C4i communication

EXPERIENCE THE DIFFERENCE
YOUR SECURITY & SAFETY PRODUCTS

ANTI DRONE JAMMING SYSTEMS CATALOG

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EXPERIENCE THE DIFFERENCE

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C4I-JAMMING SOLUTION

C4I-JAMMING SOLUTION

Observation

- Communication positioning
- Spectrum/radar detection
- Photoelectric tracking
- Moving trajectory
- 2D/3D map

Orientation

- Multi-device fusion
- Target Recognition
- Collaborative Tracking
- Manual Control
- Surveillance&Alerting

Decision

- Situation Awareness
- Security Zone Setting
- Blacklist and Whitelist
- Pre-configured Strategy

Action

- Command Dispatch
- Effect evaluation
- Re-countermeasures
- Record & Collaboration

DETECTION

Radar Detection
RF Detection
Optronic Detection

NEUTRALIZATION

Electronic Jamming
Spoofing
Laser

IDENTIFICATION

Micro-Doppler
Optronic
AI based

TRACKING

Radar Tracking
Optronic Tracking

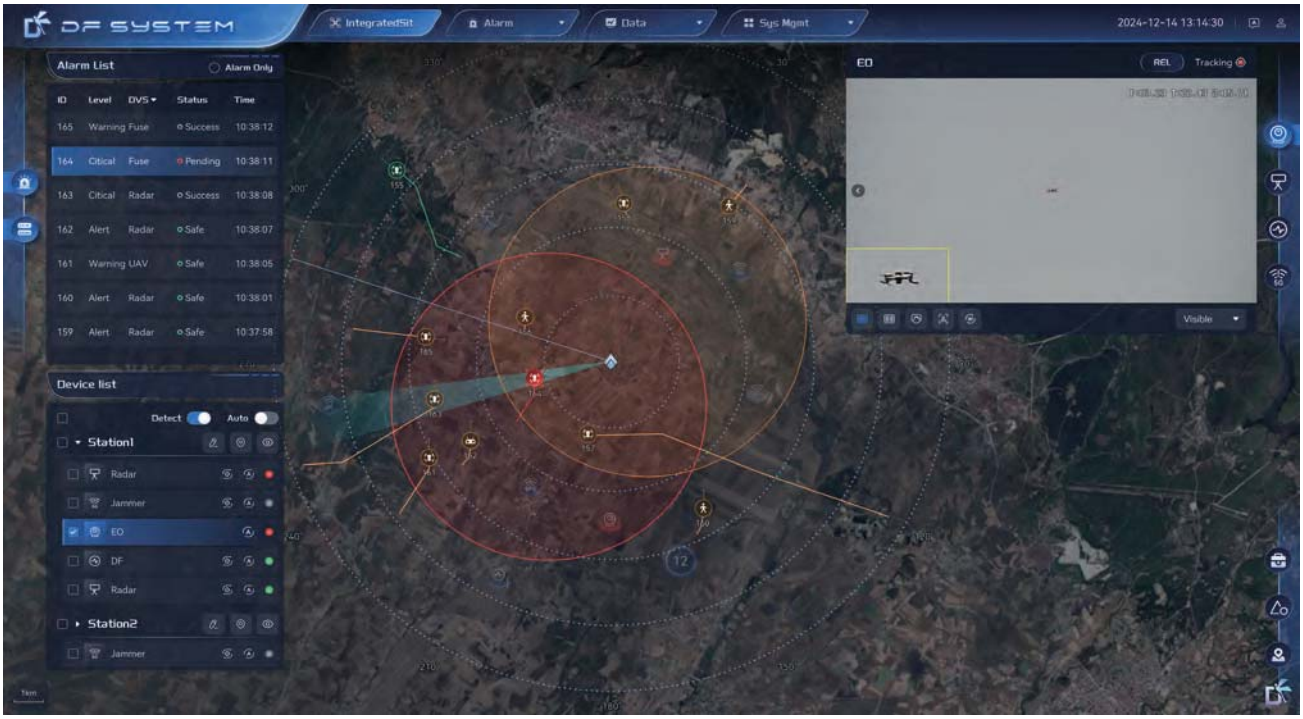
SYSTEM SOLUTIONS

System Configuration

Situation Awareness & Presentation

Countermeasure Decision

Event Sourcing



LAN

RF Radar EO

Jamming Spoofing Laser

DETECTION - IDENTIFICATION - TRACKING

NEUTRALIZATION

C4I-RM05

Long-range detection & identification ability with a low false alarm rate.

C4I-RF05

The equipment is based on TDOA composite positioning technology, with functions such as detection and early warning of electromagnetic targets within and outside the range of multiple stations,model identification, positioning tracking and trajectory playback.

C4I-HEIMDALLR-ET6

The unit, with the strong anti-electromagnetic interference ability and high image resolution, can identify, lock and track small UAVs day and night.

C4I-HEIMDALLR-PS5

A passive-detection photoelectric radar product, achieving 360° panoramic monitoring and long-distance detection of multiple targets

C4I-RJ05

The equipment integrates detection, positioning and countermeasures units to achieve detection, identification, positioning tracking and interference disposal of intruding UAVs.

C4I-JD03

Tailored frequency band within 300MHz-6GHz， effectively dealing with various civilian/ non-standard UAV targets.

C4I-CYCLOPS-04

The laser shield system is an easy-mount device that closely integrates functions of target capture, track and attack and works around the clock.

C4I-ODIN-05

The system integrates radar, optoelectronic equipment, radio frequency interference, navigation deception and other devices to achieve longrange early warning, high confidence identification and precise disposal of drones.

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C4I-RM05

C4I-RM05

PRODUCT DESCRIPTION

C4I- RM05 is a Ku-band fully coherent, fully solid-state, pulse Doppler three-dimensional radar. It can achieve all-weather, all-hours, and all-area detection and monitoring of low-altitude and ground targets (RCS=0.01m^2, detection range ≥5km). The system has multiple operating modes and is capable of multi-target tracking and identification. It is suitable for performing critical area guard duties.

PRODUCT FEATURES

Agile and Portable
The system is lightweight, compact, has a simple structure, and can be quickly installed and dismantled

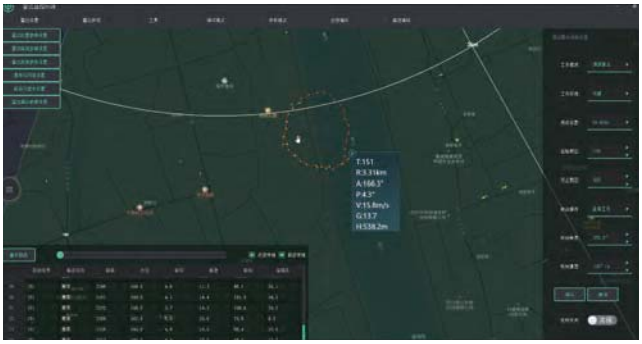
Intelligent Perception
Quickly senses the electromagnetic environment according to usage scenarios and matches the optimal radar performance

Clutter Suppression
Capable of detecting low, slow-moving targets in complex environments

Target Recognition
Uses artificial intelligence algorithms and edge computing for real-time data analysis, providing strong target recognition capabilities

SPECIFICATIONS

Working frequency band	Ku band
Operating system	Azimuth machine scanning + pitch synchronization
Antenna rotation speed/data rate	3s/r, 6s/r two modes
Detection range	Drone: ＞ 5Km（RCS=0.01m2） Pedestrian: ＞ 8km（RCS=0.5m2） Small vehicle: ＞ 12km（RCS=4m2）
Detection angle	Azimuth: 0° ～ 360° Pitch: 0° ～ 40°
Detection accuracy	Distance accuracy: ≤ 10m Azimuth accuracy: ≤ 0.3° Pitch accuracy: ≤ 0.6°
Resolution	Distance: ≤ 10m Azimuth: ≤ 3° Pitch: ≤ 6°
Speed measurement range	2m/s ～ 80m/s
Overall dimensions	≤ 800mm×350mm×250mm
Total weight	≤ 25kg
Defense level	IP65
Power supply requirements	AC220V/50Hz, ≤ 400W
Operating temperature	-40 °C ～+60°C



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C4I-RM05A

C4I-RM05A

PRODUCT DESCRIPTION

C4I-RM05A radar detection equipment is a set of three-dimensional space surveillance radar targeting low-altitude small targets with all-round and high-elevation angle coverage. It is mainly used to detect and locate aircraft at low altitude.
The radar can accurately detect the spatial position of the target, and when coupled with an optoelectronic system, it can be cascaded with countermeasures such as jamming, laser weapons, and navigation deception to provide it with accurate target position information.

PRODUCT FEATURES

- Three-dimensional coordinate detection in the entire airspace
- Small signal detection under strong clutter background
- Fully solid-state surveillance radar
- Modular design
- Fully automatic, working around the clock
- Adaptable

SPECIFICATIONS

Working frequency	X- band (9 GHz ~ 10.6 GHz)
Working system	Linear frequency-modulation pulse
Scanning method	Azimuth machine scan + pitch phased scan
Detection angle	Azimuth angle: 0°～360° scanning, pitch angle 0 °～40 °
Measurement dimensions	Distance/azimuth/pitch angle/speed
Detection distance	>5 km (UAV RCS=0.01㎡ ; UAV:DJI phantom 4 series)
Detection accuracy	Distance accuracy: ≤10m Azimuth accuracy: ≤ 0.6 ° Pitch accuracy: ≤ 0.6 °
Detection height	>1000m
Resolution	Distance ≤ 30 m Azimuth resolution: ≤ 3 ° Pitch resolution: ≤ 9 °
Speed range	1m/s~ 50m /s
Close range blind zone	≤200m
Target capacity	≥200 pieces
Tracking method	TWS/continuous tracking
Self-checking ability	Real-time sub-system working status monitoring
Protocol	UDP
Transmit power	Average power: ≤ 32 W ; Peak power: ≤ 160 W
Overall size	≤ 800mm × 320 mm × 450 mm (L× W × H)
Total weight	≤ 30 kg (excluding tripod and rain cover)
Turntable speed	10r /min
Communication interface	1 RJ45 10M/100M /1000M adaptive Ethernet port
Power supply requirements	AC220V±10%, 50Hz, device power consumption: ≤ 250 W
Operating temperature	- 40℃ ~ +70℃
Protection level	IP65

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C4I-RF05

C4I-RF05

PRODUCT DESCRIPTION

C4I-RF05 Full-frequency RF Scanner adopts the second-generation wireless detection technology.
Based on the first-generation multi-element antenna array amplitude direction finding (AOA), it adds a multi-station time difference of arrival (TDOA) function and has precise UAV location positioning capabilities. At the same time, this RF Scanner integrates our company's unique consumer-grade UAV protocol cracking algorithm, has the ability to accurately locate mainstream DJI UAVs and remote controls, and supports capture images of pilots.

PRODUCT FEATURES

- Full band detection
- Accurate identification and positioning of UAVs
- All-weather, all-day, all-round
- Highly integrated design
- TDOA+AOA +protocol analysis composite passive positioning technology

SPECIFICATIONS

Detection system	Radio passive detection
Detection signal type	UAV digital transmission signal, UAV remote control signal, WIFI system UAV signal， DVBS signal UAV.
Detection UAV types	Most conventional consumer UAVs, some unconventional UAVs, some fixed-wing UAVs, and some flying UAVs
Detection coverage band	300MHz - 6GHz full frequency band detection
Detection range	Horizontal 360° omnidirectional
Single station direction finding accuracy	≤3°(root mean square)
Detection radius	≥ 5 km (open environment, UAV transmission power 0.1W)
Detection height	≥ 1000m
Multi-station detection accuracy	The positioning accuracy of multi-station equipment within the station is ≤30m, and the positioning accuracy outside the station is ≤100m.
Number of multi-site deployments	≥3
Multi-site deployment interval	≥500m
Target false alarm rate	≤5 pieces/day (24H) (typical urban environment)
Receive sensitivity	≤ - 115dBm
Azimuth calibration capability	Built-in high-precision positioning module, automatic calibration (portable)
Overall size	≤ϕ610mm (D) × 440mm (H)
Total weight	≤16kg
Way of communication	Ethernet (100M/1000M network)
Power supply requirements	AC220V±10%, 50Hz, device power consumption: ≤ 120 W
Operating temperature	-40℃+65℃ , RH<95%
Protection level	IP66

C4i communication

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C4I-RJ05

C4I-RJ05

PRODUCT DESCRIPTION

The device integrates detection and countermeasure units, utilizing spectrum sensing and spectrum feature recognition technologies to achieve the discovery, identification, and early warning of intruding drones; based on wireless voltage suppression technology, it enables the driving away or forced landing of intruding drones. The equipment adopts an integrated industrial design, with a simple and concealed appearance, strong environmental adaptability, flexible deployment methods, and can be used in a vehicle-mounted or fixed installation.

PRODUCT FEATURES

Integrated detection and strike
detect and counteract linkage, automatically start striking after discovering the target

Detection and Early Warning
Detect and identify drones, and alert through lights when drones are detected

Omni-directional coverage
Comprehensive countermeasures, wide coverage, intelligent and efficient jamming, blocking target signals

Multi-band interference
Supports multi-band interference, capable of interfering with various drones, offers high flexibility, and supports custom er-customized control bands

Compact and portable
The product adopts a miniaturized design scheme, with an appearance similar to an ordinary suitcase, making it convenient to carry and use, and can be quickly deployed to the required area

Mobile operations
Capable of drone detection, early warning, and countermeasures while in motion, able to operate at any time in all weather conditions with strong environmental adaptability

SPECIFICATIONS

Detection unit	
Work mode	Passive Detection
Detection frequency band	300MHz～6000MHz
Key detection frequency band	2.4GHz、5.2GHz、5.8GHz
Detection distance	Omni-directional:≥3～5km (detection distance varies with different models)
Detection warning response time	≤2s (from drone activation to detection)
Power consumption	≤10W
Countermeasure Unit	
Role object	Drone navigation, flight control, video transmission link
Working frequency band	400MHz、800MHz、900MHz、1.2GHz、1.5GHz、2.4GHz、5.2GHz、5.8GHz（Customizable）
Coverage area	360° omnidirectional coverage
Range of effect	500m～1000m
Interference activation time	≤3s
Number of simultaneous interferences	≥10 flights
Transmit power	240W
Mechanical parameters	
Device dimensions	L*W*H（378mm×214mm×500mm）
Device weight	≤15Kg
Total power consumption	≤600W
Power supply requirements	AC220V±10%
Protection level	IP65
Data interaction	RJ45
Operating temperature	-40℃～＋65℃

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C4I-JD03

C4I-JD03

PRODUCT DESCRIPTION

C4I-JD03 full-frequency jamming device is a software-defined jammer that can customize interference frequency points according to mainstream UAV frequency bands and supports independent or combined output of multiple interference channels. It emits electromagnetic waves to interfere with UAV satellite navigation signals or block the communication link between the UAV and the remote controller, forcing the UAV to make an emergency landing or return home.

PRODUCT FEATURES

- Software defined interference bands
- Strong jamming ability
- Integrated design
- Easy to install and widely used

SPECIFICATIONS

Signal source format	Supporting DDS sweep source and switching of modulation source modes such as FSK, BPSK, QPSK, QAM, 16QAM, 64QAM, OFDM, etc.
Interference frequency range	Interference channel output can be set arbitrarily within the 300MHz-6000Mhz frequency band
Typical interference frequency bands	400MHz, 600MHz, 800MHz, 900MHz, 1.1GHz, 1.2GHz, 1.4GHz, 1.5Ghz, 2.4GHz, 5.8GHz (each frequency band can be turned on or off in any combination)
Interference distance	≥3km (0.1W radiation source, UAV：DJI Mavic 2series)
I/C ratio	Not less than 10:1
Antenna type	High gain directional antenna
Antenna launch angle	≥90° (<2G frequency band); ≥60° (2G-4G); ≥30° (>4G)
Number of interference modules	No less than 4
Transmit power	Around 100W/ interference module; the interference transmit power being software-adjustable
Overall size	≤428mm (L)*285mm (W)*560mm (H);
Total Weight	≤28kg
Main indicators of P&T	Rotation speed: horizontal 0.02°~60°/s; pitch 0.02°~30° Rotation angle: horizontal 0~360° continuous rotation; pitch 75°~-15°;
Communication interface	1 RJ45 10M/100M/1000M adaptive Ethernet port
Power supply requirements	AC220V±10%, 50Hz, equipment power consumption: ≤ 900W
Operating temperature	-40℃+60 ℃, RH<95%
Protection level	IP65

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C4I-HEIMDALLR-ET6

C4I-HEIMDALLR-ET6

PRODUCT DESCRIPTION

C4I-HEIMDALLR-ET6 is a spectral reconnaissance device that integrates multiple modules including the visible light camera, cooled thermal imaging module, short-wave imaging module, and high-precision laser rangefinding module. This integration enables all-weather, around-the-clock multidi-mensional detection, positioning, tracking, and recognition. It can operate independently or be combined with radar devices, passive spectrum detection equipment, and radio jamming devices to form an automatic UAV defense system, ensuring low-altitude security for critical locations in all weather conditions.

PRODUCT FEATURES

- Multi-target detection and moving target tracking.
- Working around the clock
- Anti interference and high reliability
- Wide coverage High positioning accuracy

SPECIFICATIONS

Cooled Thermal Imaging Module		
Detector	Hg Cd Te (MCT)	
Resolution	640×512	
Pixel Size	15μm	
Operating Distance	0.3m*0.3m UAV target; recognition distance ≥1000m	
Focal length	33mm~660mm continuous zoom lens	
Focal Length		
Sensor	1/1.8'' Target Starlight CMOS	
Resolution	1920×1080	
Operating Distance	0.3m*0.3m UAV target; recognition distance ≥2500m	
Focal Length	7mm~300mm HD electric zoom lens	
Short-Wave Thermal Imaging Module(Optional)		
Detector	Indium Gallium Arsenide (InGaAs)	
Resolution	640×512	
Pixel Size	15μm	
Operating Distance	0.3m*0.3m UAV target; recognition distance ≥500m	
Focal Length	17mm~300mm continuous zoom lens	
Laser Rangefinding		
Laser Wavelength	1535±5nm, eye-safe	
Divergence Angle	0.3±0.05mrad	
Maximum Range	Large target: ≥16000m	Vehicle: ≥12000m
	Human: ≥5900m	UAV: ≥3200m
Distance Measuring Accuracy	±2m	
Laser Lighting(Optional)		
Laser Wavelength	1550nm±15nm	
Zoom angle	Electric zooming, 40° to 1.0° continuously adjustable	
Lighting Angle	Far angle 1.0°: effective distance > 500m, spot diameter 8.7m Near angle 40°: effective distance ＞80m	
Output Power	2.0±0.2W	
Servo Turntable		
Structure	U-shaped, two-axis two-frame	
Horizontal range	N × 360° continuous rotation. It can be mechanically locked after power failure.	
Pitch range	-90° to +90°, soft limit function, programmable	
Rotation speed	horizontal 0.01° to 80°/s, pitch 0.01° to 60°/s	
Acceleration	horizontal 100°/s2, pitch 100°/s2	
Positioning accuracy	>0.02°	
Positioning time	<4s	
Zero position setting	It supports the setting of horizontal and pitch zero positions.	
General Specifications		
Power Supply	AC 220V±20%; 50Hz or DC 48V±5%	
Transmit power	Peak≤600W; normal≤250W	
Dimensions	721 (H) × 596 (W) × 401 (L)	
Weight	≤95kg	

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C4I-HEIMDALLR-PS5

C4I-HEIMDALLR-PS5

PRODUCT DESCRIPTION

C4I-HEIMDALLR-PS5 infrared panoramic low-altitude radar is a photoelectric radar product designed for low-altitude detection. It features a fully self-developed uncooled infrared detector, allowing for passive detection with high concealment. Its vertical FOV exceeds 45°, enabling panoramic monitoring of low-altitude areas. Equipped with a unique self-developed small target detection algorithm, it supports customizing irregular warning areas, intelligently alarming, and tracking UAV trajectories.

PRODUCT FEATURES

Photoelectric Radar
Passive detection with high concealment
Passively receives infrared energy without disturbing the electromagnetic environment

Low transmission delay
The algorithm performs real-time detection and transmission, with a single frame image delay of 30ms

Multi-target Detection
1280 panoramic detection targets and 40 single frame detection targets

Panoramic Low-altitude Monitoring
360° Horizontal FOV
Ultra-large vertical FOV: -7.95°~37.95°
Rotating for one circle every 2s

Anti-sunburn
Anti-sunburn algorithm effectively prevents irreversible high-light burn damage to the module

Auto Tracking
Automatic target intrusion alarming and tracking

SPECIFICATIONS

Detector Type		Uncooled Infrared Detector
Resolution of Detector		1280×1024
Focal Length		55mm
Panorama Resolution		28800×3600
Panorama Output Frame Rate		180°/S
Horizontal FOV		360°
Vertical FOV		45.9°(-7.95~+37.95)
Stable Detection (Detection Rate ≥90%)	UAV (0.35 m×0.35 m)	100m-1500m
	Human (1.7 m×0.5 m)	2500m
	Vehicle (4 m×2 m)	5000m
Stable Tracking (Tracking Rate ≥90%)	UAV (0.35 m×0.35 m)	150m-1300m
	Human (1.7 m×0.5 m)	2000m
	Vehicle (4 m×2 m)	4000m
Multi-target Detection		255
IP Grade		IP66
Dimensions		354×350×573.4mm
Gross Weight		25kg
Maximum Operating Temperature Range		-40°C～60°C
Video Stream Output		RTSP (Network interface)
Control Interface		RS422
Power Supply		DC18~75V≤100W
Key Features		Wide FOV, Protection against sunburn, Designed for remote small target detection

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C4I-CYCLOPS-04

C4I-CYCLOPS-04

PRODUCT DESCRIPTION

The system closely integrates multiple modules including the high-performance visible light/infrared multiband detector, high-precision tracking turntable, high-power laser, power supply, and thermal management module. Working together with the up-to-date technologies of image processing and composite axis control, the system can effectively capture, track and attack targets. Also, it is easy to mount and can work day and night.

PRODUCT FEATURES

- Miniaturized system composed of modules
- 24-hour on duty easy mount
- High reliability Low cost-effective ratio
- High beam quality; High-precision tracking

SPECIFICATIONS

UAV detection distance	>3000m
UAV tracking distance	>2000m
UAV damage distance	1500m
UAV damage time	<10s
Laser effector	1-4kw
Rotating range	Azimuth: 360° Pitch: -10°~+70°
Dimensions	1300mm(W)×1700mm (L)×2200mm(H)
Weight	1000kg
Power supply	Built-in high power lithium-ion battery; Charging input AC 220V, adjustable;
Power consumption	Average power consumption: <4KW; without laser attacks
Operating temperature	-10°C~55°C

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C4I-ODIN-05

C4I-ODIN-05

PRODUCT DESCRIPTION

The integrated UAV detection and countermeasure system combines multiple sensors, including radar, photoelectric systems, radio frequency jamming, and navigation deception. By leveraging the complementary physical characteristics of these sensors, along with multi-source data fusion and AI algorithm optimization, the system provides an intelligent three-dimensional security solution for long-range early warning, high-confidence identification, and precise handling of UAVs.

PRODUCT FEATURES

Auto Calibration
The system features an integrated coaxial design that allows for unobstructed connections between modules, enabling autonomous dynamic calibration

Flexible Configuration
The system features a modular design that allows for flexible configuration of modules based on different scenarios

Convenient Deployment
The system is designed to be compact and lightweight, allowing for installation in just 5 minutes, and is compatible with both stationary and mobile vehicle configurations

Platform Versatility
The interface protocol and installation methods are designed for universality, ensuring easy integration

SPECIFICATIONS

Radar detection components		Operating frequency band: X-band;
		Detection distance: ≥5km (RCS: 0.01m^2, UAV);
		Blind spot: ≤200m;
		Search range: Mechanical scanning: azimuth: 0°~360°, pitch: 0°~30° (60° can be set)
		phase scanning: azimuth: -45°~45°, pitch: 0°~30° (60° can be set)
		Speed range: 1m/s~100m/s;
		Data rate: ≤3.5s (default);
		Detection accuracy: Distance: <10m, azimuth: <0.5°, pitch: <0.5°.
Optical components	Cooled infrared	Detector type: T2SL cooled infrared detector;
		Spectral band: 3.4~5.0μm;
		Focal length: 15-300mm;
		Field of view: 1.83°×1.46°～35.49°×28.72°;
		Resolution: 640×512;
		Pixel pitch: 15μm.
	Visible light	Image sensor: 1/1.25" large area array progressive scan CMOS sensor;
		Focal length: 10~550mm; 55× zoom, 16× digital zoom;
		Field of view: 1.16°×0.65°~58.22°×34.78°;
		Maximum output resolution: 2688×1520, 4MP;
		Minimum illumination: Color: 0.001lux (F1.5), black and white: 0.0001lux (F1.5).
	Laser rangefinding	Eye-safe class: Class 1;
		Laser wavelength: 1535±5nm;
		Emitting aperture: Φ12mm;
		Maximum range: ≥20000m (buildings), ≥15000m (vehicles), ≥6700m (people), ≥3700m (UAVs)
		Measuring accuracy: ±2m.
Radio jamming components		Jamming frequency range: The jamming channel output can be configured freely within the 300MHz to 6GHz frequency range;
		Jamming distance: ≥3km (0.1W radiation source, Mavic 2);
		Jamming-to-communication range ratio: not less than 10:1;
		Jamming beam range: Horizontal 360°, pitch ≥70°;
		Jamming effective time: ≤3s.
Navigation deception components		Center frequency: GPS: 1574.9～1575.9±5MHz;BDS :1560.9～1562.8±5MHz；GLONASS： 1601.9～1602.2±5MHz；
		Jamming angle: ≥60° (with 360° coverage enabled by an intelligent PTZ system);
		Defense distance: ≥5km;
		Jamming modes: forced landing and expulsion;
		Deception effective time: ≤15s.
Coaxial base		Horizontal range: N×360° continuous rotation. It can be mechanically locked after power failure;
		Pitch range: -90°~+90°. It can be mechanically locked after power failure;
		Rotation speed: 0.01°~120°/s;
		Acceleration: 80°/s^2;
		Positioning accuracy: ≤0.03°.
Overall indicators		Weight: ≤110kg (excluding tripod);
		Dimensions: 1000mm*520mm*1200mm (excluding tripod);
		Power supply: AC220V/50Hz;
		Power consumption: <2200W;
		Operating temperature: -40°C~+60°C;
		IP grade: IP65.

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LEARN MORE: c4icommunication.com
FOR MORE INFORMATION: contact@c4icommunication.com or +1 (302).981.1340