

What are outdoor server racks used for



Overview

Outdoor Server Rack Guide: How to Choose the Right OneA practical, no-fluff guide on selecting an outdoor server rack—covering IP ratings, cooling, mountin.

Key Takeaways

Outdoor server racks are specialized enclosures designed to protect IT equipment from weather, dust, and temperature extremes, and they come in freestanding, wall/pole-mounted, and open-frame types. 1.

Freestanding Ground-

Mount Cabinets

These are full-height racks, often up to 42U, designed to sit on the ground with base anchoring. They are ideal for high-capacity deployments and can accommodate UPS systems, batteries, and larger servers. Pros: High capacity, robust thermal mass, space for power equipment.

Cons: Heavy (200+ kg), require concrete pads or ground screws, higher shipping and installation costs. Use Cases: Telecom hubs, municipal infrastructure nodes, or remote sites needing large equipment capacity. 2.

Wall- or Pole-

Mounted Cabinets

Compact racks ranging from 6U to 18U, engineered for vertical mounting on walls or utility poles. They are lightweight and often rated IP65/IP66 for weather resistance. Pros: Quick installation, low footprint, suitable for edge deployments.

Cons: Limited depth (usually ≤ 600 mm), less airflow control, fewer accessory options.
Use Cases: Cellular backhaul, public Wi-Fi hubs, traffic control systems, or small surveillance servers. 3.

Open-

Frame Outdoor Racks

These racks consist of a welded steel frame with mounting rails and optional mesh covers but no full enclosure. They provide maximum airflow and easy access. Pros: Cost-effective, excellent ventilation, easy maintenance.

Cons: No inherent weather protection (IP rating), vulnerable to vandalism, animals, and direct water exposure. Use Cases: Secured outdoor labs, temporary installations, or locations where environmental protection is provided separately.

Key Considerations

Ingress Protection (IP Rating): Outdoor racks typically start at IP55, with IP66 for harsher environments. This ensures protection against rain, dust, and UV exposure.
Thermal Management: Many outdoor racks combine passive and active cooling (fans, thermostats) to handle temperature swings.

Material and Corrosion Resistance: Aluminum or coated steel is common to withstand outdoor conditions. Mounting Flexibility: Choice of freestanding, wall, or pole mount affects serviceability, cooling efficiency, and long-term maintenance. Outdoor server racks are distinct from indoor racks because they prioritize environmental protection and reliability over aesthetics or cable management elegance.

Selecting the right type depends on equipment size, site conditions, and deployment goals.

Article Content

Outdoor Server Rack Guide: How to Choose the Right One

A practical, no-fluff guide on selecting an outdoor server rack—covering IP ratings, cooling, mounting, cost trade-offs, and real-world use cases.

The Complete Guide to Server Racks: Functions,

Server racks are more than IT equipment “containers”—they are the backbone of high-density, reliable, and sustainable data centers. By combining

Outdoor IT Rack Enclosures | Eaton

Designed to protect expensive outdoor IT and control equipment, especially security, fire, law enforcement and other first-responder applications.

Server Racks: Everything You Need To Know

By vertically stacking multiple servers and other hardware components in a compact enclosure, server racks enable efficient use of available floor space. This is particularly beneficial in environments

Outdoor Weatherproof Cabinets for Electronics | Waterproof Server

All of our outdoor server racks are built to protect your expensive network equipment from exposure to the environment such as dust or water. The cabinet design allows natural wind cooling through

What is a Server Rack? The Ultimate Guide to Sizes (U) & Types (2026)

A Server Rack is a specialized metal frame designed to hold, organize, and secure IT equipment. This includes servers, routers, switches, and patch panels. Unlike a standard shelf, a server rack is built

What is a Data Center Rack? The Complete Guide to Server Racks

A data center rack is a standardized frame structure designed to securely house IT equipment such as servers, switches, storage systems, and power distribution units.

Server Racks: What Are They & What Are They Used For?

Server racks are used for holding technological and electronic equipment, including for IT and telecommunications. For example, this could be routers, switches, hubs and servers which make

Waterproof Outdoor Server Racks | Outdoor Network Cabinets | AZE

AZE's 19" outdoor server racks and outdoor network cabinets are ideal for protecting sensitive network systems from any damage due to impacts and harsh climatic conditions.

Server Racks: Everything You Need to Know

Outdoor environments: Outdoor server racks are designed to be weatherproof and to withstand exposure to the elements. They are commonly used in applications

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Server Racks: Everything You Need to Know | Eaton

Everything you need to know about server racks and how to buy one for your business. Our guide covers different types of server racks, their features, and

A 19 inch outdoor cabinet for your network!

An outdoor server rack or patch cabinet is a 19-inch cabinet that has four 19-inch mounting profiles. In these profiles, you directly attach 19-inch network equipment, such as a rack server, patch panel,

Optimize Your IT Infrastructure with Outdoor Server Racks

Applications of Outdoor Server Racks Outdoor server racks are versatile and can be used in various applications, including: Telecommunications: Protecting network equipment from

Beginners Guide: What is a server rack?

What is a Server Rack Used For? A server rack is used to house and organize IT equipment in a manner that is best for the optimization of the equipment and utilization of floor space.

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