Advanced X-band Long-range Quad-cell Radar For Accurate Detection And Classification Of Drones And Other Targets

Our Product Introduction

Basic Information

- Place of Origin: China
- Brand Name: MYT
- Certification: CNAS、CMA、CAL、ILAC-MRA
- Model Number: DD-R37
- 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
- Velocity Range: 1m/s~100m/s
- Resolution Ratio: Distance: ≤15m, Azimuth: ≤6°, Elevation: ≤4°
- Operating Temperature Range: -40 +60
- Size: ≤ 510mm*3 40mm*135mm
- Power Dissipation: ≤1200W
- Supply Electricity: AC220V/DC24V
- Levels Of Protection: IP66
- Joggle: RJ45 Network Port
- Highlight: **X-band drone detection radar**, **long-range anti UAV radar**, **quad-cell radar for drone classification**

Product Description

The DD-R37 X-band long-range quad-cell radar

1, Product Overview

The DD-R37 X-band long-range quad-cell 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. Leveraging machine learning and AI recognition technologies based on "micro-Doppler signatures" and "flight path features," the radar effectively detects and classifies various targets, including drones, light aircraft, helicopters, powered triplanes, airships, and airborne balloons, with an extremely low false alarm rate. The radar is equipped with a two-dimensional phase scanning system, which can be extended into configurations such as "azimuth mechanical scanning + elevation phase scanning" or multi-cell arrays to meet a wide range of application requirements.

2, Function

The product possesses comprehensive target monitoring and analysis capabilities, enabling target positioning, trajectory display, and playback functions on the map while real-time presenting key parameters such as target distance, azimuth, elevation, and speed. The system features built-in data recording and storage functionality, which can completely save target trajectory data and radar status information, supporting subsequent data playback and query operations.

Employing AI recognition technology based on "micro-Doppler features" and "track features," the product has powerful target classification and identification capabilities, accurately recognizing various target types including drones, birds, people, and vehicles. The system integrates advanced machine learning technology, allowing it to autonomously adapt to the current environment and start operation directly without manual parameter adjustment.

To ensure reliable all-weather operation, the product is equipped with cloud and rain noise suppression capabilities, effectively eliminating interference under adverse weather conditions. The software interface provides flexible parameter configuration options, allowing users to adjust settings such as elevation coverage, target update rate, and monitoring range according to their needs. Additionally, the product features automatic compensation functions for independent positioning, orientation, elevation, and roll angles, ensuring measurement accuracy. During system operation, users can fully monitor equipment working conditions through real-time status monitoring functionality, ensuring stable and efficient system operation.

3, qualification

order number	parameter	metric
1	frequency range	X frequency range
2	detection range	≥ 10Km(RCS:0.01m^2, unmanned aerial vehicle) ≥ 20Km(RCS:0.3 m^2, unmanned aerial vehicle)
3	fade zone	≤ 150m
4	work pattern	2D Phased Array
5	hunting zone	Heading: ±45°, Pitch: 0°~ 60° (configurable according to mission requirements)
6	trace function	TAS feature available

7	TAS tracking target count	≥ 6
8	Minimum detection altitude	≤ 10m
9	velocity range	1m/s~100m/s
10	Target update rate	TWS: ≤ 5s (30° pitch coverage, 15km 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: ≤ 0.3°, pitch: ≤ 0.3°
14	joggle	RJ45 network port
15	target capacity	≥500 batches
16	weight	≤ 25Kg (net weight of the device, excluding power supply/cable)
17	supply electricity	AC220V/DC24V
18	power dissipation	≤ 1200W
19	size	≤ 510mm*3 40mm*135mm
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.

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