



WEARABLE,
ULTRA-PORTABLE
WIRELESS ROUTER

THROUGHPUT
UP TO 30 MBPS

SEAMLESS ETHERNET
CONNECTIVITY

HARDWARE
CRYPTOGRAPHIC
ACCELERATOR



MAN PORTABLE UNIT

- Special Operations Teams
- Mobile Voice/Video/Data
- Situational Awareness
- Sensor Networks

The Wave Relay™ Mobile Ad Hoc Networking System is available in a Man Portable form factor, providing a wearable wireless connectivity solution for users on the move. The Wave Relay™ Man Portable Unit is ultra-portable and lightweight. The unit delivers mobility without sacrificing extremely high communication performance.

The Man Portable Unit enables mobile users to establish and to maintain a high-speed wireless data network without relying on any existing fixed infrastructure. In fact, adding Man Portable Units to the system increases connectivity and allows the network to achieve even higher performance.

The Wave Relay™ Man Portable Unit contains an integrated GPS receiver used for situational awareness and Blue Force Tracking. The Wave Relay™ System integrates seamlessly with Google Earth, allowing user positions to update in real-time on the map display. In addition, Wave Relay™ supports Cursor-on-Target (CoT) and other military specific situational awareness packet formats, allowing the system to integrate node positions into third party situational awareness software packages.

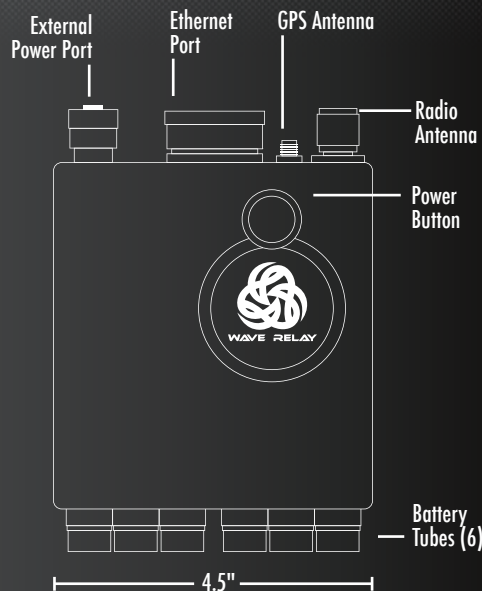
The Unit contains a single radio module and can be customized with a number of different frequency configurations, including the 4.9 GHz Public Safety Band. Twelve AA batteries power the Unit and supply up to 12 hours of continuous runtime. In addition, the Unit can be powered by a number of external power sources such as a BB-5590 battery, which will allow it to operate for more than two days. Also, the router contains a Mil-Spec IP67 rated Ethernet port for connecting a laptop and other computing devices.

MAN PORTABLE UNIT SPECIFICATION SHEET

| | |
|-------------------------|----------------------------------------------------|
| Number of Radios | 1 |
| Peak TX Power | 600 mW |
| Channel Access | CSMA/CA |
| Modulations | OFDM with Adaptive Modulation |
| Channel Width | 5, 10, 20, or 40 MHz |
| Range | 1 Mile (with rubber duck omni-directional antenna) |
| Antenna Port | RP-TNC |
| Throughput | 30 Mbps TCP (20 MHz Channel) |

Frequency Options

| Standard | Optional |
|------------------------|--------------------------------------------------------------|
| Standard 2.3 – 2.5 GHz | 700 MHz, 900 MHz, 2.4 GHz, 3.5 GHz, 4.9 GHz, and 5 GHz |



MOBILE AD HOC NETWORKING CAPABILITY:

- » Hybrid Routing Protocol Optimized for Mobility
- » Throughput Optimized Routing Metric
- » Maintains Connectivity under Mobility
- » True Peer-to-Peer Connectivity
- » Seamless Layer 2 Integration - Routed Switching Architecture
- » Optimized for Real-time Traffic (Voice/Video)
- » Optimized for Multicast Traffic
- » Optional 802.11 b/g Access Point

MANAGEMENT:

- » Web Management Interface
 - Network Wide Firmware Upgrade
 - Network Wide Management Functionality
- » SNMP Monitoring
- » Google Earth Based Network Monitoring

SECURITY:

- » Integrated Hardware Cryptographic Accelerator
- » 256-bit AES Encryption with SHA1 MAC on Backbone
- » WPA2-PSK for optional Client Access
- » Rouge DHCP Server Blocking

PHYSICAL AND ELECTRICAL:

- Dimensions:** 5.5" x 4.5" x 1.5"
- Weight:** 1.2 lbs
- Power Consumption:** 5W
- Power Supply:** 12-20V DC via External 2-Pin Port
- Batteries:** 12 AA Li-SO₂ Internal Batteries
- Power Cable:** Optional 2-Pin to BB Battery Cable
- Operating Temperature:** -40° to 85°C (-40° to 176°F)
- Ethernet Port:** IP67 Rated 10/100 Mbps Auto MDII
- LEDS:** Power, Low-Battery

INTEGRATED GPS RECEIVER:

- Antenna Port:** SMA Female Bulkhead
- Antenna:** 3V Active Micro Patch
- Acquisition:**
 - Cold Start: 38s
 - Reacquisition: 2s
- Tracking Sensitivity:** -160 dBm
- Acquisition Sensitivity:** -146 dBm
- Position Information:**
 - Available in Web Interface
 - GPSD Serves Position Data and NMEA Stream

SITUATIONAL AWARENESS: (AVAILABLE ONLY TO GOVERNMENT CUSTOMERS)

Cursor-on-Target Support (CoT)

- Simple Integration in Falcon View
- Blue Force Tracking

- Proprietary DOD SA Message Support
- Google Earth SA Display