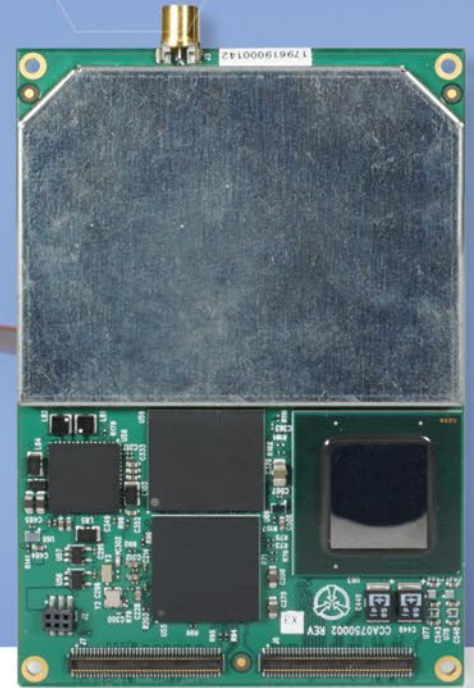




# The "CORE" Of All TrellisWare Radios Available For Embedded Integration



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



**SCAN ME**





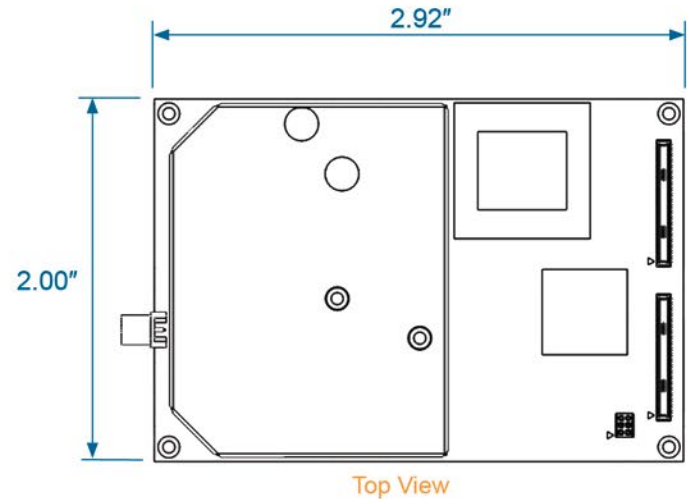
# TW-650

## SPECIFICATIONS

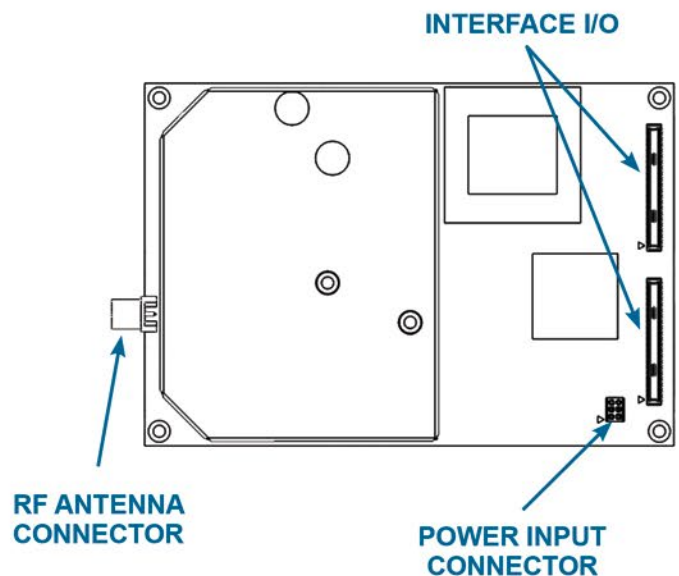
Physical	
<b>Overall Size</b>	2.92 L x 2.00 W x 0.11 H in (74.17 x 50.80 x 2.79 mm)
<b>Weight</b>	34.09 g (1.2 oz) (core board with shielding)
<b>Frequency Range</b>	<ul style="list-style-type: none"> <li>• LUHF: 225–450 MHz</li> <li>• U-UHF: 698–970 MHz</li> <li>• L/S Bands: 1250–2600 MHz</li> </ul>
<b>Configurable Bandwidth</b>	1.2, 3.6, 10, 20, 40 MHz
<b>Transmit Power</b>	0.1–2W
<b>Input Power</b>	3.2–4.2 V DC, 9.8W max
<b>Interfaces</b>	<ul style="list-style-type: none"> <li>• Board Mount</li> <li>• Power and Control</li> <li>• Ethernet</li> <li>• USB 2.0 Ports (USB-OTG, USB-H1)</li> <li>• Serial to IP</li> <li>• I2C</li> <li>• RF Antenna (SMP jack)</li> </ul>
<b>Data Rate</b>	Pt. to Pt., up to 32 Mbps (1-hop)
<b>Security</b>	<ul style="list-style-type: none"> <li>• Built-in AES-256 COMSEC</li> <li>• TRANSEC</li> </ul>
<b>Waveform</b>	TSM Release 6

Networking	
<b>Network Coverage</b>	<ul style="list-style-type: none"> <li>• Mobile Ad Hoc Networking</li> <li>• Multi-hop – Up to 8 Hops</li> <li>• 400+ Nodes in a Single RF Channel</li> <li>• Robust in Harsh RF Environments</li> </ul>
<b>Communication Services</b>	<ul style="list-style-type: none"> <li>• Simultaneous Voice, Data, PLI</li> <li>• Up to 32 Voice Talk Groups</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</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>• APIs for 3<sup>rd</sup> Party Integration</li> <li>• PLI with CoT, KML, and JSON</li> <li>• Integration with Android™ applications</li> </ul>

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](mailto:sales@trellisware.com)

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