

YellowScan Fly & Drive.

**Fly when you can,
Drive when you must.**

The YellowScan Fly & Drive LiDAR solution is a versatile land vehicle-mounted or UAV-mounted mobile mapping system.

It combines high resolution laser scanning and accurate positioning to collect geo-referenced point clouds for a wide range of applications.



Key features

- ▶ Multi-purpose mobile (ground) and UAV (airborne) mapping systems
- ▶ Precision positioning using high end GNSS and IMU coupled system
- ▶ Easy to use, lightweight, and low power consumption
- ▶ Installation on any kind of UAVs and vehicles



Integrations

- ▶ Multirotor drones
- ▶ Fixed-wings
- ▶ Land vehicles

System integration options.

▶ LiDAR unit

LiDAR system ⁽¹⁾	YellowScan Surveyor Ultra
Scanner	Hesai XT32M2X
Precision ^{(2) (4)}	3 cm
Accuracy ^{(3) (4)}	3 cm
Scanner field of view	360°
Maximum range	140 m
Shots per second	640k
Typical driving speed	25km/h

▶ General specifications

Weight: Airborne config	1.32 kg battery included
Weight: Mobile config.	5.32 kg battery included
Dimension: Airborne config.	L 16 xW 10.3 xH 13.8 cm
Dimension: Mobile config.	L 35 xW 57 xH 48 cm

▶ IMU / GNSS

GNSS-Inertial solution	Applanix APX-15
Multiconstellation	GPS, GLONASS, GALILEO, BEIDOU
Dual dynamic model	Airborne / Mobile mapping
Antenna	GNSS L1 /L2 survey grade

(1) For more information about the LiDAR system, please refer to its respective datasheets.

(2) Precision, also called reproducibility or repeatability, accounts for the variation in successive measurements taken on the same target.

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

(4) Post-processed solution, without GNSS outage.



LiDAR system
YellowScan
Surveyor Ultra

GNSS antenna
GNSS L1 /L2
survey grade

Car pod
Aluminum chassis and
fiberglass aerodynamic pod

+ LiveStation add-on
Real-time in-flight LiDAR
monitoring solution

Mounting bracket
Quick mount for Fly & Drive
pod and DJI M300 / M600



Package configuration.



▶ Open air

Ideally suited for mobile scanning scenario in open air area.



▶ Canyon

Optimized for urban area with canyoning GNSS critical signal.



▶ Full

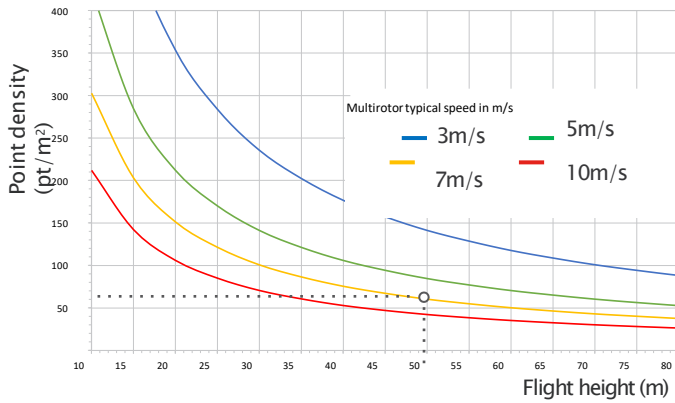
Complete solution for mobile scanning even in GNSS denied scenario.

FLY&DRIVE PACKAGE	OPEN AIR	CANYON	FULL
▶ LiDAR unit			
Surveyor Ultra	✓	✓	✓
▶ UAV & vehicle add-ons			
UAV M300 / M600 mounting bracket	✓	✓	✓
Hooks for M300 / M600	✓	✓	✓
Car Pod suction cups	✓	✓	✓
Odometer (DMI)	×	×	✓
Roofbars adaptor for Fly & Drive POD	Option	Option	Option
▶ Software included			
CloudStation (yearly license)	✓	✓	✓
Strip Adjustment module for CloudStation (yearly license)	✓	✓	✓
LiveStation	✓	✓	✓
POSPac UAV	✓	×	×
POSPac MMS	×	✓	✓
LIDAR MMS APX-15 firmware	×	✓	✓
▶ Typical scenarios			
Basic open area mobile scanning	✓	✓	✓
Urban area with canyoning GNSS critical coverage	×	✓	✓
Stop and Go (traffic lights)	×	×	✓
Tunnels (GNSS denied areas) by car	Up to 100m	Up to 100m	✓

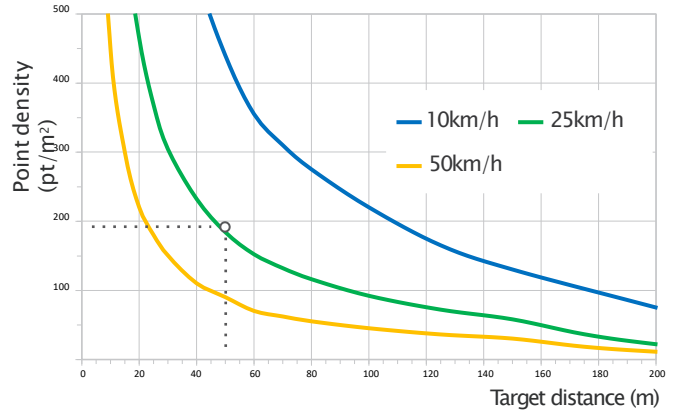
Typical mission parameters.

► Surveyor Ultra - Point density graphics

UAV LiDAR acquisition



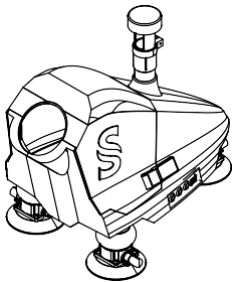
Car LiDAR acquisition



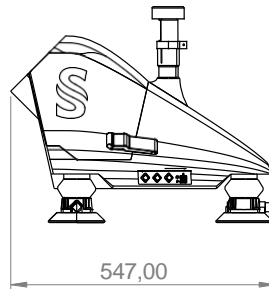
Dimensional drawings.

ⓘ Dimensions expressed in millimeters

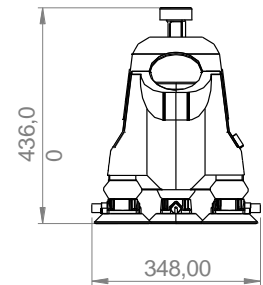
► Perspective view



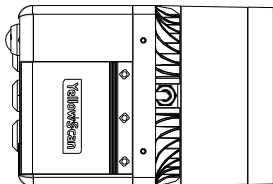
► Side view



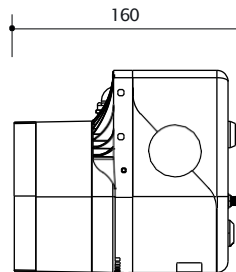
► Back view



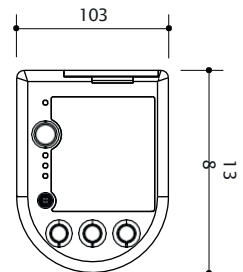
► Top view



► Side view



► Back view



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