PERSISTENT SYSTEMS



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

persistentsystems.com

© 2006 - 2026 Persistent Systems, LLC. All rights reserved. The Wave Relay® logo, the Persistent Systems, LLC logo and other designated trademarks and trade names are the property of Persistent Systems, LLC or their respective owners. Product specifications are subject to change without notice. This material is provided for informational purposes only; Persistent Systems, LLC assumes no liability related to its use and expressly disclaims any implied warranties of merchantability or fitness for any particular purpose.

The export and/or the release of certain products, technology and software to non-US persons might be subject to export restrictions. Please refer to the US export laws & regulations for details.

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 (Chassis Only)
-40° to +85° C
-40° to +185° F

Operating Temperature (with BAT-06)
-30° to +60° C
-22° to +140° 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 140-3 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

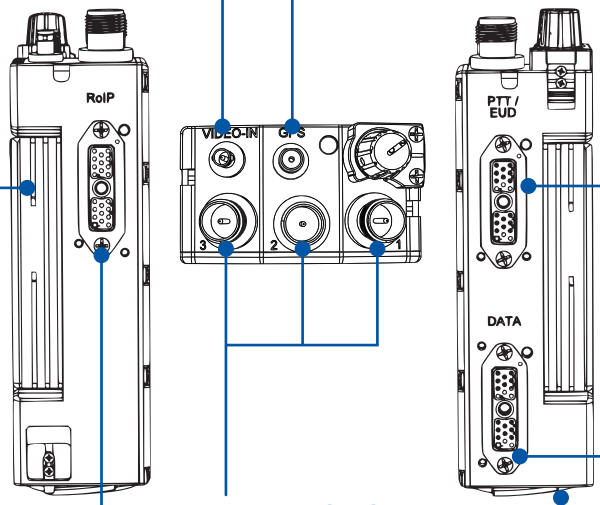
RF-5100- Upper C-Band Freq. Range: 5100 - 6000 MHz

RF Modulations:
OFDM (64-QAM, 16-QAM, QPSK)

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

NO NDA REQUIRED

persistentsystems.com

© 2006 - 2026 Persistent Systems, LLC. All rights reserved. The Wave Relay® logo, the Persistent Systems, LLC logo and other designated trademarks and trade names are the property of Persistent Systems, LLC or their respective owners. Product specifications are subject to change without notice. This material is provided for informational purposes only; Persistent Systems, LLC assumes no liability related to its use and expressly disclaims any implied warranties of merchantability or fitness for any particular purpose.

The export and/or the release of certain products, technology and software to non-US persons might be subject to export restrictions. Please refer to the US export laws & regulations for details.