Packet Power

Data Center Power Monitoring MADE EASY

POWER SERVICES
Your Green Business Partner

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Make it easy and affordable to monitor and analyze energy usage

Our Purpose

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1. Wireless Monitors

- Smart power cables
- Temperature / humidity / Alarm unit

2. Plug and Play Network

- Self-configuring adaptive wireless network
- Highly secure
- Inexpensive to install

3. Monitoring, Analysis and Reporting Software

- Real-time energy data analysis and reporting
- Multiple deployment options

Packet Power Components

Wireless Data Network

- Secure, frequency-hopping mesh
- 900 MHz frequency handles metal and noise in data centers
- Fully self-configuring
- Ethernet Gateway links wireless network to Ethernet network
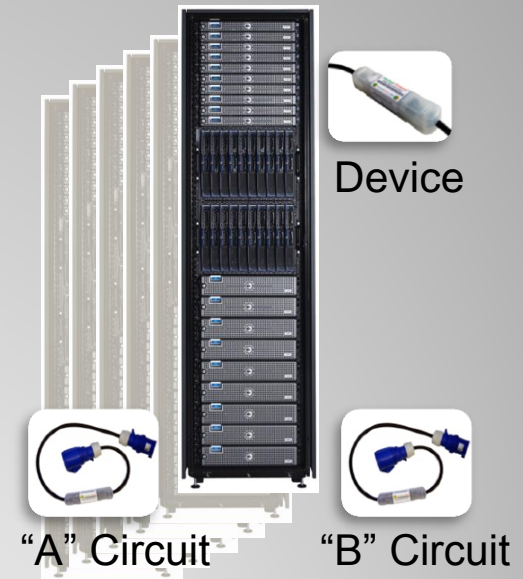- Only requires one IP address per Gateway

Ethernet Gateway

Ease of Installation

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- **Monitor rack input circuits and/or devices**
- **Over 50 types of cables**
  - **Many connectors: NEMA, IEC 60320, IEC 60309, Hubbell, RussellStoll, country-specific**
  - **15 to 1000A, single- or 3-phase, 100 to 240V**
- **Measure Amps, Volts, Volt-Amps, Watts, Watt hours, frequency and power factor by phase plus temperature.**
- **Accurate to +/-1%**
- **Fail Safe operation no Circuit Interruption**

Device

"A" Circuit   "B" Circuit

# Smart Power Cables

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Monitor Temp, RH and Pressure

- Utilizes same wireless network as the power cables
- Measures temperature at multiple heights in a rack both front and back
- Certain models can also track relative humidity or differential pressure

Features

- 110-250V AC adapter or Power over Ethernet with a PoE splitter
- Hundreds of units per facility
- Intuitive facility heat maps
- Low cost per measurement point
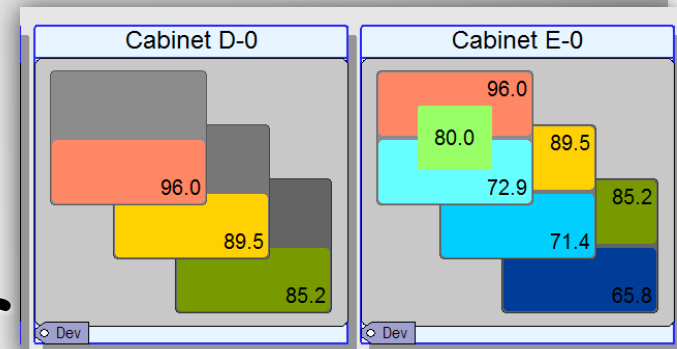
Environmental Monitor

Cabinet D-0
96.0
89.5
85.2
Dev

Cabinet E-0
96.0
80.0
89.5
72.9
85.2
71.4
65.8
Dev

Monitoring units

- All models: 1 **temperature** reading
- H models add relative **humidity**
- P models add differential **pressure**
- **10 DIs for monitoring Equipments state**

Temperature Probe Cables

- 6 probes in one cabinet (3 front, 3 rear, 6x1)
- 3 probes in 3 adjacent cabinets (plus one in center rear)
- 2 probes in 5 adjacent cabinets (all front)
- Maximum readings per unit: 11 temperature and one RH or one pressure
- Mix to suit you needs

EM Deployment Options

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Hardware	Power	Usage
"S" cables	15 to 32 A Single phase	Devices or circuits
"P" units	35 to 2000 A	High-powered circuits and monitoring at the panel, Fix or Split core
"R" cables	20 to 100 A Single and 3-phase	Circuits and high-power devices such as mainframes
Wireless PDUs	20 to 60A Single and 3-phase	Cost-effective way to add monitoring in new cabinets
Environmental Monitor	AC or PoE	Multi-point inflow temperature tracking
Ethernet Gateway	110-240V AC or PoE	Needs one Ethernet port

"S" Type

"R" Type

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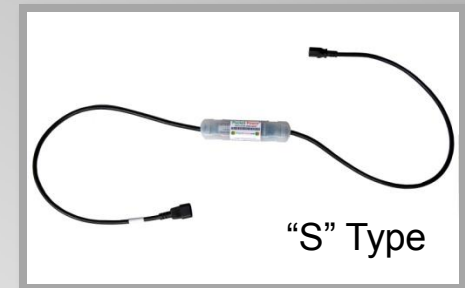
Packet Power EMX Software / cloud

- Available as hosted service **emx.packetpower.com** for "plug and play" simplicity or for local installation

- Extensive built-in functionality

- Customize reports, dashboards and monitoring unit names as desired

- The Power Manager data center layout tool allows further customization
  - device, circuit, cabinet, category and facility
  - enterprise-level alert management
  - facility power and heat maps

EMX
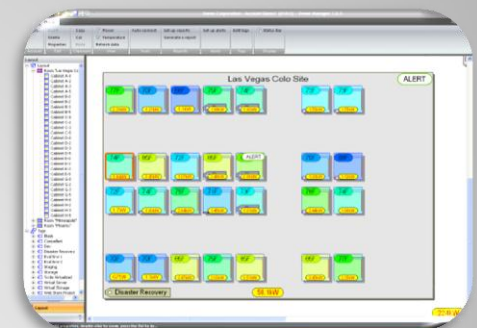
Power Manager

Use with Existing Software

- Standard SNMP interface from Gateway

Software Options

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Connect

Know

Refine

"Plug and Play" Simplicity

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- **No electricians**

- **No equipment removal**

- **Uses few IP addresses**

- **Vendor-neutral**

- **Accurate**

- **Serves IT and facilities**

Simple to Install

- **Simple to install**
    - Wireless monitors, auto-configuring network, plug and play design, easy to grow over time
- **Easy to use**
    - "Easy" is top design priority, focused on monitoring, readily customized, management tools
- **Robust wireless network**
    - Adaptable, secure, scalable
- **Affordable**
    - Lower cost installation, hardware, warranty and software

Packet Power Advantages

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Lets Start Measure – Analyse – Act.. .. ..

Thank You….!