

MONEYPRO GROUP

MOA9046B

Dual 8-Ch Anti-jam Antenna

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1. Overview

The MOA9046B anti-jam antenna completes 8 channels of Beidou B1/GPS L1/Galileo L1 and 8 channels of Glonass L1 frequency signal reception, filtering, amplification, down-conversion and anti-jam processing. The antenna can suppress 7 broadband jammers in Beidou B1/GPS L1/Galileo L1/Glonass L1 frequency bands.

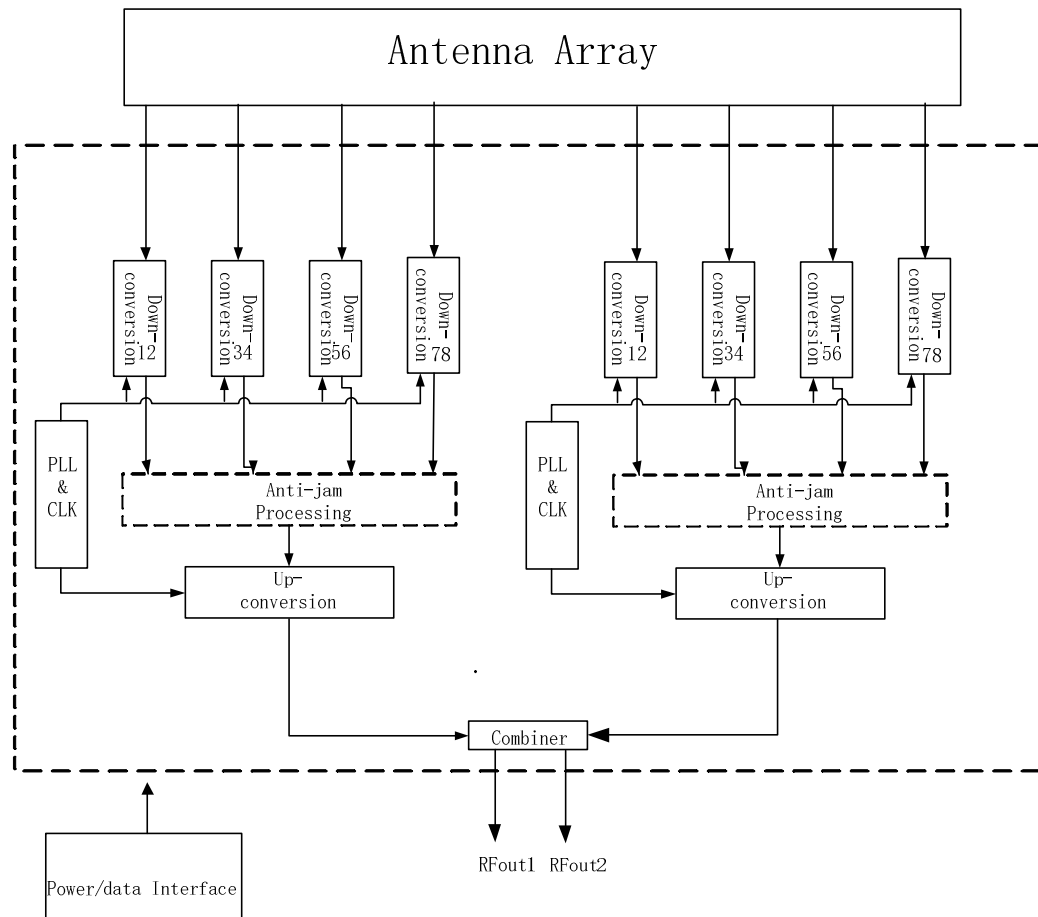


Figure 1 working principle block diagram

2. Technical Specifications

2.1. Functions

- 8 channels Beidou B1/GPS L1/Galileo L1 signal reception, filtering, amplification and down-conversion processing;
- 8 channels Gloanss L1 signal reception, filtering, amplification and down-conversion processing;
- The antenna capable of suppressing 7 external broadband jammers with space time adaptive anti-jam processing function in Beidou B1/GPS L1/Galileo L1/Gloanss L1 frequency bands.
- 1 up-conversion channel. The filtered Beidou B1/GPS L1/Galileo L1 and Glonass L1 satellite signals are forwarded to the back-end GNSS receiver;

2.2. Performance

2.2.1. Antenna array

- 8 Beidou B1/GPS L1/Galileo L1/Glonass L1 antenna array elements;
- VSWR: < 2.0 ;
- Polarization: RHCP;
- Coverage: azimuth: $0-360^{\circ}$, pitch: $0-90^{\circ}$;
- Antenna vertex gain: $\geq 2.0\text{dBi}$;

2.2.2. LNA

- GAIN: Beidou B1/GPS L1/Galileo L1//Glonass L1: $25 \pm 3\text{dB}$ (customizable);
- Noise Figure: $\leq 2.5\text{dB}$;
- Out-of-band inhibition: $\geq 50\text{dB}@$ Out of band 50MHz;
- VSWR: ≤ 2.0 ;
- RF input power limiting: 10W;
- Feed voltage: $5\text{V} \pm 10\%$;
- Feed current: $< 150\text{mA}@5\text{V}$;

2.2.3. Anti-jam processing

- a) Used for GNSS Beidou B1/GPS L1/Galileo L1/Glonass L1;
- b) Mitigates multiple CW, partial band, broadband and pulsed jammers even under

high dynamics;

- c) Greater than 95 dB J/S of jamming suppression against single jammer;
- d) Greater than 80 dB J/S of jamming suppression against 7 jammers;

2.2.4. RF output power

2 RFout: Filtered Beidou B1/GPS L1/Galileo L1/Glonass L1;

Out Power: -75dBm~-55dBm (customizable).

2.2.5. Power supply

- a) Input voltage
20V~32V (28V default) ;
- b) Supply power
≤45W.

2.3. Temperature

- a) Operation temperature: -40°C~70°C;
- b) Storage temperature: -40°C~70°C;

3. External Interface

- 2 RF TNC connectors;
- 1 DB9 female serial connector;
- 1 power connector (customizable);

3.1. RF output

The RF output interface uses 2 TNC connectors to output signals processed by anti-interference antenna.

Signal definition	Connector type	Description		
RFOUT1	TNC	Beidou B1/GPS L1/Galileo L1/Glonass L1 output		
RFOUT2	TNC	Beidou B1/GPS L1/Galileo L1/Glonass L1 output		

3.2. Serial connector

The data interface uses a DB9 female connector, with a total of 9 PIN signals defined as follows.

Pin number	Signal definition	Description	
1	NC		Beidou B1/GPS L1/Galileo L1 Jamming information output
2	TXD1	RS232 TX	
3	RXD1	RS232 RX	
4	NC		
5	GND	GND	
6	TXD2	RS232 TX	Glonass L1 Jamming information output
7	RXD2	RS232 RX	
8	NC		
9	NC		

3.3. Power connector

The power interface is customizable.

Pin number	Signal definition	Description	
1	POWER IN	20V-32V	28V default
2	GND	GND	

4. Outline dimensions

The dimension : $\Phi 268.0 \pm 0.5\text{mm} \times 52.0 \pm 0.5\text{mm}$

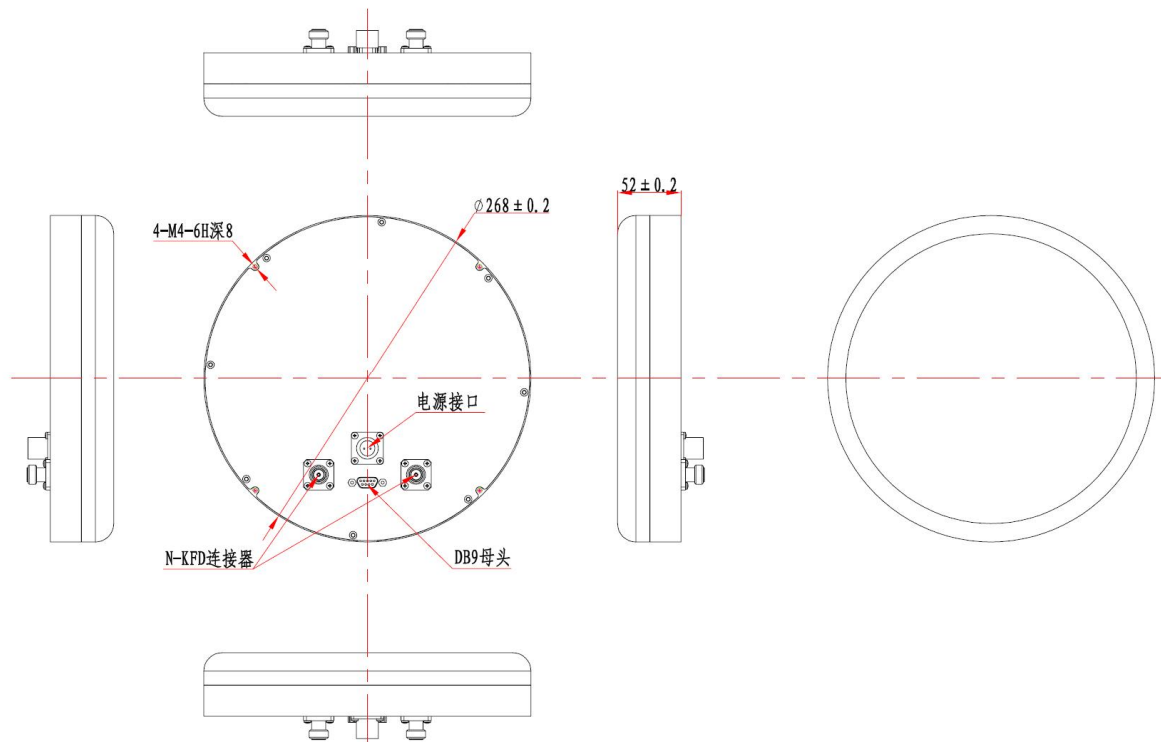


Figure 2 Dimensions (The tolerance marks shown for reference only)

5. Weight

<5Kg。