

How do I provide up to 34kW in a rack with only one pair of PDUs?



APPLICATION NOTE HDOT-005

December 2016

Learn how to power high-density IBM/Lenovo NeXtScale System* devices.

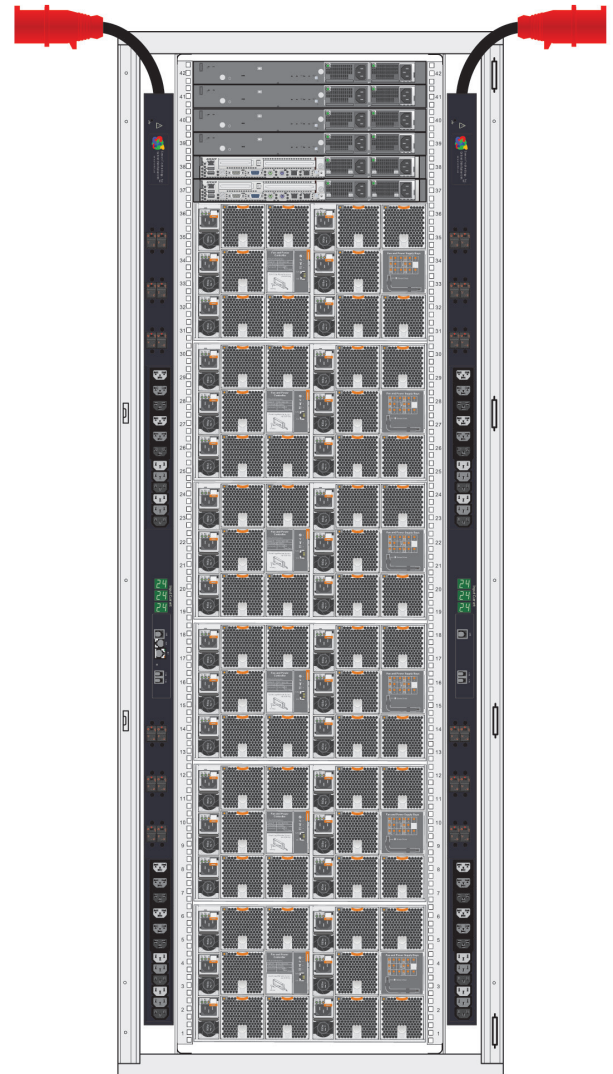
Typical Application

I am designing cabinets for high-density Hadoop clusters running on IBM/Lenovo NeXtScale chassis. Each cabinet has six chassis with 80 Plus Titanium rated 1300 watt power supplies - six supplies per chassis running N+N - and some miscellaneous 1U devices. I need a solution to distribute up to 27 kW of power in these cabinets and provide for system power usage and temperature monitoring.

Our Solution

This HDOT® PDU is configured with 24 C13 outlets on an alternating-phase layout and an IEC 60309 60A North American rated plug. In an N+N redundant deployment, available power is about 34.5 kW when balanced. This alternating-phase design makes balancing easy with color-coded outlets. The Smart PIPS® metrics provide +/- 1% accuracy on typical power measurements and can be rolled into PowerIQ by Sunbird for capacity planning and efficiency analysis.

Pictured right is a C1S24CB-5QAE2700 Smart Master PDU with a C1L24CB-5QAE2700 Link PDU. Choose from six highlight colors and a variety of outlet and plug combinations. Add up to four EMTH-1-1 for monitoring of temperature and humidity.



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High Density Outlet Technology



HDOT Smart PDUs Maximize Density in 42U Cabinets

Server Technology's High-Density Outlet Technology (HDOT) PDUs meet the needs of a wide range of data center equipment cabinets. High power densities and reduced cabinet space require new and innovative products like Server Technology's own patented outlet technology that provides industry standard C13 and C19 outlets in a drastically reduced footprint. Additional features include high native cord retention that eliminates the need for custom and costly ancillary locking cord devices. Manufactured with robust high temperature materials carrying a UL94 V-0 flame rating makes these outlets ideally suited for harsh data center environments.

Key HDOT Benefits

- Industry standard C13 and C19 with minimized footprint
- Maximum possible outlet density in an Intelligent PDU
- High native cord retention, reducing the need for additional locking devices
- Color-coded alternating-phase outputs for easy cabling
- Operation to 60°C (140°F) ambient
- Thousands of variations available using our online Build-Your-Own Smart PDU Tool

Key Smart PDU Benefits

- PIPS® (Per Inlet Power Sensing) high-accuracy measurements of current, voltage, power, and other key power metrics
- Environmental measurements through plug-and-play probes
- SNMP traps and email alerts
- Master-Expansion linking allows single-IP access to the cabinet pair of PDUs



About Server Technology®

Server Technology, a brand of Legrand, is leading the engineering and manufacturing of customer-driven, innovative and exceptionally reliable power, access and control solutions for monitoring and managing critical IT assets for continual availability.

Server Technology's power strategy experts are trusted to provide Rack PDU solutions for data centers worldwide ranging from small technology startups to Fortune 100 powerhouses. Because power is all we do, Server Technology can be found in the best cloud and colocation providers, forward thinking labs, and telecommunications operations.

Server Technology customers consistently rank us as providing the highest quality PDUs, the best customer support, and most valuable innovation. We have over 12,000 PDU configurations to fit every data center need and most of our PDUs are shipped within 10 days.



Rack PDU Buying Guide

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Rack PDU Selector

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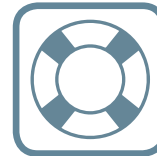
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