Infrastructure Solutions for Today and Tomorrow

DELL

4820D   4820W   4220D   4220W   4820   4220   2420
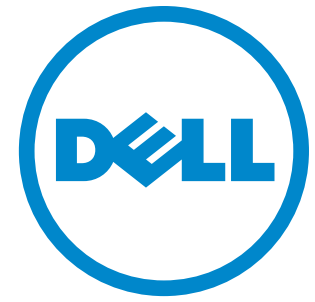
Dell™ PowerEdge™ Rack Enclosures

Dell PowerEdge Rack Enclosures Portfolio

You need racks that fit your business. Dell listened and now offers you an expanded portfolio of rack enclosures to meet the requirements for your data center today and tomorrow. Rack infrastructure from Dell helps you create an efficient design for your data center. Keeping with our focus on open standards, Dell racks can house not only your Dell servers, but also those you have purchased from other providers—allowing you to integrate existing and new equipment.

Options for every data center

Dell™ PowerEdge™ rack enclosures are designed to hold and protect your server, network, and data storage equipment. All Dell racks are solidly built with a sturdy, practical design and delivered with legendary service, support and reliability. The Dell PowerEdge rack enclosures are offered in three height options: 24U (2420), 42U (4220), and 48U (4820); each rack enclosure is available in the standard dimensions of 600mm wide and 1070mm deep to fit within a two-tile floor plan layout.

Dell has introduced both wide and deep versions of the PowerEdge rack enclosures to address specific requirements for power and cable management:

• Wide racks are useful for networking and blade server installations and other data centers that need to route cables in the sides of the rack.

• Deep racks can benefit high-density and cloud computing installations and other data centers with significant power demands by increasing PDU capacity in the back of the rack.

The 42U and 48U heights are available in the wide form factor, 750mm wide x 1070mm deep, and the deep form factor, 600mm wide x 1200mm deep. Dell racks are complemented with a range of data center infrastructure products which include basic and metered power distribution units (PDUs), rack-mount uninterruptible power supplies (UPSs), digital KVM (keyboard, video, mouse) console switches, and accessories.

Compatibility and flexibility

All Dell rack enclosure form factors adhere to the EIA-310-E standard for rack mounting of electronics—mounting posts for installing components are held in a consistent location, while the exterior of the rack is grown to the specified dimensions. This ensures compatibility with existing equipment to maximize return on investment (ROI) while providing you with more options for cable and power cord routing. Not only do Dell PowerEdge servers fit in these 19" racks, but also other enterprise systems including Dell PowerVault™, Dell EqualLogic™ and Dell/EMC storage, and PowerConnect™ networking switches as well as equipment from other providers.

Server, storage, and networking systems can be easily installed into the Dell PowerEdge 4820, 4220, and 2420 rack enclosures using the Dell ReadyRails™ static and sliding rail kits. Dell racks have four adjustable vertical mounting posts to enable positioning flexibility of IT equipment within the rack so you can place devices closer to the front door or to the rear door.

Power management

With more sizes for you to choose from, Dell racks provide the flexibility to accommodate a wide range of needs. In addition to U-space PDU mounting, the PowerEdge rack enclosures have specially designed trays inside the rear doors. You can easily install vertical PDUs that have mounting buttons without using any tools and they won't interfere with air circulation.

We know you want versatile solutions, so the PDU tray design provides you with more options for mounting vertical PDUs or routing cables and provides access to the square holes in the rear frame posts for additional cable management options. The PDU trays in the standard and wide racks can hold up to four full-height/extended-height or eight half-height units while the deep rack trays can accommodate twice as many units. Dell vertical PDUs are available in many configurations and can be combined within a rack. PDUs can also be mounted with a 90-degree rotation so that the power cords are directed toward the back of the rack rather than toward the middle.

Wide (750mm) racks in both 42U and 48U heights have three inches more space on each side for cables and PDUs for networking, blade server, and other installations that need improved access to the zero-U side space. The wide design of the 4820W and 4220W has extra distance between the mounting posts and the sides of the racks, moving the PDU trays away from the rack mounting posts and allowing plenty of room for your cables in the sides and back to help reduce interference with installed equipment and cables.

Deep (1200mm) racks offer generous space in the back of the enclosure for cables and PDUs in high-density installations. The 4820D and 4220D racks have expanded PDU trays in the back of the rack that you can use for additional power management or for routing cables.

PowerEdge Racks: Designed to fit your business

Cable management

Top canopy knock-outs and an adjustable rear-of-rack sliding cable exit door make it easier for you to route cables from above. The rack's large open base and removable side panels offer more options for cable access.

Removable tailbars located at both the top and bottom of the rear of the rack make cabling the IT equipment easier, especially in highly dense environments with 3-phase power cables deployed. The bars can be re-attached after the cables are in place.

Wide and deep rack options can benefit your data center installations that need additional rack space for cable and power management by addressing the space constraints between component cables and power cords.

Efficient cooling

Dell rack enclosures are designed for maximum airflow and the reduction of thermal issues, which means greater efficiency and power savings for your data center. The front and rear doors have 80% perforation to allow air to move through the rack and flexible air dams help keep hot air from recirculating from the back to the front. Dell's wide rack enclosure employs extended air dams across the front to ensure proper airflow containment. Available blanking panels can further manage airflow by filling unused U-space in the rack.

For hot-aisle/cold-aisle thermally efficient data center topologies, the standard rack enclosure fits within two standard floor tiles, in a space 2' wide x 3.5' deep. The 750mm wide rack is slightly wider and the 1200mm deep rack is slightly deeper. Space planners can select the form factor that best meets data center needs.

Feature	2420	4220/4820	4220W/4820W	4220D/4820D
Rack Unit Spaces	24U	42U/48U	42U/48U	42U/48U
Height (mm)	1200	2000/2275	2000/2275	2000/2275
Width (mm)	600	600	750	600
Depth (mm)	1070	1070	1070	1200
Static Load Capacity (lbs)	1500	2500	2500	2500
Vertical PDU Capacity	Up to 4 HH[1]	Up to 4 FH[2] Up to 8 HH	Up to 4 FH Up to 8 HH	Up to 8 FH Up to 16 HH
Zero-U Access	Limited	Limited	Improved	Limited

[1]Half-height   [2]Full-height

Contact your Dell Sales Representative today to find out how Dell's rack infrastructure can help you build an efficient enterprise.

PowerEdge Racks:
Adding dimension to your data center

Learn more at Dell.com/PowerEdge/Rack

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