

**Wireless Communication
Mesh Network (WiCM)****Mesh Network Node****TECHNICAL SUPPORT**

Schafer provides in-house engineering expertise to support custom robotic and communication product development and integration with access to ISO 9001 and AS 9100 Certified facilities.

NETWORK SOLUTIONS

A mobile ad hoc mesh network open architecture supports interoperability by providing a common radio, waveform, and data protocol that allows different platforms to operate together and exchange all forms of digital data.

OCU SOLUTIONS

Situational awareness software is operable on a Windows XP laptop or other computer to allow operators to interact with robotic platforms, airborne vehicles, and sensors networks. Displays show node location, network topology, map views, icons/images, quality of service, real-time video. Users can communicate by instant messaging (IM), voice-over-IP (VOIP), and exchange data files.

**Self-Aware, Self-Healing Mobile Ad Hoc Mesh Network WiFi Node
Schafer Part No.: WICM4.1-NOD**

The Mesh Network Node offers a flexible, interoperable, and affordable solution for your tactical communication needs. Employing ruggedized COTS electronics with WiFi radios, the Node is ready to deploy with only the addition of a battery or power source. The Node will link users into a self-aware and self-healing mobile ad hoc mesh network while also providing a relay of other signals throughout the network without needing to be reconfigured.

The mesh network will support simultaneous transmission of real-time video, voice, data and situational awareness information in a low cost, ruggedized, modular package. With the built in GPS, the Node broadcasts its location. Using industry standard interfaces (RJ45 Ethernet, NTSC Video) the Node supports plug-and-play connectivity to allow your laptop computer, sensor, robot, or other device to enter the network. With digital encryption, all data is secure during transmission.

**CONTACT US**

For more information on any of our products or services please visit us on the Web or contact us directly.

CONNECTIVITY • INTEROPERABILITY • AFFORDABILITY

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System Specifications

Frequency Bands:	2.4GHz, 4.9GHz, 5.8GHz and Others (Specify When Ordering)
Bandwidth:	20MHz, Multiple Channels per Waveband, OFDM Waveform
Transmit Power:	400mW (Typical, Other Powers Available)
Operating Voltage:	9-48VDC (5W Power Consumption) Supplied Through 3-Pin Circular Switchcraft/Conxall Connector
RF Antenna:	3 dBi Omnidirectional, TNC-Male Connector, 50Ohm, 9in Length
GPS Antenna:	Active (Amplified) Right Angle SMA-Male, RG174/U Cable
Data Interface:	IPv4 Through Ethernet (RJ45 x 2), Other Options Available.
Data Protocol:	802.11, UDP Multicasting or TCP
Enclosure Rating:	Call for details
SWaP:	2.3lbs (1.05kg), 6.1 x 3.3 x 1.4in (155 x 84 x 34mm) for device without 9in Antenna
Operating Environment:	Temperature: -40°C to +85°C Humidity (non-condensing): 20% to 90%
Security:	WEP Layer 2 or AES 128 Bit Layer 2 OpenVPN/OpenSSL Layer 3 Available
Software:	Embedded Linux OS on Node

System Options

NTSC Video Option

Digitizes NTSC Analog Video Signal From Your Camera To Multibroadcast In Mesh Network. Can Be Added To The Node Configuration To Fit Inside The Enclosure

- Video Input: NTSC (BNC Female Connector Provided)
- Video Digitizer Board: H.264 Real-Time Video Encoding/Decoding

Call About Customization

Custom Products Are Available, Please Contact Advanced Program for Details.

SERVICES AVAILABLE:

- Technical Support
- Installation and Setup
- Maintenance
- Integration and Testing
- Application Support
- Hardware Support
- Software Support
- Customization
- Guaranteed Warranty

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