Solar Battery AP (SBAP)

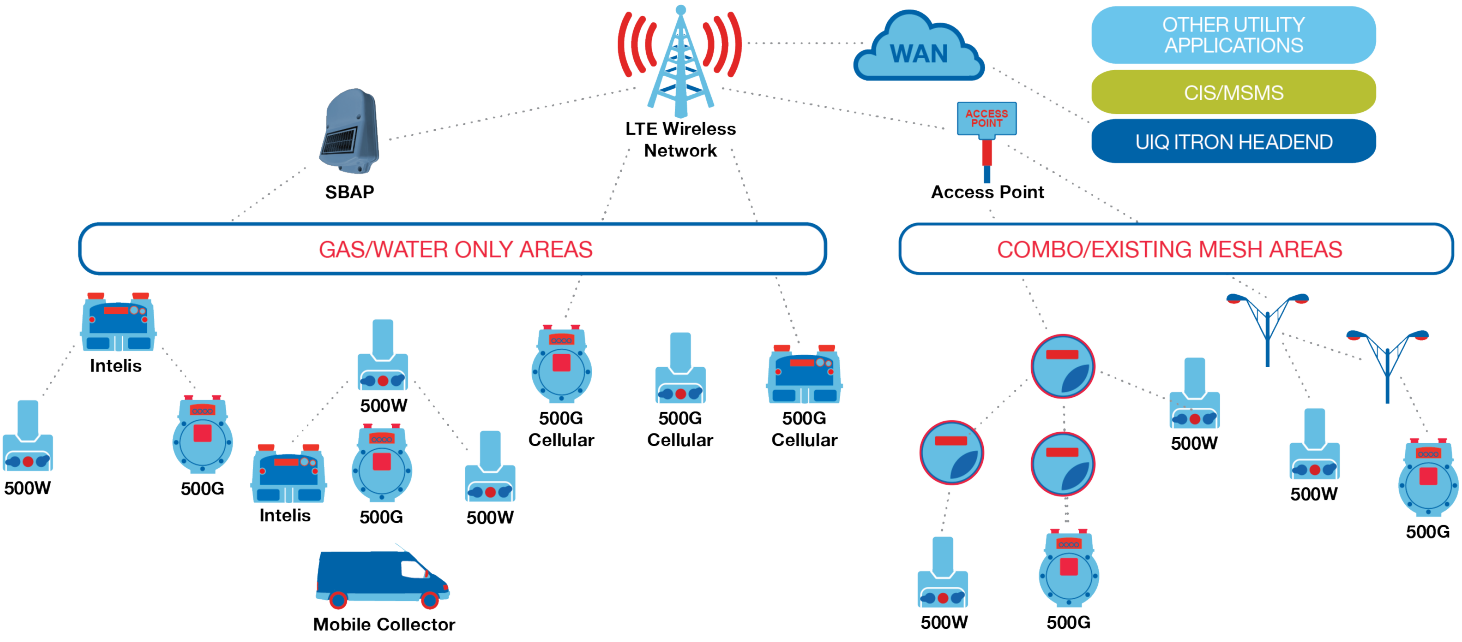
The Itron Solar Battery AP (SBAP) is an access point (AP) that provides a lower total cost of ownership (TCO) for gas-only and/or water-only deployments without relying on any overhead infrastructure or mounting assets. Leading utilities and cities have delivered breakthroughs in operational efficiency, customer service, and environmental sustainability by relying on Itron's secure, reliable two-way connectivity to critical infrastructure. Itron's Extended FAN Connectivity+ (EFC+) network technology, which the SBAP uses to communicate to its child devices, delivers the performance to continue the acceleration of critical infrastructure modernization initiatives.

FLEXIBLE COMMUNICATIONS

The SBAP communicates EFC+ with a limited number of gas and water meters, and then backhauls the data over a cellular network. The SBAP is easily mounted on vertical or horizontal utility piping next to the utility meter set. It can also be mounted directly to a wall.

Rechargeable Battery

A solar panel integrated into the SBAP's cover charges the SBAP's battery. The SBAP also contains a non-rechargeable primary cell for backup during periods when the solar panel does not provide sufficient energy.



Local Access

The SBAP can be accessed locally via a combination of the Itron Mobile Radio (IMR) and Field Tools application on either an Android®, iOS®, or Windows® device. This access utilizes DLMS/COSEM commands at the application layer. The SBAP uses a single antenna for both the local access connection and the cellular connection.

Provisioning

The SBAP is supported by the UtilityIQ head end system. When an SBAP is installed in the field and has been provisioned into and registered with the head end system, the SBAP starts relaying data from connected gas and water devices and those devices become available for two-way communication from the head end system.

SECURITY

The SBAP's software and hardware are designed to prevent, detect, and report potential tampering situations. Exposed screws are covered by anti-theft/anti-removal covers, and the SBAP sends an alarm to the back-office system in the event it detects itself tilting.

The SBAP's network communications are protected by the Gen5 network security (link layer security) as well as 4G cellular network encryption and a private access point name (APN). Gen5 network security is provided at the application layer.

FEATURES

- No external power required
- Solar-powered rechargeable battery
- Provides connectivity to up to 50 EFC+ endpoints
- Open standards-based two-way communications and interfaces
- IP65
- Cellular backhaul (LTE CAT-M1)
- Integrated open standards-based security
- Public key-based authentication and AES-256 encryption
- Increased system performance and data throughput
- 900 MHz radio
- 20-year battery life

KEY BENEFITS

The SBAP provides a lower total cost of ownership (TCO) for gas-only and/or water-only deployments, minimizes operations and management on cellular backhaul, and enables the ecosystem with its no-overhead and no-external power requirements.

Battery Life and Design

- 20-year battery life
- Solar collection system used to recharge a rechargeable battery
- Outdoor usage

Network Performance

- Low-latency LTE CAT-M1 connectivity
- Diagnostic data pushed three times per day
- Relayed gas and water alarm data transmitted immediately

Tamper Detection

The SBAP supports features to prevent, detect, and report potential tampering situations, including:

- Device tilt detection

  Note: The SBAP logs a maximum of one tilt event every 15 minutes.

- Event logging

EFC+ and cellular communications	Data rate: 150 kbps Modulation: Frequency-shift keying (FSK) Frequencies: 902-928 MHz Transmitter output (900 MHz): +27 dBm (500 mW) WAN: Cellular Cellular: 4G LTE Cat M1 Cellular transmitter output: +23 dBm
Local access communications	Data rate: 12.5 kbps or 150 kbps (depending on firmware download speed) Modulation: FSK Data rate: 16.348 kbps Modulation: OOK Frequencies: 900 MHz (ISM band 902-928 MHz) Transmitter output (900 MHz): +27 dBm for FSK (500 mW), 0 dBm for OOK
Power	Solar powered with a backup primary battery
Environmental	IP65 Operating and storage temperature: -40°F (-40° C) to +158° F (70° C)
Mounting kit options	Multiple pipe mounts Wall Mount Kit Fixed Meter Mount Kit Swivel Meter Mount Kit
Approvals	FCC (Part: 15B and 15.247) ISED UL Class 1 Division 1 PTCRB Verizon® Wireless Certification
Dimensions	9.3 in. (236 mm) H x 6.3 in. (160 mm) L x 3 in. (77 mm) W
Weight	2.2 lbs

To learn more visit itron.com

We create a more resourceful world

Itron
2111 North Molter Road
Liberty Lake, WA 99019 USA