Wave Relay® is a Mobile Ad Hoc Networking System (MANET) designed to maintain connectivity on the move. It is a scalable, peer-to-peer network which provides data, video, and voice even in the most challenging applications. With user throughput of 41 Mbps UDP and 31.1 Mbps TCP, Wave Relay® provides a dynamic, reliable, and secure wireless networking solution beyond mesh.

THE WAVE RELAY® MANET DATALINK WAS DESIGNED AS A SMALL, LIGHTWEIGHT EMBEDDED MODULE IDEAL FOR INTEGRATION WITH UNMANNED/UNATTENDED SYSTEMS, PORTABLE GROUND CONTROLLERS, AND OTHER INTEGRATED SYSTEMS.

Seamless Layer-2 Ethernet connectivity facilitates plug-and-play operation of cameras, video encoders, IP sensors, and other devices. Serial to Ethernet functionality enables control of serial devices over the wireless network.

- Peer-to-Peer Mobile Ad Hoc Network (MANET)
- Secure High Bandwidth Data
- Transfers Data, Video & Voice
- Multiple Video Streams
- Real-time Position Location
- Push to Talk (PTT) Voice
- Wave Relay® over IP (WRoIP)
- 27Mbps Multicast Throughput
- Cloud Relay Compatible
GEN 4 INTEGRATION UNIT

FREQUENCY

<table>
<thead>
<tr>
<th>WR Pin #</th>
<th>WR Frequency Range</th>
<th>WR Output Power</th>
</tr>
</thead>
<tbody>
<tr>
<td>WR-BRD3-02</td>
<td>907-922 MHz</td>
<td>27dBm/500mW</td>
</tr>
<tr>
<td>WR-BRD3-03</td>
<td>2312-2507 MHz</td>
<td>28dBm/600mW</td>
</tr>
<tr>
<td>WR-BRD3-04</td>
<td>2412-2462 MHz</td>
<td>28dBm/600mW</td>
</tr>
<tr>
<td>WR-BRD3-09</td>
<td>5180-5320, 5500-5700, 5745-5825 MHz</td>
<td>28dBm/600mW</td>
</tr>
<tr>
<td>WR-BRD3-12</td>
<td>2312-2507 MHz</td>
<td>33dBm/2W*</td>
</tr>
<tr>
<td>WR-BRD3-14</td>
<td>1352-1387 MHz</td>
<td>27dBm/500mW</td>
</tr>
<tr>
<td>WR-BRD3-15</td>
<td>4400-4800 MHz</td>
<td>25dBm/320mW</td>
</tr>
<tr>
<td>WR-BRD3-16</td>
<td>4800-4985 MHz</td>
<td>26dBm/400mW</td>
</tr>
</tbody>
</table>

SPECIFICATIONS

- Modulations: OFDM, DSSS, CCK
- Channel Width: 5, 10, 20 or 40 MHz
- Throughput: 41 Mbps UDP (20 MHz channel)
- Radio: (1) MMCX Connection
- GPS: (1) U.FL Connection (3.3V Active Antenna)
- Size: 2.7 x 3.9 x .6 -.7 in (Dependent on radio module)
- 6.9 x 9.9 x 1.5 - 1.7 cm (Dependent on radio module)
- Weight: 3.05 - 3.7 oz / 86.5 - 104.9 g (Dependent on radio module)
- Security: FIPS 140-2 Level 1 Validated

POWER & ENVIRONMENTAL

- Power Consumption: Average - 4.2 W (-12 2W Card) Peak - 16.5 W
- Operating Temperature: -40º to 85ºC
- -40º to 185ºF

DATA CONNECTION

- Connector: 20-Pin 10/100 Ethernet (2)
- Radio: RS-232 Serial
- PTT Audio
- 10-48 VDC Input Power
- 3.3 VDC Accessory Power

NETWORKING

- Seamless layer 2 network connectivity
- Industry leading Wave Relay MANET routing
- 802.11a/b/g AP compatible with MANET
- Integrated serial-to-Ethernet capability
- Cursor-on-Target compatible
- Cloud Relay™
- Dynamic Link Exchange Protocol (DLEP) Certified
- IPV4 and IPV6 compatible
- Integrated DHCP server
- Advanced multicast algorithms

SECURITY

- Integrated hardware cryptographic accelerator
- FIPS 140-2 Certified
- Utilizes Suite B algorithms
- Anti-tamper mechanisms
- AES-CTR-256 with SHA-512 HMAC
- Over the air re-keying

ANDROID™

- Multicast Video, position locator and chat in an Android™ application
- Supports commercial/custom phones and tablets
- Provides power through USB tether

NATIVE VOICE CAPABILITY

- Supports up to 16 channels of Push-to-talk (PTT) Voice
- G.711 Audio Codec - allows for seamless digital audio integration with land mobile radio bridging systems.

MANAGEMENT

- Secure web management interface
- Network wide management and configuration functionality
- Google™ Earth based network monitoring

MANUFACTURING & WARRANTY

- Designed and manufactured in USA
- Monthly training classes available
- Courses led by industry experts
- ISO 9001:2008 certified

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