



# Branch Circuit Monitoring System

## Data Center Panelboard and Busway Monitoring

Raritan's intelligent Branch Circuit Monitoring (BCM) system allows you to fully utilize your power infrastructure and manage capacity as your data center grows and changes. Whether you are retrofitting an existing facility, or planning for growth or new construction, Raritan's BCM system can help you reduce energy costs, track power usage, and prevent downtime. Easily add metering where it never existed before.

This easy-to-deploy modular system, enables real-time views of electrical capacity and power usage on branch circuits, and mains, in an electrical service entrance or a remote power panel. It sends threshold alerts for power and environmental conditions, thereby helping to prevent downtime. The data can also support energy efficiency and customer charge-back initiatives. Plus it integrates with Power IQ® DCIM Monitoring Software, and other building management system (BMS) and DCIM solutions.

## Features & Benefits

- Meters Floor PDU, RPPs, Panelboards, and Busways.
- One controller supports up to 70 power meters.
- Quick configuration via USB stick preloaded with panel schedule.
- CTs connect to live circuits.
- Auto-correct metering adjusts for CT orientation on wires.
- Real-time configurator.
- USB ports for configuration, Wi-Fi networking, and tablet display.
- Supported by DCIM software that offers auto-discovery as a panel.
- Several enclosure options.
- Same firmware as Raritan rack PDUs.
- Remote display using PDView app.
- Collects data on: A, V, kW, kVA, power factor, and kWh.
- Protocols include TCP/IP, Modbus and SNMP.
- Environmental sensor support.

### Components of the System



Branch Metering Enclosure



DIN Rail Modules (Connected)



Cabling



Current Transformers

# Metering Where It Never Existed Before

The all new BCM leverages the proven technology of Raritan's rack PDUs to monitor power upstream from IT equipment racks. Monitor power at panelboard, floor PDU, remote power panel or overhead busway, in real-time.

## Lower Your Total Cost of Ownership

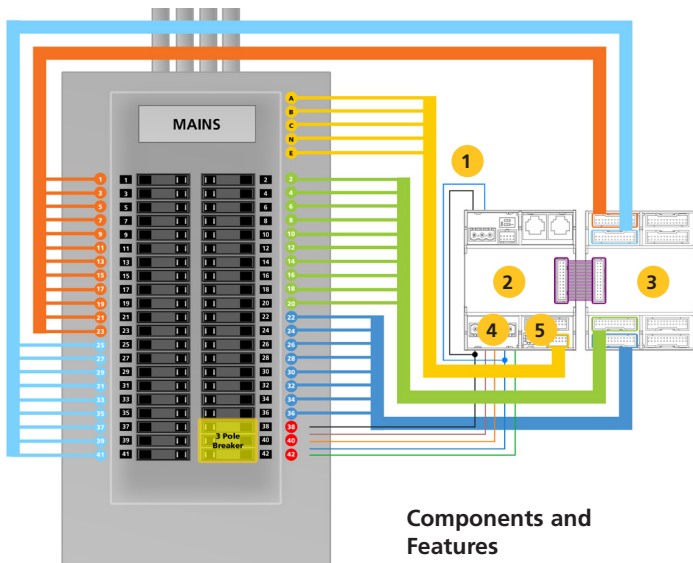
- Control up to 70 power meters with a single controller.
- Protocols include TCP/IP, Modbus and SNMP.
- Built-in redundancy; all modules function as long as one meter remains powered.
- Accessible using Wi-Fi networking access.
- Highest density branch circuit metering -- 96 branch circuits.
- Easy to install, configure, and scale.
- Prevents downtime and improves efficiency of power infrastructure.

## Features that Saves You the Time and Hassle

- Upload panel schedule to USB stick for circuit mapping and configuration setup (can be disabled).
- Mix and match same modules for busway and panelboard monitoring.
- PDView tablet apps for easily viewing large amounts of information.
- Fully supported as a panelboard in Power IQ DCIM Monitoring Software.
- Same firmware as Raritan rack PDUs.

## How It Works

### Panel



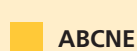
### Components and Features

#### CT Cables

Branches:

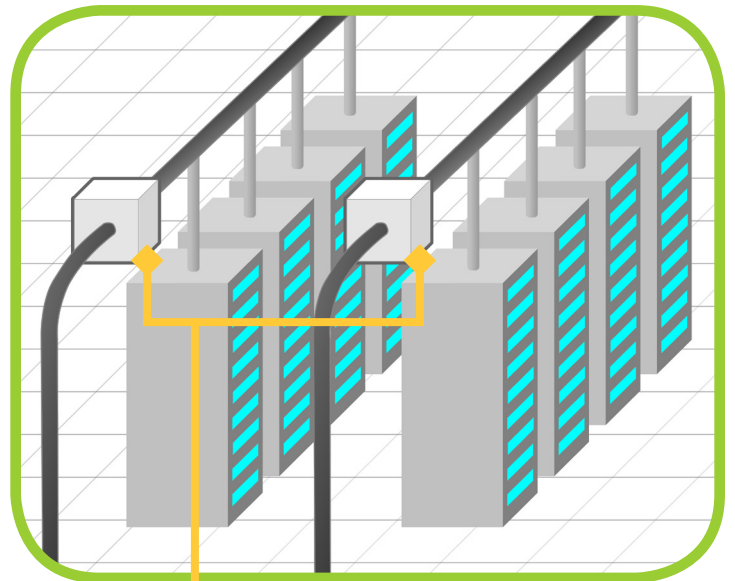


Mains:



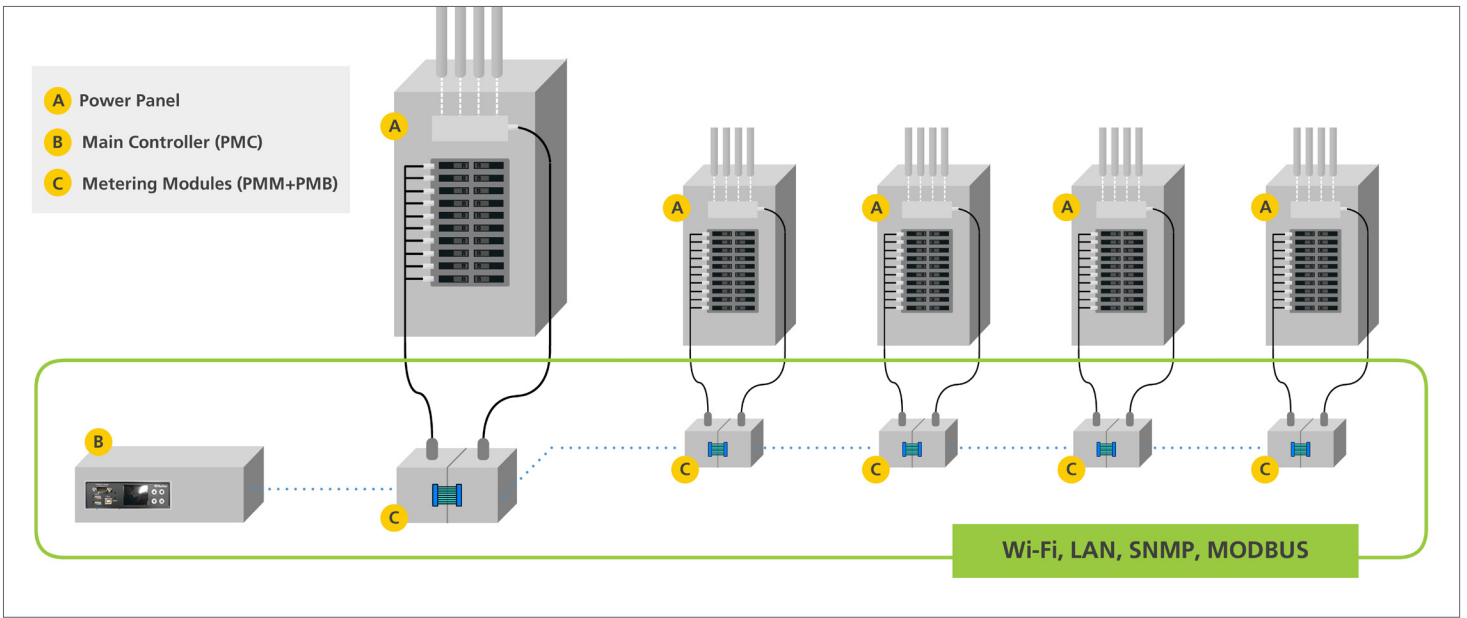
- 1 Module Power
- 2 PMM
- 3 PMB
- 4 Mains Voltage Monitoring
- 5 Mains Current Monitoring

### Busway



Install busway metering module at the busway mains junction box to monitor power going to racks.

# Unique Modular Design: Add Metering Only When Needed



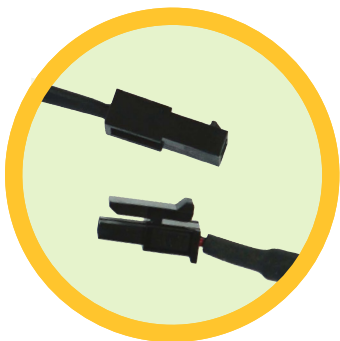
## Designed for Simple Installation and Configuration

- Split core current transformers (CTs) attach to existing branch circuits and mains.
- The CTs can be installed in either direction; metering system auto-corrects.
- Several mounting options including: subfloor, wall mount, IT rack, and DIN rail.
- The wiring harness allows you to install the CTs without a lot of excess wires.
- Simplified and clean wire installation using multi-conductor cable fed into panel to attach CTs.
- Auto correct metering adjusts for CT orientation on wires, prevents mistakes.
- CTs connect to live circuits without downtime or damage to CT.
- Labeled CT wiring to eliminate errors.
- Keyed locking connectors for error proof and reliable connection.

- Real-time configurator displays current and phase allowing you to confirm correct installation.
- Quick configuration via USB stick preloaded with panel schedule.

## Advanced Metering and Monitoring

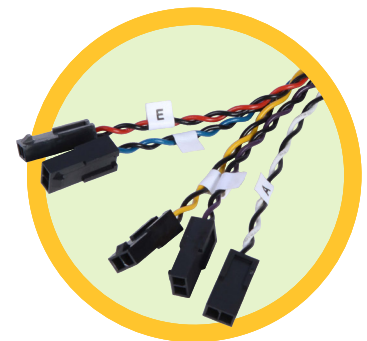
- Power data readily available with Power IQ Software or other building management systems.
- Data is remotely accessible via web; or locally on a high-res color display or tablet.
- Provides data center and facilities managers with real-time and historical views of electrical capacity and power usage.
- Mix and match same modules for busway and panelboard monitoring.
- Measures kWh with +/- 0.5% billing grade accuracy.
- Collected data can be used to reduce downtime and drive efficiency initiatives.



Locking connectors for error-proof and reliable connections.



Simple management via PowerIQ Monitoring Software.



Labeled CT cable connectors ease panel position mapping.

Enclosures	Description
<b>BCM2-9610</b>	96 Channel Branch Circuit Meter Enclosure - Supports 208V 3Phase power metering with L21-20P input. Monitor 3Phase Mains lines, Neutral and Ground and up to 96 branch circuits. Metering accuracy to 0.5%. Includes intelligent controller for remote access.
<b>BCM2-9610Y</b>	96 Channel Branch Circuit Meter Enclosure - Supports up to 415V 3Phase power metering with 16A Terminal input. Monitor 3Phase Mains lines, Neutral and Ground and up to 96 branch circuits. Metering accuracy to 0.5%. Includes intelligent controller for remote access.
<b>BCM2-9610-GO</b>	96 Channel Branch Circuit Meter Enclosure - Supports 208V 3Phase power metering with L21-20P input. Monitor 3Phase Mains lines, Neutral and Ground and up to 96 branch circuits. Metering accuracy to 0.5%. No intelligent controller for remote access.
<b>BCM2-9610Y-GO</b>	96 Channel Branch Circuit Meter Enclosure - Supports up to 415V 3Phase power metering with 16A Terminal input. Monitor 3Phase Mains lines, Neutral and Ground and up to 96 branch circuits. Metering accuracy to 0.5%. No intelligent controller for remote access.
Controllers	Description
<b>PMC-1000</b>	Power Meter Controller - wall mount
<b>PMC-1001</b>	Power Meter Controller - 19" rack mount
Current Transformers	Description
<b>BCM2-250A-CT-3PK</b>	3x 250A/0.5%/333mV/24"/610mm lead
<b>BCM2-1A-CT</b>	1x 1A/0.5%/333mV/24"/610mm lead
<b>BCM2-60A-CT-12PK</b>	12x 60A/0.5%/333mV/24"/610mm lead
Cables	Description
<b>BCM2-BCTcable-3M-1</b>	Branch Circuit cable for 12x CTs, 10ft (3m)
<b>BCM2-BCTcable-3M-2</b>	Branch Circuit cable for 12x CTs, 10ft (3m)
<b>BCM2-BCTcable-3M-3</b>	Branch Circuit cable for 12x CTs, 10ft (3m)
<b>BCM2-BCTcable-3M-4</b>	Branch Circuit cable for 12x CTs, 10ft (3m)
<b>BCM2-MCTcable-3M</b>	Mains Circuit cable for 5x CTs, 10ft (3m)

Voltage Measurement Inputs		Meter Measurement Accuracy	
<b>Input Range*</b>	90-277V LN, 156-480V LL	<b>Active Power &amp; Energy</b>	0.5%: IEC 62053 Class .5, EN 50470-3 Class C
<b>Measurement Category</b>	CAT III, Pollution Level 2	<b>Reactive Power &amp; Energy</b>	2%
<b>Frequency</b>	50/60 Hz	<b>RMS Voltage &amp; Current</b>	0.2%
Current Measurement Inputs		<b>Frequency</b>	0.1%
<b>CT Type</b>	Voltage Output = 333 mV at rated current	<b>Sample Rate</b>	64x 50 or 60 Hz (phase locked)
<b>CT Rated Current</b>	1-1200A	<b>Measurement Update Rate</b>	3 secs: IEC 61000-4-30 Class S
Environmental		Conformance	
<b>Operating Temperature</b>	0°-60°C (32°-140°F)	<b>Safety</b>	UL/EN 61010-1
<b>Operating Humidity</b>	0°-60°C (32°-140°F)	<b>EMC/EMI</b>	EN61326-1, FCC Part 15 Class A
<b>Operating Elevation</b>	0-3000m		
Power Requirements			
<b>Voltage</b>	90-240V		
<b>Current</b>	0.2A		



Ready to Learn more about Raritan's Intelligent Branch Circuit Monitoring System?  
Call 1.800.724.8090 for more information.

Raritan is a proven innovator of power management solutions and KVM-over-IP for data centers of all sizes. In over 76 countries and 50,000 locations worldwide, Raritan's award-winning hardware solutions increase energy efficiency, improve reliability, and raise productivity.

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