

Data Center PDU Classification



Overview

Data center PDUs distribute power from UPS or utility-backed systems to rack equipment. This guide explains PDU types, key features, deployment styles, and how to choose the right unit for uptime, monitoring, and power efficiency. The power distribution unit (PDU) market is projected to grow exponentially alongside the expansion of the global data center market from 2026 through 2030. Driven by the growth of hyperscale cloud, edge computing, and AI workloads, rack-level power distribution has become a strategic priority. As Data Centers evolve to handle increasing power densities driven by AI, cloud computing, and high-performance applications, PDUs have advanced from simple power strips to intelligent systems offering Monitoring, Remote Management, and. A power distribution unit (PDU) is a device fitted with multiple outputs designed to distribute electric power, especially to racks of computers and networking equipment located within a data center.



Article Content

NVIDIA HGX Platform: Data Center Physical

Detailed specifications – such as rack dimensions, sensor placement, PDU circuit ratings, weight/load limits, environmental setpoints (ASHRAE guidelines), and

What Are the Different Types of PDU?

The types of PDU in data center environments generally fall into four main categories, each of which serves different needs: Basic PDUs — Provide standard power distribution without any monitoring or

Power distribution unit

Most large data centers utilize PDUs with three-phase power input and one-phase power output. There are two main categories of PDUs: basic PDUs and intelligent (networked) PDUs or iPDUs.

White Paper Power Distribution Units (PDUs) in Data Centers

The evolution of PDUs reflects broader Data Center trends: from low-density setups (0-4 kW per rack) to extreme high-density environments (16+ kW per rack), driven by technologies like blade servers and

What Are the Different Types of PDU?

Explore the differences between basic, metered, switched, managed, and smart PDUs—and discover which power solution best fits your data center's needs.

Siemens SiePortal

SiePortal integrates Industry Mall and Online Support, providing a unified platform for Siemens products, services, and support.

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 operational efficiency. The comparison below outlines the key differences between

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

Understanding the fundamental differences between single-phase and three-phase power systems is crucial for selecting appropriate PDUs and planning data center power infrastructure.

Guide to Data Center PDUs: Types, Importance

Explore different types of Data Center PDUs, their significance in power management, and applications in enhancing operational efficiency.

Nexus Venture Partners hiring Data Center Project Engineer

Familiarity with data center industry standards: Uptime Institute Tier Classification, TIA-942, ASHRAE thermal guidelines.

How To Choose the Right Power Distribution Unit for

How To Choose the Right PDU for Your Data Center The two primary factors influencing the choice of PDU are location and staffing. Large facilities. If yours is

What type of Rack PDU is right for your data center?

At first glance, choosing a Rack Power Distribution Unit (rPDU) might seem like it has little bearing on data center performance. However, the enormity of this decision becomes apparent upon closer

TechTarget

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Data Center Industry Solutions | Regal Rexnord

Regal Rexnord offers a wide range of solutions designed to meet the rigorous demands of high-performance computing environments. Our solutions are

APC USA | Schneider Electric United States

APC, a flagship brand of Schneider Electric, provides clean battery back-up power, surge protection, and IT physical infrastructure inside and outside the traditional

An Overview of Available PDU Types in the Market

Intelligent PDU Aside from the basic powering functionalities, an intelligent power distribution unit (iPDU) provides a variety of functions like real

What type of PDU is right for your data center?

Switched PDUs are highly recommended for any large-scale, or geographically data remote data center. They're especially valuable for cloud providers that need a quick and easy way

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. Learn features, benefits, and top suppliers.

Top Features to Compare in PDUs for Data Centers This Year

Compare PDU types for data centers in 2025 by evaluating capacity, monitoring, energy efficiency, reliability, and cost to choose the best power solution.

Power Distribution Units

PDU Applications & Sectors Panduit Power Distribution Units are designed for the modern data center, integrating seamlessly with facility systems. Our PDUs offer versatile options in density, capacity,

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

Learn about PDUs in data centers: types, functions, benefits, and why they're crucial for reliable, efficient power distribution. Optimize your setup!

PDU Buying Guide | CyberPower

Why Do I Need a PDU? As a company grows, the demand for more power and IT equipment will continue to rise. It is essential to find a power solution that can

Understanding the Different Types of PDUs in Data

Introduction Power Distribution Units (PDUs) are critical in data centers for delivering electrical power to various IT equipment. However, not all

What is a power distribution unit (PDU)?

Learn what power distribution units do and how different types of PDUs work. Find out what questions to ask before you purchase your next PDU.

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

Data center PDUs distribute power from UPS or utility-backed systems to rack equipment. This guide explains PDU types, key features,

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