



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 (NB LOS) 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 act as a Black Relay for 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 (NB LOS) waveform for interoperability with FM/AM radios
- MIL-rugged construction and long battery life
- USB-C fast charging and power delivery capability
- Designed for FIPS 140-3 compliance
- Comprehensive suite of accessories to support a variety of CONOPS

TRELLISWARE WAVEFORMS

TrellisWare’s Barrage Relay technology delivers proven network scalability and performance, ensuring quality of service without compromising operational demands as they evolve, empowering users to stay connected *When Nothing Else Works*. TrellisWare’s TSM waveforms are globally recognized as the industry standard for resilient communications, delivering scalable and adaptable services for voice, video, data, and Position Location Information (PLI). The optional Katana waveforms add fast frequency hopping with tactical MANET for operations in highly contested radio frequency (RF) conditions. TrellisWare’s multi-waveform capabilities set the standard for resilient communications solutions with a large ecosystem of interoperable platforms.

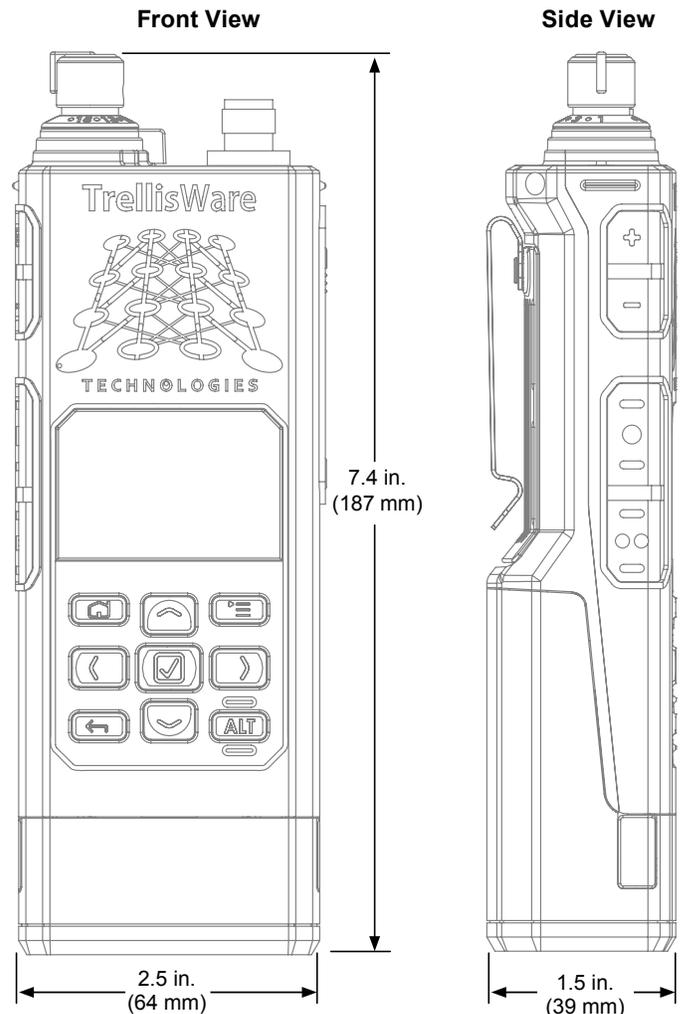




Specifications	
Overall Size	7.4 L x 2.5 W x 1.5 D in (187 x 64 x 39 mm)
Weight	Without Battery 0.6 lbs (272 g) With Battery 1.1 lbs (488 g)
Frequency Range	<ul style="list-style-type: none"> • L-UHF: 225–450 MHz • U-UHF: 698–970 MHz • L/S Bands: 1250–2600 MHz
Bandwidth/Channel Spacing	Wideband: 1.2, 3.6, 10, 20 MHz Narrowband: 6.25, 8.33, 12.5, 20, 25, 50 kHz
Transmit Power	.001 mW, .01 mW, .1 mW, 10 mW, 100 mW, 250 mW, 500 mW, 1 W, 2 W
Rechargeable Battery	34.5 Wh USB-C recharge or powerpack mode; desktop and vehicle chargers
Connectors	TNC RF, 25-Pin Side Connector
Environmental	MIL-STD-810H; IP68 (2 meters)
Operating Temperature Range	-20°C to +55°C (-4°F to +131°F)
Audio Encoding	AMR 5.9, MELPe
Waveforms	<ul style="list-style-type: none"> • TSM <ul style="list-style-type: none"> – Barrage Beamforming (optional) • NB LOS • Katana NB (optional)
Wi-Fi	Wi-Fi 802.11 ac/a/b/g/n
GNSS	GPS, Galileo, GLONASS, BeiDou
Bluetooth	Bluetooth 5.2 Core Spec, BLE 4.2, 4.0

Networking Capabilities	
Network Coverage	<ul style="list-style-type: none"> • Barrage Relay • Multi-hop – 205 miles (330 km) per hop • Hosts multiple waveforms • Robust in Harsh RF Environments • Throughputs of 50+ Mbps supported
Communication Services	<ul style="list-style-type: none"> • Simultaneous Voice, Data, and PLI • 32 Voice Talk Groups • Built-in or External GPS • IP Support – IPv4, IPv6; Unicast, Multicast, Broadcast; TCP, UDP
Security	AES-256 (FIPS 197)
Application Support	<ul style="list-style-type: none"> • Built-in Web Applications • Over-the-Air Remote Control • TW Connect • ATAK support • APIs for 3rd Party Integration

Specifications subject to change without notice.



Note: FIPS, FCC, IC, UKCA certifications in progress at time of printing. Please refer to the latest digital documentation or contact your account manager for up-to-date certification status and sales availability.



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).
support.trellisware.com

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