

Anti UAV Radar X-band Short-range Monopolar Radar With Advanced Detection And Early Warning Capabilities

Our Product Introduction

Basic Information

- Place of Origin: China
- Brand Name: MYT
- Certification: CNAS、CMA、CAL、ILAC-MRA
- Model Number: DD-R34
- 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: $\leq 12^\circ$, Elevation: $\leq 12^\circ$
- Operating Temperature Range: $-40 \sim +60$
- Size: $\leq 65\text{mm} \times 205\text{mm} \times 150\text{mm}$
- Power Dissipation: $\leq 150\text{W}$
- Supply Electricity: AC220V/DC24V
- Levels Of Protection: IP66
- Joggle: RJ45 Network Port
- Highlight: X-band anti UAV radar,
short-range monopolar radar,
UAV detection early warning radar

The DD-R34 X-band short-range monopolar rada

1, Product Overview

The DD-R34 X-band short-range monopolar radar integrates a fully solid-state, fully coherent, and pulse Doppler system. This system enables it to perform all-weather detection and early warning of "low, small, slow" targets. By leveraging machine learning and AI recognition technologies based on "micro-Doppler signatures" and "flight path features," the radar effectively detects and classifies a variety of targets. These targets include drones, light aircraft, helicopters, powered triplanes, airships, and airborne balloons, all while maintaining an extremely low false alarm rate. The radar is equipped with a two-dimensional phase scanning system. This system can be expanded into configurations such as "azimuth mechanical scanning + elevation phase scanning" or multi-polar arrays, thus meeting diverse application requirements.

2, Function

The product is equipped with comprehensive target monitoring and analysis capabilities. These capabilities enable it to perform target positioning, trajectory display, and playback functions directly on the map. Simultaneously, it presents key parameters in real - time, such as the target's distance from the monitoring point, azimuth (the horizontal angle measured clockwise from a reference direction), elevation (the vertical angle above the horizontal plane), and speed.

This system comes with built - in data recording and storage functionality. This means it can thoroughly save all target trajectory data, which includes details about the path the target has taken over time. It also stores radar status information, such as the operating mode, power levels, etc. This data storage supports subsequent data playback, allowing users to review past target movements, and query operations, enabling them to search for specific data points or time intervals.

By leveraging AI recognition technology based on "micro - Doppler features" and "track features," the product showcases powerful target classification and identification capabilities. It can accurately distinguish between various target types. These include drones, which are unmanned aerial vehicles used for a variety of purposes; birds, which are natural flying organisms; people, who may be detected in certain surveillance scenarios; and vehicles, which can be on - ground or in - air depending on the context of the monitoring.

The system incorporates advanced machine learning technology. This allows it to adapt autonomously to the current environment. Instead of requiring manual parameter adjustment, it can start operation directly. This feature is highly beneficial as it reduces the need for expert intervention and allows for seamless operation in different scenarios.

To guarantee reliable all - weather operation, the product is equipped with cloud and rain noise suppression capabilities. These capabilities effectively eliminate interference caused by adverse weather conditions. Cloud cover and rain can often disrupt the signal and introduce noise in the monitoring process, but this product can overcome these challenges.

The software interface of the product offers flexible parameter configuration options. Users can adjust settings according to their specific needs. For example, they can modify the elevation coverage, which determines the vertical range of the monitoring area; the target update rate, which affects how frequently new target data is received and processed; and the monitoring range, which defines the maximum distance at which the system can detect targets.

In addition, the product has automatic compensation functions for independent positioning, orientation, elevation, and roll angles. These functions ensure measurement accuracy. Any changes or inaccuracies in these angles due to external factors, such as vibrations or changes in the mounting position, can be compensated for automatically.

During system operation, users can make full use of the real - time status monitoring functionality. This enables them to closely monitor the equipment's working conditions. By doing so, they can ensure the stable and efficient operation of the entire system, quickly identifying and addressing any potential issues that may arise.



3, qualification

order number	parameter	metric
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1	frequency range	X frequency range
2	detection range	$\geq 1.5\text{Km}(\text{RCS}:0.01\text{m}^2, \text{unmanned aerial vehicle})$
3	fade zone	$\leq 80 \text{ m}$
4	work pattern	2D Phased Array
5	hunting zone	Heading: $\pm 45^\circ$, Pitch: $0^\circ \sim 80^\circ$ (configurable according to mission requirements)
6	trace function	TAS feature available
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	TWS: $\leq 3\text{s}$ (60° pitch coverage) TAS: $\leq 0.5\text{s}$ (default)
11	resolution ratio	Distance: $\leq 15\text{m}$, azimuth: $\leq 12^\circ$, elevation: $\leq 12^\circ$
12	Search precision (RMS)	Distance: $\leq 10\text{m}$, azimuth: $\leq 1^\circ$, elevation: $\leq 1^\circ$
13	Tracking accuracy (RMS)	Distance: $\leq 10\text{m}$, azimuth: $\leq 0.8^\circ$, pitch: $\leq 0.8^\circ$
14	joggle	RJ45 network port
15	target capacity	≥ 500 batches
16	weight	$\leq 7\text{Kg}$ (net weight of the device, excluding power supply/cable)
17	supply electricity	AC220V/DC24V
18	power dissipation	$\leq 150\text{W}$
19	size	$\leq 265\text{mm} \times 205\text{mm} \times 150\text{mm}$
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 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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