

# 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

- ▶ Multicopter UAV
- ▶ VTOL UAV
- ▶ Land vehicle

# System integration options.

## ▶ LiDAR unit

LiDAR system <sup>(1)</sup>	YellowScan Surveyor Ultra
Scanner	Hesai XT32M2X
Precision <sup>(2) (4)</sup>	3 cm
Accuracy <sup>(3) (4)</sup>	2.5 cm
Scanner field of view	360°
Maximum range	140 m
Shots per second	640 000
Typical driving speed	25km/h

## ▶ General specifications

Weight: Airborne config	0.983 kg battery excluded
Weight: Mobile config.	4.98 kg battery excluded
Dimension: Airborne config.	L 160 x W 103 x H 138 mm
Dimension: Mobile config.	L 350 x W 570 x H 480 mm

LiDAR system  
YellowScan  
Surveyor Ultra

GNSS antenna  
GNSS L1/L2  
survey grade

Car pod  
Aluminum chassis and  
fiberglass aerodynamic pod

## ▶ IMU / GNSS

GNSS-Inertial solution	SBG Quanta Micro
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.



**+** 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.

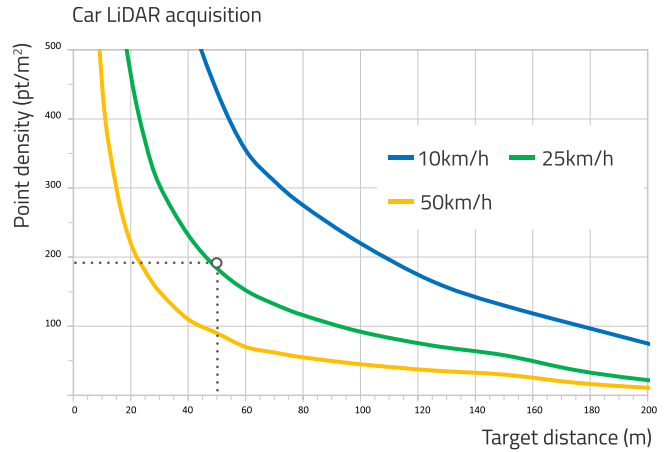
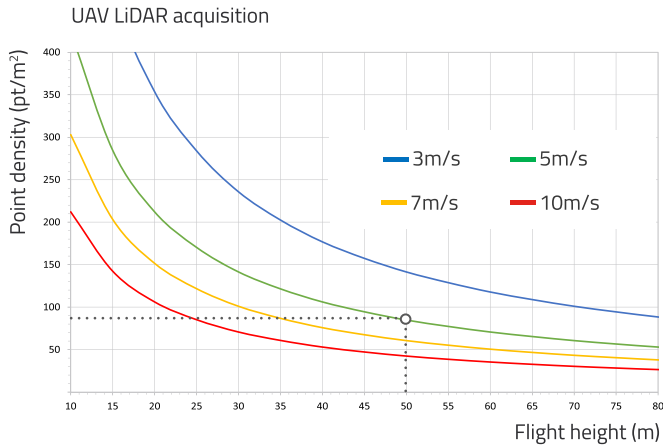


▶ **Canyon**  
Optimized for urban area with canyoning GNSS critical signal.

FLY&DRIVE PACKAGE	OPEN AIR	CANYON
▶ <b>LiDAR unit</b>		
Surveyor Ultra	✓	✓
▶ <b>UAV &amp; vehicle add-ons</b>		
UAV M300 / M600 mounting bracket	✓	✓
Car Pod suction cups	✓	✓
Odometer (DMI)	Option	✓
Roofbars adaptor for Fly & Drive POD	✓	✓
▶ <b>Software included</b>		
CloudStation Essential	✓	✓
LiveStation	✓	✓
Terrasolid TerraScan	✓	✓
Terrasolid TerraMatch	✓	✓
POSPac UAV	✓	✗
POSPac MMS	✗	✓
LiDAR MMS APX-15 firmware	✗	✓
▶ <b>Typical scenarios</b>		
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

# Typical mission parameters.

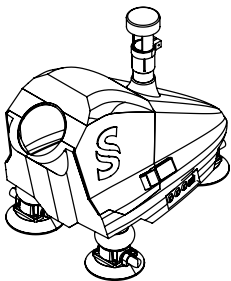
## ► Surveyor Ultra - Point density graphics



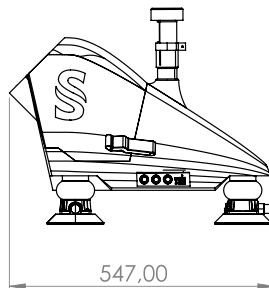
# Dimensional drawings.

ⓘ Dimensions expressed in millimeters

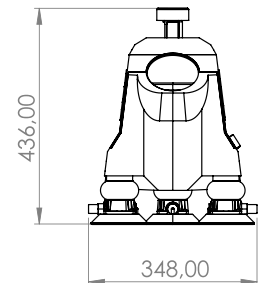
## ► Perspective view



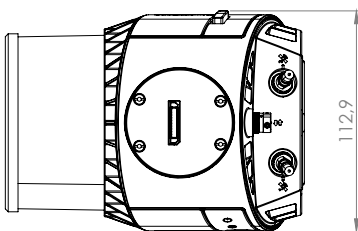
## ► Side view



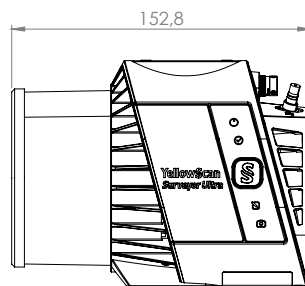
## ► Back view



## ► Top view



## ► Side view



## ► Back view

