Packet Power offers the ideal way to add monitoring to any panelboard, RPP or PDU. Designed to minimize installation time, the system uses a flexible CT harness that fits in even the tightest spaces, comes fully pre-configured, and avoids the need to run data communications wiring. Our customers use the data provided by the system to allocate energy costs, avoid unplanned outages, identify underutilized power, and balance load across phases.

**Wireless Branch Circuit Monitoring Kit**

- Monitors any combination of single and 3-phase circuits
- Installs on PDUs, RPPs or panelboards from any vendor
- Enables continuous energy monitoring to determine PUE
- Split core CTs install without having to disconnect critical power systems
- Flexible current sensor harnesses install in minutes
- No data wiring to panels
- Display data according to the actual panel circuit mix
- Send data via SNMP or Modbus or access with EMX Energy Portal

**Simple panel retrofit**

Packet Power’s circuit mapping utility makes it easy to quickly create a circuit map for a panel.

**Simple panel mapping**

*View circuits as they are installed on the panelboard*

<table>
<thead>
<tr>
<th>Pole</th>
<th>Ch</th>
<th>Circuit Type</th>
<th>#</th>
<th>Rating</th>
<th>Status</th>
<th>Name</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>A</td>
<td>L-N</td>
<td>20A</td>
<td></td>
<td>A</td>
<td>A</td>
<td>A</td>
</tr>
<tr>
<td>3</td>
<td>B</td>
<td>L-N Detx Wye</td>
<td>20A</td>
<td></td>
<td>A</td>
<td>A</td>
<td>A</td>
</tr>
<tr>
<td>5</td>
<td>C</td>
<td>L-N Detx A2</td>
<td>20A</td>
<td></td>
<td>A</td>
<td>A</td>
<td>A</td>
</tr>
<tr>
<td>9</td>
<td>B</td>
<td>Delta</td>
<td>20A</td>
<td></td>
<td>B</td>
<td>B</td>
<td>B</td>
</tr>
<tr>
<td>13</td>
<td>A</td>
<td>Delta</td>
<td>20A</td>
<td></td>
<td>B</td>
<td>B</td>
<td>B</td>
</tr>
<tr>
<td>15</td>
<td>B</td>
<td>Wye</td>
<td>15A</td>
<td></td>
<td>B</td>
<td>B</td>
<td>B</td>
</tr>
<tr>
<td>17</td>
<td>C</td>
<td>Wye</td>
<td>20A</td>
<td></td>
<td>C</td>
<td>C</td>
<td>C</td>
</tr>
</tbody>
</table>

**ENERGY USE BY CIRCUIT**
Why Packet Power

**Installs easily**
- Pre-wired CT harnesses simplify installation
- No data wiring to panels needed
- Simple panel mapping displays circuits as they appear on the panel
- Split-core CTs install without disconnecting critical systems

**Cost effective**
- Lower installation costs
- Fully self-optimizing wireless network lowers ongoing support costs

**Secure**
- Unique purpose-built wireless protocol can only be used for monitoring
- Full separation of wireless monitoring and wired data network
- Proven in data centers worldwide

**Open**
- Compatible with any existing hardware
- Send data to any DCIM or BMS using SNMP or Modbus TCP/IP

**Instant access to data**

*Access information instantly using EMX or export using SNMP or Modbus*

EMX Energy Portal is an intuitive energy monitoring software that offers all the features of competing solutions at a fraction of the cost and without the programming complexity. As soon as the BCM is energized data is accessible online.

- Automated reports including energy by user, circuit and group
- Set alerts to spot anomalies before they become problems
- Offered as cloud or local installation
- Circuit Mapping utility allows circuits types to be displayed exactly as they are installed on the panel.

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Installation to online in minutes

Packet Power wireless Branch Circuit Monitoring installs in a fraction of time versus other systems by eliminating communication wiring, configuration and providing turnkey installation wiring harnesses.

Packet Power saves time and money

<table>
<thead>
<tr>
<th>Conventional BCMs</th>
<th>Packet Power</th>
<th>Time / Cost Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wire communication cables to data integrator</td>
<td>Wireless</td>
<td>+1-3 hours (+$150-$450)</td>
</tr>
<tr>
<td>Configure communications network</td>
<td>Pre-configured plug and play</td>
<td>+1-4 hours (+$150-$600)</td>
</tr>
<tr>
<td>Assemble wiring kits</td>
<td>Pre-configured, pre-wired harnesses</td>
<td>+1-2 hours ($100-$200)</td>
</tr>
<tr>
<td>Cut and dress CT cables individually</td>
<td>Pre-made CT harness for specific panels</td>
<td>+1-2 hours ($150-$300)</td>
</tr>
</tbody>
</table>

Potential savings using Packet Power: Up to 11 hours and $1,550
### Technical Specifications

<table>
<thead>
<tr>
<th></th>
<th>BG08-C480</th>
<th>BG08-P480</th>
<th>BG14</th>
<th>BG32</th>
</tr>
</thead>
<tbody>
<tr>
<td>Circuit capacity</td>
<td>48</td>
<td>48 + main input</td>
<td>42</td>
<td>96</td>
</tr>
<tr>
<td>Measurements</td>
<td>A, Ah (W, Wh available using an arbitrary voltage)</td>
<td>Current per circuit and power for the main feed</td>
<td>A, V, W, VA, Wh, TDHI, THDV, PF, Hz</td>
<td>A, V, W, VA, Wh, TDHI, THDV, PF, Hz</td>
</tr>
<tr>
<td>Dimensions</td>
<td>9.5” x 6.3” x 3.6”</td>
<td>10.4” x 7.2” x 3.7”</td>
<td>23.0” x 11.5” x 2.5”</td>
<td>17.5” x 11.9” x 4.5”</td>
</tr>
<tr>
<td>Input voltage</td>
<td>100-277V AC (1ø)</td>
<td>100-277V AC (1ø/3ø)</td>
<td>100-277V AC (1ø/3ø)</td>
<td>100-240V AC (1ø/3ø)</td>
</tr>
</tbody>
</table>

#### Measurement

- **Circuit types**: Circuits can be any combination of L-N, L-L or 3-phase
- **Accuracy**: +/-1.0% (CT dependent); +/-0.5% available
- **Configurable parameters**: Breaker number, breaker rating, circuit type, circuit name, circuit capacity, panelboard name

#### Communications

- **Operating frequency**: 860 to 930 MHz and 2.4 GHz (frequencies vary by region)
- **Wireless network protocol**: Frequency hopping self-configuring load-balancing mesh
- **Data output (Gateway)**: SNMP and Modbus TCP/IP protocols with one IP address needed per Gateway; also visible through EMX cloud or local energy management system
- **Firmware updates**: Wireless
- **Typical transmission range**: 10 to 30 meters indoors between any two devices in mesh network
- **Antenna**: Full enclosed, fixed configuration
- **Encryption**: 128-bit
- **Local display**: LED displays on BG08 and BG14

#### Environmental & Mechanical

- **Operating environment**: -7° to 75°C (20° to 167°F) / 5% to 95% non-condensing
- **Water and dust resistance**: BG14 / BG32: NEMA 1/IP20 (indoor use)  BG08: NEMA 4X
- **CT harness configuration**: 2 x 24 CTs at 0.75” c-c, 1.0” c-c, or 18mm c-c; alternate configurations available
- **Input power**: 5-20W max; 120 to 277/480V AC
- **Monitor certifications**: UL 61010-1, CSA C22.2 No. 61010-1, UL508A, FCC.CE (this is a partial list)

#### Split Core Current Transducers

- **Main input**: 120A, 240A, 480A
- **Branch circuits**: 36A, 70A

Other CT ratings and configurations available upon request.