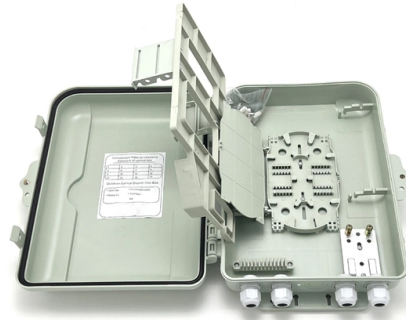


Standard network cabinet mounting hole spacing



Overview

Originally, the mounting holes were tapped with a particular screw thread. When rack rails are too thin to tap, rivet nuts or other threaded inserts can be used, and when the particular class of equipment to be mounted is known in advance, some of the holes can be omitted from the mounting rails.

Key Takeaways

19-inch network cabinets use a standard 18.312-inch horizontal spacing with vertical hole spacing in a repeating 1/2"-5/8"-5/8" pattern per rack unit (1.75 inches). Horizontal and Vertical Hole Spacing

- Horizontal spacing: The distance between the centers of the vertical rows of mounting holes is 18.312 inches (465.1 mm), while the minimum opening width of the rack is 17.72 inches (450 mm) to accommodate equipment front panels .
 - Vertical spacing: Each rack unit (1U) is 1.75 inches (44.45 mm) tall. Within a single U, the vertical hole pattern alternates as 1/2 inch – 5/8 inch – 5/8 inch, measured from center to center of the holes, and this pattern repeats for each U .
- Rack Unit and Mounting Posts
- Rack unit (U): Standardized at 1.75 inches (44.45 mm) in height, allowing consistent vertical alignment of equipment .
 - Front panel width: Equipment designed for 19-inch racks has a front panel width of 19 inches (482.6 mm), which includes the mounting ears .

- Mounting post spacing: For four-post EIA cabinets, the distance between the inside edges of the front posts is at least 17.75 inches (45.1 cm), and the distance between the outside faces of front and rear posts ranges from 26 to 32 inches (66 to 81 cm) to allow for rear-bracket installation .

Hole Types and Standards

- Hole types: Racks may have square, round, or threaded holes. Square holes are commonly used with cage nuts for flexible mounting .
- Standards compliance: Mounting holes conform to ANSI/EIA-310-D, IEC 60297-2, and DIN 41494 standards, ensuring compatibility across global rack systems .

Practical Notes

- While the horizontal and vertical spacing is standardized, manufacturing tolerances and rack quality can cause slight variations, so verifying dimensions before installation is recommended .
- Clearance for airflow, cable management, and fiber-optic bend radius should also be considered when planning equipment installation . These specifications ensure that network equipment, servers, and patch panels can be securely mounted and aligned in standard 19-inch cabinets across different manufacturers and global standards.

Article Content

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19-inch rack

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The mounting-hole distance (as shown to the right) differs for 19-inch racks and 23-inch racks: 19-inch racks use uneven spacings

Rack Mount Positions and Hole Types

Before installing system components, locate the hole pattern in the rack rails to allow

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atop each other. This Rack Cabinet is fully loaded and includes two (2) pairs of infinitely adjustable sliding EIA square-hole rails,

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The rack or cabinet must be compatible with drawer mounting rails, including a secure and snug fit of the rail-mounting pins and

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How to choose the appropriate height of a server rack?

Determine your needs before choosing a Server Rack Due to vertical mounting, 19" Server Racks allow

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Mounting Rails: EIA-310 outlines the dimensions for mounting rails, including the hole spacing for rack-mounted devices. This

Rack Holes: Threaded Holes vs Square Rack Holes

Some of the server equipment uses rack rails that can only be installed on square rack holes. Check your equipment

Understanding Rack Unit “U” or “RU”

The hole spacing for standard 19” racks on the mounting flange is spaced in groups of three holes. This three-hole group is defined

Standard Rack and EIA-310 – Aeons | Empowering Digital Infrastructure

The spacing is measured from center hole to center hole, regardless of whether the server rack has square or round

Rack Hole Size Differences: Square hole vs Round vs Threaded -

There are various types of rack screw holes for server racks. These include threaded holes, round unthreaded holes,

Rack unit

Mounting holes A typical section of rack rail, showing rack unit distribution The mounting-hole distance (as shown to the right) differs

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Clear guide to rack rail hole spacing and the EIA-310 standard. Learn the 1.75-inch rack unit pattern, why the three-hole groups

Rack Enclosure Basics: Your Essential Guide

A 19-inch rack is the standard enclosure or frame size for mounting electronic equipment, and it gets its name from the width of the

System installation and rack specifications (for racks not ...

The rack or cabinet must meet the EIA Standard EIA-310-D for 19-inch racks published August 24, 1992. The EIA-310

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