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 MPU4 BRINGS THE WAVE RELAY® MOBILE AD HOC NETWORK (MANET) CAPABILITY DIRECTLY TO THE DISMOUNTED USER.**

Seamless Layer-2 Ethernet connectivity facilitates plug-and-play operation of cameras, video encoders, IP sensors, and other devices. In addition, the MPU4 is the smallest, lightest and most portable wireless MANET solution from the Wave Relay® product family. The MPU4 is compatible with 3-pin twist lock batteries providing up to 14 hours of run-time. The MPU4 connects to Android™ phones and tablets through a high speed secure cable which also powers the device from the standardized battery.

- 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
- 27Mbps Multicast Throughput
- Cloud Relay™ Compatible
**FREQUENCY**

<table>
<thead>
<tr>
<th>WR Pin #</th>
<th>WR Frequency Range</th>
<th>WR Output Power</th>
<th>Power Consumption</th>
<th>Average - 4.2 W</th>
<th>Peak - 16.5 W</th>
<th>Operating Temperature</th>
<th>Battery Connector</th>
<th>Enclosure</th>
</tr>
</thead>
<tbody>
<tr>
<td>WR-RAD-02</td>
<td>907-922 MHz</td>
<td>28dBm/600mW</td>
<td></td>
<td></td>
<td></td>
<td>-40º to 85ºC</td>
<td>3-pin twist lock</td>
<td>IP67 Rated</td>
</tr>
<tr>
<td>WR-RAD-03</td>
<td>2312-2507 MHz</td>
<td>28dBm/600mW</td>
<td></td>
<td></td>
<td></td>
<td>-40º to 85ºC</td>
<td>3-pin twist lock</td>
<td>IP67 Rated</td>
</tr>
<tr>
<td>WR-RAD-04</td>
<td>2412-2462 MHz</td>
<td>28dBm/600mW</td>
<td></td>
<td></td>
<td></td>
<td>-40º to 85ºC</td>
<td>3-pin twist lock</td>
<td>IP67 Rated</td>
</tr>
<tr>
<td>WR-RAD-09</td>
<td>5180-5320, 5500-5700, 5745-5825 MHz</td>
<td>28dBm/600mW</td>
<td></td>
<td></td>
<td></td>
<td>-40º to 85ºC</td>
<td>3-pin twist lock</td>
<td>IP67 Rated</td>
</tr>
<tr>
<td>WR-RAD-12</td>
<td>2312-2507 MHz</td>
<td>33dBm/2W</td>
<td>Average - 4.2 W</td>
<td></td>
<td></td>
<td>-40º to 85ºC</td>
<td>3-pin twist lock</td>
<td>IP67 Rated</td>
</tr>
<tr>
<td>WR-RAD-14</td>
<td>1352-1387 MHz</td>
<td>27dBm/500mW</td>
<td>Average - 4.2 W</td>
<td></td>
<td></td>
<td>-40º to 85ºC</td>
<td>3-pin twist lock</td>
<td>IP67 Rated</td>
</tr>
<tr>
<td>WR-RAD-15</td>
<td>4400-4800 MHz</td>
<td>25dBm/320mW</td>
<td>Average - 4.2 W</td>
<td></td>
<td></td>
<td>-40º to 85ºC</td>
<td>3-pin twist lock</td>
<td>IP67 Rated</td>
</tr>
<tr>
<td>WR-RAD-16</td>
<td>4800-4985 MHz</td>
<td>26dBm/400mW</td>
<td>Average - 4.2 W</td>
<td></td>
<td></td>
<td>-40º to 85ºC</td>
<td>3-pin twist lock</td>
<td>IP67 Rated</td>
</tr>
</tbody>
</table>

**SPECIFICATIONS**

- **Modulations**: OFDM, DSSS, CCK
- **Channel Width**: 5, 10, 20 or 40 MHz
- **Throughput**: 41 Mbps UDP (20 MHz channel)
  - 31.1 Mbps TCP (20 MHz channel)
  - 27 Mbps Multicast Throughput
- **Radio**: (1) RP-TNC Antenna Connector
- **GPS**: (1) SMA Connection (3.3V Active Antenna)
- **Size**: Without Battery - 4.6 x 3.0 x 1.5 in
  - 11.7 x 7.6 x 3.2 cm
  - With Battery - 7.8 x 3.0 x 1.5 in
  - 19.8 x 7.6 x 3.2 cm
- **Weight**: 1.1 lb / 499 g without battery
  - 1.9 lb / 844 g with battery
- **Security**: FIPS 140-2 Level 2

**DATA CONNECTION**

- **19-Pin Connector**:
  - RS-232 Serial
  - PTX Audio
  - 8-48 VDC Input Power
  - 5 VDC Accessory Power

**POWER & ENVIRONMENTAL**

- **Power Consumption**: Average - 4.2 W
  - Peak - 16.5 W
- **Operating Temperature**: -40º to 85ºC
  - -40º to 185ºF
- **Battery Connector**: 3-pin twist lock
- **Enclosure**: IP67 Rated

**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
- Wave Relay® over IP (WRoIP)
- Dynamic Link Exchange Protocol (DLEP) Certified
- IPv4 and IPv6 compatible
- Integrated DHCP server
- Advanced multicast algorithms

**SECURITY**

- Integrated hardware cryptographic accelerator
- FIPS 140-2 (Up to level 2)
- Utilizes Suite B algorithms
- Active response to tamper
- 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 codec with toll-quality audio

**MANAGEMENT**

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

**MANUFACTURING & WARRANTY**

- Designed and manufactured in USA
- Limited one year warranty
- Monthly training classes available
- Courses led by industry experts
- ISO 9001:2008 certified
- MIL-STD certified