BrainyBEE Unmanned Aerial Vehicle

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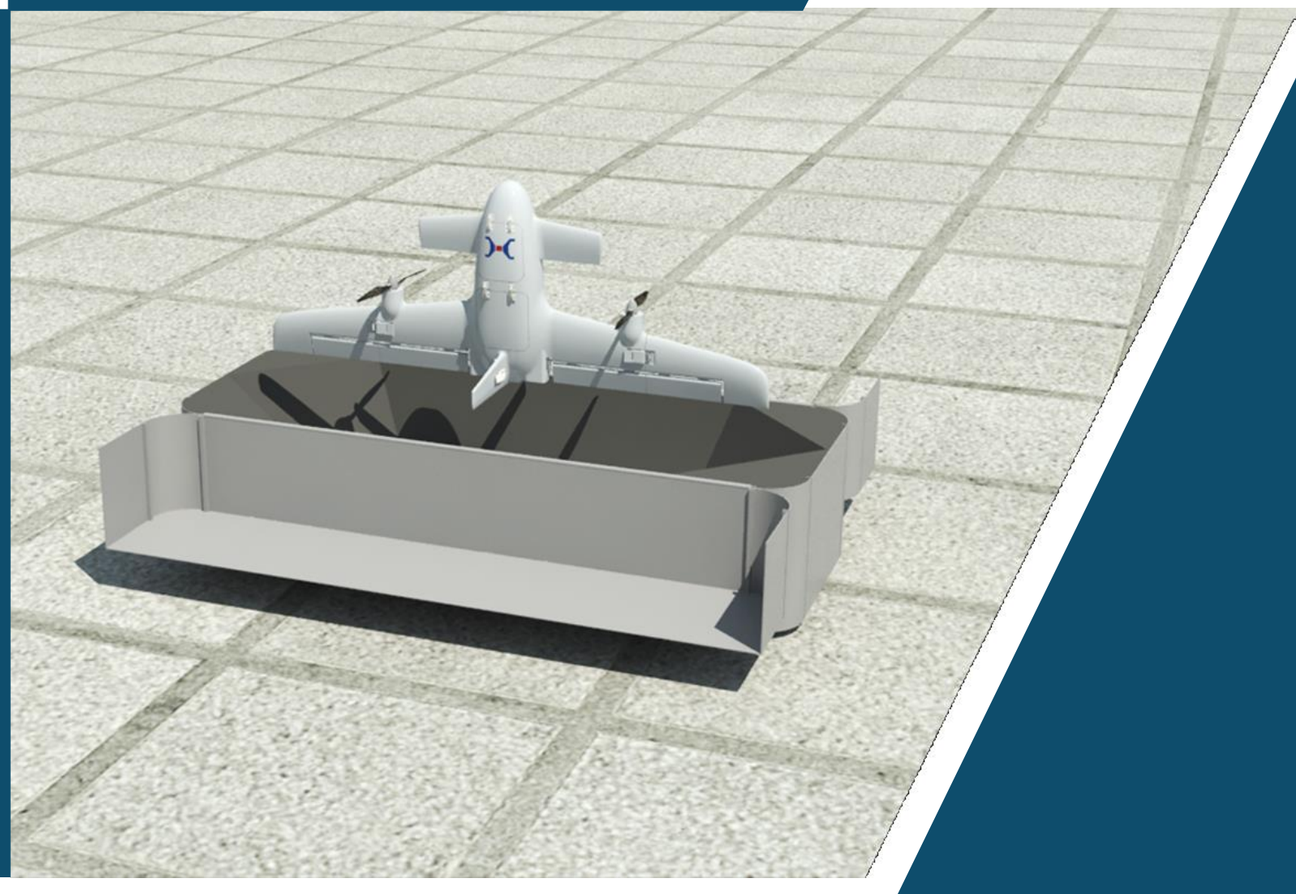

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BRAINYBEE UAV

XiangHong Technology Ltd.
Pioneering Intelligence, Empowering the Future

Product Catalog

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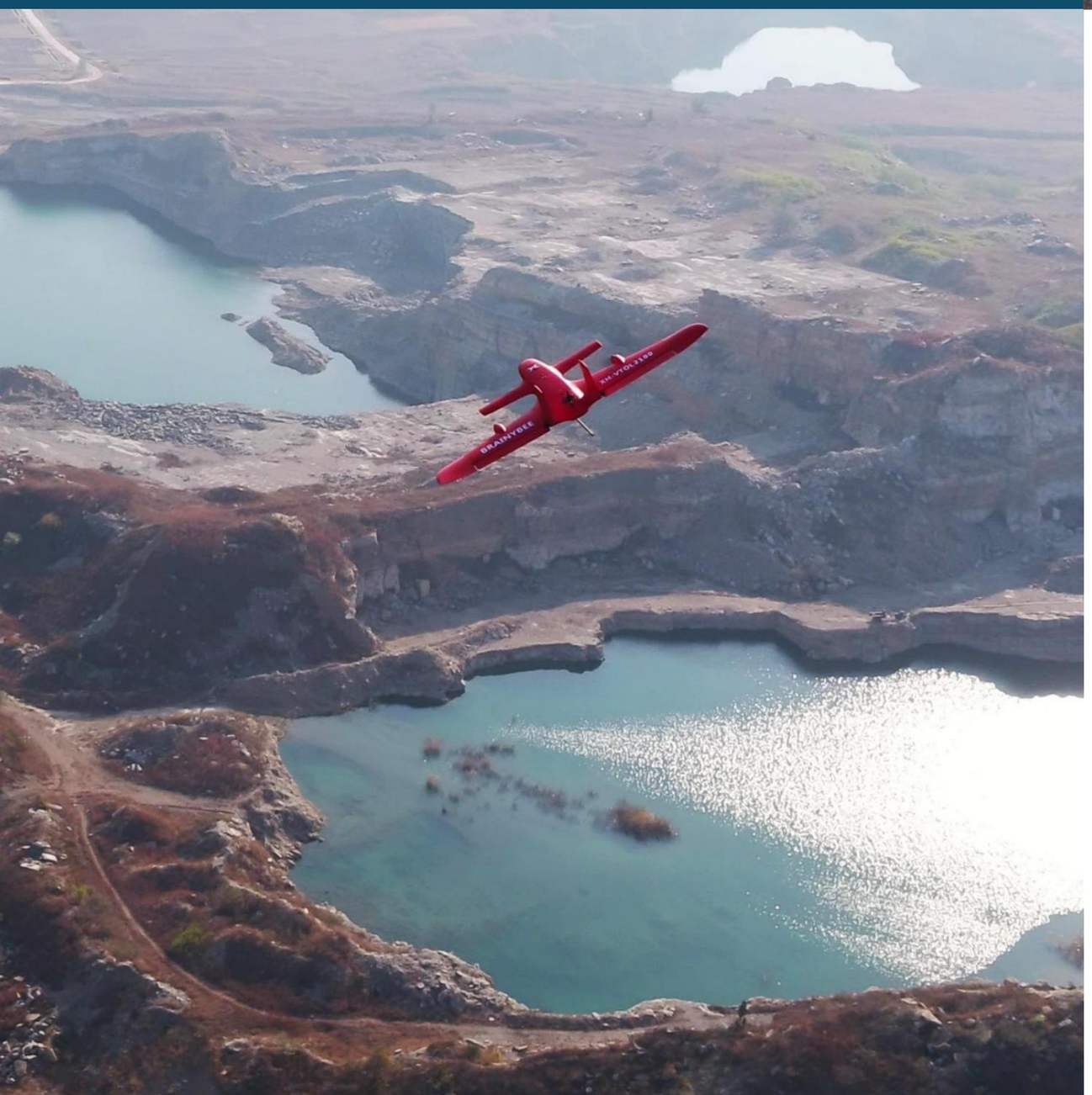


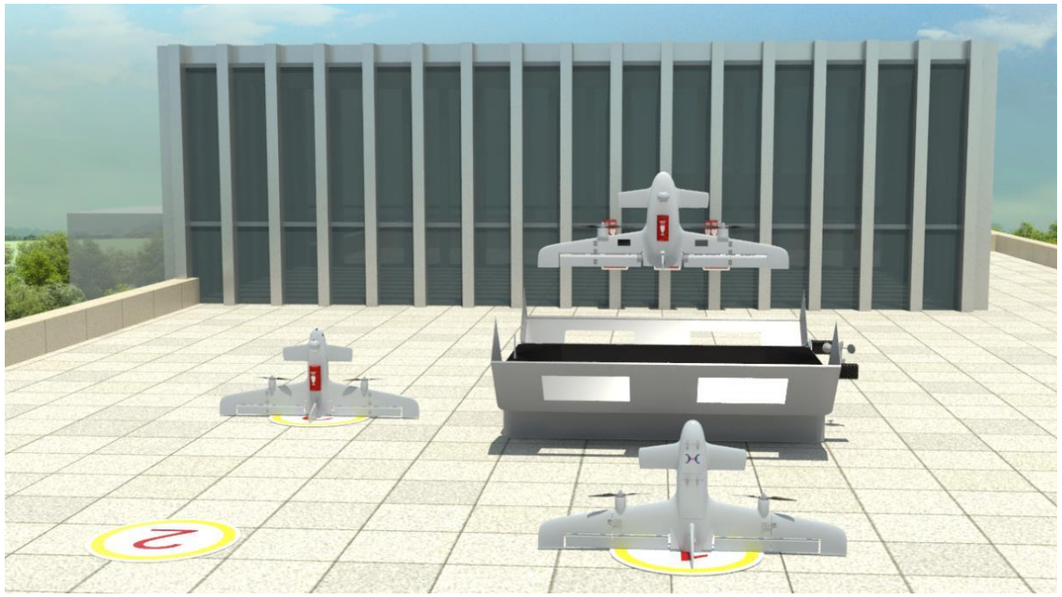
COMPANY INTRODUCTION

XiangHong Technology Ltd. specializes in developing cutting-edge UAV systems for industrial applications. From initial design and prototyping to system integration and mass production, we deliver high-performance UAV platforms and tailored solutions to meet our customers' diverse needs.

With years of dedicated research and development, we have established a strong technological foundation, focusing on four core innovations: Advanced Neural Adaptive Guidance & Control, Industry’s First Proven Tailsitter VTOL Design, Autonomous UAV Launch & Recovery, Intelligent Target Tracking & Recognition.

From high-precision navigation and ultra-efficient VTOL platforms to intelligent data processing, communication systems, and mission-specific payloads, we provide customized UAV solutions that meet the rigorous demands of modern industrial applications.

BrainyBee Tailsitter VTOL Fixed Wing UAV



The BrainyBee Tailsitter VTOL Fixed-Wing UAV offers vertical take-off and landing capabilities, unaffected by terrain, with automatic transition between vertical and horizontal flight modes, ensuring full autonomy throughout the flight. This advantage guarantees smooth operations in complex terrains such as mountains, forests, and areas with dense buildings. Featuring a foldable structure, the wings and tail can be deployed or retracted within seconds, allowing for single-person operation and quick response time.

The UAV equipped with an intelligent gimbal enables smart reconnaissance, target tracking, and other functions. With both visible light and infrared capabilities, it allows for all-weather reconnaissance operations, automatically detecting abnormal situations within the area and issuing alerts. The UAV autonomously follows the identified target during flight.

The UAV can use a small UAV station to automatically land and recover without the need for a pilot, enabling fully autonomous operations.

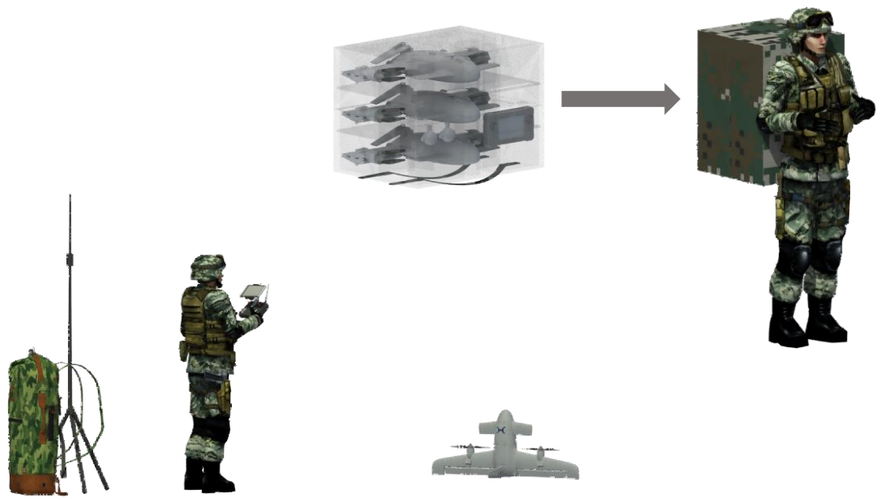
Portable Single-Operator Reconnaissance UAV

BL50-130

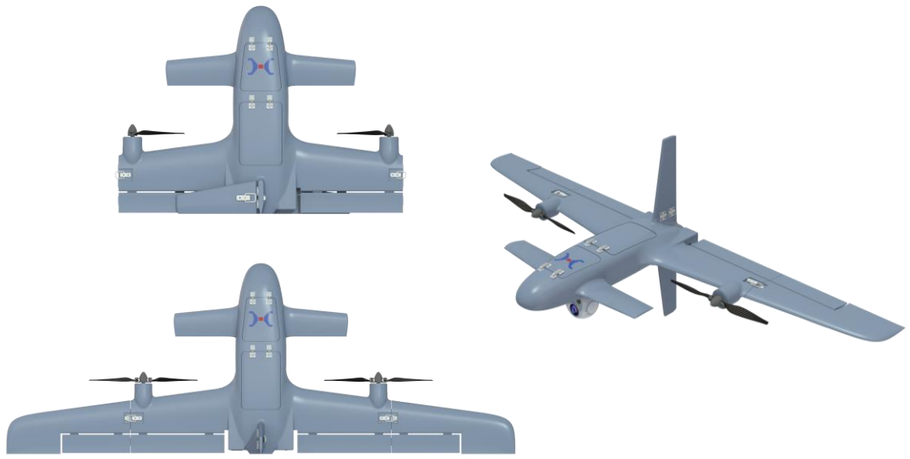
Technical Specifications

Wing Span	1.30 m	Flight Endurance	70 minutes (with Multi-Spectrum Camera Gimbal)
Fuselage Length	0.50 m	Cruise/Max Speed	80/150 km/h
Empty/Takeoff Weight	2.8/4.8kg	Max Range	95km
Folded Size	0.70*0.50*0.15 m	Max Climb Rate	6 m/s
Max Payload	2 kg	Wind Resistance	Level 6
Max Takeoff Weight	7 kg	Max Flight Altitude	> 4000m

Application Scenarios:
Military reconnaissance and strike,
Loiter Bomb



Versatile Tactical UAV

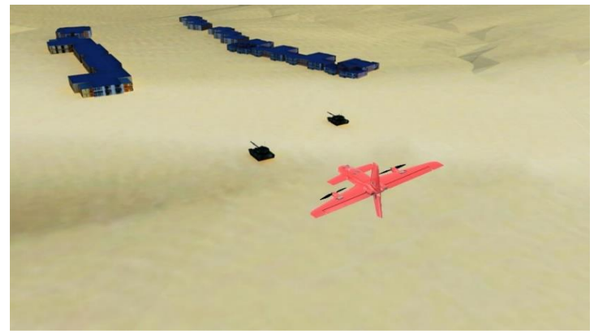


Technical Specifications		
Model	BL60-160	BL60-200
Wing Span/Fuselage Length	1.60m/0.60m	2.00m/0.60m
Folded Size	0.82*0.60*0.15m	0.82*0.60*0.15m
Empty/Takeoff Weight	2.8/4.8kg	3.4/5.8kg
Max Payload	2kg	2kg
Max Takeoff Weight	8kg	8kg
Flight Endurance (with Multi-Spectrum Camera Gimbal)	100minutes	120minutes
Cruise Speed	80km/h	75km/h
Max Range	130km	150km
Max Speed	150km/h	120km/h
Max Climb Rate	6 m/s	6 m/s
Wind Resistance	Level 6	Level 6
Max Flight Altitude	> 4000m	> 4000m

Exclusive patented design

- Twin propeller design, canard layout for high aerodynamic efficiency, simplicity, and reliability.
- Vertical takeoff and landing from restricted landscapes, automatic transition between hover and level flight modes, fully autonomous flight throughout the mission.
- Integrated Reconnaissance and Strike, Reusable and Repeatable.
- Folding design, quick deployment, operable by a single soldier, and maneuverable/flexible.
- Capable of long-duration reconnaissance, search, and tracking of targets with precise positioning.
- High level of intelligence, easy to operate, target lock by clicking on the video, confirmation of high-speed dive attack, and able to penetrate 100mm light armor.

- **Military reconnaissance and strike**
- **Loiter Bomb**

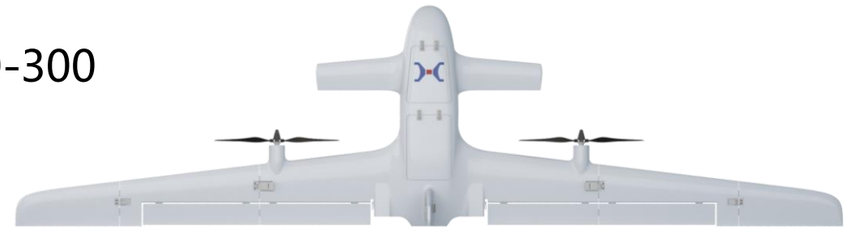


Specs / Model	USA Switchblade 300	Israel Hero-30	BL60-160
			
Wing Span/Length	0.60/0.60m	0.94m	1.60/0.70m
Max Bomb Load	0.32kg	0.5kg	1kg
Max Takeoff Weight	2.5kg	4kg	9kg
Flight Endurance	15minutes	30minutes	90minutes
Cruise speed	101km/h	/	80km/h
Max Speed	160km/h	185km/h	220km/h
Endurance range	25km	40km	120km
Launch Method	Canister(Pneumatic Launch)	Canister(Pneumatic Launch)	Vertical takeoff, no auxiliary devices
Technical Features	• Complex mechanical structure, cumbersome supporting equipment, and high training requirements for operation. • Limited to single-use strikes, high operating costs. • Short range and limited time for target identification and confirmation.		• Easy operation, integrated reconnaissance and strike capability. • Reusable, low cost. • Able to hover around the target for extended periods to locate and identify before confirming the strike.

Medium- to Long-Endurance Reconnaissance / Cargo UAV

BL80-240

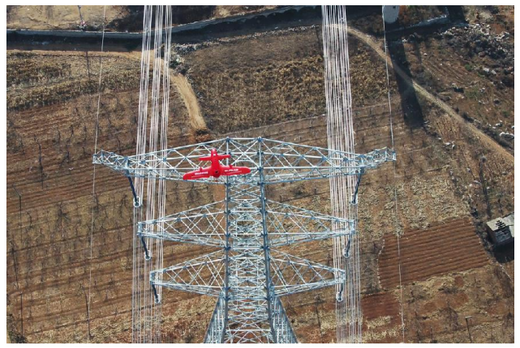
BL80-300

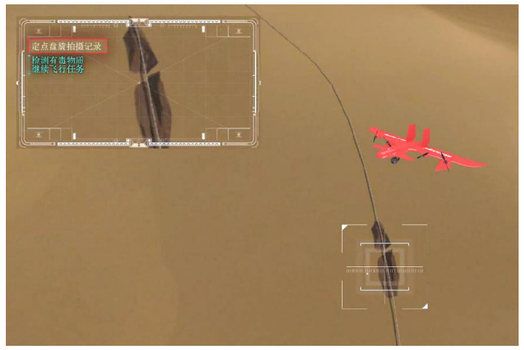


Technical Specifications

Model	BL80-240	BL80-300
Wing Span/Fuselage Length	2.40/0.80m	3.00/0.80m
Folded Size	1.23*0.80*0.20m	1.23*0.80*0.20m
Empty / Takeoff Weight	5.8/11kg	6.0/11.5kg
Max Payload	5kg	5kg
Max Takeoff Weight	16kg	16.5kg
Flight Endurance (with Multi-Spectrum Camera Gimbal)	3h	4h
Cruise Speed	80km/h	75km/h
Max Range	240km	300km
Max Speed	150km/h	120km/h
Max Climb Rate	6m/s	6m/s
Wind Resistance	Level 6	Level 6
Max Flight Altitude	> 4000m	> 4000m

- **Combining artificial intelligence with UAV industry applications enables automatic recognition and intelligent tracking, enhancing automation.**
  - ✓ Automatically recognizes targets and takes corresponding actions without human intervention, such as evidence collection, automated alerts, and continuous target tracking.
  - ✓ Integrated screen control allows for UAV operation, flight route planning, and mission payload management, including gimbal control, video display, and click-to-track functionality.
- **High-performance UAV platform, AI-powered capabilities, and autonomous operations via the BeeHive UAV Station provide efficient solutions for reconnaissance, inspection, and mapping applications.**
- **It has broad application prospects in professional fields such as oil and power facility inspection, forest fire prevention, environmental monitoring, maritime patrol, road surveillance, traffic control, anti-drug operations, and geospatial mapping.**





Long-Endurance and Heavy-Payload UAV

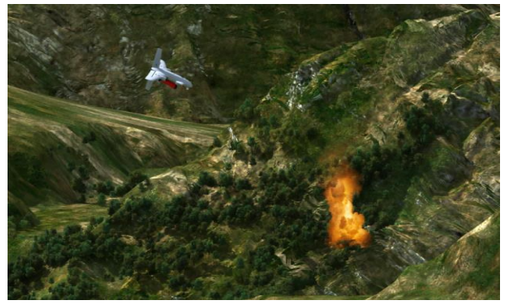
BL120-320

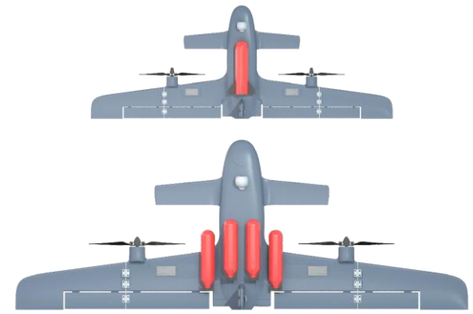
BL120-400

Technical Specifications		
Model	BL120-320	BL120-400
Wing Span/Fuselage Length	3.20m	4.00m
Empty / Takeoff Weight	15/30.5kg	15.5/36kg
Folded Size	1.64*1.20*0.30m	1.64*1.20*0.30m
Max Payload	15kg	10kg
Max Takeoff Weight	45.5kg	46kg
Flight Endurance (with Multi-Spectrum Camera Gimbal)	4h	5h
Cruise Speed	80km/h	75km/h
Max Range	320km	375km
Max Speed	130km/h	110km/h
Max Climb Rate	6m/s	6m/s
Wind Resistance	Level 6	Level 6
Max Flight Altitude	> 4000m	> 4000m

■ Fire Fighting

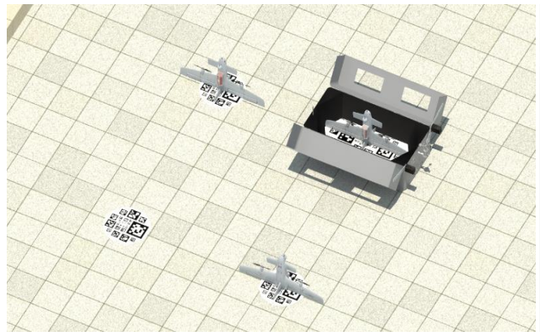
- ✓ Reconnaissance UAV hovers over the fire site for reconnaissance and positioning, assessing the effectiveness of fire suppression after the operation.
- ✓ Firefighting UAV, equipped with a 10kg fire-extinguishing bomb, takes off from an emergency command center tens of kilometers away and rapidly flies to the fire site. After confirming the fire location via video feed, it autonomously dives above the ignition point and precisely deploys the fire-extinguishing bomb, effectively extinguishing a 30㎡ area per drop.
- ✓ Depending on the fire situation, multiple UAVs can be deployed in a swarm operation, continuously dropping fire-extinguishing bombs to suppress the blaze.

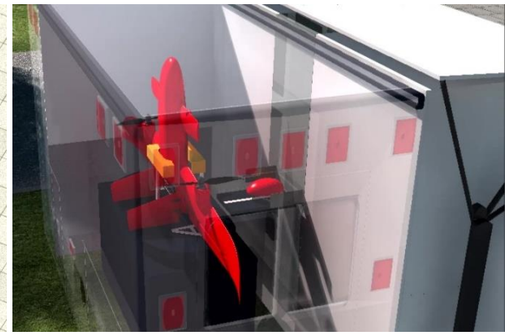




■ Logistics & Emergency Supply Delivery

- ✓ Aerial Airdrop with Parachutes – Deliver supplies from the air using parachutes for controlled descent.
- ✓ Precision Landing – Ensure point-to-point delivery with high accuracy.
- ✓ Fully Autonomous Delivery – Enable automated parcel dispatch and receipt without human intervention.





BrainyBee Multi-Spectrum Camera Gimbal (EO/IR/LIDAR)

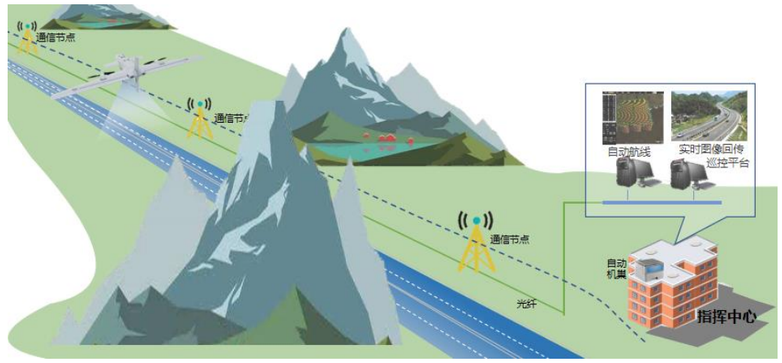
The BrainyBee navigation control system works seamlessly with the intelligent gimbal, enabling 360° uninterrupted tracking of stationary or moving targets in flight.

The intelligent gimbal utilizes a robust feature point matching algorithm combined with AI deep learning modeling. This significantly enhances target tracking reliability while enabling fully autonomous target recognition and response without human intervention.

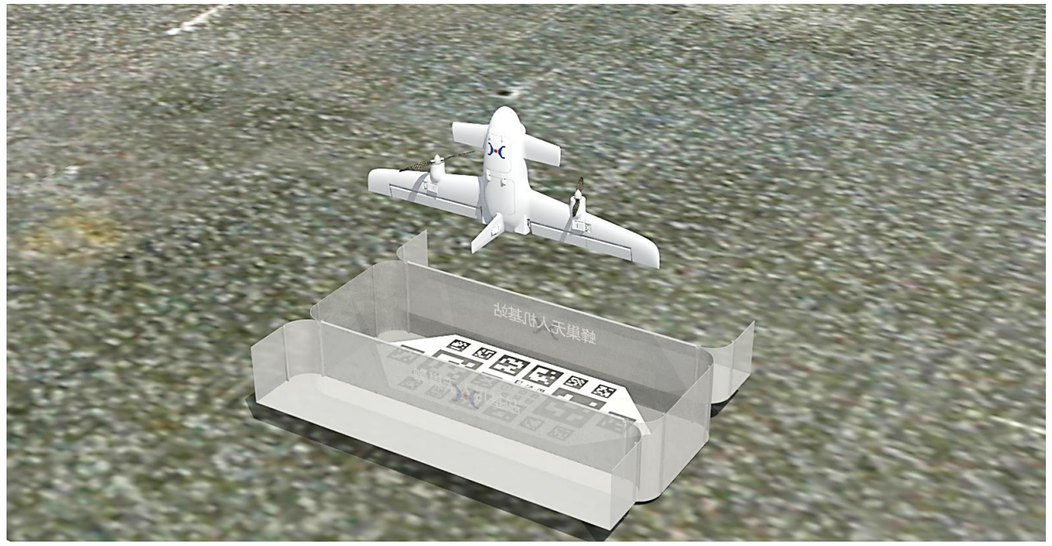
Pod	Image Stabilization Accuracy	±0.01°
	Control rotation range	Rotation direction：±360°continuous Pitch direction：-125°～+45°
	Maximum controllable speed	Rotation direction：±200°/s Pitch direction：±200°/s
	Size	96.4*96*147mm (diameter 96mm)
	Weight	608g
Visible light camera	Video resolution	1080P@25fps
	Photo resolution	1920*1080
	Zoom	10x optical plus 3x digital zoom
Infrared thermal imaging camera	Resolution	640x512
	Working band	8μm~12μm
	Focal length	18mm
Laser range finder	Wavelength	905nm
	Measuring range	5-1200m

BrainyBee Long-Range HD Image Data Transmission System

- The system integrates a bidirectional data link and broadband HD image transmission, featuring exceptional diffraction and penetration capabilities. In line-of-sight conditions, the transmission range reaches 30 km, while under ideal conditions, it extends up to 50 km.
- It supports AES encryption, including AES-256 and AES-128, and enables networked communication.



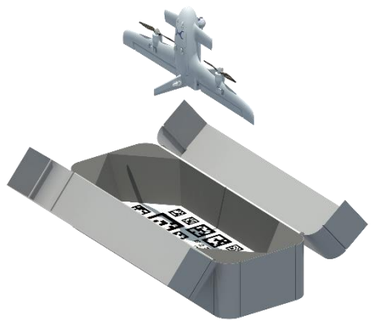
Technical Specifications	
Operating Frequency	1.400GHz-1.495GHz、 2.4GHz-2.483GHz
Bandwidth	2.5MHz（Uplink）、 10MHz（Downlink）
Modulation	OFDM
Constellation	BPSK、 QPSK、 16QAM
FEC	LDPC (1/2、 2/3、 3/4、 5/6)
Duplex Mode	TDD
Downlink Throughput	2.3Mbps-12Mbps
Uplink Throughput	115.2kbps
Interface	Ethernet port、 UART、 PPM/S.BUS



BeeHive UAV Station • Exclusive Patent Design

To achieve fully autonomous UAV operations without human pilots, XiangHong Technology introduces the BeeHive UAV Station, an exclusive patented solution enabling hands-free takeoff, landing, and inspection.
The station integrates launch, recovery, storage, charging, and data transmission, supporting unattended operations, multi-UAV collaboration, and high-frequency inspections. By eliminating manual UAV transport and control, it enhances emergency response and improves efficiency.
To meet diverse application needs, both Fixed Stations and Mobile Stations (Long Range UAV Hub Vehicle) have been developed.

The Fixed UAV Station supports long-term, high-frequency operations and serves as a communication relay. In emergencies, it enables rapid UAV deployment. After missions, UAVs can return or land at another station for storage and charging.



The Long Range UAV Hub Vehicle combines a UAV station and command center with long-range communication and an onboard generator. It supports multiple UAVs for wide-area coverage and high-frequency operations, maximizing mobility and efficiency.

Comprehensive UAV Station Network

Traditional UAVs are constrained by range, endurance, and transmission limits, making them unsuitable for large-scale reconnaissance and fully autonomous operations. By deploying a distributed network of UAV stations equipped with autonomous takeoff and landing platforms and automated charging docks, drones can autonomously land, recharge, and transfer mission data seamlessly.

For example, in key surveillance areas, UAV stations can be placed every 50 kilometers to ensure comprehensive coverage. The system automatically assigns drones to the nearest available station, enabling fully autonomous charging, storage, and operation.

Intelligent UAV Management and Control Platform

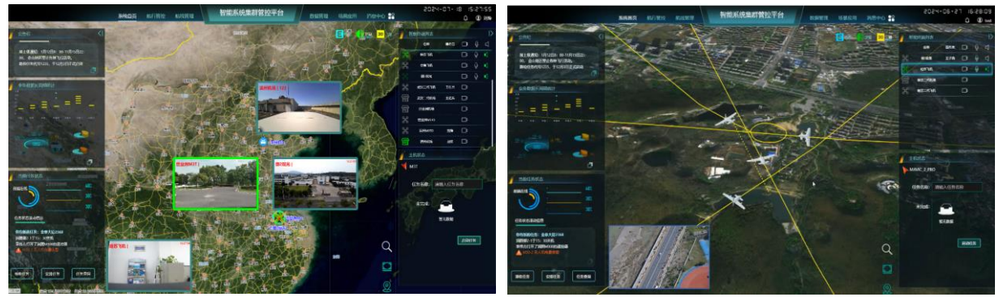
The platform excels in supporting UAV swarm operations with real-time and stable data communication. It primarily relies on 4G/5G and 1.4G/2.4G point-to-point modes to ensure efficient information transmission. In swarm management, it covers unified command, task allocation, and route planning while integrating situational awareness, data analysis, and centralized AI computing to enhance decision-making.

The platform ensures efficient data security, isolating organizational and operational data while balancing command authority for smooth coordination. Its scalable architecture supports multi-tiered data management to meet diverse needs.

With advanced AI and powerful computing, the system accurately identifies targets in real-time video, enhancing intelligence, operational efficiency, and UAV swarm capabilities.

Situational Control & Operational Dispatch

The platform excels in supporting UAV swarm operations with real-time and stable data communication. It primarily relies on 4G/5G and 1.4G/2.4G point-to-point modes to ensure efficient information transmission. In swarm management, it covers unified command, task allocation, and route planning while integrating situational awareness, data analysis, and centralized AI computing to enhance decision-making.



Intelligent Flight Route Management and Planning

The flight route management page includes standard functions such as displaying a route library list, generating new routes, editing and managing routes, and importing external routes. It meets diverse route management needs, effectively improving efficiency and flexibility.