



AJ440 series anti-jamming antenna



“ Product Overview

The AJ440 series anti-jamming antenna integrates a controlled reception pattern array antenna (CPRA) and a digital antenna control unit(DACU) internally.

The CPRA antenna can receive 4 B1/L1/E1 +G1 and 4 L2 or G2 or L2 +G2 or L2 +B2 or B3 +G2 frequency signals for anti-jamming processing and providing combined output. This series of anti-jamming antenna support resisting interference from 3 jammers of B1/L1/E1 & G1 frequency, and L2 or G2 or L2 +G2 or L2 +B2 or B3 +G2 frequency, the types of interference sources include narrowband, wideband, pulse, sweep-frequency, and composite interference.

The DACU uses a self-developed anti-jamming SoC chip to achieve adaptive nulling, within the built-in polarization-space-time-frequency anti-jamming algorithm, which leverages the characteristics of polarization, spatial, temporal, and frequency domains to effectively suppress various types of interference.

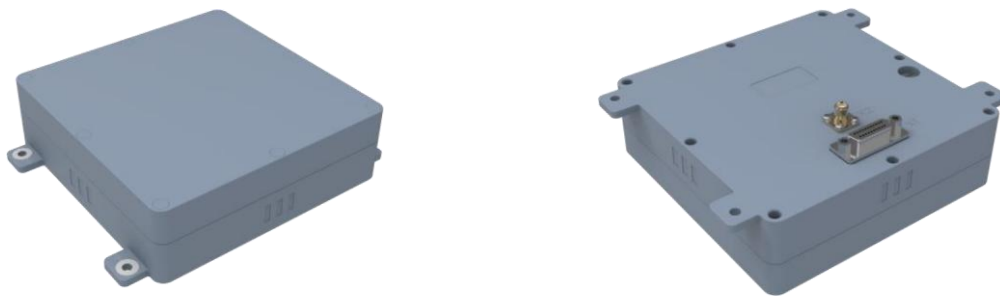


Chart 1 Product Photo

“ Performance

AJ440 series anti-jamming antenna performance is as below.

Table 1 AJ440 Series Anti-jamming Antenna Performance

Model Performance	AJ4402	AJ4403	AJ4404-L2G2	AJ4404-B2L2	AJ4404-B3G2
Anti-jamming Frequency	B1/L1/E1: 1559 ~ 1592MHz L2: 1217 ~ 1237MHz	B1/L1/E1 + G1 : 1558 ~ 1609MHz G2: 1235 ~ 1255MHz	B1/L1/E1 + G1: 1559 ~ 1602MHz L2 + G2: 1224 ~ 1260MHz	B1/L1/E1 + G1: 1559 ~ 1602MHz L2 + B2: 1196 ~ 1230MHz	B1/L1/E1 + G1: 1559 ~ 1602MHz B3 + G2: 1240 ~ 1280MHz
Combined Signal	B1/L1/E1 + L2	B1/L1/E1 + G1 + G2	B1/L1/E1 + G1 + L2 + G2	B1/L1/E1 + G1 + L2 + B2	B1/L1/E1 + G1 + B3 + G2
	Output power: -60dBm ~ -50dBm				
Anti-jamming Type	narrowband, wideband, pulsed, sweep-frequency, and composite interference				
Anti-jamming Performance	Jamming-to-Signal Ratio (@-130dBm) : 1-interference ≥ 100dBc 3-interference ≥ 90dBc				
Dimension	130mm*130mm*40mm				
Weight	≤ 500g				
Power supply	+9V ~ 32V				
Power Consumption	≤ 14W	≤ 15.5W	≤ 15.5W	≤ 15.5W	≤ 15.5W
Operation Temperature	-40°C ~ +85°C				
Storage Temperature	-55°C ~ +85°C				

“ Dimension

The antenna size is 130mm*130mm*40mm, the default color is silver gray (color can be customized).

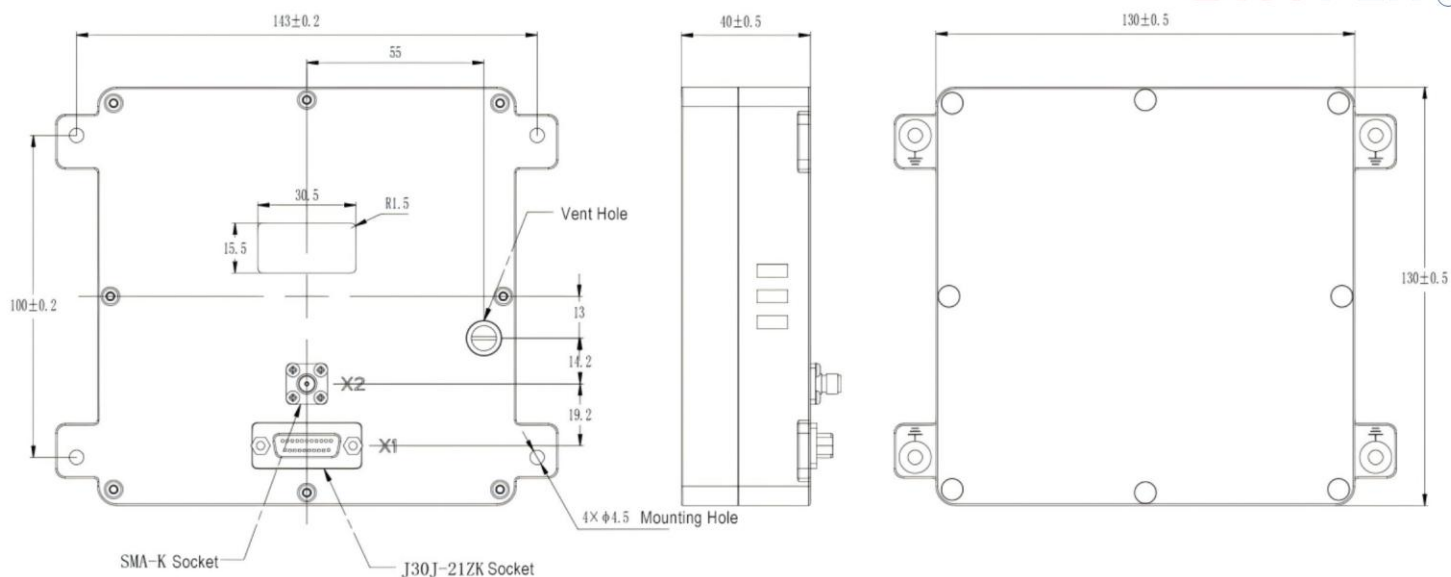


Chart 2 Outline Dimension Diagram(mm)

“ Electrical Port

AJ440 series anti-jamming antenna has 1 SMA-K RF connector for outputting DC-blocked combined signal, which is designed for connection to an external receiver. The power/data interface is J30J-21ZK connector, and the interface definition is as below.

Table 2 Power/Data Interface Definition

Item	Net	Definition	Note
1	VCC	Power Input	+9V ~32V
2	VCC	Power Input	+9V ~32V
3	VCC	Power Input	+9V ~32V
4	GND	GND	GND
5	GND	GND	GND
6	GND	GND	GND
7	RS232-RX1	UART1 RX	anti-jamming processing UART 1-RS232 (default baud rate is 115200)
8	RS232-TX1	UART1 TX	

9	GND	DGND	DGND
10	RS485-A2	UART2 RS485 A	anti-jamming processing UART 2-RS485 (default baud rate is 115200)
11	RS485-B2	UART2 RS485 B	
12	NC	--	Reserved
13	NC	--	Reserved
14	NC	--	Reserved
15	NC	--	Reserved
16	NC	--	Reserved
17	NC	--	Reserved
18	NC	--	Reserved
19	NC	--	Reserved
20	NC	--	Reserved
21	NC	--	Reserved

“ Appendix

System	Frequency Band	Frequency(MHz)
GPS	L1C/A	1575.42± 1.023
	L1C	1575.42±2.046
	L2C	1227.6 ± 1.023
	L5	1176.45± 10.23
GLONASS	G1	1602+k ×0.5625±4.5
	G2	1246+k ×0.4375±3.5
	G3	1202.025± 3.5

Galileo	E1	1575.42±2.046
	E5a	1176.45± 10.23
	E5b	1207.14± 10.23
	E6	1278.75±20.46
BDS	B1I	1561.098±2.046
	B1C	1575.42±2.046
	B2a	1176.45± 10.23
	B2b	1207.14± 10.23
	B3I	1268.52± 10.23
QZSS	L1C/A	1575.42± 1.023
	L1C	1575.42±2.046
	L2C	1227.6 ± 1.023
	L5	1176.45± 10.23