# YellowScan Vx20 series.

## The most accurate and high precison UAV LiDAR solution

YellowScan Vx20 is the most accurate fully integrated system from YellowScan's product range.

It can fly up to 100m while maintaining accuracy throughout the point cloud.

Ideally suited for applications that requires sharp and accurate descriptions.

### Technologies inside

applanix | RIEGL

### Key differentiators

- High precision point cloud
- Maximized range
- Calibrated intensity value
- Highest accuracy

### UAV Integrations

- Multirotor drones
- Helicopter drones

# System integration options.

### ▶ Vx20-100
**Scanner :**
RIEGL miniVUX-1UAV

### ▶ Vx20-200
**Scanner :**
RIEGL miniVUX-2UAV

### ▶ Vx20-300 `NEW`
**Scanner :**
RIEGL miniVUX-3UAV

# Package includes.

✓ **Hardware:**

- ▶ YellowScan Vx20-100 / 200 / 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 training & online platform access
- ▶ 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 M600
- ▶ 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** | 3.1 kg (6.8 lbs) battery included |
| **Accuracy**[2][3] | 2.5 cm | **Size** | L 43 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-20 UAV | **Operating temperature** | -20 to +40 °C |

| ▶ Vx20-100 | 100 kHz |
|---|---|
| **Shots per second** | 100k |
| **Scanner field of view** | 360° |
| **Operating Flight Altitude AGL** natural targets ≥ 20% | 100m |
| **Average point density** @50m AGL, 5m/s, 90°FOV | 50pts/sqm |

| ▶ Vx20-200 | 100 kHz | 200 kHz [4] |
|---|---|---|
| **Shots per second** | 100k | 200k |
| **Scanner field of view** | 360° | 360° |
| **Operating Flight Altitude AGL** natural targets ≥ 20% | 100m | 85m |
| **Average point density** @50m AGL, 5m/s, 90°FOV | 50pts/sqm | 100pts/sqm |

| ▶ Vx20-300 | 100 kHz | 200 kHz [4] | 200 kHz | 300 kHz |
|---|---|---|---|---|
| **Shots per second** | 100k | 200k | 100k | 100k |
| **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.

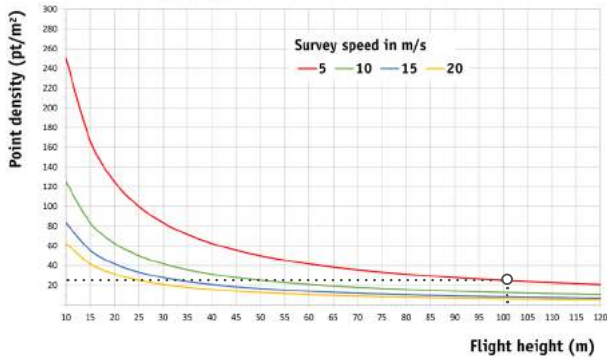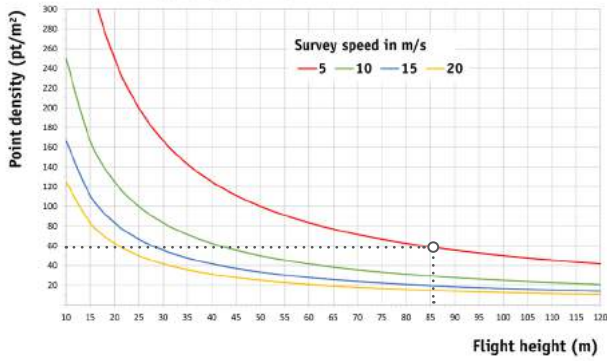(4) Reduced power.

# Typical mission parameters.

### ▶ Vx20-100


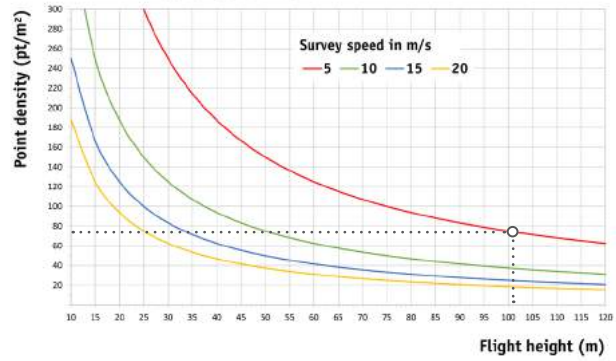
| LIDAR UNIT | FLIGHT SPEED | ALTITUDE | POINT DENSITY |
|---|---|---|---|
| Vx20-100 | 5m/s | 100m | 25pts/m² |
| LIDAR UNIT | FLIGHT SPEED | ALTITUDE | POINT DENSITY |
| Vx20-200 | 5m/s | 85m | 60pts/m² |
| LIDAR UNIT | FLIGHT SPEED | ALTITUDE | POINT DENSITY |
| Vx20-300 | 5m/s | 100m | 75pts/m² |

### ▶ Vx20-200



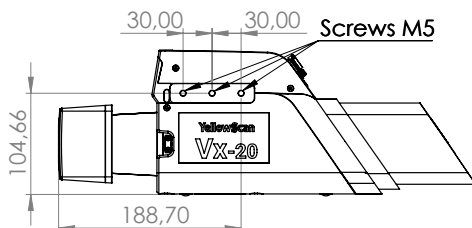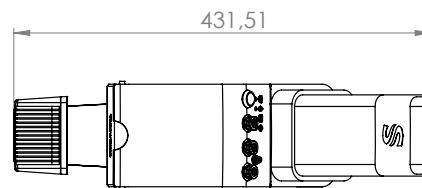### ▶ Vx20-300



# Dimensional drawings.

ⓘ Dimensions expressed in millimeters

### ▶ Side view



### ▶ Top view



### ▶ Front view