



YellowScan Navigator.

Bathymetric & topographic LiDAR solution for UAVs

YellowScan Navigator is an innovative bathymetric LiDAR solution for mapping water surface and underwater topography with a single-button operation.

Its compact design allows for operating on various UAV platforms without compromising water penetration. Survey shorelines, rivers or ponds with ease, by getting simultaneous land and underwater topography.



Technologies inside

 SBG SYSTEMS

 YellowScan



Key differentiators

- ▶ Topography & water mapping
- ▶ Easy to use and process
- ▶ Safe operational range



Integrations

- ▶ Single rotor UAV
- ▶ Multirotor UAV

Technical specifications.

Laser scanner	YellowScan development
GNSS inertial solution	SBG Quanta Micro
Precision ^{(1) (3)}	3 cm
Accuracy ^{(2) (3)}	3 cm
Typ. flight speed	5 m/s
Typ. flying height	80 m
Max. rec. flying height	100 m
Point density ⁽⁴⁾	20 pts/sqm @ 80 m AGL 5 m/s
Laser range	Up to 120 m
Laser wavelength	532 nm
Scanner field-of-view	44°
Min. Depth	0.30 m
Max. Depth	2 Secchi

Max. data generated ⁽⁴⁾	Up to 200 000 points / sec
Echoes per shot	Up to 10 / Fullwaveform
Shots per second	Up to 20 000
Scanning frequency	Up to 50 Hz (selectable)
RGB camera	Built-in 2MP global shutter
Weight	3.7 kg (8.15 lbs) batt. excl.
Size	L 350 x W 160 x H 190 mm
Autonomy	40 min. typ.
Power consumption	120 W
Operating temperature	0° to +40 °C
Laser class	Class 3B - Avoid direct exposure to beam

(1) Precision, also called reproducibility or repeatability, accounts for the variation in successive measurements taken on the same target.

(2) Accuracy is the degree of conformity of a measured position to its actual (true) value.

(3) Topography measurements. Underwater precision and accuracy may vary.

(4) Theoretical maximum of points with all shots yielding the maximum number of echoes. May vary depending on flight and survey conditions, and surveyed environment.

Package includes.

✓ Hardware:

- ▶ YellowScan Navigator
- ▶ Rugged pelicase
- ▶ 2 Batteries
- ▶ UAV GNSS antenna and cable
- ▶ 2 USB flash drives
- ▶ Documentation
- ▶ Laser Safety Goggles

✓ Services:

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

✓ Software:

- ▶ SBG Qinertia, to post-process GNSS & inertial data for highest accuracy (integrated in CloudStation)
- ▶ YellowScan CloudStation Essential to generate, visualize, inspect, and export your data

+ Optional:

- ▶ Stand-alone mounting bracket
- ▶ Warranty and technical support extensions
- ▶ YellowScan CloudStation Pro: take your point cloud to refined levels, classified and colorized

