

# *TIAN JING* Tianjing Yunhu Intelligent Technology

Committed to becoming a world-leading Synthetic Aperture Radar Solutions Provider



Suzhou Tianjing Yunhu Intelligent Technology Co., Ltd.

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Suzhou Tianjing Yunhu Intelligent Technology Co., Ltd.  
<http://www.sztjyh.cn/>

## Corporate Vision

Committed to becoming a world-leading Synthetic Aperture Radar solutions provider.

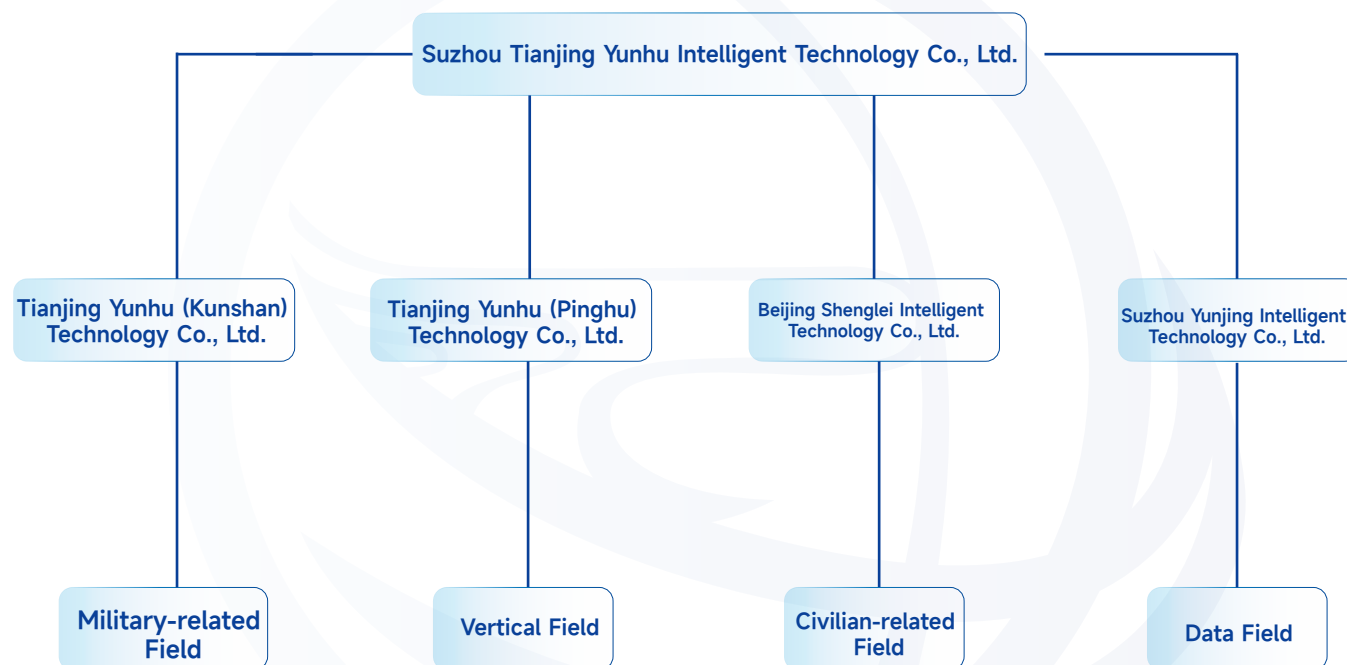
## Corporate Mission

Continuously improve products and services to enhance customer satisfaction.

## Corporate Values

People-oriented, technology for good.

## Corporate Structure



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## 01

### CORPORATE INTRODUCTION

|                             |       |
|-----------------------------|-------|
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## 02

### PRODUCT INTRODUCTION

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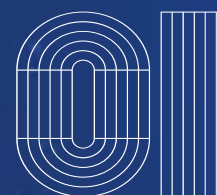
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### CASE INTRODUCTION

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|--------------------------|-------|
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# CORPORATE PROFILE

**2023**  
COMPANY ESTABLISHED

**≈8000m<sup>2</sup>**  
FACTORY AREA

**54.07** MILLION YUAN  
REGISTERED CAPITAL



DESIGN



R&D



SOLUTIONS



MANUFACTURING



SALES



SERVICE



SUZHOU TIANJING YUNHU INTELLIGENT TECHNOLOGY CO., LTD.

## CORPORATE PROFILE

Suzhou Tianjing Yunhu Intelligent Technology Co., Ltd. was established in 2023. Its core team consists of pioneering Synthetic Aperture Radar (SAR) R&D professionals formerly affiliated with the Chinese Academy of Sciences. The company has a registered capital of 54.07 million yuan, and owns a factory covering approximately 8,000 square meters. Since its establishment, the company has closely followed the industry development direction, deeply cultivated technological innovation, continuously invested in research and development, carried out overall system architecture design, made breakthroughs in key technologies including small-size antennas, wideband light-weight transmit-receive radio frequency, high-throughput and low-power signal processing, open-source software, and formed a series of innovation products.

## CORE TEAM

The company has a core team with rich experience and strong technical capabilities. The core members consist of SAR signal processing experts, SAR system and application engineers, senior integration engineers, and artificial intelligence algorithm experts.

9

HONORS  
AND  
QUALIFICATIONS

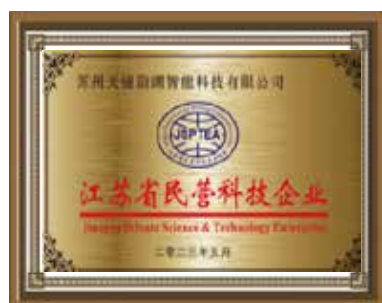
Quality Management System Certification ISO9001 | Environmental Management System Certification ISO14001 | Weapon Equipment Quality Management Certification  
Occupational Health and Safety Management System Certification | Class II Confidentiality Qualification Certification  
Software Product Certification I | Software Product Certification II | Software Product Certification III | Software Product Certification IV



# OUR STRENGTHS

## CORPORATE PATENTS

### 6 Corporate Honors



Jiangsu Province Private Science and Technology Enterprise Certification



Science and Technology-based Small and Medium-sized Enterprise Certification



Innovative Small and Medium-sized Enterprise Certification



Kunshan Double Innovation and Entrepreneurship Leading Talent Certification



Gusu Innovation and Entrepreneurship Leading Talent Certification



Jiangsu Province Innovation and Entrepreneurship Leading Talent Certification

### 93 Intellectual Property



#### 2 New - Type Invention Patent Certifications



#### 9 Utility Model Patent Certifications



#### 2 Design Patent Certifications



#### 15 Software Copyright Certifications



#### Other Certifications

(64 items related to Goodwill and Trademark Information)

OUR STRENGTHS

Corporate Capabilities



Committed to becoming a world-leading Synthetic Aperture Radar Solutions Provider.

Application Fields

Military Field

Reconnaissance-Strike Integration (RSI)

SAR, due to its advantages of all-weather and all-time operation, high-precision imaging and moving target tracking, has unique strengths in implementing integrated operations in RSI.

Battlefield Reconnaissance

In the “Battlefield Reconnaissance”, SAR can penetrate complex weather and terrain, obtain high-precision imaging information of the battlefield area in real time, and provide precise situation awareness for combat decision-making.

Camouflage Assessment

In the “Camouflage Assessment”, SAR can accurately identify the defects and deficiencies of target camouflage through high-resolution imaging technology, providing a reliable basis for the assessment of camouflage effectiveness.

Maritime Military

In the “Maritime Military”, SAR can penetrate complex environments such as sea fog, clouds and rain, enabling all-weather and all-time monitoring and tracking of maritime vessels and submarines.

Civilian Field

Institutions of Higher Education

In the “Institutions of Higher Education”, SAR is mainly used to conduct teaching practices, theoretical research, and R&D of cutting-edge algorithms related to radar remote sensing technology, providing support for talent cultivation and technological innovation.

Research Institutes

In the “Research Institutes”, SAR is mainly used to tackle challenges in core radar remote sensing technologies, research and develop equipment and optimize its performance, design application solutions for specific scenarios, and promote the transformation of technological achievements into practical applications.

Diverse Industries

In the “Diverse Industries”, SAR can be applied to scenarios such as geological exploration, disaster monitoring, agricultural yield estimation, forestry resource surveys, and urban planning according to the needs of various industries, providing high-precision remote sensing data support and decision support for each

industry

# 02 PRODUCT INTRODUCTION

01 >>>

LingYun System

02 >>>

XiangYun System

03 >>>

YunInsar System

04 >>>

Co-scene  
Co-view System

# LingYun System

## Product Description

LingYun products cover multiple frequency bands including X, Ku, C, Ka, and W. They feature single polarimetric mode, full polarimetric mode, real-time imaging, capability and optional interference capability. Their data acquisition capabilities include all-weather, and all-day operation, long-range coverage, and resolution and wavelength independent of flight altitude.

## Product Features



Onboard Real-Time  
Imaging Capability



Motion Compensation



System-Level Reliability



SAR Usability Upgrade



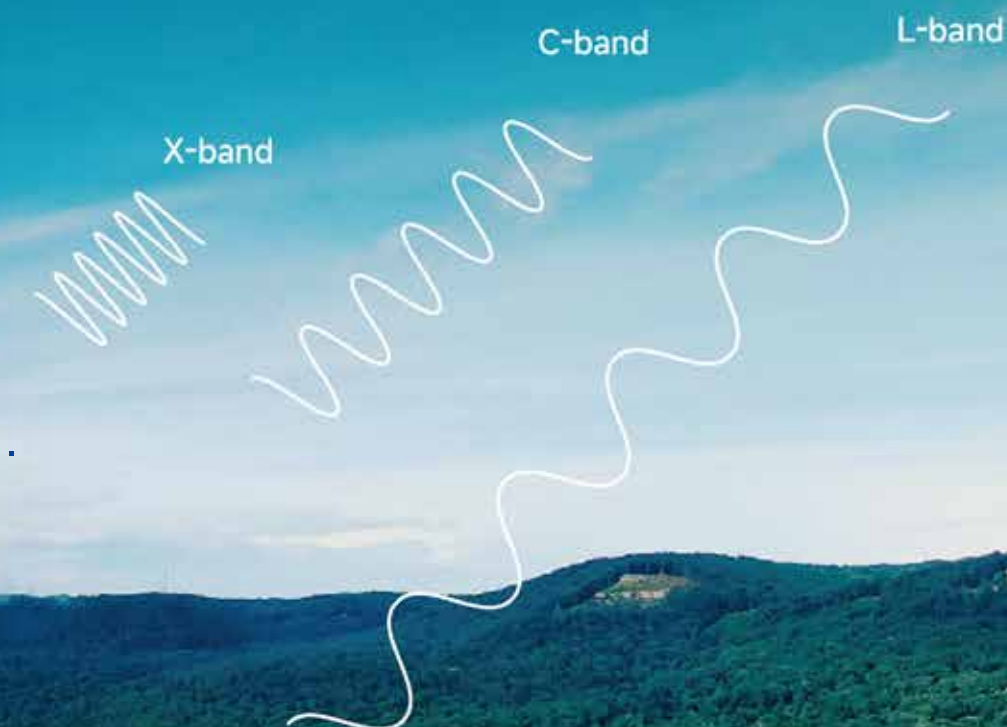
Environmental Adaptability



Open Architecture

## Product Advantages

- 1.It supports all-day and all-weather operation with high resolution, and offers unique advantages in the deformation monitoring, achieving millimeter-level accuracy.
- 2.Miniaturization and low power consumption are achieved through technical means including FMCW technology system, LTCC high-density integration process, and radar chipization.
3. It features standardized interfaces and flexible reconfiguration capabilities. All different requirements can be met, while mass production supports cost reduction.
4. The software-based architecture features strong processing and expansion capabilities, significantly reducing development costs and cycles.



## Technical Index

### LingYun FMCW Radar

|                           |             |
|---------------------------|-------------|
| Operating Frequency Bands | C、X、Ku、W、Ka |
| Operating Mode            | FMCW        |
| Resolution                | 0.01m~0.75m |

## Serial Products

### LY1A Standard Version

#### Product Description

LingYun 1A (code name LY1A) is the standard version of the micro SAR.

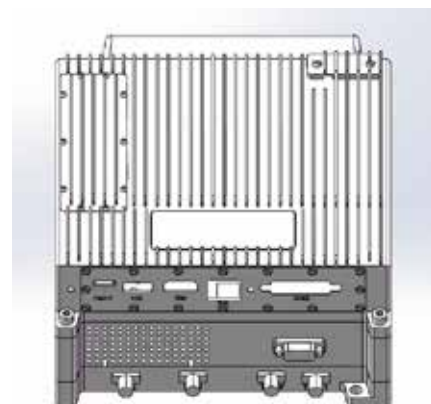
#### Main Applications

Urban and topographic mapping, camouflage reconnaissance, large-area surveying and mapping, point-target characteristics identification, reconnaissance-strike integration.

#### Applicable Platforms

Suitable for various aircraft / ground-based / satellite platforms, and can be customized to meet the requirements of mounting platforms with different payload capacities.

#### Product Photo



### LY1C Dual-band Version

#### Product Description

LingYun 1C (code name LY1C) is the dual-band version of the micro SAR.

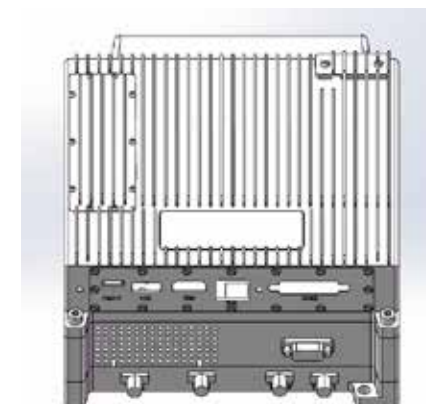
#### Main Applications

Urban and topographic mapping, camouflage reconnaissance, large-area surveying and mapping, point-target characteristics identification, reconnaissance-strike integration.

#### Applicable Platforms

Suitable for various aircraft / ground-based / satellite platforms, and can be customized to meet the requirements of mounting platforms with different payload capacities.

#### Product Photo



### LY1B Lightweight Version

#### Product Description

LingYun 1B (code name LY1B) is the lightweight version of the micro SAR.

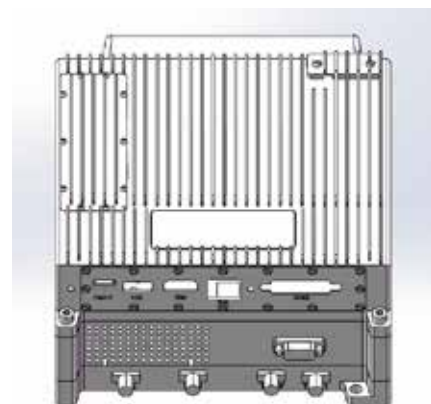
#### Main Applications

Urban and topographic mapping, camouflage reconnaissance, large-area surveying and mapping, point-target characteristics identification, reconnaissance-strike integration.

#### Applicable Platforms

Suitable for various aircraft / ground-based / satellite platforms, and can be customized to meet the requirements of mounting platforms with different payload capacities.

#### Product Photo



### LY1D Interference Version

#### Product Description

LingYun 1D (code name LY1D) is the economical interference version of the micro SAR.

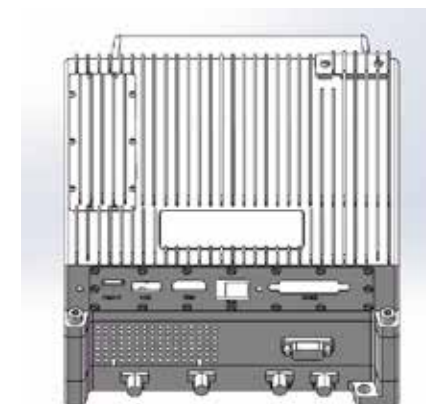
#### Main Applications

Urban and topographic mapping, camouflage reconnaissance, large-area surveying and mapping, point-target characteristics identification, reconnaissance-strike integration.

#### Applicable Platforms

Suitable for various aircraft / ground-based / satellite platforms, and can be customized to meet the requirements of mounting platforms with different payload capacities.

#### Product Photo



## Application Fields



Camouflage Assessment



Battlefield Reconnaissance



Missile-Borne Guidance



Reconnaissance-Strike Integration



Electric Power



Marine Application



Bridge



Urban Surveying And Mapping



Agriculture



Geology



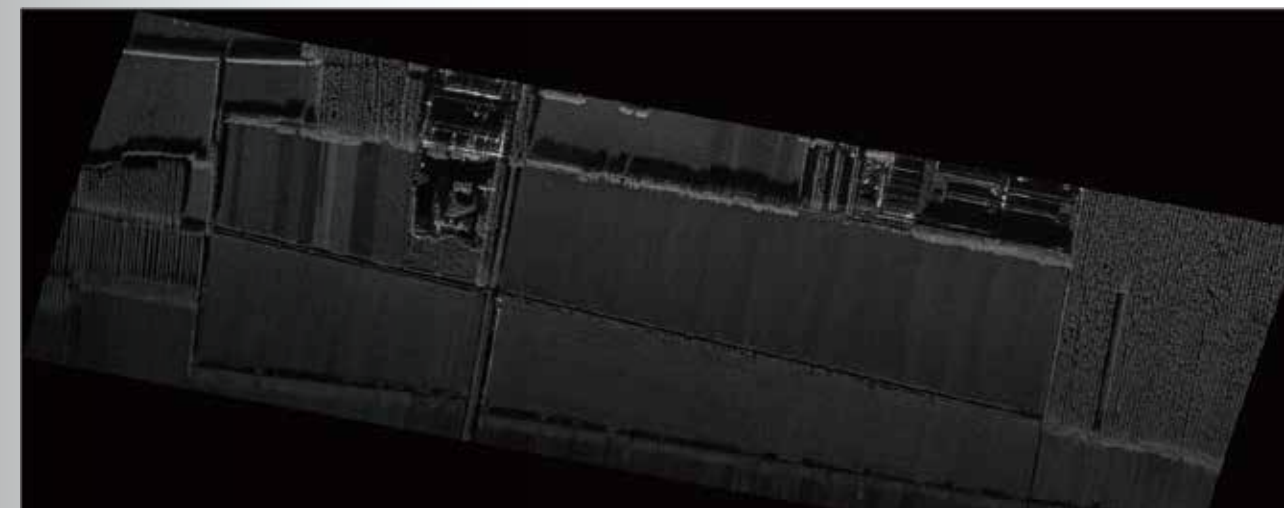
Earthquake Disaster



Pipeline

## Imaging Effect

Ku band, resolution 0.15x0.15



X band, full polarization



X band, full polarization



# XiangYun System



## Product Description

XiangYun System adopts the pulse system. The products cover multiple frequency bands including L, S, C, X, Ku, and Ka. They feature single polarimetric mode, full polarimetric mode, as well as functions like interference, spotlight, Ground Moving Target Indicator (GMTI) and pulse search.

## Product Features



Onboard Real-Time  
Imaging Capability



Motion Compensation



System-Level Reliability



SAR Usability Upgrade



Environmental Adaptability



Open Architecture

## Application Fields



Battlefield Reconnaissance



Target Characteristic Monitoring



Geological Disaster Monitoring



Camouflage Assessment



Mine Detection



Port Monitoring



## Technical Index

### XiangYun Pulse Radar

|                          |                    |
|--------------------------|--------------------|
| Operating Frequency Band | L 、 S 、 C 、 X 、 Ku |
| Operating Mode           | Pulse              |
| Resolution               | 0.01m~0.75m        |

## Serial Products

### XY1A Standard Version

#### Product Description

XY1A is the standard version micro SAR of the XiangYun Series.

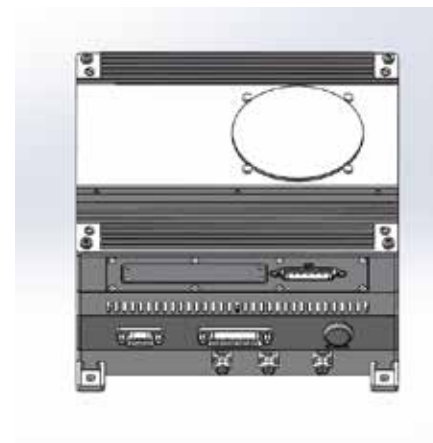
#### Main Applications

Large-area surveying and mapping, point-target characteristics identification, reconnaissance-strike integration.

#### Applicable Platforms

Customized designs can be made to meet the requirements of Unmanned Aerial Vehicles (UAVs) with different payload capacities.

#### Product Photo



### XY1B Phased Array Version

#### Product Description

XY1B is the phased array version micro SAR of the XiangYun Series.

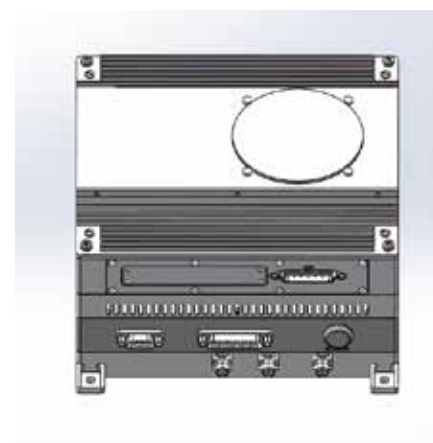
#### Main Applications

Large-area surveying and mapping, point-target characteristics identification, reconnaissance-strike integration.

#### Applicable Platforms

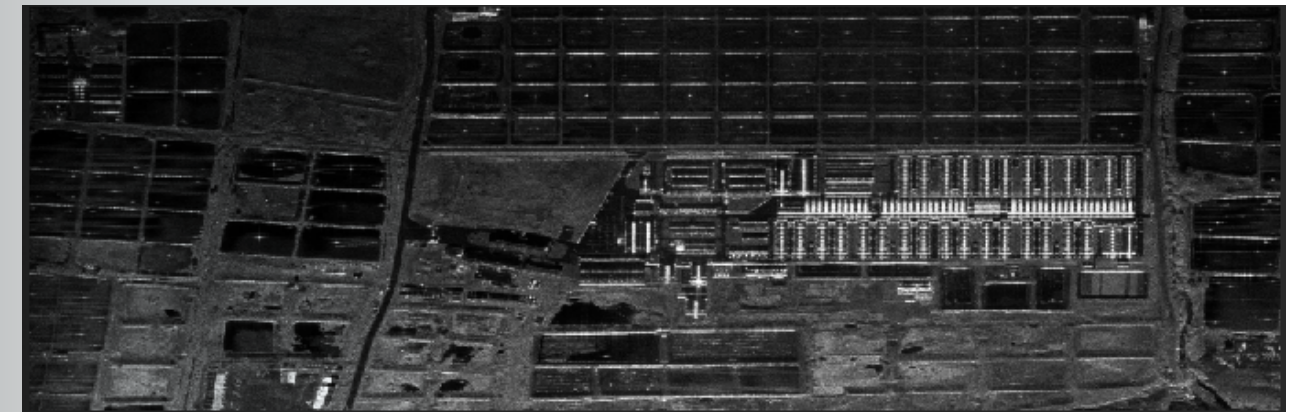
Customized designs can be made to meet the requirements of Unmanned Aerial Vehicles (UAVs) with different payload capacities.

#### Product Photo



## Imaging Effect

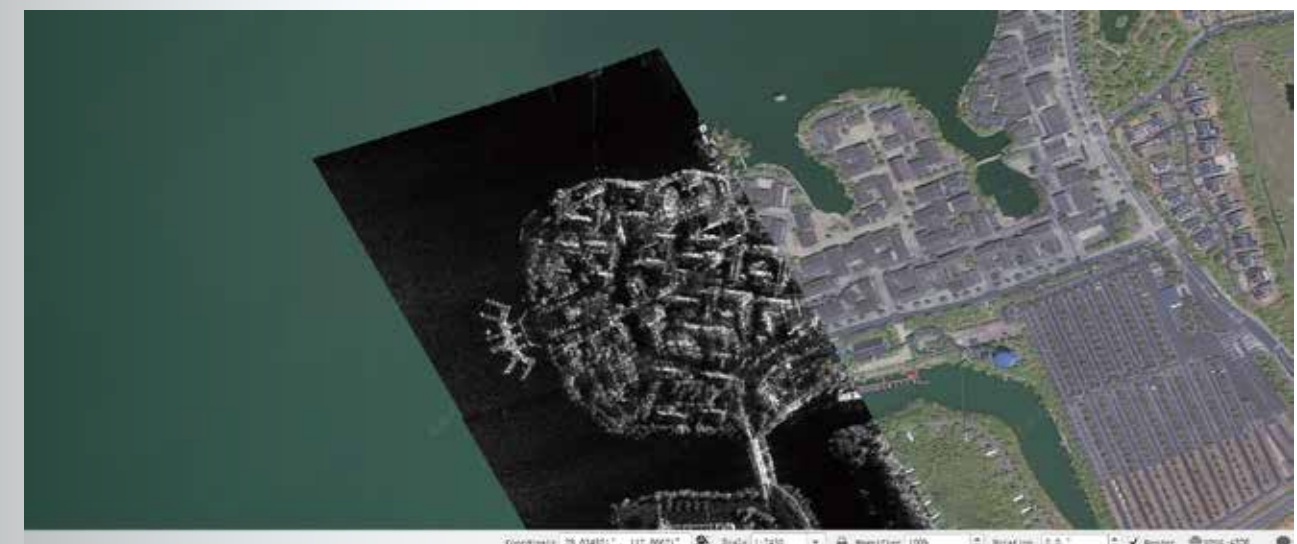
Ku band, resolution 0.15x0.15



X band, full polarization



Ku band, resolution 0.15x0.15



# YunInsar System



## Product Description

YunInsar consists of X-band InSAR and P-band full polarimetric SAR. It obtains surface Digital Terrain Model (DTM) in vegetation area through the vegetation penetrability of P-band and Digital Surface Model (DSM) of the target area through high-resolution imaging characteristic of X-band. It has the capabilities of radar image data, DSM, polarimetric interferometric image data and moving target detection.

## Product Features



Onboard Real-Time Imaging Capability



Motion Compensation



System-Level Reliability



SAR Usability Upgrade



Environmental Adaptability



Open Architecture

## Application Fields



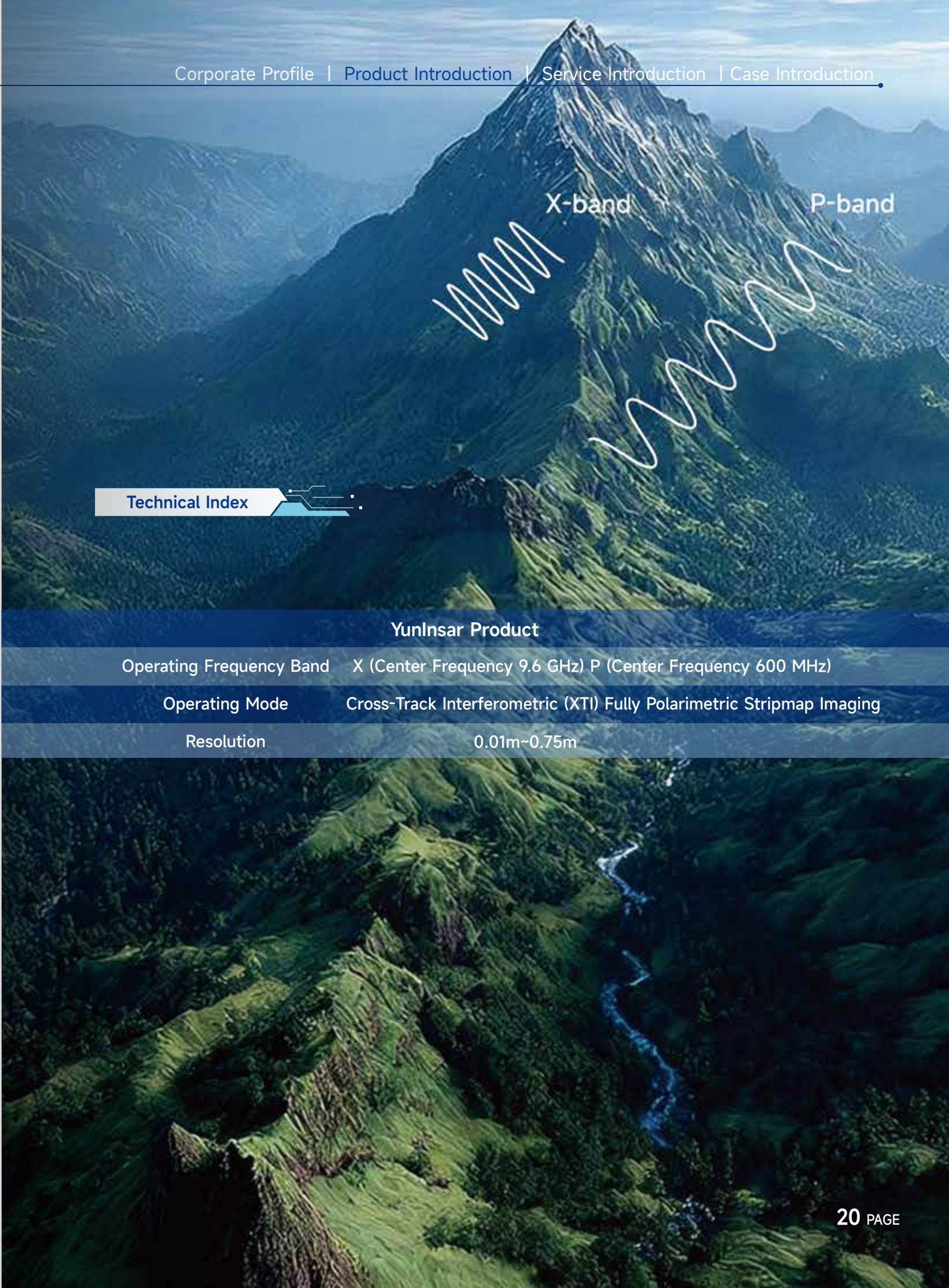
Large-Area Surveying and Mapping



Plateau Mountain Surveying and Mapping



Island (Islet) Surveying and Mapping



## Technical Index

| YunInsar Product         |                                                                       |
|--------------------------|-----------------------------------------------------------------------|
| Operating Frequency Band | X (Center Frequency 9.6 GHz) P (Center Frequency 600 MHz)             |
| Operating Mode           | Cross-Track Interferometric (XTI) Fully Polarimetric Stripmap Imaging |
| Resolution               | 0.01m~0.75m                                                           |

## Product Description

The overall weight of the YunInsar product is approximately 30 KG. It is a high-resolution airborne dual-band interferometric polarimetric SAR.

## Compatible Platform

YunInsar can be adapted to some large Unmanned Aerial Vehicles (UAVs) or lightweight manned aircraft, and can be customized to meet the requirements of UAVs with different payload capacities.

## Application Fields

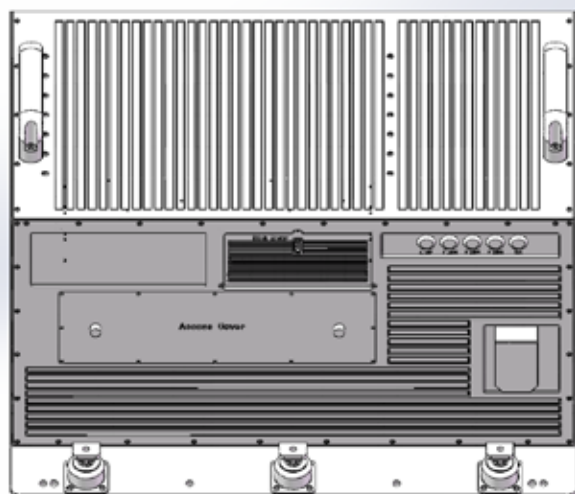
### Large-Area Topographic Surveying and Mapping

YunInsar can generate high-precision three-dimensional terrain data, meet the mapping requirements of various accuracies and is suitable for large-area surveying and mapping in island countries, plateau mountainous areas, and vegetation-covered areas.

## Imaging Effect



## Product Photo



# Co-scene Co-view System



## Product Description

The co-scene co-view System integrates SAR, visible light, infrared and other technologies into a unified design. It enables multiple sensors to image the same scene simultaneously, forming the capability to generate multiple images from a single flight.



## Product Features

The electromagnetic compatibility design is achieved by using screening filters, ensuring that there is no interference between different frequency bands.

The interface of the radar host is upgraded and renovated, and through cascading, the unified timing of radar data is realized.

The control machines of the upper computer and the ground terminal of the radar are modified to achieve integrated monitoring of multi-band equipment.



Point-Guidance and  
Amplification Function



Target Tracking Function



Target Accompanying  
Flight Function

## Technical Index



### Co-Scene Co-View Image Acquisition System

|                          |                                            |
|--------------------------|--------------------------------------------|
| Operating Frequency Band | L, X, Ku Band SAR, Visible Light, Infrared |
| Operating Mode           | 1920 (H) ×1080 (V)                         |
| Resolution               | 0.01m~0.75m                                |

## Adaptable Platforms

It can be installed on large, medium and small multi-rotor UAVs or fixed-wing UAVs. It can be customized to meet the requirements of UAVs with different payload capacities.

## Application Fields

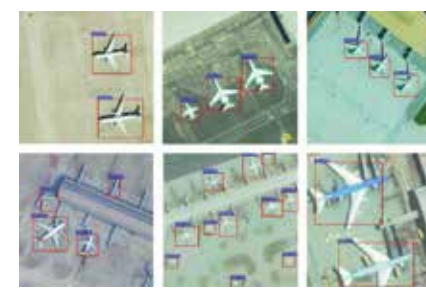
Emergency Relief: penetrate cloud and rain / smoke monitoring for disaster situations and quickly evaluate the extent of damage

Resources Exploration: multi-source data fusion for analyzing the distribution of vegetation and mineral

Security Monitoring: precisely track moving targets, supporting border / key area patrols



Mine Detection

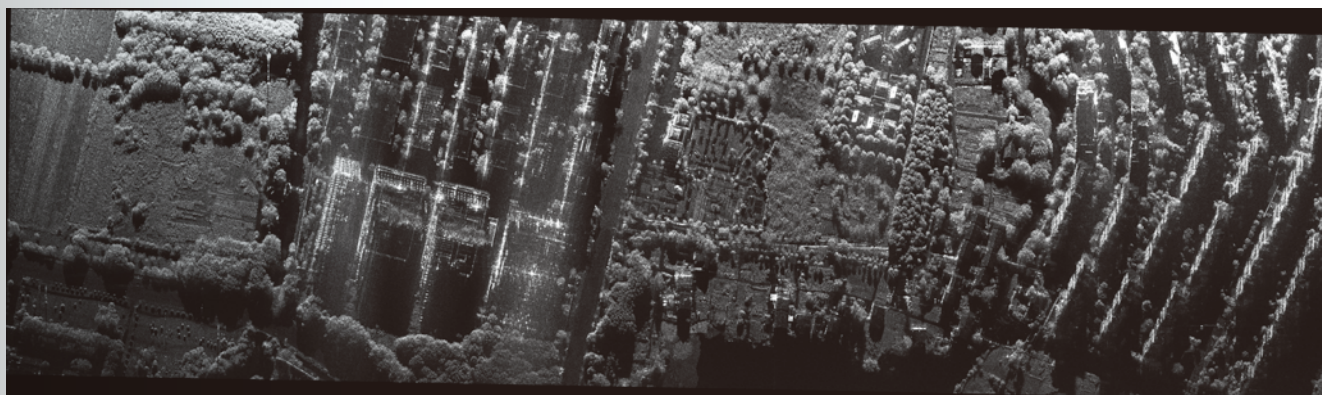
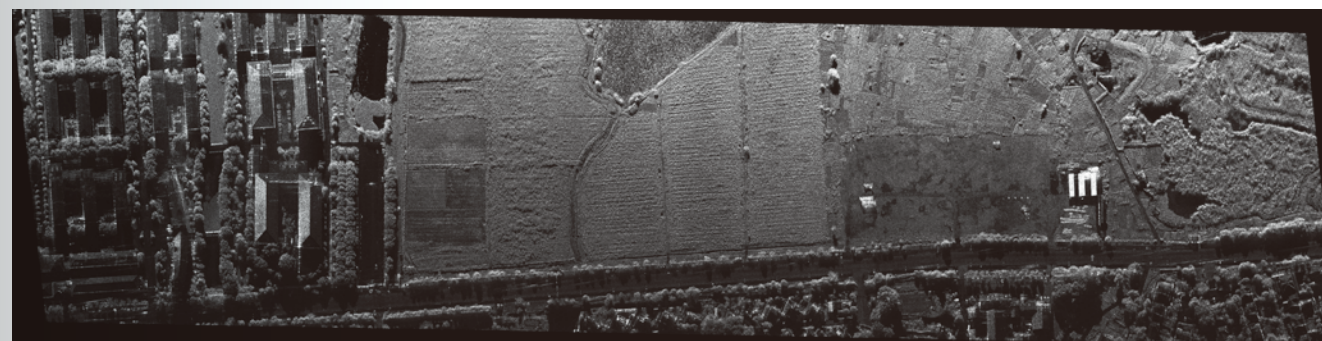


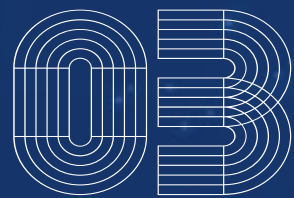
Target Characteristics Identification



Flood Monitoring

## Imaging Effect





## PRODUCT SERVICE INTRODUCTION

01 >>>

02 >>>

 **Product Matching**

 **Flight Matching**

03 >>>

04 >>>

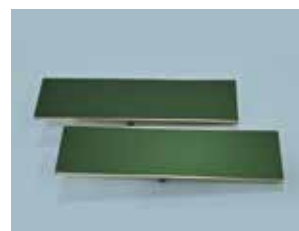
 **Flight Service**

 **After-sales Service**

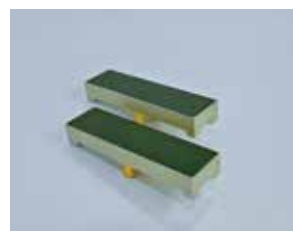
# Product Matching



## Product Accessories



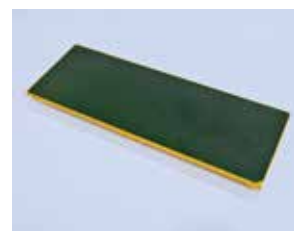
Panel Antenna



Panel Antenna



Horn Antenna



Panel Antenna



Long Cable



Short Cable



High-Frequency Cable



Low-Frequency Cable



T POS 3000



T POS 300



T POS 200



T POS 100



Triangular Corner-Reflector



Dihedral Corner-Reflector



Triangular Corner-Reflector



Omnidirectional Corner-Reflector



Assembly Bracket 1



Assembly Bracket 2



Assembly Bracket 3



Assembly Bracket 4

## Specific Tools



Cable Ties



Wrench



Solid State Disk (SSD)



Screwdriver Set



Long-Nose Pliers



Cross-Head Screwdriver Set



Torque Wrench

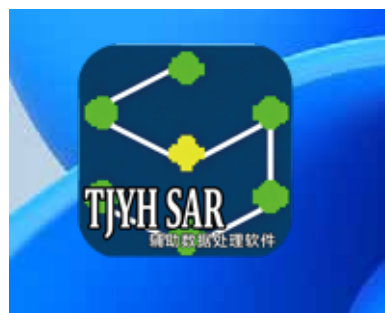


Hex Key Wrench



Screw

## Product Software



Auxiliary Data Processing Software



SAR Data Processing Software (Imaging)



InSAR Data Processing Software



IE Data Processing Software



Monitoring Processing Software



Upper Computer Control Software



Database Software



Radar Data Processing Software



MATLAB Data Processing Software

## Product Insurance

Insurance Service: We offer insurance solutions for the entire life cycle jointly underwritten by third-party insurance companies.

This after-sales service policy is applicable only to the Chinese mainland. After-sales services in other countries and regions will be implemented in accordance with the local relevant policies and laws. The following are several insurance services provided by our company:



# Flight Matching

Camouflage Material



Radar Camouflage Net



Infrared Camouflage Net 2



Optical Camouflage Net 1



Desert Optical Camouflage Net



Multi-Frequency Camouflage Car Cover



Vehicle Camouflage Paint



Multi-Frequency Stealth Clothing



Camouflage Clothing



Other Camouflage Materials

Target and False Target



Target with Radar Vehicle-Type Characteristics



Target with Tank-Type Characteristics



Target with Launching Vehicle-Type Characteristics



Target with Transport Aircraft-Type Characteristics



Target with Fighter Aircraft-Type Characteristics



Target with Helicopter-Type Characteristics



Target with Destroyer-Type Characteristics



Target with Frigate-Type Characteristics



Target with Aircraft Carrier-Type Characteristics



Target with Inflatable Aircraft-Type Characteristics



Target with Inflatable Vehicle-Type Characteristics



Target with Inflatable Tank-Type Characteristics

# Data Flight Service

## Delivery Center



## Flight Site



## Flight Airspace



## Service Advantages

**Background** 16 types of backgrounds including sandy land, forest land, grassland, etc.

**Motorcade** Diversified motorcade, of all kinds

**Aircraft** Large, medium and small UAVs, as well as manned aircrafts, of all kinds.

**Sar** FMCW/Pulse System, various band SARs.

**Other Core Carriers** All kinds of optics, infrared, multispectral core carriers, etc.

**Case** All kinds of application scenario cases.

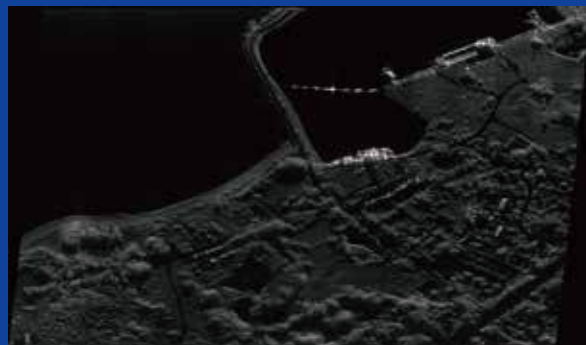
**Data Processing** Infinite Capability

**Data Delivery** Infinite Assurance

## Service Business

### Airborne SAR

A service that utilizes SAR technology for aerial data acquisition.



### Optics

A service that utilizes optical instruments for aerial data acquisition.



### Infrared

A service that utilizes infrared instruments for aerial data acquisition.



### Laser Radar (LIDAR)

A service that utilizes LIDAR technology for aerial data acquisition.



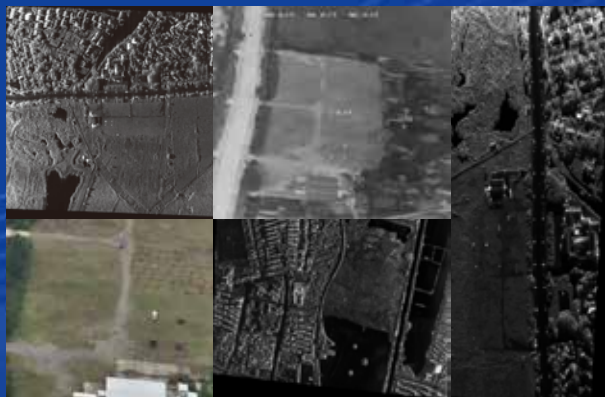
### Multi-Spectrum

A service that utilizes multispectral technology for aerial data acquisition.



### Co-Scene Co-View

A service that utilizes five bands of optics, infrared, and SAR (L, X, and Ku) for aerial data acquisition.



# AFTER-SALES SERVICE

## Training Service System

Our company has established a training system covering the entire life cycle of the equipment to ensure that customers can fully master the use, maintenance and upkeep of the equipment. The training is stratified for system administrators, maintenance personnel, and operators to ensure that different roles can meet the corresponding professional competence requirements.

### After-Sales Service

Training

Delivery

Cases

Quality Management

### 6-Day Training Course

Basic Introduction of the System  
(0.5 Days)

Hardware Connection(0.5 Days)

Radar Operation (1day)

Outfield Practical Operation  
(3 Days)

Maintenance & Fault Handling  
(1 Day)

### 6 Technical Documents

Product Manual

Operation Manual

Product Technical Drawing

Overall Circuit Block Diagram

Maintenance Guide

Equipment Integration Materials

### 4 Training Contents

Equipment Principles

Daily Maintenance Skills

Basic Operation Techniques

Other Relevant Professional  
Capabilities, etc.



## CASE INTRODUCTION

### Key Clients

(in no particular order)



20000<sup>+</sup>  
BUSINESS PARTNER

Suzhou Tianjing Yunhu Intelligent Technology Cooperation Guide

Work together for innovation and achieve a win-win future.

### Strategic Partners

(in no particular order)



Through the innovative system, various kinds of solutions can be systematically integrated. SAR has been applied in fields including camouflage assessment, marine monitoring, national territory surveying and mapping, and pipeline inspection. It has demonstrated outstanding real-time moving target recognition and detection capabilities.

# PROJECT CASE I



## PROJECT DESCRIPTION

Time and Place: 2023, XX airport in Zhuzhou, Hunan Province

## PROJECT ACHIEVEMENTS

Successfully obtained SAR full polarimetric images, Single Look Complex (SLC), and interferometric Digital Elevation Model (DEM) data of of the area.



# PROJECT CASE II

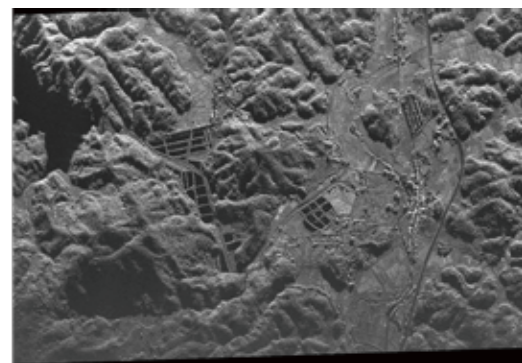


## PROJECT DESCRIPTION

Time and Place: 2023, Zhengzhou Province

## PROJECT ACHIEVEMENTS

Successfully obtained SAR Single Look Complex (SLC), full polarimetric images and Digital Orthophoto Map (DOM) of the area.



# PROJECT CASE III

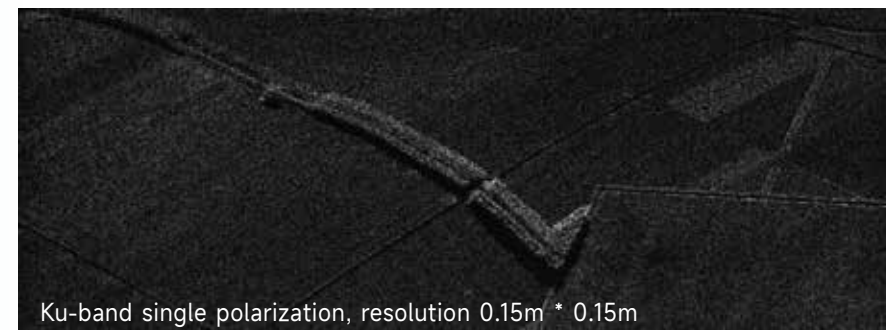


## PROJECT DESCRIPTION

Time and Place: 2023, Jinan, Shandong Province

## PROJECT ACHIEVEMENTS

Successfully obtained SAR Single Look Complex (SLC), full polarimetric images and Digital Orthophoto Map (DOM) of the area.



Ku-band single polarization, resolution 0.15m \* 0.15m

# PROJECT CASE IV

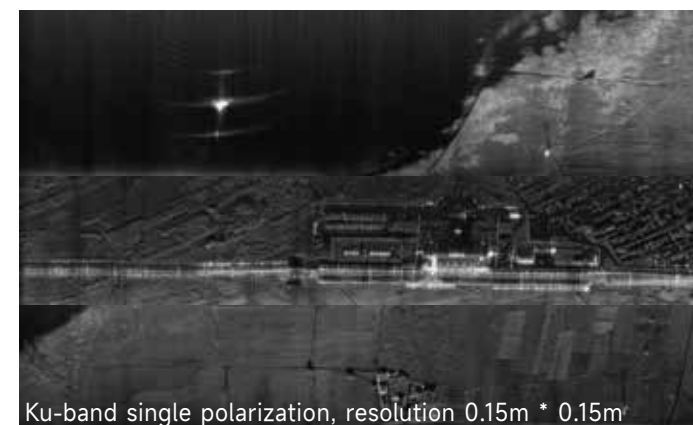


## PROJECT DESCRIPTION

Time and Place: 2023, Huailai, Hebei Province

## PROJECT ACHIEVEMENTS

Successfully obtained SAR Single Look Complex (SLC), full polarimetric images and Digital Orthophoto Map (DOM) of the area.



Ku-band single polarization, resolution 0.15m \* 0.15m

## PROJECT CASE V

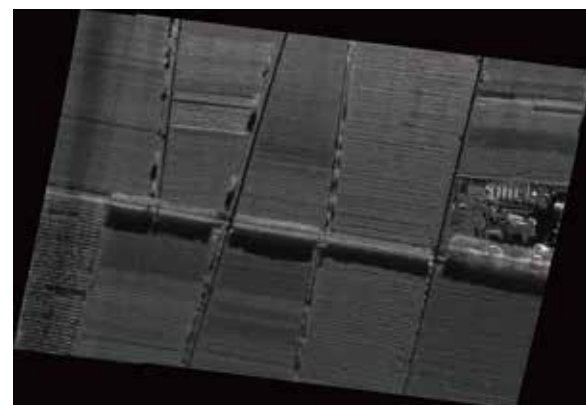
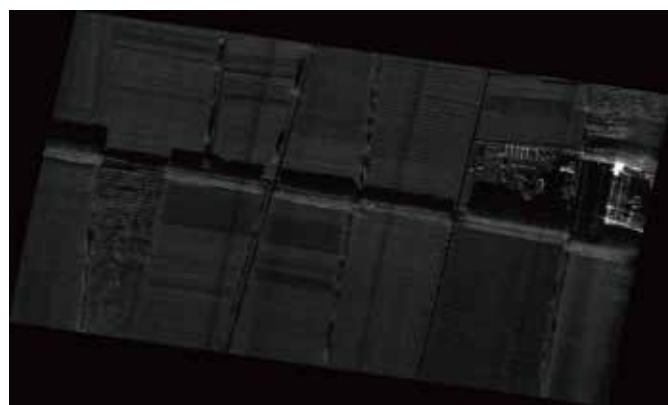


### PROJECT DESCRIPTION

Time and Place: 2023, Liaocheng, Shandong Province

### PROJECT ACHIEVEMENTS

Successfully obtained SAR full polarimetric images and Digital Orthophoto Map (DOM) of the area.



## PROJECT CASE VI

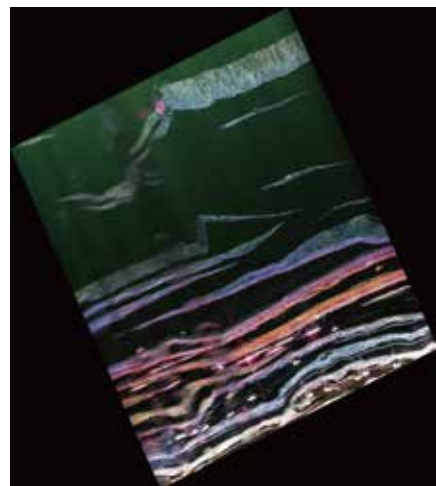


### PROJECT DESCRIPTION

Time and Place: 2023, Xinjiang

### PROJECT ACHIEVEMENTS

Successfully obtained SAR full polarimetric images and Digital Orthophoto Map (DOM) of the area.



## PROJECT CASE VII



### PROJECT DESCRIPTION

Time and Place: 2023, Zhanjiang, Guangdong Province

### PROJECT ACHIEVEMENTS

Successfully obtained SAR stripmap, spotlight, along-track mode image and Digital Orthophoto Map (DOM) of the area.



## PROJECT CASE VIII

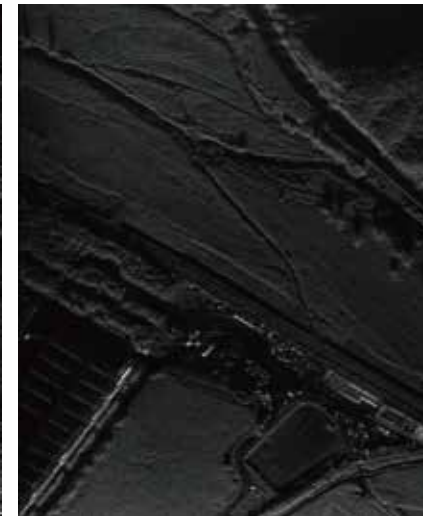
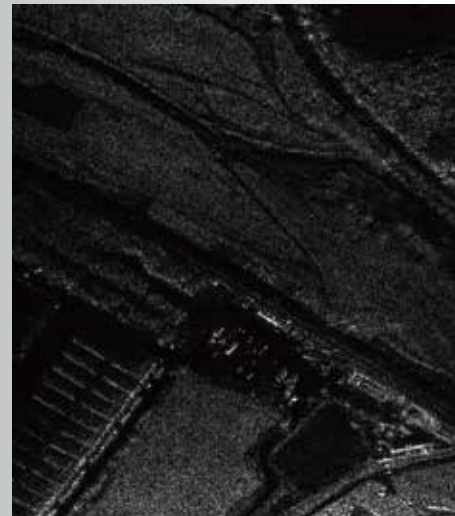


### PROJECT DESCRIPTION

Time and Place: 2023, Chengde, Hebei Province

### PROJECT ACHIEVEMENTS

Successfully obtained the L-band and Ku-band SAR imaging and optical infrared images of this area.



## PROJECT CASE IX

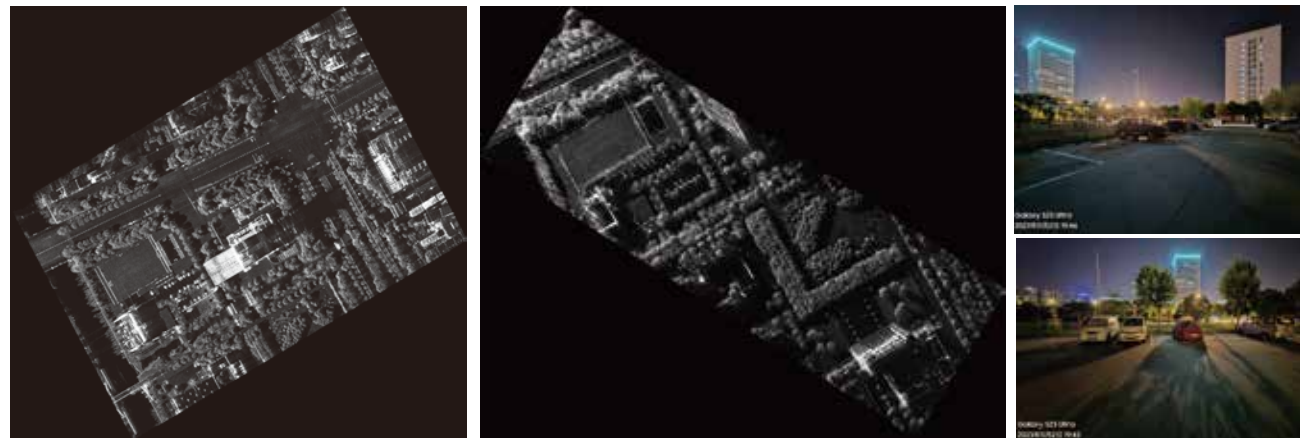


### PROJECT DESCRIPTION

Time and Place: 2024, Kunshan, Suzhou

### PROJECT ACHIEVEMENTS

Successfully obtained the Single Look Complex (SLC) and interferometric Digital Elevation Model (DEM) of Ku-band target in parking lot.



## PROJECT CASE X

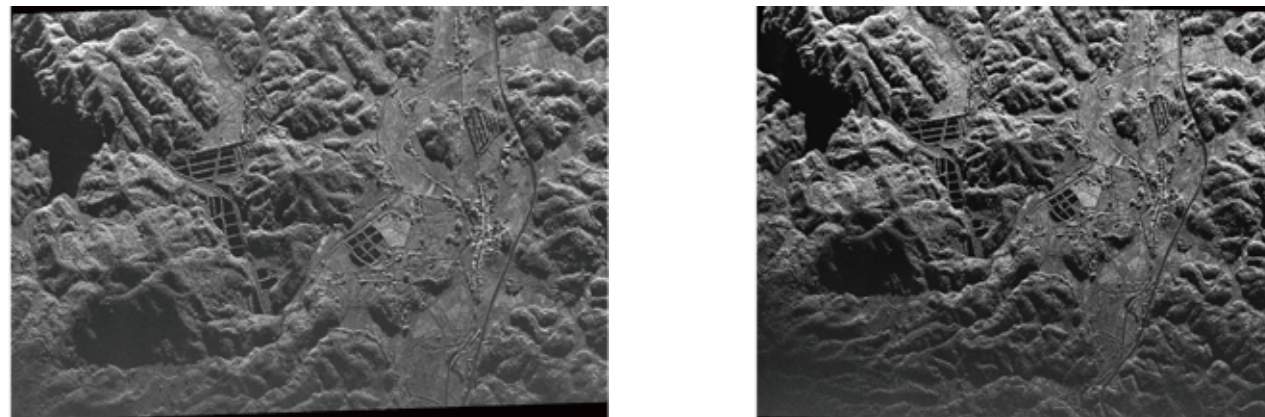


### PROJECT DESCRIPTION

Time and Place: 2024, Weinan, Shaanxi Province

### PROJECT ACHIEVEMENTS

Successfully obtained the SAR full polarimetric images, Single Look Complex (SLC), interferometric Digital Elevation Model (DEM) and double-orbit multi-baseline data of the area.



## PROJECT CASE XI

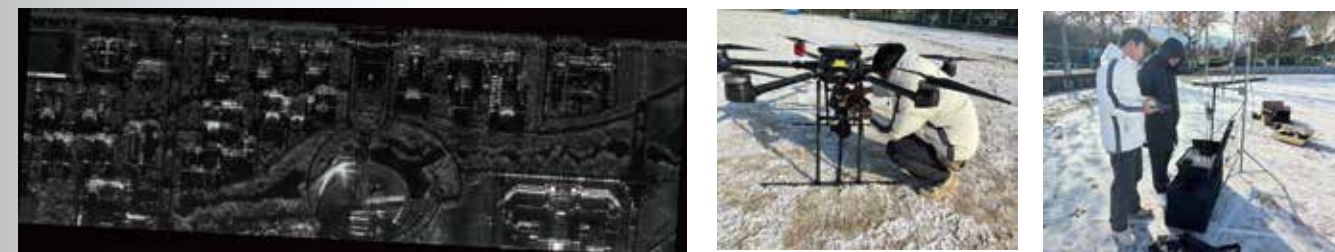


### PROJECT DESCRIPTION

Time and Place: 2024, Xi'an, Shaanxi Province

### PROJECT ACHIEVEMENTS

Successfully obtained the SAR full polarimetric images, Single Look Complex (SLC), interferometric Digital Elevation Model (DEM) and double-orbit multi-baseline data of the area.



## PROJECT CASE XII



### PROJECT DESCRIPTION

Time and Place: 2025, Kunshan, Jiangsu Province

### PROJECT ACHIEVEMENTS

Successfully obtained X-band, L-band, Ku-band, optics, infrared and other image data of the flight test site in Kunshan, Jiangsu Province.

