

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

Pitch/roll accuracy 0.006°

Heading accuracy 0.03°

GNSS

GNSS system NovAtel OEM7500

Constellations GPS, GLONASS, BEIDOU, GALILEO

Position accuracy 0.5 cm

PPK Yes

Software

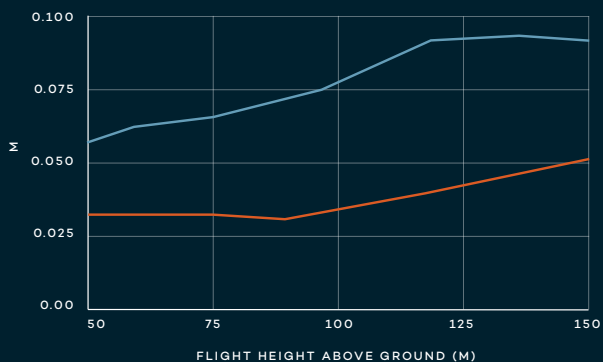
Processing SW Wingtra LIDAR app

Point cloud generation LAS and LAZ

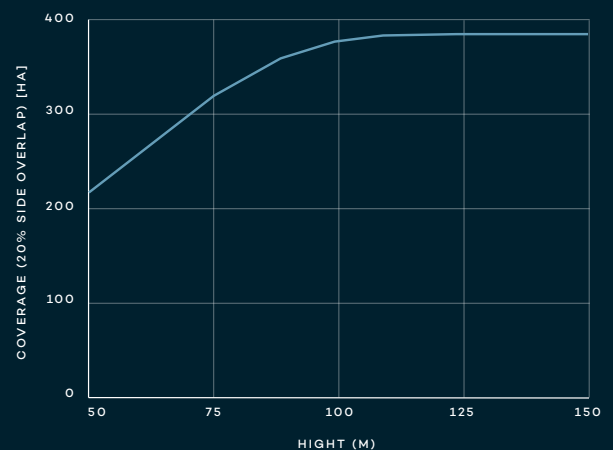
Trajectory correction Yes

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

