

Standard Length of a 1U Chassis



AI Overview

A 1U standard chassis is 1.75 inches (44.45 mm) tall and 19 inches (482.6 mm) wide, designed to fit in a standard 19-inch rack. Height The nominal height of a 1U chassis is 1.75 inches (44.45 mm), as defined by the EIA-310-D standard . In practice, the actual equipment height is slightly less—typically between 1.72 inches and 1.745 inches (43.66–44.45 mm)—to allow for airflow, thermal expansion, and safe insertion/removal in the rack . This ensures that adjacent units do not interfere with each other and maintains proper ventilation. Width The standard width for a 1U chassis is 19 inches (482.6 mm), which corresponds to the distance between the mounting rails in a 19-inch rack . While the front panel width is standardized, the internal chassis width may vary slightly depending on manufacturer design, but it must align with the rack mounting holes. Mounting and Clearance 1U chassis are designed to mount on 19-inch rack rails using standardized hole spacing. The vertical spacing between mounting holes follows the rack unit formula, allowing multiple devices to stack efficiently . Manufacturers often leave a small tolerance to accommodate thermal expansion and ease of installation. For high-density deployments, it is recommended to leave 1U of blank space between high-heat devices to optimize airflow and cooling . Depth and Other Considerations While 1U defines height only, chassis depth varies widely, typically ranging from 600 mm to 1200 mm, depending on server or network equipment design . Depth affects cable management, airflow, and compatibility with existing racks, so it should be verified before installation. Weight capacity and structural rigidity are governed by the rack itself, not the 1U standard. Summary Height: 1.75 inches (44.45 mm) nominal, slightly less in practice Width: 19 inches (482.6 mm) standard for 19-inch racks Mounting: Standardized EIA-310-D hole spacing Depth: Manufacturer-specific, typically 600–1200 mm Clearance: Allow small tolerances and optional 1U blank panels for airflow Thes...

Article Content

What Are Server Rack Sizes and Why Do They Matter?

Rack Unit Measurements (1U, 2U, 3U, 4U) The rack unit (U) is the standard for measuring the height of both server racks and the equipment they

Server Rack Sizes: The Complete Guide to Standard,

Below is a comprehensive, fully detailed guide covering all standard server rack sizes, form factors, height considerations, depth classifications, and

How to choose the rackmount case for your workstation

Building a workstation in a rackmount chassis Building a rackmount workstation or server can be annoying and difficult. Rackmount chassis need to

How is U used as a measurement for servers?

How to calculate a U measurement A rack unit of length is based on the Eurocard EIA-310 standard rack specification. It was adopted globally as IEC

Choose the Perfect Rackmount Server Case: 1U to 4U

The “U” in 1U, 2U, 3U, and 4U rackmount chassis refers to a standard unit of measurement (1.75 inches or 44.45 millimeters) that defines the

U Rack Dimensions — What Is U in Server Rack?

This measurement is standard for all rack-mounted hardware. For larger hardware, sizes greater than 1U are used. Common values include 2U,

What Is 1U Server Rack Size? Exact Dimensions in Inches & mm

Width includes ears — not chassis: The “19-inch” specification refers to the distance between the inner edges of mounting flanges (ears), not the device's body width. A 1U server may be

Server Racks and Their Sizes

Server racks have their own measuring unit, which is associated with the height of the device that will be installed. While the width can only have two sizes (19 or

Rack Unit Calculator | Penn Elcom

One U is 1.75 inches (44.45mm); the standard rack, at 19 inches, is 42U. Rack servers and other hardware designed to be rack-mounted are manufactured in multiples of 1.75 inches and specified in

Understanding Rack Units (U) in Server Racks [July 2026]

A “Rack Unit” (U) is a standard height measure for mounting equipment in a server rack. One U = 1.75 in (44.45 mm). This article explains definition, planning, installation tips, and trends.

RACK UNIT CONVERSION TABLE

1U	2U	3U	4U	5U	6U	7U	8U	9U	10U	11U	12U	13U	14U	15U	16U	17U	18U	19U	20U	21U		
22U	23U	24U	25U	26U	27U	28U	29U	30U	31U	32U	33U	34U	35U	1.75"	3.5"	5.25"	7"	8.75"	10.5"	12.25"	14"	15.75"

1U vs. 2U vs. 3U: Rack Units Explained | EDN

What does 1U mean? Many rack-mounted power systems and power supplies are specified as being 1U, 2U, 3U, etc. What does this mean? For

What Is 1U Rack Size? Height, Width, Depth in Inches

Confused about 1U rack size? Learn the exact EIA-310-D standard dimensions (1.75" × 19"), why usable depth is less than rack depth, and how to

Understanding Rack Mount System Sizing

This unit has been defined by Electronic Industries Alliance (EIA) as the standard for sizing rack mount equipment. 1 Rack Unit or 1U is 1.75 inches

1U Server Dimensions: The Ultimate Guide to Choosing the

What are the exact 1U server dimensions? The standard 1U height is 44.5 mm, with common chassis measuring 482 mm × 44.5 mm × 250 mm ensuring compatibility and proper airflow in 19-inch rack

Enterprise Core Systems Engineering Reference Manual: 1U

OPERATIONAL ADVANTAGES - Maximized Rack Density: Standard 1U height enables up to 42 devices per 42U rack, reducing per-port infrastructure footprint by 300% compared to 3U systems. -

Standard Rack Size

How Tall Is a Rack Unit? A Quick Breakdown Each rack U size represents a multiple of 1.75 inches. So, for example: 1U = 1.75 inches 2U = 3.5

What Is 1U Rack Size? Height, Width, Depth in Inches

If your 1U device has fixed-width mounting ears (non-adjustable), they must span exactly 18.3125" — not 19" — to align with standard hole

What are 1U, 2U, and 4U in Servers?

It is currently used as an informal standard in rack structures, including specified screw sizes, hole spacing, rail marking, etc. 1U and 2U are

What's the difference between 1U, 2U, 3U and 4U

The height of a rack is measured in Rack Units, written as U. A U is defined as 1 3/4 inches or 44.45mm. Find out more about 1U, 2U, 3U, 4U

1U vs 2U vs 4U Servers: What “U” Means & How to Choose in 2026

Learn what a rack unit (U) is, how 1U/2U/4U differ, and how to pick the right chassis height for disks, PCIe/GPU, noise, power, rails, and airflow. ☑☑ Checklist included.

How Tall Is 1U? A Practical Guide to Server Rack ...

A 1U server rack unit measures exactly 44.5 millimeters in height according to the EIA standard. Understanding this precise dimension is essential for proper equipment installation, airflow, and long

1U Technical Specifications

Mechanical Specifications The mechanical specifications are derived from the Eurorack mechanical specifications set by Doepfer. The 1U panel size is based

Choosing the Right Rackmount Server Case: 1U, 2U,

Understand how 1U, 2U, 3U, and 4U rackmount server units vary in order to optimize your server requirements to select the most appropriate piece

What Is a 1U Server Rack Size? Exact Dimensions

A 1U server rack measures exactly 1.75 inches (44.45 mm) in height and fits standard 19-inch racks. Learn why equipment must stay **under** that

How big is 1U? A comprehensive guide to the rack unit that shapes

What does 1U actually mean? At its heart, How big is 1U is straightforward: a single rack unit, abbreviated as 1U, is a standard height of 1.75 inches. In metric terms, that's exactly 44.45

Standard Server Rack Dimensions: Depth, Width,

While there are global standards for server rack dimensions, such as the 19-inch width standard, there can be variations in depth and height. The 19

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