

Repeater 100

Introduction

There are a variety of factors that play into a network's performance and reliability. Buildings, vegetation, RF interference and more can all impact data collection and transport. When collecting meter reading data, ensuring that you have the proper network coverage is mission-critical.

The Repeater 100 collects meter data from Itron electricity meters, gas and water endpoints and relays it to collectors within the network. Operating in the 900 MHz radio band, repeaters are used to extend the range of the network and add reliability and redundancy to the communication path between endpoints and collectors. This makes the ChoiceConnect network much more cost-effective by reducing the number of required collectors.

Repeaters can be installed on towers, buildings, poles or other structures. Once installed, repeaters automatically discover and connect to collectors and endpoints within range. The Repeater 100 also provides two-way communication capabilities with 2-way enabled endpoints, allowing for on-demand reads throughout the network.

Features and Benefits

The Repeater 100 helps to:

- > Expand network coverage in hard-to-read areas due to topography or other signal disturbances
- > Expand network coverage without additional backhaul costs
- > Low power requirements enable cost effective solar deployment
- > Enable auto-discovery of endpoints beneath the repeater footprint. Collectors discover repeaters in a similar process
- > Forward positive out notification (PON) and positive restoration notification (PRN) messages for timely and accurate outage detection
- > Facilitate a cost-effective and flexible fixed network solution
- > Provide multi-channel frequency hopping that:
 - Scans for endpoint transmissions
 - Decodes and validates packets
 - Filters packets—reduces transmissions of recent and frequently heard meters
 - Retransmits packets on a new channel away from endpoint channels
- > Status message delivery to collectors for network troubleshooting
- > Offer increased reading redundancy at a lower cost



Specifications

Functional

- > Power source
 - Single-phase 120-240V AC auto-ranging
 - Optional solar power configuration
- > Power consumption
 - 5 Watts typical
- > Operating and storage temperatures
 - -40°C to +60°C (-40°F to +140°F)*
- > Operating humidity
 - 5 to 95% non-condensing relative humidity
- > Product identification
 - Numeric and bar-coded repeater module serial number
- > FCC compliance
 - Part 15 certified
- > ANSI compliance
 - C12.1 standards

Operational

- > Receive/transmit frequency range
 - 904-924 MHz
- > Data integrity
 - Verified in every message

Dimensions

- > Height
 - 6.3" (16 cm) without antenna
- > Width
 - 11.6" (29.5 cm)
- > Depth
 - 3.9" (9.9 cm)
- > Weight
 - 6.31 lbs with battery

Mounting Options



About Itron Inc.

Itron Inc. is a leading technology provider to the global energy and water industries. Our company is the world's leading provider of intelligent metering, data collection and utility software solutions, with nearly 8,000 utilities worldwide relying on our technology to optimize the delivery and use of energy and water. Our products include electricity, gas, water and heat meters; data collection and communication systems, including automated meter reading (AMR) and advanced metering infrastructure (AMI); meter data management and related software applications; as well as project management, installation, and consulting services. To know more, start here: www.itron.com.



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