



# YellowScan Vx20 series.

The most accurate and high precision UAV LiDAR solution

YellowScan Vx20 is the most accurate fully integrated system from YellowScan's product range.

It can fly up to 100m while maintaining accuracy throughout the point cloud.

Ideally suited for applications that requires sharp and accurate descriptions.



Technologies inside

applanix | RIEGL



Key differentiators

- ▶ High precision point cloud
- ▶ Maximized range
- ▶ Calibrated intensity value
- ▶ Highest accuracy



UAV Integrations

- ▶ Single rotor UAV
- ▶ Multirotor UAV

# Technical specifications.

Laser scanner	RIEGL miniVUX-1 or miniVUX-3 UAV
GNSS inertial solution	Applanix APX-20 UAV
Precision <sup>(1)(3)</sup>	1 cm
Accuracy <sup>(2)(3)</sup>	2.5 cm
Typ. flight speed	5 m/s
Typ. flying height	100 m
Max. rec. flying height	120 m
Laser range	Up to 170 m
Laser wavelength	905 nm

Max. data generated <sup>(4)</sup>	1 500 000 points/sec
Echoes per shot	Up to 5
Scanning frequency	Up to 100 Hz
RGB camera	Optional
Weight	2.85 kg (6.3 lbs) batt. excl.
Size	L 432 x W 106 x H 149 mm
Autonomy	1.5 hour typ.
Power consumption	25 W
Operating temperature	-10 to +40 °C

▶ Vx20-100	100 kHz
Shots per second	100k over 360°
Scanner field-of-view	360°
Typ. flying height natural targets ≥ 20%	100 m
Point density @50m AGL, 5m/s, 90° FOV	50 pts/sqm

## System integration options.



▶ Vx20-100  
Scanner :  
RIEGL miniVUX-1UAV



▶ Vx20-300  
Scanner :  
RIEGL miniVUX-3UAV

▶ Vx20-300	100 kHz	200 kHz <sup>over 360°</sup>	200 kHz <sup>over 180°</sup>	300 kHz
Shots per second	100k over 360°	200k over 360°	100k over 180°	100k over 120°
Scanner field-of-view	360°	360°	180°	120°
Typ. flying height natural targets ≥ 20%	100 m	85 m	100 m	100 m
Point density @50m AGL, 5m/s, 90° FOV	50 pts/sqm	100 pts/sqm	100 pts/sqm	150 pts/sqm

(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) One sigma @ 50 m, nadir.

(4) Theoretical maximum points of the YellowScan Vx20-300 with all shots yielding the maximum number of echoes. May vary depending on flight and survey conditions, and surveyed environment.

## Package includes.

### ✓ Hardware:

- ▶ YellowScan Vx20-100 or 300
- ▶ Rugged pelicase
- ▶ 2 Batteries
- ▶ GNSS antenna and cable
- ▶ 2 USB flash drives
- ▶ Documentation

### ✓ Services:

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

### ✓ Software:

- ▶ Applanix POSPac UAV, to post-process GNSS and inertial data for highest accuracy
- ▶ YellowScan CloudStation Essential to generate, visualize, inspect, and export your data