



OpenWay[®]

Mesh Range Extender

Challenges such as geography and low meter density sometimes can limit the extensibility of the OpenWay radio frequency local area network in certain areas. The OpenWay Mesh Range Extender increases the reliability of the mesh in geographically sparse regions and in RF-challenged areas.

The Mesh Range Extender acts as a node within the network and routes packets and information just like any other meter or smart grid device within the OpenWay mesh. Designed for flexibility, the Mesh Range Extender can be installed in a variety of wall- or pole-mounted configurations, such as vertical poles or horizontal davit arms, for optimal communication effectiveness and range.

FEATURES

Increased Mesh Coverage

- » Provides “hole-filling” in areas where additional mesh communications would strengthen network self-healing capabilities
- » Supplements network reliability in difficult environmental settings such as dense urban areas where buildings obstruct the normal mesh signal propagation

- » Extends mesh-network in geographically sparse topographies to strengthen communications within the mesh in a cost-effective manner

ZigBee[®] Support

- » Every Mesh Range Extender includes an integrated ZigBee radio
- » The Mesh Range Extender can store consumption data from 2.4GZ OpenWay Gas Modules utilizing the ZigBee radio

Integrated OpenWay Mesh Module

- » The Mesh Range Extender includes a two-way, unlicensed RF module for network communications
- » The device automatically detects and connects to the mesh after installation or outage recovery

Upgradeable Firmware

- » Firmware can be upgraded remotely through the network

Outage and Restoration Messaging

- » The Mesh Range Extender passes initial notifications through the network when a power outage occurs

On-Board Battery

- » In the event of an outage, an onboard battery maintains the internal clock

Installation Flexibility

- » 120VaC/240VaC/24VdC (both horizontal and vertical mounts)
- » Pole-mount configurations available
- » Wall-mount configuration available
- » Lightweight design
- » Can be installed by a single installer

TECHNICAL DATA

Meets applicable standards:

- ANSI C12.19 - 1997 (American National Standard - Utility Industry End Device Data Tables)
- ANSI C12.22 - 2008 (American National Standard - Protocol Specifications for Interfaces to Data Communication Networks)
- ANSI/IEEE C62.45 - 2002 (Guide to Surge Testing on Low-Voltage AC Power Circuits) (N/A for DC device)
- IEC 61000-4-2 (Electromagnetic Compatibility (EMC) – Part 4-2: Testing and Measurement Techniques – Electrostatic Discharge Immunity Test) (N/A for DC device)
- IEC 61000-4-4 (Electromagnetic Compatibility (EMC) – Part 4-4: Testing and Measurement Techniques – Electrical Fast Transient / Burst Immunity Test) (N/A for DC device)

SPECIFICATIONS

Product Availability

The OpenWay Mesh Range Extender is designed to support multiple installation scenarios and be very flexible in its mounting capabilities. The device is lightweight and can be installed by a single person. Bracket mounts on the device are designed to create as much flexibility as possible allowing the installer to select the correct mounting hardware to match the requirements of the particular installation.

Specifications

AC Powered Units

Power Requirements	Voltage Rating: 120V or 240V Operating Voltage: $\pm 20\%$ (60Hz) Frequency: $\pm 20\%$ (60Hz) Operating Range: $\pm 3\text{Hz}$ Battery Voltage: 3.6V nominal Battery Operating Range: 3.4V – 3.8V
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Operating Environment	Temperature: -40° to $+85^\circ\text{C}$ Humidity: 0% to 95% non-condensing
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DC Powered Units

Power Requirements	DC Voltage: 24V Requires AC to DC power supply that meets local electrical safety requirements such as Itron Range Extender power supply
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Operating Environment	Temperature: -40° to $+85^\circ\text{C}$ Humidity: 20-90% non-condensing
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Additional Specifications

Clock Synchronization	Line Sync: Power Line Frequency Crystal Sync: $\pm 0.01\%$ @ 25°C ; $\pm 0.025\%$ over full temperature range
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Battery	$\pm 0.005\%$ @ 25°C ; $+0.005\%$ to -0.02% over full temperature range
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Power Consumption	AC Unit	Watt Loss	VA Loss
HW2.0	120	2.2	9.1
	240	2.3	12.2
HW3.1	120	3.25	7.47
	240	4.27	8.4

Modules	Standard OpenWay Register
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	HW2.0	HW3.1
FCC ID	SK9AMI-4	SK9AMI-7
Industry Canada ID	864G-AMI-4	864G-AMI-7
Supported Networks	HW	RFLAN
	2.0	Yes
	3.1	Yes
		Cisco IPv6
		No
		Yes

AC MESH RANGE EXTENDER

Dimensions

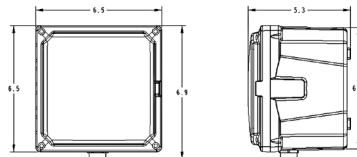
» 6.5" x 6.9" x 5.3"

Weight per Range Extender

» 2.1 lbs

Pallet

» 120 lbs, 36 units / pallet



DC MESH RANGE EXTENDER

Dimensions

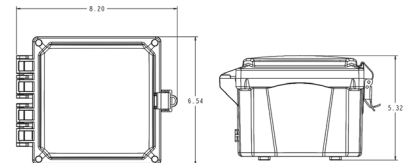
» 8.2" x 6.5" x 5.3"

Weight per Range Extender

» 2 lbs

Pallet

» 120 lbs, 36 units / pallet



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

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