OleumTech®

DATASHEET

OTC

Highlights

- 4x analog inputs (24-bit ADC)
- Independently selectable inputs for 0-10 V or 4-20 mA mode
- -40 ˚C to 80 ˚C
- 900 MHz or 2.4 GHz radio option
- Secure AES encryption
- Class I, Division 2 (Zone 2) certified

C CSA US   CE 0518   Ex II 1G   IEC IECEx

US Patent #6967589

OTC Transmitters & I/O Modules   OTC Gateway   Network Infrastructure   Cloud (Analytics)

Wireless Analog Signal Monitoring Solution

Scalable I/O Solution

The OleumTech® Wireless Analog Input Module provides a quick and scalable solution for adding analog inputs to any OTC Sensor and I/O Network. It is equipped with four high resolution analog inputs (24-bit ADC). Each input can be independently selected for either 0-10 Vdc or 4-20 mA mode of operation. The Wireless Analog Input Module communicates with an assigned wireless gateway in the network. This wireless device is certified for use in Class I, Division 2 (Zone 2) hazardous locations.

Robust Range, Advanced Networking

With the provided robust RF range, the Wireless Analog Input Module can rescue stranded assets by gaining visibility that was once economically not feasible. The Wireless Analog Input Module can be added to the network as needed and its points can to be mapped to anywhere within the OTC Network creating an efficient, highly advanced system that is yet easy to create and manage.

Technical Specifications

HARDWARE FEATURES	
Device Functionality	· Wireless Analog Input Module
Embedded Controller	· 32-bit Low Power ARM7 Microcontroller with Internal FLASH (Field Upgradeable)
I/O Interfaces	· 4 Analog Inputs (24-bit ADC): 0-10 V or 4-20 mA Selectable Modes
Configuration	· Config / Debug Port - RS232 Slave Only (RJ-45) / BreeZ® Software for PC
Device Diagnostics	· Health Tags: Supply Voltage, Received Signal Strength Indication (RSSI), RF Refresh, RF Timeout
WIRELESS COMMUNICATIONS	
Type: 900 MHz / 2.4 GHz	· ISM Band, Spread Spectrum
	· 900 MHz: FHSS (Frequency Hopping), FSK, AES Encryption 256-bit (900 MHz), 128-bit (915 MHz)
	· 2.4 GHz: DSSS (Direct-Sequence), AES Encryption 128-bit
Bit Rate	· 900 MHz: 9600 bps / 115.2 kbps ; 2.4 GHz: 250 kbps
Output Power	· 900 MHz: Up to 1000 mW; 2.4 GHz: 63 mW
Receiving Sensitivity	· 900 MHz: -110 dBm @ 9600 bps, -100 dBm @ 115.2 kbps / 2.4 GHz: -100 dBm @ 250 kbps
RF Range	· 900 MHz: Up to 40 Miles / 64 km with Clear Line of Sight[1]
	· 2.4 GHz: Up to 5.7 Miles / 9.2 km with Clear Line of Sight[1]
Antenna Connector	· MMCX
CERTIFICATIONS & COMPLIANCE	
EMC/EMI	· FCC Part 15 (USA)
	· IC ICES-003 (Canada)
Safety	· Class I, Division 2, Groups A, B, C, D T4; Ex nA IIC T4
	· Class I, Zone 2 AEx nA IIC T4 / 9-30 Vdc, Ta = -40 to 176 °F (-40 °C to +80 °C)
	· ATEX: Sira 14ATEX4143X; Ex nA IIC T4 Gc
	· IECEx: SIR 13.0055X; Ex nA IIC T4 Gc / 9-30 Vdc, Ta = -4 to 176 °F (-20 °C to +80 °C)
MECHANICAL SPECIFICATIONS	
Dimensions	· 3.8" (W) x 3" (H) x 1.4" (D) / 96.5 mm (W) x 76.2 mm (H) x 35.6 mm (D)
Package Dimensions	· 8" (W) x 6" (H) x 2.5" (D) / 203 mm (W) x 152 mm (H) x 63 mm (D)
Package Weight	· ~1 lbs / 0.4 kg
Mounting	· DIN Rail Mountable with Height Adjustability
ELECTRICAL SPECIFICATIONS	
DC Power Input	· 9-30 Vdc
Average Power Input	· 2 Watt
Power Consumption @ 12 VDC	· Idle: 55 mA; Configuration: 55 mA; Transmission: 200 mA
GENERAL SPECIFICATIONS	
Operating Conditions	· Temperature: Class I, Div 2: -40 °F to 176 °F (-40 °C to 80 °C)
	ATEX/IECEx: -4 °F to 176 °F (-20 °C to 80 °C)
	· Humidity: 0 to 99 %, Non-Condensing
Warranty	· 2-Year Parts and Labor
Country of Origin	· USA
ORDERING INFORMATION	
Model Numbers	· 900 MHz: WM-0900-003; 2.4 GHz: WM-2400-003
Wirelessly Connects To	· OTC Wireless Gateway
Configuration Cable	· SX1000-CC2, 20-ft All-in-One Configuration Cable

Networking Diagram

SCADA/CLOUD

PLC/RTU/EFM/IP RADIO

Modbus (RTU/TCP IP)
LevelMaster ASCII

OTC GATEWAY
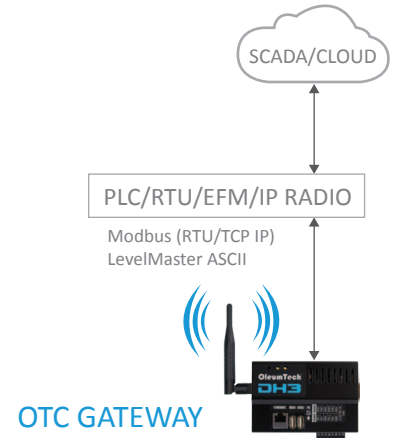
OTC TRANSMITTERS
Point-to-Multipoint
"Star Topology"

[1] The maximum RF range data was collected under optimal test conditions, including a clear line of sight between antennas. Actual wireless RF range may vary depending on location, RF interference, weather, antenna type, cable type, and line of sight.

ISO 9001 REGISTERED COMPANY

MADE IN USA