

Smart PDU's Power Cisco's Unified Computing System

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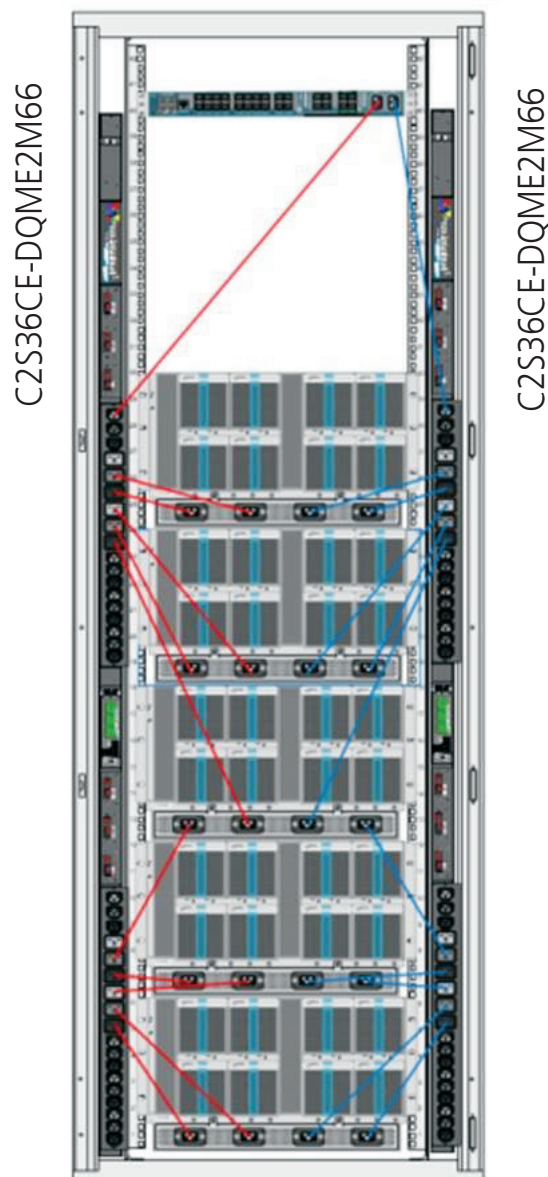
The Cisco Unified Computing System is a next-generation data center platform that unites computing, network, storage access, and virtualization into a cohesive system designed to reduce total cost of ownership (TCO) and increase business agility. This application note will illustrate how to power and provide redundancy for five Cisco UCS 5108 Series Blade Server Chassis and one Cisco UCS 6248UP 48-Port Fabric Interconnects utilizing Server Technology's Smart C2S36CE-DQME2M66 Power Distribution Unit (PDU) with (12) C19 and (24) C13 outlets per PDU with a power input feed of 3-Phase 208V 60 A power.

Notes:

1. UCS 5108 Blade Server Chassis drawing 2250W times 5 chassis.
2. UCS 6248UP drawing 350W
3. 60A 3-phase CDU's with 6 branches on 20A circuit breakers. Continuous available power of 17.3kW.

Server Technology's Smart PDU Solution to Power a Cabinet with Five Cisco UCS 5108 Series Blade Server Chassis and One Cisco UCS 6248UP 48-Port Fabric Interconnects

3-Phase 208/120V 60A with five Cisco UCS 5108 Blade Server Chassis



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Enclosed are the loaded power draws for each device shown in the cabinet.

Cisco Devices	qty	Cisco Power Spec.	Derating	Expected Watts Each	C13	C19	Total Watts
UCS 6248UP	1	600 W	58%	350	2	0	350
UCS 5108	5	5000W	45%	2250	0	4	11250
Total					2	20	11600

Total kW delivered for one 3-Phase 208 V 60 A in-feed source is 21.6 kW de-rated to 17.3 kW.

Power Requirements for Cisco Unified Computing System with Five 5108 Blade Server Chassis:

- Total Power Usage: 12.0 kW
- Input power feeds required: two 208 V, 3-Phase, 60 A, IEC 60309 plugs
- Number of Outlets: (24) C13 and (12) C19 per cabinet
- Other requirements: Intelligent monitoring, local current indicators to help in load balancing

If one of the input power feeds fails the other PDU must be capable of carrying the whole load.

The C2S36CE-DQME2M66 provides plenty of power should this occur.

Key Benefits:

- > Smart 3-Phase 60 A PDU's reduce the number of PDU's needed to deliver the power required by this cabinet configuration. This, in turn, reduces the number of power drops required for each cabinet.
- > Fewer power cords means lower infrastructure costs and improved air flow in a raised floor data center environment resulting in improved cooling in the cabinet.
- > Smart PDU's allow administrators to view the current load and environmental conditions remotely.
- > SNMP traps and email alerts ensure notification if a problem has occurred along with logging of all actions performed by the user.
- > Local LED's Per Branch Circuit - Large, easy-to-read displays let you determine if the load is balanced and provides a visual indication that power is supplied to the PDU.
- > Environmental measurements - Qty (2) temperature and humidity measurements are provided per pair of PDU's.
- > Local and remote notification if a branch circuit is lost.
- > Master and Link unit configuration (CS/CL) allows two power in-feeds and all environmental information to be monitored via single IP address per cabinet.



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