EZ Gateway
Modbus to BACnet

Overview

The EZ Gateway Modbus to BACnet (FS-EZX-MOD-BAC) is an easy to use, high-performance building and industrial automation protocol gateway for integrators to interface Modbus certified products to BACnet management systems in commercial buildings, campuses, and industrial facilities. Modbus-certified products encompass a wide range of applications such as energy, gas, heating, water, VFD drives, and PLCs. The EZ Gateway Modbus to BACnet integrates such Modbus-based devices and systems to BACnet-based management systems over BACnet MS/TP or BACnet/IP protocols.

The EZ Gateway Modbus to BACnet combines field-hardened Modbus and BACnet protocol drivers with an easy to use configuration interface. The EZ Gateway's Modbus interface is compatible with all Modbus-certified products, while the EZ Gateway's BACnet interface has been certified by BACnet Test Laboratory (BTL). The intuitive web-based interface allows configurations to be built in the field or in the office, thereby simplifying the commissioning and integration process.
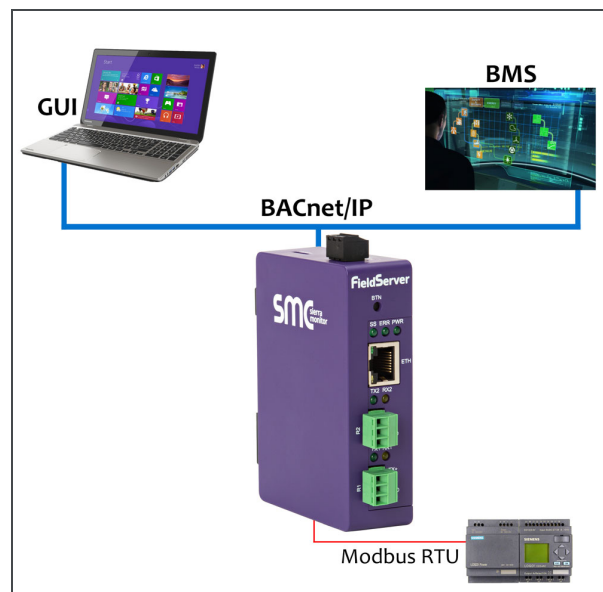
The unique FieldServer DeviceProxy™ feature allows each Modbus device to be presented as a corresponding virtual BACnet device within the EZ Gateway, thereby providing granular visibility and control over each Modbus device from within a BACnet management framework. For example, offline / online status is visible at the individual Modbus device level.

With the EZ Gateway Modbus to BACnet, the integrator or contractor does not need to be a protocol expert, and can minimize configuration and commissioning time, while also reducing ongoing operating and maintenance costs.
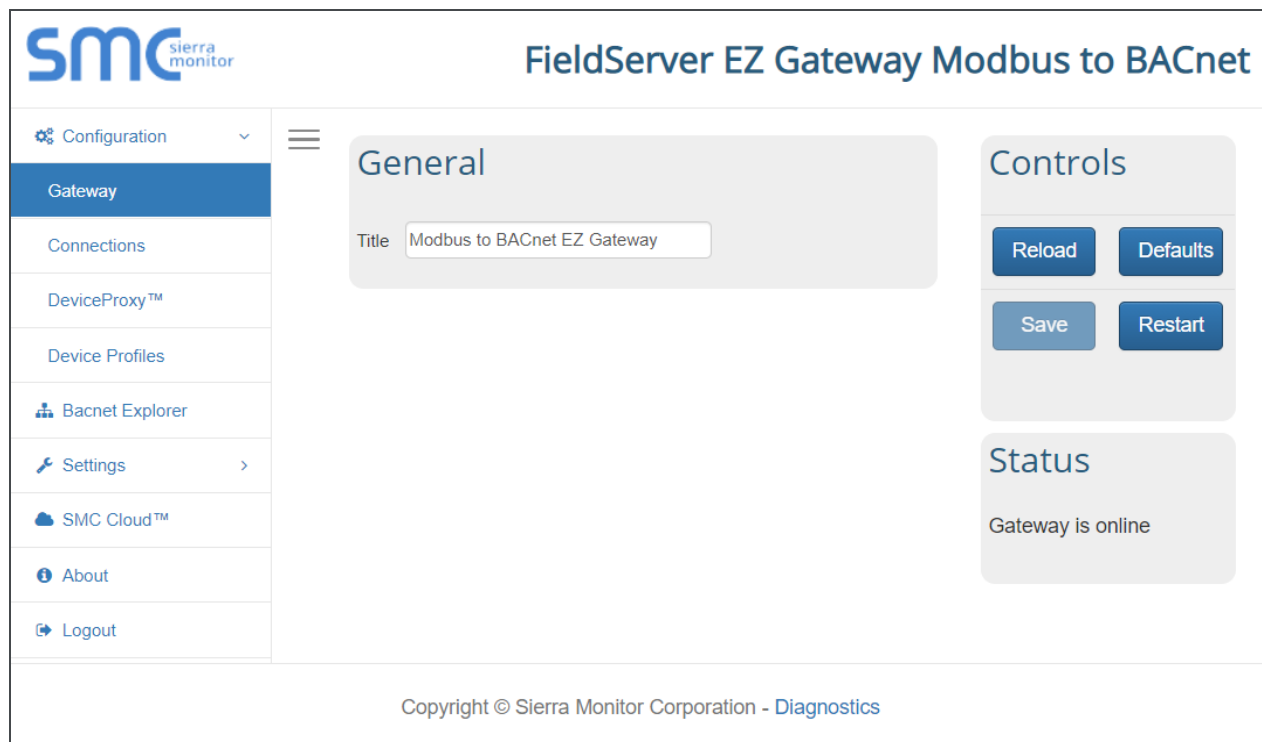
Features and Benefits

- Protocols supported: Modbus RTU, Modbus TCP/IP, BACnet MS/TP & BACnet/IP

- Any combination of the two Modbus protocols can be selected to connect to either of the BACnet protocols

- Supports up to 32 Modbus RTU devices to BACnet MS/TP and up to 64 Modbus RTU devices to BACnet/IP per EZ Gateway

- Supports up to 500 or 1,000 Modbus registers

- BACnet COV support provides fast data communication while reducing BACnet network traffic

- Supports virtual nodes allowing each Modbus device connected to a single EZ Gateway to be seen as a separate device on the BACnet network

- Easy to configure via the Web Interface

- BTL certified

- BACnet BBMD Server support for connecting to remote BACnet networks

- Diagnostics information for devices connected to the EZ Gateway can be viewed via Web Interface

- Import a Modbus register list to generate BACnet object maps with an easy to use Excel spreadsheet, downloadable from the EZ Gateway

- Modbus TCP/IP offers concurrent polling of devices to ensure a quick response

- **SMC Cloud** registration connects your devices to the cloud, allowing secure remote access for diagnostics, monitoring, alarming and configuration

- On-board diagnostics allow easy troubleshooting for both serial and Ethernet communications

- **FieldSafe** adds a wealth of security options, including: web configuration page authentication (self-signed certificates), robust user and password management features

Configuration

The Web Interface is used to configure the Modbus and BACnet connections and then profiles are created for each Modbus device to be connected to the EZ Gateway. The EZ profile can then be used for additional connections on this EZ Gateway or other EZ Gateways. The EZ profiles can be shared amongst anyone using the EZ Gateway.

Hardware Specifications

Communication

Serial (Galvanic Isolation):
1 x RS-485/RS-232 & 1 x RS-485
Baud: 9600, 19200, 38400, 57600, 76800
Ethernet
  10/100BaseT
  MDIX
  DHCP

Environment

Operating Temperature: -20 to 70°C (-4 to 158°F)
Relative Humidity: 10-95% RH non-condensing

Other

  Web configuration
  On-board diagnostics
  DIN rail mount included

Construction

Dimensions (HxWxD)
  4 x 1.1 x 2.7 in (10.16 x 2.8 x 6.8cm)
Weight: 0.4 lbs (0.2 Kg)

Power Requirements

Input: 24VAC 0.125A
  9-30VDC 0.25A @12 VDC
Max Power: 3W

Approvals

CE and FCC class B & C part 15
BTL Marked
UL 60950-1 and CAN/CSA C22.2
IC Canada
RoHS3 and WEEE compliant

Ordering Information

The EZ Gateway Modbus to BACnet is available in multiple point count configurations.

  FS-EZ3-MOD-BAC   500 Points
  FS-EZ4-MOD-BAC   1,000 Points

Options

The Accessory Kit consists of a power supply, Ethernet cable, screwdriver, DIN rail mount and a USB flash drive that includes all manuals, data sheets, notes and the discovery tool.

  FS-8915-38-QS   Accessory Kit, 110/220V

Contact FieldServer Sales for a proof of concept evaluation: SMC-insidesales@msasafety.com.

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