



PMR200/MMR200

Multi-band, Multi-waveform, Multi-mission
advanced SDR

- High-speed MANET
- High-rate frequency hopping
- Situational awareness application
- Unique SWaP and usability design
- AES-256 and customized encryption



PMR200 Handheld Radio



MMR200 Manpack Radio



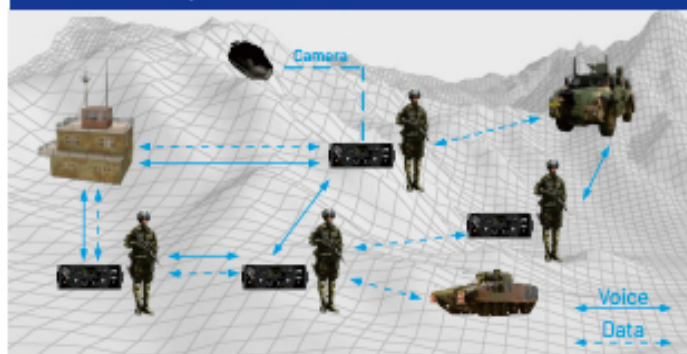
MMR200 Vehicular Power Amplifier

Overview

The new generation Multi-band SDR for advanced multi-domain networking solutions is designed to meet the complex communication and connectivity needs of the modern battlefield scenarios. The radio combines multi-waveform, including narrowband waveform of Line-Of-Sight (LOS) and Frequency Hopping ensures highly reliable communications for the harsh conditions of tactical operations. The radios provides robust high speed data communication capabilities and supports wide-band network waveform in transmitting voice ,video and data to enhance situational awareness. As a key device , the radio provides a decisive advantage on the battlefield.

Advanced Waveforms

Wideband Group Network(WGN)



The WGN supports frequency hopping wideband ad-hoc network, support 6-hop for data, 4-hop for voice with 32-node. It provides stable and reliable high-speed data transmission services in complex environment, share real-time battlefield situation information, even in video, and coordinate strike capabilities of weapon platforms.

Combat Net Radio(CNR)



CNR network provides voice and data services, which supports point-to-point and point-to-multipoint communication. CNR includes: FM (Frequency Modulation), AM (Amplitude Modulation), FH (Frequency Hopping) and FCS (Free Channel Search).

Packet Radio Network(PRN)



PRN network realizes non-centralization, and self-recovery communication through Ad-hoc networking technology based on point to-multipoint voice communication (1-hop relay) and data communication (6-hop relay). 32-node and 6-hop network to ensure real-time sharing of battlefield information .It supports data and voice transmission simultaneously.

Team Conference Network(TCN)



In TCN mode, the multi-band radio supports up to 6 people talk simultaneously with full-duplex conference, hands-free operation by one-click accessing to conference mode without continuous pressing PTT.

Highlights

Electronic Counter-Counter Measures(ECCM)



High-speed Frequency Hopping(FH)

The frequency hopping rate is as high as 2000hops/s meantime the effective communication distance can still be guaranteed, and high anti-interference and anti-interception can also be achieved to avoid the directional search and tracking interference.



Free Channel Search (FCS)

The radio can automatically select the current best frequency among the preset channels to void the interfered frequency . With advanced modulation and demodulation technology features high sensitivity, increased communication range 30%.

Multi-band, Multi-waveform, Multi-mission



Integrate Communication Capability

Based on SDR architecture ,the radio covers 30MHz to 512MHz constantly, integrated CNR(Combat net radio), PRN(Packet Radio Network), GTA(Ground to Air), TCN(Team Conference Network), WGN(Wideband Group Network) waveforms. Designed for the battlefield communication, the radio provides reliable MANET for high-bandwidth voice, video and data.



High Speed Data Transmission

The radio supports data rate up to 8Mbps (4Mbps for handheld), offers video and big data transmission, also can be used for the broadband backbone network between command posts.

Communication Security (COMSEC)



Encryption

The radio provides AES-256 software encryption for both voice and data communication,as well as supports customized encryption.



Key Erasing

The radio supports to erase the key manually or automatically, i.e., manually erasing the key by holding the combined buttons, automatically erasing the key when the radio was disassembled.

Various Applications



Situational Awareness

The situational awareness APP runs on the intelligent terminal. Through the transmission channel provided by the multi-band radio, commanders can share GPS position, altitude, speed information, SMS , files, pictures, and videos, report intelligence, play back tracks and command on the map.



Remote Control Software

Run the computer with Windows system, which can remotely control the multi-band radio, support setting parameters, communicate with other radios, and display GPS information.

Specification

General	
Frequency Range	Narrowband:30-512MHz; Wideband:225-512MHz;
Bandwidth	Narrowband: 25kHz,75kHz; Wideband:5MHz(Handheld) 10MHz(Manpack)
Preset Chanel	100
Data Rate	Handheld≤4Mbps,Manpack≤8Mbps
Data Interface	RS232/Ethernet
Power	Vehicular PA*:20~32V DC,28V DC(Nominal)
Operational Battery Life (1:1:8)	Handheld: ≥10h; Manpack: ≥10h
Weight	Handheld: ≤0.7 kg(with battery) Manpack: ≤6.5 kg(with battery) Vehicular PA: ≤8.5 kg
Dimension (HXWXD, mm)	Handheld: 220x73x37(with battery) Manpack: 85x240x292(with battery) Vehicular PA: 145x289x265
Transmitter	
Output Power	Handheld: 0.5/2/5W; Manpack: 1/5/10W Vehicular PA: 1/25/50W

Waveforms and COMSEC	
Waveforms	CNR/PRN/LINK/TCN/WGN
Voice and Data Modes	AM/FM/GMSK/CPM/QPSK
COMSEC	AES 256/Customized
ECCM	FH/FCS
Max. Hopping Rate	2,000hops/s
Receiver	
Sensitivity	Handheld/Manpack: ≤-118dBm (SINAD=12dB) Vehicular PA: ≤-116dBm (SINAD=12dB)
Environmental	
Storage Temperature	-45°C~85°C
Operating Temperature	-40°C~65°C *
Immersion	Handheld/Manpack: 2m, 4h Vehicular PA: 1m, 0.5h
Shock & Vibration	MIL-STD-810G
Electromagnetic	MIL-STD-461F

* PA:Power Amplifier * Dedicated Battery

Power Amplifier



MMR200-V01

By using the vehicular power amplifier, the radios not only remain all operation modes but also improve link reliability and expand communication range. The vehicular power amplifier has built-in co-address filter to meet the needs of deploying multiple sets of communication equipment on the same vehicle.

Accessories



Handheld Antenna



Handheld Battery



Handheld Power Supply



Camera



Hearing Defender Tactical Headset



Manpack Antenna



Manpack Battery



Manpack Charger



Handset



GPS Antenna



All specifications are tested according to applicable standards and subject to change without notification due to continuous development.