



D5000

Intelligent Aerial Survey System



D5000 PARAMETERS

Net weight	2.86 kg
Maximum takeoff weight	4.1kg
Maximum payload weight	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

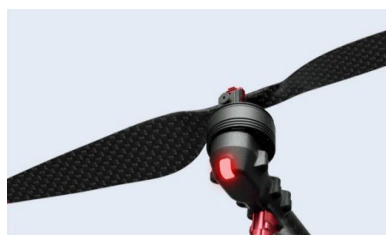
Expansion port for 5G

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

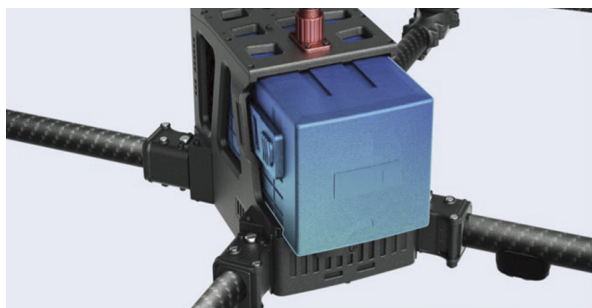
With intelligent battery management, it can monitor and optimize battery performance in real time, providing greater convenience and safety.



Exploded View



Assembly



Battery

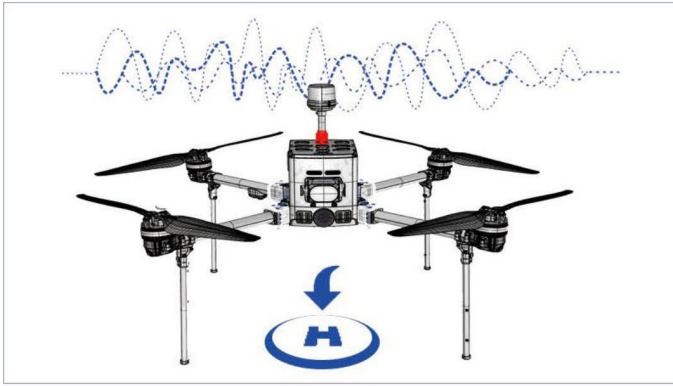


Payload



Propeller

 No GNSS, return



 GNSS lost, descent and hover



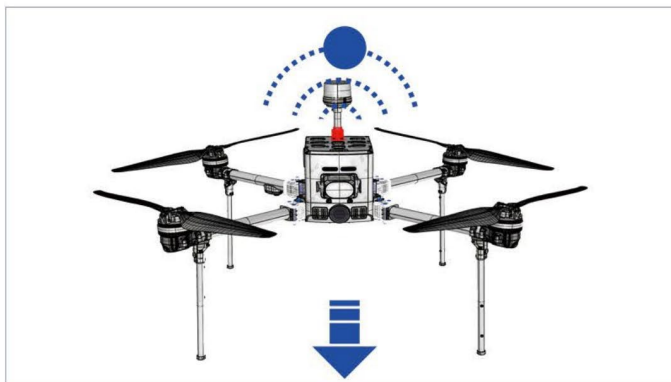
 ToF obstacle avoidance



 Contact lost, return



 Sensor failure landing



 Self-checking





300m Measuring range



Triple return



360° X 40.3° field of view



High laser pulse repetition rate

D-LiDAR550

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		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	

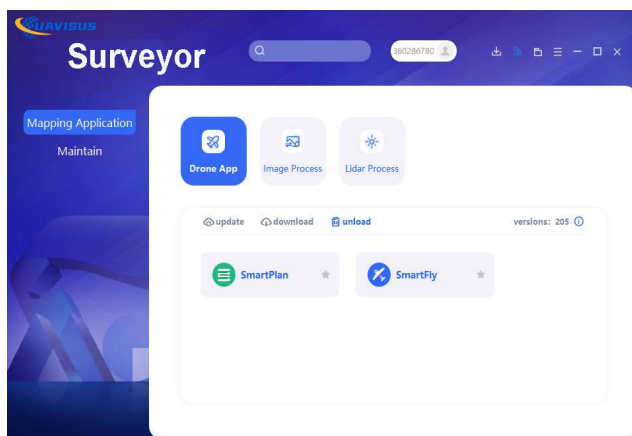
According to 6 sorties per day, 45% side overlap, flight speed of 13.5m/s

Surveyor Professional Mapping Software

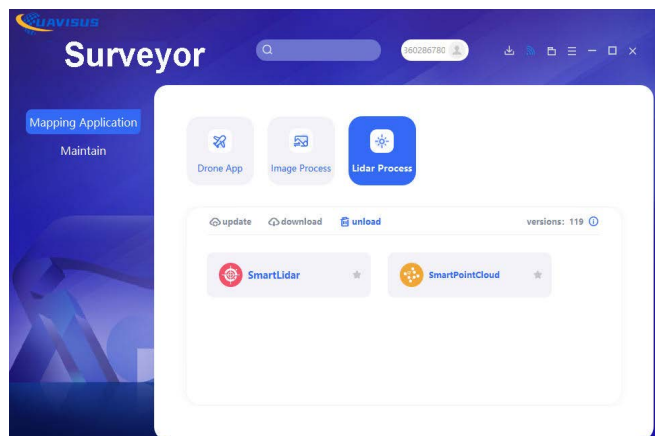
The Surveyor Professional Mapping Software is designed to meet diverse application needs, featuring automatic high-precision flight planning based on real-world 3D terrain data. It supports both fixed-wing and multi-rotor drone platforms.

The software delivers powerful 2D and 3D reconstruction from RGB imagery, along with integrated LiDAR data processing and point cloud classification. Users can complete LiDAR data reconstruction and classification without any third-party trajectory processing software, efficiently generating multiple GIS-ready outputs.

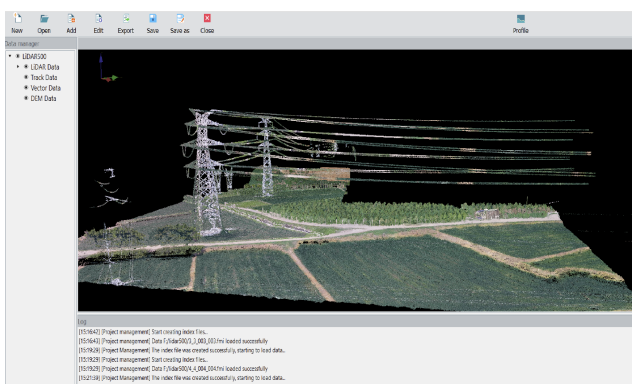
Surveyor Professional Mapping Software is included with the drone purchase and comes with lifetime free access, delivering long-term value with no recurring software purchase cost.



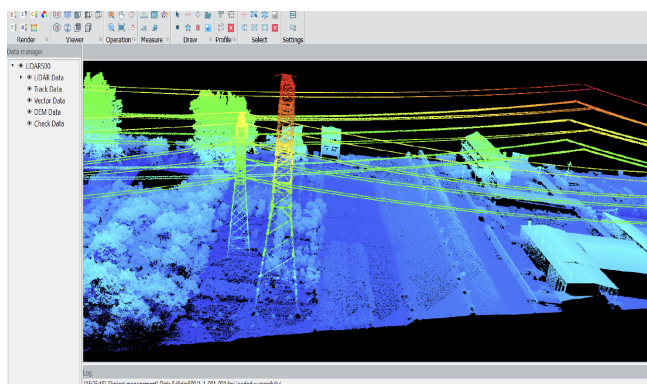
Plan and Fly module



LiDAR data process module



Smart LiDAR module



Smart point cloud module

