



# Pioneering The Edge Of Tactical Networking



## TW-900/950 TSM SHADOW RADIO-FCC

### WIDE FREQUENCY RANGE, HIGH THROUGHPUT

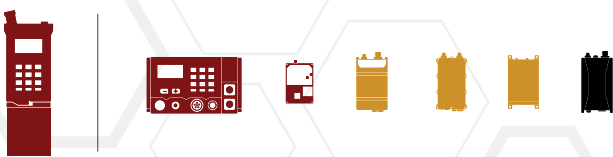
The TW-950 TSM Shadow radio features unparalleled performance powered by the TSM waveform. TrellisWare's signature radio provides an expanded frequency range, high throughputs for streaming multiple high definition (HD) videos, and offers the most flexible data interface options in its class.

### 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

- Industry-leading size, weight, and power (SWaP) among tactical networking radios that lightens the load for users
- Supports simultaneous voice talk-groups, rapid position location reporting, IP data and video streaming all in a compact form factor
  - Cellular-quality dedicated voice with support of up to 32 talk-groups enabling large-scale networks
  - Ability to ingest analog SD video or encoded high definition (HD) video for multi-cast streaming
    - Built-in H.264 encoder and HDMI for directly interfacing with a variety of cameras
- Built-in Multi-Net Bridge (MNB) capability can be used to connect geographically disparate networks or RF-separated networks over any IP link and allow them to act like a single larger network, bridging voice, PLI and data
- Accessory offering enables a wide range of use cases with multiple power options, data interfaces, and audio ancillaries





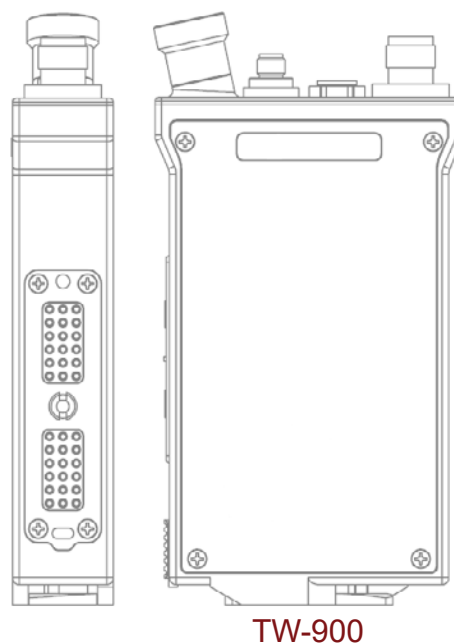
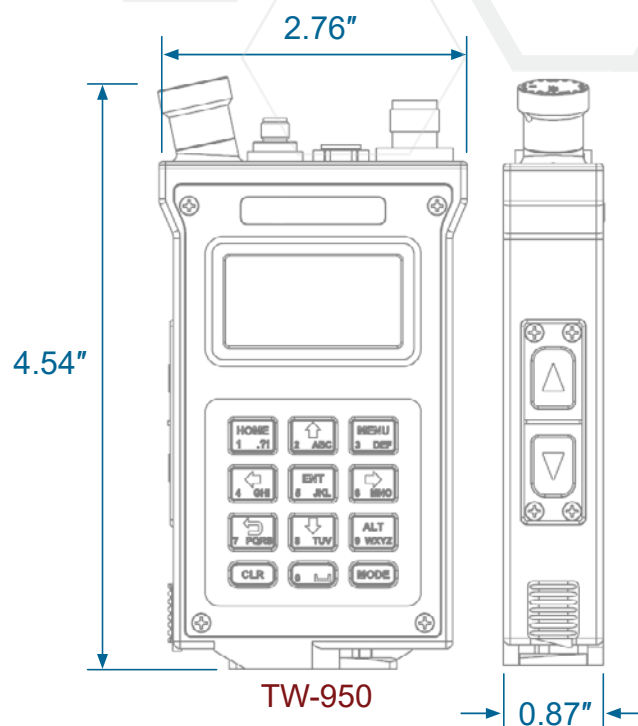
## SPECIFICATIONS

Physical	
Overall Size	4.54 L x 2.76 W x 0.87 D in (115.32 x 70.10 x 22.10 mm)
Weight (R/T only)	11.3 oz (320 g)
FCC Frequency Range	L/S Bands: 2400–2483.5 MHz
Configurable Bandwidth	1.2, 3.6, 10, 20 MHz
FCC Transmit Power	100 mW, 250 mW, 500 mW, 1W
Battery Life	8 Hours with 32 Wh Rechargeable Battery
Input Power	3.0 – 4.0 V DC, 31 W max.
Connectors	<ul style="list-style-type: none"> <li>• ODU data/audio, TNC RF, SMA GPS</li> <li>• 36-pin side connector</li> </ul>
Data Rate	Pt. to Pt., up to 32 Mbps (1-hop)
Environmental	MIL-STD-810G
Operating Temperature Range	-20°C to +55°C (-4°F to +131°F)
Water Resistant	IP68
IP Support	IPv4, IPv6; Unicast, Multicast, Broadcast; TCP, UDP
Audio Encoding	AMR 5.9, MELPe, AAC Audio
Video Encoding	SD and HD H.264
Net Entry Time	< 1 Second
Waveform	TSM 6

**Note:** For FCC radio options, please contact TrellisWare Customer Support at [support@trellisware.com](mailto:support@trellisware.com).

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

Specifications subject to change without notice.



**When Nothing Else Works**

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To place an order, please contact your account manager.  
For more information, email [sales@trellisware.com](mailto:sales@trellisware.com)

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