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.
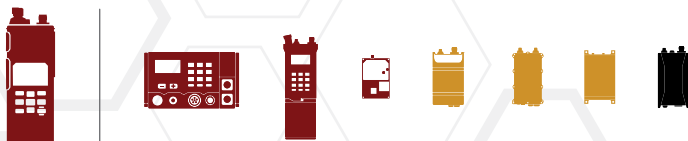
KEY FEATURES

- 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 (NB LOS) 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.
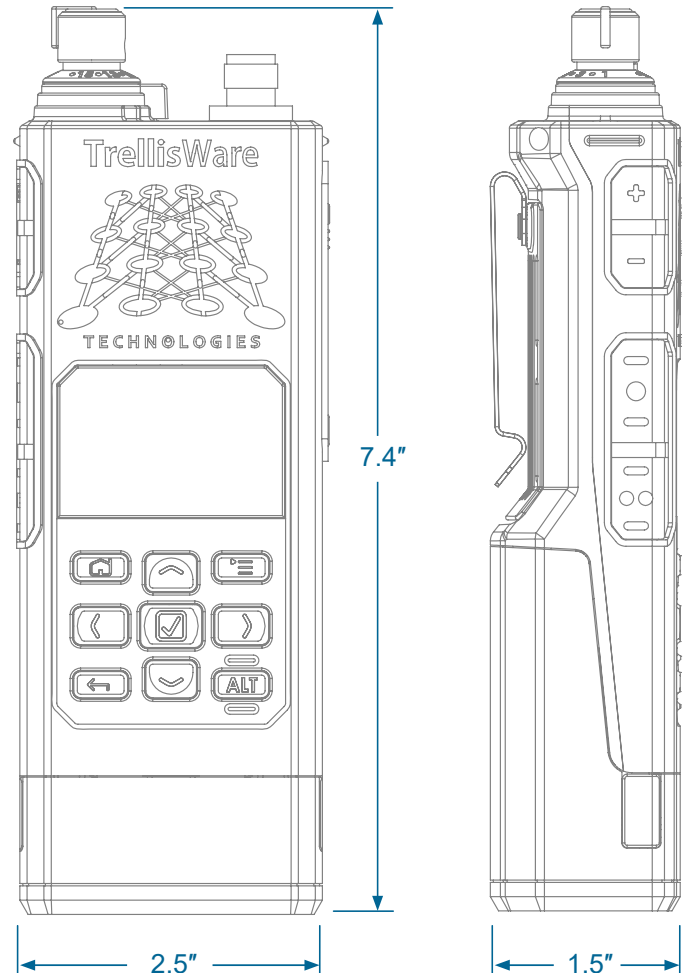
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Specifications

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	• 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	36 Wh USB-C recharge or powerpack mode; desktop and vehicle chargers
Connectors	TNC RF, 25-Pin Side Connector
Environmental	MIL-STD-810H, IP68
Operating Temperature Range	-20°C to +55°C (-4°F to +131°F)
Audio Encoding	AMR 5.9, MELPe
Waveforms	• TSM • NBLOS • Katana (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	• Barrage Relay • Multi-hop – Up to 8 Hops • 800 Nodes in a Single RF Channel • Robust in Harsh RF Environments • Up to 32 Mbps
Communication Services	• Simultaneous Voice, Data, and PLI • Up to 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	• 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: Please contact TrellisWare Customer Support at **support@trellisware.com** for FCC/IC radio options and regulatory declarations.

7.4″

2.5″

1.5″

When Nothing Else Works

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

ISO 9001:2015 Certified
VERISYS REGISTRARS'

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

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