



# Pioneering The Edge Of Tactical Networking



## TW-900/950 TSM SHADOW RADIO

### WIDE FREQUENCY RANGE, HIGH THROUGHPUT

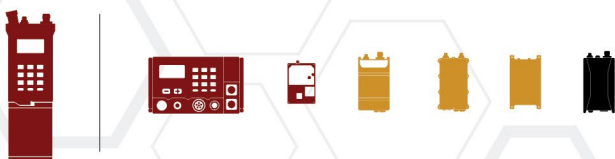
The TW-950 TSM Shadow radio features unparalleled performance powered by the TSM and Katana waveforms. TrellisWare's signature radio provides an expanded frequency range, high throughput for streaming multiple high definition (HD) video, and offers the most flexible data interface options in its class.

### KEY FEATURES

- FCC/IC-certified configuration available for the TSM waveform
- Industry-leading size, weight, and power (SWaP) among tactical networking radios that lightens the load for users
- Support for SD, HDMI, and H.264 video and multicast streaming
  - Cellular-quality prioritized voice slots 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 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

### PROVEN SCALABILITY AND PERFORMANCE

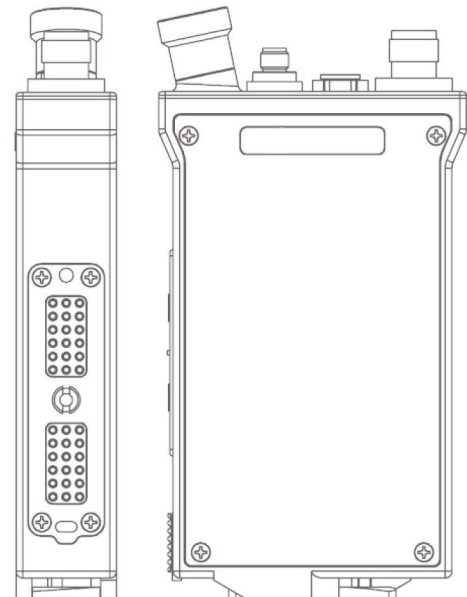
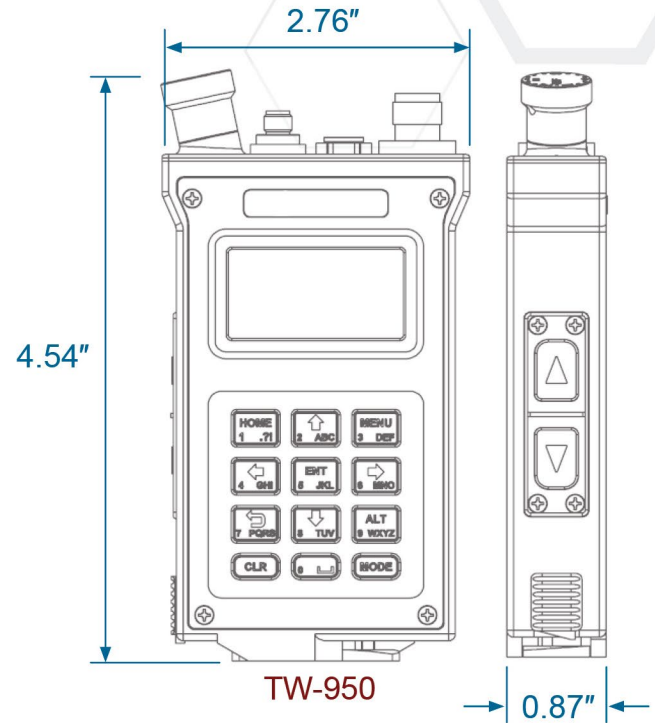
TrellisWare's patented Barrage Relay networking eliminates the need for routing protocols and allows for massive network scalability with low overhead. The TrellisWare TSM waveform is a highly scalable and robust Mobile Ad Hoc Networking (MANET) waveform designed from the ground up to support over 800 nodes with simultaneous voice, data, video, and Position Location Information (PLI) operating in a single radio frequency channel. The TrellisWare Katana waveform combines resilient narrowband fast frequency hopping with tactical MANET, operating in highly contested radio frequency (RF) communication environments.





**SPECIFICATIONS**

Physical	
<b>Overall Size</b>	4.54 L x 2.76 W x 0.87 H in (115.32 x 70.10 x 22.10 mm)
<b>Weight (Without Battery)</b>	11.3 oz (320 g)
<b>Frequency Range</b>	<ul style="list-style-type: none"> <li>• L-UHF: 225–450 MHz</li> <li>• U-UHF: 698–970 MHz</li> <li>• L/S Bands: 1250–2600 MHz</li> </ul>
<b>Configurable Bandwidth</b>	1.2, 3.6, 10, 20 MHz
<b>Spectrum Pipelining Bandwidth</b>	User-Selectable Spacing with 20 or 40 MHz Occupied Bandwidth
<b>Transmit Power</b>	100 mW, 250 mW, 500 mW, 1W, 2W
<b>Battery Life</b>	8 Hours with 32 Wh Rechargeable Battery
<b>Input Power</b>	3–4 VDC
<b>Connectors</b>	<ul style="list-style-type: none"> <li>• ODU Data/Audio, TNC RF, SMA GPS</li> <li>• 36-Pin Side Connector</li> </ul>
<b>Data Rate</b>	Up to 32 Mbps Pt. to Pt.
<b>Environmental</b>	MIL-STD-810G
<b>Operating Temperature Range</b>	-20°C to +55°C (-4°F to +131°F)
<b>Water Resistant</b>	IP68
<b>IP Support</b>	IPv4, IPv6; Unicast, Multicast, Broadcast; TCP, UDP
<b>Audio Encoding</b>	AMR 5.9, MELPe, AAC Audio
<b>Video Encoding</b>	SD and HD H.264
<b>Net Entry Time</b>	< 1 Second
<b>Waveform</b>	TSM, Katana (Optional)



Networking	
<b>Network Coverage</b>	<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 Network</li> <li>• Robust in Harsh RF Environments</li> </ul>
<b>Communication Services</b>	<ul style="list-style-type: none"> <li>• Simultaneous Voice, Data, and PLI</li> <li>• Up to 32 Voice Talk Groups</li> <li>• Built-in or External GPS</li> <li>• IP Support – IPv4, IPv6; Unicast, Multicast, Broadcast; TCP, UDP</li> </ul>
<b>Security</b>	<ul style="list-style-type: none"> <li>• AES-256</li> </ul>
<b>Application Support</b>	<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.

**Note:** For military and public safety/security use. Please contact TrellisWare Customer Support at [support@trellisware.com](mailto:support@trellisware.com) for FCC/IC radio options, or EU and UK declarations.



**When Nothing Else Works**

TRELLISWARE.COM

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)