VERTIV.

Product brochure

Vertiv™ PowerIT Rack PDU for high density applications

Advanced power management for artificial intelligence and high-performance computing

Built for high-density, high-ampacity power distribution

Meeting modern demands:

As data centers evolve, configurations exceeding 25 kW are becoming more common, driving the need for higher-density rack PDUs to efficiently manage power distribution and thermal management. Vertiv™ PowerIT High-Density rPDU is designed to address these requirements and support increasing power demands in data centers.

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 capabilities provide critical insights that support improved data center energy efficiency and help prevent downtime by issuing alerts when user-defined thresholds for power and environmental conditions are exceeded.

Engineered for high performance:

Vertiv™ PowerIT High Density rPDU is built to meet the rising power requirements of data centers, particularly those supporting high-performance computing (HPC) and artificial intelligence (AI) applications. With the capability to deliver up to 66.4 kW per unit, it provides dependable power distribution for high-density environments while maintaining performance and reliability.

Three-phase power:

Three-phase power systems are particularly well suited for meeting the high power demands of AI and other high-density computing environments. These systems connect three voltage sources or loads to balance power distribution efficiently. The most commonly used configurations, 208V Delta, 240–415V WYE, and 277/480V WYE, enable effective power delivery and management.

Beyond power distribution:

Vertiv™ PowerIT High Density rPDU integrates with data center infrastructure management (DCIM) systems to provide visibility into rack-level power usage and environmental conditions, enabling more effective monitoring and capacity management.

This makes three-phase power systems well suited for supporting intensive computing workloads.

	208V Delta	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 2 to 15 feet to simplify cable management.

At a glance

Advanced security

- UL2900-1 certificate, and Secure Boot with firmware signature and hardware trust anchor
- Supports highest security communication together with
- Vertiv™ Avocent® ACS VPN and out-of-band communications for edge applications.
- Includes SNMPv3, SSH, HTTP/HTTPS, and IPv4/IPv6 protocols.

Compatibility with all industry-standard racks and power chain

- Available in major global voltage and amperage combinations, including higher-voltage options such as 277/480V configurations used in data centers or remote sites.
- Easily integrates with a range of Vertiv power solutions. Trained service professionals can assist in selecting the appropriate rPDU for specific power infrastructure requirements.

Simplified integration with management tools

- Integration with Vertiv™ software stack to simplify implementation and change management, helping reduce costs.
- 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 solutions provide reports on power and environmental trends to help optimize 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 enable reliability.

Color

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

Warranty

- 5-year limited warranty
- 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

Vertiv™ PowerIT Monitored rPDU

Vertiv™ PowerIT UPDU

Vertiv™ PowerIT Rack Transfer Switch

Vertiv™ PowerIT IMD-5M Intelligence Card

Vertiv™ PowerIT Basic rPDU

Vertiv™ PowerIT Rack Transfer Switch

Vertiv™ PowerIT Rack Transfer Switch

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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 intelligence
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 enable 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 enables 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.

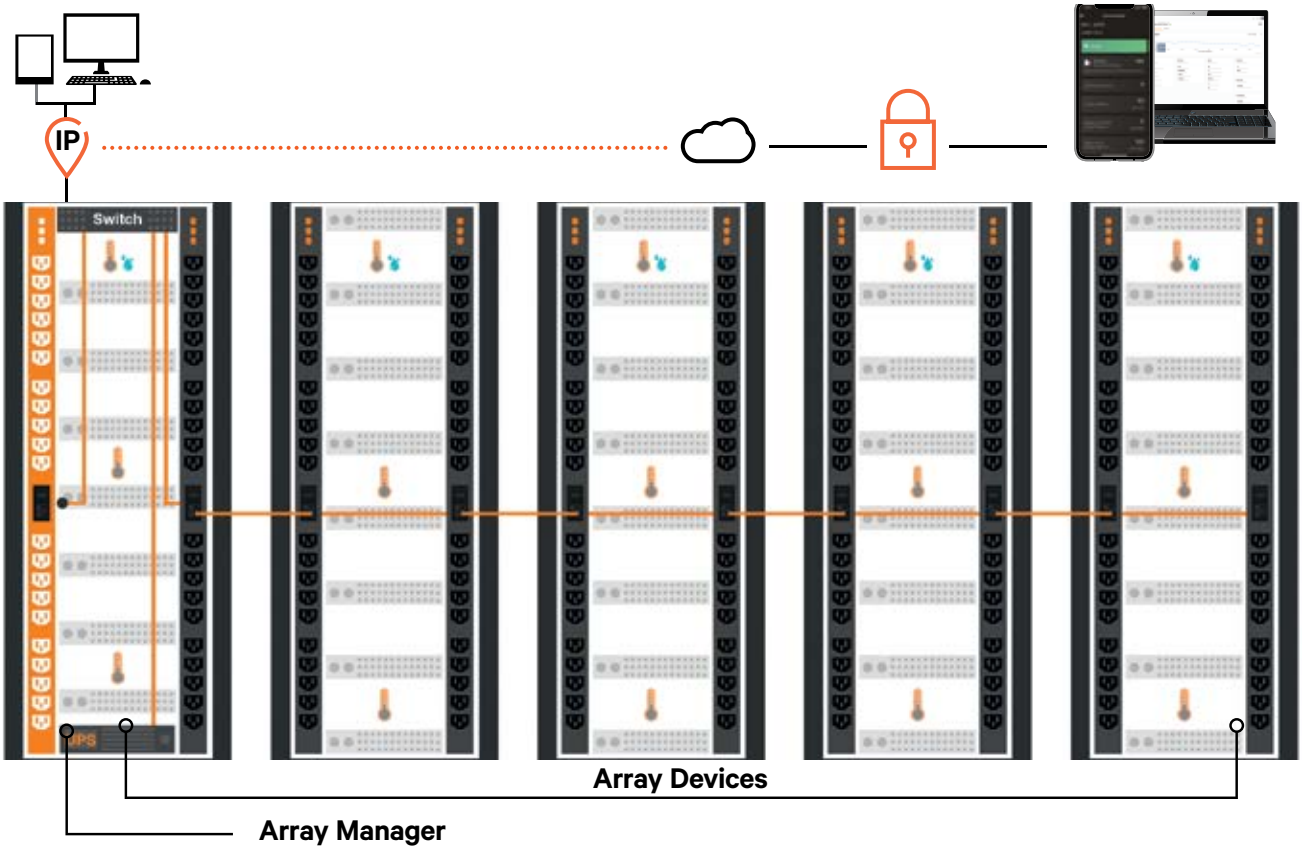
Small footprint and low profile breakers
compact size to install in tight spaces

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.

Universal input
A universal input with a pivoting connector simplifies IT power infrastructure deployments by enabling users to standardize on a single rPDU globally.

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.

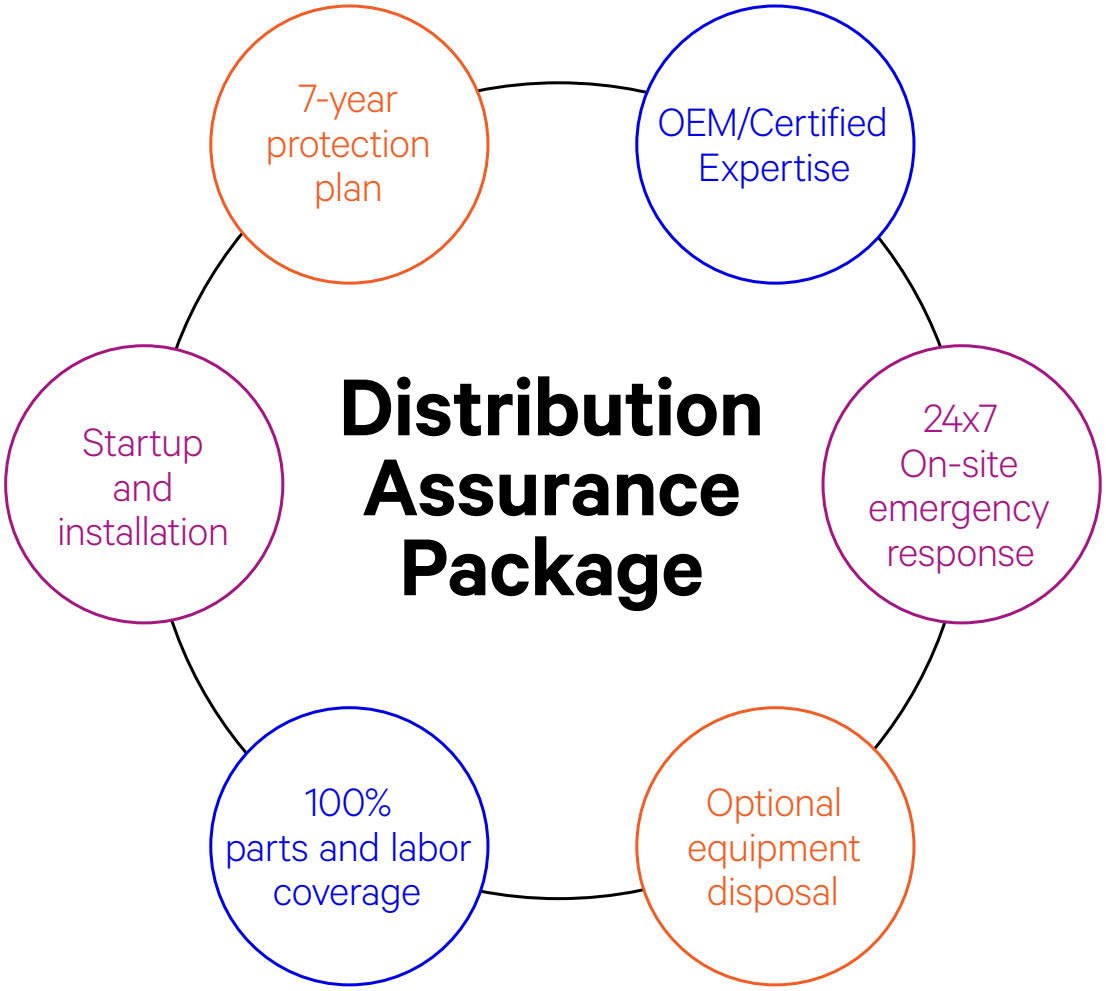
Vertiv™ Distribution Assurance Package

Combining market-leading rPDU technology with a seven-year protection plan

Rack Power Distribution Units (rPDUs) are the final link in the power chain, delivering critical power to IT loads. These components play a key role in data center infrastructure management by providing access to rack-level power consumption and environmental information, enabling direct control of power to IT equipment for improved capacity and power management.

Proper installation and maintenance are essential to system availability. However, internal resources operating under time and budget constraints may not always provide the required level of attention. In addition, services delivered outside of the original equipment manufacturer (OEM) may lack the depth and level of expertise required.

A bundled solution that combines market-leading rPDU technology with OEM-provided lifecycle services helps simplify IT equipment management.



Service options: Vertiv™ PowerIT rPDUs and Vertiv™ PowerIT RTS – Service options

Distribution Assurance Package

Bundled Start-up Service AND 7-Year On-site Emergency Response	Single Site	Single Site with Removal	Multi-site co-location	Multi-site with Removal
Equipment Model / Type	**Part Number**	**Part Number**	**Part Number**	**Part Number**
Rack PDU	DAPRPDU-GE1	DAPRPDU-GERMV1	DAPRPDU-GEX	DAPRPDU-GERMVX
Rack Transfer Switch	DAPRPDU-GE1	DAPRPDU-GERMV1	DAPRPDU-GEX	DAPRPDU-GERMVX

Vertiv™ PowerIT rPDU Startup Services

Startup Service Only	Single Site	Single Site with Removal	Multi-site co-location	Multi-site with Removal
Equipment Model / Type	**Part Number**	**Part Number**	**Part Number**	**Part Number**
Rack PDU	SURPDU-GE1	SUPRPDU-GERMV1	SURPDU-GEX	SUPRPDU-GERMVX
Rack Transfer Switch	SURPDU-GE1	SUPRPDU-GERMV1	SURPDU-GEX	SUPRPDU-GERMVX

Distribution Emergency Service

7-Year On-site Emergency Response	Monitored/Switched rPDU	Basic Non-Monitored rPDU
Equipment Model / Type	**Part Number**	**Part Number**
Rack PDU	DEP-rPDU-Mntrd	DEP-rPDU-nMntrd
Rack Transfer Switch	DEP-rPDU-Mntrd	DEP-rPDU-nMntrd

Distribution Assurance Package - Summary

Distribution Assurance Package - Summary

- Includes all below “rPDU Start-up Services” and “Distribution Emergency Services” support.

Vertiv™ PowerIT rPDU Startup Services - Summary

- Installation includes mounting and start-up of new rPDU or RTS (excludes hard-wired applications).
- Services performed by Vertiv factory trained technician.
- Services performed 7 X 24, excluding national holidays within the 48 contiguous states, Hawaii and Canada.
- Removal and disposal of existing rPDU or RTS equipment, if selected.

Distribution Emergency Services - Summary

- On Site Service Support.
- Full-service seven (7) year contract term commencing upon the start-up date.
- 100% parts coverage.
- 100% labor and travel coverage 7 days/week, 24 hours/day.
- 24-Hour Customer Resolution Center via 1-800-LIEBERT.
- Access to Customer Services Network portal.

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

Comprehensive Vertiv services and solutions to support healthcare, medical imaging, and diagnostic applications

Startup and installation

Factory-authorized Vertiv technicians handle rPDU installation and startup at the site. This provides added convenience while allowing IT staff to focus on other priorities.

Seven-year protection plan

The Distribution Assurance Package provides 100 percent labor, travel, and parts coverage for maintenance, repair, or replacement over a seven-year period. This level of protection helps reduce unexpected downtime costs and supports network availability.

Optional removal and disposal

If ordered with the Distribution Assurance Package, technicians remove and dispose of existing rPDUs in accordance with all regulatory requirements. This optional service is performed during installation and startup of new rPDUs.

On-site support and emergency response

Trained service professionals from Vertiv provide industry-leading capabilities for maintaining and supporting rPDUs. 24x7 access to the Vertiv Customer Resolution Center delivers priority response and onsite emergency support when issues arise.

Comprehensive reports

On-demand access to service histories and reports is available through the Customer Services Network portal, providing visibility into the status of rPDUs under contract and simplifying management of this critical power system component.

Ordering Information

To learn more about this service and other Vertiv™ solutions, please visit Vertiv.com or call **1-800-543-2378.**

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