



# MPU5

## WR-5100

### RELIABLE CONNECTIVITY WHEN YOUR TEAM NEEDS IT MOST

Built to create powerful, secure networks anywhere, the MPU5 unites all your critical data sources in real time – giving you access to the most advanced, most scalable Mobile Ad Hoc Network (MANET). Data, video, voice, and a fully integrated computer makes the MPU5 the world’s first Smart Tactical Networking Device.

#### SMART TACTICAL NETWORKING

- Onboard Wave Relay OS - the MPU5 is your computer
- Install existing Android™ apps
- Run custom apps natively
- Connect & use USB devices

#### STAY CONNECTED ANYWHERE

- Uses the Wave Relay® MANET
- Designed for mass scalability - no hop limits
- Rapid self-forming & self-healing
- True peer-to-peer - no master node

#### CARRY LESS. DO MORE.

- Network, voice, video, computer – all in one device
- Eliminate extra batteries, LMRs, encoders, receivers & more
- More room for mission critical equipment

#### INTERCHANGEABLE FREQUENCY MODULE

- State-of-the-art MIMO technology
- High reliability in complex environments
- Cost efficient and future-proof

#### STREAM HD VIDEO

- Fully integrated H.264 HD video encoding/decoding
- Connect video cameras directly to the unit
- View multiple video streams simultaneously
- HD output for connection to HDMI-compatible displays
- Stream video and voice simultaneously

#### RELIABLE VOICE COMMUNICATIONS

- Monitor up to 16 channels of voice
- Dual active PTT voice - key 2 channels at once
- Voice channel prioritization & configurable talk groups

#### INTELLIGENT RoIP TETHERING

- Integrated Radio Over IP (RoIP) functionality
- Bring your LMR radio onto the network
- Communicate across separate organizations seamlessly

#### NO NDA REQUIRED

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# SPECIFICATIONS

## Physical

### Dimensions (Chassis Only)

1.5 x 2.6 x 4.6 in.  
3.8 x 6.7 x 11.7 cm

### Weight (Chassis Only)

13.8 oz  
391 g

### Coating

Black Anodized  
Meets MIL-A-8625-F, TYPE III, CLASS2

### Mounting

(3) #4-40 0.15" Mounting Holes

## Environmental

IP68 Certified  
IPx8 Waterproof 30 mins @ 20m or 2 hrs @ 10m rating  
IP6x Dustproof

### MIL-STD-810G

Shock/Vibe/Salt-Fog/Rain/  
Humidity/Icing/Altitude/Solar Rad

### MIL-STD-461F

RE/RS/CE/CS

### Operating Temperature

-40° to +85° C  
-40° to +185° F

## Manufacturing

Manufactured in USA  
ISO 9001:2015 Certified  
Designed to MIL-STD

### Commercial Compliance

FCC/IC Certified  
Japan Type Approval  
RCM

## Networking

Advanced Wave Relay® multicast algorithms

Seamless Layer 2 network connectivity

Integrated serial-to-Ethernet capability

Cloud Relay™

IPv4 and IPv6 compatible

Integrated DHCP server

USB RNDIS Host and Device

## Security

Integrated Hardware  
Cryptographic Acceleration  
CTR-AES-256 Encryption

HMAC-SHA-256 Authentication & Integrity

Utilizes CNSA Algorithms

Cryptographically authenticated  
Over-the-Air Rekey and Key Zero

FIPS-140-2 Certified

Cloud Relay™

IPv4 and IPv6 compatible

Integrated DHCP server

USB RNDIS Host and Device

## Video

HD-BNC Connection  
3G-SDI & Composite Input  
Integrated HD H.264 Video  
Encoding/Decoding

## RF Module

**Interchangeable Frequency Module**  
(Ordered Separately)

**RF-1150** - 10W L-Band Freq. Range:  
1350 - 1390 MHz

**RF-2150** - 10W S-Band Freq. Range:  
2200 - 2507 MHz

**RF-2125** - BAS Band Freq. Range:  
2025 - 2150 MHz

**RF-4100** - Lower C-Band Freq. Range:  
4400 - 5000 MHz

**RF-5100** - Upper C-Band Freq. Range:  
5100 - 6000 MHz

### RF Modulations:

OFDM (64-QAM, 16-QAM, QPSK, BPSK)

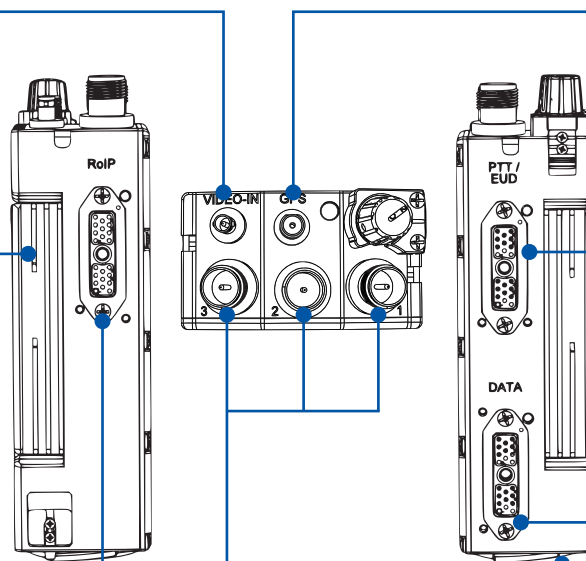
6W - 10W Transmit Power\*

### Software configurable bandwidths:

5 MHz, 10 MHz, 20 MHz,

### TX/RX Operating Modes:

All modes from SISO to 3x3 MIMO



## 3x3 MIMO Technology

Extended Range - LOS and BLOS  
100+ Mbps of throughput  
Maximal Ratio Combining  
Spatial Multiplexing

## Intelligent RoIP

Legacy Radio Tethering  
Legacy Radio Detection  
USB Host / RS-232 Serial  
Standard Charging Port (SDP): Rated for 500mA

## GPS

3.3V Active  
Situational Awareness  
Cursor-on-Target Compliant  
1 Second Updates

## PTT / EUD

Dual Active PTT Channels  
End User Device (EUD) Data / Charging  
USB Host / RS-232 Serial  
HD Video Output  
Charging Downstream Port (CDP):  
Rated for 1,500mA

## Data

USB On-the-Go  
RS-232 Serial  
Ethernet  
Standard Charging Port (SDP):  
Rated for 500mA

## Power

Low Battery Alert  
Standard Twist-Lock Connector  
8 - 28 VDC

Any radio transmitting at 6W or above is for military or international sales only

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