



Make the Sky Safer

## LZ TECH

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Official website



Anti-drone Solutions Expert

# Make the Sky Safer



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# Company Profile

Founded in 2018, Beijing Lizheng Technology Co., Ltd. (LZ TECH) pioneers Cognitive Radio Protocol Cracking (CRPC®) and AI Radio Protocol Cracking (AI-RPC®) technologies, transforming the low-altitude security and drone defense industries. At the forefront of technological innovation, we are recognized as a National High-tech Enterprise, Beijing Specialized and New Enterprise, and Beijing Gazelle Enterprise etc.

Since its foundation, LZ TECH has grown to about 500 employees, 40% of whom are dedicated to R&D with expertise in cybersecurity, wireless communications, and information protection. Headquartered in Beijing with a 4,000 m<sup>2</sup> R&D and marketing hub, and hosting a 10,000 m<sup>2</sup> manufacturing and service center in Luoyang, LZ TECH has developed 5 product series, with over 30 product models deployed across government, public security, transportation, industrial sites, and critical infrastructure to meet diverse needs. Continuous innovation has earned LZ TECH the trust of over 6,000 clients across 60+ countries.

Guided by pragmatic, persistent and professional entrepreneurial spirit, LZ TECH has built a complete industrial chain covering drone counter-applications, urban low-altitude security, electromagnetic environment monitoring, and low-altitude information services, and is gradually growing into a global leader in the field of low-altitude security.



Beijing Office

## Foundation and growth footprint

**2018**

Establishment

**5,000 m<sup>2</sup>+**

R&D and marketing center in Beijing

**10,000 m<sup>2</sup>+**

Manufacturing and service hub

## Products and Solutions Scale

**5**

Product series

**30+**

Product models

**150+**

Intellectual Property

## Team size and structure

**~500**

Team size and structure

**40%+**

R&D Personnel

**100+**

Production, testing, and service

## Global Market Presence

**6,000+**

Partners

**60+**

Countries and regions

**100%**

Domestic province coverage



Luoyang Center

LZ TECH is a global expert in the research, development, and manufacturing of advanced low-altitude security solutions. Standing at the intersection of hardware excellence and software intelligence, our product ecosystem is designed to protect critical infrastructure, public safety, and national security from the escalating threat of unauthorized unmanned aerial vehicles.

## Vision

Make the Sky Safer

## Philosophy

Where there is endeavor,  
there is achievement;  
where there is diligence,  
there is a reward

## Core Values

Pragmatism  
Persistence  
Professionalism

## Belief

Success through a Thousand  
Hardships in Optimism

## Our team

We have built a multidisciplinary team combining research, engineering, manufacturing, operations, and sales working together with a shared focus on reliability, responsibility, and long-term innovation.

Guided by a spirit of pragmatism, persistence, and professionalism, we work together to develop reliable and intelligent solutions that help build a safer and more secure low-altitude environment worldwide.



LZ TECH

Driven by Precision  
Built for Reliability



# Honor and Qualifications

## Excellence in Tech, Innovation & Business

LZ TECH has been consistently recognized for its technological capabilities, innovation strength, and business performance. Our certifications and honors reflect our commitment to high standards in product development, quality management, and long-term customer value.



Recognized for advanced R&D capability and continuous technological innovation.



Certified for excellence in specialized technologies and product innovation.



Acknowledged as a fast-growing, innovation-driven technology company.



Recognized by China Central Television (CCTV) as a representative SEM innovator in drone defense and won National First-tier Rewards in comparative testing of drone detection systems.

Products from LZ TECH are designed and manufactured in compliance with international standards and regulatory requirements. Our systems have successfully passed relevant testing and obtained certifications including CE, FCC, RoHS, LVD, and EMC, ensuring conformity in safety, electromagnetic compatibility, and environmental protection. These certifications demonstrate our commitment to product safety, electromagnetic compliance, and environmental responsibility, ensuring reliable deployment across global markets.



European Conformity



Federal Communications Commission



Restriction of Hazardous Substances



Low Voltage Directive



Electromagnetic Compatibility



# Core Tech Pillars

## CRPC®

### Cognitive Radio Protocol Cracking

Passive analysis and decoding of complex and non-cooperative drone radio protocols to accurately identify UAV types, communication behaviors, and control links in real time.

## AI-RPC®

### AI Radio Protocol Cracking

AI-driven RF intelligence that automatically recognizes, classifies, and learns drone communication patterns in dense and dynamic electromagnetic environments.

## AI Electro-optical Technology

AI-enabled visual detection and tracking that provides automatic target confirmation, trajectory monitoring, and evidence-level verification day and night..

### Scenario

A medium-to-large international airport faces increasing risks from unauthorized UAV activity

### Primary requirements

- Early warning
- Wide-area coverage
- Zero interference with aviation systems
- 24/7 passive operation

### LZ TECH System Deployment

- Devices deployed across runway perimeters, terminal rooftops, and control zone boundaries
- DF: Stationary Drone Detection and Direction Finding
- D5B: TDOA+ Drone Detection and Positioning System
- VAR300: Active Electro-optical Detection System
- VM: Vehicle-Mounted Detection and Jamming System
- H3 Pro: Handheld Drone Detection and Positioning Equipment

### Detection Tech

- CRPC passively intercepts drone control, telemetry, and downlink signals
- AI-RPC automatically recognizes Known and unknown drone protocols and behavioral patterns like hovering, waypoint flight, surveillance etc
- AI-Electro-optical technology automatically cues EO/IR cameras based on detection and provides visual confirmation



# Core Tech Pillars

## CRPC®

Cognitive Radio Protocol Cracking Technology

### Rare

Exclusive cutting-edge and high-end C-UAS technology

### Rapid

AI-powered analysis enabling immediate interception and takeover

### Unique

Identify DIY, consumer, or non-standard UAVs without standard protocols or telemetry

### Strategic

CRPC® 1.0 → 2.0 → 3.0 fast evolution with smarter results

### Comprehensive

Full-link capabilities in detection, position, monitor, and takeover



### CRPC® 1.0

Physical-layer signal demodulation and decoding

### CRPC® 2.0

Application-layer data stream analysis

### CRPC® 3.0

Control-layer command analysis and reconstruction

CRPC® (Cognitive Radio Protocol Cracking) is an advanced reverse engineering and signal analysis technology applied to UAV detection and defense industry. As one of the most sophisticated C-UAS technologies in the world, CRPC® is currently mastered by only a few leading companies globally.

### CRPC®1.0

1010101010101010101010101011...010000101010101000010101011111001

Preamble bits (1010...1010)	Sync word	Length field	Address field	Data field	CRC-16
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### CRPC®2.0

Preamble bits (1010...1010)	Sync word	Length field	Address field	Data field	CRC-16
Msg TyPe	GNSS data	Speed data	Pic Frame	Control	.....

### CRPC®3.0

Preamble bits (1010...1010)	Sync word	Length field	Address field	Data field	CRC-16
Msg TyPe	GNSS data	Speed data	Pic Frame	Control	.....
Elevator	Rudder	Throttle	Ailerons	.....	

# Core Tech Pillars

## AI-RPC

(Builds on CRPC® Cognitive Radio Protocol Cracking Technology)

AI-Enhanced UAV Signal Recognition: through deep learning and high-performance computing, AI-RPC significantly improves the detection and classification efficiency of unknown drone signals.



<h3>Major upgrades</h3>	
<h4>AI-Driven Signal Analysis</h4> <ul style="list-style-type: none"><li>• AI to elevate UAV signal detection and classification</li><li>• Deep learning to interpret unknown drone signals with higher accuracy and speed</li></ul>	
<h4>Real-Time Processing</h4> <ul style="list-style-type: none"><li>• Works seamlessly with ChannelScanner to capture and process signals instantly</li><li>• Automatically analyze, label, and store new signal fingerprints</li></ul>	
<h2>AI-RPC</h2>	<h3>Deep Neural Network Engine</h3> <ul style="list-style-type: none"><li>• Powered by big-data-trained models Signal Classification Model</li><li>• Signal Fingerprint Model Continuously improves through iterative learning</li></ul>

## Core capabilities

### Growing Fingerprint Database

Each newly detected signal added to an expanding global fingerprint library  
Enhance recognition performance over time

### Fast & Accurate UAV Identification

Rapidly match unknown signals against the database  
Support the precise identification of diverse UAV brands and models

### Growing Fingerprint Database

Effectively addresses the long-standing industry problem of detecting and recognizing DIY drones, unregistered UAVs, and nonstandard signal protocols.








# Core Tech Pillars

## AI + Electro-Optical Technology

Electro-Optical Technology Enhanced by AI Algorithms

Our AI + Electro-Optical technology combines advanced AI algorithms with high-precision imaging to deliver fast, accurate, and all-weather detection and tracking of UAV targets. With intelligent detection, adaptive tracking, and active EO sensing, it ensures reliable situational awareness and monitoring in complex environments.



-  AI-Driven Target Detection
-  Intelligent Temporal Target Tracking
-  Active Electro-Optical Detection System
-  Adaptive Gimbal Control
-  Infrared Imaging Lens



Images are for illustrative purposes only. Actual appearance may vary by model and application.

# Product Portfolio

LZ TECH has developed five major product series with over 30 product models, widely deployed across government agencies, public security departments, transportation systems, industrial facilities, and critical infrastructure sectors. Our products comply with major international standards and certifications, such as CE, FCC, RoHS, and EMC requirements etc, ensuring global market access and regulatory compliance.

Comprehensive product portfolio enables us to deliver scalable and mission-ready solutions covering fixed, portable, handheld, and vehicle-mounted platforms, supporting rapid deployment and operational flexibility in complex security scenarios. Our solutions are trusted by more than 6,000 partners in over 60 countries worldwide.

## Passive Detection System

Our passive detection system continuously monitors the electromagnetic environment to identify and locate unauthorized UAVs without emitting any signals. By combining advanced RF sensing, protocol analysis, and AI-driven classification, the system enables early warning, precise identification, and reliable operation in complex and sensitive environments, without interfering with existing communications or revealing system presence.



Images are for illustrative purposes only. Actual appearance may vary by model and application.



## Detection and Spoofing System

This system integrates real-time UAV detection with controlled navigation interference to disrupt unauthorized drones safely and effectively. By precisely identifying drone communication links and flight behaviors, the system enables targeted spoofing to take over or redirect UAV navigation, supporting rapid response while minimizing impact on surrounding communications and operations.

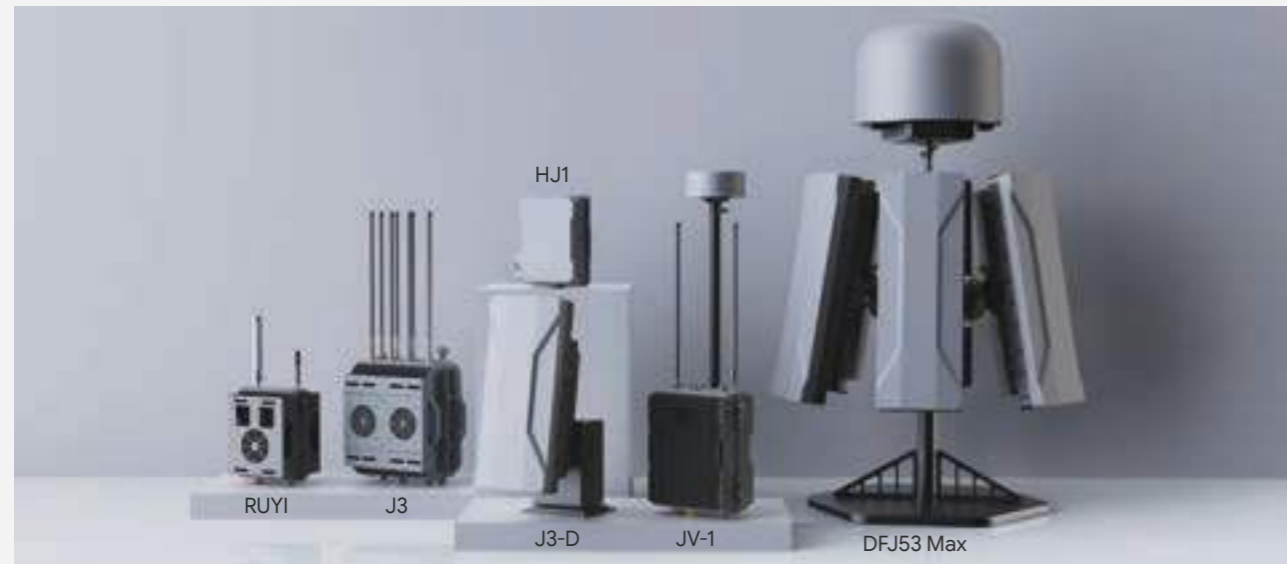


## Detection and Defense System

The Detection and Defense System possesses the capabilities of detection, identification, direction finding, and jamming. Enabling intelligent passive detection, early warning, automatic defense and jamming against "unauthorized" drones, this system has multiple forms, like stationary, portable, handheld and vehicle-mounted.

## Precise Jamming System

This system delivers targeted disruption of unauthorized drone communication and navigation links with high accuracy and controllability. By focusing interference only on identified UAV signals, the system minimizes impact on surrounding communications while enabling effective neutralization of drone threats in complex operational environments. The newly launched Ruyi utilizes cutting-edge CRPC® 3.0 technology to reconstruct control-layer data streams, allowing precise drone control and enabling operators to assume control and redirect the drone safely. This capability supports non-destructive threat mitigation, reducing collateral risk while enabling controlled landing, route diversion, or secure recovery.



## Active Electro-optical Detection System

The active electro-optical detection system combines high-resolution sensors with AI-based visual recognition to actively search, detect, and track UAV targets in real time. Supporting long-range 7\*24 observation, day/night operation, and automatic target tracking, the system provides reliable visual confirmation and situational awareness for precise threat assessment and response.

The EO system can be integrated with a phased-array radar to effectively track, identify, and issue early warnings for small and medium-sized drones. Integrating with other RF detection and jamming device, it forms a comprehensive multi-source drone defense system.



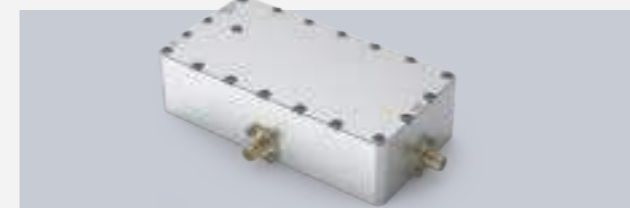
Images are for illustrative purposes only. Actual appearance may vary by model and application.

## Drone Detection and Identification Module Family

The Module consists of a radio frequency (RF) unit and a computing unit. Utilizing state-of-the-art CRPC® technology, it can detect and identify market drone models (e.g., DJI and AUTEL) and DIY drones. Its compact size and seamless integration make it a highly versatile solution that can be easily deployed within clients' own system. All necessary accessories will be provided to ensure a complete solution.



## Matching RF accessories



Integrated RF Switch for Wideband Antenna



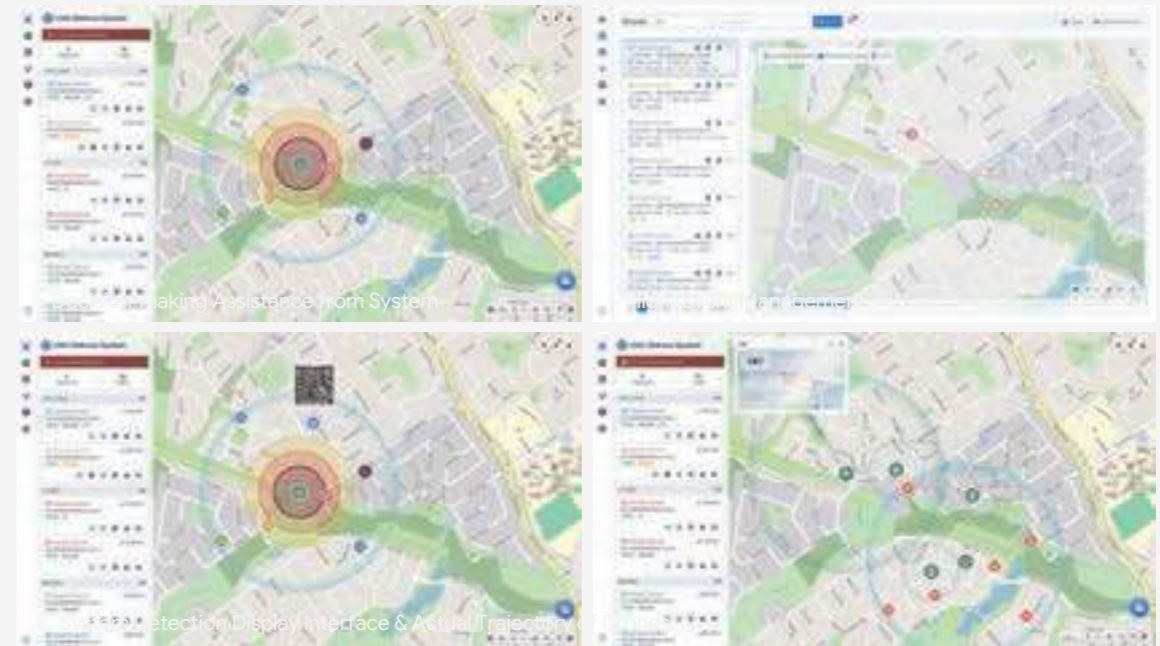
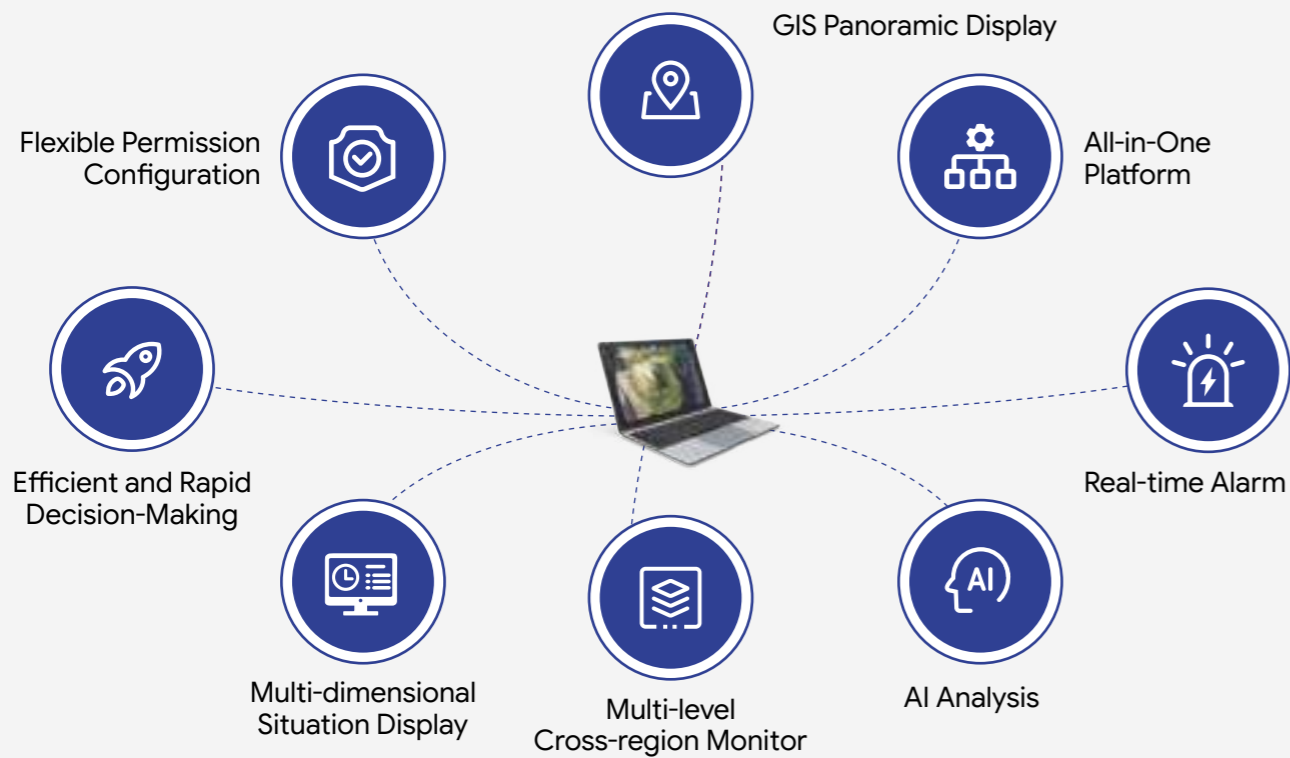
Splitter RF Switch for Narrowband Antenna

## Software Platform

LZ TECH delivers a comprehensive software ecosystem designed to support intelligent drone defense operations and low-altitude security management.

Our software portfolio includes the Command & Control System (CCS) and CRPCS (Web UI), enabling centralized management, protocol level analysis, and real-time situational awareness across distributed deployments.

Together, these platforms provide unified monitoring, device coordination, data visualization, and operational control, allowing users to efficiently manage complex low-altitude security scenarios through intuitive, secure, and scalable digital interfaces.



# Multi-tech Fusion Drone Detection Solution









**Integrated Solution**



## Key Features

The Multi-Technology Fusion Drone Detection System combines radar, EO/IR, and RF systems to provide real-time detection and identification of low-altitude targets.

## Key Features

-  Data Fusion Software API Interface
-  Active EO/IR Searching and Tracking
-  Flexible and Multiple Deployment Methods
-  Seamless Integration with Jamming System
-  Up to 10km RF Detection Range
-  Networking and Data Sharing

## Real-time Monitor on CCS System



Multi-source Data Information Presentation

Multi-device Operation Status in Coordination

Multi-layer Information about Target Drones



**Modular Solution**

# Multi-tech Fusion Drone Interception Defense System

The system is an integrated anti-drone defense system that combines radar and EO/IR detection, C2 system, and FPV interceptor. Through multi-sensor fusion, it detects, tracks, and performs interception of low-altitude targets. It features multi-platform deployment capabilities, high cost-effectiveness, and strong environmental adaptability, making it suitable for scenarios such as public security and special operations.



## Key Features



High detection reliability



All-environment capability



Accurate target identification



Early warning + long-range coverage

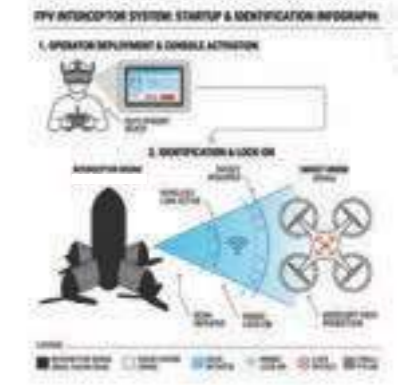
## System Workflow



Detection Stage



Decision Stage



Startup Stage

Mitigation Stage

## Real-time Monitor on CCS System



Multi-source Data Information Presentation



Multi-source Information to Identify Target Drone

# R&D and Manufacturing Capabilities



**40%+**

40%+ of employees dedicated to R&D

**PhD-led**

PhD-led technical teams with postdoctoral research capability

**10,000 m<sup>2</sup>**

10,000 m<sup>2</sup> in-house manufacturing facility

**Self-development**

End-to-end self-development, production, and quality control

## LZ TECH

LZ TECH is a technology-driven enterprise with a strong emphasis on independent research and innovation.

Approximately 40% of our workforce is dedicated to R&D, with a core team composed of experts in radio communications, cybersecurity, AI algorithms, and low-altitude security systems.

Our R&D team includes a significant number of PhD holders. Supported by Beijing's innovation ecosystem, LZ TECH was invited to participate in a key talent and innovation program jointly organized by the Beijing Municipal Human Resources and Social Security Bureau and was officially approved to establish a Postdoctoral Research Workstation—recognizing our role as an advanced technology representative in the low-altitude security sector.





## In-House Manufacturing Capability

LZ TECH operates a 10,000 m<sup>2</sup> manufacturing and service center, enabling in-house production, system integration, testing, and quality control.

This vertically integrated manufacturing capability ensures stable delivery, strict quality assurance, and rapid customization to meet diverse operational and project requirements.

By combining advanced R&D with scalable manufacturing, LZ TECH is able to efficiently transform cutting-edge technologies into reliable, deployable solutions for global low-altitude security applications.

# Key Advantages

LZ TECH differentiates itself through self-owned protocol-level intelligence, AI-driven adaptability, and unmatched drone model database, delivering high-performance drone defense solutions with exceptional cost efficiency.

## Protocol-Level Intelligence

# A

Unlike traditional frequency-based solutions, LZ TECH operates at the protocol level based on CRPC® (Cognitive Radio Protocol Cracking), AI-RPC®, and Electro-optical Technology etc, enabling deeper understanding, faster adaptation, and more precise countermeasures against both known and emerging UAV threats.

## High-Value Target Protection

# B

LZ TECH solutions have been selected and deployed in high-sensitivity, high-value security missions requiring continuous, large-scale, and zero-failure performance.

## Cost-Performance Leadership

# C

By combining advanced software intelligence with optimized hardware design, LZ TECH delivers enterprise-grade performance with superior cost efficiency.

## Unmatched Drone Model Database

# D

Backed by an extensive and continuously evolving drone model library, LZ TECH systems are able to identify, classify, and respond to a wide range of commercial and customized UAVs with high accuracy.



## High-Sensitivity & Mission-Critical Protection

Protection of high-profile national events and strategic missions requiring continuous, large-area, and zero-failure low-altitude security.

LZ TECH has participated in low-altitude security operations for high-profile national events and mission-critical activities, requiring continuous coverage, strict operational discipline, and zero-tolerance for failure. These deployments involved large-area coordination, multi-system integration, and sustained operation under the highest reliability standards, with selected missions receiving coverage by national-level media such as CCTV.



VIP security protection during international summits and critical missions



## Government & Law Enforcement & Public Security Scenarios

Dense urban environments with high UAV activity and complex electromagnetic conditions. Flexible and rapidly deployable drone defense systems supporting operations.

LZ TECH solutions have supported government and law enforcement operations in complex urban environments, including key police operations and public security missions. Designed for dense airspace and high UAV activity, these systems enable rapid deployment, accurate identification, and controlled response, supporting frontline operations without disrupting public communications.



## Critical Infrastructure & Facility Protection

Protection of power plants, substations, airports, boarder, and oil & gas facilities against unauthorized UAV activity. Our systems have been deployed to protect critical infrastructure and strategic assets across multiple regions, operating in long-term modes. In international security environments, LZ TECH technologies have supported border security and cross-border threat monitoring, including operations addressing illicit UAV usage and aerial smuggling activities.

These deployments were conducted in challenging terrain and electromagnetic environments, requiring high adaptability and system resilience.



### Representative Deployments

- Airports, correctional facilities, power plants
- Anti-narcotics operations
- National border security and cross-border UAV monitoring
- Mining assets and critical resource sites protection



## Large Public Venues & Events

Temporary or semi-permanent protection for stadiums, exhibitions, and large public gatherings. LZ TECH has provided drone protection for large-scale public events and high-density venues, where crowd safety and controlled operations are critical.

These deployments emphasize temporary or semi-permanent setups, fast response, and minimal interference with surrounding communications and event operations

