Protocol Aggregation & Telemetry Router for IoT

PLUG AND PLAY WITH SIGNALFIRE CLOUD

MQTT/SPARKPLUG READY

CONNECTS AND INTEGRATES WITH SIGNALFIRE 900MHZ PRODUCTS

MULTI PROTOCOL HUB FOR WIRED AND WIRELESS DEVICES



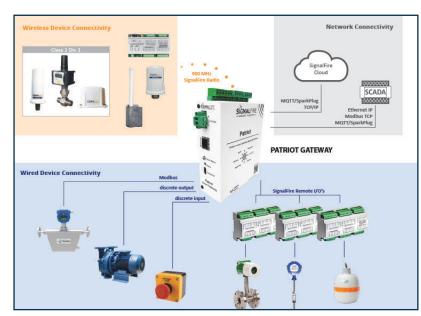
PRODUCT DESCRIPTION

The PATRIOT Gateway is a versatile hub that connects wireless and wired devices into SCADA, cloud, and monitoring systems with ease. Supporting Modbus TCP, EtherNet/IP, and MQTT/SparkPlug, it seamlessly integrates data from SignalFire's 900 MHz wireless nodes, Modbus devices, and field I/O modules for a flexible, cost-effective solution.

With ultra-low power consumption, large-scale tag support, and secure cloud-ready connectivity, the PATRIOT delivers reliable performance in even the most remote applications. Whether you need to shorten cable runs, enable local automation, or scale to thousands of devices, the PATRIOT Gateway provides a powerful platform to modernize and simplify industrial monitoring.

FEATURES

- Integrates wireless + wired signals into SCADA, cloud, or remote systems
- Publishes to MQTT/SparkPlug with no licensing required
- Supports SignalFire Cloud for turnkey monitoring and control
- Ultra-low power consumption (<50mA) for solar-friendly installations
- Large-scale deployment capabilities with up to 30,000 Modbus tags
- Remote shutdown logic with 128 configurable rules for automation
- Expansion modules for analog and relay outputs





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TECHNICAL SPECIFICATIONS

Table 1

Physical Specifications	
Dimensions	5.6" (142mm) Tall x 1.6" (41mm) Wide x 5.2" (132mm) Deep
Weight	2 Lbs (0.9Kg)
Housing Material	Powder Coated Steel
Mechanical installation	DIN Rail Mount
Electrical Specifications	
Input Power	6 to 42 Vdc
Power Consumption @ 12Vdc	No Ethernet: 66mA Average, 75mA Max With Ethernet: 85mA Average, 95mA Max
Power Consumption @ 24Vdc	No Ethernet: 35mA Average, 43mA Max With Ethernet: 45mA Average, 53mA Max
Wire Termination	Screw Terminals. 18AWG-22AWG
Clock	Clock and RSD Control Registers Maintained For 30 Days Without Power
Environmental	
Ambient Operating Temperature	-40 to +185°F (-40°C to 85°C)
Humidity	0% - 95% Non-Condensing
Wired Communication Interfaces	
2x RS485/RS232	2 Serial Ports. Individually software Configurable For RS485 or RS232. Server Mode (Client Mode Pending)
1x RJ45	10/100 Ethernet Port with TCP/IP, Modbus TCP, Ethernet/IP (pending)
1x USB-C	USB-C High Speed Interface For Local Configuration With SignalFire Toolkit
Wired Communication Protocols	
Modbus RTU	30,000 Tags 2000 Remappable Tags Mode: Server Mode: Client (Pending)
Modbus TCP	30,000 Tags 2000 Remappable Tags 8 Concurrent Clients Mode: Server Mode: Client (Pending)
Ethernet IP (Pending)	CIP I/O Connections: 2 CIP Coil / Discrete Assemblies: 2x240 CIP Register Assemblies: 12x248
MQTT/SparkPlug	1000 Tags 200,000 Store/Forward Tag Buffer Configurable MQTT Brokers (3) TLS Encryption 1.2



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TECHNICAL SPECIFICATIONS CONTINUED

Table 1

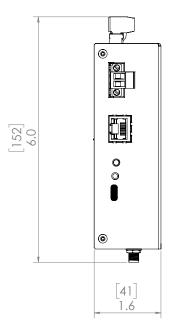
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Antenna: External, Omnidirectional Frequency Band: 902MHz - 928MHz 15 And Industry Canada Up To 3 Mile Range (Depends on SignalFire Node Type & Condition) Antenna RP-SMA Antenna connector Wireless Communication Protocol SignalFire Mode: Start/Mesh Self Organizing and Self Healing Nodes: 240 (Depends On Update Rate Interval Of Each Node) Remote Configuration of Nodes Using Over-The-Air Technology Security 2 Las Bit AES Encryption, Pre-shared Key Frequency Hopping Replay Prevention Local Automation Remote Shutdown Logic Configurable With Up To 128 rules Networking Web Admin Interface Configurable Login Credentials and Enable/Disable Control Setting MQTT/SparkPlug Configurable Broker (3) with TLS 1.2 Security IP Static or DHCP Network Time NTP Sync VOExpansion Modules SignalFire Analog/Relay Output Module Up to 2 Modules. Each Module Has 8 Analog Outputs and 2 Relay Outputs SignalFire Digital Output Relay Module Approvals Hazardous Locations (pending) Class 1 Division 2 Certified, Groups A,B, C, D. Temperature Code TS Certified to CSA C22.2 No. 213:2017, Conforms to Ut 121201:2017	Wireless Communication Interface	
Wireless Communication Protocol SignalFire Mode: Start/Mesh Self Organizing and Self Healing Nodes: 240 (Depends On Update Rate Interval Of Each Node) Remote Configuration Of Nodes Using Over-The-Air Technology Security 128 Bit AES Encryption, Pre-shared Key Frequency Hopping Replay Prevention Local Automation Remote Shutdown Logic Configurable With Up To 128 rules Networking Modbus TCP Connections 8 Modbus Concurrent Clients Web Admin Interface Configurable Login Credentials and Enable/Disable Control Setting MQTT/SparkPlug Configurable Broker (3) with TLS 1.2 Security IP Static or DHCP Network Time NTP Sync I/O Expansion Modules Up to 2 Modules. Each Module Has 8 Analog Outputs and 2 Relay Outputs SignalFire Digital Output Relay Module Up to 2 Modules. Each Module Has 12 Digital Outputs Approvals Hazardous Locations (pending) Class 1 Division 2 Certified, Groups A,B, C, D. Temperature Code TS Certified to CSA C22.2 No. 213:2017, Conforms to UL 121201:2017	SignalFire 900MHz Star/Mesh Network	Antenna: External, Omnidirectional Frequency Band: 902MHz - 928MHz ISM License Free, Compliant With FCC Part 15 And Industry Canada
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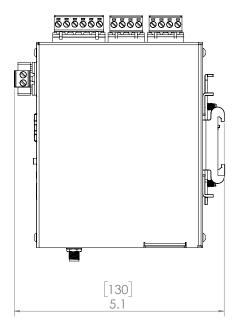


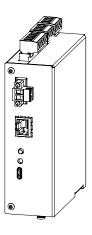
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DIMENSIONS

Weight	2 Lbs (0.9Kg)
Housing Material	Powder Coated Steel
Mechanical installation	DIN Rail Mount









Protocol Aggregation & Telemetry Router for IoT

HOW TO ORDER

Order Code Example: PATRIOTGW-900-SF128STD1-N-EXT

Wireless Comms

900 = SignalFire 900MHz

PATRIOTGW -

Expansion Module

= None

8AO2DO = Output Module with 8 Analog + 2 Digital Outs,

DIN Mount (pending)

12DO = Output Module with 12 Relay Output - Sinking or

Sourcing, DIN Mount (pending)

MIOM = Multi Input/Output Module. 8 Analog, 6

Digital inputs, 4 Relay Outputs.

Subscription

= None

SF128STD1 = 128 tags. 60 seconds min, 1-yr plan

SF128STD3 = 128 tags. 60 seconds min, 3-yr plan

SF128Fast1 = 128 tags. 15 seconds min, 1-yr plan

SF128Fast3 = 128 tags. 15 seconds min, 3-yr plan SF256STD1 = 256 tags. 60 seconds min, 1-yr plan

SF256STD3 = 256 tags. 60 seconds min, 3-yr plan

SF256Fast1 = 256 tags. 15 seconds min, 1-yr plan

SF256Fast3 = 256 tags. 15 seconds min, 3-yr plan

Antenna

Ν

= No Antenna

= Panel Mounted RPSMA Antenna with 1m cable

ANT-WP-RPSMA-20 = Remote Mount Antenna, 20ft RG58 cable, RP-SMA Connector = Remote Mount Antenna, 20ft RG58 cable, N-Male Connector

Bulkhead Kit Included

ANT-WP-N-30

ANT-WP-N-20

ANT-WP-RPSMA-30 = Remote Mount Antenna, 30ft cable, RP-SMA Connector

= Remote Mount Antenna, 30ft cable, N-Male Connector,

Bulkhead Kit Included

ANT-WP-N-50

ANT-WP-RPSMA-50 = Remote Mount Antenna, 50ft RG58 cable, RP-SMA Connector

= Remote Mount Antenna, 50ft RG58 cable, N-Male Connector, Bulkhead Kit Included

