FLYTOUAV®

2019

Aircross 6

Electrice VTOL 3 Hours Endurance

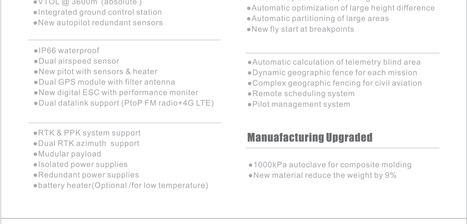
2mins Deployed Modular Payload

横空™



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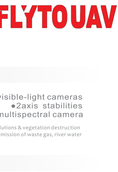


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FLYTOUAV AIRCROSS-6 UAV

AIRCROSS 横空™

a BIG JUMP



FLYTOUAV provides professional uav solutions for low-altitude data collections. The previous generation "SABER" has been in commercial operation more than 18months ,7,000+commercial flights and 560,000 km of voyage. The new generation AIRCROSS has achieved a comprehensive leap in flight and safety performance.

Hardware Upgraded

- 7.9kg takeoff weight
- Drag decreased by 12%
- Battery increase by 24.5%
- 180km of voyage
- 3Hours endurance
- 120seconds deployed

- Power system increased by 20%
- VTOL @ 10m/s constant wind(sea leavel)
- Curse @ 14m/s constant wind
- VTOL @ 3600m (absolute)
- Integrated ground control station
- New autopilot redundant sensors

- IP66 waterproof
- Dual airspeed sensor
- New pitot with sensors & heater
- Dual GPS module with filter antenna
- New digital ESC with performance moniter
- Dual datalink support (PtoP FM radio+4G LTE)

- RTK & PPK system support
- Dual RTK azimuth support
- Mudular payload
- Isolated power supplies
- Redundant power supplies
- battery heater(Optional /for low temperature)

Software Upgraded

- Smart wizard:Reduce illegal operations
- Intelligent power management system
- Obstacle avoidance system based on terrain data
- Emergency system for 20+ failure scenarios
- Smart assistant for mission planing

- Automatic 3D mapping route planning
- Automatic patrol route planning
- Automatic optimization of large height difference
- Automatic partitioning of large areas
- New fly start at breakpoints

- Automatic calculation of telemetry blind area
- Dynamic geographic fence for each mission
- Complex geographic fencing for civil aviation
- Remote scheduling system
- Pilot management system

Manuafacturing Upgraded

- 1000kPa autoclave for composite molding
- New material reduce the weight by 9%

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Modular payload

Environmental Monitoring



- 6 gas sensors(22 kinds of optional) ●24 million visible-light cameras
- PPK system optional ●640X480 thermal camera ●Zaxis stabilities
- 4G-LTE image transmission optional ●5 channel multispectral camera

★Detection of various environmental pollutions, such as atmospheric,land,water pollutions & vegetation destruction

★Typical application scenarios include monitoring illegal waste incineration, illegal emission of waste gas, river water quality inspection, sewage outlet inspection, and soil pollution monitoring

Multilens camera



- 650g ●5*24 million APS-C cameras ●Photo interval 0.8S ●PPK system optional
- 170*160*80mm ●Storage capacity 320GB/640GB ●Isometric/timed photography

★Light weight, small size, high integration, easy maintenance

★Built-in heat dissipation and dust removal system ensures long working hours in high temperature environment

★High resolution and low distortion lens ensure efficient post-processing operation

Inspection camera

- 950g ●Photo interval 1.5s ●Mapping without GCP ●Sensor&antenna stabilities
- 42 million pixels ●Storage capacity 256G ●PPK system optional ●Full size sensor

★Greatly reduced of sidelap,camera and antenna stabilize to improve measurement accuracy

★Eliminate camera roll angle, improve the efficiency of line inspection and the quality of results

Video Cameras

- 1080P full HD ● 30X F4.5~135mm ●Pitch & Yaw stablize ●Tracker optional
- 20km PtoP video transmission ●4G-LTE optional●Thermal camera optional

★Rich options of video camera,from 10X to 30X visibale light camera,320X240/640X480 thermal camera

★1km ~ 50km video transmission

★Integrated ground control station with gimbal controlers

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感 知

Sence Analyze

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DATA SHEET

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	Model	Standard	Survy	3D Mapping	Environmental	Video
Usage	Projects	Universal flight platform	Mapping& fine inspection	3D modeling of urban,lik photography	Air quality monitoring Water pollution monitoring Soil pollution monitoring Law enforcement evidence	Security inspection
	Extend Projects	Ground observation(with 0.5 ~ 2kg load) Air-to-ground observation(with multispectral camera, hyperspectral camera, lidar, thermal camera, overlidth, etc	Extensive mapping applications + Extensive fine inspection + environmental protection, etc (pipeline,highway,powerline,coastline inspection,etc	Low inspection	Extensive mapping applications fine inspection	Wildlife protection Law enforcement
Hardware	Wing span	2500mm				
	Length	1590mm				
	Takeoff weight	7.5kg / 9.5kg	7.9kg	8.2kg	8.2kg	8.4kg
	Datalink	20km @Pro FM radio Infinite @ 4G LTE /Optional				
	Standard sensors	N/a	CAM26+30mm lens	17mm	6gas sensor+10M camera	10X camera+tracker
	Optional sensors	CAM30+30mm lens Zony 4k@30m/1.35mm	Sony 4k@6m/1.35mm	16G 1244RGI	Rich5MX600thermal camera Rich Multispectral camera	30X +thermal camera+tracker
GCS	Hardware	GCS05 for survy				GCS01 (with gimbal controller)
	Software	Aircross GCS				Aircross GCS
	10km transmission	Optional				ProT FM radio from 5km to 50km
Performance	3D mapping	supported				
	Auto mission	supported				
	Cruise Speed(zero twind)	14m/s (50.4km/H)				
	Rate of climb(VAS)	6m/s(on board)				
	Rate of climb(air value)	2m/s				
	cruise resistance(zero twind)	5km/h(VTOL) 12km/h(Cruise				
	Max endurance(zero twind)	150min	180min	170min	170min	165min
	Advice endurance	105min	105min	150min	150min	150min
	Voyage	100km/150km	150km/220km	170km/250km	170km/250km	165km/245km
	navigation accuracy	0.15m(Copter ; 1m@Fixewing				
	Ceiling(Copter	3600m				
	Ceiling(Fixwing	4200m				
Optional	Camera Stabilize	N/a	supported			
	Waterproof	Waterproof for equipment compartment, Servo, motors and connectors,including payloads				
	Dual airspeed sensors	A set of redundant airspeed sensor that can greatly increase the flight reliability				
	Pitot heater	temperature control and low sensor + pitot heater				
	PPK system	Suny without ground control points				
	RTK system	Flexble landing				
	Dual RTK antenna	True course Angle; Navigation without compass				
	4G LTE module	2 ways: 5M/0 ~ 512/2M Band rate				
	4G LTE Video transmission	2ways: 720p ~ 1080p				
	4G LTE remote dispatch	In the case of 4G network coverage, multi-person and multi-machine remote scheduling is realized				
Coverage area @one sortie	10km High	A78+(Arrow @2.4ch+10D) 5.8km@70knots/129km@90knots	5.8km@90knots, (with 4ch)	3km@70knots/6km@90knots	3km@70knots/6km@90knots	N/a
	15km@2.4GHz/60min H100m	9km@70knots/20km@90knots	7.5km@90knots, (with 4ch)	4.5km@70knots/ 10km@90knots		
	5km@5.8GHz/60min H100m	12km@70knots/25km@90knots	12km@90knots	6.75km@70knots/ 15km@90knots		
	8km@5.8GHz/60min H100m	20.2km@70knots/45km@90knots	12km@90knots	10.8km@70knots/ 45km@90knots		
	20km@5.8GHz/60min H170m	28km@70knots/54km@90knots	12km@90knots	15.5km@70knots/ 32km@90knots		

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