

ZD-KXAT168E_4B1L1E1G1
CRPA Protected Antenna
Technical Specifications
V2.0

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1. Product Overview

The ZD-KXAT168E_4B1L1E1G1 is a CRPA (Correlated Reflective Protection Array) protected antenna designed to receive, amplify, downconvert, filter, and process signals from four frequency bands: BDS_B1, GPS_L1, GALILEO_E1, and GLONASS_G1. Powered by 18V-32V, it consists of three core components: an antenna array, RF module, and processing module. This system provides three-directional protection against anomalous electromagnetic signals, making it ideal for scenarios requiring high-precision positioning in electromagnetic environments. It significantly enhances the stability of positioning devices in complex electromagnetic conditions.



Figure 1. ZD-KAXT168E_4B1L1E1G1 Protective Antenna

2. Key Technical Specifications

2.1 Antenna Array	Antenna elements	4-channel B1/L1/E1/G1 antenna array
	Input frequency	BDS_B1: 1561.098MHz±2.046MHz
		GPS_L1: 1575.42MHz±10.23MHz
		GALILEOE1: 1575.42MHz±12.276MHz
		GLONASS_G1: 1601.5MHz±8.5MHz
2.2 Signal Processing	Input impedance	50Ω
	VSWR	≤2
	Number of channels	4 channels: BDS_B1, GPS_L1, GALILEO_E1, GLONASS_G1
	Signal types	Wideband, narrowband, swept frequency, and pulse, etc.
	Signal processing bandwidth	20MHz
	Number of directions processed simultaneously	3
	Single-direction performance	≥100dB@-130dBm
2.3 Positioning performance (optional)	Performance in three directions	≥90dB@-130dBm
	Cold start time	≤60s (including self-test time)
	Warm start time	≤10s
	Positioning accuracy	≤10m
	Anti-spoofing capability (optional)	
2.4 Reliability	Mean Time Between Failures (MTBF)	≥2000 hours
	Continuous working time	≥24 hours
2.5 Environmental adaptability	Operating temperature	-40℃ to +70℃, 10% to 90%RH (Non-condensing)
	Storage environment	-50℃ to +75℃, 10% to 90%RH (Non-condensing)

3. Interfaces and Dimensions

3.1 Interface	RF Connector	SMA-KF
	Impedance	50Ω
	Output Power Range	-55dBm ~ -65dBm
3.2 Structural Dimensions and Appearance	Power Supply Interface	J30J-9ZKP, pin definitions are as follows; shown in Table 1 below:
	Device appearance	Gray
	Device dimensions	154mm × 130mm × 52mm (with an error of ±0.5mm), as shown in Figure 2 below.

Table 1 Pin Definition Table

NO.	Pin definition	Signal Description	Explanation
1	+18V~+32V	Power input	Power port
2	+18V~+32V	Power input	
3	GND	Power supply ground	
4	GND	Power supply ground	
5	GND	Signal ground	Location data port (Optional)
6	RX	Data acceptance	
7	1PPS	Pulse per second	
8	TX	Presentation of information	Obligate
9	NC	NC	

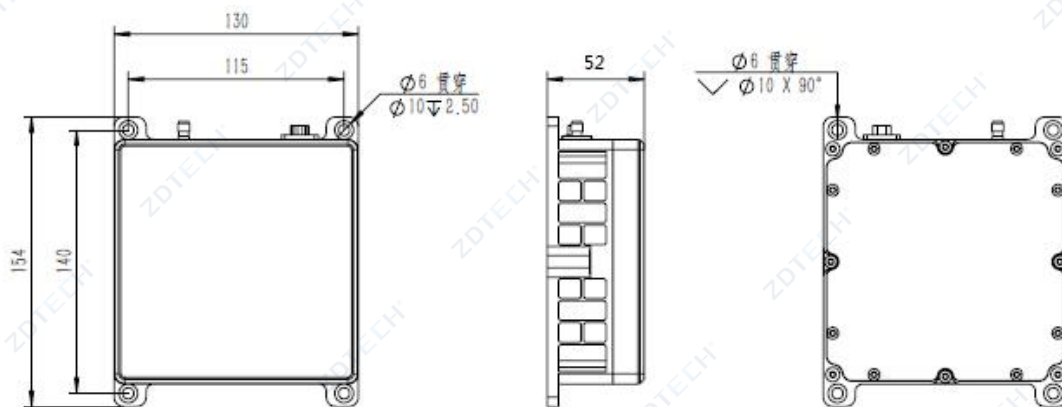


Figure 2. External structure diagram of ZD-KAXT168E_4B1L1E1G1 protective antenna

4. Power Supply and Power Consumption

- Input voltage: +18V to +32V;
- Normal operating power consumption: ≤22W

5. Weight

- Weight ≤950g

6. Delivery List

The equipment and accessories included in this model's delivery are listed in Table 2 below:

Table 2. Product Matching List for ZD-KXAT168E_4B1L1E1G1 Protective Antenna

NO.	Product Name	Qty	Unit	Remark
1	Protective antenna	1	Table	-
2	Work Certificate	1	Portion	Paper
3	Test Report	1	Portion	Paper
4	Power data cable	1	Root	J30J-9TL