FGFD ProtoAir

Overview

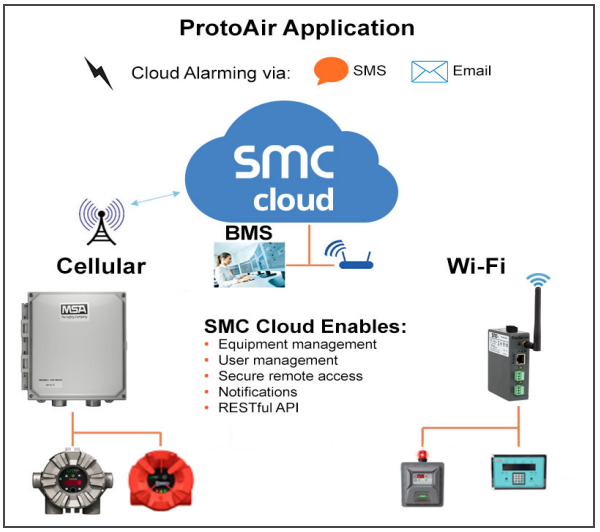
The FieldServer FGFD ProtoAir wireless gateway provides instant IoT remote monitoring capabilities for all MSA Safety's Modbus and BACnet Fixed Gas & Flame Detectors (FGFD) in the field as well as devices from other manufacturers.

Integrated MSA Cloud support enhances the ProtoAir's value by enabling remote monitoring, control, cloud-based alarm notifications (SMS or E-Mail) for trouble or alarm conditions and data visualization through MSA Cloud dashboards. Users can view data, configure dashboards, download historical data and provide remote monitor/control for any connected devices.

The ProtoAir FPA-C4X uses LTE to securely connect devices to AT&T, Verizon or Vodafone networks. This cellular connection allows IoT applications to move machine data into the cloud for maintenance, management and troubleshooting of remote equipment. An embedded OpenVPN Server enables secure remote access and programming of the OEMs Ethernet devices in the field.

Every ProtoAir is pre-configured with MSA Safety's FGFD products before delivery to seamlessly enable Cloud communications to one or many MSA products.

FieldServer FGFD ProtoAir Features and Benefits



- Multiple Connections:
  - 1 Ethernet
  - 1 RS-485/RS-232
  - 1 Wi-Fi
  - 1 Cellular-LTE
  - 4-20mA (NEMA only)
- Supports AT&T, Verizon and Vodafone Cellular networks.
- Short time to market to cloud connected devices.
- No configuration files need to be built in the field to support one or multiple pieces of equipment.
- MSA Safety FGFD preprogrammed devices: Ultima X, Ultima X5000, ChillGard 5000, ChillGard VRF, TriGard, ZGard, Senscient ELDS, S5000, IR5500/OPIR-5, FL500 UV-IR, FL500 UV-IR H2, FL4000H/Flamegard 5 MSIR, MC600, Suprema Touch, ModCon 75 Touch.
- Supports 1 or multiple devices totaling up to 3,000 Modbus, EtherNet/IP or BACnet points for cloud data transfer.
- Enabling OpenVPN allows remote connection to Ethernet devices in the field with management/configuration programs to perform diagnostics, download new firmware and reprogram the device without going to the site. Connection to webservers located on remote segmented Ethernet devices is also available.
- Wi-Fi access point allows for direct connection from any mobile device without having to be on the facility's LAN or WAN to access local applications.
- On-board diagnostics allow easy troubleshooting for both serial and Ethernet communications.

Propel Item No: T18431
Revision: 1.F

Benefits of the SMC Cloud

- Registering ProtoAir Gateways on MSA's tenant based IoT Cloud Platform, effortlessly connects the OEM's devices to the cloud, allowing secure remote access for diagnostics, monitoring, alarming and configuration of their products in the field.
- The Cloud Platform Dashboard provides enriched data metrics (averages and real-time values displayed in gauges and graphs) enabling collaboration and comparison across multiple sites.

The NEMA 4 enclosure for the ProtoAir is used for hazardous gas applications and comes with a built in cellular antenna and all the relevant safety precautions for such an application.

Hardware Specifications

Communication

Serial (Galvanic Isolation): RS-485/RS-232
Baud: 9600, 19200, 38400, 57600, 76800, 115000
Ethernet: 10/100BaseT, MDIX, DHCP

Environment

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

Cellular Frequencies Supported

NA AT&T LTE: 700(B17/B12/B13) / 850(B5) / AWS1700(B4) / 1900(B2)
NA Verizon LTE: 700(B13) / AWS1700(B4) / 1900(B2)
EU LTE: 800(B20) / 900(B8) / 1800(B3) / 2100(B1) / 2600(B7)
Rx Diversity and MIMO DL 2x2

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

12-24 VDC; Current draw @ 12V: 0.67A

Approvals

CE and FCC Class B & C Part 15
UL 62368 and IC Canada
RoHS3 and WEEE Compliant
AT&T and Verizon
PTCRB

Radio Specifications

Cellular

Features: LTE Cat.4
Antenna Type: SMA
Uplink: Up to 50 Mbps
Downlink: Up to 150 Mbps
Carriers: AT&T, Verizon & Vodafone
Output Power: Class 4 (2W, 33dBm), 108 dBm @UMTS

Wi-Fi 802.11 b/g/n

Frequency: 2.4 GHz
Channels: 1 to 11 (inclusive)
Output Power: 4.5 dBm
Antenna Type: Internal
Encryption: TKIP, WPA & AES

Ordering Information

Hardware:

- 10218634 NEMA Enclosure (AT&T)
- 10221444 NEMA Enclosure (4 x 4-20mA & AT&T)
- FPA-C41-2034 (AT&T)
- FPA-C43-2063 (Vodafone)
- FS-IoT-BACV (Verizon)
- 10218635 NEMA Enclosure (Verizon)
- 10222301 NEMA Enclosure (4 x 4-20mA & Verizon)
- FPA-C42-2035 (Verizon)
- FS-IoT-BACA (AT&T)
- FPA-W44-1919 (Wi-Fi)

Services:

- 10222302 Annual notifications and data per FGFD FieldServer
- 10222303 Additional Gateway per customer (2-5 units)
- 10222304 Additional Gateway per customer (6+ units)

Contact MSA sales for an easy proof of concept evaluation: SMC-insidesales@msasafety.com.

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