



OpenWay[®] CENTRON[®]

Cellular LTE

The smart meter for the smart grid, the OpenWay CENTRON, is now available with an LTE Itron Cellular Module (ICM). This integrated OpenWay Cellular solution provides a complementary communication pathway by incorporating WAN functionality—under the OpenWay CENTRON meter cover—to connect the meter directly to the OpenWay Collection Engine via a public wireless network.

The OpenWay CENTRON Cellular LTE takes advantage of new advanced 4G LTE networks. This results in more efficient coverage, higher bandwidth and longer network longevity. The OpenWay CENTRON Cellular LTE includes both a ZigBee[®] wireless component and an LTE ICM that can be tailored to fit your unique needs. The module comes factory installed within the OpenWay CENTRON meter—the solution ships as one complete unit, ready for field deployment.

FEATURES AND BENEFITS

Flexible Two-Way Communications

- » Execute all supported reading, configuration and firmware download functionality through user-configurable schedules controlled by head-end meter data management software
- » Acquire readings on an on-demand basis when necessary

Automated Interval Data/Energy Usage Retrieval

- » Receive and transmit meter interval data for up to four unique energy values in intervals as small as five minutes. Recorded events and exceptions with each interval are also transmitted to the head-end software, which interprets them and logs appropriate messages (such as time adjustments)

Pushing Intelligence to the Edge

- » Enable future applications in edge intelligence by utilizing on the newest Itron Riva technology platform. By pushing computing power to the edge devices, closer to where problems and opportunities occur, we enable faster, better decision making.

Automated Register, Self-Read and TOU Retrieval

- » Configure the module to read and transmit totals, self-reads, maximum demand, time-of-use (TOU) and critical peak pricing (CPP) values

Demand Reset Capability

- » Perform demand resets, over the network or locally via tools or the demand reset switch

Power Outage and Restoration Alarms

- » Transmit a real-time “last gasp” notification when detecting an AC power outage with built-in ultracapacitor energy storage. The meter then notifies the head-end when the AC power is restored

Service Diagnostic and Tamper Detection Alerts

- » The OpenWay CENTRON Cellular LTE can detect and report exceptions for meter inversion, meter removal, reverse

energy flow and power outages. The OpenWay CENTRON Cellular LTE architecture provides the power outage notification (PON) and tamper associated with a meter removal immediately upon power down. This results in two exception messages upon power down, PON and Removal tamper.

Secure Boot

- » The OpenWay CENTRON Cellular LTE has the capability to validate digital signature prior to uploading and applying any new ICM firmware.

Bi-Directional Metering

- » Support bi-directional net metering with the OpenWay CENTRON. Both received and delivered data metrics are stored in the meter and can be sent to the utility as needed to support green-credit electricity programs for consumers who own renewable energy facilities or participate in vehicle-to-grid systems

Automated ID Tracking

- » Attach barcode labels and important identifiers (such as the ICC-ID / MS-ISDN) to the integrated module for tracking and troubleshooting purposes

On-Demand Reads for Move In/Outs and Remote Disconnect

- » Remote disconnect available on all singlephase Class 200 devices

- » Perform remote disconnects through the Collection Engine by retrieving a final read for a customer and then an initial read for a subsequent customer
- » Allow service to be disconnected or reconnected remotely as well via a load-limiting service switch in the meter, eliminating the need to roll a truck to turn service on or off

900 MHz ERT Reader

- » Collect Encoder Receiver Transmitter (ERT) from 100G DLS Gas Modules. The ICM can collect consumption data and tamper counts from nearby 100G ERT modules and report this back to the Collection Engine and other upstream systems.

Clock Synchronization

- » Synchronize the meter clock automatically when time deviation falls within a user-defined boundary

Integration & Installation

- » Ensure simplified installation in the field. The ICM is a fully integrated, under-the-cover option installed within the OpenWay CENTRON. The solution is shipped from the factory as one complete unit with the module installed, ready for field deployment.

HARDWARE

CPU board (CPU)	32-bit ARM processor, 128MB RAM, 256MB flash
Capacitor Storage Bank (CSB)	Supplies power for data transmissions and all functions for outage notification
ICM Modem	Modem communicates with head-end using LTE and SMS Services
ZigBee Transceiver	Enables communication with Home Area Network (HAN) devices
Internal/External Antennas	Singlephase: Flexible dual frequency on board internal antenna for the modem and ERT available on all forms. Polyphase: Multi-band internal antenna with diversity. External Omni Directional antenna for modem available on all polyphase forms.
Tilt Detector	Detects unauthorized movement or removal of the device

INPUT/OUTPUT SIGNAL

ICM Power Input Voltage	Singlephase: 120-240 VAC Polyphase: 120-480 VAC
Capacitor Storage Bank (CSB)	3.3V / TTL compatible asynchronous
ERT Reader	900 MHz radio supports 100G Gas and 100W+ Water endpoints

VERSION AND COMPATIBILITY

Meter Hardware Version	3.1
Meter Firmware Version	Singlephase: SR 6.1 or higher Polyphase: SR 6.6 or higher
OpenWay Tools Compatibility	Singlephase: 4.00.91 or higher Polyphase: 4.20.00 or higher
OpenWay Collection Engine Compatibility	Singlephase: SR 6.1 or higher Polyphase: SR 6.6 or higher

SPECIFICATIONS

Regulatory and Industry Specifications

- » FCC Part 15 Class B
- » ANSI C37.90.1 – 1989: (SWC)
- » ANSI C12.20 (Class 0.5) – 1998
- » PTCRB Certified
- » Network Carrier Certified
- » Measurement Canada Certified
- » Industry Canada Certified

Temperature Range:

- » Operating: [-40°C, +85°C]
- » Transmission (wireless): [-30°C, +70°C]

Humidity Range

- » 0% to 95% non-condensing

Accuracy

- » Meets ANSI 12.20 for accuracy class 0.5% (Singlephase) and 0.2% (Polyphase)
- » Optional Singlephase Adder: 0.2% Accuracy Class

Supported Meter Forms

- Singlephase without Disconnect
 - » CL 200: 1S, 2S, 12S, 25S
 - » CL 320: 2S
- Singlephase with Disconnect
 - » CL 200: 1S, 2S, 12S, 25S
- Polyphase
 - » CL 20: 3S, 4S, 9S, 9S/36S, 45S
 - » CL 100: 1S
 - » CL 200: 2S, 12S, 16S
 - » CL 320: 2S, 12S, 16S

Carriers Supported

- » Verizon Wireless
- » Rogers Wireless



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CORPORATE HEADQUARTERS

2111 N Molter Road
Liberty Lake, WA 99019
USA

Phone: 1.800.635.5461
Fax: 1.509.891.3355

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