AlphaAir 450 SPECIFICATIONS

General system performance	
Absolute accuracy	<10 cm HZ <5 cm V
Accuracy conditions	Without control points, @50 m flight altitude AGL
Mounting	Skyport for DJI M300/200 External power source with the dedicated port for other UAVs (CHCNAV Alphaport interface)
Weight of instrument (1)	1 kg
Dimensions of instrument	13.6 × 12.8 × 7.7 cm 5.11 " × 4.72 " × 2.75 "
Communications	1× port for GNSS antenna Skyport interface 1× USB Type-C, copy speed up to 160 Mb/s
Data storage	256 GB
Point density on UAV setup 5 m/s (18 km/h) speed	570 pts/sqm @ 50 m AGL 280 pts/sqm @ 100 m AGL
Covered area	2 km^2 area by 30 min UAV fligh
Operation	One-touch acquisition or remote control via DJI M300 Smart controller enterprise
Transport box	1× protected soft bag with custom precut foam

Laser scanner	
Laser class	1 (in accordance with IEC 60825-1:2014)
Max.range, reflectivity > 80% (2)	450 m
Max.range, reflectivity > 10% (2)	190 m
Max. returns supported	Up to 3
Accuracy (3)	20 mm @ 20 m 30 mm @100 m
Precision (4)	15 mm
Field of view	70.4° (Horizontal) × 4.5° (Vertical)
Scan rate	240 000 pts/sec (first or strongest return 480 000 pts/sec (dual return) 720 000 pts/sec (triple return)

Positioning and orientation system	
GNSS system	Dual-frequency GNSS GPS, GLONASS, BeiDou, Galileo, sampling frequency 5Hz
IMU update rate	600 Hz
Position accuracy NO GNSS outage	0.010 m RMS horizontal, 0.020 m RMS vertical, 0.01 degrees RMS pitch/roll, 0.04 degrees RMS heading

Imaging system	
Camera type	Built-in calibrated Sony A5100
Resolution	6000 × 4000
Effective pixel	24.3 MP, 11 fps

Environmental	
Operating temperature	-20°C ~ +50°C
Storage temperature	-20°C ~ +65°C
IP rating	IP64
Humidity (operating)	80%, non-condensing

Electrial	
Input voltage	DC 12 ~ 14 V
Power consumption	32 W
Power source	Depending on UAV battery, or by Skyport from DJI M300

* Specifications are subject to change without notice

(1) Weight calculated with integrated camera. (2) Typical values for average conditions. (3) Accuracy is the degree of conformity of a measured quantity to its actual (true) value. (4) Precision is the degree to which further measurements show the same results. Improved by CHCNAV COPre SW.