

Energy Efficient Data Center Cabinet Systems



Net-Access™ Cabinet has tested compatible with Cisco Nexus 7018, MDS 9513, and Catalyst 6509. Go to www.panduit.com/cisco1 for disclaimer

PANDUIT®

building a smarter,
unified business foundation

Connect. Manage. Automate.



Using the Panduit Energy Efficient Data Center Cabinet System, you can greatly improve the energy efficiency of your data center while confidently increasing your kW per cabinet density to increase utilization of your data center space.

Factors Effecting Efficiency

- Inlet temperatures
- ΔT across heat exchanger
- Capacity utilization

Efficiency Influencers

- Inlet temperatures
- Set points
- Hot air/cold air leakage and recirculation
- Server/CRAH fan speeds
- kW per cabinet density

Enabling Improved Efficiency

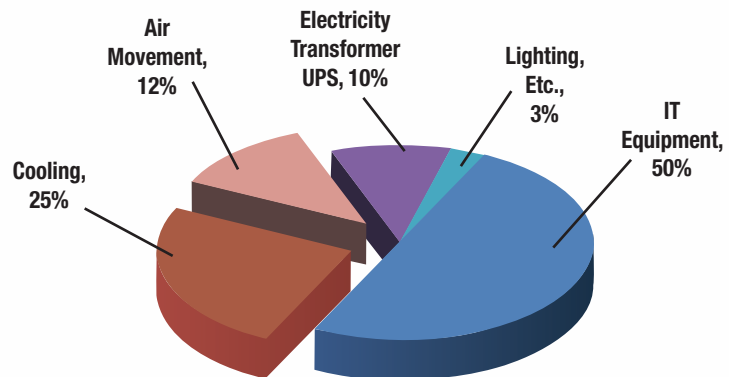
- Seal every gap for complete separation of cooling and exhaust air
- Direct cold air to where it needs to go
- Contain cooling and exhaust air for maximum cooling capacity efficiency
- Monitor to maintain operational and energy efficiency

Reduce Operational Costs, Improve Capacity Utilization, and Lower Power Usage Effectiveness (PUE)*

Driven by explosive data processing growth, Data Center Managers face multiple, competing demands: reducing operational costs, improving energy efficiency, and optimizing available capacity, while sustaining a low total cost of ownership.

To meet these demands while minimizing the risk to service levels, the available data center space is often underutilized while being overprovisioned with excess power and cooling capacity regardless of actual IT equipment and space utilization. Today, a typical data center consumes about 3-5kW per cabinet due to power and cooling concerns, while the available cabinet space can accommodate 15kW or more per cabinet if managed effectively.

As energy and construction costs continue to rise, over-provisioning and under-utilization are no longer sustainable. Energy costs related to cooling account for approximately 37% of the overall data center power consumption¹ and are one of the fastest rising data center operational costs².



Average data center energy usage allocation¹

Power and cooling capacity remain the top targets for efficiency improvement and optimization of cooling capacity is often the simplest way for data center operators to realize short term savings and directly impact PUE³.

Panduit Labs research confirms that raising the supply air temperature in a data center is one of the most effective means to reduce energy consumption. In addition, higher return temperatures enable a higher CRAH ΔT across the heat exchangers allowing the cooling system to operate more efficiently.

1°C rise in chiller water temperature translates into 3-4% cooling system energy savings⁴.

A key way to realize this energy efficiency potential and enable maximum capacity utilization is to eliminate the mixing of cold and hot air within the cabinet and at the room level delivering higher return air temperatures to the cooling system and allowing higher room set points.

*Power Usage Effectiveness – a metric used to measure how effectively input power is used. It is expressed as a ratio of power available to power used.
 1 Average Data Center Energy Usage Allocation , Lawrence Berkeley National Laboratory 2007
 2 451 Research has published 'Highly Energy-Efficient Datacenters in Practice,' October 2012
 3 How To Measure Energy Consumption In Your Data Center, Gartner Core RAS Research Note G00205428, 8 September 2010
 4 Design Considerations for Datacom Equipment Centers ASHRAE 2005, ISBN 1-931862-94-X. Page 138

Complete Hot Air/Cold Air Separation is Critical to Energy Efficiency and Capacity Utilization

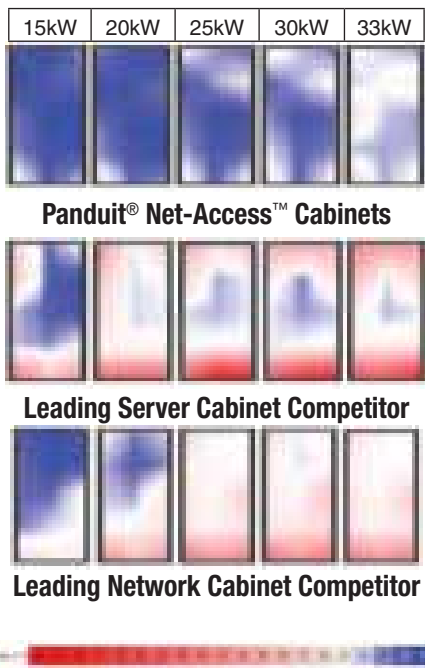
Panduit's Energy Efficient Data Center Cabinet System offers containment, in-cabinet ducting, and improved sealing that optimizes air separation and provide superior energy savings compared to competitive offerings.

Optimized energy efficiency and capacity utilization begin with improved sealing. Even small air leaks within a cabinet will impact data center energy efficiency, regardless of the heat load. Leaks allow hot air recirculation forcing IT equipment inlet fans to work harder and consume more energy, limiting per cabinet power utilization. Panduit® Net-Access™ Cabinets reduce the air leakage typical in competitive cabinets by as much as 80%.

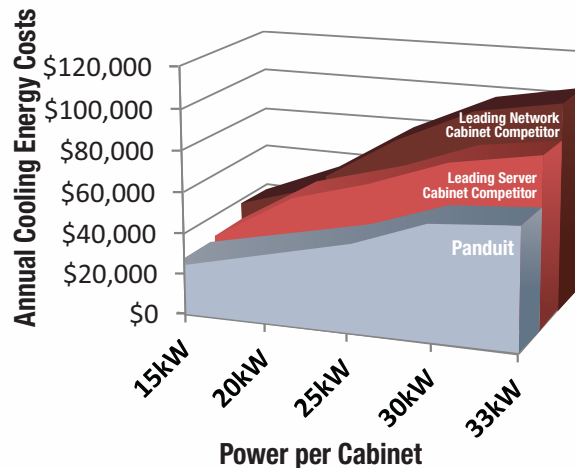
The graphics below illustrate the impact these leaks have on inlet temperatures. By preventing hot air recirculation, a more consistent inlet temperature gradient can be realized across the entire front of the cabinet allowing the data center set point to be raised. This results in reduced cooling expense leading to the ability to increase density power usage per cabinet, and increase available capacity.

Improved sealing coupled with containment leads to a \$500 annual savings in cooling costs per cabinet for high density applications at \$.10 per kWh at 15kW per cabinet⁷.

Inlet Air Temperature Gradients at Front of Cabinets Comparison⁷



Impact of Net-Access™ Cabinet with Net-Contain™ Containment System on Cooling Energy Costs vs. Competition⁷



Scan to learn how Panduit delivered a 27% energy savings with Energy Efficient Cabinets and Containment.

With improved cabinet *sealing, in-cabinet ducting, containment, and monitoring*, the results show you can significantly increase energy efficiency by raising the set point temperature in the entire data center.

Seal, Direct, Contain, and Monitor to Improve your PUE

Panduit Energy Efficient Data Center Cabinet System provides total separation allowing higher data center set points and reduced cooling system energy consumption by up to 40%.⁵

Seal every gap for complete separation of cooling and exhaust air

Net-Access™ Cabinets and Sealing Accessories eliminate leakage through the cabinet structure preventing re-circulation of hot exhaust air back into equipment inlets.

Direct cold air to where it needs to go


Net-Access™ In-Cabinet Ducting directs cool air directly into the intake fans preventing recirculation and reducing inlet air temperature by as much as 14°C, lowering fan energy consumption⁶.

Contain cooling and exhaust air for maximum cooling capacity efficiency

Net-Contain™ Vertical Exhaust Duct and Cold Aisle Containment Systems eliminate hot air recirculation and mixing with cold air allowing room and chilled water temperature set points to be raised and PUE to be lowered.

Monitor to maintain operational and energy efficiency

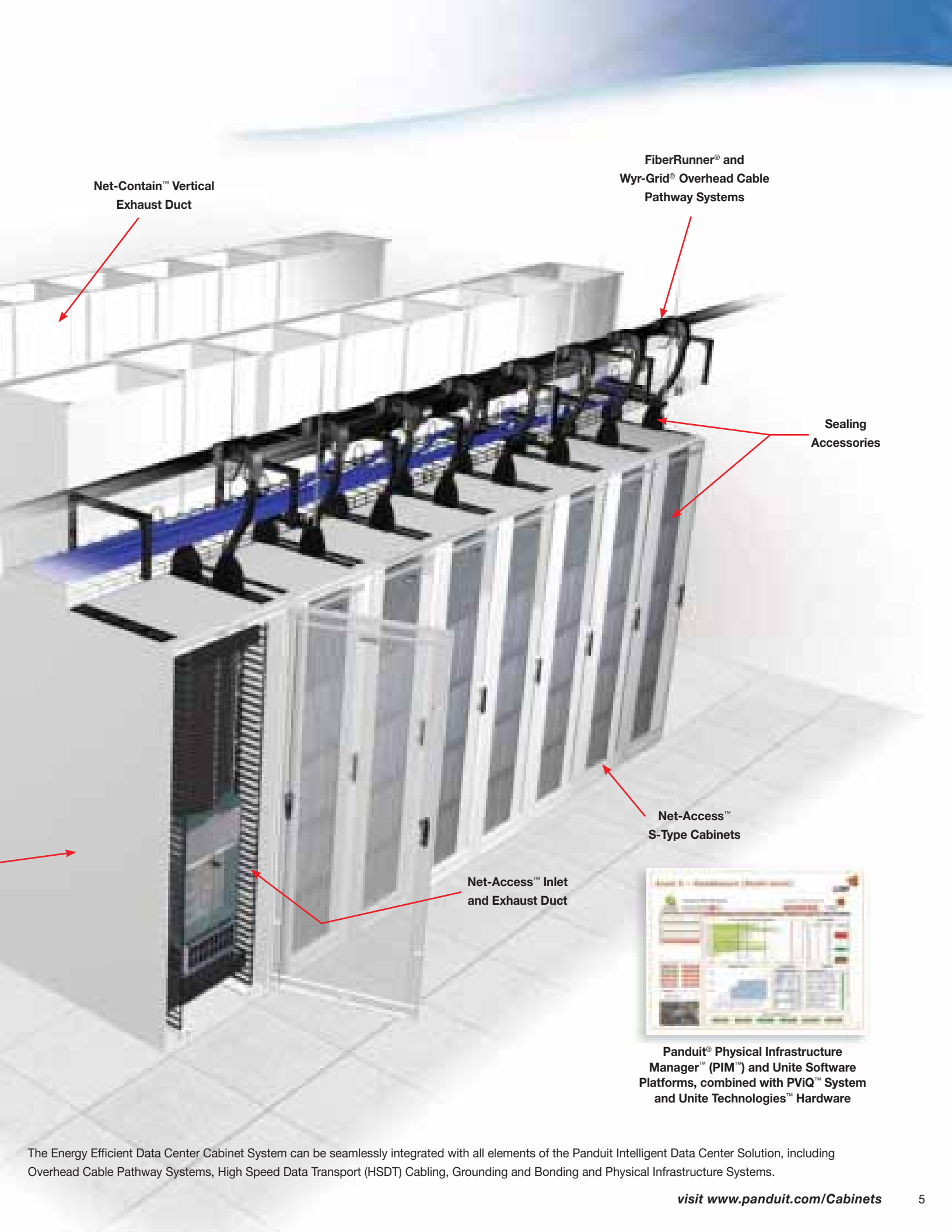
Once the physical infrastructure has been optimized for thermal efficiency, Panduit® Physical Infrastructure Manager (PIM™) Software and the Unite Technologies™ by Panduit Platforms allow continuous monitoring of highly accurate, granular PUE measurements in real-time to maintain thermal efficiency in dynamic data center environments.



**Net-Access™
N-Type Cabinets**

⁵ Impact of Air Containment Systems, Panduit White Paper #WP-20, June 2012

⁶ The Use of Ducting to Improve Inlet Air Conditions, Panduit White paper #25, November 2012



Net-Contain™ Vertical Exhaust Duct

FiberRunner® and Wyr-Grid® Overhead Cable Pathway Systems

Sealing Accessories

Net-Access™ S-Type Cabinets

Net-Access™ Inlet and Exhaust Duct



Panduit® Physical Infrastructure Manager™ (PIM™) and Unite Software Platforms, combined with PViQ™ System and Unite Technologies™ Hardware

The Energy Efficient Data Center Cabinet System can be seamlessly integrated with all elements of the Panduit Intelligent Data Center Solution, including Overhead Cable Pathway Systems, High Speed Data Transport (HSDT) Cabling, Grounding and Bonding and Physical Infrastructure Systems.

Seal Every Gap for Complete Separation of Cold Intake and Hot Exhaust Air

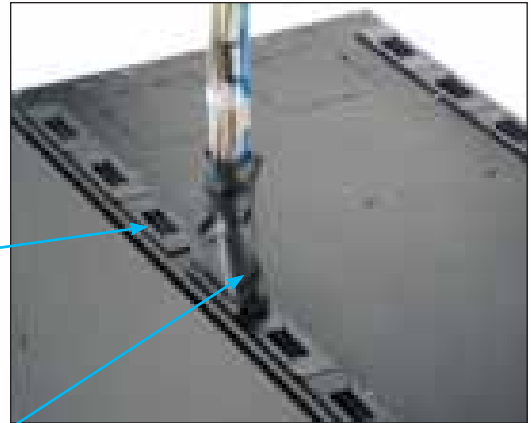


Complete Air Seal Features Reduce Air Leakage Throughout the Cabinet Structure by as much as 25%⁷

Net-Access™ Cabinets have been designed to eliminate every possible air gap other than those needed to mount equipment. This minimizes by-pass air and recirculation in the cabinet providing lower inlet temperatures.

Cabinet Top Seal

Net-Access™ Cabinets are provided with pre-installed 3.5" x 5" cabinet top covers and cable protection bezels to eliminate air leakage from unused cable entry holes.



Cool Boot® Cabinet Top Air Sealing Fitting

Eliminate air leakage where data cable bundles enter the cabinet.



Tool-Less Blanking Panels

Snap-In Panels optimize cooling efficiency by eliminating bypass airflow and hot air mixing in cabinets.



Cool Boot® Raised Floor Grommet

Stop bypass air in new or retrofit raised floor applications where power and data cable pass through a cutout into a rack or cabinet, saving \$46 per floor tile cutout annually⁸.



Scan to learn more about the Cool Boot® product overview

Direct Cold Air To Where It Needs To Go

Inlet Ducts enable optimized containment by effectively directing airflow to improve network reliability

- Inlet duct solutions deliver cooling air directly from the cold aisle into the intake fans of switches
- Inlet ducts are completely passive, requiring no energy to operate and eliminating a point of failure
- Ensures front to back cooling airflow which enables an effective deployment of network switches with a Net-Contain™ Cold Aisle Containment deployment
- Inlet ducts enable reduced fan power energy consumption by allowing lower fan speeds, improving the reliability of the switch

Available for: Cisco^ Nexus, Catalyst and MDS Switches and Juniper EX Series Switches



Exhaust Ducts direct hot exhaust air out of a cabinet away from adjacent devices within non-contained environments

- Exhaust duct solutions channel hot exhaust air directly to the hot aisle, away from the cold air inlet of adjacent switches
- Exhaust ducts are completely passive, requiring no energy to operate and eliminating a point of failure
- Ensures switch exhaust airflow is directed to the hot aisle enabling effective deployment of network switches with a standard hot aisle/cold aisle configuration
- Exhaust ducts enable reduced fan power energy consumption by allowing lower fan speeds, improving the reliability of the switch

Available for: Cisco^ Nexus and Catalyst Switches



^Cisco is a registered trademark of Cisco Technology, Inc.

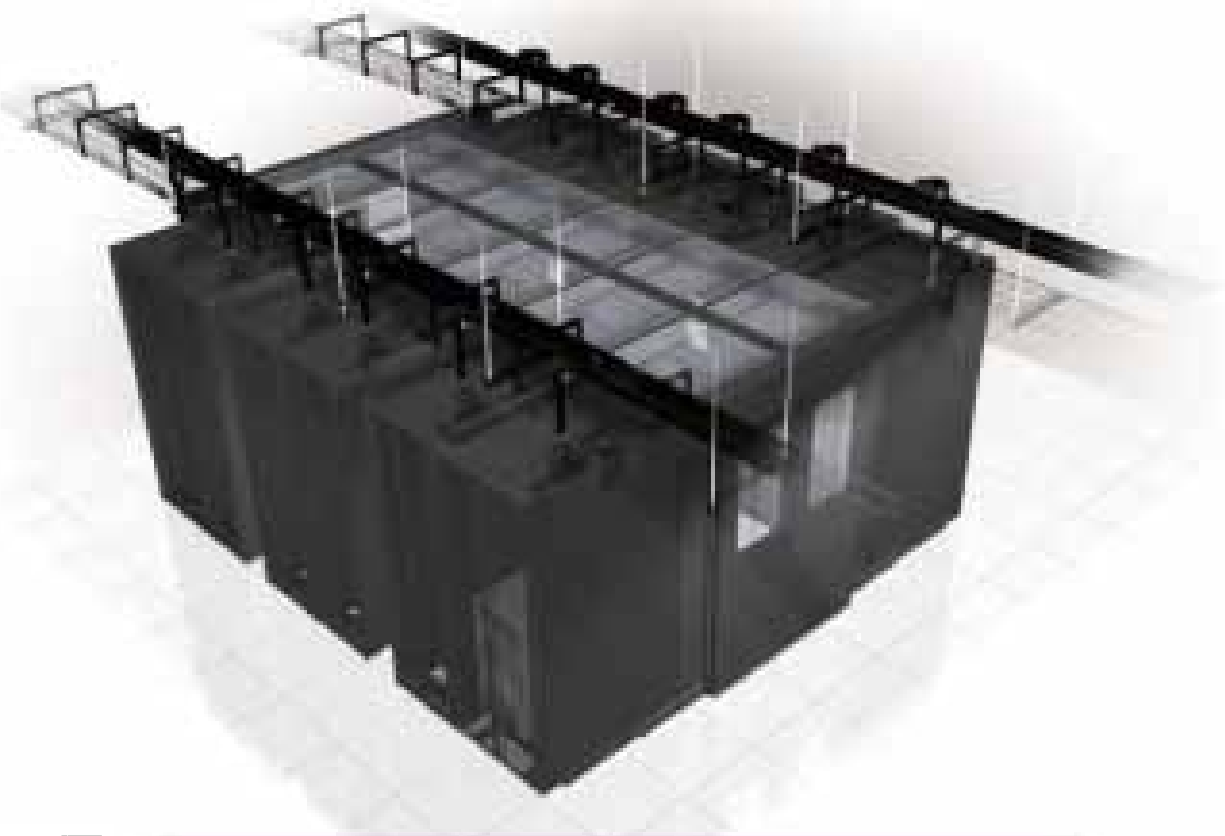
Patented⁹ In-Cabinet Ducting optimizes cooling system efficiency by establishing front-to-back airflow patterns through the cabinet.



Contain Cold Intake and Hot Exhaust Air to Maximize Cooling and Space Capacity Utilization

Net-Contain™ Cold Aisle Containment System Delivers Efficient Cooling for High Density Applications

Data Center Managers, challenged to maximize the utilization of available rack-space and cooling capacity, often increase the power density per cabinet. As cabinet power densities rise, containment architectures are the optimal approach, ensuring uniform cooling air temperature is delivered to equipment in high density PODs allowing full utilization of available cabinet space and cooling capacity.



Scan to view the Panduit® Net-Contain™ Cold Aisle Containment Application at EMC's Durham North Carolina Data Center

Net-Contain™ Cold Aisle Containment System Benefits

- **Data Center Design Versatility** – Translucent top panels provide built-in provisions for fire suppression, environmental monitoring, security devices and other utilities to accommodate all application requirements
- **Complete Application Flexibility** – System can be used for slab floor or raised floor applications. Modular design enables both 1200mm (48") and 1800mm (60") aisle widths and accommodates intermixed Net-Access™ Cabinet widths and in-row coolers to support various network architectures and heat densities
- **Reduced Operational Costs** – Sliding doors allow easy accessibility for efficient moves, adds and changes and automatically return to closed position optimizing cold air containment. Net-Contain™ Components are engineered to seal, minimizing leakage to less than 3%

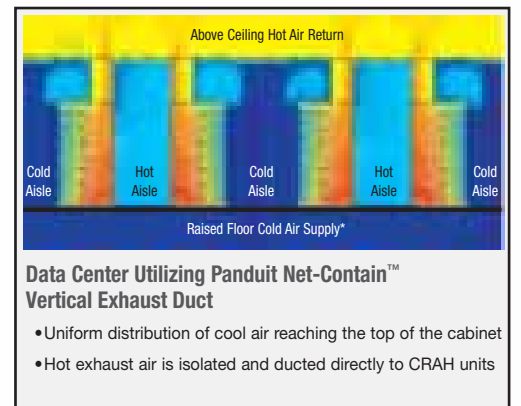
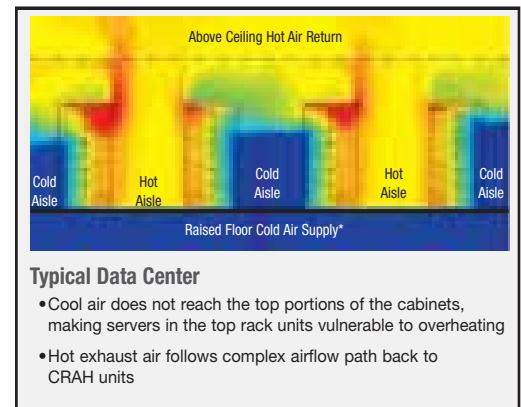
Net-Contain™ Vertical Exhaust Duct

Passive Cooling for High Density Applications

Net-Contain™ Vertical Exhaust Duct (VED) Systems optimize cooling energy utilization to support high density heat loads to enable 30kw or greater per cabinet. VEDs passively separate hot exhaust air from cooling air and direct hot exhaust air from active equipment into the Computer Room Air Handler (CRAH) air return system, allowing higher return air temperature improving CRAH and heat exchanger system efficiency up to 40% or more.



Scan to view the Panduit® Net-Contain™ Vertical Exhaust Duct Application at Cisco Allen Data Center

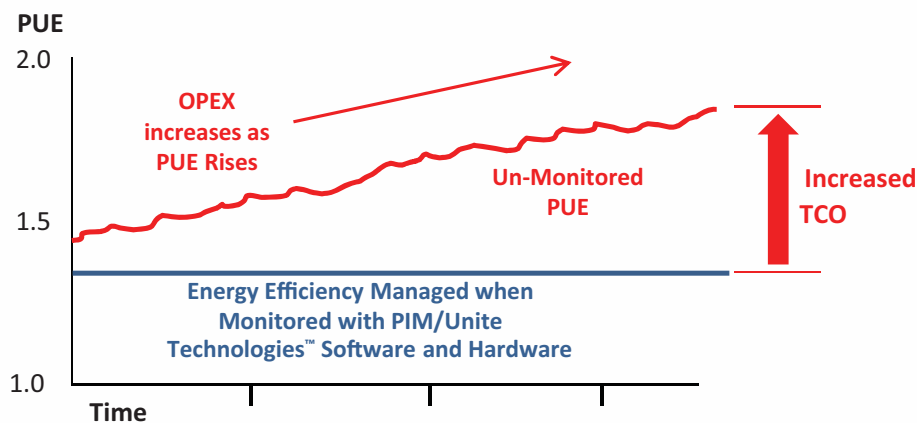


Net-Contain™ Vertical Exhaust Duct System Benefits

- **Flexibility and Versatility** – Multiple sizes, heights and adjustable height features allow system to adapt to virtually any data center structure including slab floors or raised floors and facilities with or without drop ceilings
- **Speed Deployment and Reduce Installation Cost** – Fast, simple assembly and integral ceiling seal reduce installation time by 30% compared to competitive offerings
- **Enhance Your Data Center Environment** – Vertical Exhaust Duct and Net-Access™ Cabinets with sealed, solid rear doors dampen equipment noise
- **Bond Vertical Exhaust Duct with single connection improves system reliability and protection to personnel** – Entire VED is fully electrically bonded to the cabinet requiring no grounding whips for protection of equipment and personnel

Monitor to Maintain Operational and Energy Efficiency

Data Center Managers are challenged to maintain and manage energy efficiency gains in a highly dynamic environment in which power consumption and environmental variables are constantly changing. Without the ability to monitor these variables in the data center, efficiency gains, PUE reductions and capacity utilization can erode over time leading to a higher total cost of ownership.



Panduit® PIM™ and Unite Technologies™ by Panduit Platforms Enable Real-Time Monitoring, Visualization, and Reporting

Panduit® PIM™ and Unite Technologies™ by Panduit Software and Hardware Platforms produce management information by monitoring power and environmental conditions in real time. This enables data center managers to manage power consumption and PUE as the data center evolves and prevents increased operational costs as energy efficiency declines.



Unite Technologies™ by Panduit Dashboard Example

PViQ™ and Unite Technologies™ POU's and Hardware

Panduit offers a wide range of Power Outlet Units (POUs), gateways, and environmental sensors that integrate seamlessly into Panduit cabinets and DCIM Software Platforms to enable real time monitoring. Intelligent POU's have network capabilities with optional environmental and switching capabilities that enable real time monitoring down to the individual device level.

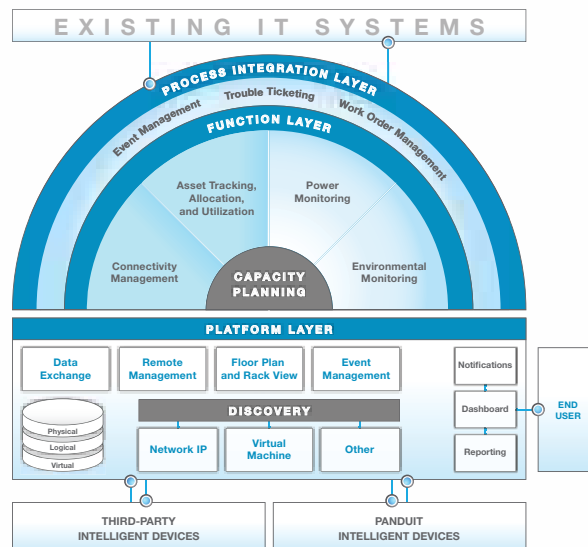
These options allow you to manage power, cooling and space at the cabinet level for reduced operational costs, increased capacity utilization and improved network reliability. (See page 28 and 29 for examples of POU's and Sensors)

Please refer to Panduit® Physical Infrastructure Manager (PIM™) Software Platform Brochure SA-PVCB24 and Unite by Panduit "Driving Integration" Capabilities Brochure



Leverage Real Time Information to Optimize Data Center Operations

Power and environmental monitoring is only one component of Panduit's DCIM offering. The Panduit® Physical Infrastructure Manager™ (PIM™) Software Platform is a physical infrastructure management system for tracking the allocation and utilization of critical IT assets within your data center and throughout today's fast-paced enterprise. The Panduit platform lays the foundation for effective Data Center Infrastructure Management (DCIM) through accurate and timely dashboards and documentation of these physical assets, improved visibility into asset moves, adds, and changes (MACs), and process-driven integration with applicable management systems.



PIM™ Software Function and Architecture
 Visit www.panduit.com/Software/PIMSolutions
 for more information.

Net-Access™ N-Type Cabinets

Optimum Accessibility and Cable Management for High Density Applications

Net-Access™ N-Type Cabinets are the first choice for data center managers and systems integrators specifying high density network, storage and compute applications that require optimal thermal management and the capacity to manage high cable densities.

Integral cabinet air seal features and integration with passive hot and cold air containment components drive efficient utilization of cooling capacity and reduce cooling energy consumption. The Net-Access™ inset frame design efficiently manages large quantities of cables and provides space for unmatched access reducing operational costs. This industry leading design also maximizes airflow and provides easy access to equipment for ongoing operational efficiencies, providing exceptional value in a 800mm (31.5") wide enclosure.



Inset frame provides up to 10% more space for cable management and cooling airflow

Industry leading inset cabinet frame posts create a large area for airflow to provide proper heat dissipation and enable easy access to equipment, in-cabinet ducting and cabling, speeding deployments and reducing operational costs.



Dual hinged doors speed deployments and moves, adds, and changes by 30%

IT staff is scarce, downtime is expensive. For a 120 rack dynamic data center, our cabinets save you up to an hour a day, adding up to \$18,250 per year savings for your staff.



Efficiently manage high cable densities

Modular snap in fingers align with rack spaces to simplify cable management, providing proper bend radius control and organizing cables for faster moves, adds and changes and installations.





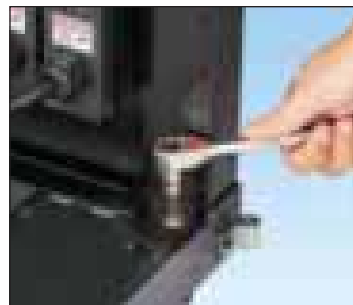
Open rail mounting creates more cable management space and equipment positioning flexibility

High strength frame eliminates need for support members between rails, providing unobstructed space between the frame and the side panels.



Vertical split side panels enable fast access to equipment

Innovative vertical split side panels and optional vertical split hinged side panels allow fast easy access to end of row network equipment and cabling, eliminating time consuming handling.



Innovative Leveling Feet Design Reduces Cabinet Installation Time by 80%

Heavy duty, M14 thread top drive leveling feet are easily accessed and allow cabinets to be leveled in less time than typical leveling feet. For example, to install 100 cabinets, the competition requires 1-1/2 days compared to less than 2 hours with Panduit.



Bond cabinets to the MCBN with single connection, reducing installation time

Entire cabinet is fully electrically bonded, requiring no grounding whips to doors or side panels for protection of equipment and personnel.

Net-Access™ S-Type Cabinets

Cost Effective and Versatile Cabinets for all Data Center Applications and Facilities Designs

Net-Access™ S-Type Cabinets provide data center managers and systems integrators an unprecedented range of features in a cost effective cabinet platform for server, network, and pre-configured cabinet applications.

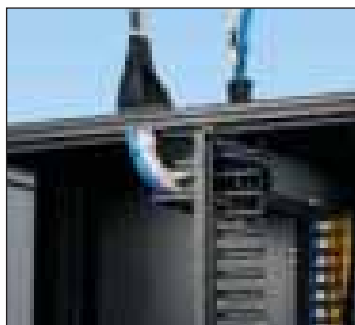
Integral cabinet air seal features and seamless integration with passive hot and cold air containment components provide efficient utilization of cooling capacity and contribute to reduced cooling energy consumption. An innovative frame design maximizes RU utilization saving as much as 15% of the floor space while safely accommodating dynamic equipment loads. Offered in a variety of widths, heights, and depths, they can be specified for a variety of applications in any facility to meet the diverse application needs of today's data centers.



Large selection of standard cabinet widths, heights, and depths offered in:

- 600mm (24"), 700mm (28"), and 800mm (31.5") Widths
- 1067mm (42") and 1200mm (48") Depths
- 42 RU, 45 RU, and 48 RU Heights
- Black and White Colors
- Static Load Rating 1,364kg (3,000 lb.)
- Rolling Load Rating 1,136kg (2,500 lb.)
- Dynamic Shock Pallet Rating of 1,250 lb. and 2,000 lb.





Out-Set Cable Entry Improves Floor Space Utilization by 5%

Network cable entry locations are outside of equipment area, allowing top 2 RUs to be used, optimizing cabinet utilization and saving floor space.



Zero RU E-Rail Vertical Patching Adds Capacity and Improves Floor Space Utilization by 10%

Unique Zero RU E-Rail is the industry's only vertical patching system for 600mm (24") wide cabinets integrating with Quick-Net™ Copper and Fiber Cabling Systems, optimizing cabinet utilization and saving floor space.



Innovative Leveling Feet Design Reduces Cabinet Installation Time by 80%

Heavy duty, M14 thread top drive leveling feet are easily accessed and allow cabinets to be leveled in less time than typical leveling feet. For example, to install 100 cabinets, the competition requires 1-1/2 days compared to less than 2 hours with Panduit.

A 15% savings in floor space means you can build a 420 server POD with 10 server cabs versus a competitor's cabinet that would require 12 server cabinets to hold equivalent amount of servers. CapEx savings¹⁰ \$900/ft² x 16ft² = \$14,400 capital savings per POD.

10) Cost Model: Dollars per kW plus Dollars per Square Foot of Computer Floor, Uptime 2008

Simplify and Accelerate Data Center Deployments

Net-Access™ Cabinets Enable Pre-Configuration of Network Equipment

Pre-Configured Solutions Add Value and Reduce Installation Time and Cost

Dynamic rated Net-Access™ N-Type and S-Type Cabinets allow pre-installation of IT equipment for faster deployments and time to production. Panduit Pre-Configured Solutions are fully tested and validated physical infrastructures that ensure best practice installations and optimal system performance. Each configuration accelerates deployment and promotes rapid upgrades requiring zero reconfigurations and downtime.

Fast, Single Part Number Quoting and Procurement

Simply attach pre-priced, robust Pre-Configured Solutions to active gear quotes:

- Reduce quote time
- Procure complete infrastructures with a single part number
- Ensure accurate delivery of all parts to the job site

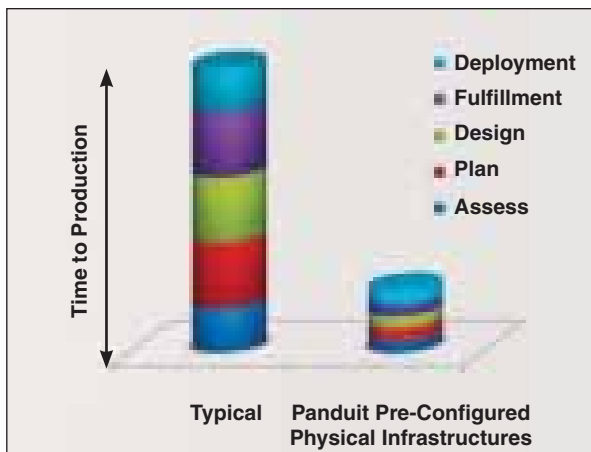
Maximize the Speed of Deployment and Overall Execution

Pre-Configured Solutions can save up to 80% in deployment time.

- Solutions arrive pre-assembled, kitted, and ready to rack and roll
- Factory installed cable managers, patch cable kits, and cabling instructions ensure a precise deployment and professional appearance



**Nexus 7009 "Heavy Copper"
Pre-Configured Physical Infrastructure**



Reduced Time to Production up to 80%

Arrive factory designed, tested, and validated to improve:

- Assessment time up to 80%
- Planning time up to 80%
- Design time up to 80%
- Fulfillment time up to 90%
- Deployment time up to 65%

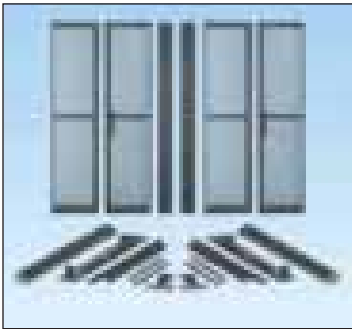
Refer to Panduit Pre-Configured Physical Infrastructures for Cisco^ Nexus, UCS, and Catalyst Platforms, SA-RKCB17.

**Major Private Cloud Provider
reduced system assembly
time by up to 7 hours per
cabinet, improving cost
and speeding delivery**

^Cisco is a registered trademark of Cisco Technology, Inc.

Net-Access™ Cabinet and Thermal Management Solution for Cisco^ Nexus 7018 Switch

Panduit offers a Net-Access™ Cabinet solution designed to meet the thermal and operating requirements of the modular, high density Cisco^ Nexus 7018 Switch. Based on a standard 800mm (31.5") wide Net-Access™ N-Type Cabinet, an easy to use expansion module provides space to route and manage high densities of cables. Internal ducting enables front to back cooling air flow and improved reliability.



Simple conversion for Standard 800mm N-Type Cabinet

Extension kit enables 800mm Net-Access™ N-Type Cabinet to be extended to 1,000mm (40") wide, reducing shipping costs and simplifying handling.



Passive inlet and exhaust duct ensures cooling airflow

Prevents recirculation of exhaust air into the switch, ensuring lower inlet temperature and reduced fan energy consumption.



Cable management fingers route, manage and protect high cable densities

Fingers align with rack spaces to ensure proper bend radius and superior management of high densities of I/O cables, keeping them clear of cold air flow while maintaining access to power supplies and fan modules, reducing operational costs.



Net-Access™ N-Type Cabinet with Cisco^ Nexus 7018 Expansion Module Installed

Net-Access™ Integral Cabinet Top Cable Routing System

Speed deployments and optimize overhead space utilization

Net-Access™ Cabinets are available with an Integral Cabinet Top Cable Routing System that protects, routes, and manages large quantities of twisted pair data cables into and out of any Net-Access™ Cabinet. This versatile system mounts to the top of the cabinets and easily integrates with other cable pathways used throughout the data center, providing up to a 30% reduction in installation costs.



Net-Access™ Integral Cabinet Top Cable Routing System deployed on Net-Access™ Cabinets.

Please contact us to discuss your application and the availability of the Net-Access™ Integral Cabinet Top Pathway System to meet your specific cable routing plan.

Net-Access™ N-Type Cabinet Specifications

- Welded and assembled steel frame construction
- Easy maintenance powder coat finish
- Adjustable rear equipment rails with infinite positioning
- Internal equipment space (max) 1070mm Cabinet – 995mm (39.1")
- Internal equipment space (max) 1200mm Cabinet – 1147mm (45.1")
- Doors include keyed swing handles
- Side panels
- Dual hinge door for maximum accessibility between adjacent cabinets
- Cabinet supplied with high density cable management fingers
- Cable entry holes are equipped with plastic sealing plugs
- Static Load of 1,364kg (3,000 lb.)
- Rolling Load of 1,136kg (2,500 lb.)
- Cabinet ships assembled, one per pallet
- Dynamic/Shock Pallet (1,250 & 2,000 lb.) ratings
- N-Type Cabinets include hardware kit: #12-24 screws, or M6 screws and cage nuts
- Casters are supplied separately

Net-Access™ S-Type Cabinet Specifications

- Welded and assembled steel frame construction
- Easy maintenance powder coat finish
- Adjustable front and rear equipment rails with infinite positioning
- Doors include keyed swing handles
- Side panels include keyed quarter-turn latches
- Large cable entry/cable access
- Cabinet supplied with standard density cable management fingers
- Cable entry holes are equipped with plastic sealing plugs
- UL Listed Static Load of 1,364kg (3,000 lb.)
- UL Listed Rolling Load of 1,136kg (2,500 lb.)
- Cabinet ships assembled, one per pallet
- Dynamic/Shock Pallet (1,250 and 2,000 lb.) ratings
- S-Type Cabinets include hardware kit: M6 screws, and cage nuts
- Casters are pre-installed

Part Number Identification Guide

Series	Width	Height	Depth	Side Panels	Color	Configuration
N = Network	6 = 600mm	2 = 42 RU	1 = 1070mm	1 = 1 side panel*	B = Black	B = basic (no cable management)
S = Server	7 = 700mm 8 = 800mm	5 = 45 RU 8 = 48 RU	2 = 1200mm	2 = 2 side panels* 9 = no side panels	W = White	F = fingers (1) set H = high density cable manager P = vertical patching A = switch configured with front fingers, cage nut rail, no POU bracket (S-Type only) C = cage nut rails (N-Type only) G = no doors and no cable management (N-Type only) J = split door (front) Z = frame only – no doors, no side panels, no cable mgmt, no e-rails, top cap included L = split door (front), cage nut rails (N-Type only) S = no doors Q = cage nut rails, no doors (N-Type only) R = casters (N-Type only) W = casters, cage nut rails, single hinge front door (N-Type only) X = casters, cage nut rails, POU brackets, single hinge front door (N-Type only) E = single hinge door, and cage nut rails (N-Type only) V = VED top ready, solid rear doors, no cable management (unless otherwise noted) T = integral cabinet top cable routing D = dynamic shipping K = 7018 ducting (N-Type only) N = vertical blanking panels, solid rear split doors VED top ready U = vertical blanking panels, cage nut rails, (N-Type only) M = vertical blanking panels (N-Type only) Y = vertical blanking panels, cage nut rails, solid rear split doors, VED top ready 2 = network server cabinet (front and rear cable management) (S-Type only)

* Standard Side Panel

Net-Access™ Cable Capacity Charts

	Top Cap Opening Cable Capacity								
	Area		Cable Capacities						
	In. ²	Cm. ²	Cat. 6A (0.354")	Cat. 6A (0.310")	Cat. 6A (0.297")	Cat. 6 (0.250")	Cat. 5e (0.187")	Fiber (3mm)	QuickNet™ Cassettes
5" x 3.5"	15.6	100.7	63	82	90	127	227	569	8
5" x 1.5"	6.5	42.2	26	34	37	53	95	239	8

	Cable Pathways (Per Side)								
	Area		Cable Capacities						
	In. ²	Cm. ²	Cat. 6A (0.354")	Cat. 6A (0.310")	Cat. 6A (0.297")	Cat. 6 (0.250")	Cat. 5e (0.187")	Fiber (3mm)	

S-Type (Rear Side)

600x1070	18.5	119.4	75	98	106	150	269	675
600x1200	30.5	196.8	123	161	176	248	444	1113
700x1070	32.4	208.9	131	171	186	263	471	1181
700x1200	53.4	344.4	216	282	308	434	777	1948
800x1070	46.3	298.4	187	245	267	376	673	1688
800x1200	76.3	491.9	309	404	440	621	1110	2783

N-Type (Front Side)

800x1070	43.8	282.7	178	232	252	357	638	1599
800x1200	43.8	282.7	178	232	252	357	638	1599

Net-Access™ N-Type Cabinet Part Numbers

Base Cabinet Configuration:

- Net-Access™ N-Type Cabinet frame with top panel
- Tapped equipment rails (#12-24)
- Dual hinge perforated front door opens to the left or right
- Split perforated rear doors open in the middle to minimize door swing footprint
- Solid side panels
- Cable management on front and rear of front posts



Part Number	Description
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800mm x 1070mm x 45 RU

Dimensions: 84.0"H x 31.5"W x 42.0"D (2134mm x 800mm x 1067mm)

With Two Side Panels

N8512B	Base cabinet configuration.
N8512BC	With cage nut rails.
N8512BE	With cage nut rails and single hinge front door.
N8512BU	With cage nut rails and vertical blanking panels – containment ready.
N8512BT	With top of cabinet pathway.

No Side Panels

N8519B	Base cabinet configuration.
N8519BC	With cage nuts.
N8519BS	No doors.
N8519BQ	With cage nut rails and no doors.
N8519BL	With cage nut rails and split front door.
N8519BG	No doors and no cable management.
N8519BU	With cage nut rails and vertical blanking panels – containment ready.

800mm x 1200mm x 45 RU

Dimensions: 84.0"H x 31.5"W x 48.0"D (2134mm x 800mm x 1219mm)

With Two Side Panels

N8522BC	With cage nut rails.
N8522BE	With cage nut rails and single hinge front door.
N8522BU	With cage nut rails and vertical blanking panels – containment ready.

No Side Panels

N8529B	Base cabinet configuration.
N8529BC	With cage nut rails.
N8529BU	With cage nut rails and vertical blanking panels – containment ready.
N8529BY	With cage nut rails, solid rear door, and vertical blanking panels – VED ready.

With One Side Panel

N8521BU	Base cabinet configuration.
N8521BY	With cage nut rails and solid rear door and vertical blanking panels – VED ready.

800mm x 1070mm x 42 RU

Dimensions: 78.8"H x 31.5"W x 42.0"D (2000mm x 800mm x 1067mm)

With Two Side Panels

N8212BC	With cage nut rails.
N8212BL	With cage nut rails and split front door.
N8212BW	With cage nut rails, casters, and single hinge front door – casters add 26mm (1") to height.
N8212BE	With cage nut rails and single hinge front door.
N8212BU	With cage nut rails and vertical blanking panels – containment ready.

For other colors replace suffix B (Black) with W (White).

Net-Access™ N-Type Cabinet Part Numbers (continued)

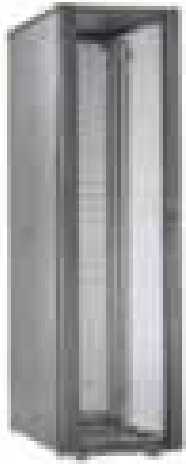
Part Number	Description
No Side Panels	
N8219BC	With cage nut rails.
N8219BU	With cage nut rails and vertical blanking panels – containment ready.
800mm x 1200mm x 42 RU	
Dimensions: 78.8"H x 31.5"W x 48.0"D (2000mm x 800mm x 1219mm)	
With Two Side Panels	
N8222B	Base cabinet configuration.
N8222BM	With vertical blanking panels – containment ready.
N8222BW	With cage nut rails, casters, and single hinge front door – casters add 26mm (1") to height.
N8222BE	With cage nut rails and vertical blanking panels – containment ready.
No Side Panels	
N8229B	Base cabinet configuration.
N8229BM	With vertical blanking panels – containment ready.
N8229BN	With solid rear door and vertical blanking panels – VED ready.
With One Side Panel	
N8221BN	With solid rear door and vertical blanking panels – VED ready.
800mm x 1070mm x 48 RU	
Dimensions: 89.3"H x 31.5"W x 42.0"D (2267mm x 800mm x 1067mm)	
With Two Side Panels	
N8812B	Base cabinet configuration.
N8812BC	With cage nut rails.
N8812BE	With cage nut rails and single hinge front door.
No Side Panels	
N8819B	Base cabinet configuration.
N8819BC	With cage nut rails.
800mm x 1200mm x 48 RU	
Dimensions: 89.3"H x 31.5"W x 48.0"D (2267mm x 800mm x 1219mm)	
With Two Side Panels	
N8822B	Base cabinet configuration.
N8822BC	With cage nut rails.
N8822BW	With cage nut rails, casters and single hinge front door.
N8822BE	With cage nut rails and single hinge front door.
No Side Panels	
N8829B	Base cabinet configuration.
N8829BC	With cage nut rails.

For other colors replace suffix B (Black) with W (White).

Net-Access™ S-Type Cabinet Part Numbers

Base Cabinet Configuration:

- Net-Access™ S-Type Cabinet frame with top panel
- Cage nut rails
- Single hinge perforated front door
- Split perforated rear doors open in the middle to minimize door swing footprint
- Solid side panels
- Casters and POU brackets included
- Cable management on front and rear of front posts



Part Number	Description
600mm Wide x 1070mm Deep x 42 RU Dimensions: 79.8"H x 23.6"W x 42.0"D (2026mm x 600mm x 1067mm)	
S6212B	Base cabinet configuration.
S6212BP	Zero RU QuickNet™ Style Vertical Patching Rails instead of basic rails.
600mm Wide x 1070mm Deep x 45 RU Dimensions: 85.0"H x 23.6"W x 42.0"D (2160mm x 600mm x 1067mm)	
S6512B	Base cabinet configuration.
S6512BP	Zero RU QuickNet™ Style Vertical Patching Rails instead of basic rails.
600mm Wide x 1070mm Deep x 48 RU Dimensions: 90.3"H x 23.6"W x 42.0"D (2292mm x 600mm x 1067mm)	
S6812B	Base cabinet configuration.
S6812BP	Zero RU QuickNet™ Style Vertical Patching Rails instead of basic rails.
600mm Wide x 1200mm Deep x 42 RU Dimensions: 79.8"H x 23.6"W x 48.0"D (2026mm x 600mm x 1219mm)	
S6222B	Base cabinet configuration.
S6222BP	Zero RU QuickNet™ Style Vertical Patching Rails instead of basic rails.
S6222BV	VED ready in Black.
600mm Wide x 1200mm Deep x 45 RU Dimensions: 85.0"H x 23.6"W x 48.0"D (2160mm x 600mm x 1219mm)	
S6522B	Base cabinet configuration.
S6522BP	Zero RU QuickNet™ Style Vertical Patching Rails instead of basic rails.
S6522BV	VED ready in Black.
600mm Wide x 1200mm Deep x 48 RU Dimensions: 90.3"H x 23.6"W x 48.0"D (2292mm x 600mm x 1219mm)	
S6822B	Base cabinet configuration.
S6822BP	Zero RU QuickNet™ Style Vertical Patching Rails instead of basic rails.
S6822BV	VED ready in Black.
700mm Wide x 1070mm Deep x 42 RU Dimensions: 79.8"H x 27.6"W x 42.0"D (2026mm x 700mm x 1067mm)	
S7212B	Base cabinet configuration.
S7219B	No side panels.
700mm Wide x 1070mm Deep x 45 RU Dimensions: 85.0"H x 27.6"W x 42.0"D (2160mm x 700mm x 1067mm)	
S7512B	Base cabinet configuration.
S7519B	No side panels.

For other colors replace suffix B (Black) with W (White).

Net-Access™ S-Type Cabinet Part Numbers (continued)

Part Number	Description
700mm Wide x 1070mm Deep x 48 RU	
Dimensions: 90.3"H x 27.6"W x 42.0"D (2292mm x 700mm x 1067mm)	
S7812B	Base cabinet configuration.
S7819B	No side panels.
700mm Wide x 1200mm Deep x 42 RU	
Dimensions: 79.8"H x 27.6"W x 48.0"D (2026mm x 700mm x 1219mm)	
S7222B	Base cabinet configuration.
S7229B	No side panels.
700mm Wide x 1200mm Deep x 45 RU	
Dimensions: 85.0"H x 27.6"W x 48.0"D (2160mm x 700mm x 1219mm)	
S7522B	Base cabinet configuration.
S7522BV	VED ready.
S7529B	No side panels.
700mm Wide x 1200mm Deep x 48 RU	
Dimensions: 90.3"H x 27.6"W x 48.0"D (2292mm x 700mm x 1219mm)	
S7822B	Base cabinet configuration.
S7822BV	VED ready.
S7829B	With solid rear door – VED ready.
800mm Wide x 1070mm Deep x 42 RU	
Dimensions: 79.8"H x 31.5"W x 42.0"D (2026mm x 800mm x 1067mm)	
S8212B	Base cabinet configuration.
S8219B	No side panels.
800mm Wide x 1070mm Deep x 45 RU	
Dimensions: 85.0"H x 31.5"W x 42.0"D (2160mm x 800mm x 1067mm)	
S8512B	Base cabinet configuration.
S8519B	No side panels.
S8512BF	Includes 1 set of rear cable management fingers.
S8519BF	No side panels, includes 1 set of rear cable management fingers.
S8519BS	No doors, no side panels.
S8519BT	With top of cabinet pathway.
800mm Wide x 1070mm Deep x 48 RU	
Dimensions: 90.3"H x 31.5"W x 42.0"D (2292mm x 800mm x 1067mm)	
S8812B	Base cabinet configuration.
S8819B	No side panels.
800mm Wide x 1200mm Deep x 42 RU	
Dimensions: 79.8"H x 31.5"W x 48.0"D (2026mm x 800mm x 1219mm)	
S8222B	Base cabinet configuration.
S8229B	No side panels.
800mm Wide x 1200mm Deep x 45 RU	
Dimensions: 90.3"H x 31.5"W x 48.0"D (2292mm x 800mm x 1219mm)	
S8522B	Base cabinet configuration.
S8529B	No side panels.
S8522BV	VED ready.

For other colors replace suffix B (Black) with W (White).

Net-Contain™ Vertical Exhaust Ducts (VEDs) and Cold Aisle Containment System



Part Number	Description
Net-Contain™ Vertical Exhaust Duct	
C2VED**I1626^^	Net-Contain™ VED **mm width cabinet – 406mm (16") up to 660mm (26") height – ^^ colored.
C2VED**I2638^^	Net-Contain™ VED **mm width cabinet – 660mm (26") up to 965mm (38") height – ^^ colored.
C2VED**I3866^^	Net-Contain™ VED **mm width cabinet – 965mm (38") up to 1,676mm (66") height – ^^ colored.

** = 08 = 800mm, 07 = 700mm, 06 = 600mm ^^ = B1 = Black, W1 = White.

Net-Contain™ Cold Aisle Containment Sliding Doors

C2CACT5F**SD^^	Net-Contain™ Sliding Door CAC for **ft(**mm) aisle- capable of 42 up to 45 RU – ^^ colored.
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** = 04 = 4ft (1200mm), 06 = 6ft (1800mm) ^^ = B1 = Black, W1 = White.

Net-Contain™ Integral Low Profile Ceiling Structure

C2CAC08F**IR^^	Net-Contain™ (CAC) Integral Roof for 800mm width cabinet with **ft (**mm) aisle width – ^^ colored.
C2CAC07F**IR^^	Net-Contain™ (CAC) Integral Roof for 700mm width cabinet with **ft (**mm) aisle width – ^^ colored.
C2CAC06F**IR^^	Net-Contain™ (CAC) Integral Roof for 600mm width cabinet with **ft (**mm) aisle width – ^^ colored.

** = 04 = 4ft (1200mm), 06 = 6ft (1800mm) ^^ = B1 = Black, W1 = White.

Net-Contain™ Integral Roof Wall Panels

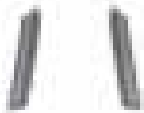
C2CAC**F08WP^^	Net-Contain™ Integral Roof Wall Panel for **mm width cabinet – ^^ colored.
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** = 08 = 800mm, 07 = 700mm, 06 = 600mm ^^ = B1 = Black, W1 = White.

Net-Contain™ Integral In-Row Cooling Adapter

C2CAC**ABWPA^^	In-row cooling adapter.
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** = 06 = 600mm, 04 = 400mm, 03 = 300mm ^^ = B1 = Black, W1 = White.



Net-Access™ N-Type and S-Type Accessories



SN15F



SN25F



NCSTR4

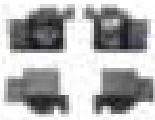


NVPDUB

Part Number	Description
N and S-Type Cabinet Accessories	
SN15F	Net-Access™ S and N-Type Cabinet 100mm Depth Finger Kit for 42 RU and 45 RU cabinets.
SN25F	Net-Access™ S and N-Type Cabinet 150mm Depth Finger Kit for 42 RU and 45 RU cabinets.
N-Type Cabinet Accessories	
NCSTR4	Net-Access™ N-Type Casters for switch cabinets.
NVPDUB	Net-Access™ N-Type POU Brackets for switch cabinets.
NVBP	Net-Access™ N-Type Vertical Blanking Panels with pass-through holes for cabinets 42 RU through 48 RU.

Net-Access™ N-Type and S-Type Accessories (continued)

Part Number	Description
N-Type Cabinet Standard Side Panels	
N21SPS	42 RU 1070mm Depth Net-Access™ N-Type Cabinet Side Panel.
N51SPS	45 RU 1070mm Depth Net-Access™ N-Type Cabinet Side Panel.
N81SPS	48 RU 1070mm Depth Net-Access™ N-Type Cabinet Side Panel.
N22SPS	42 RU 1200mm Depth Net-Access™ N-Type Cabinet Side Panel.
N52SPS	45 RU 1200mm Depth Net-Access™ N-Type Cabinet Side Panel.
N82SPS	48 RU 1200mm Depth Net-Access™ N-Type Cabinet Side Panel.
N-Type Cabinet Split Hinged Side Panels	
N21SPH	42 RU 1070mm Depth Net-Access™ N-Type Cabinet Split Hinged Side Panel for end of row.
N51SPH	45 RU 1070mm Depth Net-Access™ N-Type Cabinet Split Hinged Side Panel for end of row.
N81SPH	48 RU 1070mm Depth Net-Access™ N-Type Cabinet Split Hinged Side Panel for end of row.
N22SPH	42 RU 1200mm Depth Net-Access™ N-Type Cabinet Split Hinged Side Panel for end of row.
N52SPH	45 RU 1200mm Depth Net-Access™ N-Type Cabinet Split Hinged Side Panel for end of row.
N82SPH	48 RU 1200mm Depth Net-Access™ N-Type Cabinet Split Hinged Side Panel for end of row.
7018 Cabinet Kits	
N1000EXT	Extension kit to expand 800mm wide x 1200mm deep Net-Access™ N-Type Cabinet to 1000mm. For use with cabinets N8229BS, N8529BS, and N8829BS.
N2SD1000	One set of split doors (used front or back) for 1000mm wide Net-Access™ N-Type Cabinet 42 RU.
N5SD1000	One set of split doors (used front or back) for 1000mm wide Net-Access™ N-Type Cabinet 45 RU.
N8SD1000	One set of split doors (used front or back) for 1000mm wide Net-Access™ N-Type Cabinet 48 RU.
7018 Cabinet Duct Kits	
DIEBCC7018B	Cisco^ Nexus 7018 inlet/exhaust duct.
DIRLD0425S27W	Cisco^ Nexus 7018 inlet duct.
C2VBP10A4248B1	42 RU Net-Access™ N-Type Cabinet vertical blanking panels for Cisco^ Nexus 7018.
C2VBP10A4548B1	42 RU Net-Access™ N-Type Cabinet vertical blanking panels for Cisco^ Nexus 7018.
C2VBP10A4848B1	42 RU Net-Access™ N-Type Cabinet vertical blanking panels for Cisco^ Nexus 7018.
S-Type Cabinet Accessories	
S2BRK6	Net-Access™ S-Type Cable Management Bracket 6" full length 42 RU for server cabinets.
S2BRK12	Net-Access™ S-Type Cable Management Bracket 12" full length 42 RU for server cabinets.
S2DR	Net-Access™ S-Type D-Ring Kit for full length POU bracket (bag of 8 pcs.).
S2LR	Net-Access™ S-Type L-Ring Kit for full length POU bracket (bag of 8 pcs.).
S2EOR1BA1070B1	Net-Access™ S-Type End of Row Seal 1070mm for server cabinets.
S2EOR1CA1200B1	Net-Access™ S-Type End of Row Seal 1200mm for server cabinets.
SCSTR4	Net-Access™ S-Type Casters for server cabinets.
S-Type Cabinet Side Panels	
S21SPS	42 RU 1070mm Depth Net-Access™ S-Type Cabinet Standard Side Panel.
S51SPS	45 RU 1070mm Depth Net-Access™ S-Type Cabinet Standard Side Panel.
S81SPS	48 RU 1070mm Depth Net-Access™ S-Type Cabinet Standard Side Panel.
S22SPS	42 RU 1200mm Depth Net-Access™ S-Type Cabinet Standard Side Panel.
S52SPS	45 RU 1200mm Depth Net-Access™ S-Type Cabinet Standard Side Panel.
S82SPS	48 RU 1200mm Depth Net-Access™ S-Type Cabinet Standard Side Panel.



SCSTR4

^Cisco is a registered trademark of Cisco Technologies, Inc.

Net-Access™ In-Cabinet Ducting



CDE1



CDE2



CNLTD21B2



CNLTD52A2



CNLTD142A3



CNLTD72A3



DIBBC2314S21W



DIRLC2214M21W



Exhaust Ducts

Part Number	Description
Inlet Ducts	
CDE1	One rack unit air inlet duct that resides below the switch provides cold aisle airflow to Cisco^ 4948, 4928, and 4924. Optimized for use in server cabinet applications.
CDE2	Two rack unit air inlet duct that resides in-line and below switch provides cold aisle airflow to Cisco^ Nexus N2K-C2148T-1GE, N2K-C2248TP-1GE, and N2K-C2232PP-10GE fabric extenders and Cisco^ WS-C4948E-F, WS-C4948E-F-S, and WS-C4948E-F-E. Optimized for use in server cabinet applications.
CNLTD21B2	Two rack unit air inlet duct that resides below switch. Designed for Cisco^ 4900M switch. Duct allows switch ports to face either hot or cold aisle depending on server or switch cabinet application.
CNLTD52A2	Net-Access™ Cabinet Air Inlet Duct for high heat density configurations. Duct solution includes two rack unit inlet ducts above and below the switch. Designed for Cisco^ 6504E switch.
CNLTD142A3	Cisco^ Nexus 7009 duct delivers cold air to the switch side inlet. This duct consists of two inlet ducts and one side duct.
CNLTD72A3	Net-Access™ Cabinet Air Inlet Duct for high heat density configurations. Duct solution includes three rack unit inlet ducts above and below the switch. Designed for Cisco^ MDS 9506 switch.
DIBBC2314S21W	Net-Access™ Cabinet Air Inlet Duct Designed for Cisco^ 9513 switch.
DIRLC2214M21W	Net-Access™ Cabinet Air Inlet Duct Designed for Cisco^ 6509 switch.
Exhaust Ducts	
DERLCC6509A	Net-Access™ N-Type Cabinet 1070mm depth Exhaust Duct for high heat density configurations. Designed for Cisco^ 6509 switch.
DERLCC9513A	Net-Access™ N-Type Cabinet 1070mm depth Exhaust Duct for high heat density configurations. Designed for Cisco^ 9513 Switch.
DERLCC7009A	Net-Access™ N-Type Cabinet 1070mm depth Exhaust Duct for high heat density configurations. Designed for Cisco^ 7009 Switch.
DERLCC6513A	Net-Access™ N-Type Cabinet 1070mm depth Exhaust Duct for high heat density configurations. Designed for Cisco^ 6513 switch.

^Cisco is a registered trademark of Cisco Technologies, Inc.

Power Outlet Units (POUs) North America

Part Number	Description
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Vertical Metered POUs



VB1A1M2BM30P1

VB1A1M2BM30P1*	30A, Single Phase, L5-30P Plug, 120V, (24) C-13/(6) C-19 Receptacles.
VB1B1L2BN30P1*	30A, Single Phase, L6-30P Plug, 208V, (24) C-13/(6) C-19 Receptacles.
VB1B1J0BA30P1*	20A, 3 Phase WYE, L21-20P Plug, 208V, (24) C-13/(6) C-19 Receptacles.
VB1B1P3BN30P1*	30A, 3 Phase WYE, L21-30P Plug, 208V, (24) C-13/(6) C-19 Receptacles.
VB1B1N3BN30P1*	30A, 3 Phase Delta, L15-30P Plug, 208V, (24) C-13/(6) C-19 Receptacles.
VB1D1Q3BN30P1*	30A, 3 Phase WYE, L22-30P Plug, 230/400V, (24) C-13/(6) C-19 Receptacles.
VB1B2C3BN30P1*	60A, Single Phase, IEC 60309 - 6H 2P+E Blue Watertight Plug, 208V, (24) C-13/(6) C-19 Receptacles.

Vertical Networked with Environmental POUs



QZ1A1D0BA30P1

QN1A1D0BA30P1**	20A, Single Phase, L5-20P Plug, 120V, (24) C-13/(6) C-19 Receptacles.
QN1A1M2BM30P1**	30A, Single Phase, L5-30P Plug, 120V, (24) C-13/(6) C-19 Receptacles.
QN1B1F0BA30P1**	20A, Single Phase, L6-20P Plug, 208V, (24) C-13/(6) C-19 Receptacles.
QN1B1L2BN30P1**	30A, Single Phase, L6-30P Plug, 208V, (24) C-13/(6) C-19 Receptacles.
QN1B1J0BA30P1**	20A, 3 Phase WYE, L21-20P Plug, 208V, (24) C-13/(6) C-19 Receptacles.
QN1B1P3BN30P1**	30A, 3 Phase WYE, L21-30P Plug, 208V, (24) C-13/(6) C-19 Receptacles.
QN1B1N3BN30P1**	30A, 3 Phase Delta, L15-30P Plug, 208V, (24) C-13/(6) C-19 Receptacles.
QN1D1Q3BN30P1**	30A, 3 Phase WYE, L22-30P Plug, 230/400V, (24) C-13/(6) C-19 Receptacles.
QN1B2C3BN30P1**	60A, Single Phase, IEC 60309 - 6H 2P+E Blue Watertight Plug, 208V, (24) C-13/(6) C-19 Receptacles.

Vertical Switched with Per Outlet Monitoring POUs



QL1B1F0BA2401

QL1B1F0BA2401***	20A, Single Phase, L6-20P Plug, 208V, (21) C-13/(3) C19 Locking Receptacles.
QL1B1L2BN24AA1***	30A, Single Phase, L6-30P Plug, 208V, (20) C-13/(4) C19 Locking Receptacles.
QL1B1J0BA2401***	20A, 3 Phase WYE, L21-20P Plug, 208V, (21) C-13/(3) C19 Locking Receptacles.
QL1B1P3BN2401***	30A, 3 Phase WYE, L21-30P Plug, 208V, (21) C-13/(3) C19 Locking Receptacles.
QL1B2G6BN2491***	60A, 3 Phase Delta, IEC 60309 - 9H 3P+E Blue Splashproof Plug, 208V, (18) C-13/(6) C-19 Locking Receptacles.

*For no local monitor, replace "1" with "0", e.g. VB0A1M2BM30P1

** For Networked current monitoring, replace "QN" with "QZ", e.g. QZ1A1D0BA30P1

*** For Switched without per outlet monitoring, replace "QL1" with "QS1", e.g. QS1B1F0BA2401

Power Outlet Units (POUs) Global



VB1D2B2BM30P1



QZ1D2A0BA30P1



QL1D2A0BA2401

Part Number	Description
Vertical Metered POUs	
VB1D2A0BA30P1*	16A, Single Phase, IEC 60309 - 6H 2P+E Blue Splashproof Plug, 230V, (24) C-13/(6) C-19 Receptacles.
VB1D2B2BM30P1*	32A, Single Phase, IEC 60309 - 6H 2P+E Blue Splashproof Plug, 230V, (24) C-13/(6) C-19 Receptacles.
VB1D2P3BN30P1*	32A, 3 Phase WYE, IEC 60309 - 6H 3P+N+E Red Splashproof Plug, 230/400V, (24) C-13/(6) C-19 Receptacles.
VB1D2Q0BA30P1*	16A, 3 Phase WYE, IEC 60309 - 6H 3P+N+E Red Splashproof Plug, 230/400V, (24) C-13/(6) C-19 Receptacles.
Vertical Networked with Environmental POUs	
QN1D2A0BA30P1**	16A, Single Phase, IEC 60309 - 6H 2P+E Blue Splashproof Plug, 230V, (24) C-13/(6) C-19 Receptacles
QN1D2B2BM30P1**	32A, Single Phase, IEC 60309 - 6H 2P+E Blue Splashproof Plug, 230V, (24) C-13/(6) C-19 Receptacles
QN1D2Q0BA30P1**	16A, 3 Phase WYE, IEC 60309 - 6H 3P+N+E Red Splashproof Plug, 230/400V, (24) C-13/(6) C-19 Receptacles.
QN1D2P6BM30P1**	32A, 3 Phase WYE, IEC 60309 - 6H 3P+N+E Red Splashproof Plug, 230/400V, (24) C-13/(6) C-19 Receptacles.
QN1D2P3BN30P1**	32A, 3 Phase WYE, IEC 60309 - 6H 3P+N+E Red Splashproof Plug, 230/400V, (24) C-13/(6) C-19 Receptacles.
Vertical Switched with Per Outlet Monitoring POUs	
QL1D2A0BA2401***	16A, Single Phase, IEC 60309 - 6H 2P+E Blue Splashproof Plug, 230V, (24) C-13/(6) C-19 Receptacles.
QL1D2B2BN24AA1***	32A, Single Phase, IEC 60309 - 6H 2P+E Blue Splashproof Plug, 230V, (24) C-13/(6) C-19 Receptacles.
QL1D2Q0BA2401***	16A, 3 Phase WYE, IEC 60309 - 6H 3P+N+E Red Splashproof Plug, 230/400V, (24) C-13/(6) C-19 Receptacles.
QL1D2P3BN2401***	32A, 3 Phase WYE, IEC 60309 - 6H 3P+N+E Red Splashproof Plug, 230/400V, (24) C-13/(6) C-19 Receptacles.

*For no local monitor, replace "1" with "0", e.g. VB0A1M2BM30P1

** For Networked current monitoring, replace "QN" with "QZ", e.g. QZ1A1D0BA30P1

*** For Switched without per outlet monitoring, replace "QL1" with "QS1", e.g. QS1B1F0BA2401

PViQ™ Sensors Global



PVQ-EST-18



PVQ-ESTAFHD-18



PVQ-ESDPK



PVQ-ESWK

Part Number	Description
PVQ-EST-18	Environmental temperature sensor with 18' cord.
PVQ-ESTAFHD-18	Temperature, humidity, airflow, and dew point sensor with 18' cord.
PVQ-ESDPK	Door position sensor kit.
PVQ-ESWK	Water sensor kit.

Blanking Panels



TLBP1



TLBP2

Part Number	Description
Tool-Less Blanking Panels	
TLBP1S-V	19" (483mm) width for 3/8" cage nut holes (may be used with or without cage nuts installed). 1 RU.
TLBP2S-V	19" (483mm) width for 3/8" cage nut holes (may be used with or without cage nuts installed). 2 RU.
TLBP1R-V	19" (483mm) width for tapped rails. 1 RU.
TLBP2R-V	19" (483mm) width for tapped rails. 2 RU.

Sealing Accessories



CTGN1X5



CTGN3X5



CTCN1X5



CTCN3X5



BFS100X2000

Part Number	Description
Cool Boot® Cabinet Top Air Sealing Fitting	
CTGN1X5	Used to seal off 1" x 5" cabinet top openings when cables are routed through the top of a cabinet. Airtight fabric and Ultra-Cinch™ Tie close top of fabric, minimizing hot air bypass around cables to improve cooling of network equipment and reduce energy costs. For use with Net-Access™ Cabinets.
CTGN3X5	Used to seal off 3" x 5" cabinet top openings when cables are routed through the top of a cabinet. Airtight fabric and Ultra-Cinch™ Tie close top of fabric, minimizing hot air bypass around cables to improve cooling of network equipment and reduce energy costs. For use with Net-Access™ Cabinets.
CTGN6X6	Used to seal off 6.5" x 6.5" cabinet top openings when cables are routed through the top of a cabinet. Airtight fabric and Ultra-Cinch™ Tie close top of fabric, minimizing hot air bypass around cables to improve cooling of network equipment and reduce energy costs. For use with Net-Access™ Cabinets.
Cabinet Top Cover and Cable Protection Bezel	
CTCN1X5	Used to seal off 1.5" x 5" cabinet top openings. Can also be used to add the CTGN1X5 to openings where the snap-on cover has been removed. For use with Net-Access™ Cabinets.
CTCN3X5	Used to seal off 3.5" x 5" cabinet top openings. Can also be used to add the CTGN3X5 to openings where the snap-on cover has been removed. For use with Net-Access™ Cabinets.
CTNBZL6X6	Used to provide a protective edge for cables routed through the 6.5" x 6.5" cabinet top openings after knock-outs are removed. Can also be used to add the CTGN6X6 to openings where knock-out has been removed. For use with Net-Access™ Cabinets.
Blanking Foam Strips	
BFS100X2000	Adhesive-backed blanking foam strips conform to minimize gaps and prevent bypass air within network cabinets. Removable and repositionable acrylic-based adhesive is aggressive to provide suitable strength, however, will not leave residue on equipment 4.0" x 100" roll perforated 1.0" in width and 20.0" in length.

Energy Efficient Data Center Cabinet System

A Part of Panduit's Intelligent Data Center Solution

Panduit's Unified Physical InfrastructureSM (UPI)-based Intelligent Data Center Solutions embody the next wave of systems integration and risk management by aligning and harmonizing critical systems to support the delivery of secure, energy-efficient, always-on, real-time data and services. Energy Efficient Cabinet Systems are one of the key pillars of the Panduit Intelligent Data Center Solution that include:

Intelligent Software and Hardware — Panduit Physical Infrastructure Manager[™] (PIM[™]) Software Platform works seamlessly with PanView iQ[™] (PViQ[™]) System Hardware and select third-party devices providing an end-to-end physical to logical view of your data center and extended enterprise. Panduit's Intelligent Software and Hardware enable effective optimization of your data center's space, power, and capacity planning through 10% OpEx savings in energy costs, 75% faster moves, adds, and changes (MACs), and 80% faster mean time to repair (MTTR).

Data Center Advisory Services — Panduit Data Center Advisory Services provide a full range of physical infrastructure layer services to help you assess, design, and maintain resilient, sustainable solutions that deliver operational flexibility to reduce costs by up to 20%, and meet future requirements.

High Speed Data Transport (HSDT) Copper and Fiber Cabling Systems — Panduit HSDT Solutions are both protocol and media agnostic, delivering maximum flexibility during planning, designing, commissioning, and operation of the data center. Our HSDT Solutions enable advanced network architectures such as 10/40/100 Gig Ethernet LANs and 8/16/32 Gig Fibre Channel SANs and can provide a 10% improvement in network throughput.

Pre-Configured Physical Infrastructures — Panduit helps reduce deployment times up to 65% and mitigates the risk of adopting new technologies with reliable and robust Pre-Configured Infrastructures. Panduit utilizes optimized reference designs collaboratively engineered with our partners, to enhance the physical infrastructure of their technology platforms and seamlessly integrate physical and logical systems.

Physical Infrastructure Foundation — Critical to the deployment of our Intelligent Data Center solution is the physical infrastructure foundation in the data center, which includes such items as:

Pathways: Provide the best method to route and manage the growing amount of data and power cabling while ensuring high levels of network performance

Zone Cabling: Serves as a main distribution point for a particular zone, increasing network flexibility, manageability, accessibility, and efficiency

Bonding and Grounding: Provides a high quality, visually verifiable and dedicated grounding path to maintain system performance, improve network reliability, and protect network equipment and personnel

Identification and Labeling: Enhance the appearance of installations by presenting a clear and efficient way to label according to TIA/EIA-606-A standards

Real-World Solutions

With a proven reputation for excellence and innovation, Panduit and our partners work with you to overcome challenges and implement real-world solutions that create a competitive business advantage. Panduit offers the broadest range of solutions, from data centers and intelligent buildings to manufacturing operations, to help you build a **smarter, unified business foundation**.



Technology Leadership

Panduit develops innovative physical infrastructure solutions that meet the rapidly changing needs of our clients, from hardware and software to advisory services. This commitment is supported by investment in advanced research, solutions-focused product development, world-class manufacturing, and collaboration with customers at the forefront of technology.



Partner Ecosystem

Our best-in-class partner ecosystem offers a comprehensive portfolio of services that span the project lifecycle, from planning and design to delivery, deployment, maintenance, and operation. Panduit business partners – distributors, and certified architects, consultants, engineers, designers, system integrators, and contractors – are qualified to help you achieve your objectives and realize predictable and measurable results.



Strategic Alliances

Panduit cultivates long-term strategic alliances with industry leaders, including Cisco Systems, EMC, IBM, and Rockwell Automation, to develop, optimize, and validate solutions for our customers. This investment in people and resources helps solve our customers' greatest business challenges.



Global Business Commitment

Panduit is committed to delivering a consistently high level of quality and service the world over. With a presence in more than 100 countries, local Panduit sales representatives and technical specialists offer guidance and support that bring value to your business. Our global supply chain, which includes manufacturing, customer service, logistics, and distribution partners, provides prompt response to your inquiries and streamlines delivery to any worldwide destination.



Sustainability

With a commitment to environmental sustainability, Panduit develops and implements solutions that protect, replenish, and restore the world in which we live. This commitment is demonstrated by Panduit's LEED Gold certified World Headquarters, leveraging the Unified Physical InfrastructureSM approach to enable convergence of critical building systems to drive energy efficiency and ongoing operational improvement.

*Transform Your
Physical Infrastructure*

*Call or visit us online,
we can show you how.*

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