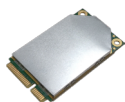
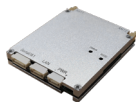


MIMOmESH Series

Lightweight Airborne (SWaP-C) - Wireless MESH/Data Link



5.1x3.0x0.7cm/14g
0.25Watts×2



6.0x4.8x1.1cm/46g



6.0x5.8x1.3cm/60g
0.5Watts×2/1Watts×2



9.6x5.8x1.9cm/120g



11.7x6.2x2.0cm/160g
1Watts×2/2Watts×2



13.8x6.2x2.7cm/225g



13.8x6.2x3.1cm/271g

4Watts×2/5Watts×2



11.7x6.2x3.2cm/287g
2Watts×2/4Watts×2/5Watts×2
(7Z030/7Z035/7Z100)



11.7x6.2x3.8cm/349g 11.7x6.2x3.8cm/364g
1Watts×2/2Watts×2
Extended WIFI/SBUS/(HDMI/SDI)



11.7x6.2x3.8cm/380g
2Watts×2/4Watts×2
Extended WIFI/HDMI/SDI



12.8x13.4x3.8cm/598g
10Watts×2/20Watts×2



14.2x13.7x6.0cm/1.11kg
30Watts×2/40Watts×2



23.0x14.8x3.5cm/1.25kg



11.7x6.2x3.2cm/279g
2W×1/4W×1 (Dual-band)



16.1x15.5x5.1cm/1.30kg
10W×1/20W×1 (Dual-band)

RF Output Power (Support TPC, transmission power control, 1dBm adjustable)	0.25Watts×2	0.5Watts×2	1Watts×2	1Watts×2/2Watts×2	4Watts×2/5Watts×2	2Watts×2/ 4Watts×2/5Watts×2	10Watts×2/20Watts	30Watts×2/40Watts×2
Size/Weight	5.1x3.0x0.7cm/14g	6.0x4.8x1.1cm/46g 6.0x5.8x1.3cm/60g	9.6x5.8x1.9cm/120g	11.7x6.2x3.8cm/160g	13.8x6.2x2.7cm/225g 13.8x6.2x3.1cm/271g	11.7x6.2x3.2cm/287g	12.8x13.4x3.8cm/598g 14.2x13.7x5.7cm/1.08kg	14.2x13.7x6.0cm/1.11kg 23.0x14.8x3.5cm/1.25kg
Supply Voltage	3.5-5V DC	9-39V DC	9-39V DC	9-39V DC, 1Watts×2 12-36V DC, 2Watts×2	12-36V DC	12-36V DC	18-32V DC	28-32V DC
Power consumption	Operation 1-2A/ Standby 0.5-1A@3.5-5V	Operation 0.3-0.5A/ Standby 0.2-0.3A@12V	Operation 1-2A/ Standby 0.5-0.7A@12V	Operation 1-2A/ Standby 0.5-0.7A@12V	Operation 2-4A/ Standby 0.5-0.7A@12V	Operation 2-4A/ Standby 0.5-0.7A@12V	Operation 3-6A/Standby 0.7-0.9A@16.8V, 10W×2 Operation 6-10A/Standby 0.7-0.9A@20V, 20W×2	Operation 6-10A/ Standby 0.7-0.9A@20V
Transmission rate	1-70Mbps (20MHz BW, 7Z020)/1-130Mbps (20MHz BW, beamforming by 7Z030)/1-252Mbps (40MHz BW, 7Z035)/1-350Mbps (80MHz BW, 7Z100)							
Frequency range	70M-6GHz/Uper C-X-Ku customizable. Same frequency or different frequency of TDD, 2T2R at single band or 1T2R at dual-band							
Service interface	IP, RS232+UART or SBUS, PTT voice							

Lightweight Airborne(SWaP-C)-Wireless MESH/Data Link Technical Specifications

General

SDR Platform, Waveform	AD936X+FPGA (7Z020, 7Z030, 7Z035, 7Z100), Mobile network MANET+MIMO
MIMO Technology	Space-time coding, Receive Diversity, TX/RX beamforming, Spatial multiplexing
Receive Sensitivity	-103dBm@5MHz BW
Channel Bandwidth	1.25/2.5/5/10/20MHz (7Z020, 7Z030)/40MHz (7Z035)/80MHz (7Z100, 40MHz+40MHz dual antenna frequency transceiver of carrier aggregation), configurable
Data Rate	1-70Mbps (20MHz BW, 7Z020)/1-130Mbps (20MHz BW, beamforming by 7Z030)/1-252Mbps (40MHz BW, 7Z035)/1-350Mbps (80MHz BW, 7Z100) 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)	0.25Watts*2; 0.5Watts*2; 1Watts*2; 2Watts*2; 4Watts*2; 5Watts*2; 10Watts*2; 20Watts*2; 30Watts*2; 40Watts*2
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*
(Note: RF power, Dimensions, Weight is different)			
MIIT (MHz)	336-344/512-592/566-626/606-678/1420-1520/1430-1444		

Mechanical

Size/Weight	5.1x3.0x0.7cm/14g, 0.25Watts*2-Iron Gray 6.0x4.8x1.1cm/46g, 0.5Watts*2-Iron Gray 6.0x5.8x1.3cm/60g, 0.5Watts*2-Iron Gray 9.6x5.8x1.9cm/120g, 1Watts*2-Iron Gray 11.7x6.2x2.0cm/160g, 1Watts*2/2Watts*2-Iron Gray 11.7x6.2x3.8cm/349g, 1Watts*2/2Watts*2-Black 11.7x6.2x4.2cm/364g, 1Watts*2/2Watts*2-Multi-interface Black 11.7x6.2x3.8cm/380g, 2Watts*2/4Watts*2-Fan Black 11.7x6.2x3.2cm/287g, 2Watts*2/4Watts*2/5Watts*2-Iron Gray 13.8x6.2x2.7cm/225g, 4Watts*2-Iron Gray 13.8x6.2x3.1cm/271g, 5Watts*2-Fan Iron Gray 12.8x13.4x3.8cm/598g, 10Watts*2/20Watts*2-Iron Gray 14.2x13.7x5.7cm/1.08kg, 10Watts*2/20Watts*2-Black 14.2x13.7x6.0cm/1.11kg, 30Watts*2/40Watts*2-Dark Gray 23.0x14.8x3.5cm/1.25kg, 30Watts*2/40Watts*2-Thin Iron Gray
Installation/Color	4 Mounting Holes/Black, Iron Gray (Army Green Optional)

Power

Supply Voltage	3.5-5V DC, 0.25Watts*2 9-39V DC, 0.5Watts*2/1Watts*2 12-36V DC, 2Watts*2/4Watts*2/5Watts*2 18-32V DC, 10Watts*2/20Watts*2 28-32V DC, 30Watts*2/40Watts*2
Power consumption	Operation 1-2A/Standby 0.5-1A@3.5-5V, 0.25Watts*2 Operation 0.3-0.5A/Standby 0.2-0.3A@12V, 0.5Watts*2 Operation 1-2A/Standby 0.5-0.7A@12V, 1Watts*2/2Watts*2 Operation 2-4A/Standby 0.5-0.7A@12V, 4Watts*2/5Watts*2 Operation 3-6A/Standby 0.7-0.9A@18V, 10Watts*2 Operation 6-10A/Standby 0.7-0.9A@20V, 20Watts*2 Operation 22A/Standby 0.4-1.6A@28-32V, 30Watts*2/40Watts*2
Power Selection	Power Supply by Main Cable

Interface

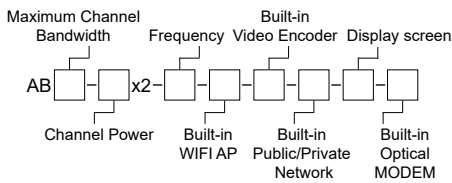
Basic interface	2xIPEX/2xMMCX/2xSMP/2xSMA RF, 1-2xRJ45 Ethernet 100/1000BaseT, RS232, DC input, TTL (UART)/SBUS/Bluetooth 1.2-2.30.4Kbps, WIFI AP, BD/GPS (GNSS) optional. Supports transparent transmission via Ethernet and serial ports, and supports all communication protocols, including MAVLink. Service priority can be selected
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
Power Indicator	Steady green - Powered on
LINK Indicator	Steady red - The network is not connected Blinking red - Starting/not connected to the network Steady green - The network is connected
RSSI 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 Off - The link is interrupted
Management Interface/Control Interface	Web-based network management/GUI, API for secondary development interface/SNMP

Environmental

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



Maximum Channel Bandwidth	Channel Power (W)	Frequency (MHz)	Built-in WIFI AP	Built-in Video Encoder	Built-in Public/Private Network	Display Screen	Built-in Optical MODEM
20	2	600, U	0(N)	0(N)	0(N)	0(N)	0(N)
40	4, 5	1400, L	1(Y)	HDMI	4G/5G	2(2")	1(Y)
80	10	2300, S		SDI/AV	4G LTE CPE	3(3.2")	
	20, 40	4500, C				4(4")	

AB20-2x2-1400-1-HDMI-4G/5G-0-0 Express: Maximum channel bandwidth 20MHz, 2Watts*2, 1400MHz, With WIFI AP, Built-in HDMI Coding, Built-in 4G/5G Public Network Module, Without display screen and without optical MODEM Airborne Radio.

Accessories/Options:



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