

# Eaton ePDU G3

## Managed



*Powering Business Worldwide*

# Advanced power management and precision control

The Eaton® ePDU® third generation (G3) Managed models build on Eaton's existing state-of-the-art ePDU G3 technology while offering new capabilities for rack power distribution in data centers and information technology (IT) applications. You now have comprehensive management and monitoring capabilities down to the outlet level. This new level of precision saves time, saves money and avoids risk, making the ePDU G3 Managed the gold standard in power management.

| Feature<br>(Value)  | Increasing level of control |                     |             |
|---|-----------------------------|---------------------|-------------|
|   | Basic                       | Metered*            | Managed     |
| <b>Integrated IEC outlet grips</b><br>(Easily secure plugs to prevent accidental disconnect)                    | ●                           | ●                   | ●           |
| <b>Low-profile form factor</b><br>(Provide zero interference into the rail space)                               | ●                           | ●                   | ●           |
| <b>High 140°F (60°C) operating temperature</b><br>(Reduce cooling costs and maintain full functionality)        | ●                           | ●                   | ●           |
| <b>Color-coded outlet sections</b><br>(Simplify load balancing)   | ●                           | ●                   | ●           |
| <b>Ease of installation</b><br>(Quick, easy and flexible for most environments)                                 | ●                           | ●                   | ●           |
| <b>One percent billing grade accuracy</b><br>(Optimize power utilization)                                       |                             | ●                   | ●           |
| <b>Advanced LCD pixel display</b><br>(Allow for easy IP setup and troubleshooting)                              |                             | ●                   | ●           |
| <b>Daisy chain (share network connection/IP address)</b><br>(Reduce network infrastructure costs by 87.5%)      |                             | ●                   | ●           |
| <b>Hot-swap meter</b><br>(Remove meter without disruption)  |                             | ●                   | ●           |
| <b>Phase and section power metering</b><br>(Control power utilization)  |                             | ●                   | ●           |
| <b>Measure power consumption at outlet level</b><br>(Acquire precise data to make informed decisions)           |                             | Metered Outlet only | ●           |
| <b>Measure level 3 power usage effectiveness (PUE)</b><br>(Transform billing into revenue or utility discounts) |                             | Metered Outlet only | ●           |
| <b>Outlet switching</b><br>(Remote on, off and reboot saves time and costs)                                     |                             |                     | ●           |
| <b>Turn off unused outlets</b><br>(Control unauthorized use)  |                             |                     | ●           |
| <b>Remote site management</b><br>(Save time from on-site visits)  |                             |                     | ●           |
| <b>Group reboot for A and B feed</b><br>(Save time by controlling grouped power supplies)                       |                             |                     | ●           |
|   | <b>Good</b>                 | <b>Better</b>       | <b>Best</b> |

\*Includes Metered Input and Metered Outlet models

## Key applications

ePDU G3 Managed models are available in a variety of plug and outlet configurations, including both 120 and 200-240 volt configurations. The ePDU G3 Managed models give you advanced control of the rack environment, making it a perfect fit for a variety of applications.



### Remote office/branch office

- Portfolio of 120V and lower power ratings (kVA)
- Reboot devices without local IT staff assistance
- Control unused outlets to prevent unauthorized use
- LCD pixel menu display simplifies setup

### Enterprise data center

- Up to 208V three phase 17kW for high density applications
- Network monitoring of power usage and capacity at the outlet level
- Save time by rebooting devices from the operations center
- Measure power for Level 3 PUE

## Outlet switching

Remotely control devices by powering on or off individual outlets. Save time and operating costs by rebooting machines from your control center without costly site visits.

## Turn off unused outlets

Secure and protect your environment by easily turning off unused outlets. Avoid overloading your system from others plugging in unauthorized devices. Also consider closing access with an outlet cap.



Green LED signifies power on and red is power off to outlet



Cap secures in place with cable tie

## Grouped reboot for A and B feed

When connecting multiple source input servers to an A and B feed power source, the daisy-chain capability allows you to group power supplies across the ePDU. As a result, all the power supplies are controlled with a single action, which saves time rebooting servers with two to six power supplies.



Typical server with multiple power inputs powered by two ePDUs

## Color-coded outlet sections

Color-coded outlet sections match a corresponding circuit breaker to easily identify which one feeds corresponding outlets and prevent unbalanced loading that would unnecessarily trip a breaker.



O is unlocked, + is grip engaged

## Outlet grip functionality

Eaton's patent-pending IEC outlet grip secures plugs in place with a lever-actuated grip that's integrated into each outlet. Once the levers click into the grip position, the plugs are secured from accidental disconnect due to bumps or vibrations without the need for special power cords.



## One percent billing grade accuracy

±1%

ePDU G3 provides one percent revenue-grade power monitoring for higher accuracy in department billing or colocation data centers. Effectively measure power usage to all outlets or individual outlets.



## Advanced LCD pixel display with hot-swap capability

Eaton's new hot-swap eNMC (ePDU Network Management and Control) module can be replaced without the need to power down your rack. Increase uptime while enhancing serviceability and saving on unnecessary service calls. The menu-driven pixel display allows for easy setup and troubleshooting.



Module being removed without removing power to the ePDU

## Daisy chain eight units from one IP address

Eaton's new patented daisy-chain capability allows up to eight ePDUs to share the same network connection and IP address. Unlike competitive rack PDUs that require a dedicated IP address for best performance, Eaton technology provides a 87.5 percent reduction in network infrastructure costs.

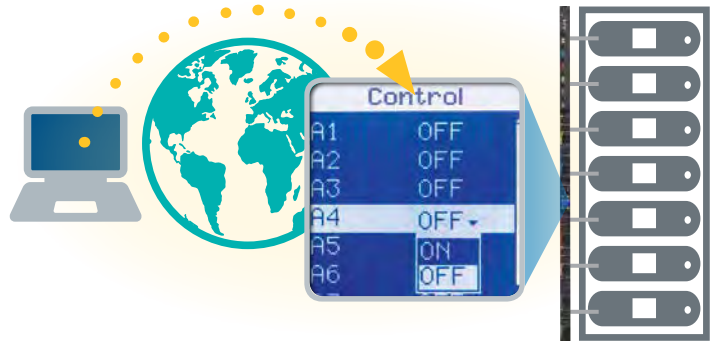


A and B power PDU sharing a network connection via daisy chain

# Increase effectiveness and reduce operating costs

## Remote site management

- Manage ePDU G3s using a web browser or SNMP integration into DCIM software
- Simplify management by using the daisy-chain capability to manage up to 8 ePDU G3s with a single IP address
- Avoid costly site visits by remotely rebooting and monitoring your site, allowing more time to manage other critical tasks



## Measure power consumption at the outlet level

- Acquire more accurate and detailed data
- Gain energy analysis at a deeper level
- Make informed decisions to reduce power consumption



From meter screen, select outlets...

From outlet screen, select specific outlet to view...

View live power levels for selected outlet

## Measure Level 3 PUE

PUE is an industry-wide accepted method to measure power effectiveness. Measuring at the outlet level removes upstream devices from the calculation to provide an accurate view of how effectively power is being used for the connected IT equipment. Data center managers typically prefer Level 3 PUE for the most accurate PUE calculation.

| PUE measurement       | Level 1: Basic | Level 2: Intermediate | Level 3: Advanced               |
|-----------------------|----------------|-----------------------|---------------------------------|
| IT equipment energy   | UPS outputs    | PDU outputs           | IT equipment input              |
| Total facility energy | Utility inputs | Utility inputs        | Utility inputs                  |
| Measurement intervals | Monthly/weekly | Daily/hourly          | Continuous (15 minutes or less) |

To obtain Level 3 PUE, you must take measurements at the IT equipment level in intervals of at least 15 minutes.

## Perform department and customer billing

Metering at the outlet level provides customer-level energy tracking and turns power billing into a revenue stream that considers actual usage. Similarly, you can measure power usage per application and assign it to specific departments for budgeting purposes or to justify costs.



Each outlet can be billed separately.

## Ease of installation

- Patented clip feet allow for multiple mounting methods
- Mounting buttons come pre-installed to reduce installation time
- Optional side mounting button locations to mount ePDU G3s at a 90-degree rotation in the rack, preventing interference with hot-swap fans and power supplies
- Double-sided buttons accommodate different variations of metal thickness



Eaton patented clip feet

## ePDU G3 Managed selection guide

| Catalog number | Input plug             | Cord (ft) | Breaker | Current (A) | Max kW | Output receptacles           | Dimensions (H x W x D, in) |
|----------------|------------------------|-----------|---------|-------------|--------|------------------------------|----------------------------|
| EMA111-10      | 5-15P                  | 10        | None    | 12          | 1.44   | (8) 5-15R                    | 35.5 x 2.05 x 2.56         |
| EMA112-10      | 5-15P                  | 10        | None    | 12          | 1.44   | (16) 5-20R                   | 66.5 x 2.05 x 2.56         |
| EMA113-10      | L5-20P (5-20P adapter) | 10        | None    | 16          | 1.92   | (8) 5-20R                    | 35.5 x 2.05 x 2.56         |
| EMA114-10      | L5-20P (5-20P adapter) | 10        | None    | 16          | 1.92   | (24) 5-20R                   | 66.5 x 2.05 x 2.09         |
| EMA108-10      | L5-30P                 | 10        | (2) 20A | 24          | 2.88   | (24) 5-20R                   | 66.5 x 2.05 x 2.56         |
| EMA106-10      | C20 (L6-20 adapter)    | 10        | None    | 16          | 3.84   | (7) C13, (1) C19             | 35.5 x 2.05 x 2.1          |
| EMA115-10      | C20 (L6-20 adapter)    | 10        | None    | 16          | 3.84   | (21) C13, (3) C19            | 63.1 x 2.05 x 2.09         |
| EMA107-10      | L6-30P                 | 10        | (2) 20A | 24          | 5.76   | (20) C13, (4) C19            | 66.5 x 2.05 x 2.1          |
| EMA334-10      | L21-20P                | 10        | None    | 16          | 5.76   | (24) 5-20R                   | 63.1 x 2.05 x 2.56         |
| EMA324-10      | L15-20P                | 10        | (3) 20A | 24          | 5.76   | (18) C13, (6) C19            | 66.5 x 2.05 x 2.56         |
| EMA325-10      | L21-20P                | 10        | (3) 20A | 24          | 5.76   | (18) C13, (6) C19            | 66.5 x 2.05 x 2.56         |
| EMA339-10      | L15-20P                | 10        | (3) 20A | 16          | 5.76   | (21) C13, (3) C19            | 66.5 x 2.05 x 2.09         |
| EMA340-10      | L21-20P                | 10        | (3) 20A | 16          | 5.76   | (21) C13, (3) C19            | 66.5 x 2.05 x 2.09         |
| EMA326-10      | L15-30P                | 10        | (3) 20A | 24          | 8.64   | (18) C13, (6) C19            | 66.5 x 2.05 x 2.56         |
| EMA327-10      | L21-30P                | 10        | (3) 20A | 24          | 8.64   | (18) C13, (6) C19            | 66.5 x 2.05 x 2.56         |
| EMA333-10      | L21-30P                | 10        | (3) 20A | 24          | 8.64   | (21) C13, (6) C19, (1) 5-20R | 66.5 x 2.05 x 2.56         |
| EMA341-10      | L15-30P                | 10        | (3) 20A | 24          | 8.64   | (21) C13, (3) C19            | 66.5 x 2.05 x 2.09         |
| EMA342-10      | L21-30P                | 10        | (3) 20A | 24          | 8.64   | (21) C13, (3) C19            | 66.5 x 2.05 x 2.09         |
| EMA328-10      | CS8365                 | 10        | (3) 20A | 35          | 12.48  | (18) C13, (6) C19            | 66.5 x 2.05 x 2.56         |
| EMA343-10      | CS8365                 | 10        | (3) 20A | 35          | 12.48  | (21) C13, (3) C19            | 66.5 x 2.05 x 2.09         |
| EMA329-06      | CS8365                 | 6         | (6) 20A | 40          | 14.4   | (12) C13, (12) C19           | 66.5 x 2.05 x 2.56         |
| EMA330-06      | IEC60309 460P9W        | 6         | (6) 20A | 48          | 17.3   | (12) C13, (12) C19           | 66.5 x 2.05 x 2.56         |

## ePDU G3 accessories

| Part Number | Description                    |
|-------------|--------------------------------|
| EMP001      | Environmental monitoring probe |
| 010-0029    | 2-foot C13 to C14 jumper cord  |
| 010-0028    | 4-foot C13 to C14 jumper cord  |
| 010-0027    | 6-foot C13 to C14 jumper cord  |
| 010-0025    | 8-foot C13 to C14 jumper cord  |
| 035-0113    | C13 outlet cap                 |
| 035-0119    | C19 outlet cap                 |

## Environmental monitoring

The optional environmental monitoring probe connects to the serial port and enables you to collect temperature and humidity readings in the rack environment to monitor environmental data remotely. You can also monitor the status of two contact closure devices, such as door switches.



Part Number EMP001