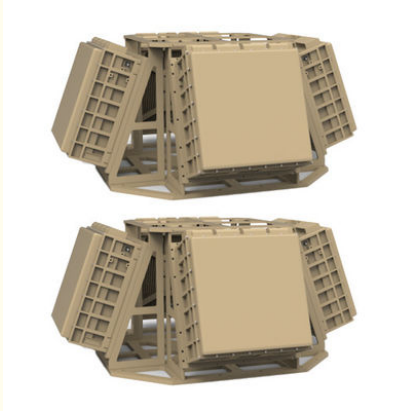
Ku-band medium-range four-element array radar with cutting-edge micro-Doppler and flight path technology

Our Product Introduction

Basic Information

- Place of Origin: China
- Brand Name: MYT
- Certification: CNAS、CMA、CAL、ILAC-MRA
- Model Number: DD-R23
- Minimum Order Quantity: 1
- Price: Pricing is negotiable based on order quantity
- Delivery Time: 10 work days
- Payment Terms: L/C,T/T
- Supply Ability: 1000units per month



Product Specification

- TAS Tracking Target Count:≥24
- Minimum Detection Altitude:≤10m
- Velocity Range: 1m/s~100m/s
- Resolution Ratio: Distance: ≤15m, Azimuth: ≤6°, Elevation: ≤4°
- Operating Temperature Range: -40 +70
- Size: ≤ 950mm* 950mm*450mm
- Power Dissipation: ≤ 1400W
- Supply Electricity: AC220V/DC24V
- Levels Of Protection: IP66
- Joggle: RJ45 Network Port
- Highlight: **Ku-band anti UAV radar**, **four-element array radar**, **micro-Doppler flight path radar**

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Product Description

DD-R23 Ku-band medium-range four-element array radar

1, Product Overview

The DD - R23 Ku - band medium - range four - element array radar is engineered with a state - of - the - art system that is entirely solid - state, fully coherent, and integrates a pulse Doppler mechanism. This advanced configuration enables the radar to possess the outstanding capacity for all - weather detection and to issue early warnings specifically for "low, small, slow" targets. Such targets are typically challenging to detect because of their distinct characteristics; however, the DD - R23 radar is well - equipped to manage them.

To further boost its detection capabilities, the system utilizes cutting - edge machine learning and artificial intelligence recognition technologies. These technologies are founded on two key aspects: "micro - Doppler signatures" and "flight path features." By capitalizing on these elements, the radar system can attain an ultra - low false alarm rate. This is of paramount significance as it guarantees the high reliability of the information provided.

Regarding target detection and classification, the DD - R23 radar is highly effective. It can accurately detect and classify a diverse range of targets. These include drones, which have become increasingly widespread in various applications and present both security and operational challenges. Light aircraft, with their relatively smaller size and lower flight altitudes, also fall within the radar's detection range. Helicopters, renowned for their vertical take - off and landing capabilities and distinctive flight patterns, can be readily identified. Powered triplanes, airships, and airborne balloons are additional targets that the radar can efficiently detect and classify, rendering it a versatile and dependable instrument for airspace monitoring.

2, Function

The product is furnished with comprehensive target monitoring and analysis capabilities. It facilitates target positioning, trajectory display, and playback functions on the map. Concurrently, it presents key parameters such as target distance, azimuth, elevation, and speed in real time. The system integrates built-in data recording and storage functionality, capable of fully saving target trajectory data and radar status information, and supports subsequent data playback and query operations.

Leveraging AI recognition technology based on "micro-Doppler features" and "track features," the product exhibits powerful target classification and identification capabilities. It can accurately identify various target types, including drones, birds, people, and vehicles. The system incorporates advanced machine learning technology, enabling it to autonomously adapt to the current environment and initiate operation directly without the necessity for manual parameter adjustment.

To ensure reliable all-weather operation, the product is equipped with cloud and rain noise suppression capabilities, effectively eliminating interference under adverse weather conditions. The software interface provides flexible parameter configuration options, enabling users to adjust settings such as elevation coverage, target update rate, and monitoring range according to their requirements. Additionally, the product features automatic compensation functions for independent positioning, orientation, elevation, and roll angles, ensuring measurement accuracy. During system operation, users can comprehensively monitor the equipment's working conditions through real-time status monitoring functionality, ensuring the stable and efficient operation of the system.

3, qualification

order number	parameter	metric
1	frequency range	Ku frequency range
2	detection range	≥ 5Km(RCS:0.01m^2, unmanned aerial vehicle) ≥ 10Km(RCS:0.3 m^2, unmanned aerial vehicle)
3	fade zone	≤ 150m
4	work pattern	2D Phased Array
5	hunting zone	Azimuth: 0°~360°, elevation: 0°~80° (configure according to task requirements)
6	trace function	TAS feature available
7	TAS tracking target count	≥ 24
8	Minimum detection altitude	≤ 10m
9	velocity range	1m/s~100m/s
10	Target update rate	TWS: ≤ 3.5 seconds (30° pitch coverage, 7.5km range) TAS: ≤ 0.5s (default)
11	resolution ratio	Distance: ≤15m, azimuth: ≤6°, elevation: ≤4°
12	Search precision (RMS)	Distance: ≤10m, azimuth: ≤0.5°, elevation: ≤0.4°
13	Tracking accuracy (RMS)	Distance: ≤10m, azimuth: ≤0.4°, elevation: ≤0.3°
14	joggle	RJ45 network port
15	target capacity	≥500 batches
16	weight	≤ 80Kg (net equipment weight, excluding power supply/cable)

17	supply electricity	AC220V/DC24V
18	power dissipation	≤ 1400W
19	size	≤ 950mm* 950mm*450mm
20	operating temperature range	-40 + 70
21	levels of protection	IP66

4, Application Scenarios

5, Certification Certificate

6, Company profile

Chongqing Miao Yitang Technology Co., Ltd. is a specialized company engaged in anti-drone and unmanned intelligent defense management.

With the technical support from the AI Internet of Things Research Institute of the Chinese Academy of Sciences and collaborations with multiple intelligent AI companies, the company has established research laboratories for AI unmanned field products, accumulating a variety of technical patents.

The company's products are widely applied to unmanned automatic management solutions for various defense and perimeter areas, including AI anti-drone systems and AI unmanned vehicle patrol systems. These systems integrate with multiple technologies such as optoelectronics, radar, vibration, thermal imaging, facial recognition, and radio frequency management, truly achieving a 24-hour uninterrupted anti-drone defense and ground perimeter defense warning system. This allows for cost savings for clients, reduction in human resource allocation, and ensures the safety of clients' lives and property. The outstanding security system has won the company an excellent reputation and created higher value for its partners.

7, Customer Service

1). We offer 24 hours service after sales

2). If there are any usage or quality issues with the product, we provide online technical support to diagnose the cause of the problem.

3). Should you find the products unsatisfactory, kindly return it to us within a period of 3 months from the date of dispatch. Upon receipt and inspection, should the products be found to be free from any damage attributable to human factors, a full refund will be granted. Alternatively, we can engage in discussions to amend the product and subsequently reship the product to you.

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