# QUAD RADIO ROUTER

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 Quad Radio Router includes four customizable radio interfaces, and five 10/100 Mbps Ethernet ports that are IP67 rated and designed for outdoor use. An integrated NATO Audio 6-pin U-283/U connector enables standard push-to-talk headsets and speaker boxes to be connected to the system. Two RS-232 serial ports are available that enable serial-over-Ethernet connectivity.

**THE QUAD RADIO ROUTER CAN BE VEHICLE MOUNTED FOR MOBILE DEPLOYMENTS, MAST MOUNTED TO COVER LARGE GEOGRAPHIC AREAS, AND/OR PAIRED WITH A TRACKING ANTENNA SYSTEM KIT TO PROVIDE LONG-RANGE, AIR-TO-GROUND CONNECTIVITY.**

It seamlessly operates peer to peer to any Wave Relay® MPU devices.

- 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

**WAVE RELAY®**

GSA Schedule Contract
Contract # GS-35F-0168Y
Small Business

FIPS VALIDATED 140-2

ISO 9001: 2008

MADE IN USA

# QUAD RADIO ROUTER

**PERSISTENT SYSTEMS**

## FREQUENCY

| WR Pin # | WR Frequency Range | WR Output Power |
|---|---|---|
| WR-RTR2-02 | 907-922 MHz | 27dBm/500mW |
| WR-RTR2-03 | 2312-2507 MHz | 28dBm/600mW |
| WR-RTR2-04 | 2412-2462 MHz | 28dBm/600mW |
| WR-RTR2-09 | 5180-5320, 5500-5700, 5745-5825 MHz | 28dBm/600mW |
| WR-RTR2-12 | 2312-2507 MHz | 33dBm/2W* |
| WR-RTR2-14 | 1352-1387 MHz | 27dBm/500mW |
| WR-RTR2-15 | 4400-4800 MHz | 25dBm/320mW |
| WR-RTR2-16 | 4800-4985 MHz | 26dBm/400mW |

## 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

## 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 | (4) N-Type Female |
| GPS | (1) SMA Connection (3.3V Active Antenna) |
| Size | 8.5 x 6 x 2 in |
| | 21.6 x 15.2 x 5.1 cm |
| Weight | 3.2 lb / 1451.5 g |
| Security | FIPS 140-2 Level 2 |

## DATA CONNECTION

| | |
|---|---|
| Connection | 10/100 Ethernet (5) |
| Type | RS-232 Serial (2) |
| | PTT Audio |
| | 10-48 VDC Input Power |

## POWER & ENVIRONMENTAL

| | |
|---|---|
| Power Consumption | Average - 8 W |
| | Up to 55 W |
| Operating Temperature | -40° to 85°C |
| | -40° to 185°F |
| Enclosure | IP67 Rated |
| Cooling | Convection cooled |

## SECURITY

- Integrated hardware cryptographic accelerator
- FIPS 140-2 (Up to level 2)
- Utilizes Suite B algorithms
- Tamper evident
- AES-CTR-256 with SHA-512 HMAC
- Over the air re-keying
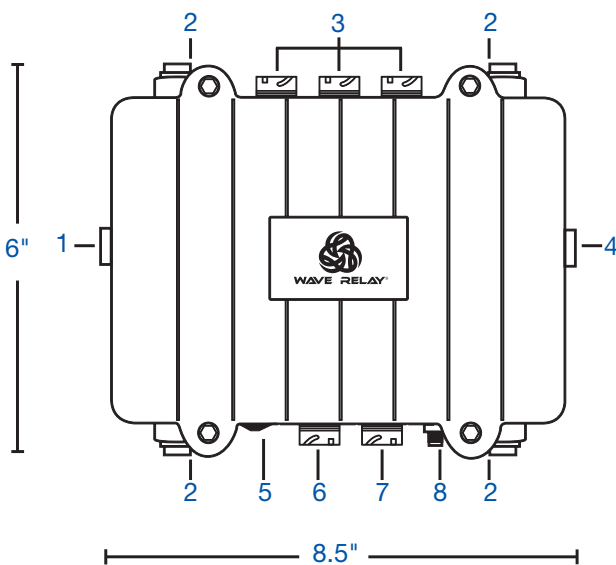
## NATIVE VOICE CAPABILITY

- 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

## WR – RTR2 - XXXXXXXX



**1** Power 8-48 VDC
Serial 8-48 VDC

**2** RF Connector
N Female

**3** Ethernet

**4** Voice

**5** On/Off
Pushbutton/LED

**6** Ethernet 1
Power 8-48 VDC

**7** Ethernet 2

**8** GPS

## 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

\* For Military or Export Use Only

QUAD
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