

X-band Long-range Phased Array Radar Solid-state Coherent Pulse Doppler System With Integrated AI Machine Learning For All-weather Surveillance Of Low Small Slow Targets And Minimal False Positives

Our Product Introduction

Basic Information

- Place of Origin: China
- Brand Name: MYT
- Certification: CNAS、CMA、CAL、ILAC-MRA
- Model Number: DD-R38
- 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: 10m~5000m
- Velocity Range: 1m/s~100m/s
- Resolution Ratio: Distance: $\leq 15\text{m}$, Azimuth: $\leq 6^\circ$, Elevation: $\leq 4^\circ$
- Operating Temperature Range: -40 +60
- Size: $\leq 785\text{mm} \times 340\text{mm} \times 220\text{mm}$
- Power Dissipation: $\leq 1200\text{W}$
- Supply Electricity: AC220V/DC24V
- Levels Of Protection: IP66
- Joggle: RJ45 Network Port
- Highlight: **X-band phased array radar system,
long-range anti UAV radar,
AI machine learning surveillance radar**

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The DD-R38 X-band long-range phased array radar

1, Product Overview

The DD-R38 X-band long-range phased array radar, featuring a fully solid-state, fully coherent, and pulse Doppler system, enables all-weather detection and early warning of "low, small, slow" targets. Utilizing machine learning and AI-based trajectory feature recognition, it achieves highly accurate detection and classification of targets including drones, light aircraft, helicopters, powered triplanes, airships, and airborne balloons with minimal false alarm rates.

2, Function

- 1) Adaptive to the battlefield environment by using machine learning technology, it can work after installation without parameter adjustment;
- 2) Strong detection ability, low false alarm, can detect the maneuvering flight of drones;
- 3) It has cloud and rain noise suppression function, which can work all day long;
- 4) It has the directional scanning mode of "one-dimensional machine scanning + one-dimensional phase scanning" and "two-dimensional phase scanning" to realize 360° airspace and key area detection. The two modes can be flexibly switched without changing the software.
- 5) Equipped with machine scanning tracking and phase scanning TAS tracking functions.
- 6) The AI recognition technology based on "track features" can classify and identify drones, birds, people and cars;
- 7) Built-in auto-position calibration module, automatically realize auto leveling and calibration function;
- 8) It has a range and pitch scan range setting function.

3, qualification

order number	parameter	metric
1	frequency range	X frequency range
2	detection range	$\geq 10\text{Km}(\text{RCS}:0.01\text{m}^2, \text{unmanned aerial vehicle})$ $\geq 20\text{Km}(\text{RCS}:0.3\text{m}^2, \text{unmanned aerial vehicle})$
3	fade zone	$\leq 150\text{m}$
4	work pattern	Supports machine scanning and 2D phase scanning
5	hunting zone	Scan: Angle: $0^\circ \sim 360^\circ$, Pitch: $0^\circ \sim 60^\circ$ (configure according to task requirements)
		Sweep: Azimuth: -45° to 45° , elevation: 0° to 60° (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	$10\text{m} \sim 5000\text{m}$
9	velocity range	$1\text{m/s} \sim 100\text{m/s}$
10	Target update rate	The scanning speed is ≤ 5 seconds per phase, with a pitch coverage of 30° and a range of 15km .
11	resolution ratio	Distance: $<15\text{m}$, azimuth: $<6^\circ$, elevation: $<4^\circ$
12	Search precision (RMS)	Distance: $<10\text{m}$, azimuth: $<0.4^\circ$, elevation: $<0.4^\circ$
13	Tracking accuracy (RMS)	Distance: $<10\text{m}$, azimuth: $<0.3^\circ$, elevation: $<0.3^\circ$
14	joggle	RJ45 network port
15	target capacity	≥ 500 batches
16	weight	$\leq 38\text{Kg}$ (net weight of the device, excluding power supply/cable)
17	supply electricity	AC220V/DC24V
18	power dissipation	$\leq 1200\text{W}$
19	size	$\leq 785\text{mm} \times 340\text{mm} \times 220\text{mm}$
20	operating temperature range	$-40 \sim +60$
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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