

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

- ▶ Multirotor drones
- ▶ Helicopter drones

System integration options.



▶ Vx15-100

Scanner :
RIEGL miniVUX-1UAV



▶ Vx15-300

NEW

Scanner :
RIEGL miniVUX-3UAV

Package includes.

✓ Hardware:

- ▶ YellowScan Vx15-100 / 300
- ▶ Rugged pelicase
- ▶ Charger and 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, to generate and visualize your georeferenced point cloud

+ 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
- ▶ Warranty and technical support extensions
- ▶ 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

Technical specifications.

| | | | |
|------------------------------------|---------------------|------------------------------|-----------------------------------|
| Precision^{(1) (3)} | 1 cm | Weight | 2.6 kg (5.7 lbs) battery included |
| Accuracy^{(2) (3)} | 5 cm | Size | L 35 x W 11 x H 17 cm |
| Echoes per shot | Up to 5 | Autonomy | 1.5 hours typ. |
| Laser wavelength | 905 nm | Power consumption | 25 W |
| GNSS-Inertial solution | Applanix APX-15 UAV | Operating temperature | -20 to +40 °C |

| ▶ Vx15-100 | 100 kHz |
|---------------------------------------------------------------|----------------|
| Shots per second | 100k over 360° |
| Scanner field of view | 360° |
| Operating Flight Altitude AGL natural targets ≥ 20% | 100m |
| Average point density @50m AGL, 5m/s, 90° FOV | 50pts/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° |
| Operating Flight Altitude AGL natural targets ≥ 20% | 100m | 85m | 100m | 100m |
| Average point density @50m AGL, 5m/s, 90° FOV | 50pts/sqm | 100pts/sqm | 100pts/sqm | 150pts/sqm |

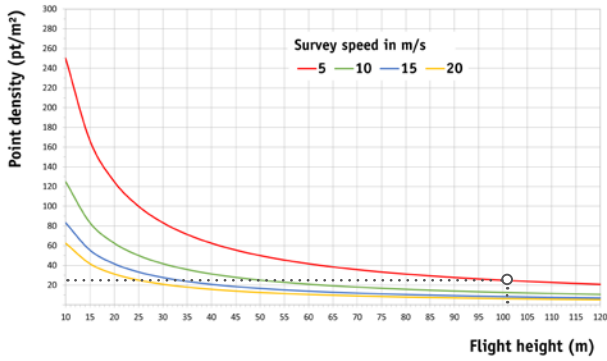
(1) Precision, also called reproducibility or repeatability, accounts for the variation in successive measurements taken on the same target.

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

(3) One σ @ 50 m, nadir.

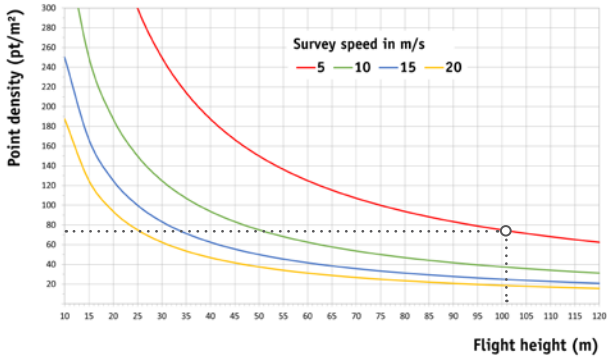
Typical mission parameters.

▶ Vx15-100



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

▶ Vx15-300

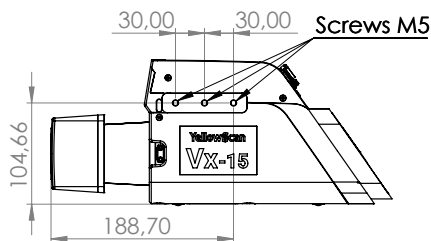


| | |
|---------------|-----------|
| LiDAR unit | Vx15-300 |
| Flight speed | 5m/s |
| Flying height | 100m AGL |
| Point density | 75pts/sqm |

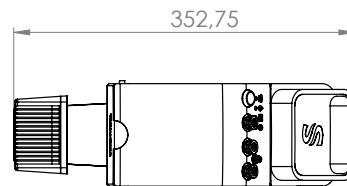
Dimensional drawings.

① Dimensions expressed in millimeters

▶ Side view



▶ Top view



▶ Front view

