



# New!

## Reliable SCADA Communications in Difficult Terrain

# Raveon VHF / UHF / MURS Data Radios

### Very High performance Long-Range 5 Watt radios with Remote Management

- Reliable long-distance wireless communications for industrial SCADA systems – up to 60 miles
- Point-to-Multipoint, Peer-to-Peer operation
- High penetration 150MHz (VHF) and 450MHz (UHF) operation
- Industry Leading Sensitivity and overall Receiver Performance
- Ultra-fast Transmit/Receive Switching Times for fast system throughput
- Store & Forward Repeater operation to extend radio range
- RS-232, RS-485 and USB Communications Interfaces
- Allen-Bradley (DF1), Modicon (Modbus) and Harris (DNP3) protocol support
- Low-power and smart power management for solar/battery backed applications
- Compact DIN Rail Mounting Available
- Wide operating Temperature Range: -30°C to +60°C
- 3-year factory warranty on parts and labor



Raveon 5 Watt Data Radio

**Wideband Coverage** – Raveon Radios are available to cover the entire VHF and UHF Bands in the US and around the world; 136MHz to 174MHz (VHF) and 403 MHz to 512MHz (UHF) (includes non-domestic frequencies).

**Extremely Fast** - Raveon Radios support over-the-air data rates of up to 19,200 baud and transmit/receive switching times down to 3mS. Message throughput rates of 50 messages per second are possible depending on configuration settings and message sizes.

**Superior Receiver Performance** – Not all 5 watt radios are the same. Raveon radios have extreme sensitivity and front-end performance to dig out even the weakest signals, even up to 60 miles away!.

**Simple Universal Interface** - Raveon radios can be used with nearly any industrial control device with a standard serial or USB port. No modem control signals are used and messages are transferred in error-checked packets, compatible with standard protocols including Modbus, DF1 and DNP3.

**Point-to-Multipoint and Peer-to-peer Topologies** - In addition to conventional point-to-multipoint configurations, Raveon radios support peer-to-peer communications for newer high-performance, high-reliability system configurations that don't depend on a "Master" radio, eliminating a potential single-point of failure.

**Integral Repeater Functionality** – Raveon radios have built-in Store-and-Forward capability so any radio can also act as a repeater to effectively extend the reach of a radio system.

**License-Free Operation Available** – Raveon radios are available in MURS configuration without requiring an FCC License. Output power is limited to 2 watts, there are four available non-exclusive VHF frequencies and repeaters are not allowed.

**RS-232, RS-485 and USB Interfaces** – Raveon radios are available with four industry standard communications interfaces to simplify connection into nearly any system; RS-232, RS-422 and RS-485 for use in legacy point-to-point and multi-drop configurations, and USB for more modern systems and PC computers.

**Remote Diagnostics and Management** – Channel performance, RSSI, RF power, packet counters, and radio configuration are easily accessed locally via the serial port or remotely over-the-air, simplifying the installation and management of larger installations over wide areas. "Radio Manager" software makes configuration and system troubleshooting even easier.

**Very Low Power Consumption** – Raveon radios can be powered down to very low power consumption levels (sleep mode), ideal for solar powered and battery backed systems.

**Rugged Reliability** – Raveon radios are 100% tested over an extended temperature range of -30C to 60C, and backed by an industry leading 3-year factory parts and labor warranty.

## Specifications

### VHF / MURS

### UHF

#### RF Performance

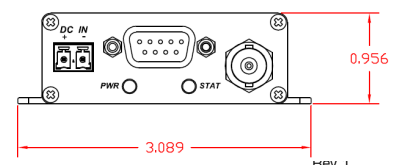
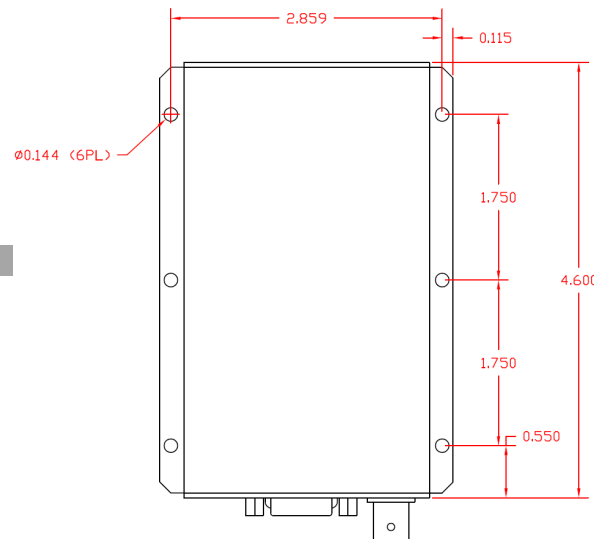
Transmit Power	0.5Watt to 5 Watt - user configurable	(up to 2 watts - MURS)
Maximum Duty Cycle	100% @ 2W to 40C, 25% @5W (100% w/ optional heat-sink)	
Operating Frequency	A 136-155MHz (for export) B 150-174MHz (domestic & export)	A 403-434MHz (for export) B 419-440MHz (for export) C 450-480MHz domestic & export) D 470-512MHz (for export)
Frequency Stability	Better than +/- 2.5.ppm	Better than +/- 1.5.ppm
Tx/Rx Turnaround Time	<5mS	<3mS
Receiver Sensitivity (0.1% BER)	< -118 dBm @ 1200bps < -114 dBm @ 4800bps < -108 dBm @ 9600bps	< -116 dBm @ 4800bps < -108 dBm @ 9600bps
Adjacent Channel Selectivity	-70dB (1200bps Wide) -65dB (1200bps Narrow) -60dB (4800bps Narrow)	-50 dB
Alternate Channel Selectivity	-70dB (1200bps Wide)	-65 dB
Blocking and Spurious Rejection	-80dB	-75dB
Rx Intermodulation Rejection	75dB (4800bps Narrow) 80dB (1200bps Narrow)	75dB (4800bps Narrow) 80dB (1200bps Narrow)

#### Data Communications Port

Interface	RS-232, RS-485 RS-422 (user selectable) or USB (option)
Serial Data Rate	1200 baud to 115200bps (user configurable)

<b>Power</b>	10 to 16Vdc.	
Sleep	: <25mA	: <25mA
Receive/Idle	: <65mA (55mA typ).	: <90mA (85mA typ).
Transmitting	1.8A @ 5W, 1.1A @ 2W typical	2.7A @ 5W, 1.2A @ 2W typical

<b>Antenna Connector</b>	BNC (female)
<b>Mounting</b>	Panel mount (35mm. DIN rail optional)
<b>Dimensions</b>	4.60" X 2.60" X .956 (11.7cm X 6.6cm X 2.43cm)
<b>Environment</b>	- 22°F(- 30°C) to 140°F (60°C), 5%RH to 95% RH, non-condensing
<b>Warranty</b>	3 years, factory parts and labor



## Represented by:

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