SKYPATH

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.

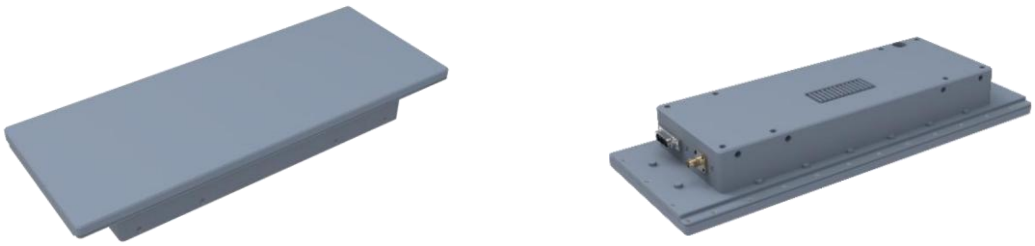

Chart 1 Product Photo

Performance

AJ800 series anti-jamming antenna performance is as below.

Product Overview

The AJ410 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 channels of B1/L1/E1 & G1 frequency signals for anti-jamming processing, the signal processed by anti-jamming units combined with the amplified L2/G2/B3 signal then output. This series of anti-jamming antenna supports resisting interference from 3 jamming signal of B1/L1/E1 & G1 frequency, and the types of interference sources include narrowband, wide band, 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

AJ410 series anti-jamming antenna performance is as below.

Table 1 AJ410 Series Anti-jamming Antenna Performance

Model / Performance	AJ4101	AJ4102
Anti-jamming Frequency	B1/L1/E1(1559 ~ 1592MHz)	B1/L1/E1&G1(1558 ~ 1609MHz)
Pass-through Frequency	L2/G2/B3(1226～1280MHz)	
Combined Signal	B1/L1/E1	B1/L1/E1 + G1
	Output power: -60dBm ~ -50dBm	
Anti-jamming Type	narrowband, wide band, pulse, sweep-frequency, composite interference	
Anti-jamming Performance	Jamming-to-Signal Ratio (@-130dBm) : 1-interference ≥100dBc 3-interference ≥90dBc	
Dimension	100mm*100mm*26mm	
Weight	≤380g	
Power supply	+9V ~ 32V	
Power Consumption	≤10W	≤11.5W
Operation Temperature	-40℃～+85℃	
Storage Temperature	-55℃～+85℃	

“ Dimension

The antenna size is 100mm*100mm*26mm. The default color is matte olive green(color can be customized).

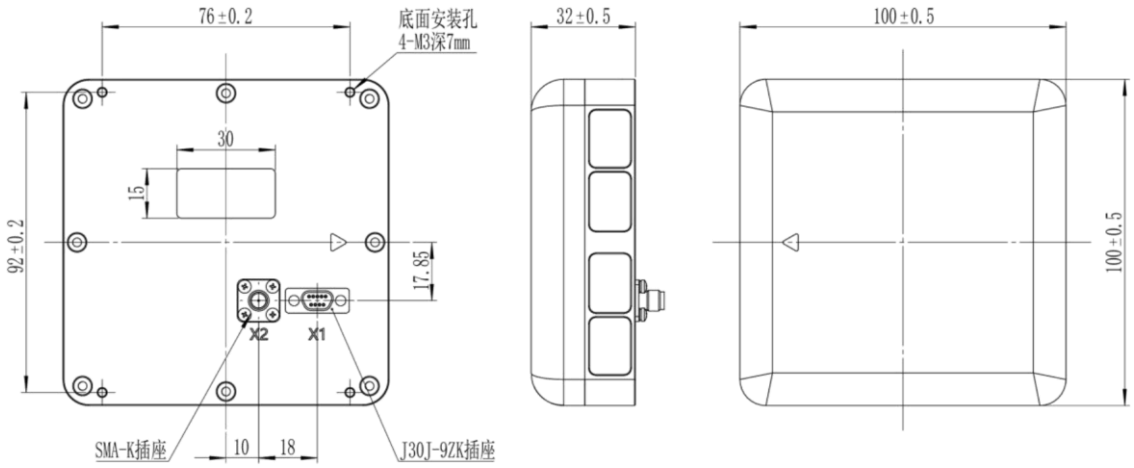

Chart 2 Outline Dimension Diagram(mm)

“ Electrical Port

AJ410 series anti-jamming antenna has 1 SMA-F RF connector for outputting DC-blocked combined signal, which is designed for connection to an external receiver. The power/data interface is J30J-9ZK 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	GND	GND	GND
4	GND	GND	GND
5	NC	--	Reserved
6	NC	--	Reserved
7	RS232-RX1	UART1 RX	anti-jamming processing UART 1-RS232 (default band rate is 115200)
8	RS232-TX1	UART1 TX	
9	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