

TWC-650 TSM SHADOW CORE BOARD MODULE



EMBEDDED INTEGRATION

The TW-650 TSM Shadow® Core Board Module is a SoftwareDefined Radio (SDR) architected for embedment into a wide range of systems, including tactical communications platforms, network devices, and unmanned systems. The radio module provides reliable connectivity for tactical mobile ad-hoc networking using TrellisWare's TSM™ waveform. The TW-650 is designed for optimal size, weight, and power consumption (SWaP), allowing for embedment into small to large platforms.

Once the TW-650 TSM Shadow Core Board Module is successfully embedded into a custom platform, integrators will have access to interface control documents, reference designs, and a full set of Application Programming Interfaces (APIs).

RELIABLE IN HARSH CONDITIONS

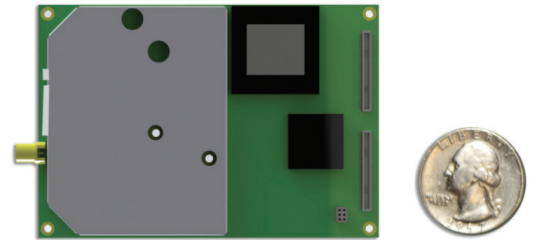
TrellisWare's TSM waveform provides the only Mobile Ad-hoc Networking (MANET) solution with field-proven, cutting-edge Barrage Relay™ technology. This innovative technology uses unique digital signal processing and cooperative combining techniques to take advantage of multipath reflections and relays in harsh RF environments. This enables massive scalability and fast network adaptability.



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EXTENSIVE FEATURE SET

- BUILT-IN ADVANCED ENCRYPTION STANDARD (AES) SECURITY
- BUILT-IN VIDEO ENCODING
- FULL SOFTWARE API FOR STATUS AND CONTROL OF THE RADIO THROUGH AN INTERNET PROTOCOL (IP) INTERFACE
- WEB APPLICATIONS HOSTED ON THE RADIO FOR END-USER CONFIGURATION AND MONITORING OF THE TSM NETWORK



TSM™ WAVEFORM RELEASE 6

The TSM waveform supports simultaneous voice, Position Location Information (PLI), and data messaging for up to 250 users, all on a single RF channel.

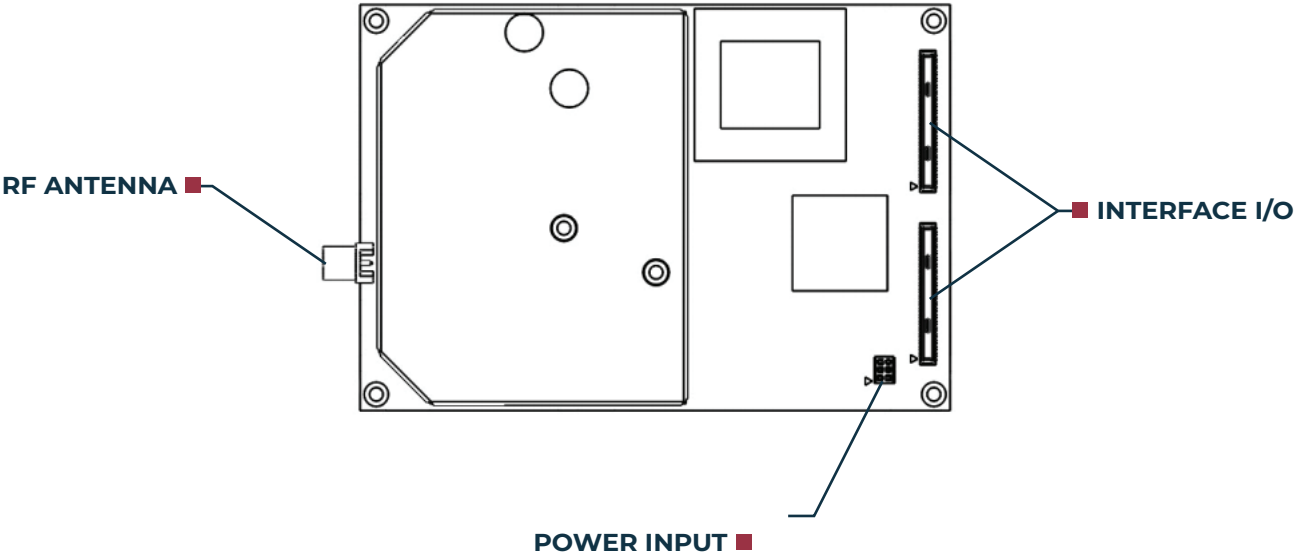
RF SPECTRUM FLEXIBILITY

Combined with the TWC-650 extended frequency coverage that includes UHF, L-band, and S-band spectrum, the TSM waveform is also configurable to support bandwidths ranging from 1.2 to 40 MHz.

INTEROPERABILITY

Running TrellisWare's TSM waveform Release 6, the TWC-650 is fully interoperable with the TrellisWare® family of radios, and partner radios and devices that run the TSM-X™ waveform (that interface to NSA-certified Type 1 security architectures).

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TSM SHADOW® CORE BOARD MODULE SPECS

SIZE

2.920" (H) X 2.0" (W) X 0.108" (D)

WEIGHT (R/T ONLY)

1.12 OZ (CORE BOARD WITH SHIELDING)

FREQUENCY RANGE

L-UHF: 225–450 MHZ
U-UHF: 698–970 MHZ,
L/S BANDS: 1250–2600 MHZ

CONFIGURABLE BANDWIDTH

1.2, 4, 10, 20, 40 MHZ

TRANSMIT POWER

0.1–2 W

ENVIRONMENTAL

MIL-STD-810G

INPUT POWER

3.0–4.0 V DC, 9.8 W MAX

CONNECTORS

BOARD MOUNT, POWER AND CONTROL, PTT AUDIO, USB 2.0 PORTS (USB-OTG, USB-H1), SERIAL UARTS, I2C, RF ANTENNA (SMP JACK), GPS

DATA RATE

PT. TO PT., UP TO 16 MBPS (1-HOP)

SECURITY

BUILT IN AES-256 COMSEC AND TRANSEC

WAVEFORM

TSM RELEASE 6