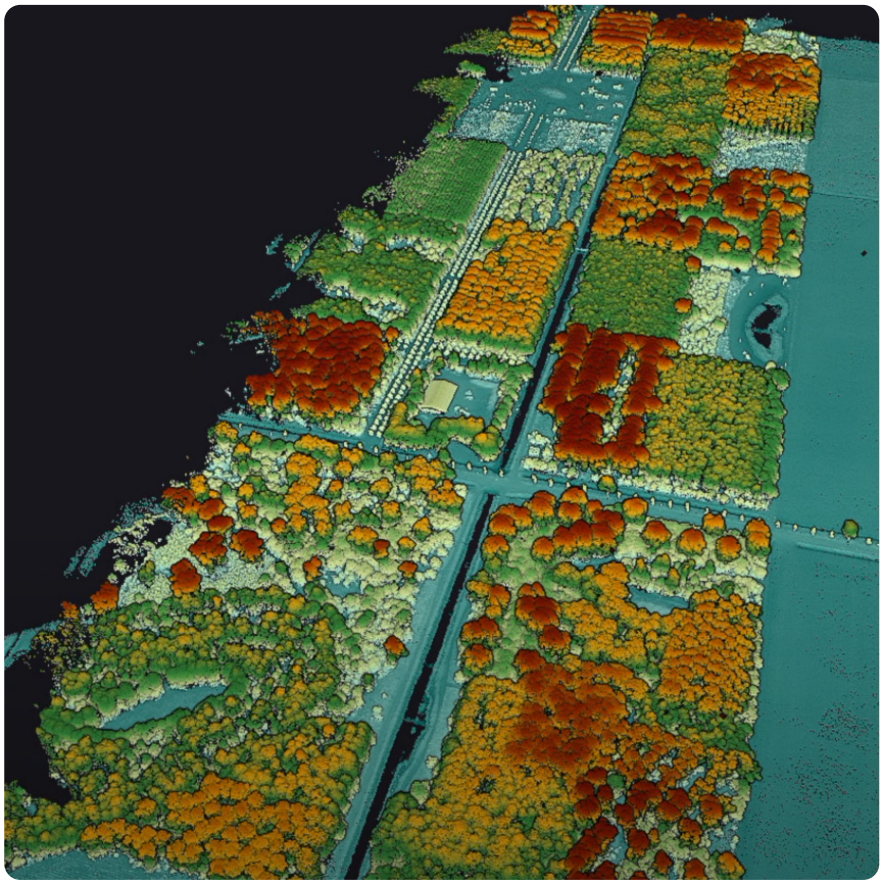
DELTAQUAD

YellowScan Surveyor Ultra OEM for DeltaQuad Evo

LIDAR & RGB



Point cloud generated in YellowScan CloudStation

An integrated 360° LiDAR & RGB solution for those in need of extra long range.

Integrated into DeltaQuad Evo fixed-wing VTOL UAV, the YellowScan Surveyor Ultra OEM opens new possibilities for LiDAR mapping & surveying. Due to the modularity of Evo, it can be equipped with an auxiliary battery for extended flight times. Enjoy extraordinary flight performance, more coverage, and high-quality data in one.

Surveyor Ultra OEM

Key differentiators

120° Surveying & Mapping

Built-in RGB

1200 ha coverage

Up to 225 min flight time

Technologies inside

SBG SYSTEMS

HESAI

Technical specifications

Scanner	Hesai XT32M2X
GNSS Inertial solution	SBG Quanta Micro
Integrated Camera	8 MP (for colorization)
Wavelength	905 nm
Laser range (1)	80 m
Recommended AGL	100 m
Precision (2)	3 cm
Accuracy (3)	2.5 cm
Scanner field of view	360° x 40.3°
Shots per second	640 k
Echoes per shot	Up to 3
Max. Data Points generated	Single return: 640 000 points/sec Dual return: 1280000 points/sec Triple return: 1920000 points/sec

General characteristics

Autonomy (4)	Up to 225 min
Coverage (4)	Up to 1200 ha
Point density (5)	50-100 pt/m^2
Power consumption	20 W

(1) @ 10% target reflectivity.
(2) Precision, also called reproducibility or repeatability, accounts for the variation in successive measurements taken on the same target. Here precision value is obtained by averaging the precision from 3 flight levels @60, 90 and 120mAGL. At each flight level, the precision is considered as the mean value of absolute elevation differences between 2 flight lines recorded in opposite directions over a nadir-located 40m hard surface area.
(3) Accuracy is the degree of conformity of a measured position to its actual (true) value. Here accuracy value is obtained by averaging the accuracy from 3 flight levels @ 60, 90 and 120mAGL. At each flight level, the accuracy is considered as the RMSE value of the elevation differences between targets and the point cloud extracted from 2 flight lines recorded in opposite directions. Validation targets are located within a 40m wide corridor centered along the flight line axis.
(4) Autonomy and coverage vary depending on flight conditions. Here, it is based on the performance at 100m altitude. For a better estimate of performance, please go to www.evo.deltaquad.com/calc.
(5) The range represents point density at different altitudes from 100m to 50m.

Package includes

Hardware

- YellowScan Surveyor Ultra OEM Evo payload
- Integrated 8 MP camera for colorization purposes
- UAV GNSS antenna and cable
- 2 USB flash drives
- Documentation

Services

- 1 year unlimited technical support
- 1 year warranty
- In-person training
- Boresight calibration certificate

Software

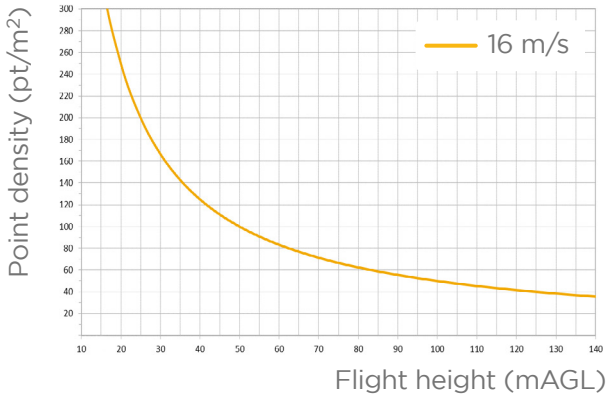
- SBG Qinertia, to post-process GNSS and inertial data for highest accuracy. Integrated in CloudStation
- YellowScan CloudStation, to generate and visualize your georeferenced point cloud
- Strip Adjustment module: a point cloud enhancing toolbox for the CloudStation software
- Colorization module: easily combine simultaneously acquired RGB images to your point cloud to enrich it with color information in the CloudStation software
- (Optional) Terrain module: export classified point cloud and Digital Models from the CloudStation software

Typical mission parameters

100 m
ALTITUDE AGL

345 m
SWATH

16 m/s
FLIGHT SPEED



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