

CHCNAV

AlphaAir 10

**AIRBORNE LIDAR
SOLUTION**



**MAPPING
& GEOSPATIAL**



NEW GENERATION AIRBORNE LIDAR SYSTEM

AlphaAir 10 is a new generation of mid-range airborne LiDAR system totally launched by CHCNAV. Based on the design concept of "strong penetration, high precision", AlphaAir 10 integrates high-performance LiDAR, high-precision inertial navigation and full-frame camera which are equipped with UAV, CoPre and CoProcess software to provide "high precision, high efficiency, low cost" 3D data acquisition and processing of the whole process solutions for customers in terrain surveying, engineering survey, power line inspection and other industries.

SPECIFICATIONS

General system performance		Environmental	
Absolute Hz accuracy	< 5 cm RMS	Operating temperature	-20°C ~ +50°C
Absolute Z accuracy	< 5 cm RMS ⁽¹⁾	Storage temperature	-20°C ~ +60°C
Accuracy conditions	Without control points, @150 m flight altitude AGL with 7 m/s speed	IP rating	IP64
Mounting	quickly install & release design	Humidity (operating)	80%, non-condensing
Weight of instrument	1.55 kg	Electrical	
Dimensions of instrument	210 mm x 112 mm x 131 mm	Input voltage	DC 13 ~ 32 V
Data storage	512 GB (optional upgrade to 1 TB)	Power consumption	45 W
Coping speed	80 m/s	Power source	Depending on UAV battery or by Skyport (DJI M300).
Laser scanner		Equipped software	
Laser class	1 (in accordance with IEC 60825-1:2014)	CoPre pre-processing software	Data copy, POS solve, Adjust & Refine, Generate point cloud
Max. range, reflectivity >80%	800 m	CoProcess point cloud processing software	Terrain module, road module, extraction module, volume module
Minimum range	10 m	* All specifications are subject to change without notice.	
Accuracy ⁽²⁾	10 mm		
Precision ⁽³⁾	5 mm (1σ)		
Field of view	72°		
Maximum scan rate	Up to 500,000 pts/sec		
Scan speed (selectable)	50 ~ 250 scans/sec		
Return numbers	Up to 8		
Angular resolution	0.001° (5 Hz)		
Positioning and orientation system			
GNSS system	GPS: L1,L2,L5 GLONASS: L1,L2 BEIDOU: B1,B2,B3 GALILEO: E1,E5a,E5b QZSS: L1 C/A,L5		
IMU update rate	500 Hz		
Attitude accuracy after post-processing	0.006 degrees RMS pitch/roll 0.019 degrees RMS heading		
Position accuracy after post-processing	0.010 m RMS horizontal, 0.020 m RMS vertical		

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