

EAS Product Management

Product Line Managers

May 16, 2024



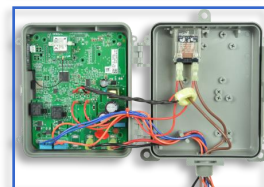
Smart Grid | AMI & DR



Powering Business Worldwide

Product Update

- **LCR-7600 Cellular Demand Controller**
 - **Grid Edge control from the Cloud**
 - Simple and Fast Installation
 - SIMs installed and pre-activated at the factory
 - On-board terminal strips – no wire nuts
 - Third party retrofits
 - Grid Edge Monitoring and Autonomous Control
 - Monitor and Report: Live Voltage, Line Frequency, Load Consumption
 - Frequency deviation response < 12 cycles
 - Voltage deviation response < 105 ms
 - Reserves and Ancillary Services Support
 - Quick response to dispatch request
 - Immediate acknowledgement of receipt
 - Forecasting, M&V and Appliance Monitoring
 - Reports interval kWh and Load Demand



Product Update

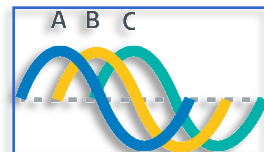
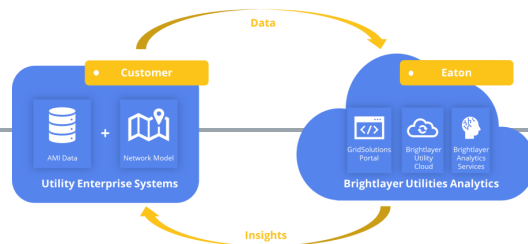
- RFW-201 Water Node Production
- **Plant Move is COMPLETE**
 - Shifted to high volume plant
 - Same plant our electric AMI products are made
 - Line restarted at end of April
 - Coordinating production schedules as we ramp up
- **We sincerely appreciate your patience and understanding**
- Cellular IPLink Relay (CRLY-856)
- **AT&T Field Trial Underway**
- Targeted for pockets of up to 50 nodes
 - No longer delaying for Verizon's network support of private static IPv6 addressing



Smart Grid – AMI & DR Updates

- Operational Analytics

- Data to Insights**
- Distribution Network Verification: Phase Detection
 - Identify inaccuracies of your network model
- EV Detection
 - Gain insights into EV adoption and charging to better manage your distribution system
- Transformer Loading Analysis
 - Improve asset management with critical insights
 - Address supply chain concerns
- Demand Response Measurement & Validation
 - Improve load reduction event reporting



New Product Initiatives

- RFN-630CP3
 - **Adds Itron's new polyphase meter to our portfolio**
 - Itron CENTRON Polyphase III meter
 - Built on our latest backwards compatible radio platform
 - **Join us at 1:00 for details on all things AMI**
- LCR-7200 Cellular Demand Controller
 - **Extending Grid Edge control to the small box LCR**



Expected Release:
2025

Grid Automation



GridAdvisor 3

Smart Utility Sensor

Coming Soon...



GridAdvisor 3 improves on GridAdvisor II

- Higher visibility LEDs
- Improved clamping with positive lock
- Better energy harvesting and low power operation
- Increased accuracy
- Higher current rating and larger cable size range
- Updated technologies for increased processing and memory
- Fully digital sampling and analysis to enable new algorithms and features



GridAdvisor 3 improves on GridAdvisor II



Learn More with Ryan Rausch, Product Manager,
during the Interactive Session with New DA Products
Thursday, May 16th, 3:30pm – 4:30pm in the Hall of Fame

CBC-8000: Feature-rich and versatile

Capacitor banks on the distribution system are the most **economical** and most **efficient** source of VARs.

Local algorithms:

- Voltage
- VARs
- Current
- Time
- Temperature
- Neutral current



CBC-8000: Feature-rich and versatile

Installation options:

- Site-ready options available
- Installed as a standalone unit
- Volt/VAR optimization systems using remote communication via SCADA
- Override and Comms Loss fallback modes

6-week lead-time

Priced Aggressively

Made in the USA



Conference Special

Early reveal to attendees Eaton's Next Generation Capacitor Bank Control

Interact and Provide feedback on
Eaton's 1st CBC-9000 prototype

- Learn about our roadmap

New Feature include:

- Individual Phase Operation
- WiFi Wireless Service Access
- Ease-of-use innovations
- Simplified Maintenance and Support approaches



Conference Special

Early reveal to attendees
Eaton's Next Generation Capacitor Bank Control



Learn More with Troy Hedlund, Product Manager,
during the Interactive Session with New DA Products
Thursday, May 16th, 3:30pm – 4:30pm in the Hall of
Fame

SMP DA-3050

Grid Monitoring and Control in compact form.

SMP 3050 enables multiple use cases:

- Local data concentration and calculation
- Smart RTU to inform SCADA/ADMS
- Health monitoring of equipment
- Secure firewall to access IEDs downstream
- Control platform for DERs and microgrids and other small plants
- Legacy-to-modern protocol translation
- Can be located anywhere along the grid, indoor or outdoor

KEY FEATURES:

- Combine I/O processing and communication in small form factor .
- Future proof with a great deal of CPU horsepower in reserve
- All major protocols supported
- 4 embedded I/O and up to 36 additional I/O extension
- Embedded cellular modem for upstream communication
- Open platform (container based) with programmable interface



SMP EDG (project Octopus)

Grid Edge Computing Platform.

SMP EDG is an open platform to enable decentralized intelligence :

- Collect measurements and statuses of distribution equipment.
- Local data concentration, normalization and calculations
- Provide situational awareness to enterprise level applications
- Facilitate DERs integration
- Prevent equipment failure using edge analytics
- Enable decentralized automation

KEY FEATURES

- Powerful and cost effective computing platform
- Support modern utility communication protocols
- Easy deployment using Low Touch/No Touch approach
- Flexible architecture using containerized applications (Eaton's or 3rd party's)
- Optional embedded 5G cellular modem for upstream communication



SMP SG-4260

Substation Modernization Platform is a flexible, progressive and scalable platform for all electrical utility substation automation and integration projects.

Features:

- Support all utility communication protocols
- Data concentration & protocol translation
- Logic processor functions
- Integrated HMI with SLD capabilities
- Cyber-security (NERC-CIP compliance)
- Facilitates IED secure remote access
- Integrated GPS clock
- PRP/HSR network redundancy
- PTP and IRIG-B time synchronization

Benefits:

- Robust automation platform which can work across manufacturers, facilitating product compatibility across solutions
- One box that does it all simplifies system design, deployment and maintenance.
- Appliance approach makes it very easy to deal with Cybersecurity.



Vendor Agnostic



Compatible with any manufacturer

Leading SMP Player



Holds substantial market share

30,000+ Devices



SMP gateways installed globally

80+ Protocols



Standards & protocols compliant

25+ Years Experience



Serving utilities with SMP Gateway

Key Users



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IED Manager Suite (IMS)



Configuration management

- Automatically retrieves and stores IED asset information
 - Hardware information
 - Firmware versions
 - Configuration settings
- Detects changes and baseline deviations and notifies appropriate users
- Perform side by side comparison
- Meet NERC CIP configuration management requirements



Firmware update management

- Performs batch firmware and settings updates to hundreds of IEDs
- Increases efficiency and reduces maintenance costs



Password management

- Securely manages IED accounts and passwords
- Randomly generates complex NERC CIP compliant passwords that meet specific IED requirements



Secure engineering access

- Provides role-based access control (RBAC), centralized access management and single sign on (SSO)
- Performs IED automatic login, command filtering and keeps complete audit trail logs
- Secure remote access to devices saves on maintenance costs



Event and data collection

- Automatically retrieves fault records, events and oscillography from IEDs and stores all data in a centralized database
- Collects real-time operational data from IEDs and publishes it to control systems and data historians
- Reduces SAIDI by providing the right data to the right person at the right time

Wrap Up



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Eaton.com/WhatMatters

Appendix

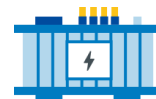
Brightlayer Utilities Analytics – from Data to Insights



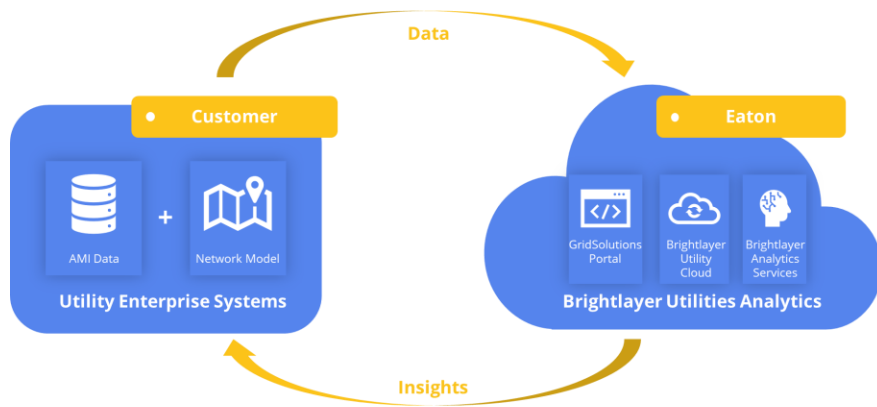
Distribution Network
Verification: Phase
Detection



Electric Vehicle
Detection



Transformer
Loading



New Product: LCR-7600 Cellular Demand Controller

Eaton Advanced Solutions: from the Cloud and at the Grid Edge

Simple and Fast Installation

- No cellular setup required at site
 - SIM is installed and pre-activated at factory
- Terminal connection on board, eliminates need for wire nuts
- Retrofit into 3rd party equipment

Reserves and Ancillary Services Support

- Quick response to dispatch request
- No pre-conditioning required
- Flexible control strategies (5 minutes to several hours)
- Immediate acknowledgement of receipt
- Control adapts to connected resource



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Grid Edge Monitoring and Autonomous Control

- Monitor and report Line Voltage
- Monitor and report Line Frequency
- Monitor and report Load Consumption
- Under Frequency deviation response < 12 cycles
- Voltage deviation response < 105 ms

Forecasting, M&V and Appliance Monitoring

- Reports Interval KWh consumption for load
- Reports Demand of the load
- Reports Appliance usage change can be used detect potential failure

Now Shipping

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