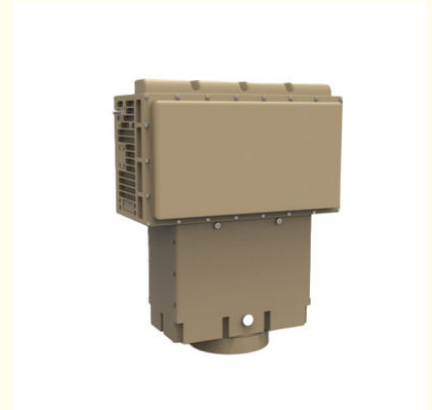


X-band Medium-range Phased Array Radar Solid-state Coherent Pulse Doppler System with AI Machine Learning for All-weather Detection of Low Small Slow Targets, Minimizing False Alarms

Our Product Introduction

Basic Information

- Place of Origin: China
- Brand Name: MYT
- Certification: CNAS、CMA、CAL、ILAC-MRA
- Model Number: DD-R33
- 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: ≥ 6
- Minimum Detection Altitude: $\leq 10\text{m}$
- Velocity Range: $1\text{m/s} \sim 100\text{m/s}$
- Resolution Ratio: Distance: $\leq 15\text{m}$, Azimuth: $\leq 6^\circ$, Elevation: $\leq 12^\circ$
- Operating Temperature Range: $-40 \sim +60$
- Size: $\leq 405\text{mm} \times 316\text{mm} \times 160\text{mm}$
- Power Dissipation: $\leq 200\text{W}$
- Supply Electricity: AC220V/DC24V
- Levels Of Protection: IP66
- Joggle: RJ45 Network Port
- Highlight: X-band phased array radar system, solid-state coherent pulse Doppler radar, anti UAV radar with AI detection

The DD-R33 medium-range X-band phased array radar

1, Product Overview

The DD-R33 medium-range X-band phased array radar adopts a fully solid-state, fully coherent, and pulse Doppler system. This enables it to conduct all-weather detection and early warning of "low, small, slow" targets. By leveraging machine learning and AI-based trajectory feature recognition, the system can accurately detect and classify various targets, such as drones, light aircraft, helicopters, powered triplanes, airships, and airborne balloons, while maintaining extremely low false alarm rates.

2, Function

The product employs advanced machine learning technology, enabling it to adapt to battlefield environments and be directly put into use after installation without parameter adjustment. The system possesses powerful detection capabilities and an extremely low false alarm rate, effectively detecting the maneuvering flight of unmanned aerial vehicles. To ensure reliable all-weather operation, the product is equipped with cloud and rain noise suppression functionality, allowing continuous operation under various weather conditions.

In terms of scanning modes, the system offers two directional scanning methods: "one-dimensional mechanical scanning + one-dimensional phase scanning" and "two-dimensional phase scanning." It can achieve both 360° airspace detection and precise monitoring of key areas, with flexible switching between the two modes without the need for software changes. The product simultaneously integrates mechanical scanning tracking and phase scanning TAS tracking functions to ensure continuous and stable tracking of targets.

AI recognition technology based on "track features" enables the system to accurately classify and identify multiple target types such as drones, birds, personnel, and vehicles. The built-in automatic positioning and calibration module can automatically implement equipment leveling and north calibration functions, simplifying the operation process. Additionally, the system provides flexible setting functions for distance and elevation scanning ranges, allowing users to make personalized configurations according to actual needs.

3, qualification

order number	parameter	metric
1	frequency range	X frequency range
2	detection range	≥ 3Km(RCS:0.01m ² , unmanned aerial vehicle) ≥ 6Km(RCS:0.3 m ² , unmanned aerial vehicle)
3	fade zone	≤100m
4	work pattern	Supports machine scanning and 2D phase scanning
5	hunting zone	Scan: Angle: 0°~360°, Pitch: 0°~80° (configure according to task requirements) Sweep: Azimuth: -45° to 45°, elevation: 0° to 80° (configure according to mission requirements)
6	trace function	Machine scanning tracking function / phase scanning TAS function
7	TAS tracking target count	≥6
8	Minimum detection altitude	≤10m
9	velocity range	1m/s~100m/s
10	Target update rate	Scan duration ≤3.5 seconds per phase, with a pitch coverage of 30° and a range of 5 km.
11	resolution ratio	Distance: ≤15m, azimuth: ≤6°, elevation: ≤12°
12	Search precision (RMS)	Distance: ≤10m, azimuth: ≤0.4°, elevation: ≤1°
13	Tracking accuracy (RMS)	Distance: ≤10m, azimuth: ≤0.4°, elevation: ≤0.6°
14	joggle	RJ45 network port
15	target capacity	≥500 batches
16	weight	≤16kg (front panel: ≤9kg, turntable: ≤12kg)
17	supply electricity	AC220V/DC24V
18	power dissipation	≤200W
19	size	≤405mm*316mm*160mm
20	operating temperature range	-40 +60
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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