UAVISUS

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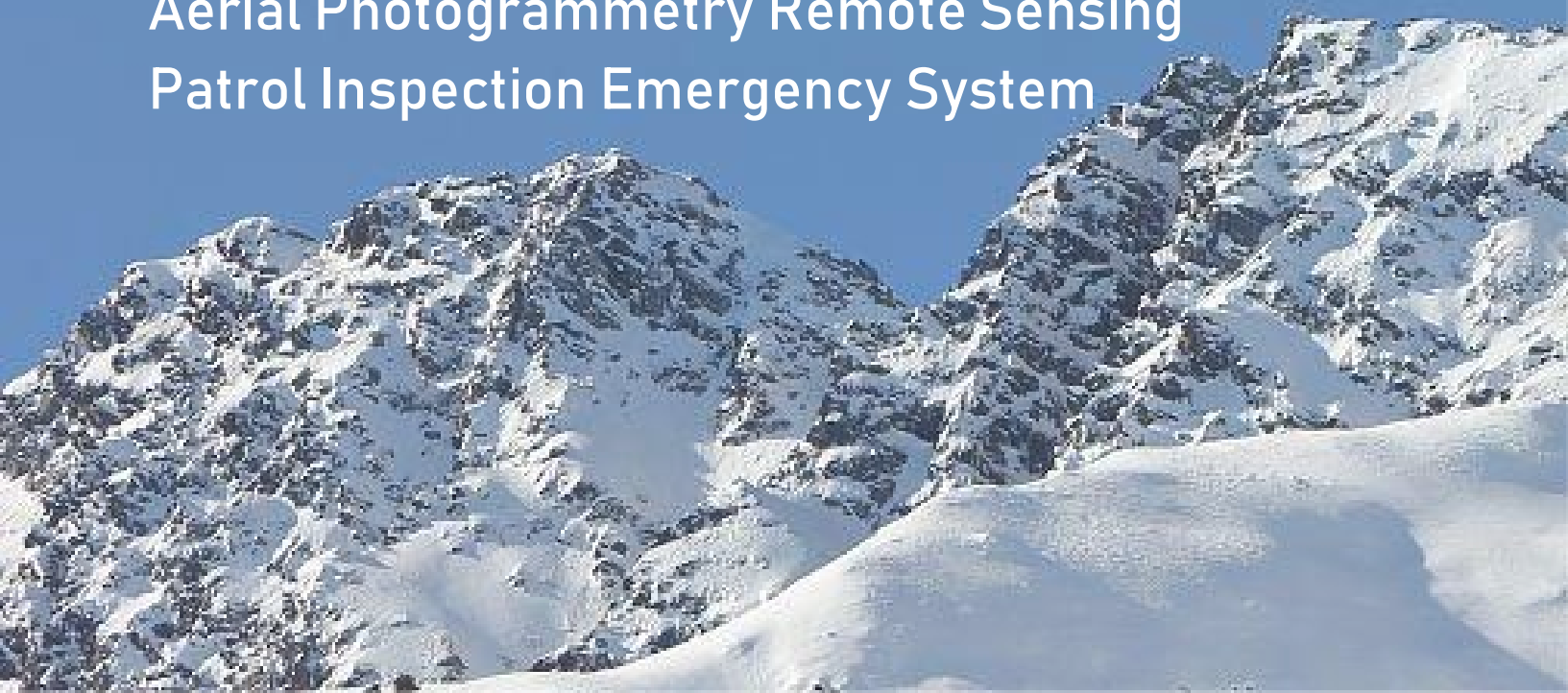
D5000

Aerial Photogrammetry Remote Sensing Patrol Inspection Emergency System



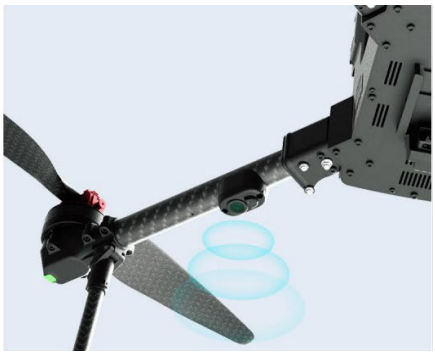
D5000 PARAMETERS

Net weight	2.86 kg
Maximum takeoff weight Maximum	4.1kg
Payload	1.2 kg
Symmetrical motor wheelbase	599 mm
Dimensions	(Unfold) 830 X 829 x 394 mm, (Fold) 469 X 467 x 173 mm
Navigation satellite	GPS, BeiDou, GLONASS, Galileo, QZSS
Power mode	Electric
Maximum speed	20 m/s
Cruising speed	13.5 m/s
Hovering time	90 min
Maximum climb speed	8.0 m/s (manual), 5.0 m/s (automatic)
Maximum descent speed Hovering	5.0 m/s (manual), 3.0 m/s (automatic)
Accuracy (RTK) Differential GNSS	(H) 1cm+1ppm, (V) 2cm+1ppm
Update frequency Maximum take-	20 Hz
Off altitude	6000 m
Wind resistance	Force 6
Task response time	Unfold ≤5 mins, Withdraw ≤3 mins
Image transmission distance Control	30km
Distance	30km
Take-off and landing mode Working	VTOL without remote control
Working temperature	-20°C~45°C

Key components

Visual modules

Forward and downward vision modules make it easy to realize obstacle avoidance and visual SLAM navigation



ToF module

Better than millimeter wave radar in identifying finer obstacles

Special digital radio

Independently developed and certified by the Radio Approval committee. Stronger anti-interference capability

Expansion port for 5G

Realize 5G transmission of data and images, solving communication problems in urban environments.

Navigation lights

Four navigation lights fully display the aircraft status and ensure the safety of night flight.

Intelligent battery

With intelligent battery management, it can monitor and optimize battery performance in real time, providing greater convenience and safety.

Exploded View

Assembly

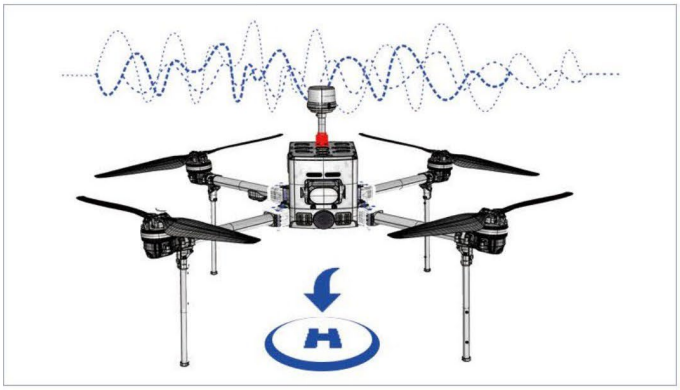
Battery

Payload

Propeller

Security

No GNSS, return

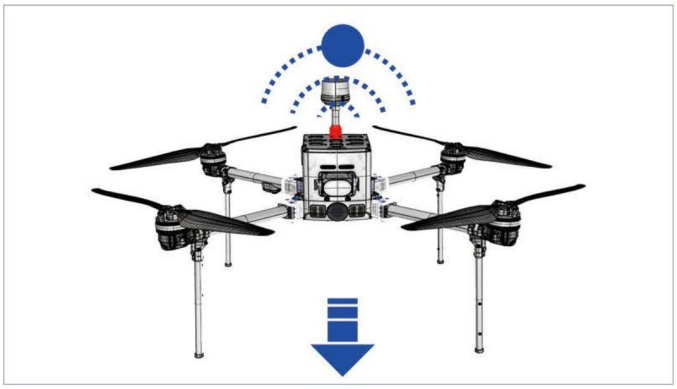


GNSS lost, descent and hover

ToF obstacle avoidance

Contact lost, return

Sensor failure landing



Self-checking

LiDAR Module

D-LiDAR550

300m Measuring range

Triple return

360° X 40.3° field of view

High laser pulse repetition rate

Laser	Ranging mode	TOF	POS	Horizontal positioning accuracy	0.01m
	Laser class	Class 1		Vertical positioning accuracy	0.02 m
	Wavelength	905nm		Roll & pitch accuracy	0.02°
	Laser pulse repetition rate	640 kpts/s		Heading angular accuracy	0.02°
	Echoes	3		GNSS data update frequency	20 Hz
	Echo signal intensity	8 bits		Inertial navigation data update frequency	400 Hz
	Ranging accuracy	±2 cm	Camera	Effective pixels	26 M
	Horizontal field of view	360°		Sensor size	23.1 mm x 15.4 mm
	Vertical field of view	40.3°		Focal length	16 mm
	Measuring range	300 m		Field of view	71.6°

Flight Efficiency Table

Flight height	Point density	Working area	Total flight /day	Flight distance
m	pts/m^2	km^2	km^2	km
60	173	2.11	12.67	32
80	130	2.82	16.90	
100	104	3.52	21.12	
120	87	4.22	25.34	

According to 6 sorties per day, 45% side overlap, flight speed of 13.5m/s

Surveyor Professional Edition Mapping Software

Surveyor Professional Edition is a one-stop intelligent Mapping software system for drone flight plan and manipulation, data acquisition, data processing, display and management, and drone maintenance.

According to different kinds of application purposes, automatic and accurate flight planning based on real scene 3D terrain data are integrated to Surveyor Professional Edition for both fixed-wing drones and rotor-crafts. It has the functions of LiDAR data processing and LiDAR point cloud classification. The LiDAR mapping data is processed and reconstructed, and the point cloud data is classified to generate various GIS data results. The software is included in the drone purchase price. The software is offered free of charge for life and includes free upgrades.