



# YellowScan Mapper.

## The next-generation of integrated UAV LiDAR solution

YellowScan Mapper is the next generation of integrated lidar solution.

Its low weight, mid-range capability, top-end point density and advanced accuracy and precision, makes it the best value for money in our portfolio.

It is dedicated to UAV borne mapping applications.



Technologies inside

applanix **LIVOX**



Key differentiators

- ▶ High point density
- ▶ Compact
- ▶ Advanced point cloud precision



UAV Integrations

- ▶ Multirotor drones
- ▶ Helicopter drones
- ▶ Fixed-wings

## Package includes.

### ✓ Hardware:

- ▶ YellowScan Mapper
- ▶ DJI Skyport adapter for M300 / M200
- ▶ Charger and 2 batteries
- ▶ GNSS antenna and cable
- ▶ 2 USB flash drives
- ▶ Rugged backpack



### ✓ Services:

- ▶ 1-year unlimited technical support
- ▶ 1-year warranty
- ▶ In-person or online training
- ▶ Camera & boresight calibration

### ✓ Software:

- ▶ Applanix POSPac UAV, to process GNSS and inertial data for highest accuracy
- ▶ YellowScan CloudStation to generate, visualize, adjust strips, classify and colorize your georeferenced point cloud

## Optional camera module.

### Product presentation:

- ▶ The camera is a Sony APS-C size Exmor™ CMOS image sensor with a BIONZ X™ processor to produce high-precision 20 MP images.
- ▶ The lens is a Sony E16F28. The operation will be as simple as our LiDAR operation: «Just press the Yellow button».

### Built-in camera module:

- ▶ Collect LiDAR and RGB data in a single flight
- ▶ Data are georeferenced automatically
- ▶ No need of pre-flight calibration



## Technical specifications.

### ▶ Mapper LiDAR system

Scanner	Livox Horizon	GNSS-Inertial solution	Applanix APX-15 UAV
Wavelength	905 nm	Weight <sup>(4)</sup>	1.5 kg (3.3 lbs) battery included
Precision <sup>(1) (3)</sup>	2 cm	Size	L 14.3 x W 9.5 x H 15.4 cm
Accuracy <sup>(2) (3)</sup>	3 cm	Autonomy	1 hour typ.
Shots per second	240 k	Power consumption	19 W
Echoes per shot	Up to 2	Operating temperature	-20 to +40 °C
Scanner field of view	81.7 °		

(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) Weight battery excluded: 1.3 kg (2.9 lbs)

### ▶ Camera Module

Sensor	APS-C Type Exmor CMOS	Depth	106.2 mm
Resolution	19.8 Mpx	Weight	350 gr (with camera lens)
Storage	MicroSD card	Interface with Mapper	YellowScan accessories port
Lens	Sony SEL-16F28 E-mount	Power	Powered by Mapper
Width	86.6 mm	Power consumption	2.2 W
Height	78.1 mm		

## Add-ons.

### ⊕ Optional software:

- ▶ YellowScan LiveStation: the real-time in-flight LiDAR monitoring kit (includes software and 2 radio-modems)
- ▶ Strip Adjustment module: a point cloud enhancing toolbox for the CloudStation software
- ▶ Terrain module: export classified point clouds from the CloudStation software

### ⊕ Optional hardware:

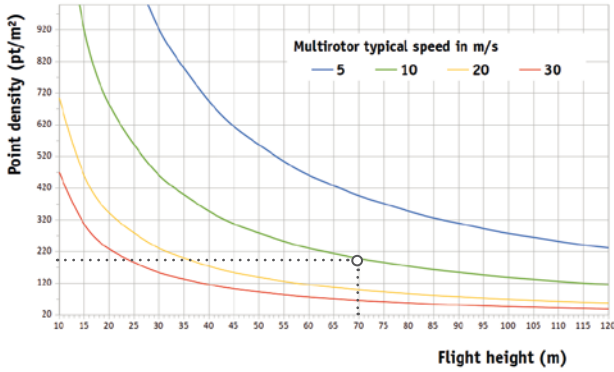
- ▶ Stand-alone mounting bracket for DJI M600/300
- ▶ Stand-alone mounting bracket for DJI M210

### ⊕ Optional services:

- ▶ Warranty and technical support extensions

# Typical mission parameters.

## Mapper LiDAR system



FLIGHT SPEED	ALTITUDE	POINT DENSITY
<b>5m/s</b>	<b>70m</b>	<b>400pts/sqm</b>

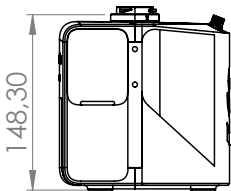
FLIGHT SPEED	ALTITUDE	POINT DENSITY
<b>10m/s</b>	<b>70m</b>	<b>200pts/sqm</b>

FLIGHT SPEED	ALTITUDE	POINT DENSITY
<b>20m/s</b>	<b>70m</b>	<b>100pts/sqm</b>

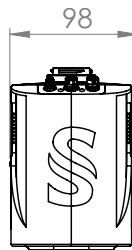
## Dimensional drawings.

ⓘ All dimensions are in millimeters

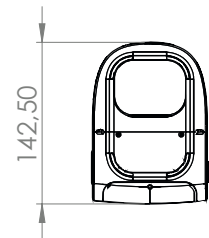
### Mapper side view



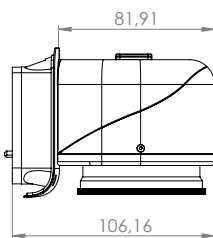
### Mapper front view



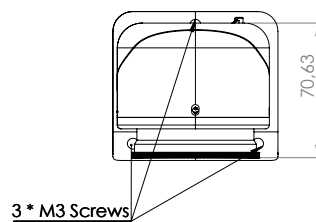
### Mapper bottom view



### Camera module side view



### Camera module front view



### Camera module top view

