

MIMOmash Series of Wireless Broadband MESH

Beamforming/Space Diversity/Spatial Multiplexing, Reach More Than Twice Range and Data Rate

Intelligent Anti-Jamming by Smart Frequency Selection, Adaptive Frequency Hopping

Wide Range Bands, Dual Band Selection, Free To Choose Different Working Frequency Band, Adapt To Complex Terrain Environment And Electromagnetic Environment



Handheld

2Watts x2/4(5)Watts x2



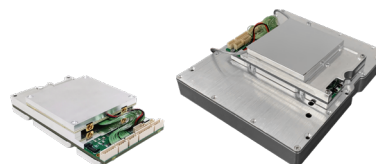
Airborne

2Watts×2/4Watts×2/5Watts×2, 10Watts×2/20Watts×2



Backpack/Vehicle/Outdoor

10(20)Watts×2, 40(50)Watts×2



Module

2Watts×2/4Watts×2/5Watts×2, 10Watts×2/20Watts×2/40Watts×2

The Latest Generation of MIMOmash Wireless Broadband MESH

Performance:

- MESH network(self-forming, self-adapting, self-healing), high-speed throughput
- Non-visual urban construction, jungle multi-path transmission terrain, effective connection
- High-speed movement of ground, water and air, effective connection
- Multiple antenna settings, omnidirectional, high gain orientation or mixing
- GPS/BD and Multicast Support

Advantages:

- Increased 4.5 times coverage in densely populated areas
- Increase the range by 2 times in the visible limit environment
- Increase 2-4 times data transmission rate
- The same communication range and transmission data rate, reducing transmission power by 2 times

Significant applications in Non-Line of Sight /Multipath Fading environments, video/data/voice critical communications:

- Robot / Unmanned Vehicle, Reconnaissance / Surveillance / Anti-Terrorism / Monitoring
- Air-to-air & air-to-ground & ground-to-ground, public safety / special operations
- Urban network, emergency support / normal patrol / traffic management
- Inside and outside the building, firefighting / rescue and disaster relief / forest / civil air defense / earthquake
- TV broadcast wireless audio / video / live broadcast
- Marine communication / high speed transmission on the opposite side of the ship
- Low deck wireless network / ship landing
- Mine / tunnel / basement connection

MIMOMesh Series of Wireless Broadband MESH Specifications

General

SDR Platform, Waveform	9361+7Z030/7Z035 or 7Z100, Mobile network MANET+MIMO
MIMO Technology (2T2R)	Space-time coding, Receive Diversity, TX /RX beamforming, Spatial multiplexing
Receive Sensitivity	-103dBm@5MHz BW
Channel Bandwidth	1.25/2.5/5/10/20MHz/40MHz/80MHz (40MHz+40MHz dual antenna frequency transceiver of carrier aggregation), configurable
Data Rate	1-130Mbps(20MHz BW)/252Mbps (40MHz BW)/350Mbps(40MHz+40MHz of Carrier Aggregation) Adaptive, QoS
Modulation Mode	TD-COFDM, BPSK/QPSK/16QAM/64QAM/256QAM/1024QAM Adaptive (Fixed setting optional)
RF Output Power (Support TPC, transmission power control, 1dBm adjustable)	2/4/5Watts*2 (Handheld/Airborne Radio/Module) 10Watts*2 (Airborne/Backpack/Vehicle/Rack Mount/Outdoor Radio) 20Watts*2 (Airborne/Backpack/Vehicle/Rack Mount/Outdoor Radio) 40Watts*2 (Airborne/Vehicle/Rack Mount/Outdoor Radio) 150Watts*2 (Customization)
Mode	Distributed centerless Point-to-point/Point-to-multipoint/Multipoint-to-multipoint, Layer 2 or 3 of Dynamic routing, Multi-hop relay, Star/Line/Network/Hybrid
Single Hop Delay	Average 6mS (Unidirectional, 20MHz BW)
Encryption	DES, AES128/256 (SM4/SNOW3G/ZUC optional, Chip/TF card encryption customized or external encryption machine)
Anti-Jamming Mode	Manual spectrum scanning channel selection/Full band enhanced intelligent frequency selecting(spectrum awareness)/Full band adaptive frequency hopping FHSS/Roaming mode, Multi-level anti-interference
Local/Remote Management	Operating frequency, channel bandwidth, network ID, transmit power and other parameter settings, spectrum scanning, real-time display and statistical records of network topology, link field strength signal-to-noise ratio, upload and download traffic, node distance, BD/GPS(GNSS) positioning electronic map, temperature/voltage/jamming Monitoring, software upgrade (remote silence and wake-up optional)
Others	The startup time is less than 28 seconds, and the network access/update/switchover time is less than 1 second; There is no limit on the user capacity of a single system (256 nodes or more) and the number of hops in Mesh networks (Data 15+ hops, voice 10+ hops, video 8+ hops); The total transmission rate loss for more than three hops is less than 70%; Automatic carrier tracking, adapted to a Doppler frequency deviation of ±6kHz frequency offset, supports mobile communication at speeds above 7200 kilometers per hour (6 Mach, 2000 meters per second)

Bands (70M-6GHz/Upper C-X-Ku customizable. Same frequency or different frequency of TDD, 2T2R at single band or 1T2R at dual-band)

BAND	Frequency range	BAND	Frequency range
VHF/UHF (MHz)	360-450/450-550/570-700/800-950, 225-400/225-678/320-470*	S Band (GHz)	2.0-2.2/2.2-2.4/2.3-2.5/2.5-2.7/2.7-2.9/3.2-3.4/3.4-3.6/3.6-3.8, 1.9-2.7/2.0-2.7/2.1-2.7/2.7-3.6*
L Band (GHz)	1.0-1.2/1.1-1.3/1.3-1.5/1.5-1.7/1.6-1.8, 1.0-1.5/1.1-1.6/1.2-1.7/1.3-1.8/1.6-2.3/1.7-2.4/1.8-2.5*	C Band (GHz)	4.4-5.0/5.25-5.85, 4.2-5.2/5.5-6.0/6.4-7.2*
MIIT (MHz)	336-344/512-592/566-626/606-678/1420-1520/1430-1444		

(Note: RF power, Dimensions, Weight is different)

Environmental

Operation Temperature	-40°C ~+80°C	Protection Level	IP66 (IP67/IP68 Customized)	RF	SMP
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Mechanical

Size/Weight	19.0x6.8x3.8cm/769g, with 11.1V/77.7Wh battery Handheld Radio 22.0x6.8x3.8cm/982g, with 11.1V/114Wh battery Handheld Radio 11.7x6.2x3.2cm/279g, 2Watts*2/4Watts/5Watts*2 Airborne Radio-Iron Gray 11.7x6.2x4.3cm/349g, 2W*2/4Watts/5W*2 Airborne Radio-Multi-interface Black 12.8x13.4x3.8cm/598g, 10Watts x2/20Watts x2 Airborne Radio-Iron Gray 14.2x14.0x5.0cm/1.08kg, 10Watts x2/20Watts x2 Airborne Radio-Black 14.2x13.7x6.0cm/1.11kg, 30Watts*2/40Watts*2 Airborne Radio-Dark Gray 23.0x14.8x3.5cm/1.25kg, 30Watts x2/40Watts x2 Airborne Radio-Thin Iron Gray 27.5x18.9x6.2cm/4.15kg, with 22.2V/123Wh battery Backpack Radio 33.6x18.9x6.2cm/5.26kg, with 22.2V/142Wh battery Backpack Radio 19.1x18.6x6.3cm/2.16kg, 10Watts*2/20Watts*2/40Watts*2 Vehicle Radio 48.2x42.0x8.8cm/5.9kg, 19-inch 2U Standard Rack Radio 35.5x35.0x15.0cm/10.9kg, Outdoor Radio
Installation/Color	4 Mounting Holes/Black, Iron Gray (Army Green Optional)
Supply Voltage	12-28V DC (2Watts*2/4Watts*2/5Watts*2 Handheld/Airborne/Module) 18-32V DC (10W*2/20W*2 Airborne/Backpack/Vehicle Rack-mounted/Outdoor) 28-32V DC (30W*2/40W*2 Airborne/Backpack/Vehicle Rack-mounted/Outdoor)
Power consumption	Operation 1-2A/Standby 0.4-0.6A@12V (2Watts*2 Handheld/Airborne/Module) Operation 2-4A/Standby 0.5-0.7A@12V (4W*2/5W*2 Handheld/Airborne/Module) Operation 3-6A/Standby 0.7-0.9A@18V (10Watts*2 Airborne/Backpack/Vehicle Rack-mounted/Outdoor) Operation 6-10A/Standby 0.7-0.9A@20V (20Watts*2 Airborne/Backpack/Vehicle Rack-mounted/Outdoor) Operation 22A/Standby 0.4-1.6A@28-32V(30Watts*2/40Watts*2 Airborne/Vehicle Rack-mounted/Outdoor)
Power Selection	Power Supply by Twist-Lock Battery or Main Cable
Batteries	8-10/6-8 hours for 114/77.7Wh (Handheld Radio) 10-12/6-8 hours for 427/213Wh (Backpack Radio) polymer lithium battery

Power

Interface

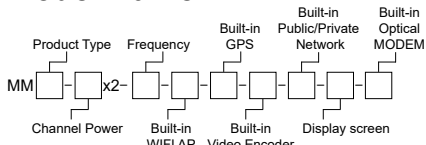
Basic interface	2x1PEX/2xMMCX/2xSMP/2xSMA/2xTNC/2xN RF, 1-2xRJ45 Ethernet 100/1000BaseT, RS232, DC input, TTL (UART)/SBUS/Bluetooth 1.2-230.4Kbps, WIFI AP, BD/GPS (GNSS) optional. Supports transparent transmission via Ethernet and serial ports, and supports all communication protocols, including MAVLink. Service priority can be selected
Push to talk/Auxiliary interface	MIC, SPK, PTT, GND/1xRS232, TTL, SBUS
Network Extension Optional	Public Network Routing/4G LTE, WB-NB integration, Fiber, Satellite
Video Extension Optional	Low Delay HDMI/SDI/ CVBS, 4K/2K/1080P/720P/D1
Link Status Indicator	Steady red - The network is not connected Blinking red - Starting/not connected to the network Steady green - The network is connected Blinking green - Push-To-Talk has been pushed
RSSI Link Indicator	Steady green - The link quality is excellent Steady blue - The link quality is good Steady yellow - The link quality is medium Steady purple - The link quality is slightly worse Steady red - The link quality is poor or link is down
Management Interface/Control Interface	Web-based network management/GUI, API for secondary development interface/SNMP

OEM

Size/Weight	10.1x5.4x1.9cm/123.5g, 2/4/5Watts*2 Module 12.7x11.0x3.6cm/600g, 10/20/40Watts*2 Module
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Product Model Approval Certificate of Radio Administration of The Ministry of Industry and Information Technology of China: 2018FP5238、2018FP6081、2021FP0114、2021DP10060、2022FP15779

Model Name:

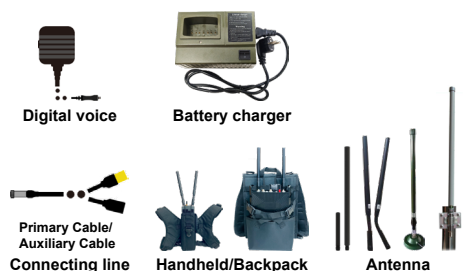


Product Type	Channel Power (W)	Frequency (MHz)	Built-in WIFI AP	Built-in GPS	Built-in Video Encoder	Built-in Public/Private Network	Display Screen	Built-in Optical MODEM
HandHeld	2	600, U	0(N)	0(N)	0(N)	0(N)	0(N)	0(N)
BackPack	4, 5	1400, L	1(Y)	1(Y)	HDMI	4G/5G	2(2")	1(Y)
VehiCle	10	2300, S			SDI/AV	4G LTE CPE	3(3.2")	
AirBorne	20, 40	4500, C					4(4")	

MMHH-2x2-1400-1-1-HDMI-4G/5G-0-0 Express: 2Wx2, 1400MHz, With WIFI AP, With Positioning Module, Built-in HDMI Coding, Built-in 4G/5G Public Network Module, Without display screen and without optical MODEM Handheld Radio.

MMBP-10x2-600-1-1-SDI-4G LTE-0-0 Express: 10Wx2, 600MHz, With WIFI AP, With Positioning Module, Built-in SDI Coding, Built-in 4G LTE Private Network Module, Without display screen and without optical MODEM Backpack Radio.

Accessories:



Options:



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