

ZD-KXAT150D_8B1L1E1G1

CPRA Protected Antenna

Technical Specification V2.0

Catalogue

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1. Product Overview

The ZD-KXAT150D_8B1L1E1G1 is a CRPA (Correlated Reflective Protection Array)protected antenna designed to receive, amplify, downconvert, filter, and process signals from eight frequency bands: BDS_B1, GPS_L1, GALILEO_E1, and GLON- ASS_G1. Powered by 12V-32V, it consists of three core components: an antenna array, RF module, and processing module. With seven-direction electromagnetic signal protection capability,this antenna is ideal for scenarios requiring high-precision positioning in electromagnetic environments,significantly enhancing the stability of positioning devices in complex electromagnetic conditions.



Figure 1. ZD-KXAT150D_8B1L1E1G1 Protective Antenna

2. The Key Technical Indexes

2.1 Antenna Array	Antenna array elements	8-channel B1/L1/E1/G1 array
	Input frequency	BSD_B1: 1561.098MHz±2.046MHz; GPS_L1: 1575.42MHz±1.023MHz; GAL_E1: 1575.42MHz±12.276MHz; ONASS_G1:1602MHz±8.5MHz
	Input impedance	50 Ω
	Voltage standing wave ratio	≤2
2.2 Signal Processing	Number of channels	8 channels (BDS_B1, GPS_L1, GALILEO_E1, GLONASS_G1)
	Signal types	broadband, narrowband, sweep, and pulse, etc.
	Processing direction count	7
	Signal processing bandwidth	20MHz
	Signal processing performance of B1, L1, and E1	
	Single-direction performance	≥110dB@-130dBm
	Three-directions performance	≥100dB@-130dBm

	Seven directions performance	≥90dB@-130dBm
	G1 Signal Processing Performance	
	Single-direction performance	≥110dB@-130dBm
	Three-directions performance	≥100dB@-130dBm
	Seven directions performance	≥90dB@-130dBm
2.3 Location Performance (optional)	Cold start	≤60 seconds (including self-test time)
	Hot start	≤10s
	Lost lock reacquisition time	≤2s (within 5s of loss)
	Positioning accuracy	≤10m
	Anti-Deception Capability (Optional)	
2.4 Reliability	Mean Time Between Failures (MTBF)	≥2000 hours
	Continuous working time	≥24 hours
2.5 Environmental Suitability	Operating temperature	-45℃ to +70℃, 10% to 90% relative humidity (no condensation)
	Storage conditions	-50℃ to +75℃, 10% to 95% relative humidity (no Condensation)

3. Interface and External Dimensions

3.1 Interface

- The airborne RF interface is SMA-KF, impedance: 50 Ω .Output power range: -55dBm to-65dBm
- Power interface: J30J-9ZKP, with pin definitions as shown in Table 1 below:

Table 1 Signal Definition Table

Order number	Signal definition	Signal description	Explain
1	+12V~+32V	Power input	Antenna power supply
2	+12V~+32V	Power input	
3	GND	Power supply ground	Power supply signal ground
4	GND	Power supply ground	
5	TTL_TX	Data transmission	Process component debugging interface
6	TTL_RX	Data acceptance	
7	TTL_TX	Data transmission	
8	TTL_RX	Data acceptance	The default baud rate for navigation data port is 115200 (optional)
9	1PPS	Pulse per second	

3.2 Structural Dimensions and Appearance

Device appearance: Sea Gray 05

Device dimensions: Diameter (165±0.5) mm, Height (63±0.5) mm, as shown in Figure 2 below:

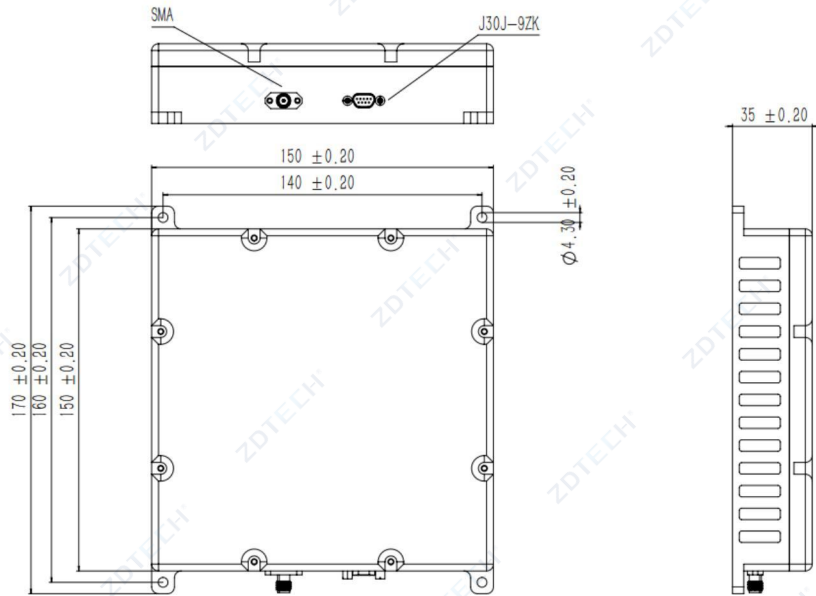


Figure 2.ZD-KXAT150D_8B1L1E1G1 Protective Antenna Structural Diagram

4. Power Supply and Power Consumption

Input voltage: +12V to +32V
The power consumption at room temperature is less than 20 W

5. Weight

≤700g

6. Delivery List

The equipment and accessories included in this product delivery are listed in Table 2 below:

Table 7-1 KXAT150D_8B1L1E1G1 Protective Antenna Product Matching Table

NO.	Product Name	Qty	Unit	Remark
1	Protective antenna	1	Table	-
2	Product Certificate of Conformity/Warranty Card	1/1	Portion	Paper
3	Test Report	1/1	Portion	Paper
4	Power supply cable	1	Root	J30J-9TL