



OpenWay[®] CENTRON[®]

Bridge Meter

The CENTRON Bridge meter is the bridge between Itron communication architectures that enable AMI and smart grid functionality. The meter's adaptability allows it to be incorporated alongside existing Itron electric meters with a mobile meter data collection system, delivering advanced metering benefits associated with remote service disconnects, demand metering (real-time resetting), net metering, time of use rates, and interval data for customer service and engineering.

When prudent for the utility, the CENTRON Bridge can easily migrate to a full smart grid solution, offering demand response and distribution automation benefits. With CENTRON Bridge's versatility and proven operational benefits, utilities can address current business challenges and see an immediate return on investment, all while readying for a full smart grid solution as the need develops. Enabled to leverage field assets across two different data collection solutions, a utility can protect and extend its original investment.

Featuring open-standards architecture, modular design for flexibility in communications, and extensive features and functionality, the CENTRON Bridge supports existing operational needs as well as the most demanding smart grid business requirements today and well into the future. The CENTRON Bridge is the first meter to offer compatibility between the OpenWay[®] network and Itron's ChoiceConnect[®] mobile environment. This revolutionary capability is perfect for customers that require advanced metering functionality in a mobile environment today, with complete support for full smart grid functionality in the future.

What does the CENTRON Bridge offer in a mobile environment?

Utilities can deploy the new CENTRON Bridge alongside the existing meter population, reading all meters with the Itron mobile data collection system. This enables the utility to deploy the CENTRON Bridge on a schedule, whether through an annual meter maintenance program, a complete meter replacement or any other combination that suits the business case. With this flexibility, the utility sets the timetable according to its operational needs, capital management goals or strategic plans.

Once deployed, the CENTRON Bridge offers a range of benefits. Utilities can streamline current operational processes and subsequently lower costs. Field work required to disconnect meter service is reduced by the ability to activate the under-the-glass service switch in-route with the mobile collection system. Safety incidents are reduced and meter socket damage is eliminated by this remote capability. Demand reset of commercial meters is also managed with the mobile system, eliminating the need to physically access the meter or having to worry about setting schedules. Time based rates can be calculated in the meter and retrieved via the mobile system which removes the need for calculating rates in an MDM. With the ability to extract 5 different energy values you can address all of your metering needs from net meters to complex demand accounts.

The new CENTRON Bridge also manages and collects up to 40 days of 15 minute interval data from two channels, which enables a range of capabilities. With historical usage data, a utility's customer service department can address bill inquiries, eliminating the lengthy and costly bill reconciliation process. Customers also gain greater confidence in the billing process and their bills when questions are answered accurately and in a timely manner.

PRODUCT AVAILABILITY (SINGLEPHASE)

| Metrology | Class | Voltage |
|-----------|-------|---------|
| 1S | 200 | 120 |
| 2S | 200 | 240 |
| 2S | 320 | 120 |
| 12S/25S | 200 | 120 |

PRODUCT AVAILABILITY (POLYPHASE)

| Metrology | Class | Voltage |
|---------------------|-------|---------|
| 1S | 100 | 120-480 |
| 2S | 200 | 120-480 |
| 2S | 320 | 120-480 |
| 3S | 20 | 120-480 |
| 4S | 20 | 120-480 |
| 9S (8S) | 20 | 120-480 |
| 9S (8S)/36S | 20 | 120-480 |
| 45S/5S | 20 | 120-480 |
| 12S | 200 | 120-480 |
| 12S | 320 | 120-480 |
| 16S | 200 | 120-480 |
| 16S (14S, 15S, 17S) | 320 | 120-480 |

What does the CENTRON Bridge offer under the OpenWay environment?

While in OpenWay network mode, the meter is fully compliant with the ANSI C12.19 and C12.22 standards for storage and transport of register data. The CENTRON Bridge provides a secure and reliable open-standards approach to data collection and communications between the meter and network.

In addition, each CENTRON Bridge comes factory-equipped with a ZigBee® radio chip (Smart Energy Profile v1.1) to provide a built-in communications pathway into the home for data presentation, load control and demand response.

CHOICECONNECT MOBILE MODE

Energy Values

- » Up to five energy registers (Max of 4 for Singlephase); kWh delivered, kWh received, kWh net, kWh unidirectional, VAh delivered, VAh received, Varh delivered, Varh received
- » Up to 2 demand values (1 for Singlephase) based on energy values; Max demand, cumulative demand, continuous cumulative demand with a remote reset.
- » For Polyphase, a PF @ Peak Demand can also be returned
- » Two channels of 15-minute interval data with 40 days of data retention; intervals can be retrieved as 15 minute, hourly, daily or single historical read

Time of Use

- » Time of Use rates can be calculated in the meter and retrieved with your Field Collection System (FCS)
- » 24 Year calendar in the meter
 - Can be updated via FCS remotely
- » Seasons (1 to 8 per year)
- » Rates (1 to 4 per season)
- » Events (1 to 32 per season)
 - DST and Holidays

Disconnect/Reconnect service switch operation

- » The CENTRON Bridge (forms 1S, 2S, 12S, and 25S) is available with a 200 amp remote disconnect/reconnect switch that can be operated with your ChoiceConnect applications

Tamper Detection

- » Tamper indications are included in every communication received by the ChoiceConnect applications
- » Tamperers include: inversion, removal, reverse power flow and magnetic (Singlephase only)
- » SiteScan Diagnostics™ with OpenWay Tools

Other Features

- » Event Counters: Volt Hour Threshold Exceeded, RMS Threshold Exceeded, Outage, Demand Reset, Tamperers & Program Changes
- » Date and Time of last power outage
- » Number of Minutes Running on Battery
- » Firmware Versions
- » Configuration Information (Energy and Demand values)
- » Fatal & Non-Fatal errors
- » Ability to schedule a switch from ChoiceConnect to OpenWay mode
- » Ability to switch from OpenWay to ChoiceConnect mode
- » Time synchronization
- » ZigBee radio chip provides access to Consumer Engagement devices such as in-home displays and smart thermostats and others

Security

- » ChoiceConnect security deploys end to end security from the mobile communications systems to the meter through authentication of two-way communications and encryption of meter data

ChoiceConnect Support

- » Approved Reading Devices for Collecting Reads with Basic Security
 - Handheld and Mobile Application Software SCM+ Only
 - MV-RS v8.4.1 or higher
 - Field Collection System (FCS) v2.3 or higher including FCS DC v2.3.10.1 and FCS DC v2.4.8.2
 - Mobile Collection Software v3.4 or higher
 - Field Deployment Manager (FDM) Work orders v3.3 or higher
 - Field Deployment Manager (FDM) Endpoint Tools Enhanced v3.2 or higher
 - Handhelds and Radios
 - FC300SR: All models along with application software listed above
 - Mobile Collectors
 - MC3 when used with Mobile Collection Software v3.4 and application software listed above.

- DCU-5300-001, DCU-5300-011U, DCU-5300-101U, DCU-5300-111U
- MCLite when used with application software listed above.
- Only: DCU-5000-001, DCU-5000-002, DCU-5000-002U, DCU-5000-102U, DCU-5000-002DL, DCU-5310-201
- » Approved Reading Devices for Performing Advanced AMR Commands
 - Handheld and Mobile Application Software:
 - Field Collection System (FCS) v2.7 or higher
 - Mobile Collection Software v3.7 or higher
 - Itron Security Manager v3.0 or higher
 - Field Deployment Manager (FDM) FDM work orders v3.6 or higher
 - FDM Endpoint Tools Enhanced v3.6 or higher
 - Handhelds and Radios:
 - FC300SR: All models along with application software listed above.
 - Mobile Collectors:
 - MC3 when used with Mobile Collection Software v3.7 and application software listed above.
 - DCU-5300-001DL, DCU-5300-001DLU, DCU-5300-011DLU, DCU-5310-001, DCU-5310-011, DCU-5310-011U
 - MCLite when used with application software listed above.
 - DCU-5000-002DL, DCU-5310-201

SPECIFICATIONS

Technical Data

Meets applicable standards:

- » ANSI C12.1 - 2001 (American National Standard for Electric Meters - Code for Electricity Metering)
- » ANSI C12.18 - 1996 (American National Standard - Protocol Specification for ANSI Type 2 Optical Port)
- » ANSI C12.19 - 1997 (American National Standard - Utility Industry End Device Data Tables)
- » ANSI C12.20 - 2002 (American National Standard for Electricity Meters-0.2 and 0.5 Accuracy Classes)
- » ANSI C12.22 - (consult ANSI electricity metering protocol standards, balloted version)
- » ANSI/IEEE C62.45 - 1992 (Guide to Surge Testing on Low-Voltage AC Power Circuits)
- » IEC 61000-4-2
- » IEC 61000-4-4

Reference Information

- » OpenWay CENTRON Meter Specification Sheet
- » OpenWay CENTRON Polyphase Meter Specification Sheet
- » OpenWay CENTRON Meter Technical Reference Guide
- » Hardware Specification Form



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