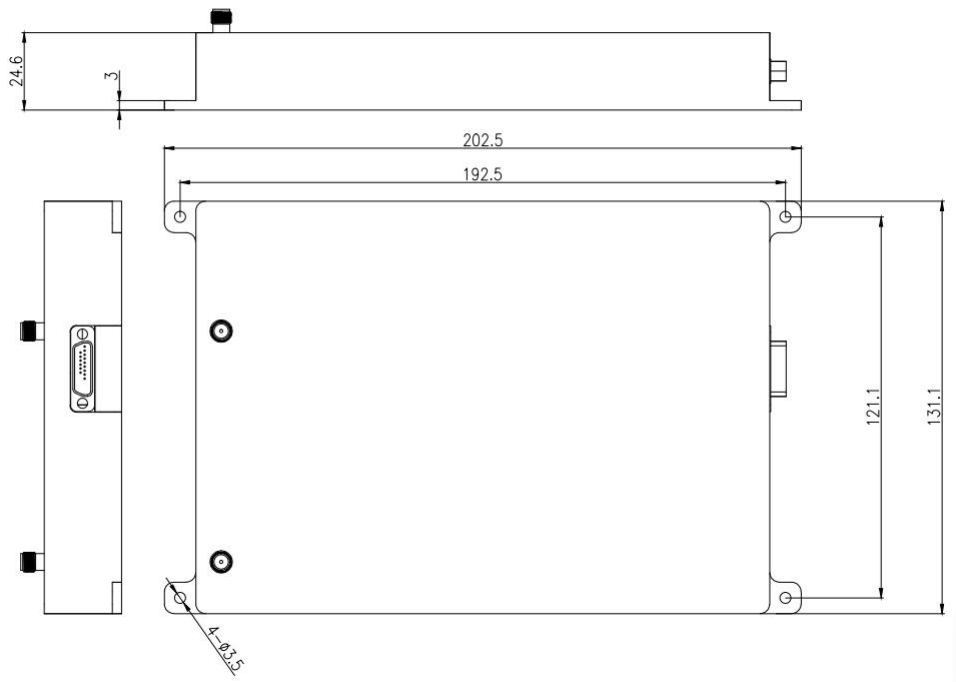


Navigation spoofing module Specification Sheet

一、Function and Parameters

1. Support GPS/L1($1575.42\text{MHz}\pm 1.023\text{MHz}$)、BDS/B1($1561.098\text{MHz}\pm 2.046\text{MHz}$)、GLONASS/G1($1602\text{MHz}\pm 4\text{MHz}$)、GALILEO/E1($1575.42\text{MHz}\pm 12.276\text{MHz}$)simulation;
2. Directional dispersal (dispersal conducted in a specified direction);
3. Navigation interference (disrupting the GPS positioning of drones);
4. Navigation forced landing;
5. Circling function (forcing the drone to hover in mid-air);
6. Power output range: $-70\text{dbm}\sim +10\text{dbm}$ (default output 10dbm);
7. Power adjustment step: 0.5dB ;
8. Deceptive distance : $>500\text{m}$ (10dbm)
9. Power-on initialization time : <10 秒 (RMS);
10. Spurious: $\geq 50\text{dB}$;
11. communication information:UDP Protocol(Customized support serial communication;
- 12.With status and launch indication;
- 13.Receiving antenna interface:SMA-K;
- 14.Transmitting antenna interface:SMA-K;
- 15.power supply: DC $12\text{V}/1\text{A}$, industrial interface:J30J;
- 16.size: $17.5*12.5*1.5\text{cm}$ (Subject to the actual product.)

二、Structural diagram, interface diagram, model diagram, and physical diagram



Structural diagram

三、Module Interface Description

1. Power/communication interface: This interface is a J30J-21 core socket, which includes power input, network port, serial port and GPIO, etc. The specific definitions are shown in the following table

Pin Number	Name	Description
Pin 1、 2	Input power supply 12V positive terminal	Input power positive
Pin 3、 4	Input power 12V negative pole	GND
Pin 5	232-communication-TX	Reserve
Pin 6	232-communication-RX	

Pin 7	Digital GND	GND
Pin 8	485 communication-A	Reserve
Pin 9	485 communication-B	
Pin 10	Digital GND	GND
Pin 11	GPI01	The high level is 3.3V, and the default is low level when powered on (reserved)
Pin 12	GPI02	
Pin 13	GPI03	
Pin 14	GPI04	The high level is 5.0V, and the default is low level when powered on (reserved)
Pin 15	100M network cable output+	Orange and white line
Pin 16	100M network cable output-	Orange line
Pin 17	100M network cable input+	Green and white line
Pin 18	100M network cable input-	Green line
Pin 19	Serial port 232-TX	Reserve
Pin 20	Serial port 232-RX	
Pin 21	Digital GND	GND

2. Receive: SMA-K interface , Used for receiving satellite navigation signals, this interface defaults to using an active receiving antenna (5VDC).
3. Transmit: SMA-K interface , for signal output, since the module has a built-in power amplifier, it is required that this interface be reliably connected to the transmitting antenna (passive) during use, and prolonged open-circuit conditions are prohibited when transmitting signals.