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EFY technology Flight Control System

Multi-rotor Drone | Helicopter | Heavy Duty UAV
RTK | Cloud Management

EFY Intelligent Control (Tianjin) Technology Co., Ltd.

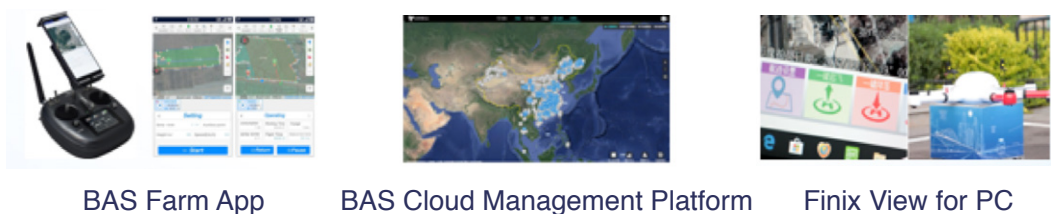
EFY Technology is a global leading provider of Commercial UAS Solutions. The products and solutions cover Cluster control, Logistics & transportation, Patrol & inspection, Flight control system and Customization. Finix series flight control system products include Finix200M for multi-rotor drone, Finix300 for helicopter, and Finix3000 for heavy duty UAVs with taking off weight from 100KG to 4000KG.

To meet the needs of industry applications, we develop and provide high-precision positioning system solutions, cloud management system solutions, and develop professional PC and mobile operating terminals. The products also include millimeter wave terrain following module, high-precision mapper, smart battery and so on. Finix200M and Finix300 flight control systems are widely used in agricultural drones. Finix3000 with triple redundancy flight control system, which has been applied in many customized flight platforms.

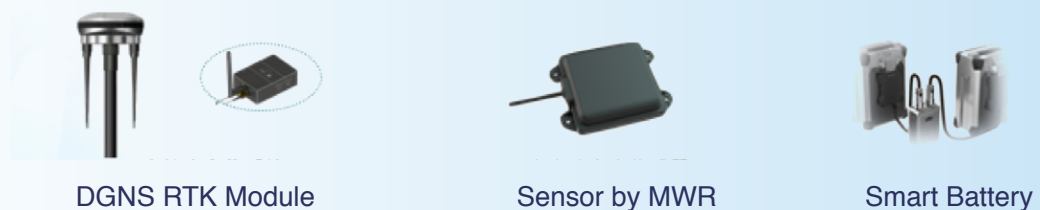
Flight Controller



Soft Ware



Other Parts



Finix200M

for Multi-rotor Drones

Finix200M is a multi-rotor drone controller based on IoT. It can be operated by App or remote controller. It is widely used in agricultural drones. It is equipped with “BAS Farm” App which is a specialized agricultural drone operation terminal. With a cloud platform account, the user can check on the flight information through BAS Cloud at anytime. It also supports international market applications.



▼ Technical Parameters

Support for multi-rotor types	4-axes (+ type, X type) 6-axis (+ type, X type) 8-axes (+ type, X type) Customization	Hover accuracy	Horizontal Direction: $\pm 30\text{cm}$ Vertical Direction: $\pm 30\text{cm}$
Interface types	CAN/PWM/USB	Voltage range	3S-12S
RTK positioning accuracy	Horizontal 10cm+1ppm Vertical 10cm+1ppm	Receiver	S.BUS
		Operating temperature	-10~70°C
Internet of things module	Support	Wind resistance	< 8m/s

▼ Features

- Applicable to multi-rotor drone with take-off weight below 100KG
- Support APP control & remote controller & RTK & other module extension
- Full autonomous operation
- Provide cloud management account
- Built-in flight safety strategy, stable and reliable



Finix300

for Helicopters

Finix300 is a helicopter controller based on IoT. It can be used for helicopters powered by gasoline or battery. It can be operated by an App or a remote controller. With a “BAS cloud platform” account, the user can check on the flight information through BAS Cloud at any time.



▼ Technical Parameters

Helicopter swashplate type	H1, H3 H4, HE3 HR3, H140	Hover accuracy	Horizontal direction: $\pm 30\text{cm}$ Vertical direction: $\pm 30\text{cm}$
Helicopter type	Gasoline-powered Battery-powered	Interface type	CAN\PWM\USB
		Voltage range	3S-12S
RTK positioning accuracy	Horizontal 10cm+1ppm Vertical 10cm+1ppm	Receiver	S.BUS
		Operating temperature	-10~70°C
Internet of Things module	Support	Wind resistance	< 8m/s

▼ Features

- Applicable to helicopter below 100KG
- Compatible with gasoline-powered and electronic-powered types
- Separate IMU
- Built-in flight safety strategy, stable and reliable
- Support App control & remote controller & RTK & other module expansion
- Provide cloud management account
- One-button full-automatic operation



Finix3000

for Heavy Duty UAVs

Finix3000 is a flight control system developed for 100KG-4000KG takeoff weight UAV. It is safe and reliable which adopts triple redundancy design and has aviation-grade process quality. Reserve abundant external interfaces to meet the application requirements of various projects.



▼ Technical Parameters

Support aircraft type	Multi-rotor Single-rotor	Hover accuracy	Horizontal direction: $\pm 1\text{m}$ Vertical direction: $\pm 1\text{m}$
Support power type	Gasoline-powered Battery-powered	Interface Type	CAN\PWM\RS232\RS485
RTK high precision positioning	Support	Storage	32GB
Maximum flight speed	Forward: 120Km/h Lateral: 20Km/h	Receiver	S.BUS
		Operating temperature	-20~60°C
Internet of Things module	Support	Wind resistance	< 8m/s

▼ Features

- Applicable to 100KG-4000KG take-off weight UAV
- Tri-redundancy backup design
- Voting decision mechanism
- Aviation quality
- Rich external interface
- RTK high-precision positioning
- Multi-platform mature application
- Project-oriented customization



RTK High-Precision Positioning Solution

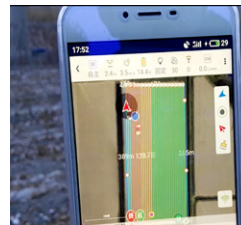
EFY RTK high-precision positioning solution adopts high-precision navigation and positioning technology to meet the high-precision positioning requirements of precise route, precise take-off and landing, precise mapping, precise obstacle avoidance, etc. It has centimeter-level positioning accuracy which is easy to realize one-button full-automatic operation. It is good for enhance accuracy, improve efficiency and reduce personnel costs. The program has been applied in large scale in the field of agricultural drones and logistics distribution drones.



Precise Route



Precise Take-off and Landing

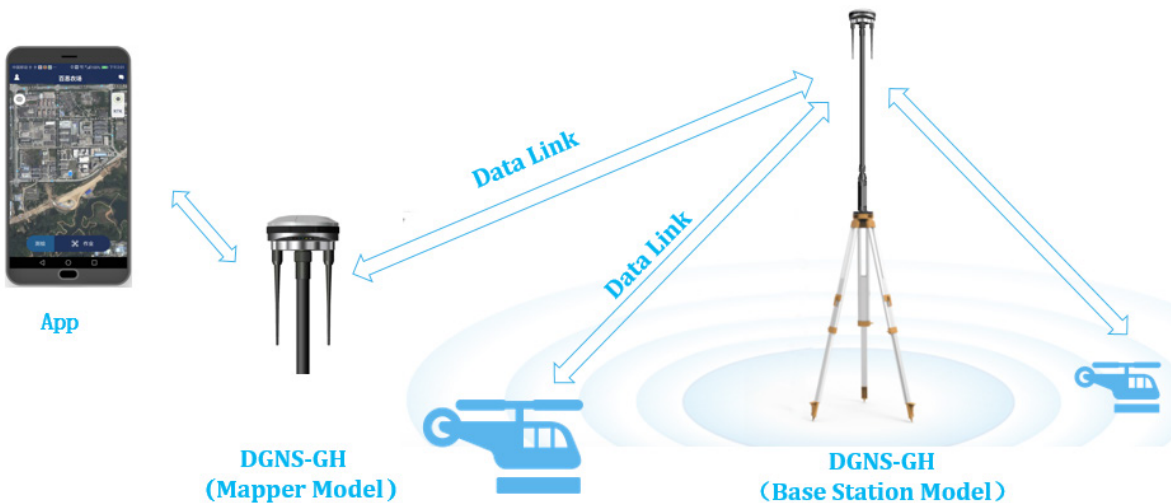


Precise Mapping



Precise Obstacle Avoidance

RTK high-precision positioning solution by Base station GH



▼ Features

- Transmission over data link
- Support base station topology
- Stable and reliable, low power consumption;
- Frequency matching: 4G/Wi-Fi

Cloud Base Station DGNS-GH



▼ Features

- Support multi-mode multi-frequency: GPS L1,L2; Beidou B1,B2,B3; GLONASS L1, L2;
- With centimeter positioning measurement accuracy;
- High sensitivity, stable and reliable, low power consumption;
- Base station/Mapper model all in one;
- Built-in lithium-ion battery, long life, 6S fast charging;
- Built-in SIM card and support SIM card switching;

Product Suite	
Item Name	Item Model
Autopilot Unit	Finix200M-APU/300-APU
4G IoT navigation light	FM-05 A3.0
Independent magnetic compass	FM-06 A1.0
High precision satellite positioning module	DGNS-A+ A1.0
HUB	FM-07-2C A1.0
Power HUB	FM-07-3C A1.0
Millimeter wave terrain following module	FM-09-MWR A2.0
High-precision Mapper	DGNS-GH(Mapper model)
Base Station	DGNS-GH

Agricultural IoT and Cloud Computing Solution

The agricultural IoT and cloud computing solution consists of drones, airports, high-precision positioning system, BAS Farm operating terminal App, BAS Cloud platform and other elements. With the IoT information flow, the information of each part is integrated and exchanged. This solution achieves full interaction of human, drone and parcel information in agricultural plant protection operations, enhance efficiency and improves work effect. With sharing information through the platform, it can meet the different needs of the regulatory part, government, drone manufacturers, and operational team.



Regulators

Real-time Supervision
Airworthiness Control



Government

Subsidy Settlement
Quality Assessment



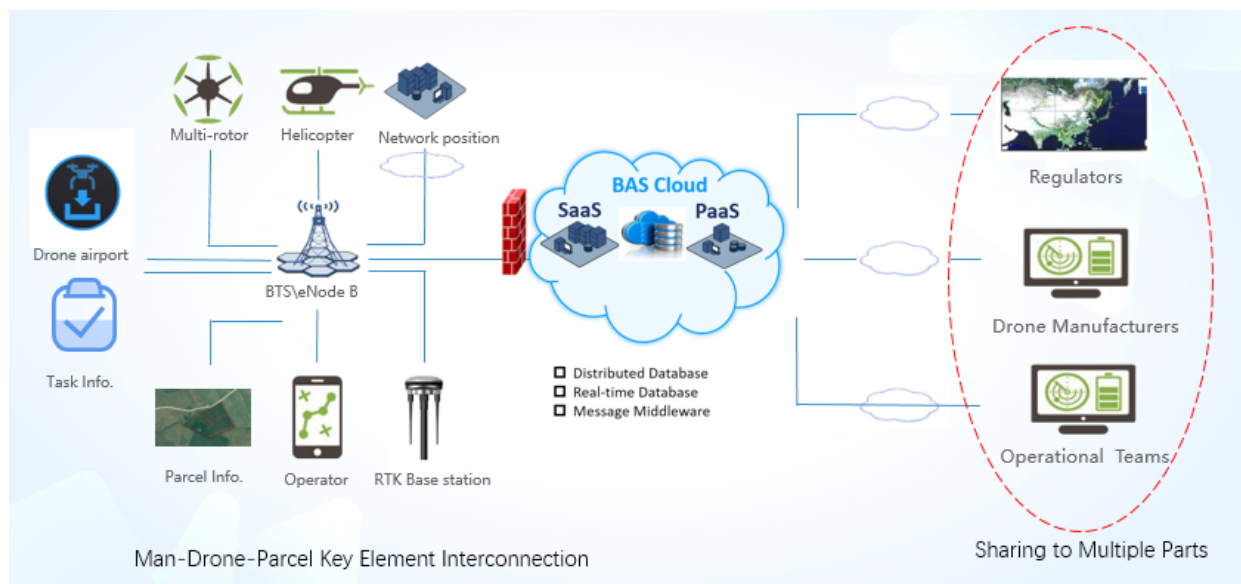
Operator

Cooperative Work
Operational Statistics



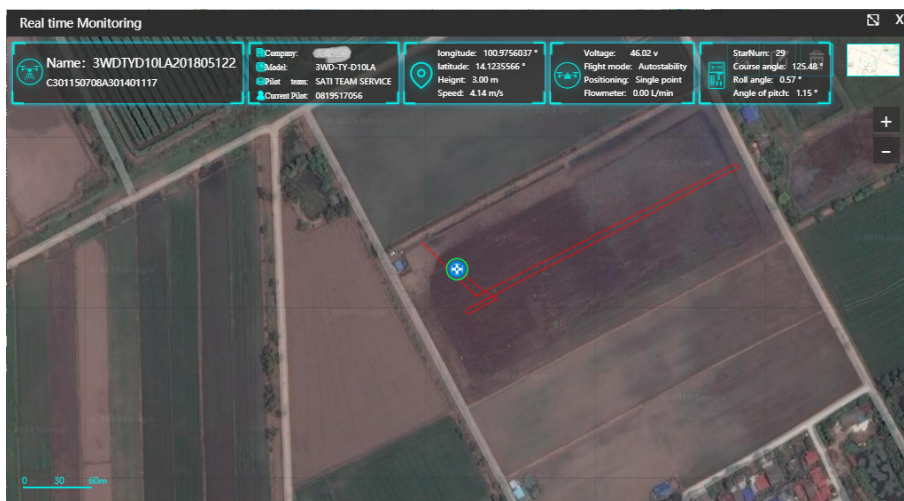
Manufacturer

Device Management
Fault Analysis

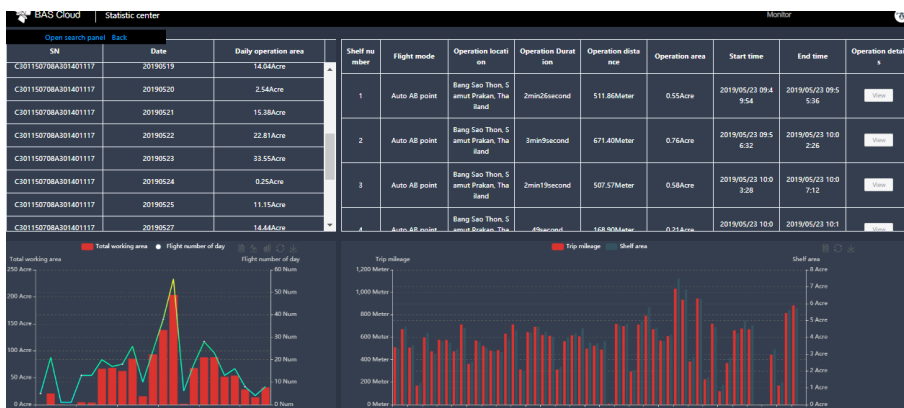




Real-time Supervision



Real-time Monitoring



Operational Statistics



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