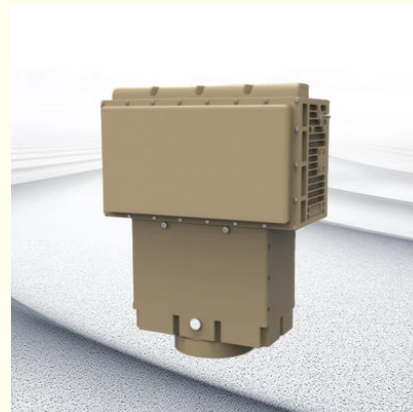


The medium-range X-band phased array radar for all-weather detection and early warning of "low small slow" targets

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,
anti UAV radar system,
all-weather detection radar

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

1, Product Overview

The DD - R33 medium - range X - band phased array radar is designed with a state - of - the - art configuration, featuring a fully solid - state, fully coherent, and pulse Doppler system. This advanced design is the key that empowers the radar to perform all - weather detection and early warning specifically for "low, small, slow" targets. These types of targets are often more difficult to detect due to their characteristics, such as their low altitude, small size, and slow speed.

The radar takes advantage of the latest technological advancements in the form of machine learning and AI - based trajectory feature recognition. Through these intelligent algorithms, the system has the remarkable ability to accurately detect and classify a wide variety of targets. These include drones, which have become increasingly common in various applications and can pose challenges for detection. Light aircraft, with their relatively small size compared to larger commercial planes, are also within the radar's detection scope. Helicopters, known for their unique flight characteristics, can be precisely identified. Powered triplanes, which are less common but still need to be monitored, are detected accurately. Additionally, airships and airborne balloons, which may be used for various purposes like advertising or scientific research, are also detected and classified by the radar. All of this is achieved while the system manages to maintain extremely low false alarm rates, ensuring that only real targets are flagged for attention.

2, Function

The product utilizes advanced machine learning technology. This enables it to adapt to battlefield environments and be directly deployed for use upon installation, without the requirement for parameter adjustment. The system features robust detection capabilities and an extremely low false alarm rate, effectively detecting the maneuvering flight of unmanned aerial vehicles. To guarantee reliable all - weather operation, the product is equipped with cloud and rain noise suppression functionality, enabling continuous operation under diverse weather conditions.

Regarding scanning modes, the system provides two directional scanning methods: "one - dimensional mechanical scanning + one - dimensional phase scanning" and "two - dimensional phase scanning". It can accomplish both 360° airspace detection and precise monitoring of key areas. The two modes can be flexibly switched without the need for software modifications. The product concurrently integrates mechanical scanning tracking and phase scanning TAS tracking functions to ensure continuous and stable target tracking.

AI recognition technology based on "track features" empowers the system to accurately classify and identify multiple target types, including drones, birds, personnel, and vehicles. The built - in automatic positioning and calibration module can automatically perform equipment leveling and north calibration functions, streamlining the operation process. Moreover, the system offers flexible setting functions for distance and elevation scanning ranges, enabling users to make personalized configurations in accordance with actual requirements.

3, qualification

order number	parameter	metric
1	frequency range	X frequency range
2	detection range	$\geq 3\text{Km}(\text{RCS}:0.01\text{m}^2, \text{unmanned aerial vehicle})$ $\geq 6\text{Km}(\text{RCS}:0.3\text{m}^2, \text{unmanned aerial vehicle})$
3	fade zone	$\leq 100\text{m}$
4	work pattern	Supports machine scanning and 2D phase scanning
5	hunting zone	Scan: Angle: $0^\circ \sim 360^\circ$, Pitch: $0^\circ \sim 80^\circ$ (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	$\leq 10\text{m}$
9	velocity range	$1\text{m/s} \sim 100\text{m/s}$
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: $\leq 15\text{m}$, azimuth: $\leq 6^\circ$, elevation: $\leq 12^\circ$
12	Search precision (RMS)	Distance: $\leq 10\text{m}$, azimuth: $\leq 0.4^\circ$, elevation: $\leq 1^\circ$
13	Tracking accuracy (RMS)	Distance: $\leq 10\text{m}$, azimuth: $\leq 0.4^\circ$, elevation: $\leq 0.6^\circ$
14	joggle	RJ45 network port
15	target capacity	≥ 500 batches
16	weight	$\leq 16\text{kg}$ (front panel: $\leq 9\text{kg}$, turntable: $\leq 12\text{kg}$)
17	supply electricity	AC220V/DC24V
18	power dissipation	$\leq 200\text{W}$
19	size	$\leq 405\text{mm} \times 316\text{mm} \times 160\text{mm}$

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 reshipe 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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