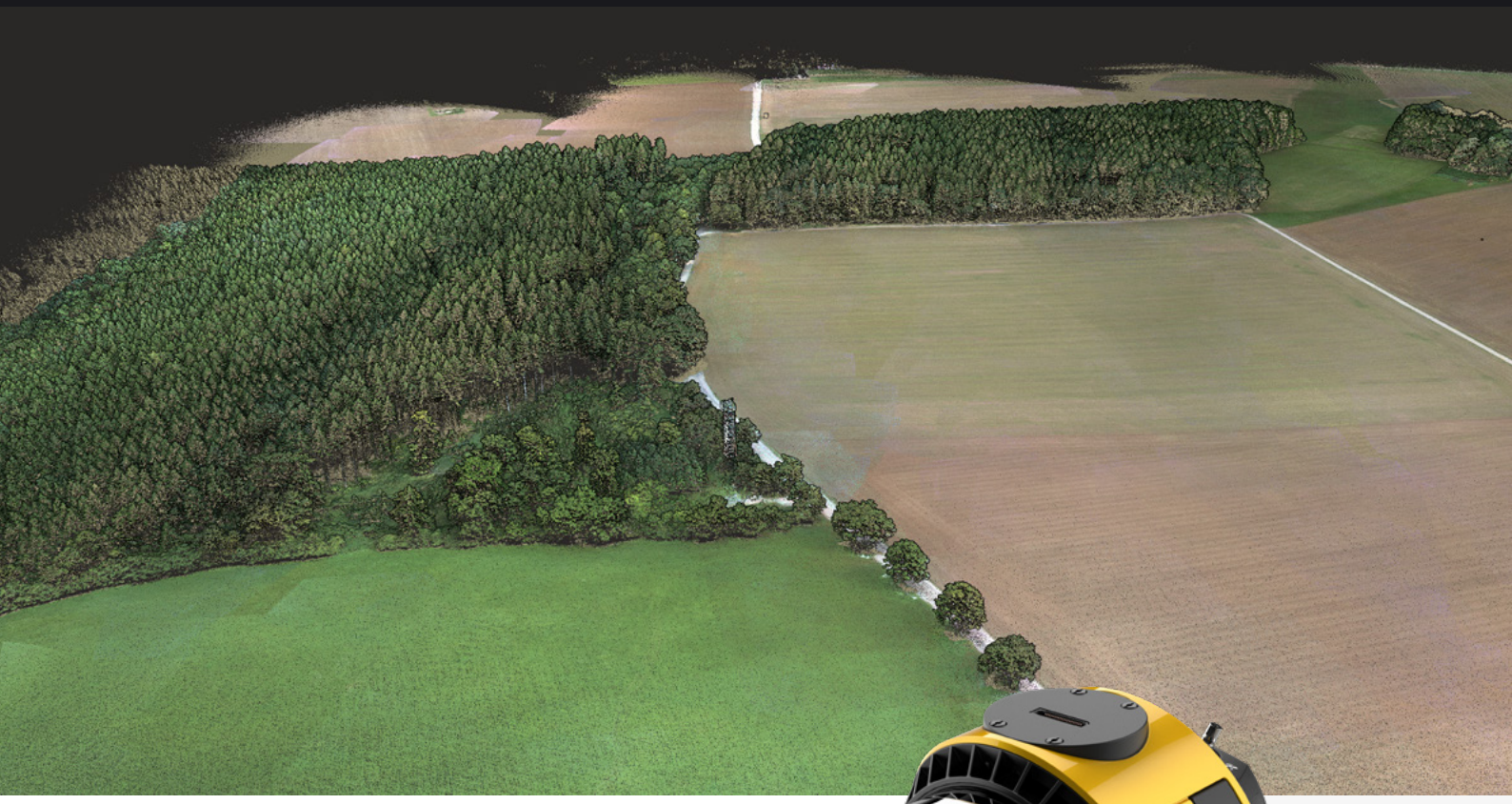


# YellowScan Surveyor Ultra.

## Affordability. Flexibility. Productivity.

The YellowScan Surveyor Ultra marks a new generation of YellowScan LiDAR systems integrating SBG Systems' IMU, combined with an integrated RGB camera for colorization purposes.

Combining light weight and high density, its flexiblity makes a great addition anywhere.

### Technologies inside

SBG SYSTEMS

HESAI

### Key differentiators

- 360° Surveying & Mapping
- Weight : 1 kg
- Easy to use and process

### Integrations

- Single-rotor UAV
- Multi-rotor UAV
- VTOL UAV

# Technical specifications.

| | |
|---|---|
| **Laser scanner** | Hesai XT32-M2X |
| **GNSS inertial solution** | SBG Quanta Micro |
| **Precision** [2] [3] | 3 cm |
| **Accuracy** [2] [3] | 2.5 cm |
| **Typ. flight speed** | 10 m/s |
| **Typ. flight height** | 100 m |
| **Max. rec. flight height** | 140 m |
| **Point density** | 60 pts/sqm @ 100m AGL 10 m/s |
| **Laser range** | Up to 300 m |
| **Laser wavelength** | 905 nm |
| **Scanner field-of-view** | 360° x 40.3° |

(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.

| | |
|---|---|
| **Max. data generated** [4] | 1 920 000 points/sec |
| **Echoes per shot** | Up to 3 |
| **Shots per second** | Up to 640 000 |
| **Scanning frequency** | Up to 20 Hz |
| **RGB camera** | Built-in (for colorization purposes) |
| **Weight** | 0.983 kg (2.167 lbs) batt. excl. |
| **Size** | L 153 x W 113 x H 117 mm |
| **Battery autonomy** | 1 hour typ. |
| **Power** | 10-34 V |
| **Power consumption** | 23 W |
| **Operating temperature** | -10 to +40 °C |

(3) 1σ @ 50 m, nadir.
(4) Theoretical maximum of points with all shots yielding the maximum number of echoes. May vary depending on flight and survey conditions, and surveyed environment.

# Package includes.

## ✓ Hardware :

- YellowScan Surveyor Ultra
- 2 Batteries
- Rugged pelicase
- UAV GNSS antenna and cable
- 2 USB flash drives
- Documentation

## ✓ Services :

- 1-year warranty & unlimited technical support
- In-person or online training
- Boresight calibration certificate

## ✓ Software :

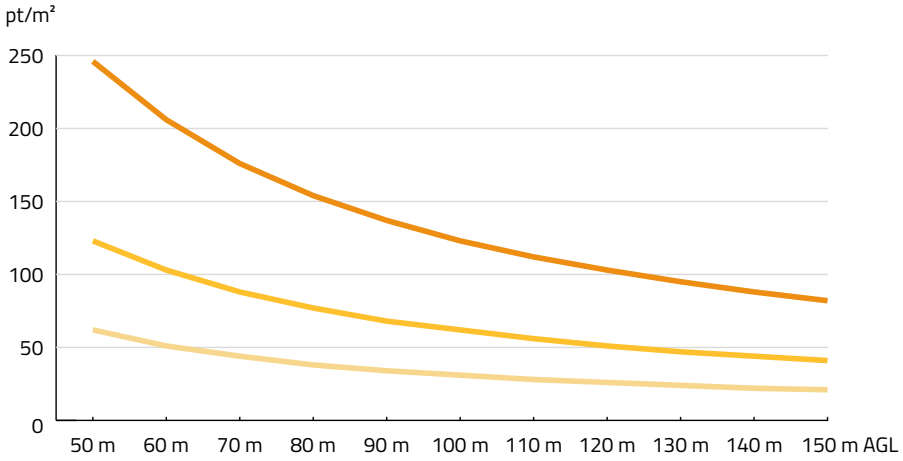
- SBG Qinertia to post-process GNSS and inertial data for highest accuracy
- **CloudStation Essential**
  Visualize, inspect, colorize from orthophotos, and export your data.

## ⊕ Optional accessories and enhancements :

- Stand-alone mounting bracket and quick release adapters
- YellowScan LiveStation: the real-time in-flight LiDAR monitoring kit (includes software & 2 radio-modems)
- Warranty and technical support extensions
- Single- or Dual-camera modules (RGB)

- **CloudStation Pro**
  Visualize, inspect, refine your data quality, enrich your data with classification and color, and unlock more export features.
- **CloudStation Ultimate**
  Zero compromise, all features activated.
  Includes Orthophoto generation and Command Line (ytk) processing for automation & batching.

# Typical mission parameters.

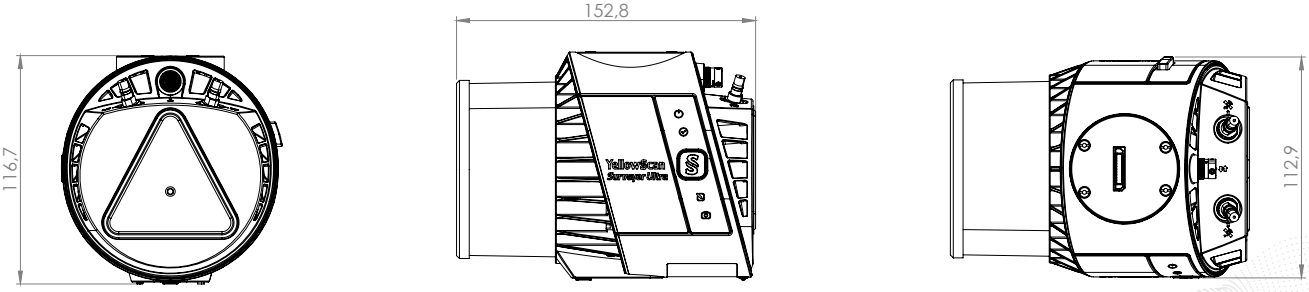



| | 50 m | 100 m | 150 m |
|---|---|---|---|
| **5 m/s** | 246 | 123 | 82 |
| **10 m/s** | 123 | 62 | 41 |
| **20 m/s** | 62 | 31 | 21 |

Point density (pt/m²)

# Dimensional drawings.

ⓘ Dimensions expressed in millimeters

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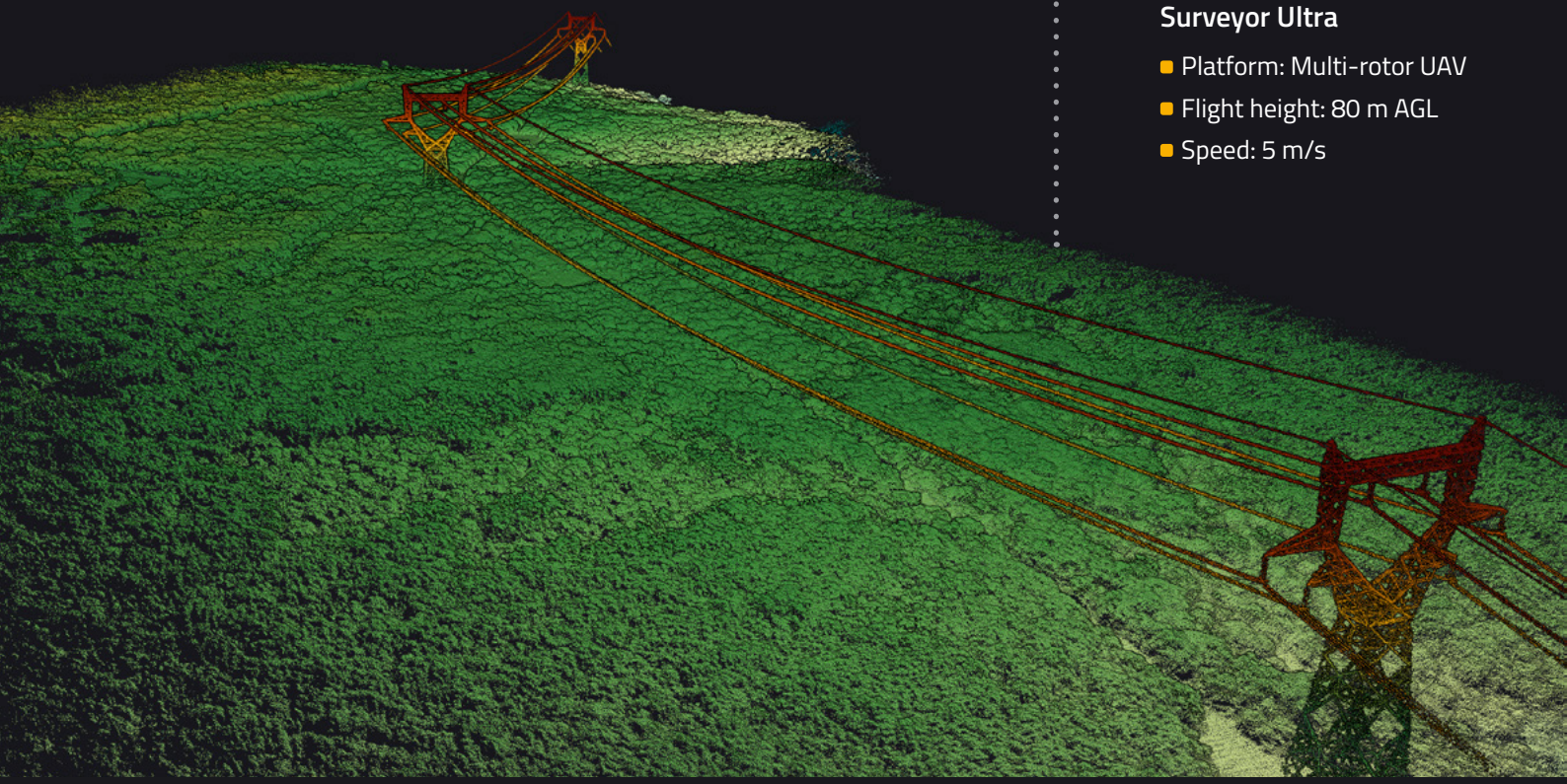
# Typical point cloud snapshots.

**Surveyor Ultra**

- Platform: Multi-rotor UAV
- Flight height: 80 m AGL
- Speed: 5 m/s



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