

RIVO MULTITRADE OPTICAL SYSTEMS

Data Center Interconnect Outdoor Cabinet Dimensions



Overview

Outdoor enclosures for telecom & industrial equipmentOutdoor enclosures for telecom, energy, and industrial applications. IP and NEMA-rated protection with.

Key Takeaways

Outdoor DCI cabinets typically range from 12U to 45U in height, 19–24 inches in width, and 600–800 mm in depth, with IP55–IP66 or NEMA-rated protection for harsh environments. Standard Dimensions and Rack Units

Outdoor cabinets for data center interconnects are designed to accommodate standard 19-inch rack-mounted equipment. Common rack unit (U) heights include 12U, 24U, 42U, and 45U, where each U corresponds to 1.75 inches (44.45 mm) of vertical space. Widths are typically 19 inches (482.6 mm) for equipment compatibility, while depths vary from 600 mm to 800 mm to allow for cable management and airflow. For example, a 12U outdoor network cabinet may have a single-wall construction with a depth of 600 mm and width of 19 inches.

Environmental Protection

Outdoor cabinets are engineered to withstand extreme weather, dust, UV exposure, and temperature fluctuations. Protection levels are defined by IP ratings (IP55–IP66) or NEMA ratings (NEMA 3R, 4, 4X), ensuring resistance to rain, snow, dust, and corrosion. Sealed doors, gaskets, and powder-coated steel or aluminum construction are standard features to maintain a controlled internal environment.

Thermal Management

Outdoor cabinets often include integrated thermal management, such as fans, heat exchangers, or air conditioners, to maintain stable operating temperatures for sensitive equipment . Proper airflow is critical, especially for high-density deployments or AI-centric servers, to prevent overheating in fluctuating outdoor conditions.

Modularity and Mounting

Many outdoor DCI cabinets are modular, allowing expansion from small to large configurations. For instance, the Clearfield ODC-200 can scale from 48 to 384 fiber or copper connections, supporting additional shelves, power modules, and cross-connect panels . Cabinets can be wall-mounted, pole-mounted, or freestanding, depending on site requirements .

Material and Finish

Outdoor cabinets are typically constructed from galvanized steel or heavy-gauge aluminum, with powder-coated finishes (e.g., RAL 7035 epoxy polyester) for corrosion resistance and durability . Single-wall or double-wall designs provide structural integrity while accommodating internal equipment and cabling.

Summary

When selecting an outdoor DCI cabinet, consider:

- Rack units (U): 12U–45U depending on equipment density
 - Width: 19 inches standard
 - Depth: 600–800 mm for cable management
 - Protection: IP55–IP66 or NEMA 3R/4/4X
 - Material: Galvanized steel or aluminum with powder coating
 - Thermal management: Fans, heat exchangers, or AC units
 - Mounting options: Wall, pole, or freestanding
 - Modularity: Expandable for future growth and additional equipment
- These specifications ensure reliable deployment of networking and server equipment in outdoor environments while maintaining accessibility, cooling, and protection from environmental hazards .

Article Content

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