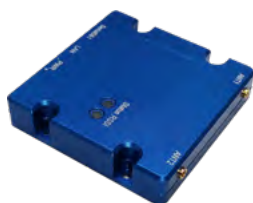


SINOSUN-DDL 0.5W×2/1W×2/2W×2/10W×2/20W×2

Airborne Radio

Technical Specification



0.5Watts×2



1Watts×2/2Watts×2
IP/RS232



1Watts×2/2Watts×2
IP&WiFi&HDMI(or SDI)/RS232&Sbus



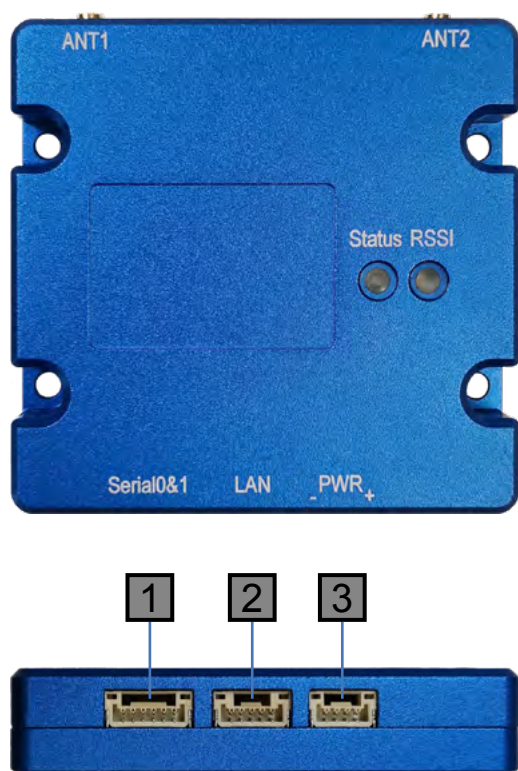
10Watts×2/20Watts×2
IP/RS232

Airborne Radio Specifications

Wireless Specifications	
Frequency Range (70M-6GHz Customized)	430-550/570-700/800-950, 225-400/320-470*MHz 1000-1200/1300-1500/1600-1800/1800-2000, 1200-1700*MHz 2.0-2.2/2.2-2.5/2.5-2.7/2.7-2.9, 1.6-2.3/1.9-2.7*GHz 4.4-5.0/5.25-5.85, 4.2-5.2/5.5-6.0*GHz
Channel Bandwidth	1.25/2.5/5/10MHz Adjustable
Modulation Mode	COFDM, DSSS-CCK/BPSK/QPSK/16QAM/64QAM (Adaptive)
Throughput	70Mbps@10MHz/25Mbps@5MHz/10Mbps@2.5MHz/4Mbps@1.25MHz
Sensitivity	-102dBm@5MHz
Transmission Distance (line-of-sight)	Air to G. 10-30KM (0.5Watts x2) 、20~50/50~150KM (1Watts x2/2Watts x2) 、 150~300/250~500KM (10Watts x2/20Watts x2×2)
Transmission Power	0.5Watts x2 1Watts x2 2Watts x2 10Watts x2 20Watts x2
Networking Capabilities	
Communication Mode	Point-to-point、point-to-multipoint and multipoint-to-multipoint, Reapter
Network Topology	Centerless of no-master/slave to MPtoMP
Wireless Protocol	HTDMA
Network Protocol	IPv6, QoS, DNS, HTTPS, IP, ICMP, NTP, DHCP, VLAN
Encryption	DES56/AES128/AES256
Anti-jamming	Intelligent frequency selection/Autonomous frequency hopping
Mobility	Support movement speed greater than 200 km/h
Transmission Delay	Less than 10 ms
System Parameters	
Interface	Network port (IP/WiFi), Serial port (232/485/422/TTL、Sbus/USB/Bluetooth)、Audio port (MIC-SP-PTT/VoIP)、4G-5G Public Network Routing/4G LTE/Satellite/Fibe
Video Interface	IP、HDMI/SDI、CVBS
Local/Remote Management	PC terminal Web browsing, Mobile APP: topology, node and link status, distance monitoring, whole network parameter configuration, software upgrade and other functions
System Upgrade	Support one-click upgrade, remote upgrade
Positioning Function	GPS/BDS
Power Supply	9-32VDC, 0.5Watts×2 9-39VDC, 1Watts×2 12-36VDC, 2Watts×2 18-32VDC, 10Watts×2/20Watts×2
Power Consumption	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 3-6A/Standby 0.7-0.9A@16.8V, 10Watts×2 Operation 6-10A/Standby 0.7-0.9A@20V, 20Watts×2
Physical Properties	
Operating Temperature	-40℃ ~ 80℃
Protection Level	IP65、IP66/IP67(Customized)
Size/Weight	11.7x6.2x1.9cm/149g(1Watts×2/2Watts×2 Airborne Radio-Lron Gray) 11.7x6.2x4.2cm/364g(1Watts×2/2Watts×2 Airborne Multi-interface Radio-Black) 12.7x11.0x3.3cm/635g(10Watts×2/20Watts×2 Airborne Radio-Lron Gray) 6.2x6.3x1.3cm/65g(0.5Watts×2 Airborne Radio-Blue, DDL-mini)

2. Airborne Radio Hardware Interfaces

2.1 Airborne Radio (Blue) , DDL-mini



- 1** Serial 0&1
- Pin1: GND
 - Pin2: RX0
 - Pin3: TX0
 - Pin4: RX1
 - Pin5: TX1
 - Pin6: 5V

- 2** LAN
- Pin1: GND
 - Pin2: R+
 - Pin3: R-
 - Pin4: T+
 - Pin5: T-

- 3** PWR
- Pin1: GND
 - Pin2: GND
 - Pin3: +
 - Pin4: +

2.2 Airborne Radio (Lron Gray)

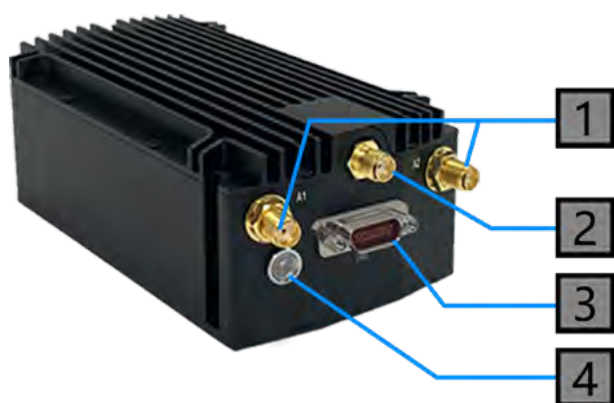


- 1** RF Channels 1-2 Connectors [SMA Female]

- 2** Power/Communication Ports

- 3** Link Status Indicator
- Steady red: The network is not connected
 - Blinking red: Starting/not connected to the network
 - Steady green: The network is connected

2.3 Airborne Radio (Black)

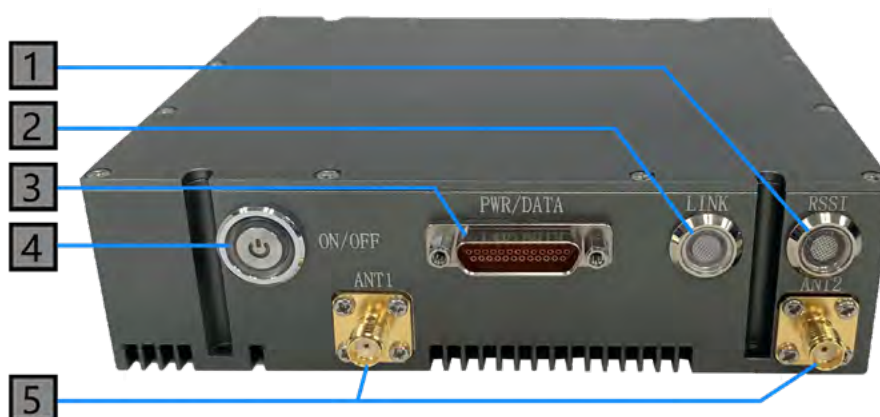


- 1 RF Channels 1-2 Connectors [SMA Female]
- 2 WiFi Antenna
- 3 Power/Communication Ports
- 4 Link Status Indicator
 - Steady red: The network is not connected
 - Blinking red: Starting/not connected to the network
 - Steady green: The network is connected
 - Blinking green: Voice PTT is down



- 1 RF Channels 1-2 Connectors [SMA Female]
- 2 WiFi Antenna
- 3 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: Voice PTT is down
- 4 HDMI Port
- 5 Power/Communication Ports

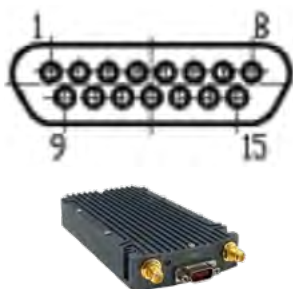
2.4 High-power Airborne Radio (Lron Gray)



- 1 RSSI Link Indicator
 - Steady green: The link quality is excellent
 - Blue Steady: 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
 - Off: The link is interrupted
- 2 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: Voice PTT is down
- 3 Power (18-32V), Ethernet, and Serial Port Connector
- 4 Radio switch
- 5 RF Channels 1-2 Connectors [SMA Female]

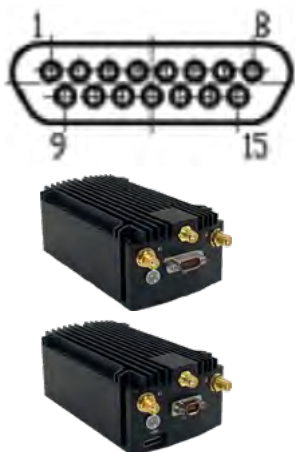
3. Airborne Radio Connection Port Pin Definition

3.1 Airborne Radio (Lron Gray/Black-J30J-9)



Power/Ethernet/Serial Connector Pinout	
J30J-15ZKN-J	Signal
1	RS232_RXD0
2	RS232_TXD0
3	RS232_GND0
4	RS232_GND1
5	RS232_RXD1
6	RS232_TXD1
7	5V Output
8	ETH RX+
9	ETH RX-
10	ETH TX+
11	ETH TX-
12	GND IN
13	GND IN
14	VCC IN
15	VCC IN

3.2 Airborne Radio (Black-J30J-15ZKP)



Power/Ethernet/Serial Connector Pinout	
J30J-15ZKP	Signal
1	RS232_RXD
2	RS232_TXD
3	RS232_GND
4	5V Output
5	100-Base T ETHO M1P
6	100-Base T ETHO M1N
7	100-Base T ETHO M2P
8	100-Base T ETHO M2N
9	Sbus
10	Sbus_VCC
11	Sbus_GND
12	GND IN
13	GND IN
14	VCC IN
15	VCC IN

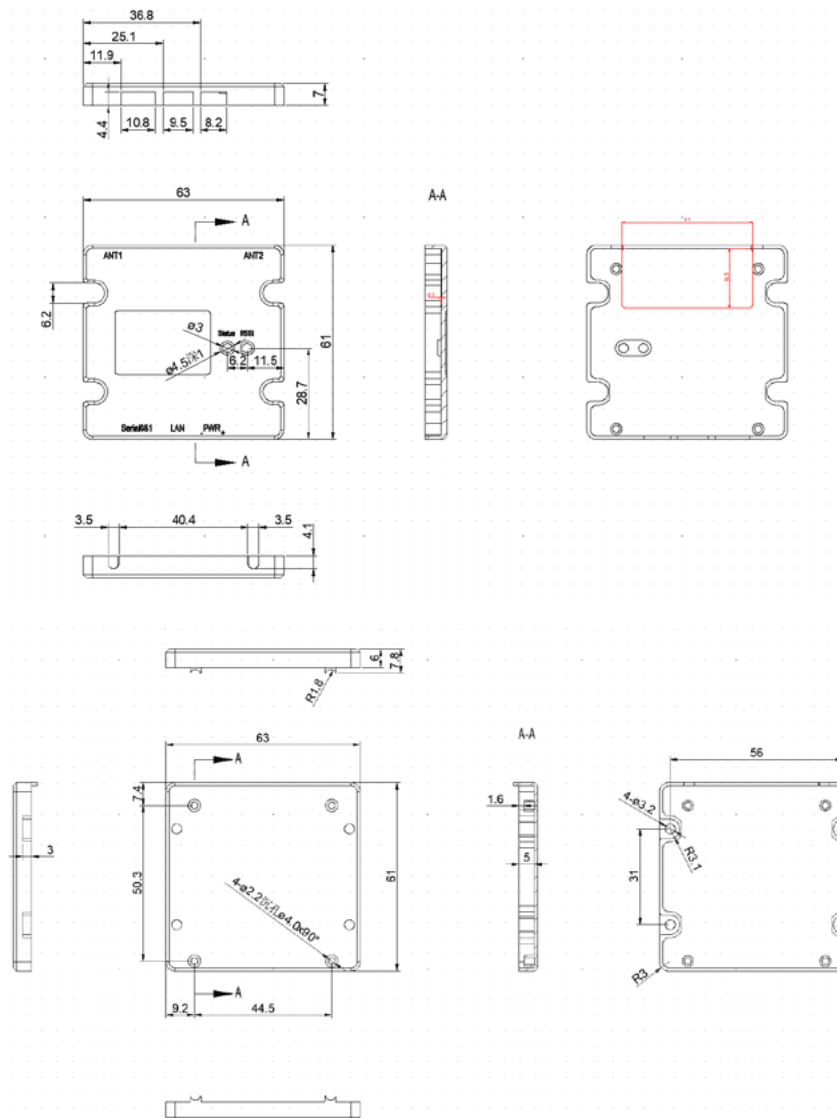
3.3 High-power Airborne Radio (Lron Gray-J30J-25)



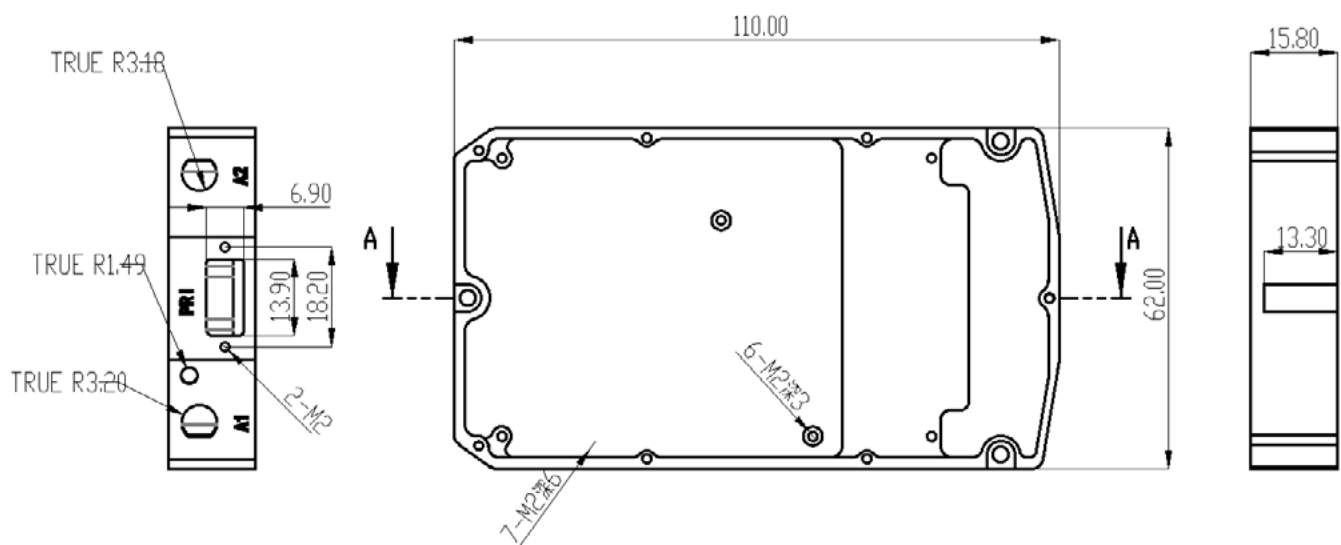
Power/Ethernet/Serial Connector Pinout	
J30J-25ZKP	Signal
1	ETH_RX-
2	ETH_RX+
3	ETH_TX-
4	ETH_TX+
5	VCC IN
6	
7	
8	
9	
10	
11	
12	
13	
14	RS232_TXD
15	RS232_RXD
16	RS232_GND
17	5V OUT
18	GND IN
19	
20	
21	
22	
23	
24	
25	

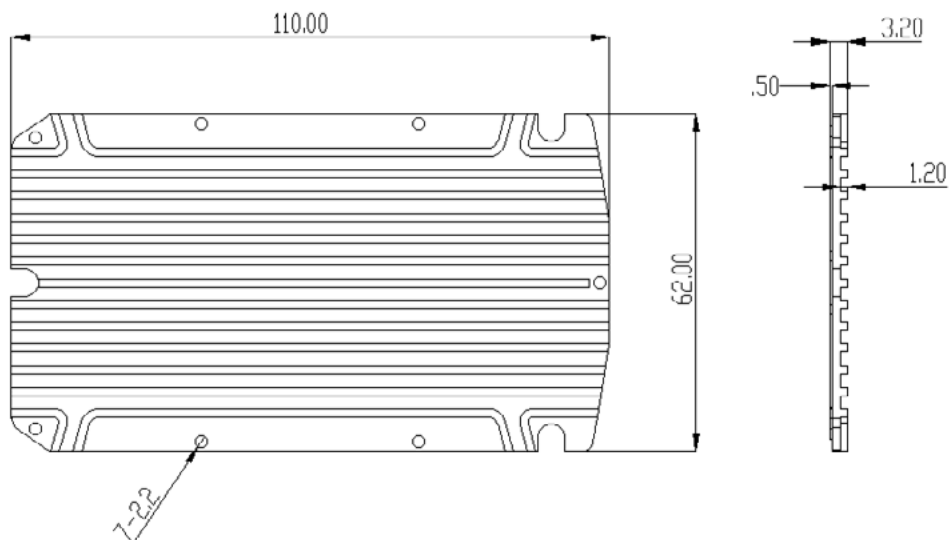
4. Airborne Radio Dimension Figure

4.1 Airborne Radio (Blue) , DDL-mini

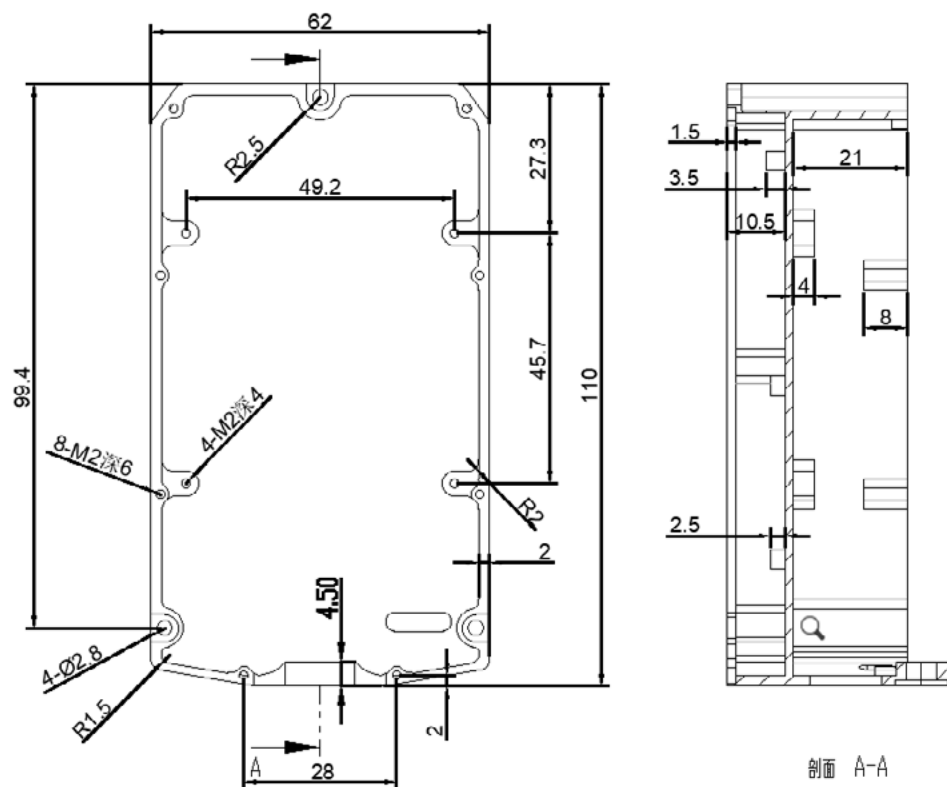
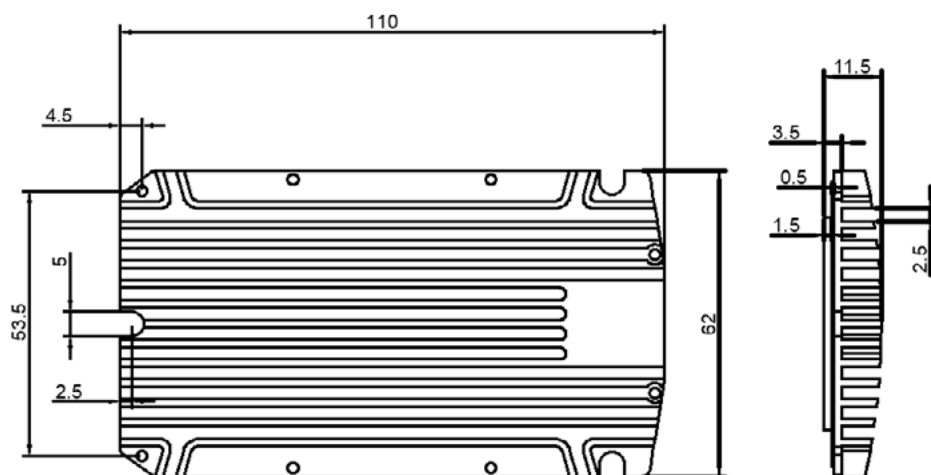


4.2 Airborne Radio (Lron Gray)

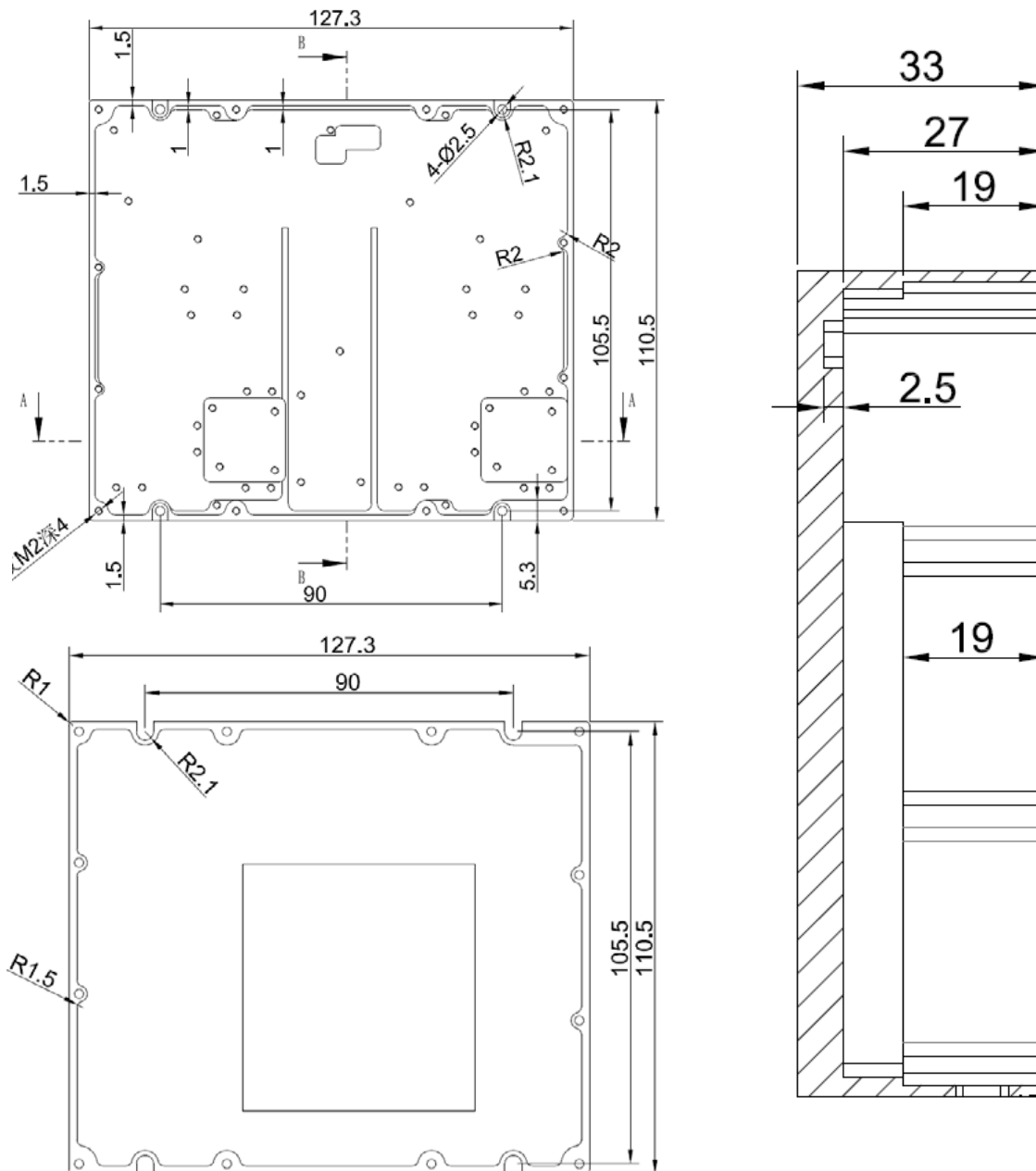




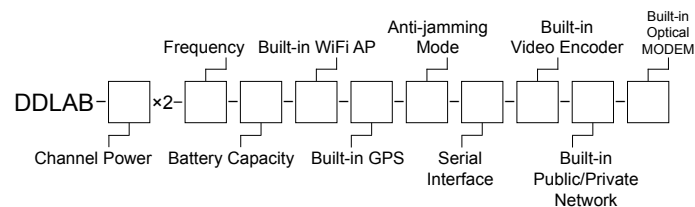
4.3 Airborne Radio (Black)



4.4 High-power Airborne Radio (Lron Gray)



5. Airborne Radio Model Name



Channel Power (W)	Frequency (MHz)	Battery Capacity (Wh)	Built-in WiFi AP	Built-in GPS	Anti-jamming Mode	Serial Interface	Built-in Video Encoder	Built-in Public/Private Network
0.5,1	600,U	0(N)	0(N)	0(N)	0(Single Frequency)	0(RS232+RS485/422)	0(N)	0(N)
2,4	1400,L	77.7,114	1(Y)	1(Y)	1(Intelligent Frequency Selecting)	1(RS232x2)	HDMI	4G/5G
10	2300,S	213,427			2(Frequency Hopping)	2(TTL(3.3V)x2)	SDI/AV	4G LTE CPE
20	4500,C					3(TTL(3.3V)+Sbus)		

DDLAB-2x2-1400-0-0-0-1-0-0-0Express: 2Wx2, L Band, with intelligent frequency selection Airborne Radio.