

Rack Power Distribution Units (PDUs)

Intelligent and non-intelligent Power Distribution Units (PDUs) at the equipment or data center rack level.

Rack PDU Type		Description	Application	PDU Model
Non-Intelligent	Basic PDU	PDU which has no intelligent function that simply delivers / distributes power from outside the cabinet to the IT equipment.	Office, Server room, Hotel, Telecom type applications	Basic (1 Phase) Basic (3 Phase)
	Metered PDU	PDU with local metering function. 1 Phase models with RMS current meter. 3 Phase models with digital meter for monitoring Amperes, kWh, Volts, Power Factor, & kW.	Manned data halls/centers where PDU data can be read locally	MD (1 Phase) MK (3 Phase)
Intelligent	Monitored PDU	PDU with a digital local touchscreen display and IP network connectivity for reporting the entire strip data, Amperes, kWh, Volts, Power Factor, and kW centrally.	Data Centers, sites requiring capacity planning via network IP, management of power capacity	W (1 Phase) W (3 Phase)
	Outlet Metered PDU	PDU with the above Monitored (W) PDU functionality + IP network connectivity to enable users to measure individual outlets remotely.	Data Centers, sites requiring metering accuracy +/- 1% for billing purposes, such as Multi-Tenant / Co-Location	Wi (1 Phase) Wi (3 Phase)
	Metered & Outlet Switched PDU	PDU with the above Monitored (W) PDU functionality + IP network connectivity to enable users to switch or control individual outlets or IT equipment within the rack remotely.	Multi-Tenant / Co-Location Facilities, corporates with multiple locations, remote sites requiring remote power management	WS (1 Phase) WS (3 Phase)
	Outlet Switched with Outlet Metered PDU	PDU with IP network connectivity that allows users to switch individual outlets and meter individual outlet or equipment consumption remotely.	Enterprise, Hyperscale, Cloud Data Centers. Complete remote management of the PDU functions.	WSi (1 Phase) WSi (3 Phase)

Metered and Intelligent [Automatic Transfer Switches \(ATS\)](#) also available from the InfraPower Range

What is a Rack PDU?

“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.” - Wikipedia

Power management at the equipment level within the rack/cabinet is a vital point in the power chain for the continual uptime of critical services.

Rack PDUs available in two mounting versions:

- Vertical (0U) PDUs
- Horizontal 19-inch (1U/2U) PDUs

PDU Voltage:

- 1 Phase: 110V / 208V
- 3 Phase: 208V / 400V

Why Choose Intelligent Rack PDUs?

- Manage data center power capacity
- Reduce downtime and energy costs
- Improve energy efficiency
- Capacity planning via network IP
- Enterprise class PDU software
- SNMP trap integration to DCIM
- PDU cascading reducing data ports & network IP addresses
- Zero power consumption latching relay for outlet control



[Intelligent PDU Video >](#)

Quoting Server Racks?

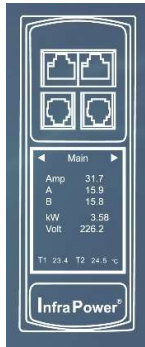
Server Racks + PDUs = Larger Order Values!



Why a Field Replaceable iMeter?

The field replaceable display design helps eliminate maintenance downtime by simply replacing a possible defective meter without a service interruption.

The [iMeter](#) includes a color LCD display with touch screen functionality and is positioned at the top of the PDU for increased visibility and ease of access.



Data provided by a PDU meter includes:

- Current (AMP)
- Voltage (Volt)
- Power (KW)
- Energy consumption (KWh)
- Power factor at the circuit, socket, and strip level
- Data has a metering accuracy of +/- 1%

Connectivity

With any rack mount device or in cabinet PDU one of the largest challenges is to integrate the device into the data center environment without simply building up additional connectivity, cable run, patch panel etc. or network related costs.

Dual LAN - PDU IP Dongle ([IPD-03-S](#)) allows up to 32 PDUs / daisy chain levels to be achieved utilising a single IP address.



Highly Efficient PDU Remote Management

3 Options for remote management:

- 1) Management Software [IPM-04](#)
- 2) Web-based GUI (Graphic User Interface)
- 3) Third Party DCIM via SNMP

The Windows based InfraPower IPM-04 software consolidates management of max. 800 x 1 Phase & 3 Phase PDUs via 50 IP dongles.

- Monitoring or measurement of Amps, Volts, kW, kWh, Power Factor and Temperature / Humidity
- Remote switching ON / OFF per individual power outlets
- Reporting
- Alarm setting
- PDU outlet measurement
- Grouping and chart reporting

6 Ways to Help Reduce Power Outages

There are some simple yet effective ways to reduce the possibility of power outages at the rack end of the power chain where it is imperative to keep IT equipment running. Here are our top 6 recommendations:

1. Power Feed Differentiation

The use of coloured PDU's enables clear visual identification of the power feeds when redundancy is required. Generally, two PDUs are installed per rack for primary and redundant, A&B, power feeds. Alternatively, [Dual Feed PDUs](#) can be used to save valuable rack space, where 2 feeds are in 1 PDU.

2. Austin Hughes Lockable IEC Outlets & Cords

[Lockable IEC C13 and C19 outlets](#) on Austin Hughes rack PDUs prevent accidental removal of the IEC cords. Combined with [IEC locking cords](#), with color options for power source identification, for added security.

3. Colored Power Distribution Units (PDUs)

Colored PDUs, in addition to allowing primary and redundant power feed differentiation, also enables identification of the PDU's for technicians and engineers to reduce human error whilst working in racks/cabinets. The color of the PDUs can follow the power chain color coding throughout the data center.

4. Threshold Alerts

Threshold alerts can be set to highlight unauthorised or accidental removal of equipment. Setting low alert levels can notify nominated administrator(s) of removal of equipment from PDU sockets using SNMP. InfraPower Intelligent PDUs are supplied with IPM-04 Free Management Software.

5. Environmental Sensors

Environmental [Sensors](#) will also allow setting of alarms and thresholds to provide early detection of issues within the rack. InfraPower Intelligent PDUs have two sensor ports per PDU for temperature / humidity sensors.

6. Field Replaceable Technology

Selecting PDUs which have field replaceable technology; RMS current [iMeter](#) with LCD or field replaceable DC modules so there is no interruption to equipment in the event of a component replacement being required.



Third Party DCIM via SNMP including:



Sunbird

NETZOOM



trellis

TRIDIUM



COMMSCOPE®