SKYPATH

GuardTiger C-UAS

Developing Global All-Zone Anti-UAVs Integrated Comprehensive Platform

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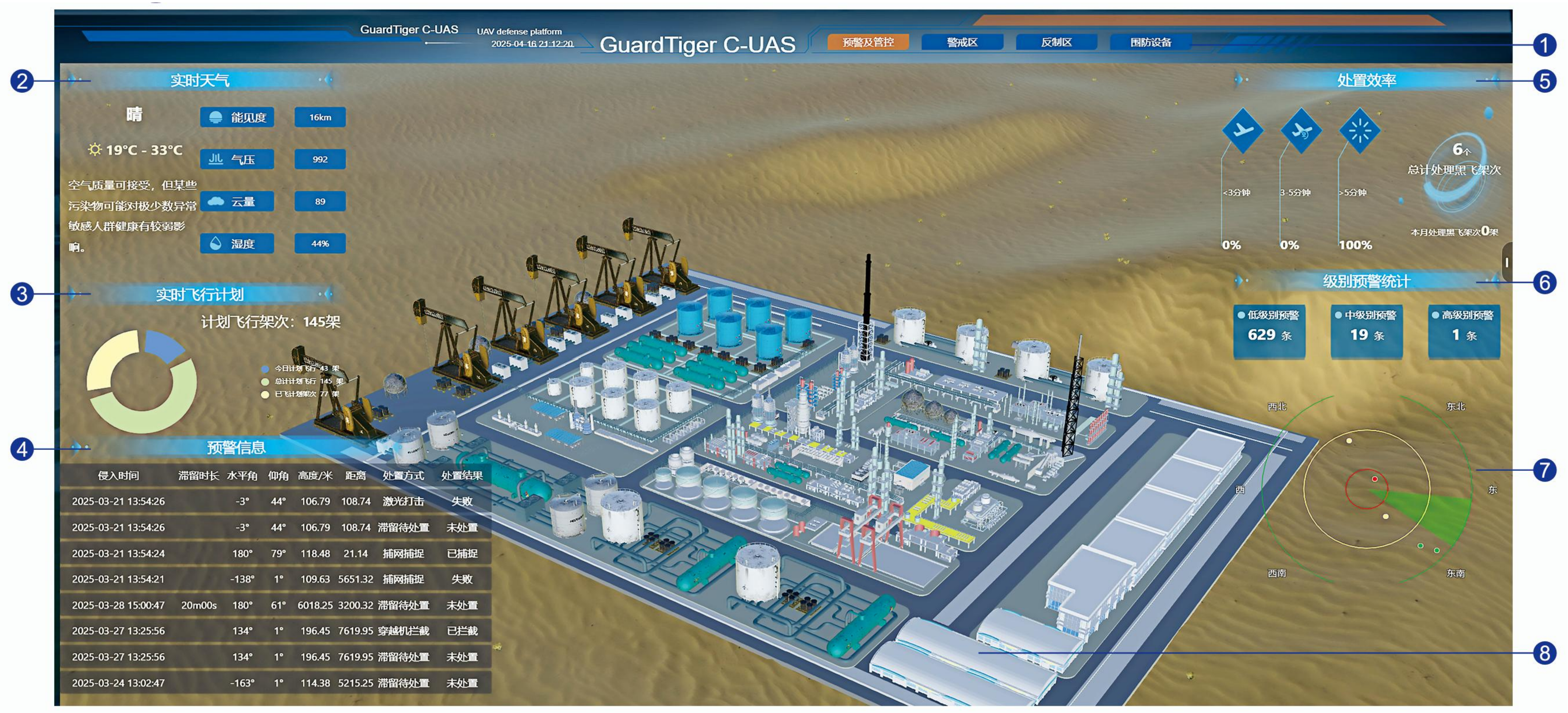
GuardTiger C-UAS

The GuardTiger C-UAS comprehensive platform integrates radar monitoring,electro-optical tracking,spectrum detection, radio interference, and navigation deception and deterrence.Integrating AI intelligent algorithms and digital twin technology, it has trained a large anti-drone model to comprehensively address low-altitude security challenges. It contains key technologies in tackling against drone intrusion threats through efficient, inteligent and fully responsive measures.Equipped with an automatic control mode,it can achieve full utomation of multi-target detection, tracking, evidence collection, and countermeasures.It can accurately manage and control drones in legal flight operations, issue warnings and counter black-flying drones, thus ensuring regional security. The platform supports customization and multiple languages , enabling international users to operate it conveniently.

Developing Global All-Zone
Anti-UAVs Integrated
Comprehensive Platform



晴

☼ 19°C - 33°C

空气质量可接受，但某些污染物可能对极少数异常敏感人群健康有较弱影响。

能见度	16km
气压	992
云量	89
湿度	44%

计划飞行架次：145架

● 今日计划飞行 43 架
● 总计计划飞行 145 架
● 已飞计划架次 77 架

侵入时间	滞留时长	水平角	仰角	高度/米	距离	处置方式	处置结果
2025-03-21 13:54:26		-3°	44°	106.79	108.74	激光打击	失败
2025-03-21 13:54:26		-3°	44°	106.79	108.74	滞留待处置	未处置
2025-03-21 13:54:24		180°	79°	118.48	21.14	捕网捕捉	已捕捉
2025-03-21 13:54:21		-138°	1°	109.63	5651.32	捕网捕捉	失败
2025-03-28 15:00:47	20m00s	180°	61°	6018.25	3200.32	滞留待处置	未处置
2025-03-27 13:25:56		134°	1°	196.45	7619.95	穿越机拦截	已拦截
2025-03-27 13:25:56		134°	1°	196.45	7619.95	滞留待处置	未处置
2025-03-24 13:02:47		-163°	1°	114.38	5215.25	滞留待处置	未处置

<3分钟	3-5分钟	>5分钟
0%	0%	100%

6个
总计处理黑飞架次

本月处理黑飞架次0架

低级别预警	中级别预警	高级别预警
629 条	19 条	1 条

① Tab navigation page
1) Warning dashboard: live data display of anti- drone surveillance
2) Warning zone monitoring: alarming signal in controlled policy zones + data of countermeasure effectiveness
3) Countermeasure zone control(hidden): threat level assessment + manual countermeasure operation entrance (interference equipment control/fight plan management)
4) Equipments & Assets: full lifecycle monitoring of affiliated equipments (Online Status/Maintenance Records/Remote Start-Stop/Video Linkage)

② Meteorological auxiliary panel real-time push of 6 meteorological indicators such as visibility, temperature and humidity to support decision making for drone in mission

③ Flight Plan Dashboard: Visualize todays/cumulative flight execution progress(planned/completed)

④ Warning status wall: The timeline scrolls warning information in reverse order, adding strong warning prompts and clicking linkage to display drone trajectories

⑤ Spectrum disposal efficiency diagram: the full-chains timely analysing model from early warning to disposal, targeting the response delayed spots

⑥ Threat Grading Panel: Statistics of Alarm Frequency and Threat Intensity Thermal Distribution by High/Medium/Low Risk Level

⑦ Radar Fusion View: Overlay display of multiple radar signal coverage ranges, dynamic annotation of target positioning points(distinguishing between conventional scanning and threat targets) 3D digital sand table:1:1 key location digital twin base, integrating real-time spatial visualization of personnel positioning/equipment coordinates/alarm points

APPLICATION SCENARIOS

AIRPORT—OILDEPOT—PORT—NUCLEARPOWERPLANT

AIRPORT

Civil airports,as the core hub of aviation,have extremely high requirements for airspace safety.Drones'unauthorized entry into airport's clear air zones may collide with high-speed landing and taking-off passenger planes or interfere with airborne radar and communication systems, causing fight delays, forced landings, and even fatal accidents Strengthening drone defense is a necessary safeguard to ensure aviation safety and protect the lives and property of millions of passengers.

OILDEPOT

Oil depots store large quantities of flammable and explosive hazardous materials. During illegal intrusion , drones may carry fire sources, cameras, and other equipment.This not only directly risks triggering explosions and fires, but also may expose sensitive information like oil storage layouts and security vulnerabilities through aerial photography, offering opportunities for terorist attacks or destructive activities. Establishing a drone defense system is a crucial measure to safeguard energy security and prevent catastrophic accidents.

PORT

As hubs for cargo distribution and international trade, ports face risks of UAVs stealing dispatch data and identifying security loopholes through aerial photography. UAVs may even airdrop prohibited items and damage critical equipment like cranes, affecting logistics efficiency and national security. Establishing a drone defense mechanism is a necessary measure to maintain port operation order and safeguard national security at ports.

NUCLEARPOWERPLANT

Nuclear power plants are the core infrastructure of national energy supply. If drones enter the plant area without authorization, they may carry hacker devices to attack the power control system, or steal data by capturing key equipment parameters and line layouts. They may even directly collide with transmission facilities, causing power outages and seriously threatening social production and people's stable electricity supply. Strengthening drone defense is a crucial prerequisite for ensuring the safe operation of the energy industry chain.

PLATFORMADVANTAGES

One · Digital Twin Modeling

Compared to traditional applications such as tile maps and flat maps, the GuardTiger C-UAS platform relies on advanced digital twin modeling technology to deeply meet customers'needs for precise control of complex real-world scenes and surrounding situations. Through rigorous field surveys,a virtual model is constructed with a 1:1 high fidelity and organically integrated with the map to form a three -dimensional scene model,allowing users to fully graspevery detail of key areas and achieve seamless connection and precise mapping between reality and virtuality.

Two · Empowering The Self-developed "NT-XAI" Algorithm Model

The platform relies on its independently developed cutting –edge "NT -XAI” algorithm model and leverages the powerful capabilities of machine learning and deep learning to conduct in-depth analysis of massive historical drone flight data. This can not only accurately predict the future flight trajectory of drones, but also achieve ultra-early warning for potential risks. At the same time,key warning information can be transmitted in real-time to the intelligent control center, quickly generating and pushing highly targeted defense decision-making solutions,achieving efficient conversion from data to decision-making.

Three · Collaborative Fusion Algorithm Between Operating Platform And Hardware Devices

The GuardTigerC-UASplatform enables fully-intelligent contingency plan management, ensuring 24-hour unmanned operation. It boasts advantages like rapid detection and response eficient execution of contingency plans,shorttime intervals in tiered defense, and high-precision target defense.Through the integration of multi-device networking and advanced algorithms for inteligent data processing, it achieves notable benefits such as unified target recognition, accurate discrimination, and a low misjudgment rate,thus building a comprehensive intelligent protection system.

Four · Advanced Prediction Algorithms,Large Models, And IntelligentAi Technology Synergistically Enhance Efficiency

The advanced large-scale model prediction algorithms integrated into the platform are tightly coupled with real-time data streams, enabling high-precision flight trajectory prediction outputs,which holds significant and far-reaching implications for mitigating potential risks posed by drones.Through the deep convergence of large-scale AI models and intelligent AI technologies, the system dynamically generates more efficient,adaptable,and targeted drone countermeasures and strategies. Such as smartly setting the restricted fly zones, dynamically adjusting fly routes in time, and implementing precise auto-tracking and intervention against illegal drones.

RADAREQUIPMENT

The Four-face Array Security Radar employs phased array technology to detect, discriminate, locate, and generate tracks for dynamic targets. It is applicable for monitoring critical sites such as border surveillnce,security monitoring,key area protection,and airway/waterway management(depending on the scenario).It can continuously detect and track moving targets in line-of-sight (LOS) and vegetation-free areas. A perimeter radar network can be deployed as required to meet the monitoring and security demands of larger areas.

Low False Alarm Rate

Superior Target Detection Capability

Exceptional Tracking Performance

FOUR SIDEDARRAY SECURITY RADAR GT-R200 [HIGH-ENDVERSION]

RADAR EQUIPMENT

FOUR SIDEDARRAY SECURITY RADAR GT-R200 [HIGH-ENDVERSION]

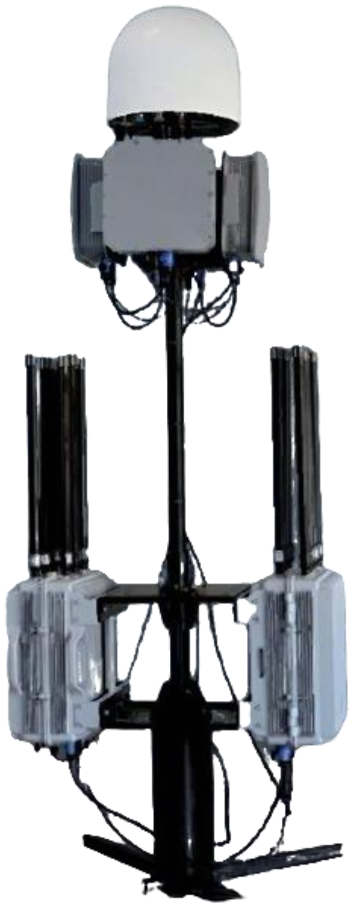
SERIAL NUMBER	PERFORMANCE METRICS	DETAILED PARAMETERS
1	Working frequency band	X (band)
2	Radar system	Two dimensionalactive phased array pulse compressio system
3	Frequency hopping quantity	6
4	Directional scanning range	360°azimuth sector
5	Pitch range	-3°~45°
6	Detection range (smal rotary wing drone,DJIEIf4)	≥5Km
7	Detection range(medium fixed wing unmanned aerial vehicle)	≥8Km
8	Angle measurement acuracy	(orientation):≤0.5°(RMS) (pitch):≤0.5°(RMS)
9	Detecting blind spots	≤200m
10	Distance acuracy	≤5m(RMS)
11	TWSdata refresh rate	2s (Wireless Audio Technology)
12	TASdata refresh rate	4Hz(2targets/array)Simultaneously track8 targets
13	Simultaneously tracking the numberof targets	≥200批(batch)
14	Detecting radial velocity range	1 ~ 200m/s
15	Array power consumption(single array)	≤320W
16	Power supply range	Dc power, 36~48V
17	Communication interface	Gigabit Ethernet
18	Environmental adaptability	- 40℃~+55℃ (operation temperature)
19	Array size (single aray)	400*380*150mm
20	Protection grade	IP66

DRONECOUNTERMEASUREEQUIPMENT

This device adopts a modular detachable design, supporting integrated or separate deployment of detection and defense modules. It enables flexible networking through 1 detection unit+N countermeasure units for coordinated operations. Equipped with advanced FPV jamming capabilities, it comes preconfigured with 13 jamming frequency bands and supports multi-band expansion to effectively neutralize drone threats. The system is highly scalable,allowing integration with radar,electro-optical systems, navigation spoofing devices, and more, adapting to diverse defense scenarios. Featuring 24/7 unattended operation, it automatically activates countermeasures upon drone detection, expelling threats outside the defense zone.

- 360°Full-Spectrum Passive Detection
- Advanced FPV Jamming Capability
- Flexible 1+N Modular Configuration
- 130midirectional+4-Diectional Antennas

COUNTER EQUIPMENT
GT-S200 [ADVANCED VERSION]



DRONE COUNTERVEASURE EQUIPVENT

COUNTER EQUIPMENT
GT-S200 [ADVANCED VERSION]

SERIAL NUMBER	PERFORMANCE METRICS	DETAILED PARAMETERS
1	Detecting frequency band	70MHz-6GHzfullfrequency scanning,detection,and display
2	Key frequency bands for detection	800MHz、900MHz、1.2GHz、1.4GHz、2.4GHz、5.2GHz、5.8GHz
3	Detecting distance	≥10km(depending on operating conditions)
4	detection range	The horizontal detection angle can reach 360°,and the vertical detection range is -90° to 90°
5	Detection response time	The time required for the device to discover and report the drone is ≤ 10 seconds
6	Direction finding acuracy	≤ ±3°(RMS, under site conditions without obvious obstructions or electromagnetic interference)
7	Detection display	Drone distance(the distance from the detection device to the drone),flight altitude,speed,position (including latitude and longitude,and requiring accuracy to 1 meter),drone model,drone SN,drone takeoff point,drone return point,drone real-time trajectory,etc
8	interference distance	≥ 3Km
9	Interference capability	Capable of simulating image transmission interference, effectively preventing drone intrusion using simulated image transmission
10	Interference mode	Targeted interference in key frequency bands and omnidirectional interference covering all frequency bands effectively contain the intrusion of high-power drones and non-standard frequency band drones
11	Interference frequency band	410MHz-480MHz 50W、650MHz-750MHz 50W、750MHz-850MHz 50W、850MHz-1080MHz 50W、1080MHz-1200MHz 50W、1200MHz-1340MHz 50W、 1340MHz-1500MHz 50W、1560MHz-1620MHz 50W、4000MHz-4300MHz 50W、 5950MHz-6200MHz 50W、5100MHz-5300MHz 50W、5700MHz-5950MHz 100W、2450MHz-2600MHz 100W 850MHz-1080MHz 50W、240MHz-2450MHz 50W、5750MHz-5850MHz 50W、5100MHz-5200MHz 30W
12	Interference azimuth coverage	The horizontal detection angle can reach 360°
13	Interferenceresponse time	≤7s
14	Envionmental adaptability	Working temperature -40℃-60℃
15	FPV simulation image transmission detection	500MHz-6GHz full frequency scanning and display
16	FPV simulation image transmission detection distance	≥ 1.5km(supports viewing real-time videos)

RADAR EQUIPMENT

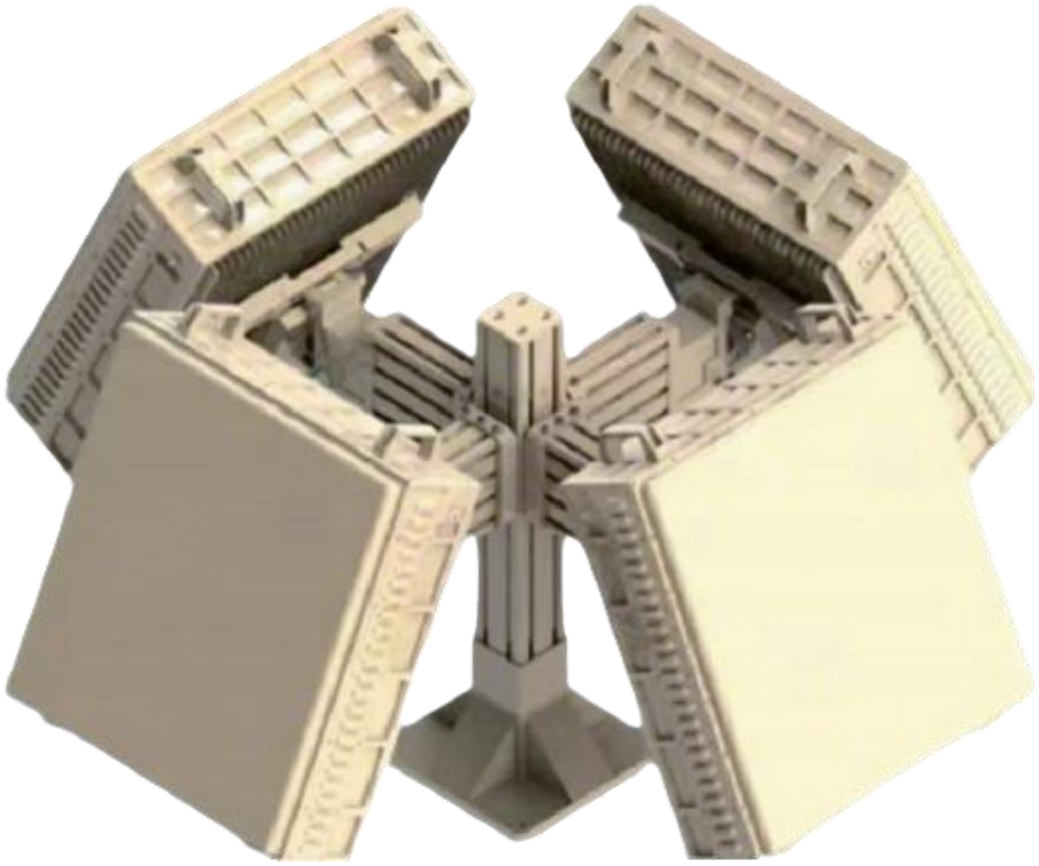
The four-face array detection radar is a K.u band fully coherent pulse Doppler two-dimensional phase scanning 3D radar. It is primarily responsible for detecting and tracking low-altitude UAV targets, birds, balloons and other objects,providing precise guidance for optoelectronic systems. The radar system adopts a four-face array technical scheme to cover a 360° range, enabling TWS(Track-While-Scan)+TAS(Track-As-Scan)precise tracking of targets.

High refresh rate

Long-distance precise detection

Large-batch tracking

FOUR-ARRAY SECURITY RADAR GT-R201 [HIGH-CONFIGURATION VERSION]



RADAR EQUIPMENT

FOUR-ARRAY SECURITY RADAR GT-R201 [HIGH-CONFIGURATION VERSION]

SERIAL NUMBER	PERFORMANCE METRICS	DETAILED PARAMETERS
1	Operating Frequency Band	Ku band
2	Detection Range and Scanning Method	Azimuth:360°(four-sided aray,90°per array face); Elevation phase scanning range:≥60° (default coverage 0°-30°)
3	Detection Distance	Maximum detection distance: ≥5km(for Phantom drones); Minimum detection distance:≤250m; Minimum detection speed:≤1m/s(tracking mode)
4	Three-Coordinate Measurement Accuracy (Root Mean Square Error)	Range accuracy: ≤ 5m; Azimuth accuracy: ≤ 0.3°; Elevation accuracy: ≤ 0.3°
5	Data Refresh Rate	TWS search and track: 2s; TAStracking:1s
6	Number of Tracked Targets	TWS: ≥ 128 batches; TAS:≥ 5 batches
7	Radar Host Dimensions	≤ 650 mm×400mm×100mm
8	Overall Power Consumption	s900W(including pan-tit)(single ray face)
9	Overall Weight	≤ 35kg (per array face)
10	Interface	Gigabit Ethernet port