



The Most Cost-Effective TSM-Enabled Radio



TW-860 TSM SPIRIT RADIO

TRELLISWARE'S TW-860 TSM SPIRIT IS IDEAL FOR DEPLOYMENT AT THE EDGE OF THE NETWORK, DESIGNED FOR NEXT-GENERATION SOLDIER SYSTEMS, PUBLIC SAFETY, AND FIRST RESPONDER REQUIREMENTS.

The TW-860 TSM Spirit radio represents the most cost-effective TrellisWare radio available, making it easier to expand tactical networks to everyone who needs to be connected. Interoperable with all TrellisWare radios, the TW-860 TSM Spirit radio supports a true flat network with massive scalability in a single radio frequency (RF) channel, while still delivering rapid position location information (PLI) updates for every radio.

PROVEN SCALABILITY AND PERFORMANCE

TrellisWare's patented Barrage Relay networking eliminates the need for routing protocols and allows for massive network scalability with low overhead. TrellisWare's TSM waveform facilitates secure mission critical voice and data delivery in the most severe conditions. The result is an exceptionally robust, flat network that supports hundreds of nodes, using less spectrum than any other Mobile Ad Hoc Networking (MANET) technology.

KEY FEATURES

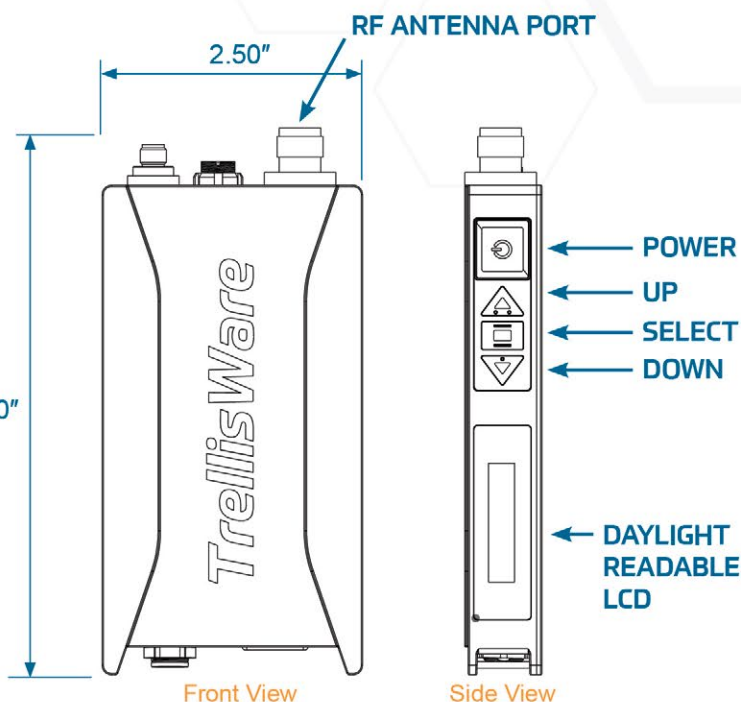
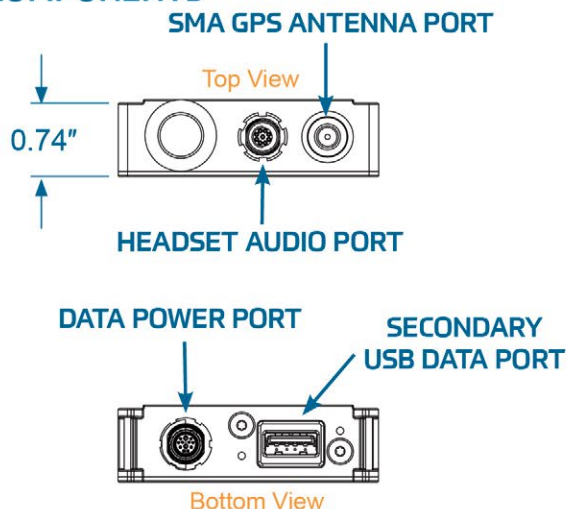
- Designed specifically for body-wearable applications with industry-leading size, weight, and power (SWaP) among body-worn mesh networking radio
 - Single data and power connector that supports IP data and USB-C power delivery (PD) to support soldier hub devices and conformal wearable batteries (CWB)
 - Ideal for use with body-worn wearable antennas, only requiring one antenna to achieve reliable performance (versus MIMO radios that require multiple antennas)
- Seamless data connectivity for all body-worn end-user equipment
 - Expansion port for Wi-Fi and Bluetooth wireless connectivity for audio and data
- Full TSM voice capability with dual push-to-talk (PTT) and up to 32 selectable talk groups





TW-860

COMPONENTS



SPECIFICATIONS

Physical	
Overall Size	4.70 L x 2.50 W x 0.74 H in (119.38 x 63.50 x 18.79 mm)
Weight	8.81oz (249 g)
Frequency Range	<ul style="list-style-type: none"> • LUHF: 225–450 MHz • U-UHF: 698–970 MHz • L/S Bands: 1250–2600 MHz
Configurable Bandwidth	1.2, 3.6, 10, 20, 40 MHz
Transmit Power	100mW, 250mW, 500mW, 1W, 2W
Operating Temperature Range*	-20°C to +55°C (-4°F to +131°F)
Environmental	MIL-STD-810H
Water Resistant	IP67 without USB-A cap, IP68 with USB-A cap
MTBF	16,310 hours (MIL-HDBK-217 FN2)
RF Connector	TNC
Commercial GPS Support	SMA connector, U-Blox EVA-7M Module
Headset Audio Port	9-Pin Connector – Supports Dual Push-To-Talk (PTT) and Two Simultaneous Talkgroups
Data/Power Port	12-Pin ODU Connector – Supports USB-C Power Delivery and Data
Secondary USB Port	USB-A Connector – Supports Data, Programming, WiFi, and Bluetooth Accessories
Input Power	5 V to 20 V
Data Rate	Pt. to Pt., up to 32 Mbps (1-hop)
Waveform	TSM 6

Networking	
Network Coverage	<ul style="list-style-type: none"> • Mobile Ad Hoc Networking • Multi-hop – Up to 8 Hops • 800 Nodes in a Single RF Channel • Robust in Harsh RF Environments • Range – 26 Miles (40 Km) in a Single Hop
Communication Services	<ul style="list-style-type: none"> • Simultaneous Data and PLI • Up to 32 Voice Talk Groups with Voice Option • Built-in GPS • IP Support – IPv4, IPv6; Unicast, Multicast, Broadcast; TCP, UDP
Security	<ul style="list-style-type: none"> • AES-256
Application Support	<ul style="list-style-type: none"> • Built-in Web Applications • Over the Air Remote Control • APIs for 3rd Party Integration • PLI with CoT, KML, and JSON • Integration with Android™ applications

Specifications subject to change without notice.

*Expanded temperature range test results available.

When Nothing Else Works

TRELLISWARE.COM

To place an order, please contact your account manager.
For more information, email sales@trellisware.com

Please access the most recent digital version of this datasheet on the TrellisWare Customer Support Site (site registration required).