



# Introduction to portable Anti-Drone Solution

With the popularity of consumer drones, incidents of "black flying" drones frequently occur in crowded places such as concerts and sports stadiums. Such drones can easily carry cameras to invade privacy, intrude into core activity areas to disrupt order, and even cause safety risks to people due to loss of control. Traditional prevention and control methods suffer from slow response and lack of portability, urgently requiring lightweight, mobile, and rapid response solutions.

## ▪ Solution Overview

This solution focuses on lightweight operations, using a combination of "handheld detection device + portable detection and jamming device" to suit individual soldier mobile defense needs. The detection device covers the 700MHz-6000MHz frequency band, can quickly identify drone models, frequencies, and other information within 0-3km, with a response time  $\leq 5$  seconds, and weighs only  $\leq 0.35$ kg. The jamming device supports multi-band (800MHz, 900MHz, 1.5GHz, etc.) jamming within 2km distance, forcing drones to return or land through manual frequency selection or frequency hopping technology, with a total weight  $\leq 6.5$ kg, and battery life suitable for mobile operations. The advantage of the solution lies in its non-lethal approach, enabling rapid response to drone threats in crowded scenarios, achieving flexible deployment and low collateral damage prevention and control.

## ▪ Portable Detection and Jamming equipment

The portable detection and jamming device (directional and omnidirectional) uses UAV radio signal detection to passively search, track, and alert in real time, building an effective early warning system even in complex electromagnetic environments. It measures UAV signal parameters, performs direction finding, and identifies target frequencies with features like silent monitoring and multi-target recognition. By transmitting multi-band frequency, it can jam drones, forcing them to land or leave. The portable design ensures simple operation, quick assembly, and easy transport.



### SPECIFICATION

Jamming Distance	0~2km(Depending on working conditions)
Jamming Frequency Band	800&900MHz, 1.5GHz, 2.4GHz, 5.8GHz
Effective Time of Jamming	$\leq 2$ s
Detection Band	2.4GHz, 5.2GHz, 5.8GHz
Detection Distance	0~2km(Depending on working conditions)
Detection range	360°
Weight	$\leq 6.5$ kg

## ▪ Portable Detection Unit

The handheld detection device is a lightweight, portable security tool designed to detect most consumer and racing drones. Easy to carry and ready to use, it's ideal for mobile operations and rapid deployment, providing efficient low-altitude defense for events, airports, and military zones.



### SPECIFICATION

Detection Band	700~6000MHz
Detection Distance	0~3km((Depending on working conditions))
Battery Life	4h
Weight	$\leq 0.35$ kg



# Introduction to Vehicle-Mounted Anti-drone Solutions

Critical sites such as airports and energy facilities face urgent demands for UAV intrusion prevention. "Black flying" drone activities may cause severe consequences like flight delays or operational disruptions at energy facilities, with many such scenarios prohibiting drone debris from falling. High-risk areas like military bases and borders confront threats including UAVs carrying contraband, conducting surveillance, or even attacks, necessitating high-intensity interception capabilities. Hence, there is a need for mobile, scenario-adaptive vehicle-mounted Anti-drone solutions .

## ▪ Solution Overview

The solution comprises soft-kill and hard-kill categories, utilizing vehicle-mounted platforms for mobile defense .

## ▪ Vehicle-Mounted Soft-Kill Solution

Core: "Detection-Jamming-Spoofing Integrated System" capable of:

Detection: 600 – 6000 MHz band coverage.

Jamming: Multi-target interference within 1 km (interception capacity  $\geq 7$  targets) .

Spoofing: Lure  $\geq 10$  UAVs within 1 km .

Workflow: Combines "detection  $\rightarrow$  jamming  $\rightarrow$  spoofing" to safely land or repel drones .



## ▪ Vehicle-Mounted Hard-Kill Solution

Target Locking: Achieved via 1D phased-array radar (5km detection) + dual-spectrum electro-optical device (3 km visible-light tracking) .

Interception Equipment:

Laser destruction device (1 km range, 2 – 7 s damage time) .

Directional jamming assistance (5 km range) .

Capacity: Single-action neutralization of  $\geq 7$  targets .

Workflow: "Detection  $\rightarrow$  Locking  $\rightarrow$  Laser + Jamming" .



## ▪ Vehicle-mounted Anti-drone System-Soft-Kill



### FEATURE

- Integrated Design
- Blacklist and Whitelist
- Module Customization
- Without modification to the vehicle
- Mobile operation
- Drone Operator Positioning

### OVERVIEW

The "Vehicle-Mounted Detection, Jamming, and Spoofing Integration" can conduct real-time search, monitoring and alarm for the radio signals of unmanned aerial vehicles (UAVs), and identify the type and manufacturer of the UAVs. It can also conduct jamming for the receiving and processing of image transmission, remote control and navigation signals of UAVs within 360° range. The equipment can send false navigation spoofing signals to UAVs, and have the countermeasures of direction spoofing, forced return, forced landing and driving away to dispose suspicious UAVs quickly and effectively.

### APPLICATION SCENARIO



Security Assurance



Warfare and Antagonism



Critical Facilities



Important Figure

### SPECIFICATION

Detection Distance	0~8km(Depending on working conditions)
Detection Frequency Range	600~6000MHz
Jamming Distance	0~1km(Depending on working conditions)
Jamming Frequency Band	1.5GHz,2.4GHz,5.2GHz,5.8GHz
Spoofing Intervention Distance	0~1km
Spoofing Signal Modulation Mode	GPS,GLONASS,BDS,GALILEO
Weight	≤25kg

## ▪ Vehicle-mounted Anti-drone System-Hard-Kill



### FEATURE

- Integrated Design
- Blacklist and Whitelist
- Module Customization
- Without modification to the vehicle
- Mobile operation
- Drone Operator Positioning

### OVERVIEW

The UAV detection and defense command vehicle can control surrounding drones while on the move or at temporary sites. Equipped with radar and electro-optical devices, it enables real-time search, monitoring, and alerts. Through an onboard UAV control platform, it coordinates jamming and laser systems to disrupt or neutralize drones, providing rapid and flexible response in critical area protection, border patrols, and conflict scenarios.

### APPLICATION SCENARIO



Security Assurance



Warfare and Antagonism



Critical Facilities



Important Figure

### SPECIFICATION

Detection distance	0~5km(Depending on working conditions)
EO Tracking distance	100m~3km(Depending on working conditions)
Intercept distance	50m~1km
Interception of UAVs	2s~7s (Such as DJI Phantom4)
Jamming distance	≤5km(Depending on working conditions)



# Fixed Anti-Drone Solution Overview

Fixed areas such as nuclear power plants, core combat zones, and sensitive infrastructure face persistent risks of illegal drone incursions. Once disrupted or attacked by drones, these areas may trigger severe consequences including nuclear safety accidents or military intelligence leaks. Such zones often encounter coordinated swarms of drones, making traditional temporary countermeasures inadequate for 24/7, all-directional, high-intensity defense needs. Consequently, establishing a long-term, multi-layered anti-drone defense system for fixed areas is essential.

## Solution Overview

This solution is designed for sustained protection of fixed zones, combining soft-kill and hard-kill technologies to create an integrated defense system.

## Fixed Soft-Kill Solution

### ▪ Detection measures.

Integrates 1D phased array radar (10km detection) + radio detection equipment (8km directional accuracy  $\leq 3^\circ$ ) for continuous target monitoring.

### ▪ Core Equipment

Omnidirectional spoofing devices (directional 7km / omnidirectional 3km) simulate satellite signals to lure drones into landing along preset trajectories.

9-band jammers (3km coverage, 433MHz – 5.8GHz) suppress communication links.



## Fixed Hard-Kill Solution

### ▪ Detection measures.

Integrates 1D phased array radar + dual-optics electro-optical systems (tracking accuracy  $\leq 0.1^\circ$ ) for precise target locking.

### ▪ Core Equipment

2km laser anti-drone devices with multi-beam emitters capable of simultaneously destroying 3 – 5 drones.

Detection-strike integrated systems (5km detection + 1km jamming) for supplementary defense.



## ▪ Radar



### FEATURE

- Far Operating
- High Detection Resolution
- Multi-Batch Information Processing
- Adaptive Tracking
- Small Detection Blind Zone
- Low Transmit Power

### OVERVIEW

This radar is a low power detection radar developed for "low slow and small" targets, used to detect drones in sensitive airspace from a distance, provides accurate three-dimensional position information of the target, and achieves full coverage of 360° in the supervision area. This equipment is a special coded continuous wave system, three-dimensional radar. It has the characteristics of low transmitting power, high detecting resolution, long operating distance, strong anti-interference ability and good portability. It is suitable for all-weather, all-day, complex electromagnetic environment and geographical conditions, and can work continuously and stably for 7\*24 hours.

### APPLICATION SCENARIO



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Critical Facilities



Important Figure

### SPECIFICATION

Detection distance	300m~10km(RCS: 0.01m <sup>2</sup> , Depending on working conditions)
Operating Frequency Band	Ku/X
Range Resolution	≤10m
Detection Velocity Resolution	0.1m/s
Azimuth accuracy	≤0.5°
Elevation accuracy	≤0.5°
Weight	≤70Kg

## ▪ Optoelectronic Recognition



### FEATURE

- Multi-target recognition
- Data fusion
- Automatic area search
- Complex background tracking
- Fully automatic tracking
- Video recording for evidence

### OVERVIEW

The electro-optical identification and tracking system consists mainly of a visible-light camera, an infrared thermal imaging camera, a gimbal, angle measurement sensors, servo controls, a tracking module, and a main control module. It uses independently developed technologies for multi-target feature recognition, intelligent target tracking, and target detection in complex backgrounds to perform visible-light and infrared image recognition, enabling fully automated detection, identification, tracking, and evidence collection of drones.

### APPLICATION SCENARIO



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Warfare and Antagonism



Critical Facilities



Important Figure

### SPECIFICATION

Visible-light tracking range	100m~3km(Depending on working conditions)
Infrared tracking range	100m~1.5km(Depending on working conditions)
Resolution	1920*1080(Visible-light),640*512(Infrared)
Tracking Response Time	≤1s
Weight	≤40kg

## Radio Detection and Direction Finding (AOA+Protocol Analysis)



### FEATURE

- Single-station DF
- Blacklist and Whitelist
- Passive Detection
- Multi-Station Networking
- Accurate recognition
- Multi-target recognition

### OVERVIEW

The radio detection and direction-finding device (AOA + protocol analysis) enables real-time search, detection, and alerting of UAV data and control signals. The device supports both standalone operation and networked operation (intersection-based positioning). It features parameter measurement, single-station direction finding, and positioning of UAV data and control signals, and includes functions such as whitelist and blacklist management.

### APPLICATION SCENARIO



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Critical Facilities



Important Figure

### SPECIFICATION

Detection Frequency Range	30MHz~6000MHz
Working Mode	AOA and Protocol decoding
Detection distance	0~8km(Depending on working conditions)
Direction Finding Range	0~6km(Depending on working conditions)
Detection Angular Coverage	360°
Direction finding accuracy	≤3°(RMS)(Depending on working conditions)
Multi-target compecity	≥30
Weight	≤20kg

## GNSS Spoofing Device



### FEATURE

- Long-Range Spoofing
- Multi-objective Spoofing
- Remote Upgrade
- Diverse Countermeasure Strategies
- Area Denial
- Unmanned

### OVERVIEW

GNSS Spoofing Device emits simulated satellite navigation signals to deceive the location, speed, and time of the drone. Through implementing different deception strategies on the drone's navigation terminal, the equipment can achieve the functions of drone eviction, forced landing, and flight path induction. Combined with radar, radio, and other detection methods, the system can precisely induce the drone to land at a designated location.

### APPLICATION SCENARIO



Security Assurance



Warfare and Antagonism



Critical Facilities



Important Figure

### SPECIFICATION

Spoofing Intervention Distance	Directional :0~8km Omnidirectional:0~5km(Depending on working conditions)
Spoofing Signal Modulation mode	GPS,GLONASS,BDS,GALILEO
Transmission Power	≤30w(Tunable)
Number of Simultaneously effective target	≥30
Spoofing Range	360°
Weight	≤25kg

## ▪ Jammer-9-band



### FEATURE

- Remote Upgrade
- Long-Range Jamming
- Multi-Frequency Counteraction
- Targeted Frequency Band Strike
- Precision Strike
- Multi-Target Jamming

### OVERVIEW

Jamming Suppression Device utilizes white noise narrowband swept frequency jamming technique, adopting an intelligent and efficient method of suppressing jamming to disrupt the reception and processing of image transmission, remote control, and navigation signals of drones within a designated range. This achieves countermeasures such as forced return, forced landing, and expulsion, enabling rapid and effective disposal of the target drone. The equipment is guided by radar, radio, and other devices to emit signals, achieving the desired jamming effect on the target.

### APPLICATION SCENARIO



Security Assurance



Warfare and Antagonism



Critical Facilities

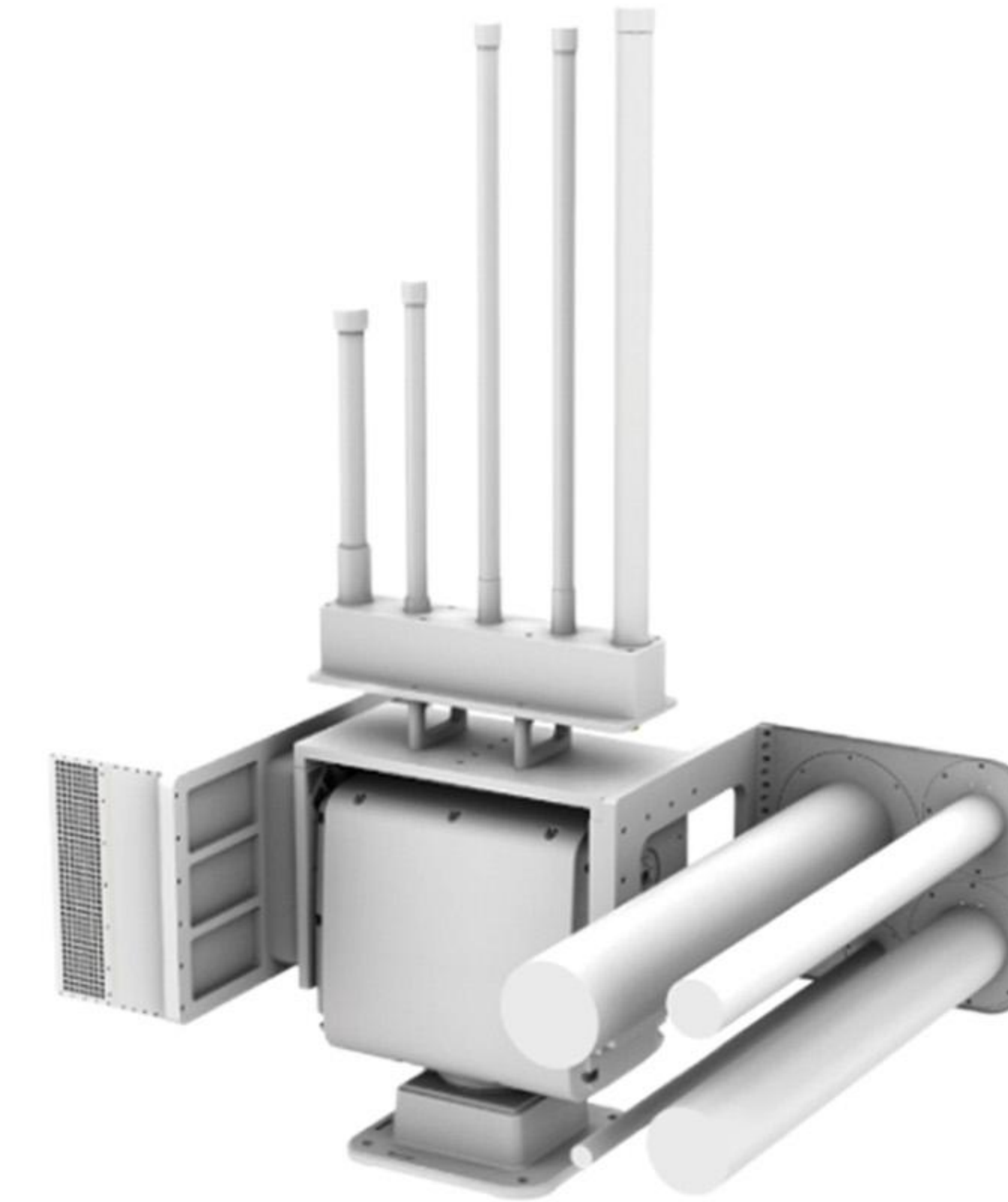


Important Figure

### SPECIFICATION

Jamming distance	0~3km(Depending on working conditions)
Jamming frequency band	433MHz、840MHz、900MHz; 1.2GHz、1.4GHz、1.5GHz; 2.4GHz; 5.2GHz、5.8GHz;
Effective Time of Jamming	≤2s
Jamming Angular Coverage	360°
Number of Simultaneously intercepted target	≥30
Weight	≤50kg

## ▪ Jammer-Integrated Directional/Omnidirectional



### FEATURE

- Remote Upgrade
- Long-Range Jamming
- Multi-Frequency Counteraction
- Targeted Frequency Band Strike
- Precision Strike
- Multi-Target Jamming

### OVERVIEW

Jamming Suppression Device utilizes white noise narrowband swept frequency jamming technique, adopting an intelligent and efficient method of suppressing jamming to disrupt the reception and processing of image transmission, remote control, and navigation signals of drones within a designated range. This achieves countermeasures such as forced return, forced landing, and expulsion, enabling rapid and effective disposal of the target drone. The equipment is guided by radar, radio, and other devices to emit signals, achieving the desired jamming effect on the target.

### APPLICATION SCENARIO



Security Assurance



Warfare and Antagonism



Critical Facilities



Important Figure

### SPECIFICATION

Jamming distance	Directional :0~7km Omnidirectional:0~3km(Depending on working conditions)
Jamming frequency band	800&900MHz、1.5GHz、2.4GHz、5.8GHz
Effective Time of Jamming	≤2s
Jamming Angular Coverage	360°
Number of Simultaneously intercepted target	≥30
Weight	≤50kg

## Tactical Laser



### FEATURE

- AIDC Power System
- Air-Cooled Laser Technology
- Unmanned Design

### OVERVIEW

The portable anti-UAV laser system adopts a lightweight and compact modular design, enabling integration onto a single vehicle. The system meets transportation and operational requirements across various environmental conditions and can be deployed in multiple configurations, including vehicle-mounted, shipboard, and fixed installations, tailored to specific application scenarios.

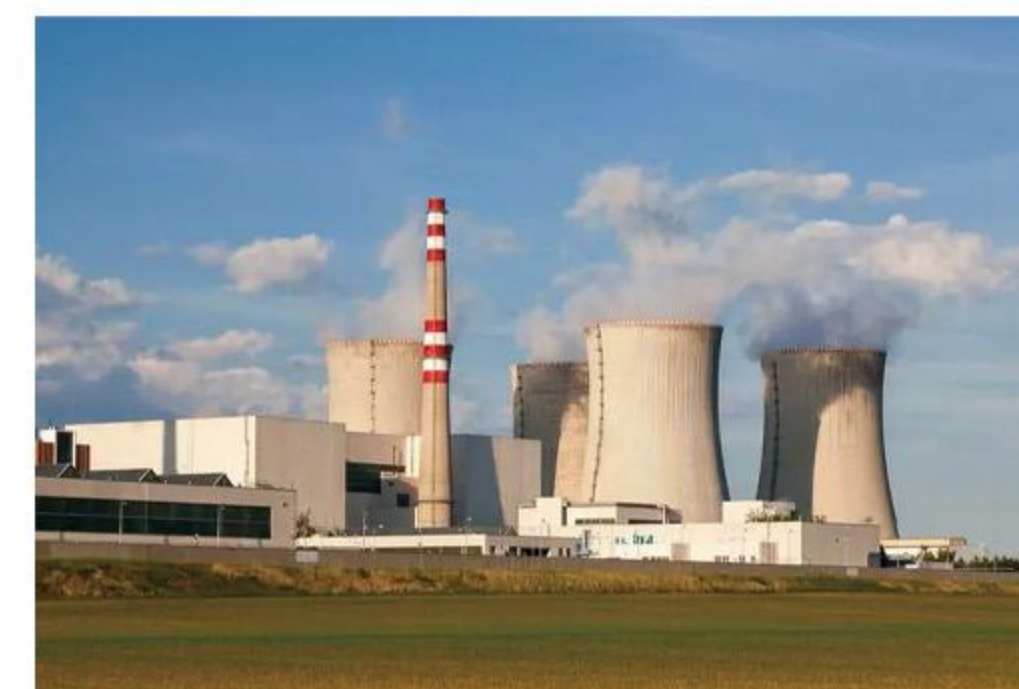
### APPLICATION SCENARIO



Security Assurance



Warfare and Antagonism



Critical Facilities

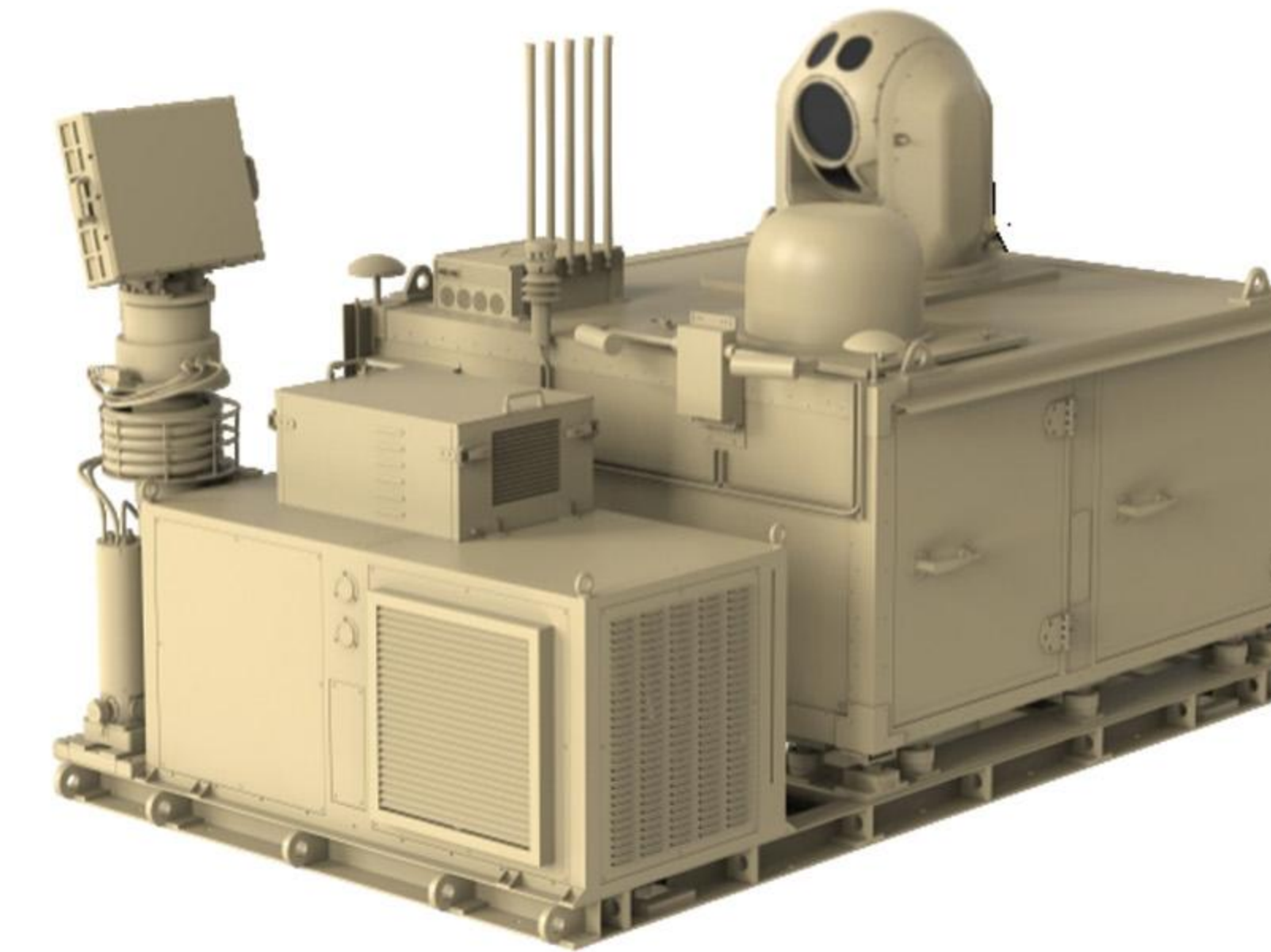


Important Figure

### SPECIFICATION

Interception of UAVs	2s~7s (Such as DJI Phantom4)
Intercept distance	50m~1000m (Such as DJI Phantom4)
Continuous shooting time	≥15s
Cumulative shooting time	≥30min
Strike aperture	≥80mm
Tracking accuracy	≤8μrad
Target switching time	≤5s
Weight	≤280kg

## Tactical Laser



### FEATURE

- Superior destructive power
- Leveling-free design
- Operating independently
- Compact and modular system design
- Easy to control
- Intelligent Assisted Targeting

### OVERVIEW

Based on proprietary core single-mode fiberlaser, this system is a High-Mobility Compact Vehicle-Mounted Laser Air Defense System with exceptional destructive capability superior battle field survivability, and high reliability. It is also adaptable for shipborne and airborne applications.

### APPLICATION SCENARIO



Security Assurance



Warfare and Antagonism



Critical Facilities



Important Figure

### SPECIFICATION

Interception of UAVs	2s~8s (Such as DJI Phantom4)
Intercept distance	300m~2.5km (Such as DJI Phantom4)
Continuous shooting time	≥120s(Continuous uninterrupted shooting)
Maximum shots	≥40times(5 s/shot)
Energy storage recovery time	≤30min(Enable 120s shooting)
Tracking accuracy	≤10μrad
Target switching time	≤3s
Shelter container weight	≤2T