ProtoAir LTE

Overview

The FieldServer ProtoAir LTE wireless gateway provides the Equipment Manufacturer (OEM) a cost-effective interface to Building Management Systems (BMS) and immediate IoT remote monitoring capabilities for all devices in the field at no extra cost.

Integrated MSA Grid cloud platform support enhances the ProtoAir LTE's value by enabling remote monitoring, control, cloud-based alarm notifications (SMS or E-Mail) for trouble or alarm conditions and data visualization. MSA Grid - FieldServer Manager users can view data, download historical data and provide remote monitor/control for any connected devices. Additionally, a FieldServer Manager integrated ProtoAir LTE dramatically reduces the time for an OEM to implement their IoT cloud strategy.

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 LTE is pre-configured with the OEM's products before delivery to seamlessly connect one or many OEM devices into their BMS networks and instantly cloud enable their devices.

## FieldServer ProtoAir LTE Features and Benefits

- Multiple Connections: 1 x Ethernet, 1 x RS-485/RS-232, 1 x Wi-Fi, 1 x Cellular-LTE
- Supports AT&T, Verizon and Vodafone Cellular networks
- Short time to market for BMS, industrial protocols and cloud connected devices
- No configuration files need to be built in the field to support one or multiple of the OEM's devices
- One ProtoAir connects multiple Serial and Ethernet devices to field protocol networks (BACnet MS/TP, BACnet/IP, Metasys N2, SNMP, XML over HTTP, EtherNet/IP, DNP 3.0 and many others)
- Supports up to 5,000 points for protocol conversion and 3,000 points for cloud data transfer
- 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 the local applications
- 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
- 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
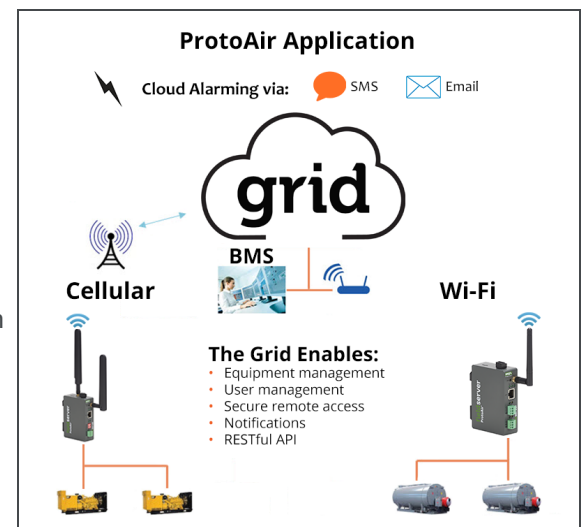
Customization for Equipment Manufacturers

The ProtoAir is part of MSA Safety's product customization program for Equipment Manufacturers. Designed to enable manufacturers to quickly add Cloud and BMS connectivity, MSA Safety will create a product customized specifically for your requirements:

- Unique part number
- Profiles tailored to specific equipment models
- Customized documentation
- Non-standard packaging, identity
- Customized network GUI on the FieldServer
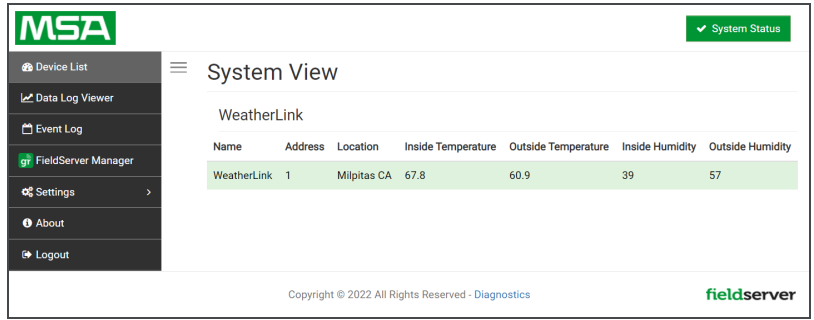
MSA Grid - FieldServer Manager

- Registering ProtoAir BMS/IoT Gateways on the MSA Grid - FieldServer Manager, 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.

- FieldVEU provides enriched data metrics (averages and real-time values displayed in gauges or graphs) enabling collaboration and comparison across sites.

- No annual subscription to connect FieldServers to the FieldServer Manager for 50 data points per minute through 2023.
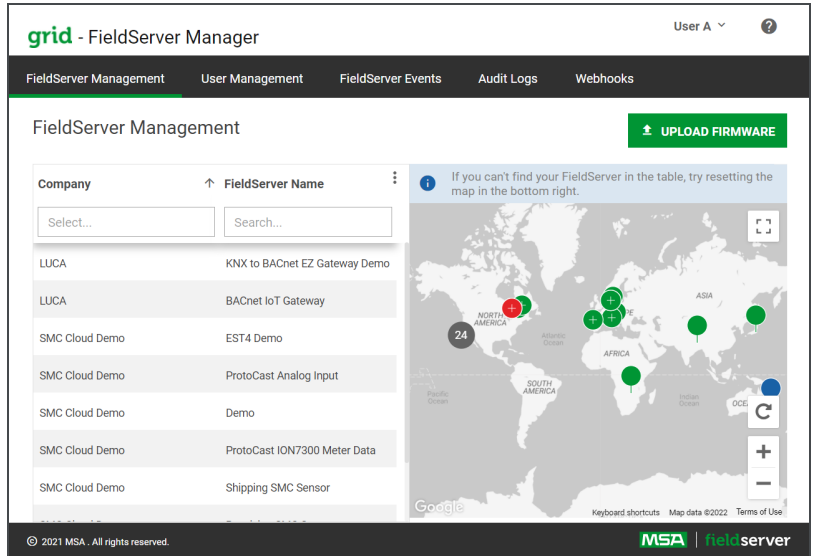
Hardware Specifications

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 Part 15 C
UL 62368-1
RoHS3 and WEEE compliant
AT&T and Verizon
PTCRB and UKCA compliant
DNP 3.0 and Modbus conformance tested
ODVA CONFORMANT

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, WPA2 & AES

Ordering Information

- FPA-C41-XXXX: Serial, Ethernet, AT&T Cellular and Wi-Fi
- FPA-C42-XXXX: Serial, Ethernet, Verizon Cellular and Wi-Fi
- FPA-C43-XXXX: Serial, Ethernet, Vodafone Cellular and Wi-Fi

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

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