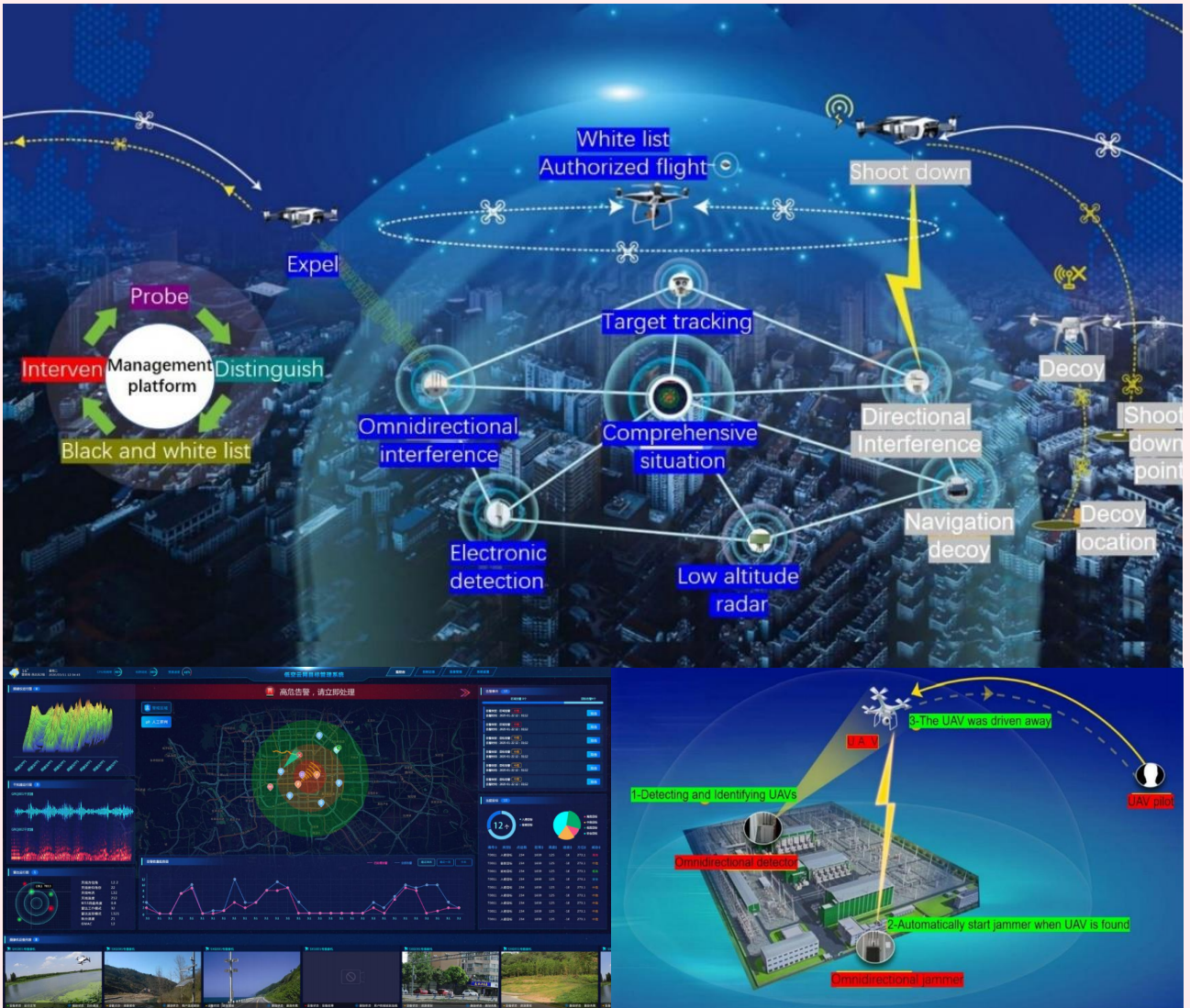# Low Attitude Cloud Network Anti-UAV System

**Defend your fears
Provide your needs**

Anti-UAV System

General Description:

The main function of the system is detecting, tracking, recognizing, striking and driving away the target of low altitude UAV, and managing the identification of UAV.
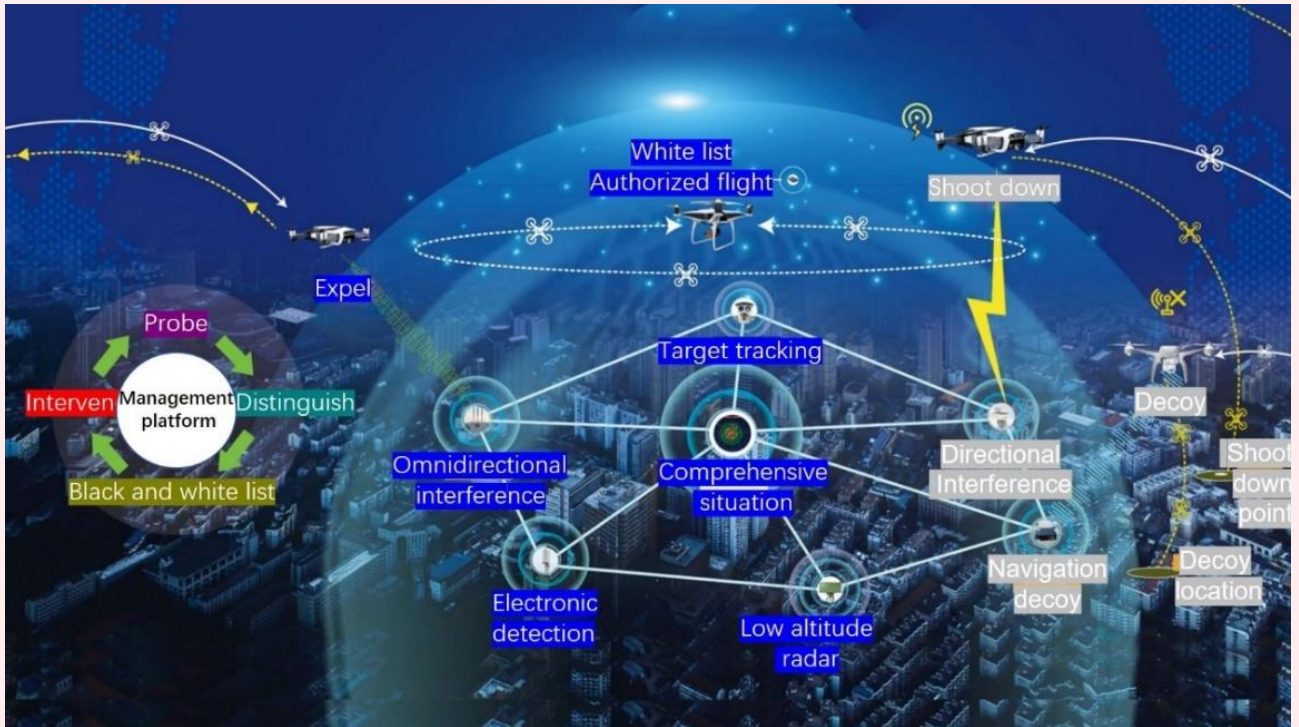
Feature:

- Large coverage at key region
- Coverage expansion and early warning
- Various UAV and invasion
- Enhanced functions and performance
- High level Automation and unmanning
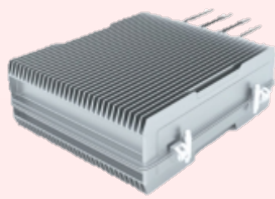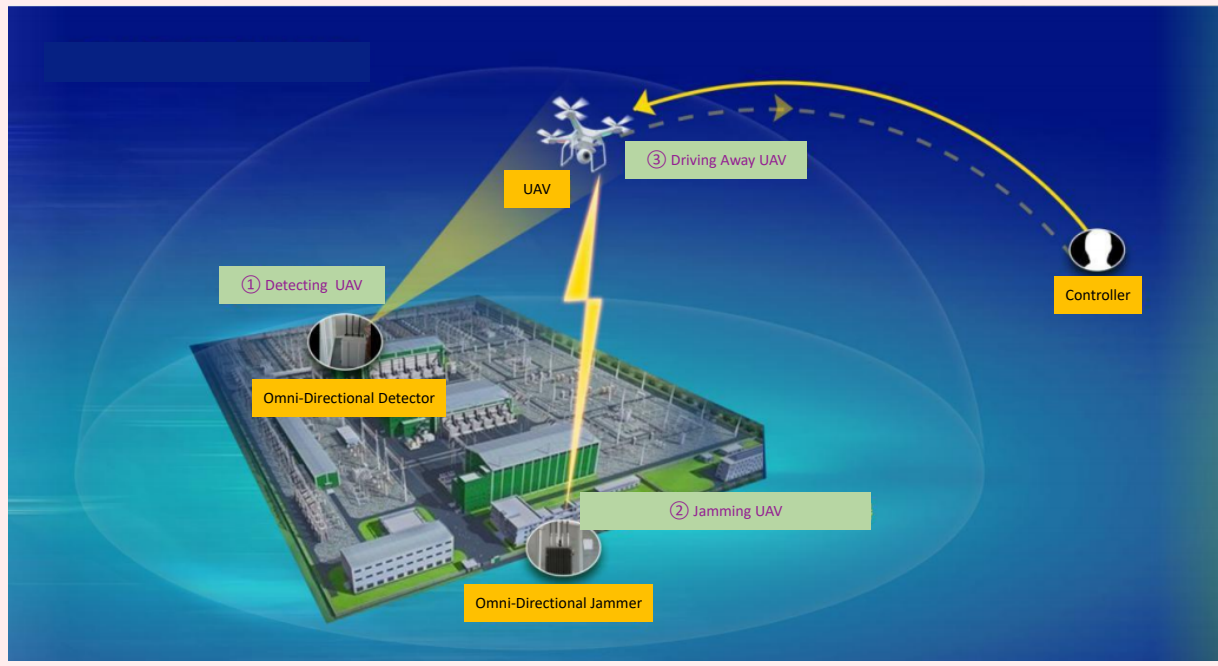- Open architecture and extensibility
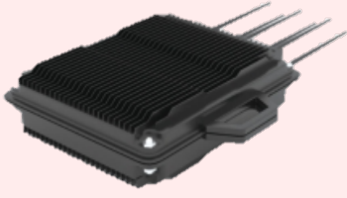
Large Area Integrated Management Solution

Large Area Integrated Management Solution:

- According to the needs of low attitude management and physiographic feature, appropriate equipments would be deployed in selected positions.
- For low attitude target tracking, positioning, and managing, the system would integrate target detection radar, multi-point positioning system, electric optical tracking system and multi-band jammer in optimum allocation.
- Equipping UAV identification management system, the identify UAV would be authorized and positioned in restricting area.
- The system could equipped patrol UAV realizing automatic patrolling mission.
- The integrated management platform would comprehensive control the situation of low attitude airspace and manage the targets inside.

Small Area Integrated Management Solution

- UAV
- ③ Driving Away UAV
- Controller
- ① Detecting UAV
- Omni-Directional Detector
- ② Jamming UAV
- Omni-Directional Jammer

Omni-Directional Jammer

Omni-Directional Detector

Installation Diagram

Small Area Integrated Management Solution:
- Omni-directional multi band detector and jammer are providing a total solution for low attitude airspace safety in small area.
- Omni-directional multi band detector and jammer would detect the UAV signal in 1km radius area and drive the detected target away automatically.

Major Equipment and Specifications

Multi-Point Positioning System (model: LSC-TD6000):

TDOA time difference positioning system is covering the frequency of uplink or downlink signal of most UAVs from 300MHz to 6GHz.

No	Item	Parameter
1	Working Mode	TDOA multi-point passive detecting
2	Detection Angle	Direction: 0°-360°
		Pitch: 0°-90°
3	Detection Range	≥3km (empty obstacle free zone）
4	Number of Networking	≥4
5	Dimension	(L × W × H)：320mm×260m×76mm
6	Weight	≤4.5kg
7	Operation Temperature	-20°C~55°C
8	Power Consumption	≤50W

Electro Optical Tracking System (model: LSC-C1000B):

The electro optical which adopts global shutter and telephoto lens catching high speed moving target and basing on deep learning algorithm recognizing UAV target and driving the servo continuous tracking it stably.

No	Item	Parameter
1	Working Mode	Moving object inspecting, feature recognizing, and automatic tracking
2	Detection Angle	Direction: 360°
		Pitch: -40°~85°
3	Max. Tracking Range	1000m （DJ Phantom 4, max velocity, visibility ≥15km）
4	Time Delay	≤30ms
5	Focus Control	Auto focus
6	Recognizing Frame	≥10 fps
7	Operation Temperature	-20°C~55°C
8	Working Voltage	DC24V

Major Equipment and Specifications

Multi Band Directional Jammer (model: LSC-J300005):

Multi band directional jammer is transmitting high power electromagnetic wave to cut the control, navigation and image transmission signal of UAV driving it away.

No	Item	Parameter
1	Band Frequency	Band1:2400MHz~2500MHz Band2:5700MHz~5900MHz Band3:1550MHz~1625MHz Band4:915MHz~933MHz Band5:800MHz~845MHz
2	Jamming Model	Oppressive interferences in communication and GPS signals.
3	Jamming Range	≥2km
4	Response Time	≤1s
5	Weight	≤50kg
6	Power Consumption	800W, 220V AC

Omni Directional Jammer (model: LSC-J1000Q):

The electro optical which adopts global shutter and telephoto lens catching high speed moving target and basing on deep learning algorithm recognizing UAV target and driving the servo continuous tracking it stably.

No	Item	Parameter
1	Band Frequency	Band1:157542±20MHz Band2:2400-2483MHz Band3:57255850MHz (expandable as request)
2	Jamming Model	Omni directional oppressive interferences in communication and GPS signals.
3	Jamming Range	≥1km
4	Response Time	≤1s
6	Power Consumption	500W, 220V AC

Major Equipment and Specifications

## Omni Directional Multi Band Detector (model: LSC-P1000Q):

The omni directional multi band detector is basing on advanced radio detecting and signal processing algorithm recognizing the intruding UAV.

No	Item	Parameter
1	Detectable UAV Model	Normal commercial UAV
2	Working Frequency	300MHz ~ 6GHz
3	Detecting Range	≥1km
4	Time Delay	≤5s

Navigation Tricking Equipment (model: LSC-G1000):

The navigation tricking equipment is tricking the UAV by high reality GPS signal to assigning point.
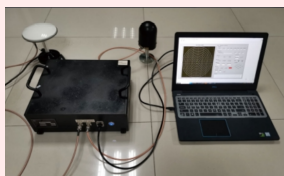
No	Item	Parameter
1	Working Frequency	GPS:L1:1574.6~1576.4MHz BD B1:1559.5~1562.8MHz GLONASS L1: 1559. 7~1602.5MHz
2	Effective Range	800m (omni-direction) 3km (orientation)
3	Response Time	≥4.5s (DJ Phantom 4P)
4	Transmitting Power	6.3mW
5	Anti-hazard Class	Ex nA llC T6 GB

Major Equipment and Specifications

## UAV Identification Management System (model: LSC-ID1000):

The UAV identification management system is binding the ID card with UAV which would report the location and get authority in restricting area.

| No	Item	Parameter
1	Location Reporting	Latitude and longitude, altitude, and ID
2	Location Devitation	≤30m
3	Refresh Time	≤3s
4	Working Time	Normal transmission ≥4h, stand by ≥24h
5	Weight	≤55g
6	Operation Temperature	-20°C~60°C

Integrated Management Platform:

The integrated management platform is integrating the radio frequency monitoring and analyzing, electro optical tracking, multi band jammer jamming which is realizing the low altitude airspace security control.
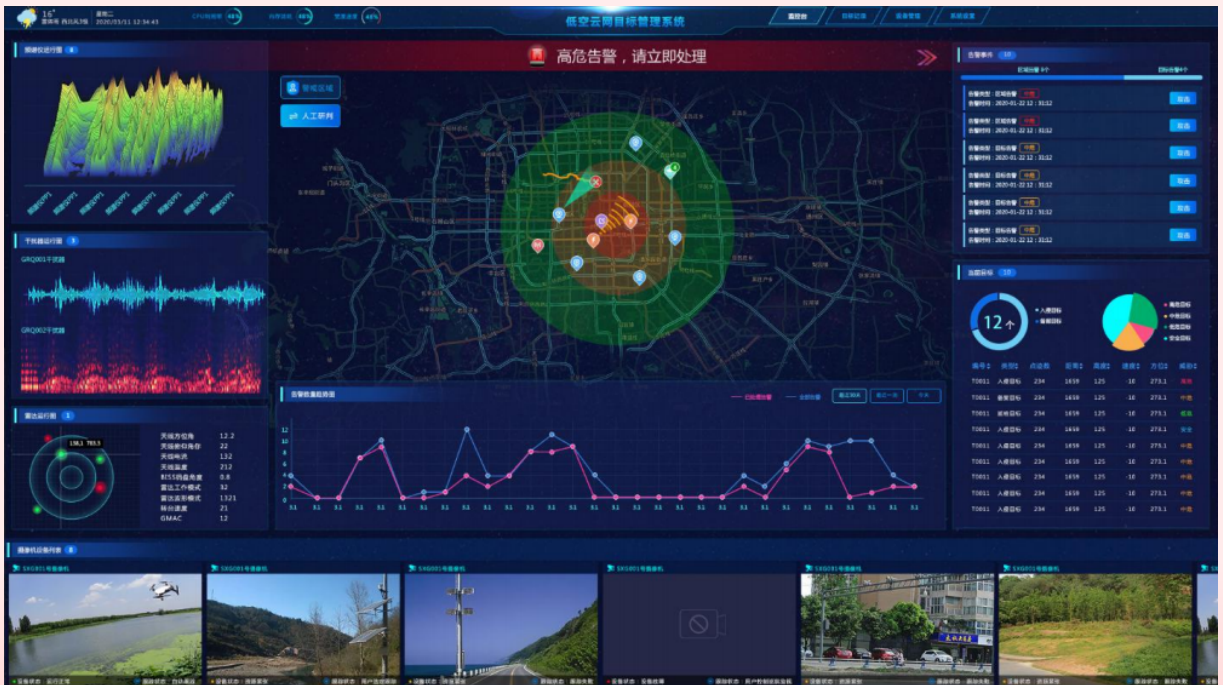
RAY10 TECHNOLOGY CO., LTD.
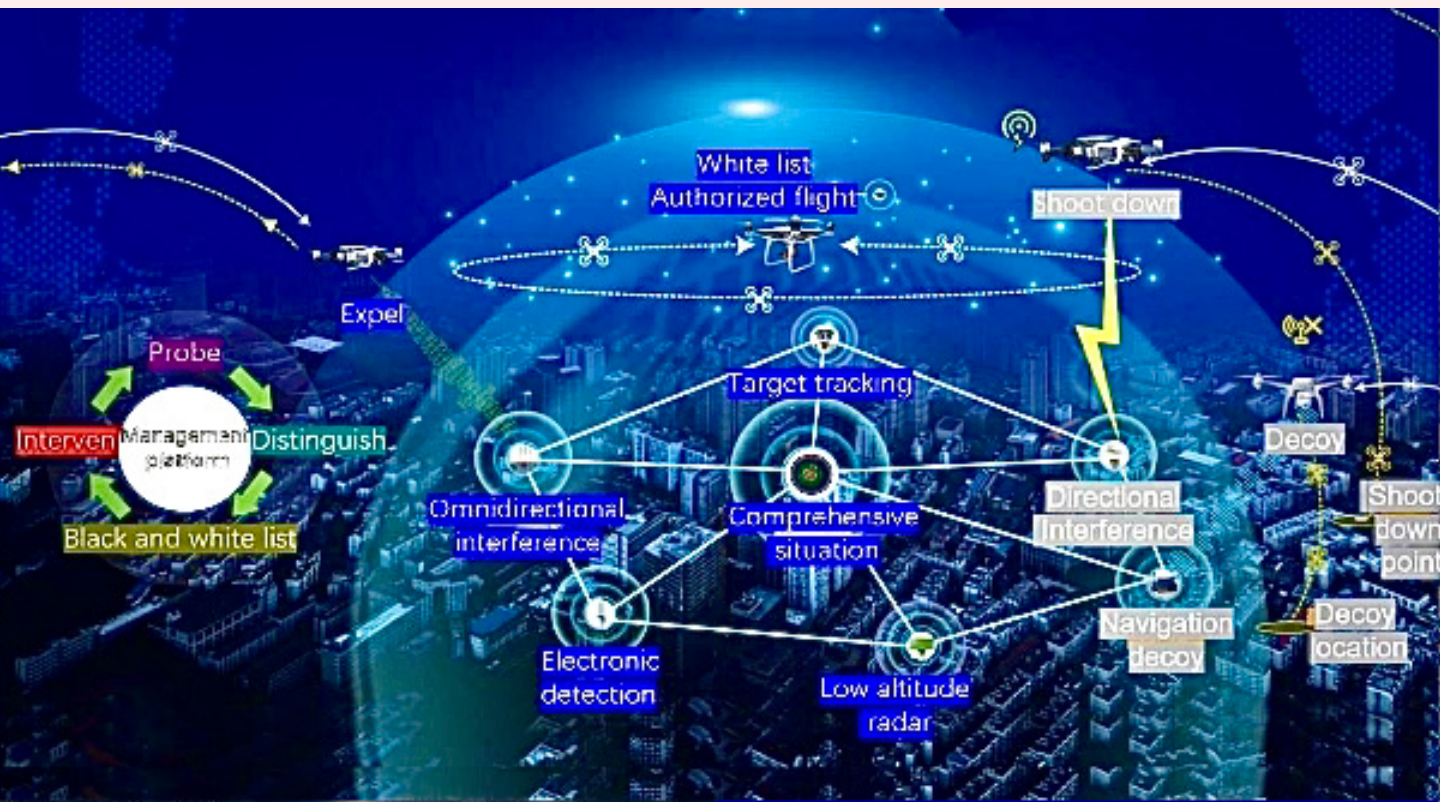
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