

The fastest mapping drone just got LIDAR



Wingtra LIDAR sets new standards in aerial mapping. Experience unmatched efficiency with user-friendliness and reliability to win more bids and improve construction project designs.

LIDAR System

Taking ease-of-use, precision and efficiency to the next level

Payload weight (incl. mount)	1030 g
Point density at 45 m AGL (single pass, single return)	110 pt/m ²
Effective point density in deliverable at 45 m AGL with 50% side overlap	Hard surface: ~220 pts/m ² (single return) Low vegetation: up to 440 pts/m ² (dual return) High vegetation: up to 660 pts/m ² (triple return)"
Effective point density in deliverable at 90 m AGL with 50% side overlap	Hard surface: ~110 pts/m ² (single return) Low vegetation: up to 220 pts/m ² (dual return) High vegetation: up to 330 pts/m ² (triple return)
Effective point density in deliverable at 120 m AGL with 50% side overlap	Hard surface: ~84 pts/m ² (single return) Low vegetation: up to 168 pts/m ² (dual return) High vegetation: up to 252 pts/m ² (triple return)
Maximum coverage for highest density at 45 m (150 ft)	Up to 190 ha (30% side overlap)
Maximum coverage at 90 m (300 ft)	Up to 360 ha (30% side overlap)
Maximum coverage at 120 m (400 ft)	Up to 380 ha (930 ac) (30% side overlap)
Vertical absolute accuracy at 90m (RMS)	Down to 3 cm (1.2 in)

Scanner

Laser scanner	Hesai XT32M2X
Field of view (horizontal)	90°
Field of view (vertical)	40.3°
Number of returns	3
Sensor type	Rotating sensor
Wavelength	905 nm
Range	0.5 - 300 m 80 m with 10% reflectivity (all channels)
Pulse	640 k/s (single return) 1280 k/s (double return) 1920 k/s (triple return)

IMU

Inertial measurement unit	Inertial Labs Tactical-Grade IMU-P
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Pitch/roll accuracy	0.006°
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Heading accuracy	0.03°
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GNSS

GNSS system	NovAtel OEM7500
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Constellations	GPS, GLONASS, BEIDOU, GALILEO
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Position accuracy	0.5 cm
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PPK	Yes
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Software

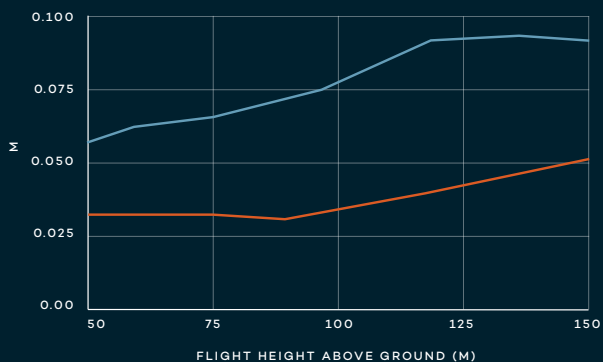
Processing SW	Wingtra LIDAR app
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Point cloud generation	LAS and LAZ
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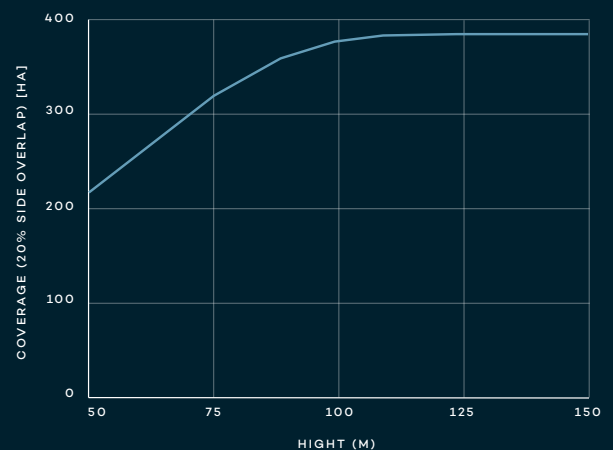
Trajectory correction	Yes
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Vertical accuracy and precision

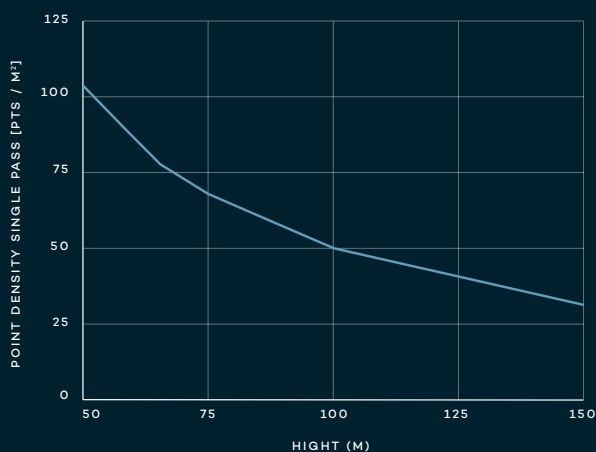
- PRECISION IN RAW POINT CLOUD WITHOUT STRIP ALIGNMENT OR SMOOTHING (PEAK-TO-PEAK ON HARD SURFACES)
- VERTICAL ACCURACY IN RAW POINT CLOUD (AVERAGE Z-VALUE OF CLOSEST 10 POINTS VS TRUE CHECK POINT HEIGHT, Z-RMSE)



Coverage (20% side overlap)



Point density



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