

YellowScan Vx15 series.



The long range & high precision UAV LiDAR solution

YellowScan Vx15 is the lightest system integrating the Riegl Mini-VUX.

Ideally suited for high precision surveys such as civil engineering.

Coupled with the DJI M300 it allows over 25min flight time maximizing your survey production.



Technologies inside

applanix | RIEGL



Key differentiators

- ▶ High precision point cloud
- ▶ Maximized range
- ▶ Calibrated intensity value



UAV Integrations

- ▶ Single rotor UAV
- ▶ Multirotor UAV

System integration options.



▶ Vx15-100

Scanner :
RIEGL miniVUX-1UAV



▶ Vx15-300

Scanner :
RIEGL miniVUX-3UAV

Package includes.

✓ Hardware:

- ▶ YellowScan Vx15-100 or 300
- ▶ Rugged pelicase
- ▶ 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 Essential to generate, visualize, inspect, and export your data

⊕ Optional:

- ▶ Stand-alone mounting bracket for DJI M300/600
- ▶ Mounting bracket with single Sony α6000 camera for DJI M600
- ▶ Mounting bracket with dual Sony α6000 camera for DJI M600
- ▶ Mounting bracket with Micasense Altum camera
- ▶ CloudStation Pro: refine and improve your data quality, with more export options
- ▶ Warranty and technical support extensions

Technical specifications.

Laser scanner	RIEGL miniVUX-1 or miniVUX-3 UAV	Max. data generated ⁽⁴⁾	1 500 000 points/sec
GNSS inertial solution	Applanix APX-15 UAV	Echoes per shot	Up to 5
Precision ^{(1) (3)}	1 cm	Scanning frequency	Up to 100 Hz
Accuracy ^{(2) (3)}	5 cm	RGB camera	Optional
Typ. flight speed	5 m/s	Weight	2.4 kg (5.3 lbs) batt. excl.
Typ. flying height	80 m	Size	L 353 x W 106 x H 149 mm
Max. rec. flying height	100 m	Autonomy	1.5 hour typ.
Laser range	Up to 170 m	Power consumption	25 W
Laser wavelength	905 nm	Operating temperature	-10 to +40 °C

► Vx15-100	100 kHz
Shots per second	Up to 100 000
Scanner field-of-view	360°
Typ. flying height natural targets ≥ 20%	100 m
Point density @50m AGL, 5m/s, 90° FOV	50 pts/sqm

► Vx15-300	100 kHz	200 kHz ^{over 360°}	200 kHz ^{over 180°}	300 kHz
Shots per second	100k over 360°	200k over 360°	100k over 180°	100k over 120°
Scanner field-of-view	360°	360°	180°	120°
Typ. flying height natural targets ≥ 20%	100 m	85 m	100 m	100 m
Point density @50m AGL, 5m/s, 90° FOV	50 pts/sqm	100 pts/sqm	100 pts/sqm	150 pts/sqm

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

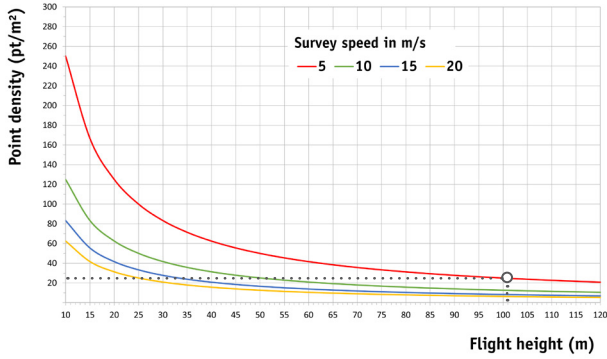
(2) Accuracy is the degree of conformity of a measured position to its actual (true) value.

(3) One sigma @ 50 m, nadir.

(4) Theoretical maximum points of the YellowScan Vx15-300 with all shots yielding the maximum number of echoes. May vary depending on flight and survey conditions, and surveyed environment.

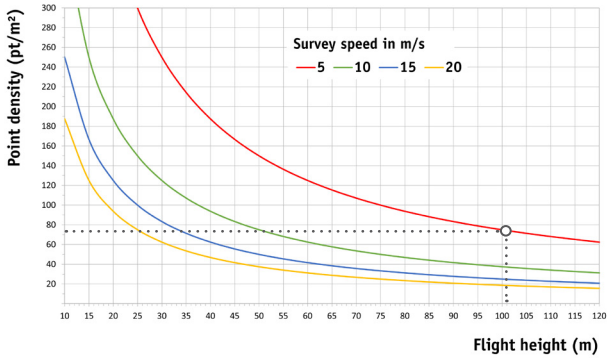
Typical mission parameters.

▶ Vx15-100



LiDAR unit	Vx15-100
Flight speed	5m/s
Flying height	100m AGL
Point density	25pts/sqm

▶ Vx15-300

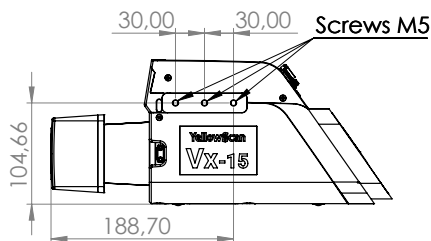


LiDAR unit	Vx15-300
Flight speed	5m/s
Flying height	100m AGL
Point density	75pts/sqm

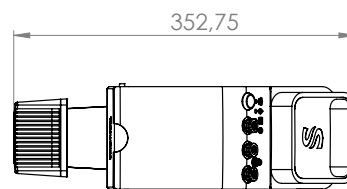
Dimensional drawings.

① Dimensions expressed in millimeters

▶ Side view



▶ Top view



▶ Front view

