

BGS-8CH-G1-01
8-Element Anti-jamming Terminal
Product Specification



Preparation /

Date: _____

Review / Date: _____

Approval / Date: _____

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■ Product Presentation

This miniaturized multi-system anti-jamming all-in-one device is developed for the satellite navigation needs of industrial users such as unmanned aerial vehicles (UAVs). It supports the reception of GPS+GLONASS multi-system signals and features simultaneous anti-suppression jamming capability for multiple systems, with a maximum anti-jamming ability of 7 interference. Internally integrated with an antenna array, anti-jamming components and a satellite navigation receiver, it boasts the advantages of miniaturization, lightweight design and low cost.

■ Product Function

1. This product is a dual-frequency 8-channel anti-interference antenna

2. RNSS signal reception

1. Capable of receiving RNSS signals from GPS and GLONASS navigation satellites
2. Civil code: GPS-L1, GLO-G1

3. Anti-interference type

It can suppress narrowband interference, broadband interference, pulse interference, sweep interference, Gaussian interference and other suppression interference

4. Built-in full-frequency point navigation and positioning module, and output the information according to the NMEA or Ublox protocol.

5. Serial port output or RF port output can be used.(either-or)

6. Software upgrade

With the software upgrade function, you can upgrade the anti-interference module and the receiver module through the serial port

7. System self-inspection

It has self-check and status inspection functions

8. Interference detection

With the interference detection function, it can identify the interference power

9. Anti-burning function

The continuous W power must not be less than 10W

10. Safety

With over-pressure protection, reverse contact protection, etc

■ Behaviour of Electricity

1. Frequency of work

GPS-L1: 1575.42MHz

GLO-G1: 1602MHz

2. Anti-interference performance

- Single jamming: jamming-to-signal ratio (J/S) ≥ 110 dB
- Triple jamming: jamming-to-signal ratio (J/S) ≥ 100 dB
- Seven jamming: jamming-to-signal ratio (J/S) ≥ 90 dB

3. Positioning accuracy

Without interference: horizontal accuracy ≤ 1.5 m; with interference: ≤ 10 m

4. Speed measurement accuracy

0.2 m / second (95%)

5. Time-giving accuracy

≤ 100 ns (95%)

6. Operating voltage

The input voltage is 8 to 34V

7. Power consumption

≤ 19 W

Note: B3 or B1 single-frequency point anti-interference, the power consumption is 10W

■ Interface Definition

This product has the function of serial port output or RF output. However, these two output methods cannot be selected at the same time. Please confirm before placing the order and inform us.

1. Power supply / data interface

The J30J-9 ZK core connector is selected, and the pin is defined as follows:

Pin No.	name	direction	electrical level	remarks
1	Power positive pole	Input	8-34V	
2	Power positive pole	Input	8-34V	
3	Power anode	Input		
4	Power anode	Input		
5	TXD0	Output	TTL	Upgrade serial port
6	RXD0	Input	TTL	
7	RXD1	Input	TTL	Anti-interference serial port
8	TXD1	Output	TTL	
9	GND	-	-	

2. RF interface

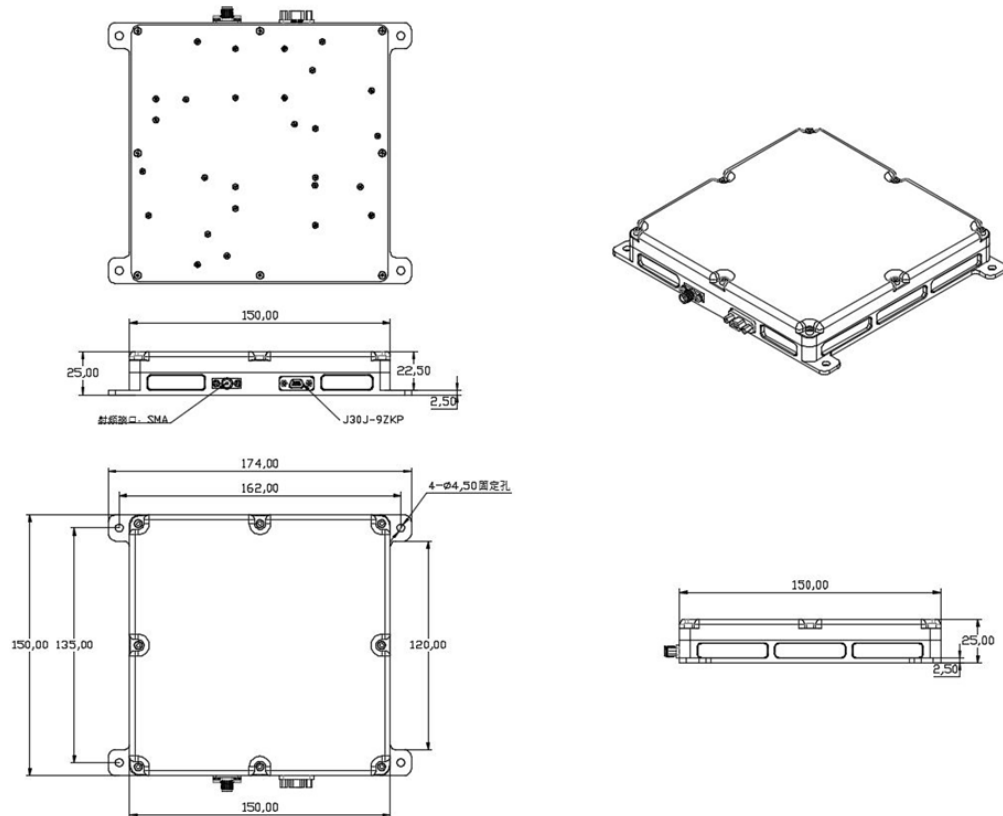
1) Anti-interference signal output interface (reserved), using SMA connector, and for the first-line pass form

2) The signal level of the output B3 \ B1 is -70~ -60 dBm

■ Appearance Structure

1. Appearance size

150mm×150mm×22.5mm



2. Weight

≤720g

3. Color

French grey

■ Product identification

product name:
product model:
serial number:
date of manufacture:
manufacturer:

■ Environmental suitability

1. Operating temperature:

-40°C~+55°C

2. Storage temperature:

-55°C~+70°C

3. Relative humidity:

Temperature: 40°C; humidity: 96%

4. Rain:

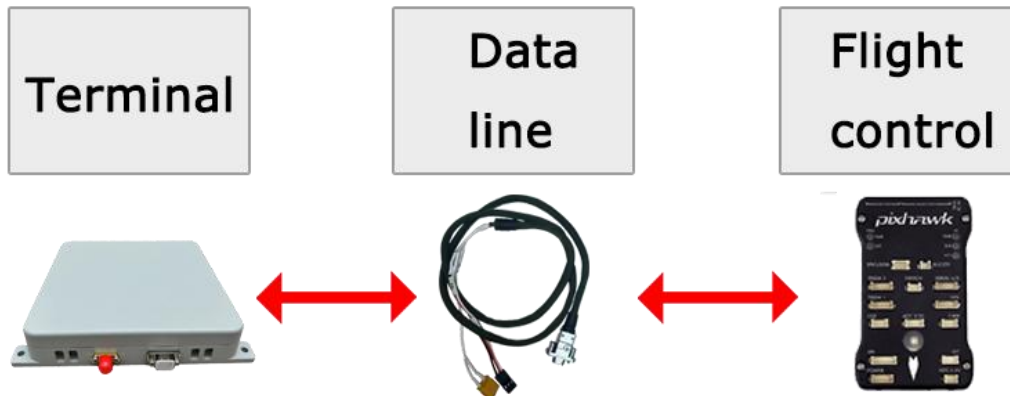
Meet the rain waterproof test requirements of GJB150A

■ Typical application occasions

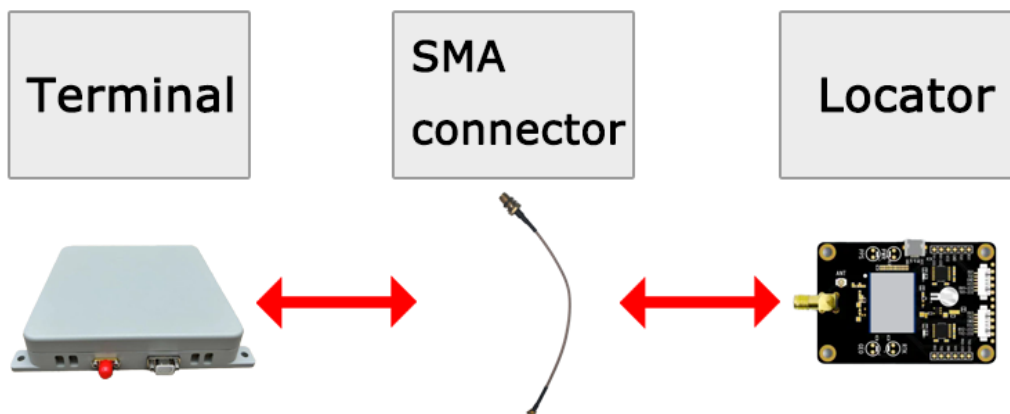
1. Power, communications, finance and other fields of time security
2. UAVs, unmanned vehicles, unmanned ships and other navigation safety
3. Convoy defense and navigation security
4. High-end logistics and navigation security

■ Connection Description

1. The electrical signal connection of the product and the platform carrier is connected by low-frequency data mode.
2. This product has a built-in locator, which can replace the conventional positioning terminal and antenna. The following schematic diagram:



3. In the RF signal access mode, this product replaces the conventional active antenna. **When using the RF interface of the product, ensure that the interface of the access party does not provide power to the product to avoid possible power conflicts or damage.** The following schematic diagram.



4. When using usb to TTL tool to connect with the computer, do not plug or unplug usb when powered on to avoid damage to the serial port.

■ Installation and use

1. fixing

Install fixation with M3 screws.

2. supply electricity

Use XT 30 power supply, power supply voltage 8-34V, maximum not exceeding 34V,

3. Locate the data connection

1) Connect the DuPont line TTL serial port of this product to the flight control GNSS serial port.

Connect the flight control to the GNSS serial port using the matching data line provided by this product. Connect one end of the data line label TX to the flight control RX interface, one end of the label RX to the flight control TX interface, and one end of the label GND to the flight control GND interface.

2) Use the SMA cable to connect the RF port of the product to the antenna port of the UAV locator.

Note: Choose either serial port or RF port.

■ Docking with the flight control protocol

This product shall output nmea, protocol or ublox protocol, and the flight control shall be set to receive either of these two protocols. Please ask the customer to complete the agreement docking work with our technical personnel before placing an order.

■ Disclaimer

This product is designed to improve the security of satellite navigation. Please comply with the relevant laws and regulations during the use. Any illegal activities with the product.