



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 E1 6F28. 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 ⁽⁴⁾	1.5 kg (3.3 lbs) battery included
Precision ^{(1) (3)}	2 cm	Size	L 14.3 xW 9.5 xH 15.4 cm
Accuracy ^{(2) (3)}	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 σ @ 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:

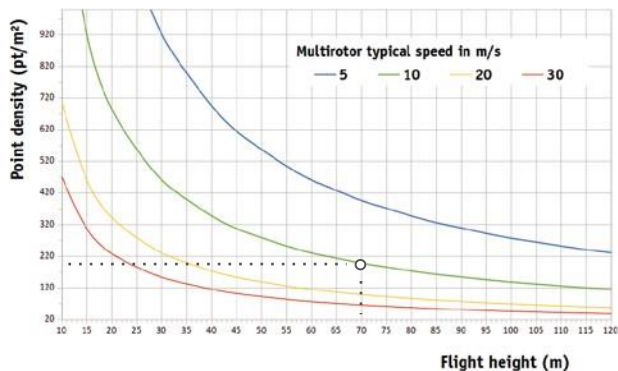
- ▶ Stand-alone mounting bracket for DJI M600/300
- ▶ Stand-alone mounting bracket for DJI M210

+ Optional services:

- ▶ Warranty and technical support extensions

Typical mission parameters.

Mapper LiDAR system



FLIGHT SPEED
5m/s

ALTITUDE
70m

POINT DENSITY
400pts/sqm

FLIGHT SPEED
10m/s

ALTITUDE
70m

POINT DENSITY
200pts/sqm

FLIGHT SPEED
20m/s

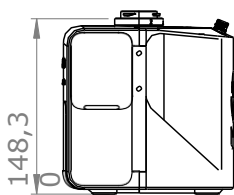
ALTITUDE
70m

POINT DENSITY
100pts/sqm

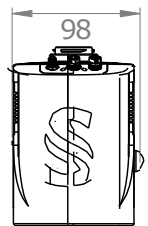
Dimensional drawings.

i All dimensions are in millimeters

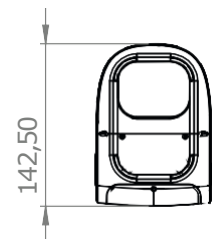
Mapper side view



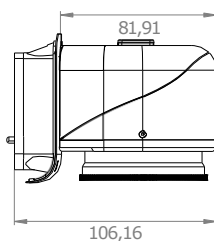
Mapper front view



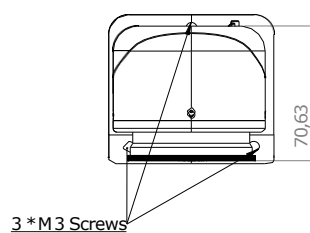
Mapper bottom view



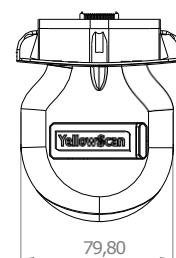
Camera module side view



Camera module front view



Camera module top view



YellowScan

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