Nominee: Server Technology Inc.

Nomination title: High Density Outlet Technology (HDOT) Rackmount PDU In Switched and Smart POPS

What are your product's/solution's key distinguishing features and/or USP?

The HDOT in Switched and Smart POPS is the most feature rich rackmount PDU that Server Technology has ever developed. While none of these features are new to our product line, this is the first time Server Technology has packed them all into a single rackmount PDU, making it the most advanced PDU solution on the market. The HDOT POPS PDU's, provides maximum flexibility, unparalleled uptime, and accurate capacity planning.

This product is perfect for customers who:

- Have 36 to 54 devices in their cabinet

- Need quick-turn PDUs available with a large number of outlet variations

- Are looking at bill-back to departments

- Are looking to minimize power drops

- Need high-temperature PDUs

With the HDOT in Switched and Smart POPS, customers no longer need to pick and choose a single solution based on their current needs. The HDOT POPS rackmount PDU addresses the three data center pain points: capacity planning, power density, and uptime.

Capacity planning: with POPS technology, this PDU provides the capability to securely monitor power per individual outlet/ device. Power information per individual outlet/device includes current, voltage, power (kW), apparent power, crest factor, accumulated energy, and power factor. POPS Switched technology provides the flexibility needed for all data centers and remote sites, including power requirements for high amperage and high-voltage, Branch Circuit Protection, and SNMP traps and email alerts including current monitoring. When paired with Sentry Power Manager (SPM), Server Technology's award-winning power management solution, Switched POPS technology provides the most detailed power data within the cabinet.

Power Density: HDOT Alt-phase provides for better efficiency. Stay Green. Save Green. This proprietary outlet design allows the users to fill narrow/shallow racks with 36 to 54 devices using 36 to 54 outlets. Since the PDU is available through our Build Your Own PDU online configurators, the user can order a PDU with their desired outlet configuration with the right outlets in the right place. With the addition of Alternating Phase Technology, these outlets allow the user to plug in devices from top-to-bottom or bottom to top without disrupting phase and load balance. This allows for shorter cords, which lowers cooling costs and simplifies cable inventory.

Uptime: PRO2 enables communications with a Master unit even when the Master has lost input power, by back-feeding power to the network interface from a Link unit. The network interface is hot swappable in the field without changing the state of the outlets. The firmware in PRO2 allows even more opportunity for configure ability and customization, while maintaining a clean and simple-to-use interface. Key benefits of a PRO2 chassis includes:

•	**Hot-swappable, redundantly-powered network card**

•	**Star architecture multi-linking compared to competition's daisy chain design eliminates single point of failure**

•	**Input power and Branch current measurements with multi-level alerts**

•	**Shallower enclosure that allows the outlets to face towards the center of the rack and still let the rack mounted hardware pass out the back of the rack.**

•	**More alarms and configuration options compared to previous generation PDU**

What tangible impact has your product/solution had on the market and your customers?

While the HDOT in Switched and Smart POPS is new to the market, the solutions equipped within have been tested and praised by the industry.

1)	**Switched POPs Technology**

Client: Cyber security products and solutions company (name withheld)

Key Challenges

•	**IT Power capacity utilization and planning for existing labs.**

•	**Colocation facility power and cooling**

•	**Enhanced LDAP support.**

With existing cabinet POPS PDU hardware and management software from Server Technology, our client could gather the data he needed to ensure his colocation deployment would be successful, as well as provide a high level of confidence that he could prevent the end of row breakers inside the lab from tripping. By implementing an outlet naming convention for PDUs, out client was able to rapidly identify assets, cabinet and row location. Once that was applied to the rackmount PDUs, the information presented within Sentry Power Manager (SPM) allowed our client to use the capacity planning features of SPM to decide where new hardware could be deployed in the lab, as well determining when new power circuits were required.

2)   High Density Outlet Technology (HDOT) with Alternating Phase Outlets

Client: Mike Tran, Datacenter Design Engineer, Cisco

Key Challenges

•   Power constraints within the cabinet

•   Space constraints within the cabinet

Lack of flexibility to accommodate frequent hardware changes according to Mike Tran, "Server Tech High Density Outlet (HDOT) technology with Alternating Phase Outlets (Alt-Phase) provided us both the power and outlet density to support our virtualized server farms which required C19 outlets and our high density rack mounted clusters which required C13 outlets."

By choosing the outlet type and location on the PDU through the 'build your own PDU' approach of Server Technology's HDOT units, he was able to get exactly what was needed to support the hardware diversity present in the labs. Having alternating phase outlets also made it inherently easier for Cisco to load balance across phases within each cabinet and row of cabinets within the lab. The cabinet real estate gained by using the narrower PDU with alternating phase outlets allowed for better cable management to be implemented, resulting in improved airflows and better reliability.

3)   PRO2

The validation of the PRO2 PDU architecture starts with the customer feedback and requirements and ends with the huge commercial success that we have seen since we have been shipping this product. As the commercial success of this product has far exceeded our expectations and ability to plan for.

The PRO2 PDU architecture was developed based on several factors including our experience in the PDU market place, the large number of custom products that we create for industry and

constant customer feedback including customer visits, input from our channel partners, customer surveys and other proven methods to solicit feedback. This led to a flexible design that could not only meet current customer needs and expectations but a platform that we can expand to meet future customer requirements.

What are the major differentiators between your product/solution and those of your primary competitors?

Not only is the HDOT in Switched and Smart POPs relevant across the wider industry, it's relevant through the changes a data center manager might encounter during the growth and evolution of their facility.

This rackmount PDU solves the needs of data center and lab facilities throughout the industry.

Potential Customers include:

• Those who Have 36 to 54 devices in their cabinet

• Need quick-turn PDUs available with a large number of outlet variations

• Those who are looking at bill-back to departments

• Those who are looking to minimize power drops

• Those Who need high-temperature PDUs

Furthermore, it answers the question to problems such as:

• Do you run out of outlets before power?

• Do you ever have an urgent need for PDU configurations that are hard to find in stock?

• Do you have a rat's nest of cables in your rack due to the need for load balancing across phases?

• Have you considered bill-back or "show-back" to departments to manage op-ex?

• Do you know what your power drops cost?

• Is your organization considering raising the "cold" aisle temperature for efficiency?

By combining our core solution into a single rackmount HDOT PDU, Server Technology has provided a keystone for the three common data center power pain points: capacity planning, uptime and power density. In addition, this PDU improves the user experience with feature rich

technology, like POPS with the capability to securely monitor power per individual outlet/ device and Alternating Phase for easy load balancing and improved cooling costs.

As the industry grows, the HDOT Switched and Smart POPS PDU's will allow for more devices in the cabinet at a lower cost, with technology to provide power metrics needed to grow the data center accordingly. Beyond the value of the PDU itself, the product is available through a custom configurator, which allows the user to place the right outlet in the right place. Behind each Server Technology PDU is a comprehensive product support team.

This PDU is built to help the industry Stay Powered, Be Supported, and Get Ahead.

Why nominee should win

You get:

•   Highest density of Switched and Smart POPS outlets in a rack PDU.

•   PRO2 firmware for a feature rich platform

•   Alternating Phase Outlet configuration which simplifies load and phase balancing