

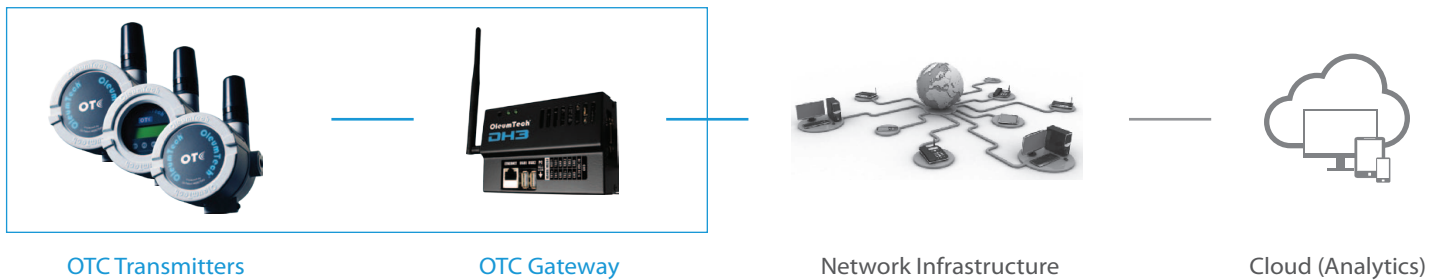


▶ Highlights

- 4x analog inputs (4-20 mA / 0-10 Vdc)
- 2x discrete inputs
- 2x discrete outputs
- Master: Modbus/HART/LevelMaster
- Self-contained, rugged design
- Multi-drop up to 16 slave devices
- Dedicated 10 Vdc output for powering H-Series Resistive Tank Level Sensors
- IP66, -40 °C to 70 °C
- 900 MHz: up to 10 miles (16.1 km)¹
- 2.4 GHz: up to 4.3 miles (7 km)¹
- Secure AES encryption
- Class I, Division 2 (Zone 2) certified



US Patent #6967589



OTC Transmitters

OTC Gateway

Network Infrastructure

Cloud (Analytics)

▶ The Most Flexible Multi-I/O Wireless Transmitter

Long-Range Multi-Function Transmitter

The OleumTech® IO MAX® Transmitter provides four analog inputs for supporting 4-20 mA or 0-10 Vdc signals. The IO MAX also provides two discrete inputs and two discrete outputs. The MX1 can be configured to operate as a master device interfacing Modbus, LevelMaster ASCII, or HART devices. Multi-drop up to 16 instruments. The IO MAX is powered using an external 9-24 Vdc source. This not only enables its users to customize their power solution, but also allows for the IO MAX to supply continuous power to connected sensors or slave devices if required.

Reliable, Scalable, and Safe







The field-proven wireless transmitter communicates with an assigned wireless gateway within the OTC Wireless Sensor and I/O Network creating a highly scalable network, accommodating virtually any I/O requirement.

The OleumTech Wireless Transmitter is certified for use in Class I, Division 2 (Zone 2) hazardous locations, and provides a robust RF range.

Technical Specifications

| HARDWARE FEATURES | |
|------------------------------|--|
| Device Functionality | · Wireless Transmitter: Multiple Analog Inputs, Digital I/O · Master Function: Modbus/LevelMaster/HART (Software Selectable) |
| Embedded Controller | · Ultra-Low Power RISC Microcontroller with Internal FLASH (Field Upgradeable) |
| Configuration | · BreeZ® Software for PC · 4x Analog Inputs (0-10 Vdc or 4-20 mA), 24-bit ADC, Independently Selectable via DIP Switches |
| I/O Interface | · 2x Discrete Inputs (Up to 24 Vdc, For Dry Contact or Open-Drain Output/NPN Devices), 20 ms - 2 s Filter · 2x Discrete Outputs (Open-drain / NPN / 1 Amp Sink Current) |
| Accuracy | · ±0.2 % Accuracy for 4-20 mA Input |
| RS485 | · Half-Duplex |
| Modbus RTU | · Master Function, Read and Write, Multi-drop up to 16 Slave Devices |
| LevelMaster ASCII | · Master Function, Read Only, Multi-drop up to 16 Slave Devices |
| HART | · Master Function, Read Only (PV, SV, TV, QV), Multi-drop up to 16 HART Instruments |
| Power Source | · External 9-24 Vdc |
| Output Power with Ext. Power | · Continuous Power: 9-24 Vdc, 12 Vdc, 200 mA Total Max, Switchable Power to Analog Sensors: 12 Vdc |
| Sensor Power Up Delay | · Adjustable 0-60,000 ms (Switchable Power Only), 0 = Continuous (External Power Only) |
| Device Diagnostics | · Health Tags: Battery 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 100 mW; 2.4 GHz: 63 mW |
| Receiving Sensitivity | · 900 MHz: -110 dBm @ 9600 bps, -100 dBm @ 115.2 kbps · 2.4 GHz: -100 dBm |
| RF Range | · 900 MHz: Up to 10 miles (16.1 km) @ 100 mW with Clear Line of Sight ¹ · 2.4 GHz: Up to 4.3 miles (7 km) @ 63 mW with Clear Line of Sight ¹ |

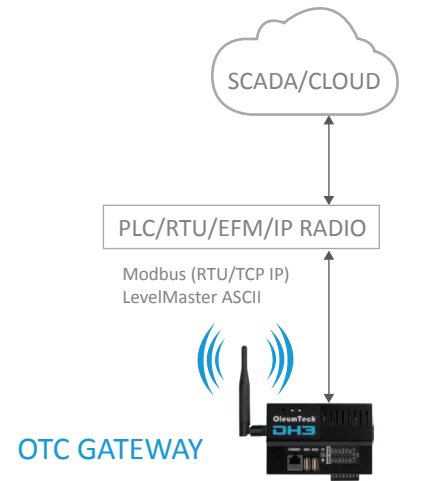
| CERTIFICATIONS & COMPLIANCE | |
|-----------------------------|--|
| EMC/EMI |  <ul style="list-style-type: none"> · FCC Part 15 (USA) · IC ICES-003 (Canada) |
| Safety |  <ul style="list-style-type: none"> · Class I, Division 2, Groups A, B, C, D T4; Ex nA IIC T4 Gc · Class I, Zone 2; AEx nA ic IIC T4 Gc / 9-24 Vdc, 0.64 A, Ta = -40 to 176 °F (-40 °C to +80 °C) |
| |     <ul style="list-style-type: none"> · ATEX: Sira 18ATEX4010X; Ex nA IIC T3 Gc; II 3 G · IECEx: SIR 18.0002X; Ex nA IIC T3 Ga / 9-24 Vdc, 0.64 A, Ta = -4 to 176 °F (-20 °C to +80 °C) |

| MECHANICAL SPECIFICATIONS | |
|---------------------------|---|
| Dimensions (WxHxD) | · 7.0 x 13.5 x 4.5-inch / 178 mm x 343 mm x 114 mm |
| Package Dimensions | · 10.38 x 14.38 x 6.5-inch / 26.4 cm x 36.5 cm x 16.5 cm |
| Package Weight | · ~7.25 lbs / 3.3 kg |
| Connection Fitting | · 2x 3/4-inch NPT Female, 1/4-inch (6.35 mm) Mounting Holes, Pipe Mountable |
| Enclosure Casing Material | · Type 4X Aluminum; IP66 |

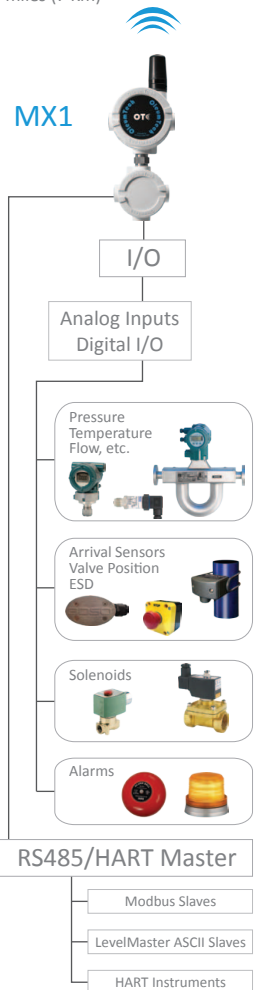
| ELECTRICAL SPECIFICATIONS | |
|---------------------------|---|
| DC Power Input | · 9-24 Vdc |
| Power Consumption @ 12 V | <ul style="list-style-type: none"> · Average Current: 0.35 mA (Tx Pwr @100 mW, Tx Interval @ 60 sec) · Average Current: 0.66 mA (Tx Pwr @100 mW, Tx Interval @ 30 sec) · Average Current: 18.58 mA (Tx Pwr @100 mW, Tx Interval @ 1 sec) |
| Power Consumption @ 24 V | <ul style="list-style-type: none"> · Average Current: 0.21 mA (Tx Pwr @100 mW, Tx Interval @ 60 sec) · Average Current: 0.38 mA (Tx Pwr @100 mW, Tx Interval @ 30 sec) · Average Current: 10.44 mA (Tx Pwr @100 mW, Tx Interval @ 1 sec) |

| GENERAL SPECIFICATIONS - TRANSMITTER | |
|--------------------------------------|--|
| Operating Conditions | · Ambient Temperature (Class I, Division 2): -40 °F to 176 °F (-40 °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: WT-0900-MX1, WT-0915-MX1; 2.4 GHz: WT-2400-MX1, WT-2410-MX1 |
| Wirelessly Connects To | · OTC Wireless Gateway |
| Configuration Cable | · SX1000-CC2, 20-ft All-in-One Configuration Cable |

Networking Diagram



RF RANGE¹
 900 MHz: Up to 10 miles (16.1 km)
 2.4 GHz: Up to 4.3 miles (7 Km)



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.

