VERTIV.

Product brochure

Vertiv™ PowerIT High-Density Rack PDU

Advanced power management for AI and HPC

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	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.

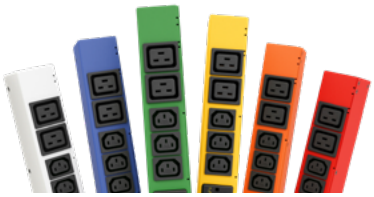
Monitored rPDUs provide comprehensive power usage data, making them ideal for optimizing energy efficiency and power distribution in high-density settings. These rPDUs offer detailed insights into power consumption, helping to maintain operational efficiency.

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 AI 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 / 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 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

Model	PDU Type	Plug type	Output receptacle	Power description	Output voltage	Power rating	Input Current	Placement
VP1NA0A0	Basic	Hard Wired	24 x Combination C13 / C19	1~ 240V/3~ Delta 208V	208V	28.8kW	80A	Vertical
VP4NA0A0	Monitored Input Level	Hard Wired	24 x Combination C13 / C19	1~ 240V/3~ Delta 208V	208V	28.8kW	80A	Vertical
VP4NA0A2	Monitored Input Level	1 x 3P+N+E (IP67)	24 x Combination C13 / C19	1~ 240V/3~ Delta 208V	208V	28.8kW	80A	Vertical
VP1UA0A1	Basic	Hard Wired	36 x Combination C13 / C19	240V/415V WYE	240V (L-N)	57.6kW	80A	Vertical
VP4UA0A1	Monitored Input Level	Hard Wired	36 x Combination C13 / C19	240V/415V WYE	240V (L-N)	57.6kW	80A	Vertical
VP6NA0A0	Monitored Outlet Level	Hard Wired	24 x Combination C13 / C19	1~ 240V/3~ Delta 208V	208V	28.8kW	80A	Vertical
VP5NA0A0	Switched Unit Level	Hard Wired	24 x Combination C13 / C19	1~ 240V/3~ Delta 208V	208V	28.8kW	80A	Vertical
VP7NA0A0	Switched Outlet Level Monitoring	Hard Wired	24 x Combination C13 / C19	1~ 240V/3~ Delta 208V	208V	28.8kW	80A	Vertical
VP6UA0A0	Monitored Outlet Level	Hard Wired	36 x Combination C13 / C19	240V/415V WYE	240V (L-N)	57.6kW	80A	Vertical
VP5UA0A0	Switched Unit Level	Hard Wired	36 x Combination C13 / C19	240V/415V WYE	240V (L-N)	57.6kW	80A	Vertical
VP7UA0A0	Switched Outlet Level Monitoring	Hard Wired	36 x Combination C13 / C19	240V/415V WYE	240V (L-N)	57.6kW	80A	Vertical
VP1U60A2	Basic	1 x 3P+N+E (IP44)	36 x Combination C13 / C19	240/415V WYE	240V (L-N)	43.5kW	60A/63A	Vertical
VP4U60A2	Monitored Input Level	1 x 3P+N+E (IP44)	36 x Combination C13 / C19	240/415V WYE	240V (L-N)	43.5kW	60A/63A	Vertical
VP1U62A1	Basic	1 x 3P+N+E (IP44)	24 x Combination C13 / C19	240/415V WYE	240V (L-N)	43.5kW	60A/63A	Horizontal
VP4U62A1	Monitored Input Level	1 x 3P+N+E (IP44)	24 x Combination C13 / C19	240/415V WYE	240V (L-N)	43.5kW	60A/63A	Horizontal
VP6U60A1	Monitored Outlet Level	1 x 3P+N+E (IP44)	48 x Combination C13 / C19	240/415V WYE	240V (L-N)	43.5kW	60A/63A	Vertical
VP5U60A1	Switched Unit Level	1 x 3P+N+E (IP44)	48 x Combination C13 / C19	240/415V WYE	240V (L-N)	43.5kW	60A/63A	Vertical
VP7U60A1	Switched Outlet Level Monitoring	1 x 3P+N+E (IP44)	48 x Combination C13 / C19	240/415V WYE	240V (L-N)	43.5kW	60A/63A	Vertical
VP6U60A2	Monitored Outlet Level	1 x 3P+N+E (IP44)	36 x Combination C13 / C19	240/415V WYE	240V (L-N)	43.5kW	60A/63A	Vertical
VP5U60A2	Switched Unit Level	1 x 3P+N+E (IP44)	36 x Combination C13 / C19	240/415V WYE	240V (L-N)	43.5kW	60A/63A	Vertical
VP7U60A2	Switched Outlet Level Monitoring	1 x 3P+N+E (IP44)	36 x Combination C13 / C19	240/415V WYE	240V (L-N)	43.5kW	60A/63A	Vertical
VP6U60A3	Monitored Outlet Level	1 x 3P+N+E (IP44)	24 x Combination C13 / C19	240/415V WYE	240V (L-N)	43.5kW	60A/63A	Vertical
VP5U60A3	Switched Unit Level	1 x 3P+N+E (IP44)	24 x Combination C13 / C19	240/415V WYE	240V (L-N)	43.5kW	60A/63A	Vertical
VP7U60A3	Switched Outlet Level Monitoring	1 x 3P+N+E (IP44)	24 x Combination C13 / C19	240/415V WYE	240V (L-N)	43.5kW	60A/63A	Vertical
VP6U62A2	Monitored Outlet Level	1 x 3P+N+E (IP44)	24 x Combination C13 / C19	240/415V WYE	240V (L-N)	43.5kW	60A/63A	Horizontal
VP5U62A2	Switched Unit Level	1 x 3P+N+E (IP44)	24 x Combination C13 / C19	240/415V WYE	240V (L-N)	43.5kW	60A/63A	Horizontal
VP7U62A2	Switched Outlet Level Monitoring	1 x 3P+N+E (IP44)	24 x Combination C13 / C19	240/415V WYE	240V (L-N)	43.5kW	60A/63A	Horizontal

Why choose Vertiv's High-Density rPDUs?

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

Upgradable & hot-swappable
easily update your rPDU's
monitoring capabilities to adaptto 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.

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

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.

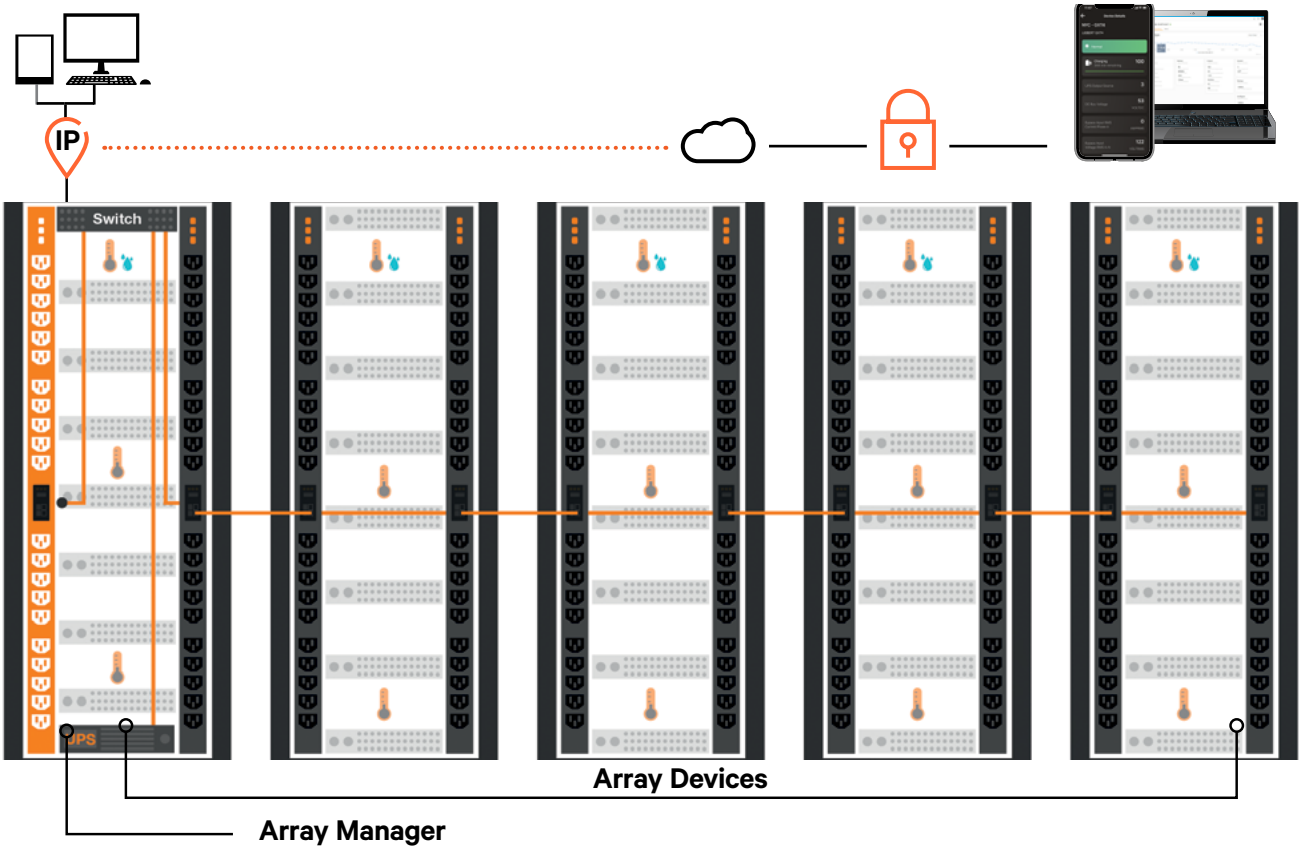
Small footprint and
low profile breakers
compact size to install in tight spaces

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.

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

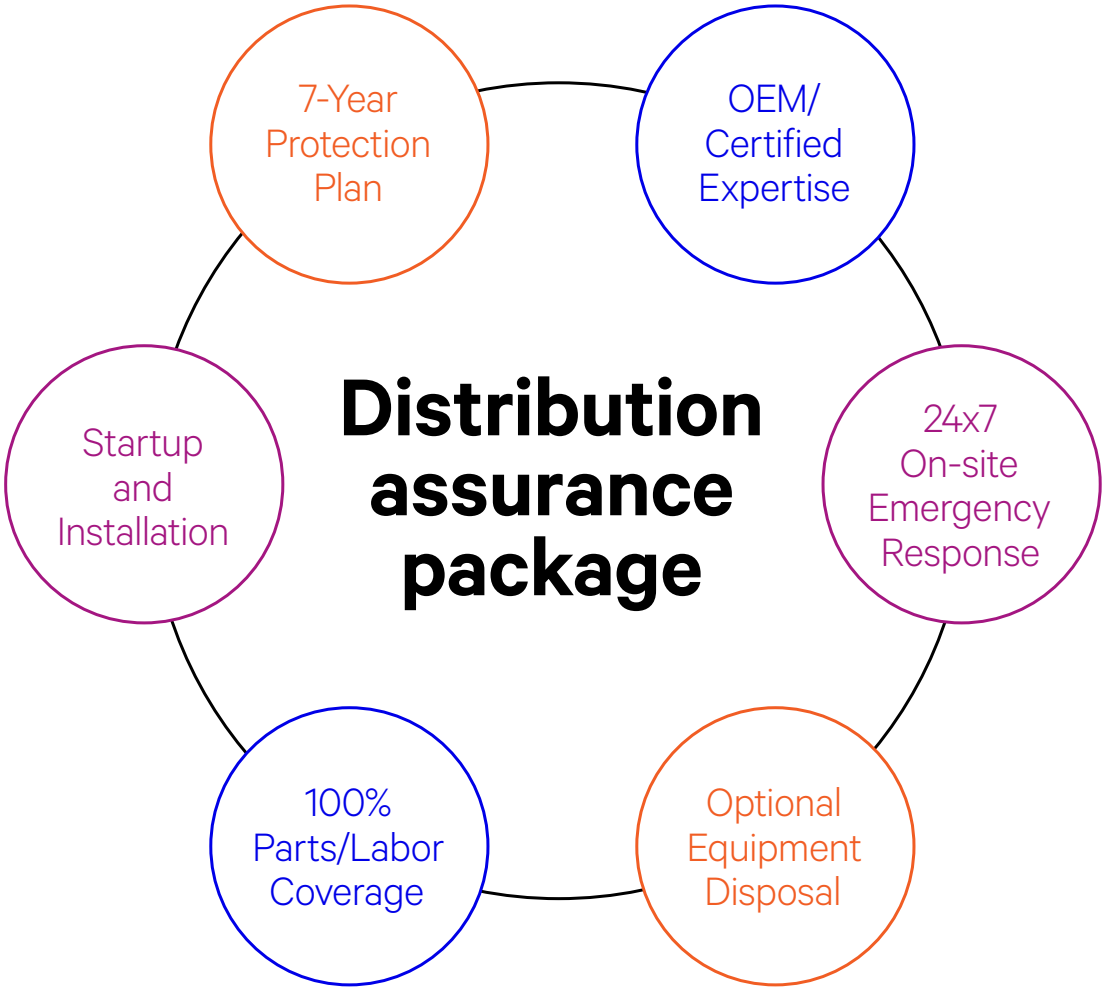
**Vertiv™ Intelligence Director compatible with Vertiv™ MPH2 and Vertiv™ MPX rack Vertiv™ GXT4, Vertiv™ GXT5, Vertiv™ PSI5, Vertiv™ EXM, Vertiv™ APM and Vertiv™ ITA2 UPS, Vertiv™ CRV row cooling and USB-connected Vertiv™ VRC cooling.

Vertiv™ Distribution Assurance Package

Combine market-leading rPDU technology with a seven-year protection plan and the industry's premier service capability.

Rack Power Distribution Units (rPDUs) are the last link in the power chain, deliveringcritical 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.



Vertiv™ PowerIT Rack PDUs and 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.

Vertiv's solutions support healthcare and medical imaging and diagnostic applications, including:

Startup and Installation

Factory-authorized Vertiv technicians handle rPDU installation and startup at your location. You'll enjoy the convenience and peace of mind that comes from having the experts do the job, and the IT staff is free to attend to other tasks.

Seven-Year Protection Plan

The Distribution Assurance Package provides 100 percent labor and travel coverage and 100 percent parts coverage for maintenance, repair, or replacement for a full seven years. With this level of protection, you avoid unexpected downtime costs and gain network availability.

Optional Removal and Disposal

If ordered with the Distribution Assurance Package, our technicians will remove and dispose of any old rPDUs while following all regulatory requirements. This optional task is handled when visiting to install and startup your new rPDUs.

On-site Support and Emergency Response

Vertiv's experienced team of technicians offers the industry's premier service capability for maintaining and supporting rPDUs. Should a problem ever arise, you'll have 24x7 access to Vertiv's Customer Resolution Center. You can count on quick recognition by support personnel as well as priority status during emergencies, including guaranteed onsite emergency response.

Comprehensive Reports

We provide on-demand access to service histories and reports via the Customer Services Network portal. With this vital information at your fingertips, you will always know the status of your rPDUs under contract and will have the information needed to simplify the 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.**

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

SL-80075 (02/25)