

SKYPAT

AJ440 series anti-jamming antenna

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“ Product Overview

The AJ800 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 8 B1/L1/E1 & G1 frequency signals for anti-jamming processing. This series of anti-jamming antenna support resisting interference from 7 B1/L1/E1/G1 frequency, and 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.

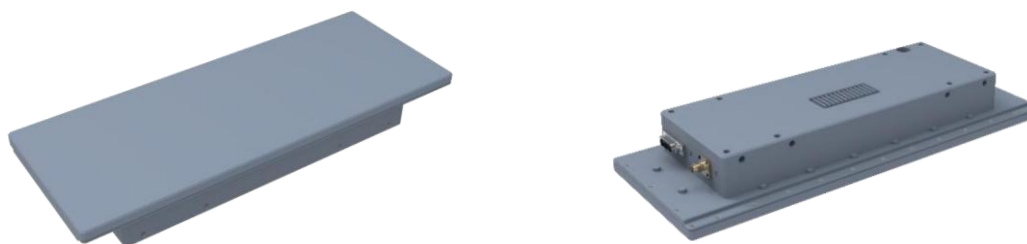


Chart 1 Product Photo

“ Performance

AJ800 series anti-jamming antenna performance is as below.

Table 1 AJ800 Series Anti-jamming Antenna Performance

Model Performance	AJ8001	AJ8002
Anti-jamming Frequency	B1/L1/E1: 1559 ~ 1592MHz	B1/L1/E1 + G1: 1558 ~ 1609MHz
Combined Signal	B1/L1/E1	B1/L1/E1 + G1
	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 $\geq 100\text{dBc}$ 7-interference $\geq 85\text{dBc}$	
Dimension	290mm*110mm*40m	
Weight	$\leq 700\text{g}$	
Power supply	+9V ~ 32V	
Power Consumption	$\leq 14\text{W}$	$\leq 15.5\text{W}$
Operation Temperature	$-40^{\circ}\text{C} \sim +85^{\circ}\text{C}$	
Storage Temperature	$-55^{\circ}\text{C} \sim +85^{\circ}\text{C}$	

“ Dimension

The antenna size is 290mm*110mm*40mm, and the default color is silver gray(color can be customized).

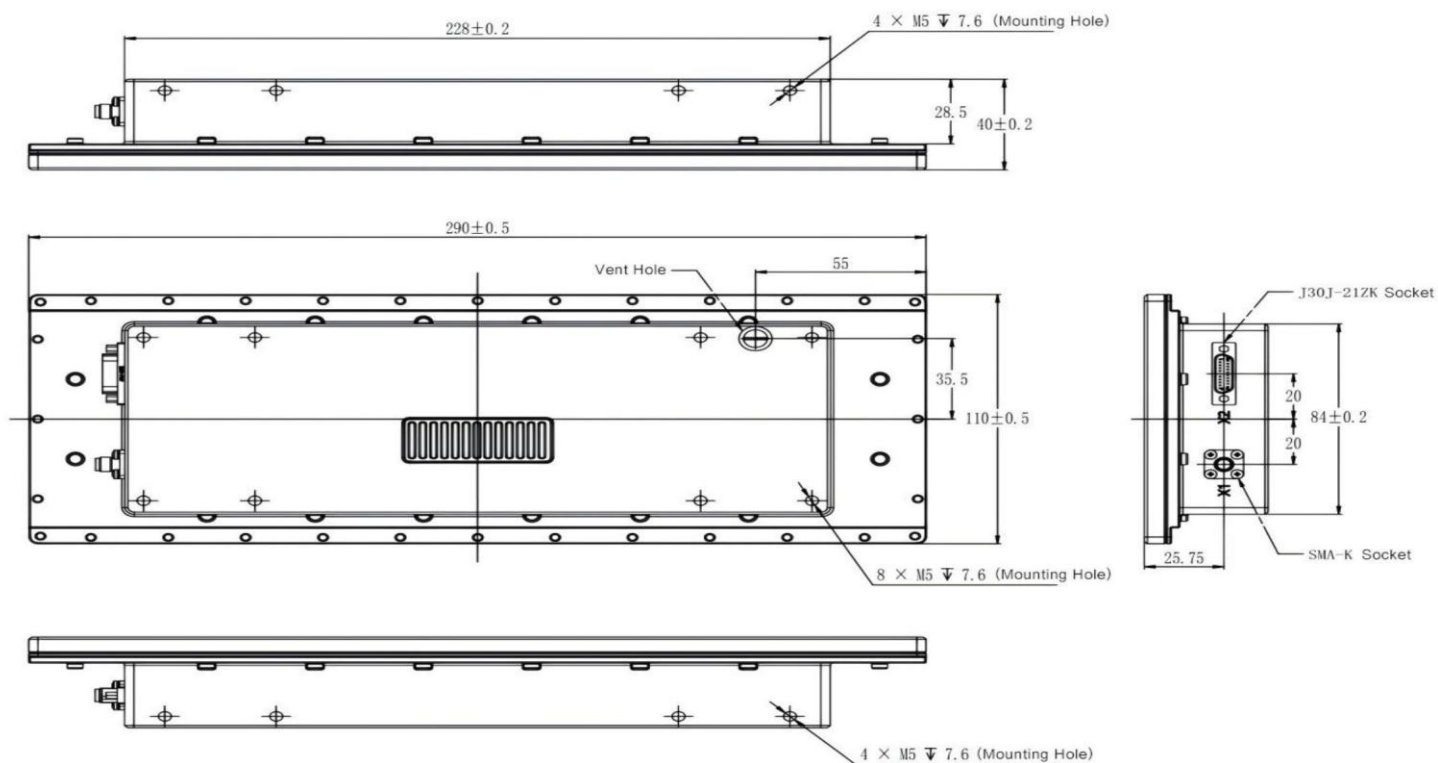


Chart 2 Outline Dimension Diagram(mm)

“ Electrical Port

AJ800 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	$1602+k \times 0.5625 \pm 4.5$
	G2	$1246+k \times 0.4375 \pm 3.5$
	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