



# TW SHADOW 750 RADIO

## ROBUST PERFORMANCE WITHOUT COMPROMISE

The TW Shadow 750 radio expands TrellisWare's family of radios with a highly integrated handheld solution to address mission-critical communications challenges, putting resilient and assured communications capabilities directly in the users' hands for simplified operation. The radio is designed to provide mission-critical voice, data service, and position location information (PLI) across the entire formation.

The multi-waveform TW-750 radio operates the industry-leading TSM Mobile Ad Hoc Networking (MANET) waveform, the modern electronic counter-countermeasure (ECCM) Katana narrowband MANET waveform, and the Narrowband Line-of-Sight (NBLOS) waveform to provide maximum reliability, resiliency, scalability, security, and interoperability. The TW-750 was purposefully designed to deliver next-generation capabilities at a competitive price point without sacrificing performance or customization.

## KEY FEATURES

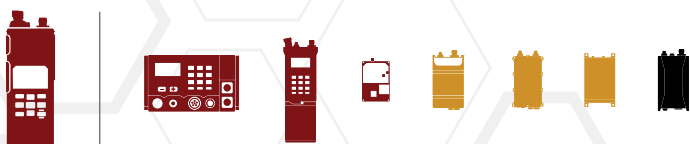
- Built-in speaker & microphone, dual Push-to-Talk (PTT), 32 Talk Groups, Wi-Fi, Bluetooth, and multi-constellation GNSS
- TSM waveform for interoperability with existing TrellisWare radios and partner solutions, including the capability to relay high-assurance traffic from Type-1 radios
- Optional anti-jam Katana waveform for assured communications in the most congested and contested environments
- Narrowband Line-of-Sight (NBLOS) waveform for interoperability with FM/AM radios
- MIL-rugged construction and long battery life
- USB-C fast charging and power delivery capability
- Federal Information Processing Standards (FIPS) 140-3
- Comprehensive suite of accessories to support a variety of CONOPS

## TRELLISWARE WAVEFORMS

TrellisWare's Barrage Relay technology provides proven network scalability and performance without compromising quality of service. The TSM waveform is a highly scalable and robust MANET waveform that supports over 800 nodes with simultaneous voice, data, video, and PLI operating in a single radio frequency channel. The optional Katana waveform combines resilient narrowband fast frequency hopping with tactical MANET, operating in highly contested radio frequency (RF) communication environments.



**SCAN ME**



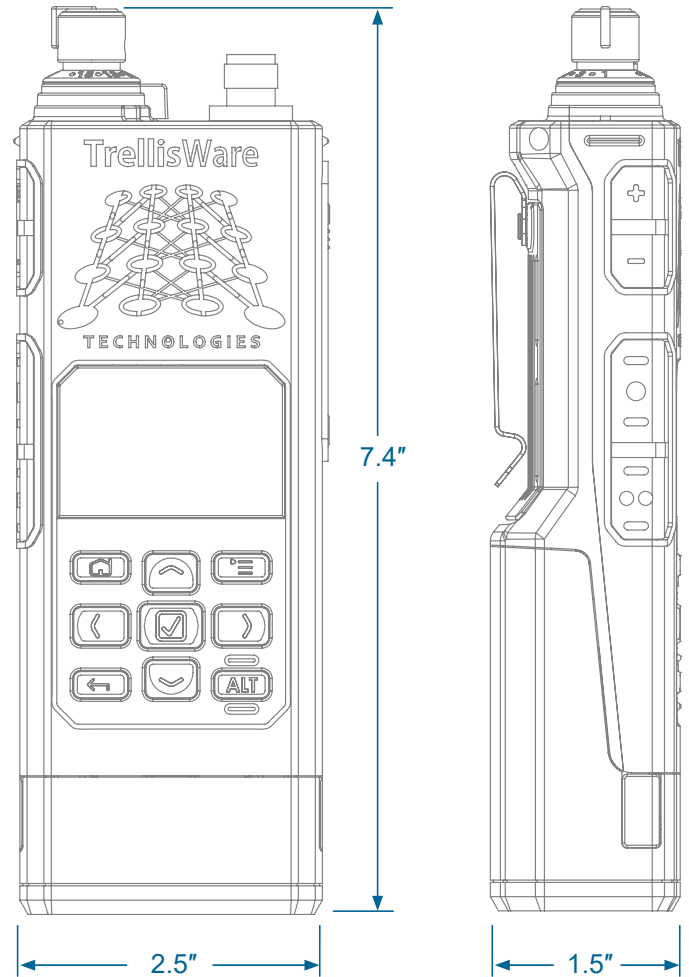


| Specifications                     |  |
|------------------------------------|--|
| <b>Overall Size</b>                | 7.4 L x 2.5 W x 1.5 D in<br>(187 x 64 x 39 mm)   |
| <b>Weight</b>                      | Without Battery 0.6 lbs (272 g)<br>With Battery 1.1 lbs (488 g)  |
| <b>Frequency Range</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>Bandwidth/Channel Spacing</b>   | Wideband: 1.2, 3.6, 10, 20 MHz<br>Narrowband: 6.25, 8.33, 12.5, 20, 25, 50 kHz   |
| <b>Transmit Power</b>              | 100 mW, 250 mW, 500 mW, 1W, 2W   |
| <b>Rechargeable Battery</b>        | 36 Wh USB-C recharge or powerpack mode; desktop and vehicle chargers   |
| <b>Connectors</b>                  | TNC RF, 25-Pin Side Connector  |
| <b>Environmental</b>               | MIL-STD-810H   |
| <b>Operating Temperature Range</b> | -4°F to +131°F<br>(-20°C to +55°C )  |
| <b>Water Resistant</b>             | IP68   |
| <b>Audio Encoding</b>              | AMR 5.9, MELPe   |
| <b>Waveforms</b>                   | <ul style="list-style-type: none"> <li>• TSM</li> <li>• NBLOS</li> <li>• Katana (optional)</li> </ul>                                    |
| <b>Wi-Fi</b>                       | Wi-Fi 802. 11 ac/a/b/g/n   |
| <b>GNSS</b>                        | GPS, Galileo, GLONASS, BeiDou  |
| <b>Bluetooth</b>                   | Bluetooth 5.2 Core Spec, BLE 4.2, 4.0  |

| Networking Capabilities       |   |
|-------------------------------|---|
| <b>Network Coverage</b>       | <ul style="list-style-type: none"> <li>• Barrage Relay</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> <li>• Up to 32 Mbps</li> </ul> |
| <b>Communication Services</b> | <ul style="list-style-type: none"> <li>• Simultaneous Voice, Data, and PLI</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 (FIPS 197)</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>• TW Connect</li> <li>• ATAK support</li> </ul>  |

Specifications subject to change without notice.

**Note:** Please contact TrellisWare Customer Support at [support@trellisware.com](mailto:support@trellisware.com) for FCC/IC radio options and regulatory declarations.



**When Nothing Else Works**  
T R E L L I S W A R E . C O M

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).

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