

Relay 5

Data sheet



Leading utilities and cities have delivered breakthroughs in operational efficiency, customer service and environmental sustainability by relying on Itron's secure, reliable two-way connectivity to critical infrastructure. The Itron Gen™5 network technology delivers the performance to continue the acceleration of critical infrastructure modernization initiatives. The Itron Relay and Access Point work together to relay data from endpoints to IT/OT systems. The Relay 5 extends the network to cost effectively reach more endpoint devices.

EXTENDING REACH AND COVERAGE FOR COST-EFFECTIVE COMMUNICATIONS

The Relay 5 works with the AP 5 to deliver data generated by endpoint devices at the network edge and IT/OT systems—enabling high performance applications, network control and monitoring. Its flexible communication features extend the reach and coverage of the network. The Relay 5 provides multi-hop capability between Itron-enabled endpoint devices and the AP 5 for seamless integration.

INTEGRATION AND DEPLOYMENT SCENARIOS

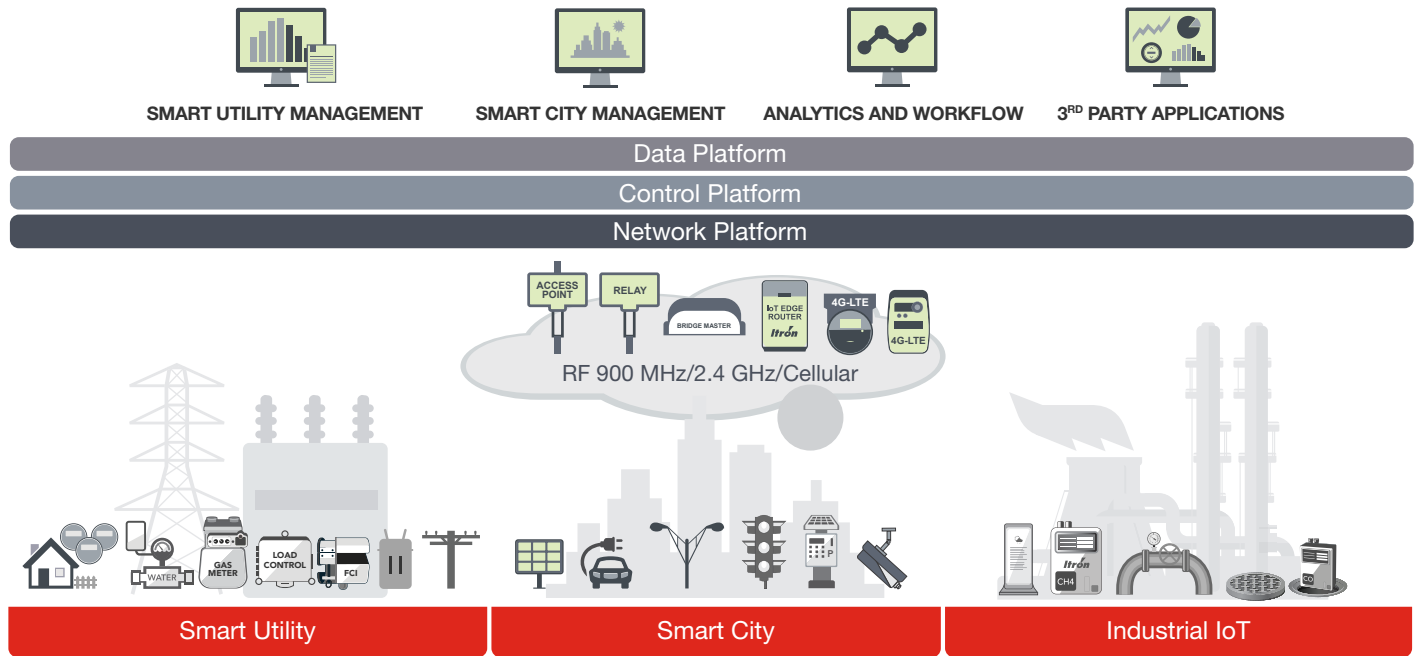
Smart grid – The low latency and high-speed throughput of the Relay 5 keeps pace with the high performance devices and network infrastructure within the Itron network. Redundancy, secure communications and high reliability enable utilities to scale multi-application deployments rapidly while leveraging existing systems and reducing overall cost of ownership.

Smart city – The Relay 5's flexibility and ease of installation facilitates the success of new city services such as traffic monitoring and smart parking. The proven multi-layer security of the Relay 5 allows cities to rapidly deploy new applications and services while leveraging consistent policies and controls proven at scale.

GEN5 SOLUTION ARCHITECTURE

THE ITRON GEN5 SOLUTION SUITE

Any application server: not dependent on Itron head end



The Relay 5 in conjunction with the AP 5 extends the speed and coverage of the network to deliver high-capacity data securely and reliably from the edge devices to a variety of IT/OT systems.

FEATURES

Gen5-based networking technology with performance optimization

- » Up to 2400 Kbps data speeds
- » 10 ms latency
- » Open standards-based two-way communications and interfaces
- » IPv6; IEEE 802.15.4g, Wi-SUN compatible
- » Increased system performance and data throughput
- » 900 MHz radio
- » 32 MB RAM and 32 MB flash

KEY BENEFITS

The Relay 5 couples secure, reliable performance with open standards-based IPv6 communications to enable cities and utilities to cost effectively integrate mission-critical control and monitoring processes.

Expanded opportunity for performance intensive multi-application services

The Relay 5's support for a data rate up to 2400 Kbps and 10 ms latency enables cities and utilities to roll out new services and increase customer satisfaction with engaging applications.

Comprehensive and cost-effective coverage of diverse territory

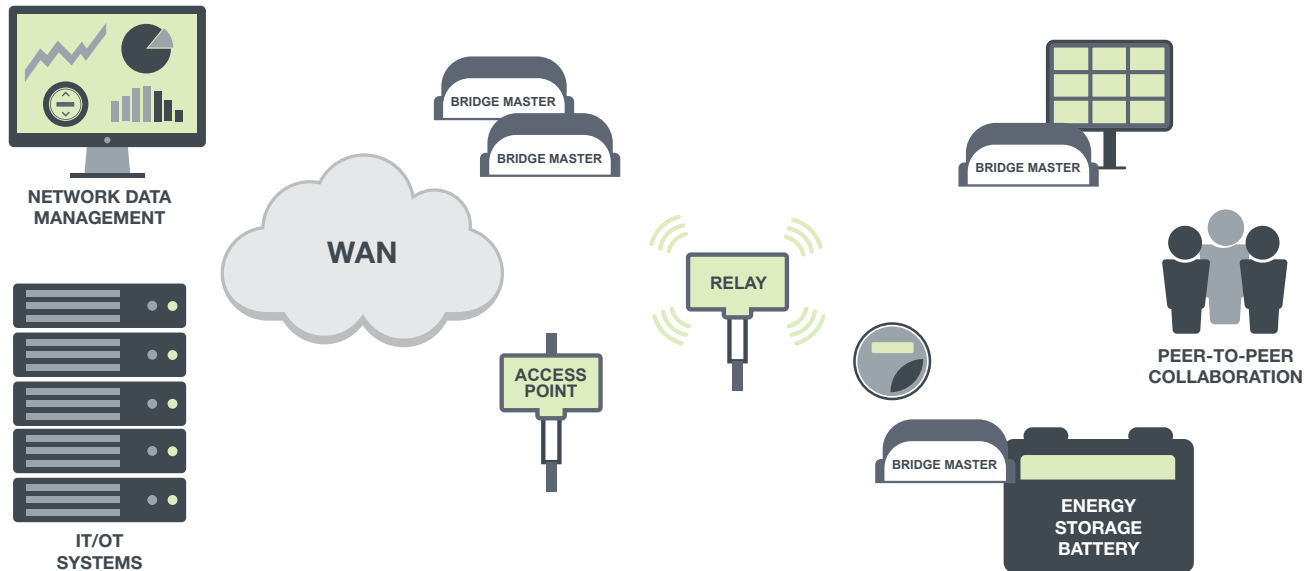
The Relay 5 delivers cost-effective coverage while ensuring maximum overall system performance by dynamically adapting the data rate to optimize reliable information delivery over a long range in the most challenging environments

Risk mitigation through proven, multi-layer security

Two-way communications remains protected from the increasingly hostile threat environment by building on Itron's proven, multi-layer security that leverages built-in controls from the application-to-device layer.

Rapid time-to-value with flexible integration

The Relay 5 can be deployed on a broad array of existing assets. Mounting kits are available for installing relays on distribution poles, street lights, and walls, and inside pad-mounted enclosures.



The Relay 5 in conjunction with the AP 5 extends the speed and coverage of the network to deliver high-capacity data securely and reliably from the edge devices to a variety of IT/OT systems.

SPECIFICATIONS

Communications	Data rate: 50 to 2400 Kbps Frequencies: 902-928 MHz or 860-880 MHz Spread spectrum technology: FHSS Modulation: FSK or OFDM - adaptive gear shifting Transmitter output: 900 MHz - 1 W, 870 MHz – 500 mW ERP Output impedance: 50 ohms
Protocols/Security	Addressing: Internet Protocol version 6 (IPv6) Security: Secure Hash Algorithm 256 bit (SHA-256) and RSA-1024 or ECC-256 Encryption: Advanced Encryption Standard (AES-128 or AES-256)
Physical Interfaces	Antenna connectors: N Type, Female
Power	Power Input range: 96 to 277 VAC, 50 to 60 Hz
Environmental	Operating temperature: -40°C to +85°C (-40°F to +185°F) Humidity: 0% to 95%, non-condensing
Mechanical	Dimensions: 35.0 cm (13.78") L x 21.1 cm (8.32") W x 9.2 cm (3.62") H Weight: 3.67 kgs (8.1 lbs) Enclosure: IP65, white, aluminum Relay 5.0 does not have an active 2.4 GHz radio. It is recommended that the provided weatherproof cap be installed on the unused 2.4 GHz antenna port
Mounting Kit Options	Wooden pole Concrete pole Light pole Wall
Approvals	FCC: Part 15.247 Industry Canada: RSS-247 EU: ETSI EN 303 204
Memory	32 MB/32 MB Flash/RAM

POWER CONSUMPTION

Relay	Idle 4.8 W	Max 8.8 W
Relay with Battery	Idle 4.8 W	Max 14.8 W



Join us in creating a more **resourceful world**.
To learn more visit **itron.com**

While Itron strives to make the content of its marketing materials as timely and accurate as possible, Itron makes no claims, promises, or guarantees about the accuracy, completeness, or adequacy of, and expressly disclaims liability for errors and omissions in, such materials. No warranty of any kind, implied, expressed, or statutory, including but not limited to the warranties of non-infringement of third party rights, title, merchantability, and fitness for a particular purpose, is given with respect to the content of these marketing materials. © Copyright 2021 Itron. All rights reserved. **101650SP-03 04/21**

CORPORATE HQ

2111 North Molter Road
Liberty Lake, WA 99019 USA

Phone: 1.800.635.5461

Fax: 1.509.891.3355