

What does a data center PDU do



Article Overview

A data center PDU (Power Distribution Unit) is a specialized device that distributes electrical power from a main source to multiple servers, networking devices, and other IT equipment efficiently and reliably.

What a PDU Does

A PDU acts like a heavy-duty power strip designed for high-demand environments such as data centers and server rooms. It takes power from a primary source—such as a utility supply, generator, or uninterruptible power supply (UPS)—and distributes it to multiple outlets for IT equipment. PDUs ensure that each device receives stable, clean power, helping prevent downtime, equipment failure, and power-related disruptions. In many data centers, power distribution is tiered: large floor-mounted PDUs step down high voltage to usable levels and feed rack-mounted PDUs, which are installed directly in server cabinets for day-to-day use.

Types of PDUs

- Basic PDUs – Simple power distributors without monitoring or control features, ideal for straightforward setups where only reliable power delivery is needed.
- Metered PDUs – Include power meters to monitor real-time energy usage, helping with energy efficiency planning and preventing overloads.
- Monitored PDUs – Provide remote visibility into power consumption at the rack or outlet level, allowing alerts and better management of high-density environments.
- Switched PDUs – Offer all features of monitored PDUs plus the ability to remotely control individual outlets, useful for rebooting servers or shutting down unused equipment

Article Content

What is a Power Distribution Unit (PDU)?

A Power Distribution Unit (PDU) is a critical piece of equipment used to distribute electrical

How Does a Power Distribution Unit (PDU) Work? The Basics

Those features are valuable for effective power management, but they really don't impact how a PDU works at the

PDU Types in Data Centers: Basic, Metered, Switched & Intelligent

Explore different PDU types used in data centers, including basic, metered, monitored, switched, and intelligent PDUs.

What Is a Power Distribution Unit (PDU) and What Does It Do?

What Does a PDU Do? The job of a PDU is to bring power from a primary electrical source into the data center. Floor

What Does PDUs Do?

What Does PDUs Stand For? PDU stands for "power distribution unit" In the context of a power distribution unit for rack setups, it

What Is a PDU in Data Centers and Why Is It Important?

Learn what a PDU is, how power distribution units work, and why they are essential for managing power in modern data center

What is the primary function of a Power Distribution Unit (PDU) in a ...

The PDU power distribution unit is indispensable to any data center's infrastructure. It ensures the safe and efficient

How To Choose the Right Power Distribution Unit for Your Data Center

Learn how to choose the right power distribution unit (PDU) for your data center IT enclosure — from types and specs

What Is a PDU? Power Distribution Unit Basics

This is possible because a PDU turns one (or a few) power inputs into many (usually about eight) power outputs. For data centers, a

What Is a PDU? Power Distribution Unit Explained

A PDU distributes power to multiple devices in a rack or data center. Learn how they work, the different types

PDU in Data Centers: Types, Features & How to Choose

A PDU (Power Distribution Unit) in a data center distributes electrical power from upstream

White Paper Power Distribution Units (PDUs) in Data Centers

Introduction Data centers are the backbone of the digital economy, powering everything from cloud services to AI-driven analytics.

Complete Guide for Power Distribution in Servers, Racks, and Data

Power Distribution Units (PDUs) are the crucial link between your facility's electrical infrastructure and your IT equipment. These

Understanding Power Distribution Units (PDUs): A

This guide aims to equip readers with an in-depth understanding of PDUs, exploring various types,

Power Distribution Units (PDUs)

Power distribution units are essential to managing electrical supplies for data centers. Get all your data center PDUs

Power Distribution Unit (PDU) Applications, Testing & Maintenance

This guide covers the basics of pdu construction, applications, testing and maintenance procedures. Photo: TestGuy.

What is a Rack Mounted PDU? Buyer's Guide

What is a Rack PDU? A Rack PDU is a device that distributes electric power to servers and networking equipment

PDUs in Data Centers & Telecom: A Complete Guide | Matismart

Whether in a massive data center or a remote telecommunications hub, PDUs ensure that electricity from a primary

What are Power Distribution Units (PDU)?

Power Distribution Units (PDU): A Critical Component for Data Centers and IT Infrastructures In today's

PSU vs PDU: Understanding Different Power Units

Explore the differences between PSU vs PDU in data centers. Learn their functions, applications, and installation

4 Types of PDU in Data Centers: Overview and Features

Main Types of PDUs Used in Data Centers Different PDU types provide varying levels of visibility, control, and

What Is a PDU in Data Centers and Why Is It Important?

The main function of a PDU is to distribute power to various IT equipment in a data center,

What Are the Different Types of PDU?

What Is the Purpose of the PDU? The primary purpose of a PDU is to provide a seamless connection between your facility's power

Power Distribution Unit (PDU) Definition & FAQ's

Data centers house a significant volume and density of IT equipment that must be consistently powered to ensure uptime and

What is a PDU in Data Center?

A Power Distribution Unit (PDU) in a data center, at its most fundamental, serves as a sophisticated electrical power

Understanding the Different Types of PDUs in Data Centers

Introduction Power Distribution Units (PDUs) are critical in data centers for delivering electrical power to various IT

What Is a Power Distribution Unit (PDU)? | Data Center Glossary ...

A power distribution unit (PDU) is a device with multiple power outlets that provides electrical protection and distributes power to IT

Power distribution unit

A power distribution unit (PDU) is a device fitted with multiple outputs designed to distribute electric power, especially to racks of

What is a PDU (Power Distribution Unit)

PDU (Power Distribution Unit): Explained in Simple Terms Ever wondered how all those servers and network devices

What is a Data Center PDU? Defined.

With a host of PDU types available in the market, understanding what a Data Center PDU does can be confusing. This Server

Maximizing Efficiency: The Role of PDUs in Large Data Center Power ...

This article assesses the contribution of PDUs in the overall operational efficiency of large-scale data centers, offers

Understanding PDU Data to Enhance Data Center

PDUs also help optimize performance metrics such as Power Usage Effectiveness (PUE) to ensure

Contact Us

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