

Ku-band Medium-range Radar Is A Fully Solid-state Pulse Doppler System Using AI To Detect Low Small Slow Targets With Minimal False Alarms In All Weather Adaptable To Diverse Scenarios

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
- Trace Function: TAS Feature Available
- TAS Tracking Target Count: ≥ 6
- Minimum Detection Altitude: $\leq 10\text{m}$
- Velocity Range: 1m/s~100m/s
- Target Update Rate: TWS: ≤ 3.5 Seconds (30° Pitch Coverage, 7.5km Range) TAS: $\leq 0.5\text{s}$ (default)
- Resolution Ratio: Distance: $\leq 15\text{m}$, Azimuth: $\leq 6^\circ$, Elevation: $\leq 4^\circ$
- Joggle: RJ45 Network Port
- Supply Electricity: AC220V/DC24V
- Power Dissipation: $\leq 350\text{W}$

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Product Description

Ku-band medium-range single-faced array radar

1, Overview

The DD-R21 Ku-band medium-range monopolar array radar employs a fully solid-state, fully coherent, and pulse Doppler system, enabling all-weather detection and early warning of "low, small, slow" targets. Utilizing machine learning and AI recognition technologies based on "micro-Doppler signatures" and "flight path features," it achieves effective detection and classification of targets including drones, light aircraft, helicopters, powered triplanes, airships, and airborne balloons with extremely low false alarm rates. The radar features a two-dimensional phase scanning system that can be expanded into configurations such as "azimuth mechanical scanning + elevation phase scanning" or multi-polar arrays, meeting diverse application requirements.

2, Feature

- 1) It can realize the target positioning, trajectory display and playback function on the map, and can display the target distance, azimuth, pitch and speed information;
- 2) Records and saves target track data and radar status data, and supports data playback and query;
- 3) The AI recognition technology adopts "micro Doppler feature" and "track feature", which has the ability to classify and identify targets, such as drones, birds, people and cars.
- 4) Using machine learning technology, adaptive environment, no need to adjust parameters, can be started directly to work;
- 5) It has cloud and rain noise suppression function, which can work all day long;
- 6) The software can configure the pitch coverage, target update rate and range range;
- 7) It has the function of automatic compensation for independent positioning and orientation, pitch and roll angle;
- 8) It has real-time working status monitoring.

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	≤ 10 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
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.

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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