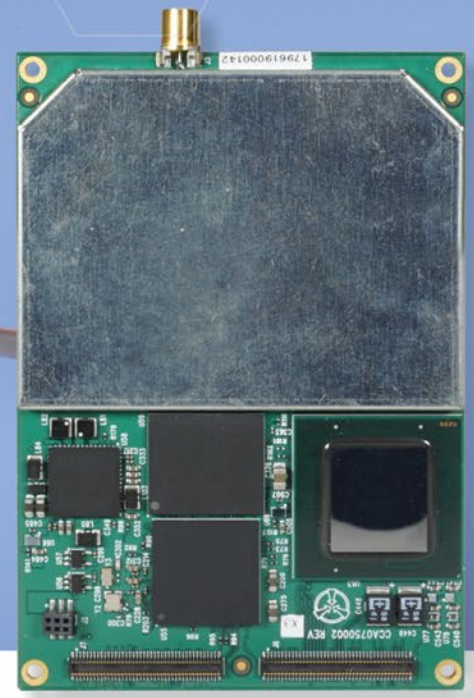




The "CORE" Of All TrellisWare Radios Available For Embedded Integration



ALTIUS-600 Photo By Area-I Inc.



TW-650 TSM SHADOW CORE BOARD MODULE

EMBEDDED INTEGRATION

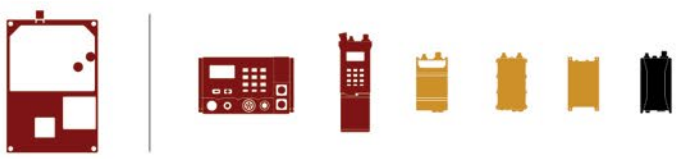
The TW-650 TSM Shadow Core Board Module is a Software-Defined Radio (SDR) architected for embedment into a wide range of systems, including tactical communications platforms, network devices, and unmanned systems.

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. TrellisWare's TSM waveform facilitates secure mission critical voice and data delivery in the most severe conditions. The result is an exceptionally robust, flat network that supports hundreds of nodes, using less spectrum than any other Mobile Ad Hoc Networking (MANET) technology.

KEY FEATURES

- Advanced SDR architecture designed for embedment into a wide range of systems
- Designed for optimal size, weight, and power consumption (SWaP), allowing for embedment into small to large platforms
- Full software application programming interface (API) for status and control of the radio through an Internet Protocol (IP) interface





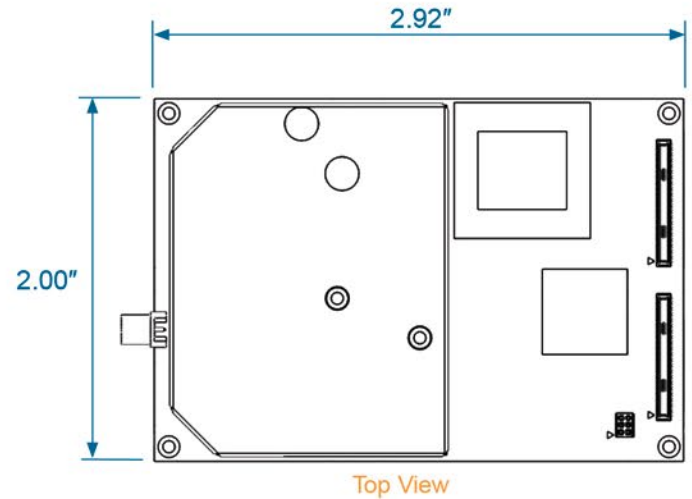
TW-650

SPECIFICATIONS

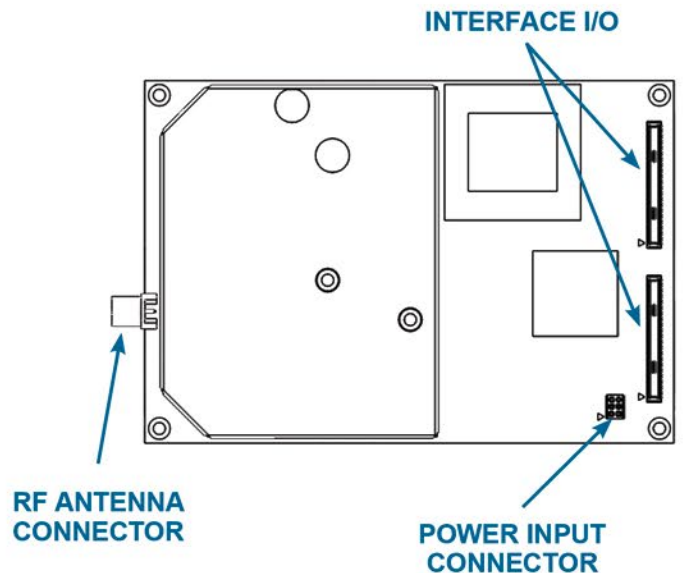
Physical	
Overall Size	2.92 L x 2.00 W x 0.11 H in (74.17 x 50.80 x 2.79 mm)
Weight	34.09 g (1.2 oz) (core board with shielding)
Frequency Range	<ul style="list-style-type: none"> • LUHF: 225–450 MHz • U-UHF: 698–970 MHz • L/S Bands: 1250–2600 MHz
Configurable Bandwidth	1.2, 3.6, 10, 20, 40 MHz
Transmit Power	100 mW, 250 mW, 500 mW, 1W, 2W
Input Power	3.2–4.2 V DC, 9.8W max
Interfaces	<ul style="list-style-type: none"> • Board Mount • Power and Control • Ethernet • USB 2.0 Ports (USB-OTG, USB-H1) • Serial to IP • I2C • RF Antenna (SMP jack)
Data Rate	Pt. to Pt., up to 32 Mbps (1-hop)
Security	<ul style="list-style-type: none"> • Built-in AES-256 COMSEC • TRANSEC
Waveform	TSM Release 6

Networking	
Network Coverage	<ul style="list-style-type: none"> • Mobile Ad Hoc Networking • Multi-hop – Up to 8 Hops • 400+ Nodes in a Single RF Channel • Robust in Harsh RF Environments
Communication Services	<ul style="list-style-type: none"> • Simultaneous Voice, Data, PLI • Up to 32 Voice Talk Groups • IP Support – IPv4, IPv6; Unicast, Multicast, Broadcast; TCP, UDP
Security	<ul style="list-style-type: none"> • AES-256
Application Support	<ul style="list-style-type: none"> • Built-in Web Applications • Over the Air Remote Control • APIs for 3rd Party Integration • PLI with CoT, KML, and JSON • Integration with Android™ applications

Specifications subject to change without notice.



COMPONENTS



When Nothing Else Works

TRELLISWARE.COM

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

This TrellisWare product is under the jurisdiction of the Department of Commerce and is subject to Export Administration Regulations (EAR)
Please access the most recent digital version of this datasheet on the TrellisWare Customer Support Site (site registration required).