



Fiber MiniAP™ (Mini Access Point)

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. Itron's Fiber Mini Access Point (Fiber MiniAP) leverages existing fiber assets to connect smart meters and devices to Itron's multi-purpose network, extending industrial internet of things (IIoT) network coverage and enabling rural areas to easily and securely transmit data to head end systems.

FLEXIBLE COMMUNICATIONS FOR DIVERSE ENVIRONMENTS

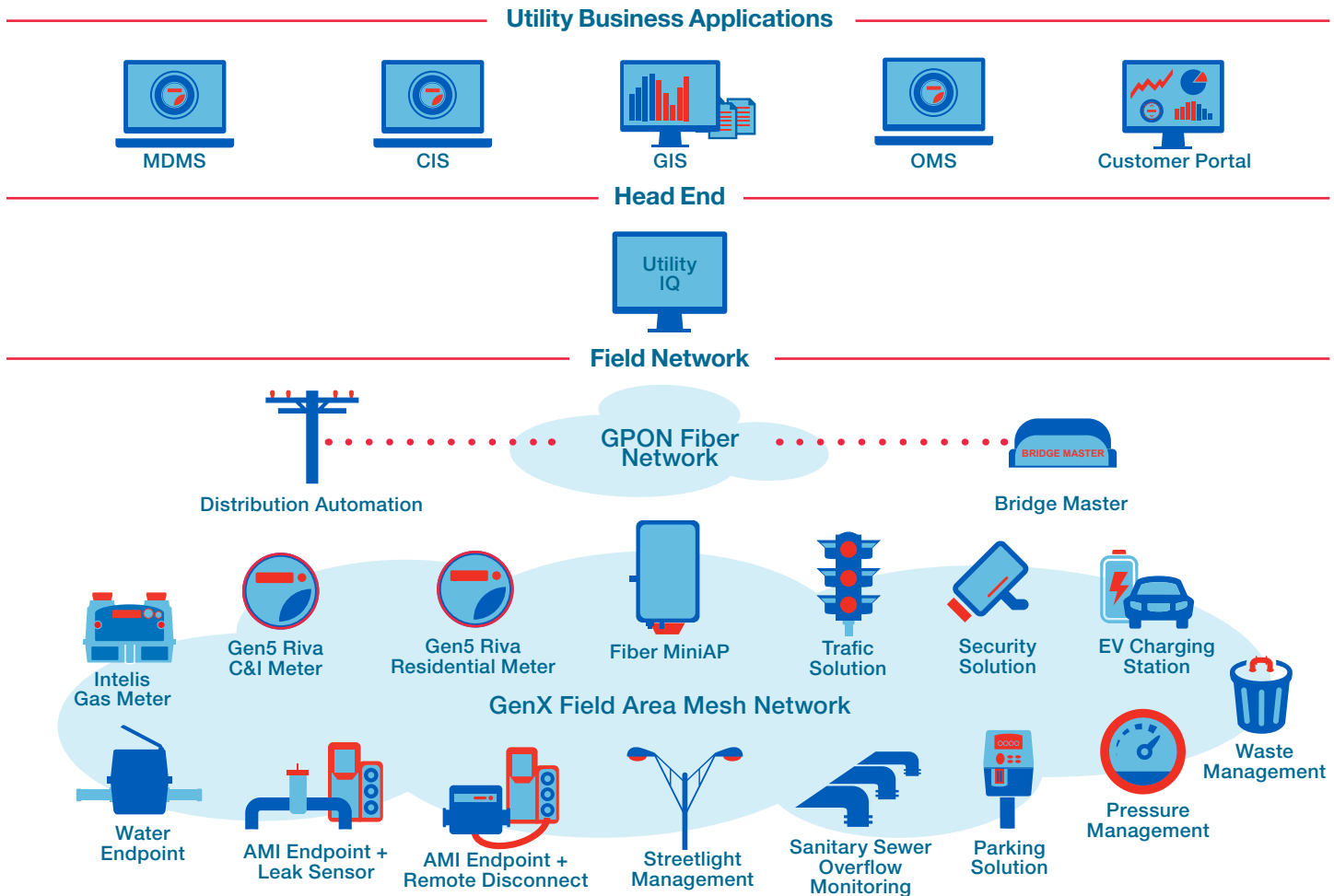
Itron's Fiber MiniAP is designed to provide seamless connectivity and provide a solution to challenges faced by rural electric cooperatives, other utilities, and cities when building smart grid and broadband networks in sparsely populated areas. Our cutting-edge fiber technology leverages utility and commercial connectivity to extend IIoT network coverage in low meter-per-mile density rural areas, making upgrading cooperative networks more accessible and affordable than ever before.

The Fiber MiniAP helps cooperatives leverage fiber network assets for next-generation advanced metering infrastructure (AMI), distribution automation (DA), low-voltage network

management, smart lighting, and more, enabling the next step in grid modernization beyond meter-to-cash. With this practical next step, Itron customers can solve pressing operational challenges through fiber-enabled next-generation AMI.

Itron's extensive partner ecosystem is available to help customers address grid modernization challenges at their own pace. With our fiber-enabled AMI connectivity, customers can access granular, near real-time operational data to monitor and manage electric vehicles, distributed energy resources, and conservation voltage reduction.

ITRON SOLUTION ARCHITECTURE



FEATURES

- » Small form-factor pluggable (SFP) for gigabyte passive optical networks (GPON)
- » Provides fiber backhaul for AMI, DA, and Smart City applications
- » 900 MHz radio
- » Up to 2400 Kbps data speeds
- » Two-hour backup battery
- » Capable of backhauling up to 750 devices per Fiber MiniAP
- » Outdoor rated – IP65
- » Open standards-based two-way communications and interfaces
- » IPv6; IEEE 802.15.4g, Wi-SUN compatible
- » Integrated, open standards-based security
- » Public key-based authentication and AES-128 or AES-256 encryption
- » 32 MB RAM and 32 MB flash

KEY BENEFITS

The Fiber MiniAP couples secure, reliable performance with open standards-based IPv6 communications to enable rural areas and utilities to cost-effectively integrate mission-critical control and monitoring processes.

Reduce operating costs

The Fiber MiniAP reduces operating costs by lowering wide area network (WAN) charges, making it a cost-effective solution for rural electric cooperatives and other utilities.

Eliminate end-user involvement

By keeping the radio frequency at the endpoints, end-customer involvement and influence is practically eliminated, providing a seamless and hassle-free experience for customers.

Enable smart communities

The Fiber MiniAP couples fiber assets and Itron's GenX technology, enabling low latency, high-speed AMI data for distribution system "situational awareness". It also allows smart communities to monitor and control electric vehicle and distributed generation assets, providing greater coverage and access to the AMI network for customers.

SPECIFICATIONS:

COMMUNICATIONS	<p>iNAN</p> <p>Data rate: 50-2400 Kbps</p> <p>Frequencies: 902-928 MHz (for North America) or 915-928 MHz (for Asia Pacific)</p> <p>Spread spectrum technology: FHSS</p> <p>Modulation: FSK, OFDM – adaptive gear shifting Transmitter output: 900 MHz–30 dBm (1 W) Output impedance: 50 Ohms</p> <p>WAN</p> <p>Fiber GPON</p> <ul style="list-style-type: none">» CALIX» ADTRAN» DZS
PROTOCOLS AND SECURITY	<p>Addressing: Internet Protocol version 6 (IPv6)</p> <p>Security: Secure Hash Algorithm 256 bit (SHA-256) and RSA-1024 or ECC-256</p> <p>Encryption: Advanced Encryption Standard (AES-128 or AES-256)</p>
PHYSICAL INTERFACES	<p>Antenna connector: N-type, Female</p>
POWER	<p>Power input range: 96 to 277 VAC, 47 to 63 Hz</p> <p>Internal two-hour battery backup</p>
ENVIRONMENTAL	<p>Operating temperature: -30° C to +55° C (-30° F to +131° F)</p> <p>Storage temperature: -40° C to +65° C (-40° F to +149° F)</p> <p>Humidity: 95%, non-condensing</p>
MECHANICAL	<p>Dimensions: 89 mm (W) x 200 mm (L) x 327 mm (H) (3.5" x 7.8" x 12.8")</p> <p>Weight: 4.54 lbs</p>
ENCLOSURE	<p>P65, white, plastic</p>
MOUNTING OPTIONS	<p>Concrete, wood, or metal pole</p>
APPROVALS	<p>32 MB/32 MB Flash/RAM</p>
POWER CONSUMPTION:	
FIBER MINI-AP	<p>Idle: 10 W Max: 25 W</p>



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