



CHATSWORTH  
PRODUCTS

## The Basics of Selecting a Rack System

When it comes to organizing and setting up equipment in a computer room or data center, it is important to make the best use of the space available. For this reason, open frame server racks are a great solution to help stay organized in a cost-effective manner. Rack systems also provide:

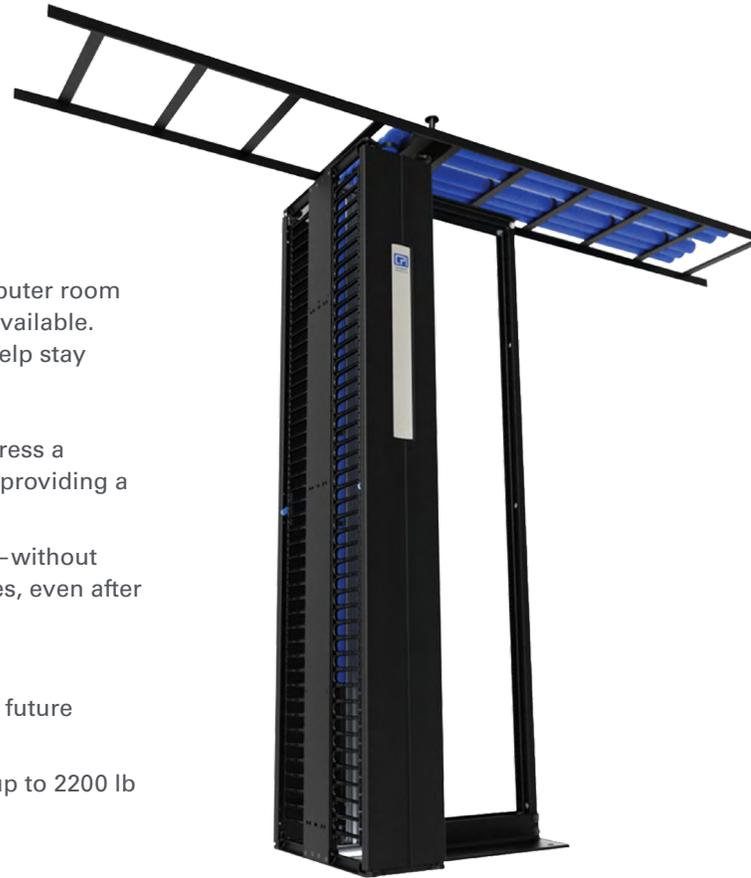
- A viable solution for many data center deployments, and address a variety of applications, from supporting active equipment, to providing a straightforward cable patching platform.
- Straightforward access to the equipment or cabling sections—without walls or side panels, the hardware is accessible from all angles, even after the installation of the cabling and active equipment.
- Unrestricted airflow to equipment.
- Easy access which can reduce maintenance time and costs of future changes.
- Load ratings up to 1500 lb (680.4 kg) for two-post racks, and up to 2200 lb (1000 kg) for four-post racks.

In essence, **open frame racks are cost effective, easily accessible and durable**, which makes them a smart option for telecom equipment, servers or networking with a relative low power load where cooling requirements are not a key cause for concern.

With those benefits in mind, once you've determined if a rack system makes the most sense for your application, it's time to make the right selection. Strength, stability and durability are all key factors, as is the ability to keep equipment safe and secure.

### Two-Post or Four-Post?

Delineating between the two options is fairly straightforward. Two-post racks are typically used with open, floor-mount racks for patch panels and fiber enclosures with rack-mount equipment that is less than 20" D (510 mm), while four-post racks are a smarter choice for larger and heavier equipment, like network switches, because they surround equipment and provide front and rear support. Making the right selection usually depends on your current and future equipment needs.



Two-Post  
Universal Rack



## What's on the Market Today?



### Two-Post Racks

#### **Universal Rack**

Heavy-duty two-post rack with a 3"D (80 mm) mounting channel. Available in 19" EIA and 23" rack-mount widths and heights from 3' to 9' (0.9 m to 2.7 m). Supports 1500 lb (680.4 kg) of equipment. UL Listed versions available.

#### **Standard Rack, 3"D (80 mm)**

Standard two-post rack with a 3"D (80 mm) mounting channel. Available in 19" EIA rack-mount width and 7', 8' and 9'H (2.1 m, 2.4 m and 2.7 m). Supports 1000 lb (453.6 kg) of equipment. UL Listed.

#### **Standard Rack, 6"D (150 mm)**

Standard two-post rack with a 6"D (150 mm) mounting channel. Available in 19" EIA and 23" rack-mount widths and 7'H (2.1 m). Supports 1000 lb (453.6 kg) of equipment. UL Listed.



### Four-Post Racks

#### **QuadraRack® 4-Post Frame**

Fixed 29"D (740 mm) four-post rack with threaded mounting holes available in 19" EIA rack-mount width and 7', 8' and 9'H (2.1 m, 2.4 m and 2.7 m). Supports 2000 lb (907.2 kg) of equipment.

#### **QuadraRack® Server Frame**

Fixed 29"D (740 mm) four-post rack with square-punched mounting holes available in 19" EIA rack-mount width and 7'H (2.1 m). Supports 1000 lb (453.6 kg) of equipment.

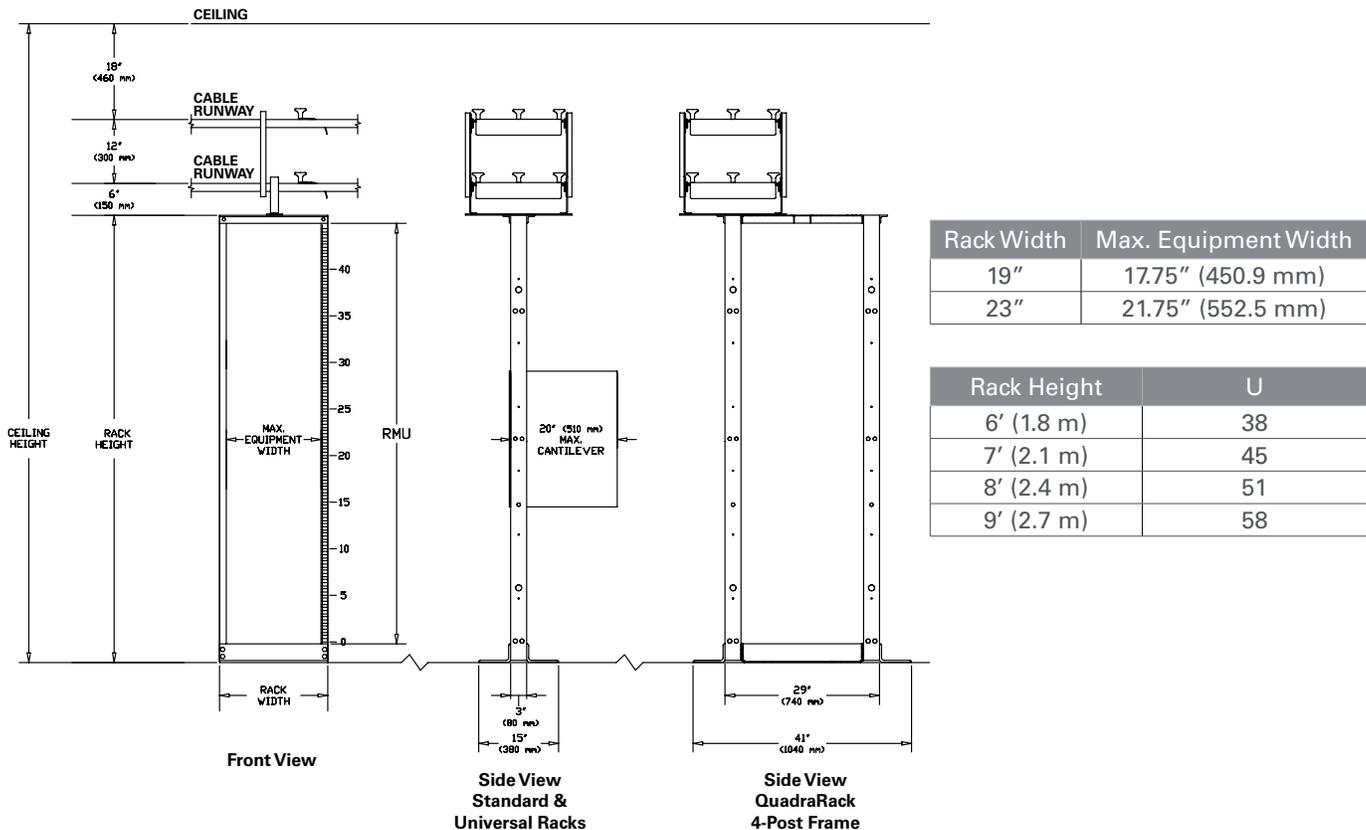
#### **Adjustable QuadraRack® & Adjustable ServerRack**

Adjustable 15.75"D (400 mm) to 42.32"D (1075 mm) self-squaring four-post racks. Adjustable QuadraRack (pictured above) has #12-24 threaded equipment mounting holes. Adjustable ServerRack has square-punched equipment mounting holes that accept cage nuts or CPI's patented tool-less Clik-Nut® Hardware Kit. Available in 19" EIA-310 rack-mount width and 6', 7', 8', and 9'H (1.8m , 2.1 m, 2.4 m, and 2.7 m). Supports 2000 lb (907.2 kg) of equipment.

#### **Adjustable Rail QuadraRack® & Adjustable Rail ServerRack**

Fixed 23.6"D (600 mm) and 35.4"D (900 mm) four-post racks adjustable depth rear equipment mounting rails that extend up to 5.9" (150 mm) beyond the rack to support deeper equipment. QuadraRack has #12-24 threaded equipment mounting holes. ServerRack has square-punched equipment mounting holes that accept cage nuts. Available in 19" EIA rack-mount width and 6', 7' and 8'H (1.8 m, 2.1 m and 2.4 m). Supports 2200 lb (1000 kg) of equipment.

The rack-mount width must match equipment requirements. The depth of the rack, especially a four-post rack, must be carefully selected. Generally, you should plan a minimum 3' (0.9 m) aisle at the front and rear of the rack. The height of the rack also determines the number of rack-mount unit (U) spaces on the rack. Additionally, racks that feature marked and numbered rack-mount spaces can greatly assist in determining remaining space available for future moves, adds and/or changes.



It is important to pick a height that provides enough overhead space for cable runway or cable trays. Note the relationship of rack height to ceiling height in the graphic above. Always leave 3" to 6" (80 mm to 150 mm) of space between the top of racks and cable runway. Leave 12" (300 mm) between each tier of cable runway and 18" (460 mm) between the ceiling and the top tier of cable runway.

For more information on rack system selection, be sure to use this [quick reference guide](#) from Chatsworth Products.

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