



# OpenWay<sup>®</sup>

## Integrated Cell Router

A crucial element of any smart grid solution is the communications network. Whether transporting meter data, communicating with smart appliances or performing distribution automation, a robust two-way communications network is an essential element for smart metering and smart grid applications.

When it comes to smart metering, creating and collecting data at the meter is only half of the equation—transporting it back to a network operations center for analysis and billing is just as important. The OpenWay Cell Relay is an ANSI C12.22-compliant relay that provides two-way communications to OpenWay CENTRON<sup>®</sup> meters, as well as distribution automation and other smart grid devices. The Cell Relay functions as a router, exchanging messages between the OpenWay Collection Engine and end devices over TCP/IP and the OpenWay radio-frequency local area network (RFLAN). The OpenWay Integrated Cell Router combines the Cell Relay function with a wireless LAN-based (802.11) mesh router to provide reliable backhaul connections and enable other smart grid applications.

The Integrated Cell Router was developed from a partnership between Itron and Tropos<sup>®</sup> Networks. Tropos' GridCom<sup>™</sup> is a private wireless, wide-area aggregation

network architecture for smart grid communications, utilizing open-standard radios and IP communications. Realizing the vision of a smart grid requires a broadband network that can create a solid foundation upon which multiple smart grid applications can be deployed.

Along with the Integrated Cell Router, Itron also provides a secure element management solution with OpenWay Control. OpenWay Control provides discovery, monitoring and configuration downloads for the Integrated Cell Router, Tropos Mesh Routers and Itron Cell Relays for a seamless element management solution for your smart grid communications network.

The Integrated Cell Router builds on the success of the current socket-based and pole-mount OpenWay Cell Relays, providing flexible options for creating the two-way communications network for advanced meter and smart grid applications.

## FEATURES

### Two-Way Communications

- » The Cell Relay is the router for the OpenWay RFLAN. It facilitates bi-directional communication of data between the OpenWay Collection Engine and OpenWay CENTRON

### ANSI C12.22 Compliance

- » As an ANSI C12.22-compliant device, the OpenWay Integrated Cell Router provides address resolution, message segmentation and other relay functionality available with the C12.22 protocol

### Integrated Packaging Design

- » Combines OpenWay Cell Relay with Tropos Mesh Router
- » Single unit for simplified power and mounting options
- » Combined network management with OpenWay Control

### Flexible Installation

- » Streetlight mast arm
- » Pole
- » Wood brace
- » Tower mounting
- » Roof tops
- » Integrated level on sun shield
- » One wrench needed to mount the device

### Tri Band Radio

- » Functions as node or gateway within the Tropos GridCom mesh network
- » Two wired Ethernet connections (backhaul and wired device support)
- » 30 W PoE sourcing capability 12/24/48 Vdc

### Power Outage Backup

- » Battery backup
- » Up to eight-hour hold up time

### Flexible Input Power Options

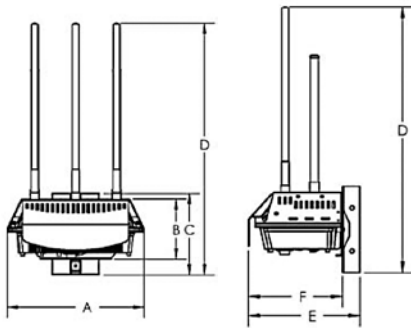
- » AC Powered Version: 100 – 480 VAC
- » Modular antennas

### Next Generation Wireless

- » Supports 802.11b/g/a/n clients
- » Improves wireless client connectivity by 20%-50%
- » Increases mesh capacity

### Technical Data

- » IEEE 802.11b/g/n radio (2.4-2.483 GHz)
  - 3 -7.4 dBi Omni-directional antennas (2.4 GHz)
- » IEEE 802.11a radio (5.725-5.850 GHz)
  - 1 - 9.1 dBi Omni-directional antenna (5.8 GHz)
- » 900 MHz radio 20dBm conducted power
  - 3 dBi antenna gain
- » Approvals:
  - FCC CFR Part 15, Class B
  - EN 301 489-17, 300 328, 301 893, 60950
  - IEC 950
  - UL 60950-1
  - CSA 22.2 No. 60950-1
  - UL 579/IEC 60529 IP67 rated for outdoor use
  - IEEE 1613



### Dimensions

	A	B	C	D	E	F
in	13.4"	5.9"	8.0"	24.6"	10.3"	8.7"
cm	33.9cm	15.0cm	20.3cm	62.6cm	26.1cm	22.0cm

Unit Weight: 16 lbs

### Specifications

Power Requirements	Power input voltage: 100-240VAC Auto Ranging Frequency: 50/60Hz
Battery Backup	Li-Ion battery: 2 – 8 hours (POE load dependent)
Operating Environment	Temperature: -40c to +55c Humidity: 0% to 95% non-condensing
Transients	EN61000-4-4 Level 2
Surge Protection	ANSI/IEEE C62.41, UL 1449-2nd ed.
Weather Rating	IP67
Wind Survivability	Up to 165 mph
Wind Loading	Less than 300 Newtons (165 mph)



Itron is the leading provider of energy and water resource management solutions for nearly 8,000 utilities around the world. We offer end-to-end solutions that include electricity, gas, water and heat measurement and control technology; communications systems; software; and professional services. With nearly 10,000 employees doing business in more than 130 countries, Itron empowers utilities to responsibly and efficiently manage energy and water. To realize your smarter energy and water future, start here: [www.itron.com](http://www.itron.com)

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