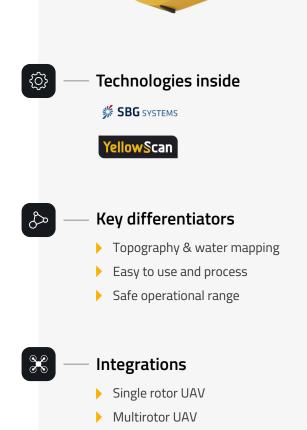# YellowScan Navigator.

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		**Max. data generated** [4]	Up to 200 000 points / sec
GNSS inertial solution	SBG Quanta Micro		**Echoes per shot**	Up to 10 / Fullwaveform
Precision [1] [3]	3 cm		**Shots per second**	Up to 20 000
Accuracy [2] [3]	3 cm		**Scanning frequency**	Up to 50 Hz (selectable)
Typ. flight speed	5 m/s		**RGB camera**	Built-in 2MP global shutter
Typ. flying height	80 m		**Weight**	3.7 kg (8.15 lbs) batt. excl.
Max. rec. flying height	100 m		**Size**	L 350 x W 160 x H 190 mm
Point density [4]	20 pts/sqm @ 80 m AGL 5 m/s		**Autonomy**	45 min. typ.
Laser range	Up to 120 m		**Power consumption**	120 W
Laser wavelength	532 nm		**Operating temperature**	0° to +40 °C
Scanner field-of-view	44°		**Laser class**	Class 3B - Avoid direct exposure to beam
Min. Depth	0.30 m			
Max. Depth	2 Secchi			

(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