlessly with your high-performance infrastructure computing infrastructure, enhancing resilience and performance. Let's compare their features to determine the best fit for your needs.

	Monitored rPDUs	Switched rPDUs
Power usage data	☑	☑
Remote on/off control of individual outlets	✕	☑
Real-time monitoring and remote power cycling	☑	☑
Energy efficiency optimization	☑	☑
Prevents overloads by turning off outlets	✕	☑
Remotely reboots unresponsive equipment	✕	☑
Integrates with equipment management systems	☑	☑

Go beyond the standard with Configure-to-Order capabilities:



Chassis color

Differentiate between primary and secondary power feeds with color-coded rPDUs.

Outlet and plug type

Modify the rPDU by selecting the outlet type, placement, and color-coding to meet specific needs.

Intelligence

Choose from basic to intelligent features to optimize your rack power infrastructure.

Cord length

Select a cord length ranging from 3 to 5 meters to simplify cable management.

At a glance

Advanced security

- UL2900-1 certificate, (and IEC 62443 SL2 ongoing) Secure Boot with firmware signature / hardware trust anchor
- Supports highest security communication together with Avocent® ACS VPN and Out-of-Band communications for Edge applications.
- SNMPv3, ssh, HTTP(S) and IPv6 support.

Compatibility with all industry-standard racks and power chain

- Available in all major global voltage and amperage combinations typically used in data centers or remote sites.
- Easily integrate with Vertiv's full line of power products. A Vertiv™ expert can assist in selecting the right rPDU for your power chain needs

Simplified integration with management tools

- Integration with Vertiv™ software stack to simplify implementation and change management translating to real cost savings.
- IPv4 and IPv6 support.
- Support for all major management, authentication and encryption standards and protocols to fully integrate with higher level data center management software provided by Vertiv or third parties.

Optimized energy and capacity management

- Metering of key electrical parameters with +/-1% accuracy provides highly accurate comprehensive power monitoring.
- Lowest idle power consumption in the industry.
- Vertiv DCIM (Data center infrastructure management) solutions provide reports on power and environmental trends, giving you control over IT energy usage.

Designed for high availability

- High operating temperature rating to accommodate increased rack densities.
- Secure cords with U-Lock outlets to prevent accidental dislodging.

Hot-swappable Interchangeable Monitoring Device (IMD)

- Allows for easy upgrades and maintenance without disrupting power distribution.

Dual ethernet ports

- Simplifies management of multiple PDUs with fault-tolerant daisy chaining or IP aggregation capabilities.

UL and CE marked

- Meets important regulatory requirements for data centers.

Individual testing

- Each unit undergoes rigorous testing for functionality to ensure reliability.

Color

- Black powder coat finish.
- Red, orange, yellow, green, blue, white Available on configure-to -order units.

Warranty

- 5-year limited warranty if registered within 120 days of purchase; otherwise, warranty defaults to 3 years.
- Certifications*
- RoHS
- UL & c-UL listed 62368
- CE marked
- FCC part 15 class a conformance
- TAA Compliant

*Certifications vary by model. Refer to the product data sheet for specific regulatory information.

Configure-to-order and engineer-to-order

Engineered-to-order units allow further customization, including colored chassis options, alongside varying power and receptacle configurations. Contact your Vertiv sales team for more information.

Interfaces/ports*

- Serial port
- Modem (RJ-12)
- Network (RJ-45)
- USB

Intelligence type

- Basic upgradable
- Unit level monitored
- Outlet level monitored
- Switched unit level monitored
- Switched outlet level monitored

Built-to-Order reference PDU models

Model	PDU type	Plug type	Input current	Voltage	Output receptacle	Power rating	Configuration	Distribution Emergency	Distribution Emergency Renewal
VP1U60A0	Basic	2P + E (IP44)	60A/63A	200-240V	"(36) Combination Outlet C13/C19"	13.8kW	Vertical	RPDU-DE5R-006	RPDU-DER5R-006
VP1U60A1	Basic	2P + E (IP44)	60A/63A	200-240V	"(24) Combination Outlet C13/C19"	13.8kW	Vertical	RPDU-DE5R-006	RPDU-DER5R-006
VP1U60A2	Basic	" 3P + N + E (IP44)"	60A/63A	240/415V WYE	"(36) Combination Outlet C13/C19"	43.4 kW	Vertical	RPDU-DE5R-007	RPDU-DER5R-007
VP1U62A0	Basic	2P + E (IP44)	60A/63A	200-240V	"(24) Combination Outlet C13/C19"	13.8kW	Horizontal	RPDU-DE5R-006	RPDU-DER5R-006
VP1U62A1	Basic	" 3P + N+ E (IP44)"	60A/63A	240/415V WYE	"(24) Combination Outlet C13/C19"	43.4 kW	Horizontal	RPDU-DE5R-007	RPDU-DER5R-007
VP1UA0A1	Basic	Hardwired Input	80A	240/415V WYE	"(36) Combination Outlet C13/C19"	57.6 kW	Vertical	RPDU-DE5R-007	RPDU-DER5R-007
VP4U60A0	Unit Monitored	2P + E (IP44)	60A/63A	200-240V	"(36) Combination Outlet C13/C19"	13.8kW	Vertical	RPDU-DE5R-007	RPDU-DER5R-007
VP4U60A1	Unit Monitored	2P + E (IP44)	60A/63A	200-240V	"(24) Combination Outlet C13/C19"	13.8kW	Vertical	RPDU-DE5R-007	RPDU-DER5R-007
VP4U60A2	Unit Monitored	" 3P + N + E (IP44)"	60A/63A	240/415V WYE	"(36) Combination Outlet C13/C19"	43.4 kW	Vertical	RPDU-DE5R-008	RPDU-DER5R-008
VP4U62A0	Unit Monitored	2P + E (IP44)	60A/63A	200-240V	"(24) Combination Outlet C13/C19"	13.8kW	Horizontal	RPDU-DE5R-007	RPDU-DER5R-007
VP4U62A1	Unit Monitored	" 3P + N + E (IP44)"	60A/63A	240/415V WYE	"(24) Combination Outlet C13/C19"	43.4 kW	Horizontal	RPDU-DE5R-008	RPDU-DER5R-008
VP4UA0A1	Unit Monitored	Hardwired Input	80A	240/415V WYE	"(36) Combination Outlet C13/C19"	57.6 kW	Vertical	RPDU-DE5R-008	RPDU-DER5R-008
VP5U60A0	"Switched Unit Monitored"	2P + E (IP44)	60A/63A	200-240V	"(36) Combination Outlet C13/C19"	13.8kW	Vertical	RPDU-DE5R-008	RPDU-DER5R-008
VP5U60A1	"Switched Unit Monitored"	" 3P + N + E (IP44)"	60A/63A	240/415V WYE	"(48) Combination Outlet C13/C19"	43.4 kW	Vertical	RPDU-DE5R-008	RPDU-DER5R-008
VP5U60A2	"Switched Unit Monitored"	" 3P + N + E (IP44)"	60A/63A	240/415V WYE	"(36) Combination Outlet C13/C19"	43.4 kW	Vertical	RPDU-DE5R-008	RPDU-DER5R-008
VP5U60A3	"Switched Unit Monitored"	" 3P + N + E (IP44)"	60A/63A	240/415V WYE	"(24) Combination Outlet C13/C19"	43.4 kW	Vertical	RPDU-DE5R-008	RPDU-DER5R-008
VP5U62A0	"Switched Unit Monitored"	2P + E (IP44)	60A/63A	200-240V	"(24) Combination Outlet C13/C19"	13.8kW	Horizontal	RPDU-DE5R-008	RPDU-DER5R-008

VP5U62A2	"Switched Unit Monitored"	" 3P + N + E (IP44)"	60A/63A	240/415V WYE	"(24) Combination Outlet C13/C19"	43.4 kW	Horizontal	RPDU-DE5R-008	RPDU-DER5R-008
VP5UA0A0	"Switched Unit Monitored"	Hardwired Input	80A	240/415V WYE	"(36) Combination Outlet C13/C19"	57.6 kW	Vertical	RPDU-DE5R-008	RPDU-DER5R-008
VP6U60A0	Outlet Monitored	2P + E (IP44)	60A/63A	200-240V	"(36) Combination Outlet C13/C19"	13.8kW	Vertical	RPDU-DE5R-008	RPDU-DER5R-008
VP6U60A1	Outlet Monitored	" 3P + N + E (IP44)"	60A/63A	240/415V WYE	"(48) Combination Outlet C13/C19"	43.4 kW	Vertical	RPDU-DE5R-008	RPDU-DER5R-008
VP6U60A2	Outlet Monitored	" 3P + N + E (IP44)"	60A/63A	240/415V WYE	"(36) Combination Outlet C13/C19"	43.4 kW	Vertical	RPDU-DE5R-008	RPDU-DER5R-008
VP6U60A3	Outlet Monitored	" 3P + N + E (IP44)"	60A/63A	240/415V WYE	"(24) Combination Outlet C13/C19"	43.4 kW	Vertical	RPDU-DE5R-008	RPDU-DER5R-008
VP6U62A0	Outlet Monitored	2P + E (IP44)	60A/63A	200-240V	"(24) Combination Outlet C13/C19"	13.8kW	Horizontal	RPDU-DE5R-008	RPDU-DER5R-008
VP6U62A2	Outlet Monitored	" 3P + N + E (IP44)"	60A/63A	240/415V WYE	"(24) Combination Outlet C13/C19"	43.4 kW	Horizontal	RPDU-DE5R-008	RPDU-DER5R-008
VP6UA0A0	Outlet Monitored	Hardwired Input	80A	240/415V WYE	"(36) Combination Outlet C13/C19"	57.6 kW	Vertical	RPDU-DE5R-008	RPDU-DER5R-008
VP7U60A0	"Switched Outlet Monitored"	2P + E (IP44)	60A/63A	200-240V	"(36) Combination Outlet C13/C19"	13.8kW	Vertical	RPDU-DE5R-008	RPDU-DER5R-008
VP7U60A1	"Switched Outlet Monitored"	" 3P + N + E (IP44)"	60A/63A	240/415V WYE	"(48) Combination Outlet C13/C19"	43.4 kW	Vertical	RPDU-DE5R-008	RPDU-DER5R-008
VP7U60A2	"Switched Outlet Monitored"	" 3P + N + E (IP44)"	60A/63A	240/415V WYE	"(36) Combination Outlet C13/C19"	43.4 kW	Vertical	RPDU-DE5R-008	RPDU-DER5R-008
VP7U60A3	"Switched Outlet Monitored"	" 3P + N + E (IP44)"	60A/63A	240/415V WYE	"(24) Combination Outlet C13/C19"	43.4 kW	Vertical	RPDU-DE5R-008	RPDU-DER5R-008
VP7U62A0	"Switched Outlet Monitored"	2P + E (IP44)	60A/63A	200-240V	"(24) Combination Outlet C13/C19"	13.8kW	Horizontal	RPDU-DE5R-008	RPDU-DER5R-008
VP7U62A2	"Switched Outlet Monitored"	" 3P + N + E (IP44)"	60A/63A	240/415V WYE	"(24) Combination Outlet C13/C19"	43.4 kW	Horizontal	RPDU-DE5R-008	RPDU-DER5R-008
VP7UA0A0	"Switched Outlet Monitored"	Hardwired Input	80A	240/415V WYE	"(36) Combination Outlet C13/C19"	57.6 kW	Vertical	RPDU-DE5R-008	RPDU-DER5R-008

Why choose Vertiv's High-Density rPDUs?

U-lock
Secure power cords and avoid accidental disconnections. Receptacles are color-coded by circuit for instant identification.

Upgradable & hot-swappable
easily update your rPDU's
monitoring capabilities to adapt to latest technologies and changing business needs.

Environmental monitoring
Proactively monitor environmental conditions within the cabinet to ensure optimal operating conditions. A variety of sensors are available to meet your needs including temperature, humidity, airflow, door position, flood detection and more.

Alternating outlets
Simplify circuit/phase balancing and cable management with color coded alternating outlets.

Combination outlet C13 / C19
C13 and C19 in one. Provides the flexibility to connect C14 and C20 plugs in the same outlet. High retention color coded outlets are P-Lock cable compatible.

Outlet control
Address unresponsive equipment or increase runtime of critical equipment upon power failure with outlet-level control.

Vertiv™ Intelligence Director
Daisy-chain up to 50 devices on a single IP address. Reduce deployment time with self-configuration of downstream devices.

High temperature grade
Up to 60°C working ambient variants for high temperature environments.

Remote connectivity
Access the rPDU remotely via the network interface or serial connection to monitor power consumption and configure user-defined alert notifications to prevent downtime.

Fault-tolerant daisy chaining
simplifies intelligent rPDU connectivity and ensures data is reported even when a break in the network chain occurs.

Gigabit ethernet speed
allows 1gb connections directly to the rpdu, reducing the need for additional equipment.

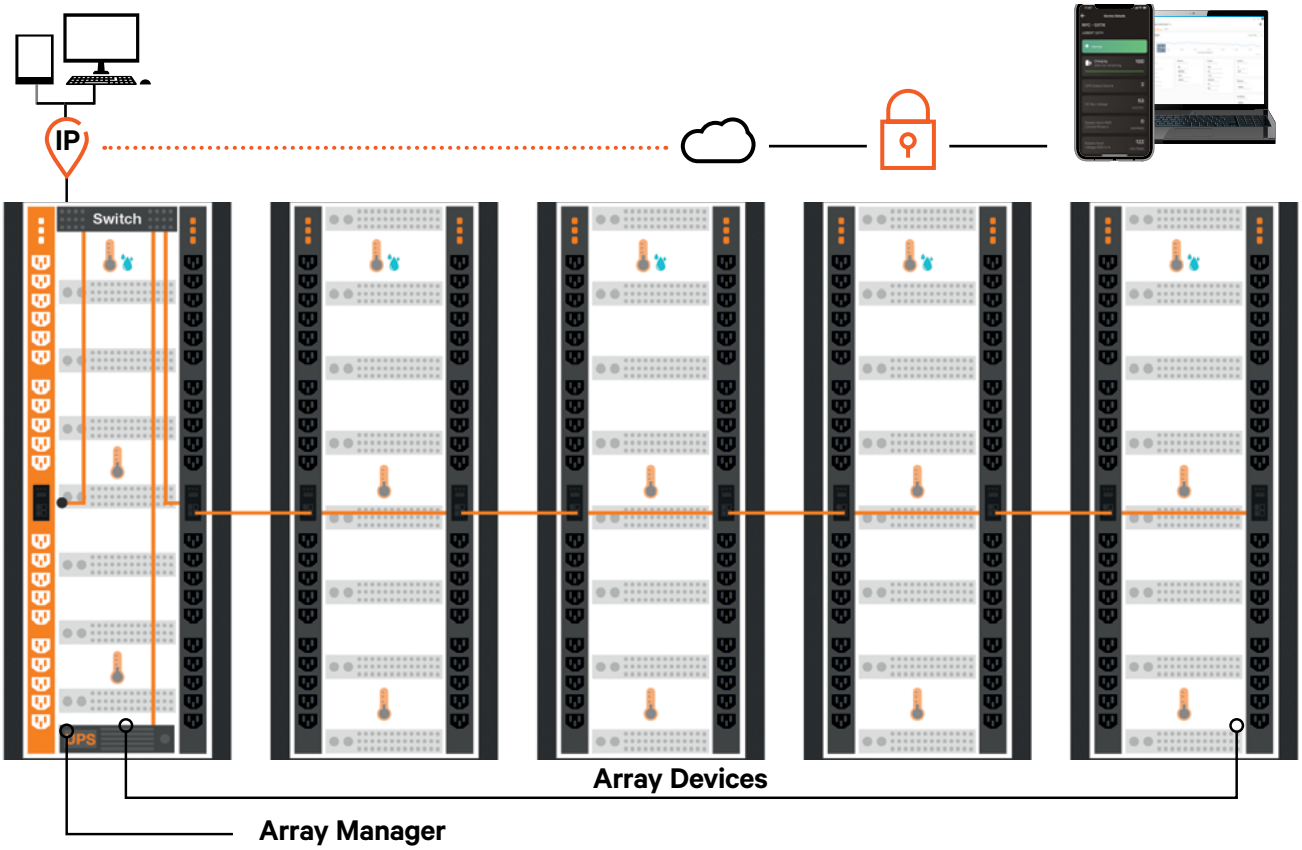
Small footprint and
low profile breakers
compact size to install in tight spaces

Power Monitoring 1% accuracy
Allows data center managers to accurately monitor input and outlet level power usage with 1% monitoring accuracy tested to ANSI and IEC standards.

IMD Power Sharing
Extend redundancy in the rack down to the IMD with the power-sharing port, connecting two IMDs and providing backup power in the event of a power loss.

Vertiv™ Intelligence Director

Plug-n-play data center infrastructure enabling lightning-fast AI and HPC deployments



The next generation of Vertiv™ PowerIT rPDUs offer enhanced monitoring and simplified networking with the introduction of Vertiv™ Intelligence Director.

- On Monitored* and Switched units, users have the ability to daisy chain up to 50 devices with a single IP address.
- Access data from all downstream rPDU and UPS** devices from one rPDU.
- Users are able to aggregate data by grouping devices by rack or row.
- Downstream devices self-configure, significantly reducing deployment time.
- Securely transmit device data to the Vertiv™ Intelligence cloud for anytime access to critical infrastructure information.

How it works

1. Designate a Switched or Monitored unit as the array manager.
2. Connect up to 50 array devices through a network switch or by daisy chaining the rPDUs to the array manager.
3. Securely access array device data via SNMP or the array manager user interface through a single IP address and bring the consolidated data in your private cloud.
4. Bring your infrastructure data together with the option to connect to the Vertiv Intelligence cloud platform.

*One unit per group is required to have an IMD-03E, IMD-03E-S, IMD-3E, IMD-3E-S, IMD-03E-G, IMD-3E-G or IMD-5M

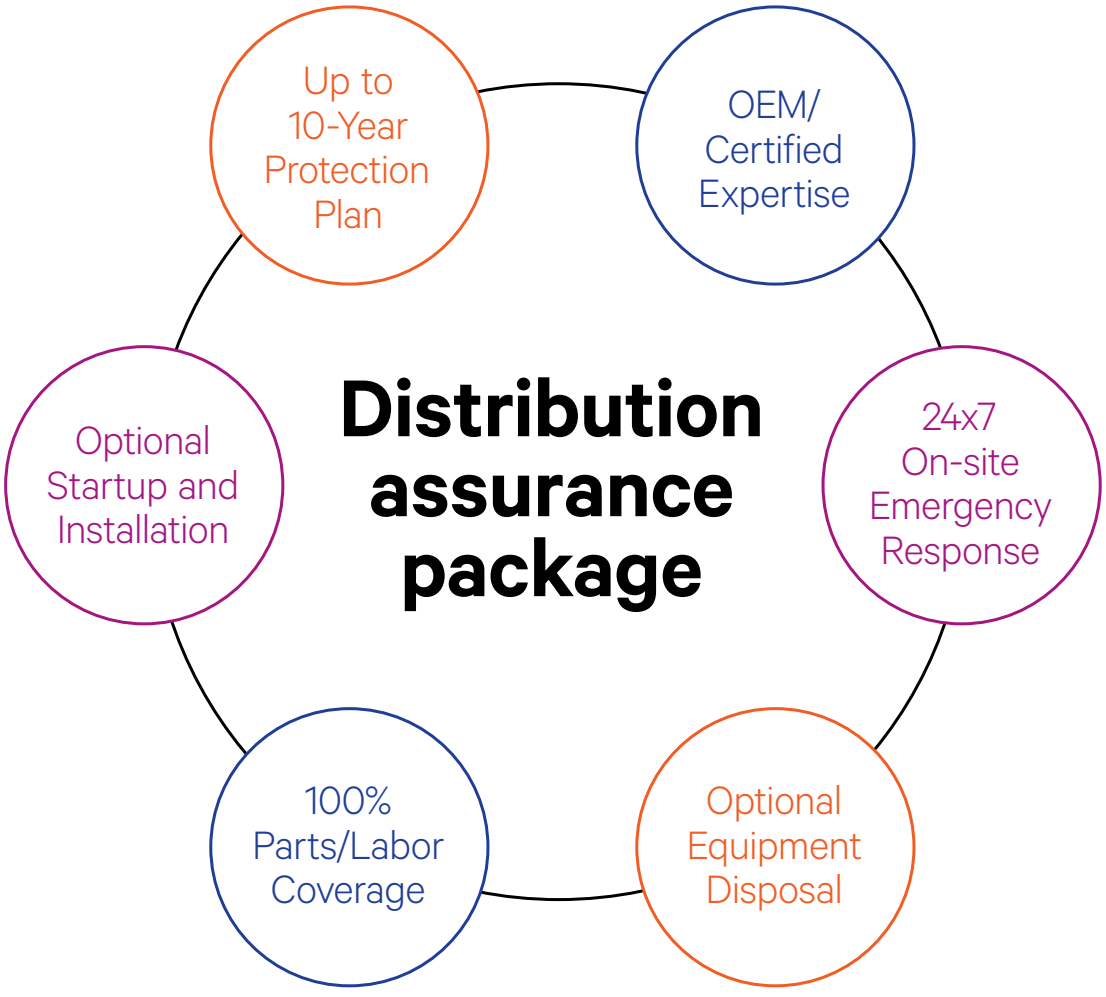
**Vertiv™ Intelligence Director compatible with Vertiv™ MPH2 and Vertiv™ MPX rack Vertiv™ GXT4, Vertiv™ GXT5, Vertiv™ PSI5, Vertiv™ EXM, Vertiv™ APM and Vertiv™ ITA2 UPS, Vertiv™ CRV row cooling and USB-connected Vertiv™ VRC cooling.

Ensure power system availability with expert support for Vertiv™ PowerIT rPDUs

The Distribution Assurance Package combines market-leading rPDU technology with a up to ten years' protection plan and the industry's premier service capability.

Rack Power Distribution Units (rPDUs) are the last link in the power chain, ensuring delivery of critical power to IT loads. These critical components play a key role in data center infrastructure management, giving you access to rack-level power consumption and environmental information. Rack PDUs also allow you to directly control power to IT equipment for better capacity and power management. Having rPDUs that are properly installed and maintained is essential for critical system availability. However, your internal resources who are dealing with time and budget constraints cannot always give rPDUs the attention they need. Additionally, services that aren't provided by the original equipment manufacturer (OEM) may not be comprehensive or include the level of expertise required.

By choosing a bundled solution that combines market-leading rPDU technology with lifecycle services provided by the OEM, you simplify the management of your IT equipment.



Benefits

Assured critical power delivery	Simplified rack PDU deployment and maintenance	Optimized use of your IT staff	Instant access to power protection information	Improved protection for your IT investment

Channel Services

Recommended

Distribution Emergency — **Advanced** Channel Services

Distribution Emergency Renewal — **Elite** Channel Services

Distribution assurance package configurations	Comprehensive 5-year protection service	Installation service	Startup service	Distribution emergency
	Installation	☑	✕	✕
	Startup	✕	☑	✕
	Technical support hotline	☑	☑	24/7
	Parts included	✕	✕	✕
	Response time	✕	✕	8 working hours*
	Contract duration	✕	✕	5 years + 5 years' renewal

*Customer engineer or shipment of the new unit within 8 working hours from ticket acknowledgement

Please refer to the Scopes of Work for full and additional details.

Vertiv.com | **Vertiv Headquarters,** 505 N Cleveland Ave, Westerville, OH 43082, USA

SL-80075-EMEA（Rev1-06/25）