For professional consultation and technical collaboration needs, our team welcomes the opportunity to discuss customized solutions. Please feel free to contact us to explore synergistic partnership possibilities.

速维通达科技
wavesonic technology

WUHAN SU WEI TONG DA TECHNOLOGY CO., LTD

0086-13601270608 / 0086-15001309413
www.wavesonics.com
info@wavesonics.com
Building 20, Optics Valley New Power, Optics Valley Second Road, East Lake New Technology Development Zone, Wuhan City

PRODUCT CATALOGUE

Leading Manufacturer of Active Phased Array Radar

2025

CONTENTS

WAVESONIC SERIES SECURITY RADAR

Wavesonic Protect the world

Introduction

Founded in July 2016, Wavesonic Technology Co., Ltd. is a high-tech enterprise with fully independent intellectual property rights, located in the state-level high-tech development zone "Optical Valley" Dingjie Modern Electromechanical Information Incubator. Specializing in the research, development, and manufacturing of military and civilian radar systems, Wavesonic has established itself as a leader in the radar security industry.

The company employs a team of over 100 professionals, including more than 50 specialized engineers in fields such as RF design, structural engineering, software development, and algorithm engineering. This highly skilled workforce enables Wavesonic to provide customized development and project planning for diverse applications in military, civilian, and police operations. Its products are exported worldwide and have earned excellent feedback for their performance in both civilian and defense environments.

Under the slogan "Radar Secures the World", Wavesonic has successfully contributed to multiple national security projects, including border protection, anti-UAV operations, and port control. Its solutions have been widely recognized for their reliability, precision, and adaptability, meeting the complex demands of military, civilian, and police clients.

Dedicated to delivering first-class products and tailored services, Wavesonic pursues standardization, specialization, and brand-oriented development. With integrity, professionalism, and a commitment to innovation, the company actively participates in and promotes the healthy growth and prosperity of the global radar security industry.

Development History

2016
Wavesonic 2016: Establishing the Vision

Wavesonic Technology Co., Ltd. was founded in July 2016 in the state-level high-tech development zone "Optical Valley." The company committed itself to the research, development, and manufacturing of cutting-edge radar systems for military, civilian, and police applications.

2017
Wavesonic 2017 – Gaining Global Recognition

Wavesonic made its international debut at Milipol France, showcasing its first-generation anti-UAV radar system. The system was successfully deployed in national security projects, including border protection and coastal defense, marking its initial market success.

2018
Wavesonic 2018: Expanding Horizons

The company entered the Southeast Asian market with new radar solutions tailored for coastal surveillance and ground security. It also participated in the DAS Malaysia exhibition, gaining recognition for its innovative and reliable products.

2019
Wavesonic 2019: Entering the Middle East

Wavesonic expanded its global reach by presenting advanced anti-drone and ground surveillance solutions at the IDEAS Pakistan exhibition. This marked a key milestone in its international collaborations and defense partnerships.

2020
Wavesonic 2020: Driving Diversification

The company introduced fully customizable radar systems to meet the needs of law enforcement, critical infrastructure protection, and other specialized industries.

2021
Wavesonic 2021: Advancing Technology

Wavesonic integrated advanced algorithm engineering into its radar systems, significantly enhancing detection accuracy and system efficiency. It also launched multi-layer integrated systems for UAV detection and mitigation, furthering its technological leadership.

2022
Wavesonic 2022: Launching Thunder Shield

Wavesonic unveiled the Thunder Shield, a comprehensive system integrating radar, electro-optical tracking, and jamming technologies for anti-UAV applications. The company's workforce also grew to over 100 professionals, strengthening its expertise in RF engineering, structural design, and software development.

2023
Wavesonic 2023: Introducing the OWL Anti-drone System

The company launched the OWL, an advanced multi-functional radar system for ground surveillance and UAV detection. Wavesonic's participation in IDEF Turkey further solidified its global presence as a leader in radar technologies.

2024
Wavesonic 2024: Innovating with FALCON Counter UAVs Solution

Wavesonic introduced the FALCON, a high-precision radar system designed for UAV tracking and coastal monitoring. The company also showcased its latest solutions at the AAD South Africa Aerospace and Defense Exhibition, expanding its influence in the African market.

2025
Wavesonic 2025: Innovations in Radar Technology and Global Partnerships

In 2025, Wavesonic will focus on advancing anti-drone technology, enhancing coastal and border surveillance solutions, and breaking new ground with X and S-band air surveillance radars exceeding a 10 km detection range. Progress continues on 3D static phased array radar development, aiming to deliver top-quality products and exceptional technical services while fostering global partnerships.

Honorary Qualifications

- Intellectual Property Management System Certification
- "3551" Optics Valley Talent Plan
- High Tech Enterprise
- Software Certificate for Anti-drone system
- Radio Transmission Equipment Model Approval Certification
- A radar equipment with centralized installation of antenna
- Components Patent for flight trajectory tracking device and radar invention
- A radar equipment with centralized installation of antenna components
- A radio frequency channel selection and front-end amplifica-tion circuit
- A method of interception wireless communication based ondual-frequency pulse compression
- An X-band anti-drone radar shaping antenna

12 Software Copyright

23 Utility Model Patent

2 Invention Patents

PART

01

Border Surveillance

Perimeter Security

Battlefield Surveillance

Force Protection

Law Enforcement & Security

Prison Surveillance

Critical Infrastructure Protection

Ground Surveillance Radar

Human & Vehicle Detection

GROUND-BASED SURVEILLANCE RADAR

WAVESONIC GSR 215 SERIES

WAVESONIC GSR 215 SERIES

GSR 215 series radar, utilizing MIMO technology and DBF (Digital Beam-forming), provides solid-state technology, increasing operational effectiveness by meeting mission objectives decisively.

Detecting, monitoring, and tracking target information for pedestrians and vehicles in critical areas, such as borders, perimeters, checkpoints, and military bases. It offers precise tracking data, including target position, distance, speed, etc.

FEATURES

Real-Time Monitoring
Monitor the surrounding environment, promptly detect anomalies, and respond accordingly.

Strong Rapability in rapid Target Detection
High data refresh rate, able to continuously and stably track targets, especially fast-moving ones

Easy Installation
Convenient installation using lampposts or existing infrastructure.

All-weather, Round-the-clock
Provides 24/7 real-time protection, adapting to harsh weather conditions including rain, snow, fog, and haze.

TECHNICAL SPECIFICATON

Model		GSR215-1200C	GSR215-1500C	GSR215-3200C
Working System		Phased Array PulseDoppler		
Frequency		C Band	C Band	C Band
Peak Power		0.5W	4W	4W
Coverage	Azimuth	90°	90°	90°
	Vertical	18°	18°	9°
Detection Range	Human	100m~ 0.8km	100m ~2km	100m~3.0km
	Vehicle	100m~ 1.2km	100m~3km	100m~5.0km
Detect Speed Range		0.5m/s-30m/s	0.5m/s-30m/s	0.5m/s-30m/s
Accuracy	Speed	0.3m/s	0.2m/s	0.2m/s
	Distance	8m	8m	10m
	Azimuth	1.0°	1.0°	1.0°
	Vertical	\	\	\
Min Detection Distance		30m	100m	100m
Data Rate		1Frame/s	2Frame/s	2Frame/s
Max Detection Target Number		200	200	200
Target Trajectory		MotionTargetTrajectory		
Interface		RJ45	RJ45	RJ45
Rated Power		45W	45W	45W
Power Supply		AC200-AC240	AC200-AC240	AC200-AC240
Environment Adaptability	Dust/Water Proof	IP65	IP65	IP65
	Working Temperature	-40℃～+55℃	-40℃～+55℃	-40℃～+55℃
Size		436×324×86mm	436×324×86mm	436×324×86mm
Weight		5.5kg	5.5kg	5.5kg

Portable Tactical Security Radar

WAVESONIC GRB101C-3100

WAVESONIC GRB101C-3100

The GRB101C-3100 is a lightweight, portable tactical radar system designed for individual use in various high-security missions. It consists of a radar array, tripod, and a portable backpack for easy transport. Featuring a modular design, it ensures quick deployment, requiring no wiring, and can be fully operational within minutes.

The radar wirelessly transmits target positioning and identification data to the accompanying display and control system, ensuring real-time updates. Its user-friendly terminal software offers intuitive controls, making it simple to learn and operate. This system is ideal for detecting, warning, and providing target indication for pedestrians and vehicles across sensitive areas such as borders, airports, military bases, and other critical infrastructures.

FEATURES

High Portability
Composed of a radar array, tripod, and portable backpack,making it light weightand easy to transport forindividual rapiddeployment.

Ease of Operation
User-friendly terminal software with anintuitive interface,low learning curve, andeasy to master.

High-Precision Monitoring
Offers real-time,accurate target tracking and early warnings for potential threats.

Tactical Flexibility
Designed for dynamic and complex environments,meeting the needs of special operations forces for rapid deployment and with drawal.

Durability and Reliability
Built to withstand harsh environments,ensuring dependable

TECHNICAL SPECIFICATON

Model		GRB101C-3100
Working System		Phased Array Pulse Doppler
Frequency		Cband
Peak Power		4W
Coverage	Azimuth	90°
	Vertical	18°
Max Detection Range		3.1km
Detection Range	Human	1.5km
	Vehicle	3km
	Vessel （5-10m size）	3km
Detect Speed Range		0.5m/s-30m/s
Accuracy	Speed	0.2m/s
	Distance	8m
	Azimuth	1.0
Min Detection Distance		100m
Data Rate		1Frame/s
Max Detection Target Number		200
Target Trajectory		Motion Target Trajectory
Interface		RJ45
Rated Power		45W
Power Supply		DC12V
Environment Adaptability	Dust/Water Proof	IP65
	Working Temperature	-40℃~+55℃
Dimension		344x290x110mm
Weight		Radar Panel 6.8kg Total18kg(inc.Tripod)

Long Range Air Surveillance Radar

PART

02

Air Surveillance Radar
Commercial Drone Detection

- Urban Security
- Prison & Government Facilities
- Oil & Gas Facilities
- Power Plants & Substations
- Airports & Seaports
- Critical Infrastructure Protection
- Law Enforcement & Public Safety
- VIP Protection

Air-Based Surveillance Radar

WAVESONIC ASR216S -10K

WAVESONIC ASR216S -10K

The ASR216S -10K is mainly composed of a radar array, a mechanical rotary table and a power adapter. This device is designed for the detection, warning and target indication of micro/small civilian unmanned aerial vehicles (UAVs) in crucial areas such as borders, airports and military bases. It can precisely provide the track information including the orientation, distance, altitude and speed of the target.

With its stable performance and convenient operation, it can effectively enhance the efficiency and accuracy of UAV monitoring and provide robust support for ensuring air safety. Whether in a complex and variable environment or dealing with a high - speed moving target, the ASR216S -10K can exhibit outstanding performance.

FEATURES

360 Degree Azimuth Detection
PTZ design with 360 degree azimuthdetection with real-time targettracking, providing continuous outputof the target's three-coordinateinformation.

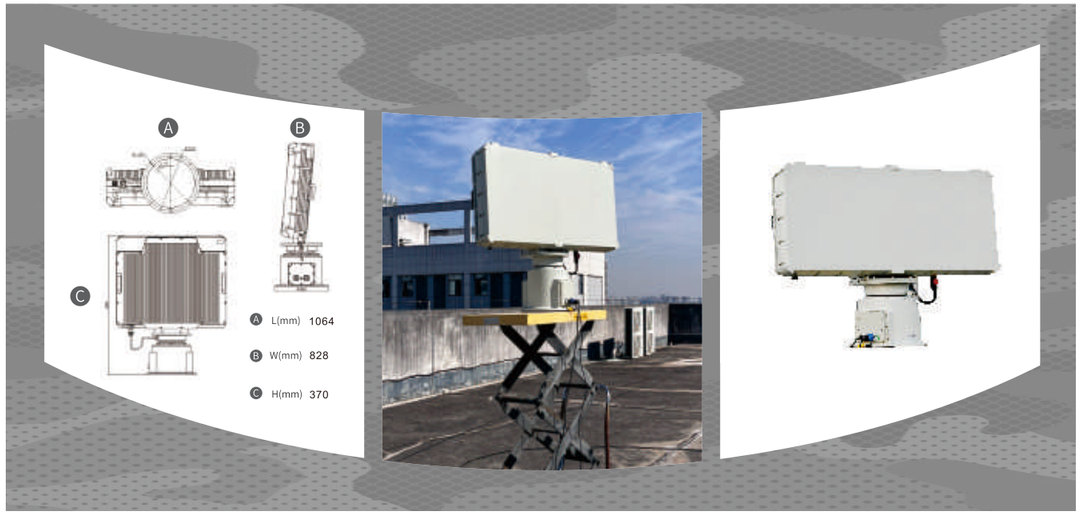
High Environmental Adaptability
Operates 24/7 and adapts to harsh conditions,the system adaptseffectively to harsh environments.

High Flexibility
Remote detection of targets, easy to set up.

DBF Technology
DBF technology transmitting multi-beam technology can improve anti-interference ability.

TECHNICAL SPECIFICATON

Model		ASR216S-1S10K
Working System		Azimuth mechanical scanning + Elevation phase scanning
Working Mode		Pulse Doppler
Frequency		S Band
Peak Power		160W
Coverage	ıth	360°
	Vertical	40 °
Max Detection Range		10.5km
Detection Range (Radius)	Human	N/A
	Vehicle	N/A
	Vessel （5-10m size）	N/A
	Drone	10km
Detect Speed Range		0.5m/s-85m/s
Accuracy	Speed	0.5m/s
	Distance	10m
	Azimuth	0.8°
	Vertical	1.0°
Min Detection Distance		100m
Data Rate		0.2Frame/s (Antenna Rotation 12rpm)
Max Detection Target Number		200
Target Trajectory		Motion Target Trajectory
Interface		RJ45
Rated Power		250W
Power Supply		AC200-AC240
Environment Adaptability	Dust/Water Proof	IP66
	Working Temperature	-40℃~+55℃
Size		1064x828x370mm
Weight		Radar Panel :28kg PTZ:30kg Total System < 60kg



Air-Based Surveillance Radar

WAVESONIC ASR226S-5000

WAVESONIC ASR226S-5000

With a robust, mechanically rotating design, the ASR226S-5000 offers 360-degree coverage for comprehensive surveillance. Its modular structure simplifies installation and maintenance while ensuring long-term reliability and durability. Additionally, the radar can seamlessly integrate with other security systems, such as electro-optical tracking equipment, command and control centers, and jamming devices, to deliver a complete UAV defense solution.

This radar system is ideal for scenarios requiring real-time threat detection, early warning, and actionable intelligence to secure airspace and safeguard critical infrastructure. Its innovative design and advanced technology make it an indispensable tool for modern UAV monitoring up to 5km radius detection range, providing reliable air safety and enhancing security for military, law enforcement, and civilian applications.

FEATURES

360 Degree Azimuth Detection
PTZ design with 360 degree azimuth detection with real-time target tracking, providing continuous output of the target'sthree-coordinate information.

High Environmental Adaptability
Operates 24/7 and adapts to harsh conditions,the system adapts effectively toharsh environments.

High Flexibility
Remote detection of targets, easy to set up.

DBF Technology
DBF technology transmitting multi-beam technology can improve anti-interference ability.

TECHNICAL SPECIFICATON

Model		ASR226S-5000
Working System		Azimuth mechanical scanning + Elevation phase scanning
Working Mode		Pulse Doppler
Frequency		S Band
Peak Power		160W
Coverage	Azimuth	360°
	Vertical	40°
Detection Range	Drone	5km (Radius)
Detect Speed Range		0.5m/s-30m/s
Accuracy	Speed	0.3m/s
	Distance	10m
	Azimuth	1.0°
	Vertical	1.0°
Min Detection Distance		100m
Data Rate		0.2Frame/s (Antenna Rotation=12rpm)
Max Detection Target Number		200
Target Trajectory		Motion Target Trajectory
Interface		RJ45
Rated Power		250W
Power Supply		AC200-AC240
Environment Adaptability	Dust/Water Proof	IP66
	Working Temperature	-40℃~+55℃
Size		782x882x434mm
Weight		Radar Panel:25kg PTZ:24kg Total System <50kg

Air-Based Surveillance Radar

WAVESONIC ASR226X-6000

WAVESONIC ASR226X-6000

Utilizing advanced radar technology and signal processing algorithms, the ASR226X-6000 delivers real-time data on UAV position, altitude, speed, and trajectory. Its ability to monitor high-speed and dynamic targets ensures unmatched performance, even in harsh weather conditions and electromagnetic interference environments. The mechanical rotary table enables 360-degree omnidirectional coverage, providing seamless surveillance without blind spots.

Designed with a compact, modular structure, the system is easy to deploy, maintain, and integrate with other security systems, such as electro-optical cameras, command and control centers, and jamming devices. This flexibility ensures enhanced security and situational awareness for protecting critical infrastructure, airspace, and operational zones.

FEATURES

360 Degree Azimuth Detection
PTZ design with 360 degree azimuth detection with real-time target tracking,providing continuous output of the target'sthree-coordinate information.

High Environmental Adaptability
Operates 24/7 and adapts to harshconditions,the system adapts effectivelyto harsh environments.

High Flexibility
Remote detection of targets, easy to set up.

DBF Technology
DBF technology transmitting multi-beam technology canimprove anti-interference ability.

TECHNICAL SPECIFICATON

Model		ASR226X- 6000
Working System		Azimuth mechanical scanning + Elevation phase scanning
Working Mode		Pulse Doppler
Frequency		X Band
Peak Power		320W
Coverage	Azimuth	360°
	Vertical	40 °
Detection Range (Radius)	Human	8km
	Vehicle	12km
	Drone	5km
Detect Speed Range		0.5m/s- 75 m/s
Accuracy	Speed	0.3m/s
	Distance	10m
	Azimuth	0.5°
	Vertical	1.0°
Min Detection Distance		100m
Data Rate		0.2Frame/s (Antenna Rotation=12rpm)
Max Detection Target Number		200
Target Trajectory		Motion Target Trajectory
Interface		RJ45
Rated Power		350W
Power Supply		AC200-AC240
Environment Adaptability	Dust/Water Proof	IP66
	Working Temperature	-40℃~+55℃
Size		812x638x370mm
Weight		Radar Panel:23kg PTZ:9kg Total System <48kg

Air-Based Surveillance Radar

WAVESONIC ASR226X-3100

WAVESONIC ASR226X-3100

The ASR226X-3100 is acutting-edge UAV detection system designed to safe guard critical areas such as prisons,exhibitions military bases,and other high-security zones.Tailored for detecting and tracking micro and small civilian UAVs up to 2km radius detection range,it provides reliable real-time monitoring and comprehensive protection.

The system comprises three keycomponents:

RadarArray:
The core of the system,responsible for detecting,tracking,and identifying UAVs with high accuracy.

Mechanical Turntable:
Ensures flexible360-degree rotation of the radar,achieving seamless omnidirectional, monitoring without blind spots.

PowerAdapter:
Delivers a stable and continuous power supply,guaranteeing the system operates reliably in various environments.

Using advanced radar technology,the ASR 226X-3100providesreal-time data on UAV position,distance,altitude,speed,and flight trajectory.This ensures precise warning and target indication, giving operators actionable intelligence to respond swiftly to potential threats.

FEATURES

360 Degree Azimuth Detection
PTZ design with 360 degree azimuthdetection with real-time target tracking,providing continuous output of the target'sthree-coordinate information.

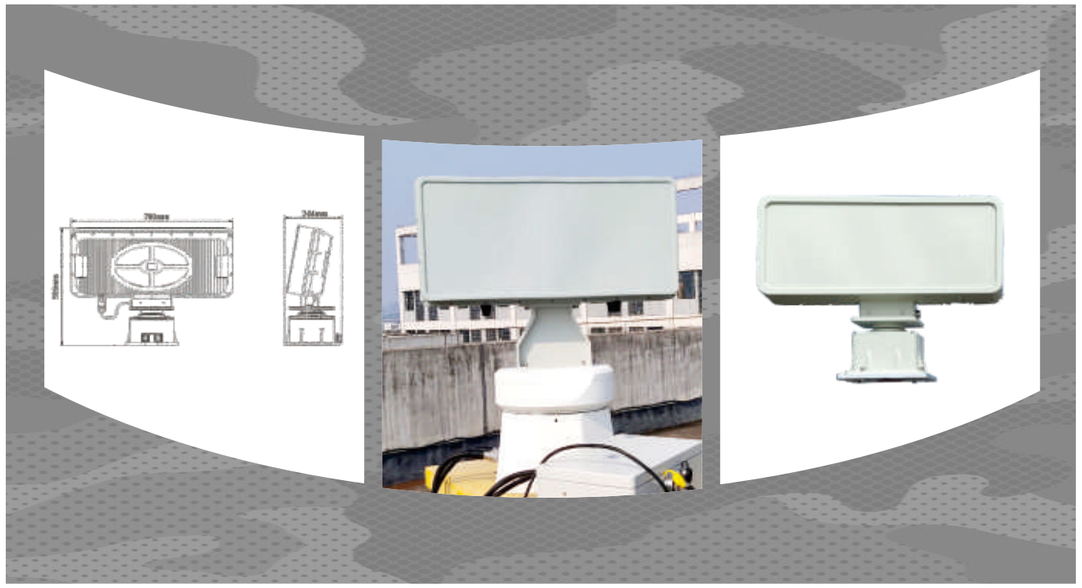
High Environmental Adaptability
Operates 2417 and adapts to harshconditions,the system adapts effectivelyto harsh environments.

High Flexibility
Remote detection of targets, easy to setup.

DBF Technology
DBF technology transmitting multi-beamtechnology can improve anti-interferenceability.

TECHNICAL SPECIFICATON

Model		ASR226X-3100
Working System		Azimuth mechanical scanning + Elevation phase scanning
Working Mode		Pulse Doppler
Frequency		X Band
Peak Power		40W
Coverage	Azimuth	360°
	Vertical	40 °
Detection Range	Drone	2.0km （Radius）
Detect Speed Range		0.5m/s- 30 m/s
Accuracy	Speed	0.3m/s
	Distance	10m
	Azimuth	0.8°
	Vertical	1.0°
Min Detection Distance		150m
Data Rate		0.2Frame/s （Antenna Rotation=15rpm）
Max Detection Target Number		200
Target Trajectory		Motion Target Trajectory
Interface		RJ45
Rated Power		200W
Power Supply		AC200-AC240
Environment Adaptability	Dust/Water Proof	Ip65
	Working Temperature	-40℃~+55℃
Size		812x638x370mm
Weight		Radar Panel :20kg PTZ :9kg Total System <30kg



Air-based Surveillance Radar

Wavesonic ASR226C-2100

WAVESONIC ASR226C-2100

The ASR226C-2100 is a cutting-edge detection and monitoring system engineered specifically for the detection and tracking of micro and small civilian UAVs. Designed to provide unparalleled protection for critical areas such as prisons, exhibitions, military bases, government facilities, airports, and border checkpoints, it offers a comprehensive solution to counter unauthorized drone intrusions.

This system integrates advanced technologies to deliver precise detection, real-time tracking, and early warning capabilities, ensuring the safety of sensitive zones from potential threats. Its robust design and reliable performance make it a vital component for securing low-altitude airspace in diverse environments.

With a focus on accuracy, efficiency, and scalability, the ASR226C-2100 sets a new standard in UAV monitoring, providing operators with actionable intelligence to respond to drone threats swiftly and effectively. Whether for fixed installations or flexible deployments, this system is the ideal choice for modern airspace security needs.

FEATURES

360 Degree Azimuth Detection
PTZ design with 360 degree azimuthdetection with real-time target tracking.providing continuous output of the target'sthree-coordinate information.

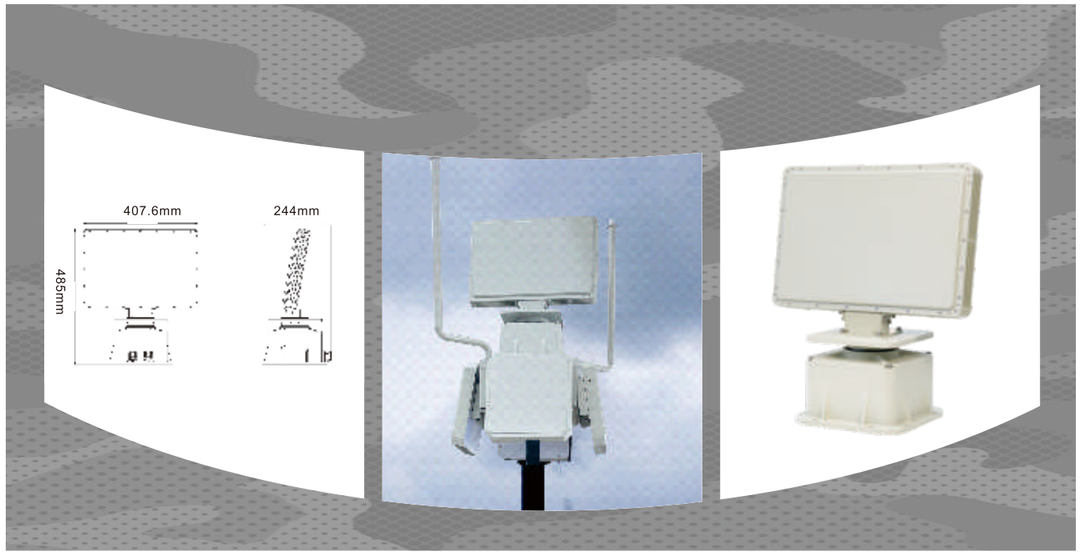
High EnvironmentalAdaptability
Operates 2417 and adapts to harshconditions,the system adapts effectivelyto harsh environments.

High Flexibility
Remote detection oftargets, easy to set up

DBF Technology
DBF technology transmitting multi-beamtechnology can improve anti-interferenceability.

TECHNICAL SPECIFICATON

Model		ASR226C-2100
Working System		Azimuth mechanical scanning + Elevation phase scanning
Working Mode		Pulse Doppler
Frequency		C Band
Peak Power		4W
Coverage	Azimuth	360°
	Vertical	30 °
Detection Range (Radius)	Human	N/A
	Vehicle	N/A
	Vessel (5-10m size)	N/A
	Drone	1.5km
Detect Speed Range		0.5m/s- 30 m/s
Accuracy	Speed	0.3m/s
	Distance	10m
	Azimuth	1.0°
	Vertical	1.0°
Min Detection Distance		100m
Data Rate		0.2Frame/s (Antenna Rotation=12rpm)
Max Detection Target Number		200
Target Trajectory		Motion Target Trajectory
Interface		RJ45
Rated Power		100W
Power Supply		AC200-AC240
Environment Adaptability	Dust/Water Proof	Ip65
	Working Temperature	-40℃~+55℃
Size		407x244x485mm
Weight		Radar Panel:5kg PTZ:9kg Total System <15kg



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ACCURATE DETECTION OF MULTIPLE TARGETS AT THE SAME TIME

Drones

Birds

ASR226-6000XP

Vessels

Pedestrians

Vehicles

Multi-Functional Surveillance Radar

WAVESONIC ASR226-6000XP

WAVESONIC ASR226-6000XP

The ASR226-6000XP is a highly versatile multi-purpose radar system designed for detecting and tracking a wide range of targets, including humans, vehicles, vessels, and UAVs. Engineered for deployment in critical areas such as borders, perimeters, airports, coastal regions, and military installations, this advanced radar system offers unparalleled performance and adaptability for diverse surveillance applications.

Pedestrian:8km
Vehicle:10km
Boats:15km
Drones:5km

Equipped with a high-precision radar array, motorized rotary table, and robust power adapter, the ASR226-6000XP leverages Digital Beamforming (DBF) and Active Phased Array Technology to deliver real-time tracking and accurate three-dimensional coordinates of multiple targets. Its all-weather design ensures consistent operation in harsh conditions, including rain, snow, fog, and dust, while maintaining strong resistance to interference in high-density electromagnetic environments.

FEATURES

Multi-Purpose Target Detection
Capable of detecting and tracking humans, vehicles, vessels, and UAVs, making it suitable for a wide range of surveillance and security applications.

High Precision and Real-Time Tracking
Equipped with advanced Digital Beamforming (DBF) and Active Phased Array Technology to provide accurate three-dimensional tracking of multiple targets simultaneously.

All-Weather, All-Terrain Performance
Operates effectively in harsh environmental conditions such as rain, snow, fog, and dusty environments, ensuring reliable performance 24/7.

360-Degree Omnidirectional Coverage
Features a motorized rotary table for seamless, blind-spot-free monitoring over large areas, enhancing situational awareness.

Strong Resistance to Interference
Built to withstand electromagnetic interference, ensuring stable operation even in complex and high-density environments.

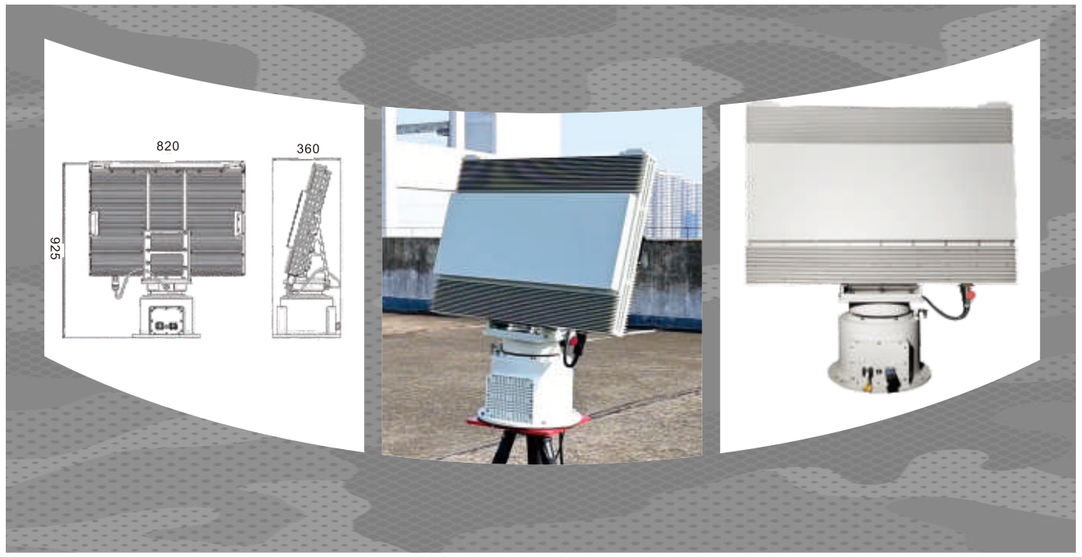
Compact and Modular Design
Easy to deploy, integrate, and maintain. Can be combined with electro-optical cameras, RF detection systems, jammers, and command-and-control platforms for versatile operations.

Cost-Effective Solution
Combines military-grade reliability, exceptional performance, and affordability, offering excellent value for diverse security needs.

Versatile Applications
Suitable for critical areas such as borders, perimeters, airports, coastal regions, military installations, and critical infrastructure.

TECHNICAL SPECIFICATON

Model		ASR226-6000XP
Working System		Azimuth mechanical scanning + Elevation phase scanning
Working Mode		Pulse Doppler
Frequency		X Band
Coverage	Azimuth	360°
	Vertical	≥40°
Max Detection Range (Radius)	Human	150m ~8km
	Vehicle	150m~10km
	Vessel（5-10m size）	150m~15km
	Drone	150m~5km
Detection Speed		1m/s-75m/s
Speed Accuracy		≤0.5m/s
Distance Accuracy		≤10m
Azimuth Accuracy		≤0.4°
Vertical Accuracy		<0.5°
Min Detection Distance		≤150m
Data Rate		⩾0.5Hz (Antenna Rotation≥ 30rpm)
Max Detection Target Number		200
Target Trajectory		Motion Target Trajectory
Interface		RJ45
Rated Power		400W
Power Supply		AC200-AC240
Dust/ater Proof		IP 66
Working Temperature		-40℃~+55℃
Size		820x925x360mm
Weight		Radar Panel :38kg PTZ:28kg Total System :77kg



PART

03

Illegal Immigration & Smuggling Detection

Bridge Collision Prevention

Farming Theft Prevention

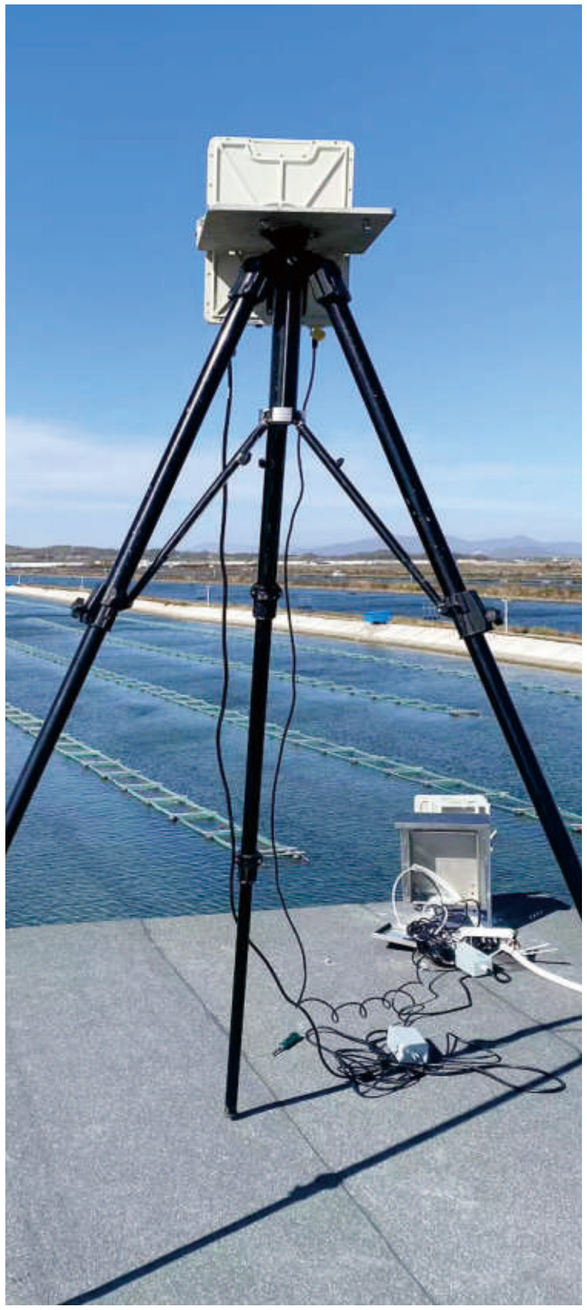
Offshore Prevention and Control

COASTLINE SURVEILLANE RADAR

Shipping Vessel Detection

Coastal Surveillance Radar

WAVESONIC CSR 237 SERIES



WAVESONIC CSR 237 SERIES

The CSR 237 series radar is an advanced vessel monitoring and alert system, consisting primarily of a radar array and a power adapter.

Incorporating MIMO and DBF technology, it significantly enhances anti-interference capability and effectively suppresses false alarms caused by clutter. This radar is specifically designed for use in coastal and inland waterway areas, where it excels in detecting, tracking, and providing warnings as well as target indication for ships.

By accurately capturing vessel trajectory information, it greatly improves the efficiency of maritime security monitoring. Its compact design and stable performance offer robust support for the safety and effective management of maritime traffic. Whether in ports, shipping lanes, or offshore operational zones, the CSR 237 series radar plays a critical role in ensuring safety and security.

FEATURES

Light weight
Light weight and compact; transportation and deployment are quick and convenient.

Low False Alarm Rate
Strong anti-clutter capability, effectively filtering false alarms caused by floating Objects.

High Sensitivity
Tiny animal movements and human behavior can be detected, providing enhanced early warning for theft and vandalism.r.

Efficient and Reliable
Efficient and reliable deployment, suitable for various setups.High data rate ensures accurate target detection.

Strong Environmental Adaptability
All-weather,24/7 real-time protection,adaptable to rain,snow, fog, haze, and other harsh weather conditions.

TECHNICAL SPECIFICATON

Model		CSR 237-8500C	CSR 237-5200C	CSR 237-3100C	CSR 237-1500C
Working System		Phased Array Pulse Doppler			
Frequency		C Band			
Coverage	Azimuth	90°	90°	90°	90°
	Vertical	9°	18°	18°	18°
Detection Range (Radius)	Vessel 5-10m size	100m-8 km	100m-5 km	100m-3km	1.2km-1.5km
Detect Speed Range		0.5m/s- 30m/s	0.5m/s-45m/s	0.5m/s- 30m/s	0.5m/s- 30m/s
Accuracy	Distance	10 m	10m	10m	10 m
	Azimuth	1.0°	1.0°	1.0°	1.0°
Min Detection Distance		100m	100m	100m	30 m
Data Rate		2Hz	2Hz	2Hz	1Hz
Max Detection Target Number		200	200	200	200
Interface		RJ45	RJ45	RJ45	RJ45
Rated Power		45W	60W	55W	55W
Power Supply			AC220V-AC240V		
Environment Adaptability	Dust/Water Proof	IP65	IP65	IP65	IP65
	Working Temperature	-40℃～+55℃			
Size		436x324x86mm	436x324x86mm	436x324x86mm	436×324×86mm
Weight		5.5kg			

PART

04

Urban Security
Prison& Government Facilities
Oil & Gas Facilities
Power Plants & Substations
Airports & Seaports
Critical infrastructure Protection
Law Enforcement & Public Safety
VIP Protection

COUNTER DRONE SOLUTION

Flexbile Counter Drone Solution

OVERVIEW

WaveSonic provides a range of portable handheld and fully integrated drone detection andcountermeasure solutions, delivering real-time situational awareness and lavered responsecapabilities for counter-drone protection applications. These include public safety, criticalinfrastructure,military,andlaw enforcement deplovments.

Counter-UAV systems combine **detection, tracking, identification, and mitigation** technologies toaddress threats posed by unauthorized or hostile drones. Our integrated solutions employ multi-sensorfusion and electronic countermeasures to effectively detect and neutralize drone targets

Active Radar Svstems: Detect and track drones throuah radio wave reflection analysis.
Passive RF Scanners:identiy drone sianas via eectromaanetic spectrum monitoring.
Optical Imaging Systems: Utilize computer vision for visual identification and classification.
Countermeasure Modules:Signal jamming, GPS spoofing.

As evolving drone threats increasingly bypass conventional defenses, C-UAV now constitute mission.critical infrastructure for: Military base protection; Critical facility security (power plants,

Radio Frequency (RF) | Radar | Smart-Jamming | Electro-Optics & Computer Vision

Detect | Track | Identify | Mitigate

Detect

Passive RF scanner & Active Radar provide 24/7 continuous monitoring and alerting.

Track

Monitoring drone height and speed,locating drone coordinates.

Identifiy

Providing user-level identification, Including:
-drone type and brand
-serial number.

Mitigate

Jamming technology: Disconnecting drone from remote control;
Spoofing technology: transmits stronger fake GPS signals than the real ones, causing the drone to lock onto the false data.

Mounting Options

Portable HandHeld Solution

WS04-Pro
4 frequency bands;
Long Range, Highly Effective,
Countermeasure

WS06-Pro
6 frequency bands;
Long Range, Highly Effective,
Countermeasure

Fixed Integrated Solution

Owl/Falcon Integrated Anti-Drone System
Active Radar(2km-5km) + RF Detector (5km) +RF Jamming + GPS Spoofing

Fixed Compatible Solution

Passive RF Sensor WS-DF-5000A
5-8km radius detection range

EO Tracking Camera
Uncooling & Cooling type

Mitigating Technology
RF Jamming & GPS Spoofing

Active Radars ASR216S -10K
(radius 10km)
ASR226S-5000 (radius 5km)
ASR226X-6000 (radius 5km)

Central Control Software Platform

Portable Handheld Jammer Advanced Low-Altitude Airspace Protection

The WS-04Pro and WS-06Pro handheld drone jamming gun is a cutting-edge device designed to ensure low-altitude airspace security in designated areas. Utilizing frequency-sweeping jamming technology specifically targeted at drone communication bands, this device achieves precise and directional disruption of drones. It forces them to land, hover, or return to their point of origin, effectively neutralizing potential threats.

Equipped with an integrated directional antenna, the jamming gun is optimized to interfere with the most commonly used control and video transmission signals of commercial drones, providing robust countermeasure capabilities against unauthorized or hostile UAV activities. Its lightweight design, long-lasting rechargeable battery, and rapid response make it an ideal solution for dynamic operational scenarios.

This advanced system is tailored to meet the rigorous demands of law enforcement, paramilitary forces, and military personnel, particularly during critical events requiring secure low-altitude airspace. Whether deployed for public safety, high-profile events, or strategic defense operations, the jamming gun ensures rapid and effective UAV mitigation with minimal operational burden.

Key Features

Targeted Frequency Disruption
Employs frequency-sweeping jamming to precisely interfere with control and data link signals, ensuring effective neutralization of drones without affecting unrelated communication systems.

Directional Precision
Built-in directional antenna allows highly focused interference, minimizing the risk of collateral signal disruption in surrounding areas.

Lightweight and Portable
Ergonomically designed for ease of use and portability, allowing operators to carry and deploy the device comfortably in field operations.

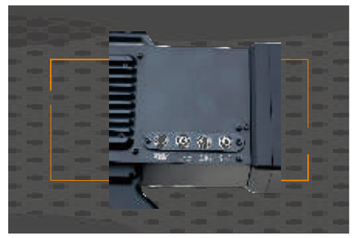
Extended Battery Life
Features a high-capacity rechargeable battery, ensuring prolonged operational capability in demanding scenarios.

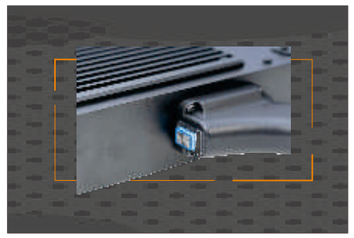
Rapid Response
Provides instantaneous jamming action to counter emerging drone threats quickly, reducing risks in critical moments.

Wide Compatibility
Effectively disrupts communication and video transmission signals of most commercial drones, ensuring broad applicability against evolving UAV threats.

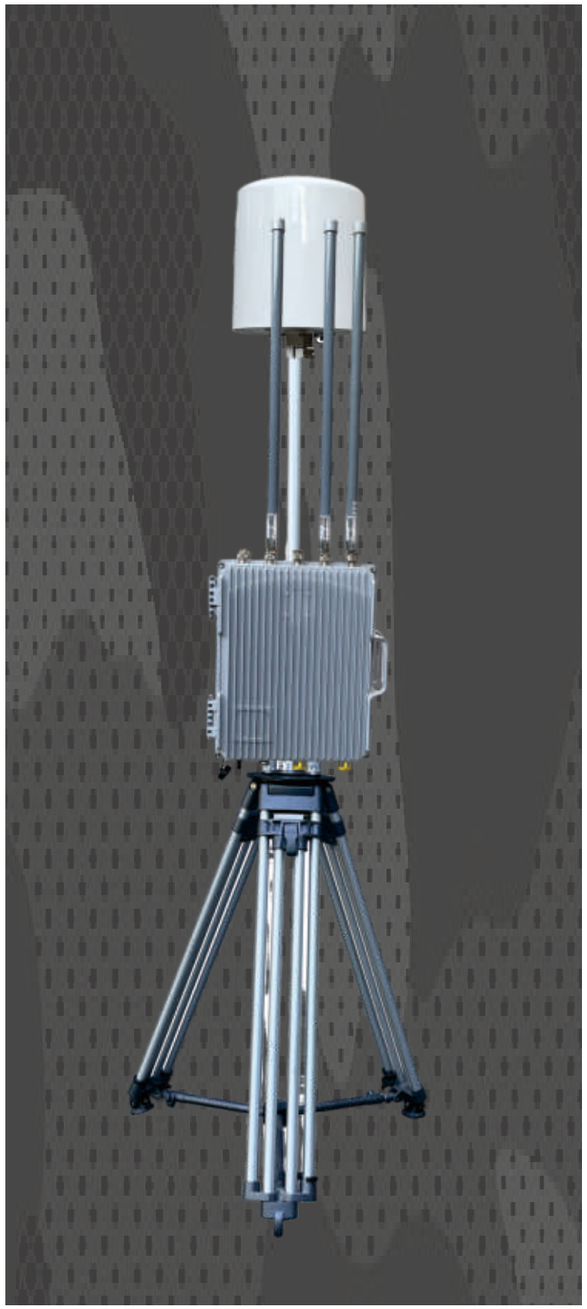
KEY PARAMETERS

Item	WS-04Pro	WS-06Pro
Jamming range	1-2km (GPS2-3km)	1-2km (GPS 2-3km)
Working frequency	900Mhz/50W	800Mhz/50W
	GPS/20W	900Mhz/50W
	2.4Ghz/50W	1.2Ghz/50W
	5.8Ghz/50W	GPS/20W
		2.4Ghz/50W
		5.8Ghz/50W
Continuous working time	35-45mins	35-45mins
Standby time	>10hrs	>10hrs
Response time	<4s	<4s
Antennas	900Mhz/5dBi/ Azimuth 58°/Elevation50°	800-900Mhz/5dBi/Azimuth 58°/Elevation 50°
Directional	GPS/5.5-10dBi/Azimuth 41°/Elevation 36°	1.2Ghz/4-9.5dBi/Azimuth 60°/Elevation 50°
	2.4Ghz/10-11dBi/Azimuth 60°/Elevation 50°	GPS/5.5-10dBi/Azimuth 41°/Elevation 36°
	5.8Ghz/12.5-14dBi/Azimuth 60°/Elevation 50°	2.4Ghz/10-11dBi/Azimuth 41°/Elevation 36°
		5.2Ghz/12.5-13dBi/Azimuth 28°/Elevation 23°
		5.8Ghz/12.5-14dBi/Azimuth 60°/Elevation 50°
Battery	Rechargeable Lithium 9.6Ah/24V	Rechargeable Lithium 9.6Ah/24V
Working temerature	-10 to 50	-10 to 50
Size	620*125*70mm (665*410*145mm package)	770*125*70mm(925*375*150mm package)
Weight	3.5kg (4.6kg package)	4.4kg (5.6kg package)
Environment	Operating temperature: -20ºC to +55ºC	
Protection Grade	IP 54	
Warranty	12 months from date of shipmenty	





Compatible Solution--Passive RF Sensor



WSDF-5000A

The Passive RF system--WSDF-5000A adoptsCRPC technology,it can be organically integrated with other security systems and is suitable for long-term fixed protection in areas such as airports, petrochemicals,and large venues.

It can also be deployed with the vehicle and can be applied to dynamic accompanying support such as public security law enforcement armed police special services, and military patrols.

Basic Function

200+drone library
White & Black list function
Locate drones and operators
Up to 5km radius detection range
High accuracy with low false alarm

FEATURES

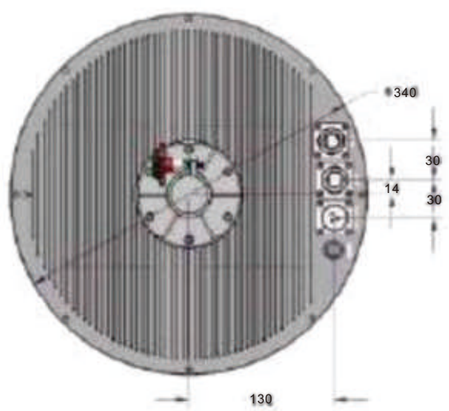
- **Environment Friendly & Safety**
  Adopting passive detection technology, with no impact and zero interference on the surrounding
  Highly integrated
  All modules are integrated into one protective cover, without any accompanying work units, and operate upon power on
  Networking positioning
  Single station can accurately measure direction;
  Multiple networkable positioning devices
  Good scalability
  Can be integrated with radar, optoelectronic and other jamming systems for integration
- ;**Strong flexibility**
- Strong transportation, deployment and mobility

Key Technical Parameter

Model	WSDF-5000A
Passive detection	CRPC Technology
Frequency band support	30MHz--6GHz
Key frequency band	433MHz, 900MHz, 1.4GHz, 2.4GHz,5.8GHz(Others optional)
Coverage	360°
Detection range	5km (radius)
Detection height	1km
Date rate	3s-7s
Sensitivity	
DF accuracy Number of real-time detection	10°(following)
	⩽3°(hovering)
	⩾ 30 drones
Dimension	L 410 x W 330 x 190mm
Weight	14kgs
Working time	7*24H
Positioning capabilities	Display the working frequency band, brand number, electronic fingerprint ID (serial number of the fuselage), bearing, distance, latitude and longitude , flight altitude and other information of the drone in the detection list, and it can display identification icons and flight tracks on the electronic map;(Optional)
Power supply	220V AC, can be connected by fixed power supply or UPS.
Power voltage	AC100V~240V
Power consumption	15W

A

B



Compatible Solution--3D Drone Detection
Active Radar Options

3D DRONE DETECTION ACTIVE RADAR

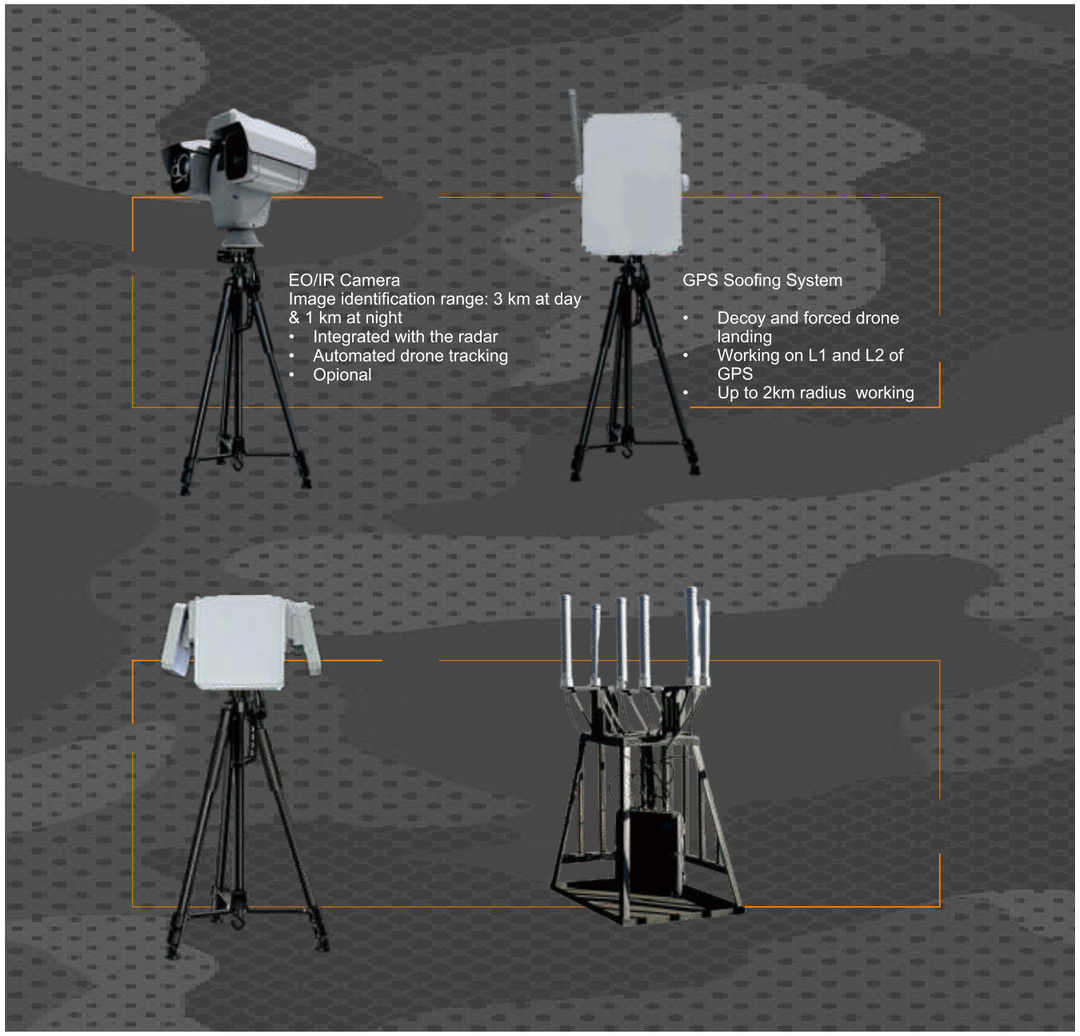
3D drone detection radar creates a full 3D dome detection area:

Early warning on drone perimeter breachesReal time tracking on targets from all directions, including directly above the radar

Automatic PTZ design on targets

Reliable nuisance alarm filtering
All-internal cabling and has been ruggedized for use in high EM electromagnetic) environments, making it idealfor use in substation security.

Compatible Solution
EO Camera/Mitigation Options



JAMMING SYSTEM

The high-performance UAV jamming system is designed to disrupt remote control signals, GPS, and common R/C links (5.8G) used by commercial drones, providing comprehensive protection against unauthorized drone activity and shielding sensitive areas from potential threats.

Tailored (Directional antenna based & Omni-directional antenna based) for highsecurity environments such as government compounds, military bases, anti-terrorism units, and border control operations.

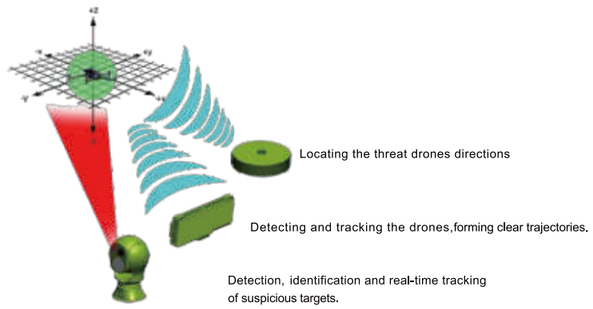
“Falcon”Directional Anti-UAV System

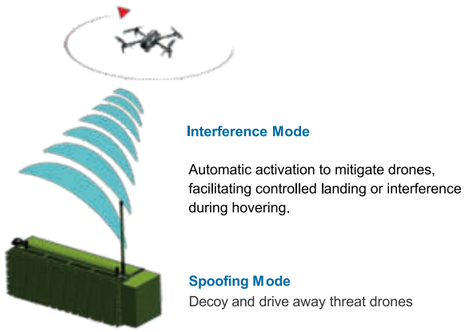
The new anti-drone defense system uses technologies like RF detection, radar,optics, radio interference,and navigation spoofing to detect,track,and neutralizeunauthorized drones, creating an integrated low-altitude defense network.

Spectrum detection : 5km
Optoelectronic tracking ： 5km
Radio jamming range: 3km
Radar detection range: 5km
GNSS spoofing range: 500m-1km

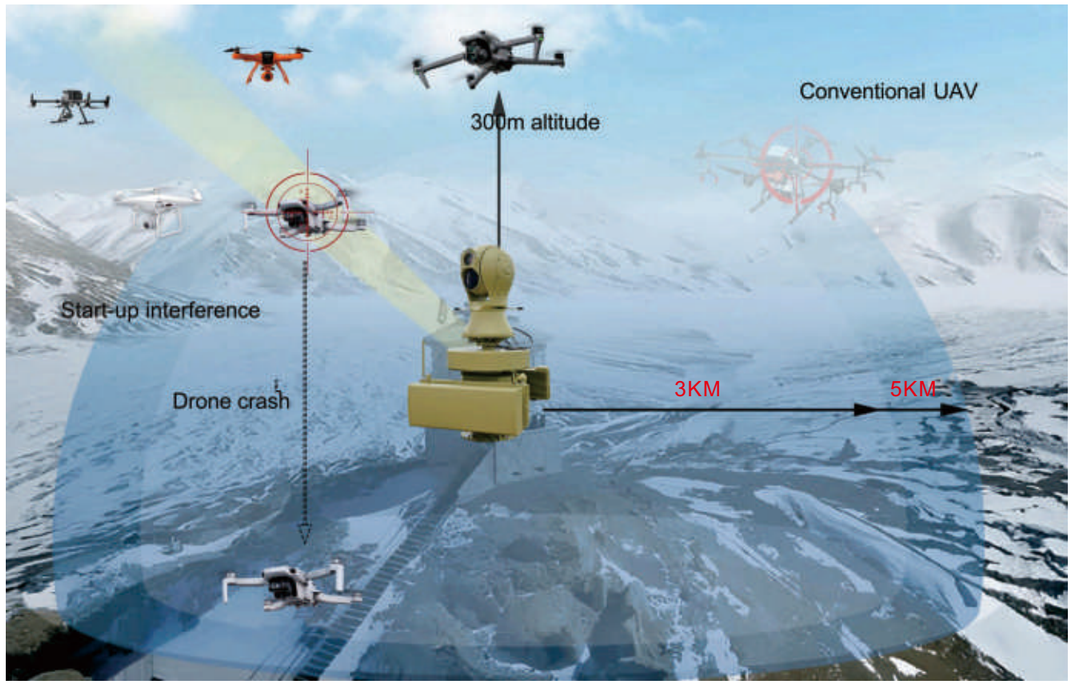
System Working Principle

Highly integrated modular eauipment offers stable performance, sleek desian, high visibility, and robust deterrence capabilities, With extensive coverage and long-range striking capability, it effectively safeguards large private properties and secures large-scale event sites.ntegrated low-altitude defense network.





FEATURES



Five-in-one Defense System

The system integrates electro-optical tracking, full-spec-trum monitoring, radar, radio interference,and GNSS deception systems to achieve real-time tracking,detection,interference,and deception functions against drones.

Multi-Level Control

Supports both unattended and manual operation modes,allowing users to customize and preset response levels. Radar detection, radio detection, and electro-optical tracking can be set to multi-level linkage response modes to ensure flexible responses to various

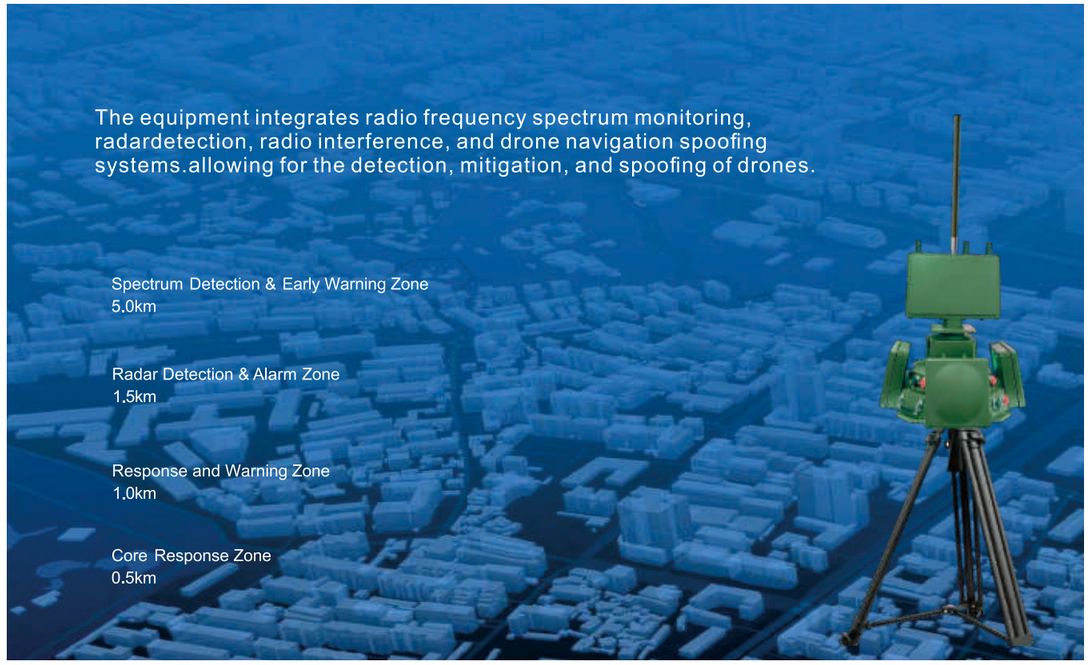
Radar+Spectrum+Electro-Optical Three-Level Linkage

The detection system consists of spectrum detection,radardetection, and electro-optical tracking.By combining active and passive detection methods, it effectively complement seach other, achieving efficient drone monitoring and tracking with in a 5 km range.

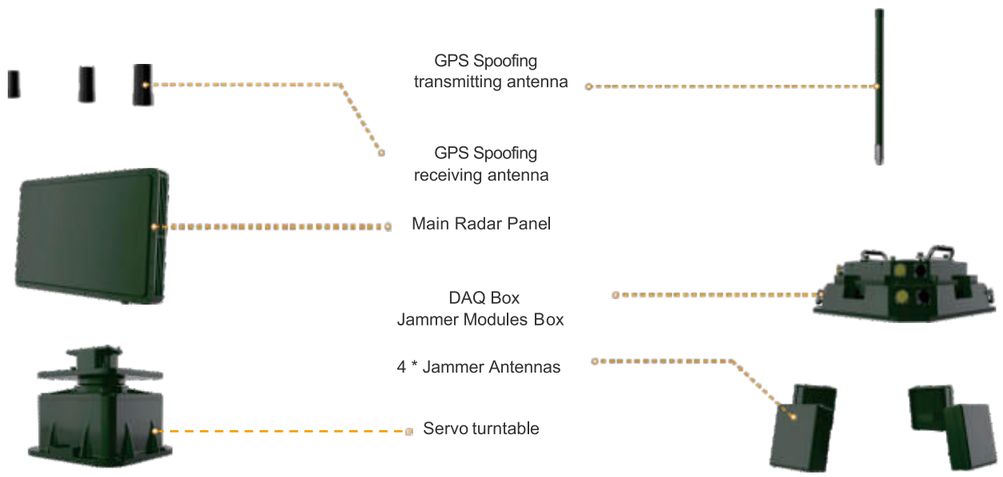
Dual Linkage Response

A combined solution of navigation deception and radio interference is employed to effectively complement deception and interference in the 1-3km range of the alert and core zones, forcing drones to land, hover, or return immediately.

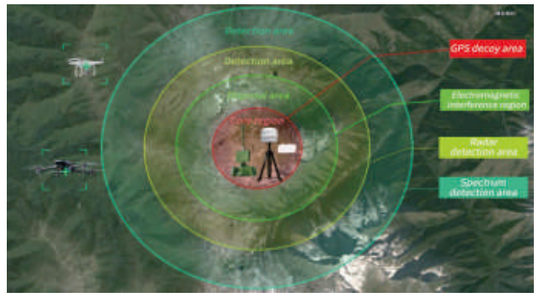
OWL Omni-Directional Anti-UAV System



HARDWARE COMPOSITION



WORKING LOGIC



PACKING

Main System Packing Case

Size: L 80cm x W 60cm x H 80cm

Weight:50.4kg

Accessories Packing Case

Size: L 65cm x W 62cm x H 42cm

Weight:44kg

Unpacking image

Unpacking image

Working Status Diagram

SCHEME CONSTRUCTION

Mobile layout

For mobile operations,in the active investigation and camp security,the system is deployed in the fierce armored vehicle,the investigators in the vehicle through the terminal equipment to investigate and control the radiation area, to ensure the safety of the area

Fixed layout

It is mainly used for the protection of places with high security levels such asposts, camps, prisons, and detention centers, which need to prevent dronesfrom being used for illegal prospecting and transporting prohibited items

Comprehensive Monitoring software

LGSS Control Software, a cutting-edge solution that redefines user-friendly operation and unparalleled functionality. Ousoftware is your all-in-one tool, seamlessly integrating with radar,RF detection, jammer, GPS spoofing system, electro-opti.cal system,and drone capture system.

Complete Compatlbllity

Radar/RF Detector/Jammer & GPS Spoofing System/EO Camera

Efficient And Stable

High user usability and management efficiency

Streamlined Interface

Intuitive and user-friendlyinterface Easy to operate

Robust Functionality

Digital Map/Real-time Monitoring Historical Playback/Device Management/White &Black List

Wireless Micro-Vibration Heart Beat Detection System

The Wireless Intelligent Micro-Vibration Life Detection System is a cutting-edge solution developed to enhance vehicle security inspections in prisons, drug treatment centers, detention centers, border defense, customs, and public security checkpoints. This advanced system addresses the challenges of detecting hidden individuals within vehicles while significantly improving the efficiency and accuracy of inspections.

The system utilizes microchip sensors to detect minute vibrations caused by vital signs such as heartbeat, breathing, pulse, and body movement. These signals are automatically amplified by 500-10,000 times and analyzed by the intelligent data processing system. Through proprietary algorithms, the system can accurately determine whether there are living beings hidden inside the vehicle, without the need for opening doors or unloading cargo.

APPLICATIONS

Prison Security
Prevents unauthorized escapes and smuggling attempts.

Border and Customs
Detects concealed individuals in cargo or vehicles to combat illegal immigration and smuggling.

Public Security Checkpoints
Enhances the efficiency and safety of vehicle inspections.

Detention Centers
Improves accuracy in locating hidden individuals during routine checks.

ADVANTAGES

Convenient Detection
Requires no door-opening or goods unloading. The handheld wireless detection terminal magnetically adheres to vehicle undersides with no wiring.

Wireless Operation
Wireless terminals enable real-time monitoring (prevents loss) and secure data collection/transmission.

Intuitive Interface
Clear GUI with simplified one-touch operation: single-button activation and automated scanning.
Multi-mode Alerts

Convenient detection:
The inspected vehicle does not need to open doors/unload goods, the handheld wireless vehicle detection terminal directly adsorbs on the bottom of the vehicle, no wiring is required, and the operation is convenient.

Wireless detection:
Wireless detection terminals, real-time monitoring to prevent loss; wireless information collection/transmission.

Simple operation:
The interactive interface is clear and the operation process is simple and easy to learn, one-key start and one-key detection.

Multiple warnings:
Visual red and green signs on the software interface + automatic voice broadcast of detection results.

Intelligent alarm:
Intelligent positioning monitoring, overall/partial alarm display; voice reminder to retract the detection terminal.

Intelligent charging:
Wireless magnetic adsorption charging, intelligent power monitoring, charge when weak, cut off when full.

Battery display:
Real-time display of detection terminal power status, visual four-level power icon, with low power reminder.

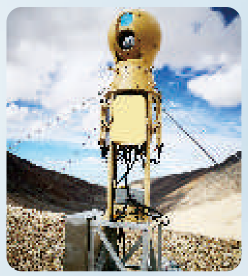
Transmission security:
Industrial-grade wireless radio frequency technology, stable data reception; Dedicated data encryption technology to ensure data transmission security;

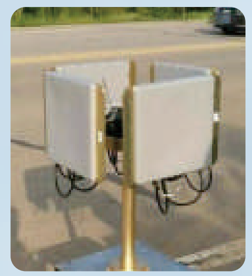
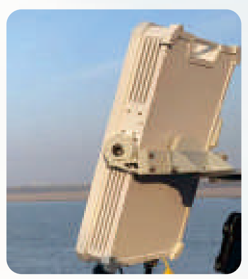
Convenient maintenance:
Modular structure standard installation, can be quickly disassembled for maintenance replacement.

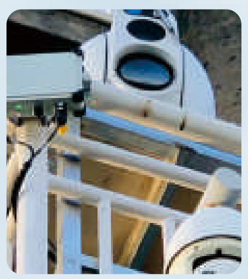
Detail Picture	Component Unit	Function introduction
	System Software	Integrated control center,Command sending center Patented built-in software
	Operation Client	Portable,remote operation
	Microseismic Detection System Host	Built-in detection sensor charging base, start switch, and various interfaces; Portable aviation trolley case, can store detection sensors and operation clients; Telescopic rod can be freely extended and adjusted, flexible deployment.
	Vehicle Detection Terminal	Vehicle detection terminalsand ground environmental detectionterminals can be used interchangeably through system settings.
	Ground Environmental Detection Terminal	

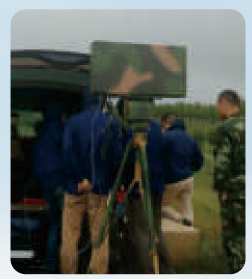
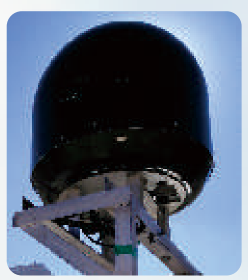
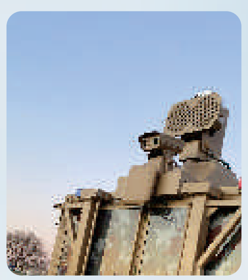
Ground radar

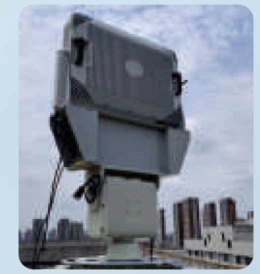
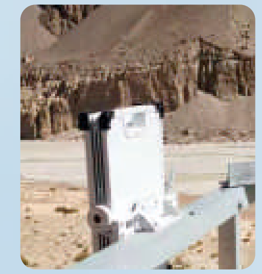
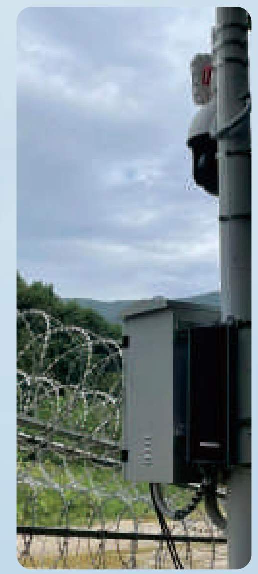


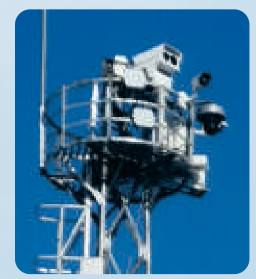
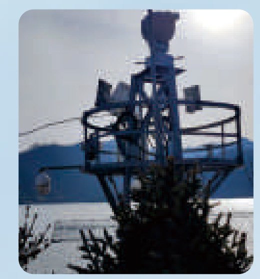
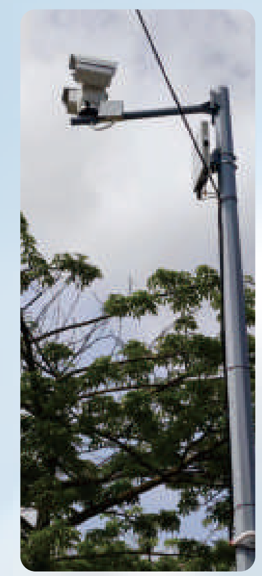
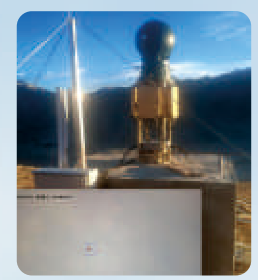
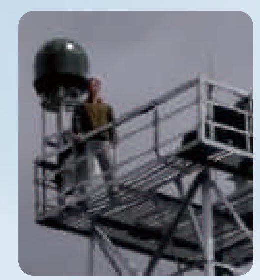
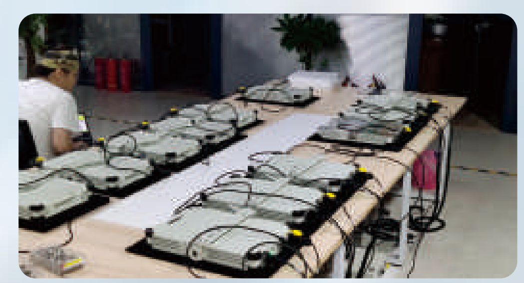







Air radar









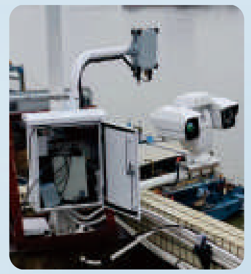


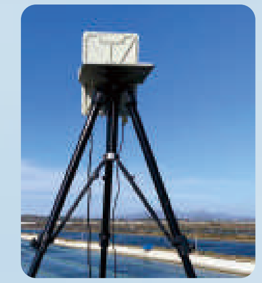
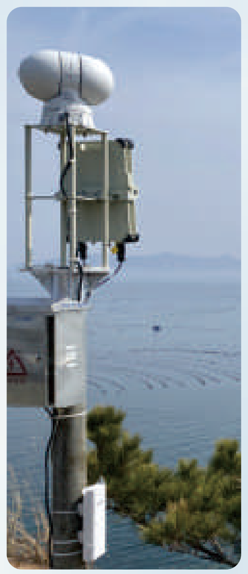
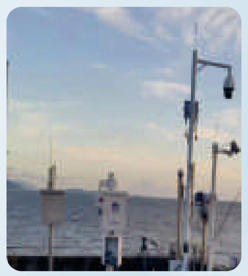


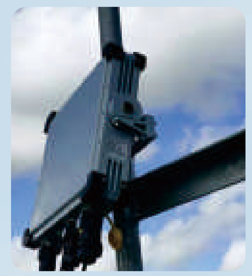


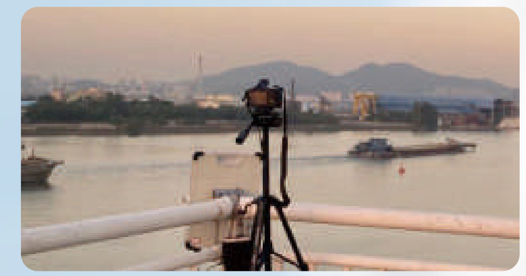


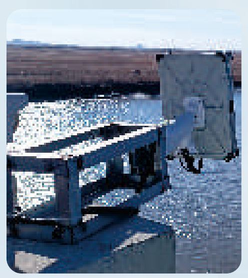
Coastline radar

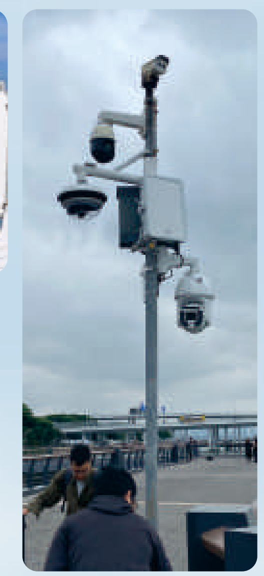
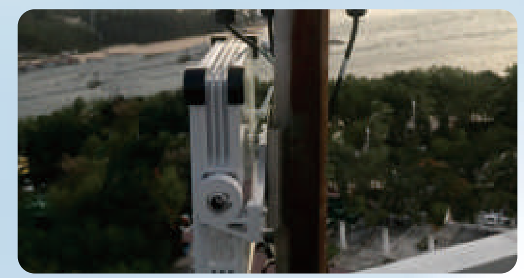
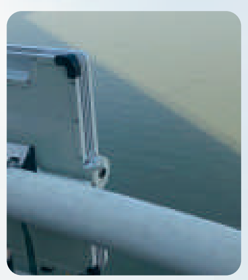
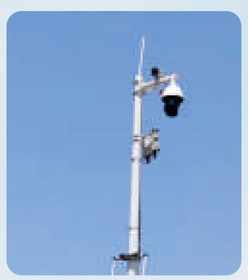



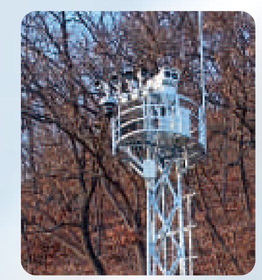
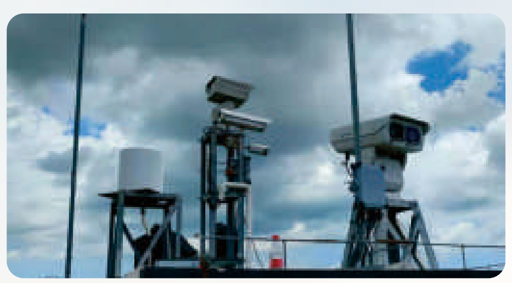






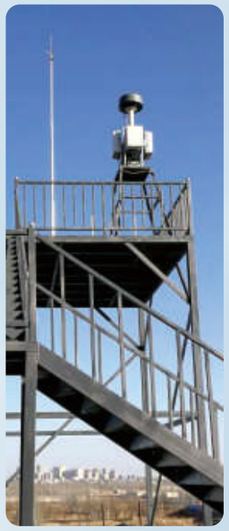




Anti drone



Enterprise display