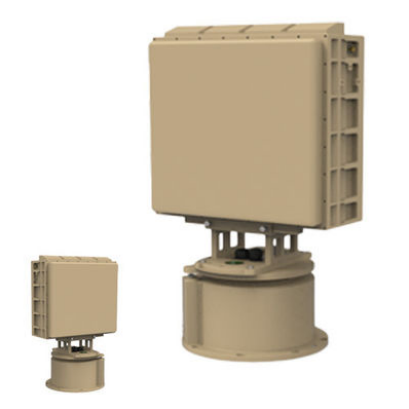
Ku-band Radar For Defense And Security Sector With Advanced Capabilities For Detecting Drones And Cruise Missiles

Our Product Introduction

Basic Information

- Place of Origin: China
- Brand Name: MYT
- Certification: CNAS、CMA、CAL、ILAC-MRA
- Model Number: DD-R22
- 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

- Detection Range: ≥5Km RCS:0.01m2 Unmanned Aerial Vehicle 3 Fade Zone
- Fade Zone: ≤150m
- TAS Tracking Target Count:≥6
- Size: ≤575mm*317mm*220mm
- Minimum Detection Altitude:≤10m
- Velocity Range: 1m/s~100m/s
- Resolution Ratio: Distance: ≤15m, Azimuth: ≤6°, Elevation: ≤4°
- Operating Temperature Range: -40 +70
- Power Dissipation: ≤350W
- Supply Electricity: AC220V/DC24V
- Highlight: **Ku-band anti UAV radar**, **drone detection radar system**, **cruise missile detection radar**

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Product Description

DD-R22 Ku-band medium-range phased array radar

1, Product Overview

The DD - R22 Ku - band medium - range phased array radar represents a highly advanced system. It employs a fully solid - state, fully coherent, and pulse Doppler configuration. This configuration enables it to possess the remarkable capacity for conducting all - weather detection and early warning operations, with a particular focus on "low, small, slow" targets.

By harnessing the capabilities of machine learning and artificial intelligence recognition techniques, which are founded on two critical elements - "track characteristics" and "micro - Doppler signatures", the system achieves an ultra - low false alarm rate. This accomplishment is of great significance as it ensures a more reliable and accurate performance.

Moreover, this radar system is highly efficient in detecting and classifying a wide array of targets. These targets include drones, which have become increasingly common in various applications and present unique detection challenges due to their small size and frequently low - altitude flight. Light aircraft, characterized by their relatively smaller dimensions compared to larger commercial aircraft, also lie within the radar's detection range. Helicopters, renowned for their vertical take - off and landing capabilities and distinct flight patterns, can be accurately detected and classified. Powered triplanes, airships, and airborne balloons, each with their own specific flight characteristics, are also successfully identified by the DD - R22 Ku - band medium - range phased array radar. This comprehensive target detection and classification ability renders the radar an invaluable asset in numerous scenarios, whether for military surveillance, border control, or civilian airspace monitoring.

2, Function

The product utilizes advanced machine learning technology. This enables it to adapt to battlefield environments and be directly operational 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 achieve both 360° all-round spatial detection and precise monitoring of key areas. The two modes can be flexibly switched without the necessity of 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 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 according to actual requirements.

3, qualification

order number	parameter	metric
1	frequency range	Ku frequency range
2	detection range	≥5Km(RCS:0.01m^2, unmanned aerial vehicle)
3	fade zone	≤150m
4	work pattern	Machine scan and 2D phase scan
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 time ≤3.5 seconds per phase (30° pitch coverage, 7.5km range)
11	resolution ratio	Distance: ≤15m, azimuth: ≤6°, elevation: ≤4°
12	Search precision (RMS)	Distance: ≤10m, azimuth: ≤0.4°, elevation: ≤0.4°
13	Tracking accuracy (RMS)	Distance: ≤10m, azimuth: ≤0.3°, elevation: ≤0.3°
14	joggle	RJ45 network port
15	target capacity	≥500 batches
16	weight	≤26kg (front panel: ≤13kg; turntable: ≤12kg)
17	supply electricity	AC220V/DC24V
18	power dissipation	≤350W
19	size	≤575mm*317mm*220mm

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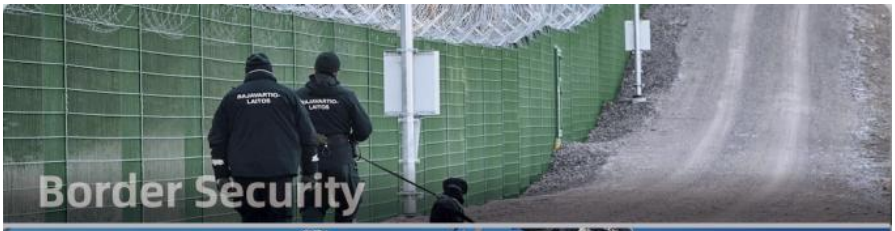
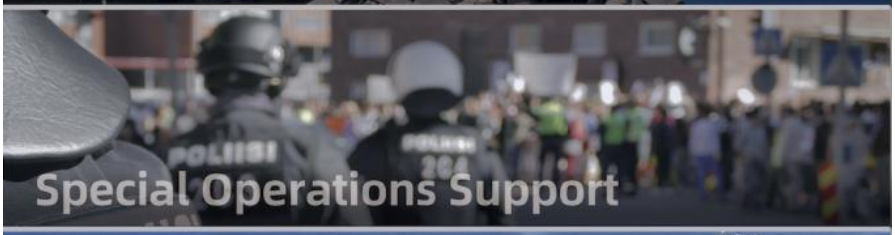
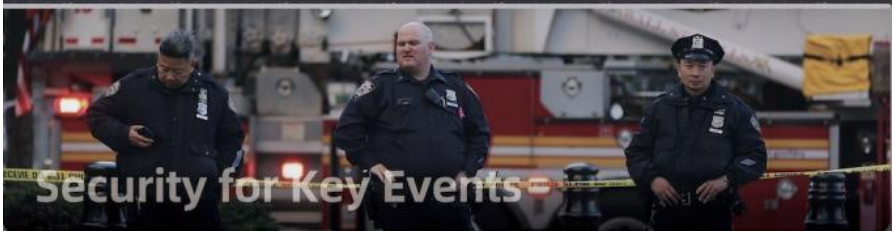
20	operating temperature range	-40 +70
21	levels of protection	IP66

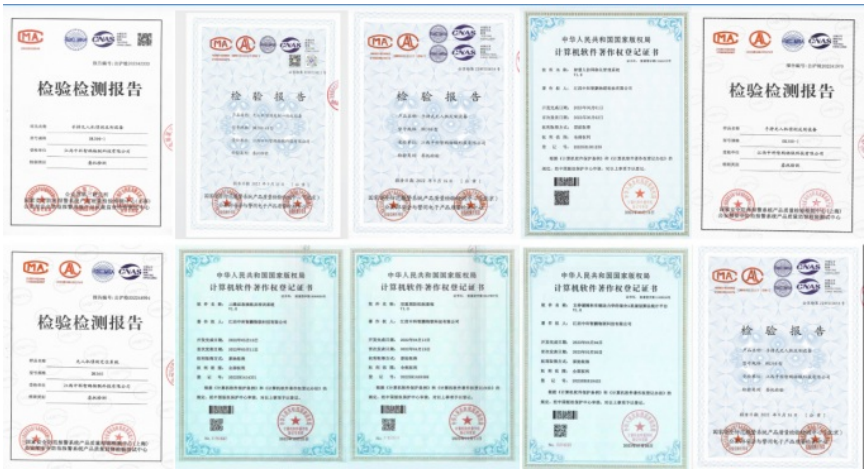
4, Application Scenarios





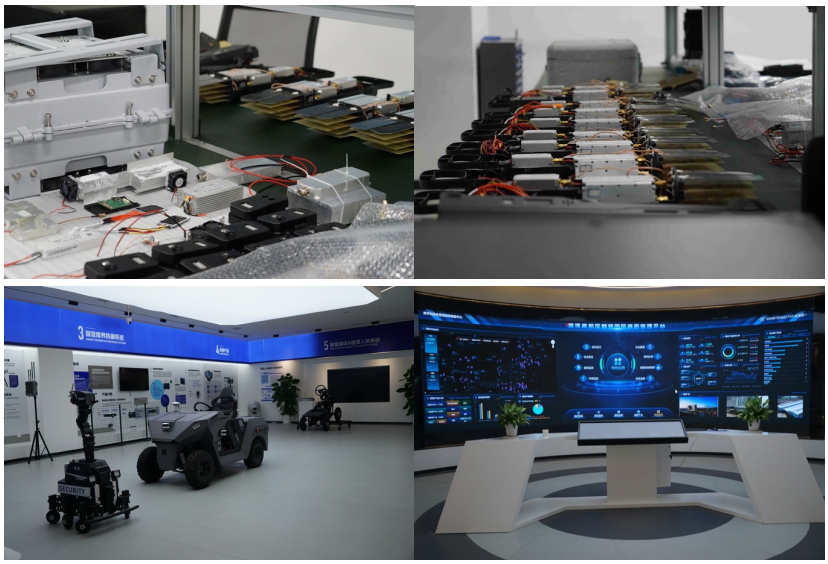


5, Certification Certificate



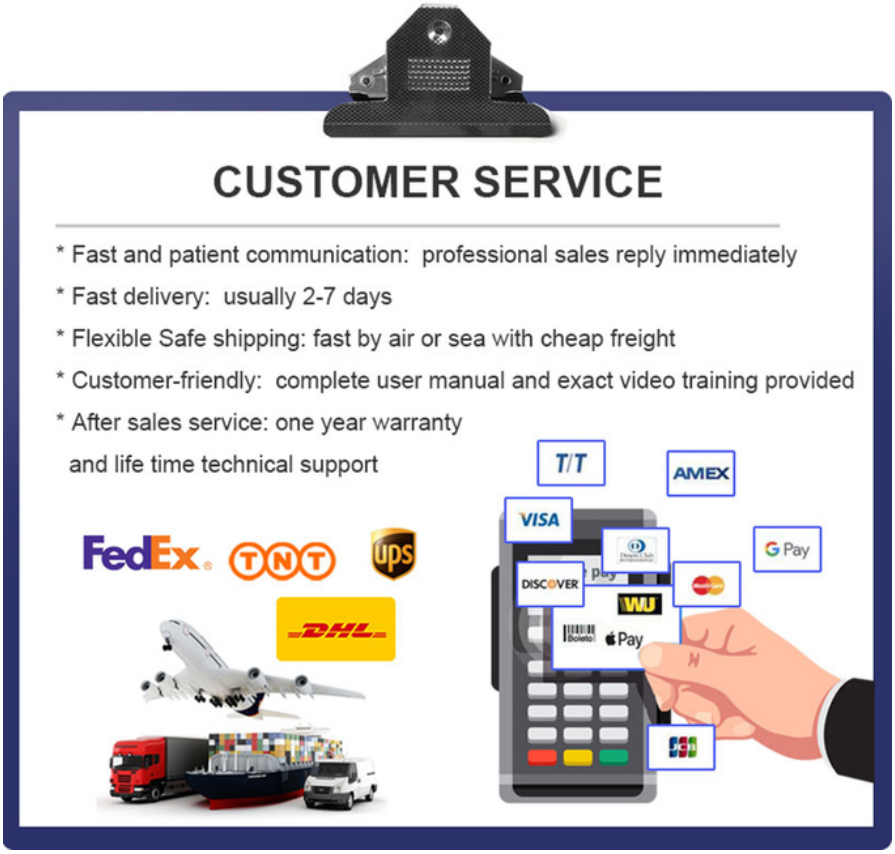
6, Company profile

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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