

Ku-band Medium-range Single-faced Array Radar For Accurate Detection And Classification Of Various Airborne Targets

Our Product Introduction

Basic Information

- Place of Origin: China
- Brand Name: MYT
- Certification: CNAS、CMA、CAL、ILAC-MRA
- Model Number: DD-R21
- 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

- Detection Range: $\geq 5\text{Km}$ RCS:0.01m² unmanned Aerial Vehicle $\geq 10\text{Km}$ RCS:0.3 M² unmanned Aerial Vehicle
- Fade Zone: $\leq 150\text{m}$
- Work Pattern: 2D Phased Array
- Supply Electricity: AC220V/DC24V
- Minimum Detection Altitude: $\leq 10\text{m}$
- Velocity Range: 1m/s~100m/s
- Trace Function: TAS Feature Available
- TAS Tracking Target Count: ≥ 6
- Power Dissipation: $\leq 350\text{W}$
- Resolution Ratio: Distance: $\leq 15\text{m}$, Azimuth: $\leq 6^\circ$, Elevation: $\leq 4^\circ$
- Target Update Rate: TWS: ≤ 3.5 Seconds (30° Pitch Coverage, 7.5km Range) TAS: $\leq 0.5\text{s}$ (default)
- Joggle: RJ45 Network Port
- Highlight: **Ku-band anti UAV radar,**

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Product Description

The DD - R21 Ku-band medium-range single-faced array radar

1, Overview

The DD - R21 Ku - band medium - range monopolar array radar is highly advanced. It has a fully solid - state, coherent, pulse Doppler system, enabling all - weather detection. Designed for early warning of "low, small, slow" targets, it uses machine learning and AI recognition (based on "micro - Doppler signatures" and "flight path features") to detect/classify various targets like drones, light aircraft, etc. with low false alarm rates. It has a unique two - dimensional phase scanning system that can be configured in different ways (e.g., "azimuth mechanical scanning + elevation phase scanning", multi - polar arrays) to meet diverse application needs.

2, Feature

The product features 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 is integrated with built-in data recording and storage functionality, capable of completely saving target trajectory data and equipment status information, thus supporting subsequent data playback and query operations.

Equipped with advanced AI recognition technology, the system employs "micro-Doppler signature" and "trajectory feature" analysis methods to accurately classify and identify various target types, including drones, birds, humans, and vehicles. It incorporates adaptive machine learning technology, enabling it to autonomously adapt to the current environment and initiate operation directly without the need for manual parameter adjustment.

To ensure reliable all-weather operation, the system 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.

Moreover, the product incorporates automatic compensation functions for independent positioning, orientation, elevation, and roll angles, ensuring measurement accuracy. During system operation, users can fully monitor the equipment's working conditions through the 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	≤ 150 m
4	work pattern	2D Phased Array
5	hunting zone	Heading: ±45°, Pitch: 0°~ 80° (configurable according to mission requirements)
6	trace function	TAS feature available
7	TAS tracking target count	≥ 6
8	Minimum detection altitude	≤ 1 0 m
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	≤ 13Kg (net weight of the device, excluding power supply/cable)
17	supply electricity	AC220V/DC24V
18	power dissipation	≤ 35 0W
19	size	≤ 337mm* 317mm* 137 mm
20	operating temperature range	-40 + 70

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.



CUSTOMER SERVICE

- * Fast and patient communication: professional sales reply immediately
- * Fast delivery: usually 2-7 days
- * Flexible Safe shipping: fast by air or sea with cheap freight
- * Customer-friendly: complete user manual and exact video training provided
- * After sales service: one year warranty and life time technical support





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