**YellowScan** 

Aller Stall

# YellowScan Voyager.

## Precision meets reality.

The YellowScan Voyager is our highest range LiDAR solution, with a range of up to 760m.

Its laser scanner's wide field of view of 100° and its extremely fast data acquisition rate of up to 1.8 MHz, makes this solution the best option for projects requiring the highest point density.



Multirotor UAV Fixed-wing UAV

## Technical specifications.

Scanner precision <sup>(1)(3)</sup>	0.5 cm
Scanner accuracy <sup>(2) (3)</sup>	1 cm
Laser scanner	RIEGL VUX-120
Laser Pulse Repetition Rate	Up to 1800 kHz
Echoes per shot	Up to 15
Wavelength	Near infrared
Range	Up to 760 m
Scanner field of view	100°
GNSS-Inertial solution	Applanix AP+ 30 AIR or AP+ 50 AIR

Weight	3.5 kg (7.7 lbs) battery excluded L 36.9 x W 11.7 x H 18.3 cm 1 hours typ.		
Size			
Autonomy			
Power consumption	55 W		
Operating			
temperature	-10 to +40 °C		

(1) Precision, also called reproducibility or repeatability, is the degree to which further measurements show the same result.

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

(3) One sigma @ 150 m range under RIEGL test conditions.

## Package includes.

#### Hardware:

- YellowScan Voyager (AP+ 30 AIR or AP+ 50 AIR IMU option)
- Rugged pelicase
- Charger and 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, to generate and visualize your georeferenced pointcloud

#### ⊕ Optional:

- Strip Adjustment module: a pointcloud enhancing toolbox for the CloudStation software
- Terrain module: export classified point cloud from the CloudStation software
- Stand-alone mounting bracket for DJI M600
- Warranty and technical support extensions

## Typical mission parameters.

### Airborne parameters

PRF	FLIGHT SPEED	FLIGHT HEIGHT	POINT DENSITY	TARGET PER PULSE
150 kHz	30 m/s	440 m AGL	3.9 pts/m²	15
150 kHz	15 m/s	440 m AGL	7.9 pts/m²	15
300 kHz	30 m/s	320 m AGL	10.9 pts/m²	15
300 kHz	15 m/s	320 m AGL	21.8 pts/m²	15
600 kHz	30 m/s	230 m AGL	30.3 pts/m²	15
600 kHz	15 m/s	230 m AGL	60.9 pts/m²	15

## UAV parameters

PRF	FLIGHT SPEED	FLIGHT HEIGHT	POINT DENSITY	TARGET PER PULSE
1200 kHz	25 m/s	160 m AGL	105 pts/m²	8
1200 kHz	5 m/s	160 m AGL	525 pts/m²	8
1800 kHz	25 m/s	130 m AGL	193.5 pts/m²	5
1800 kHz	5 m/s	130 m AGL	969 pts/m²	5

## Dimensional drawings.

(i) Dimensions expressed in millimeters

Side view



#### Top view



Front view



# Typical pointcloud snapshots.

