

Scan through the clutter



**YellowScan**



UAV mapping

Geographic Information Systems

# Aerial surveying tools made easy with LiDAR technology

UAV surveying

lightweight UAV LiDAR

The professional grade drone has revolutionized aerial surveying. No longer is a helicopter or a plane needed to analyze the topography of an area... Traditional analysis tools remain too heavy, too large and too expensive.

Evolving to the next level, the YellowScan team is committed to designing and developing ultra-compact image sensors and tools based on cutting-edge remote sensing technology.

Able to penetrate vegetation, even very dense, our scanner solutions adapt to various drone platforms and can generate actionable data fast, even in the field.

## Prefer our lightweight LiDAR systems

Over the last decade, LiDAR technology has proven its efficiency with a ever growing list of diverse field applications. However, most LiDAR systems are heavy (20 to 100 kg) and can only be operated from a utility plane or helicopter. Due to these high operational costs, these kinds of sensors are not cost effective for small area surveying.

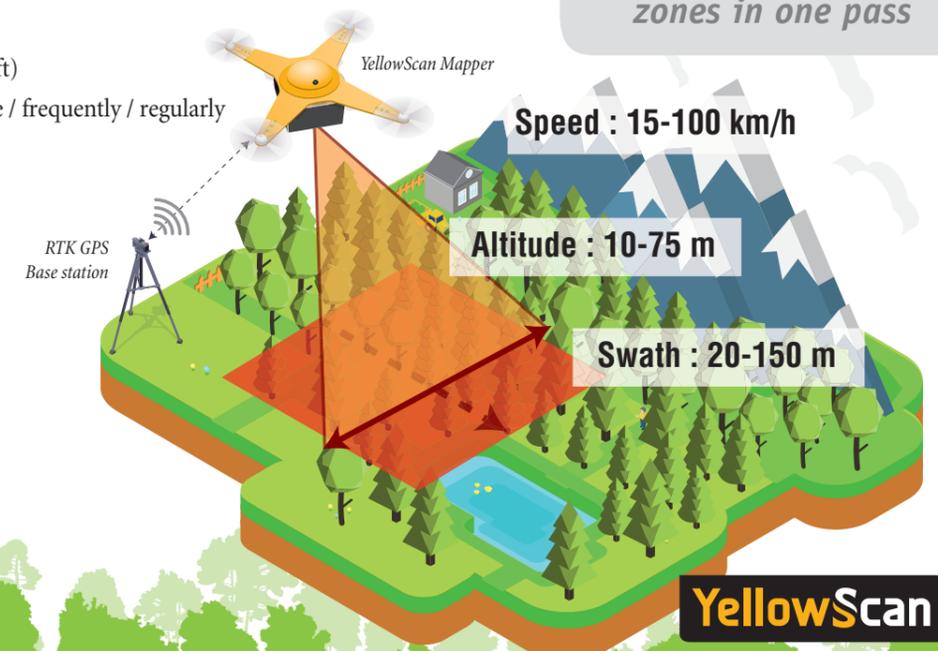
## Streamline your survey process

YellowScan produces the world's lightest stand-alone surveying systems for drones and other ultra-light aircraft. Our LiDAR solutions are less cumbersome and easier to use than other remote sensing technology such as photogrammetry and works in low-contrast or shadowy situations, even at night! Our aerial approach can cover a zone faster and with more homogeneous result than traditional ground mapping techniques using terrestrial or mobile technologies.

YellowScan LiDAR systems are ideally suited for:

- Small areas (<10 km<sup>2</sup> or 100 km linear)
- Need to penetrate vegetation
- Hard-to-access zones (by foot or traditional aircraft)
- Data needed in near real-time / frequently / regularly
- Accuracy range of 5-50 cm

Drone mounted YellowScan Mapper unit surveying both dense and sparsely vegetated zones in one pass



YellowScan support team in the field with a customer.

YellowScan



UAV mapping

# Aerial surveying tools for applications that before were out of reach

UAV surveying

aerial mapping

3D laser mapping

LiDAR scanning system

The professional grade drone has revolutionized aerial surveying. No longer is a helicopter or a plane needed to analyze the topography of an area... Traditional analysis tools remain too heavy, too large and too expensive.

Evolving to the next level, the YellowScan team is committed to designing and developing ultra-compact image sensors and tools based on cutting-edge remote sensing technology.

Able to penetrate vegetation, even very dense, our scanner solutions adapt to various drone platforms and can generate actionable data fast, even in the field.

## Use Case - Environment

**Objective:** The Amazon represents over half of the planet's rainforests. Understanding its dynamics, how it reacts and influences climate change, is a top priority for researchers. **Results:** An airborne survey was carried out using YellowScan in French Guiana. The data was processed in conjunction with the world-class scientists of Carbomap. Together with YellowScan, a team was able to map both canopy and topography, thus assessing the canopy height or the zone surveyed. Despite a huge density of vegetation, a sufficient amount of ground echoes were received, generating a rough digital terrain model.

## Use Case - Archeology

**Objective:** Map the remains of an iron-age settlement, located under centuries of vegetation on an uneven landscape. The site was excavated and partially restored in the 20th century, but a part of the settlement remains hidden due to terrain. **Results:** An airborne survey was carried out using YellowScan. The ruins were clearly identified under dense shrub, allowing a greater overview of the site and the ability to map it accurately.

## Use Case - Forestry

**Objective:** Regardless if it's a commercial or governmental activity, forest management requires data on forest to make proper decisions. Photogrammetry doesn't really work. **Results:** An airborne survey using YellowScan is the only way to penetrate the vegetation of a forest in order to produce a terrain model (DTM) as well as accurate measurements such as identifying various species, height and size, or volume of wood per hectare.

Tested and operated by professionals world wide in various scenarios

## Use Case - Corridor Mapping

**Objective:** Transmission lines need to be inspected according to regulation in several countries. A minimum clearance for vegetation is required to prevent flashover. **Results:** An airborne survey using YellowScan was carried out on thin 20 kV lines, inspecting and mapping the corridor including lines, poles and vegetation.

## Use Case - Civil Engineering

**Objective:** Often prime road and rail corridors require preliminary topographic studies to map the best route, assess impact on existing infrastructure and environment in order to plan for ground clearing and temporary access roads. **Results:** An airborne survey using YellowScan can generate very detailed 3D data that accurately depict the landscape and be incorporated into a CAD/GIS system for modeling and analysis. Due to the flexibility of the system, areas can be easily re-scanned, as frequently as needed.

## Use Case - Mining

**Objective:** By their very nature, mines are in remote areas that do not offer good survey control points. Add the lack of access roads and rough terrain, ground surveying becomes impractical. The best option is in most cases an aerial survey. **Results:** An airborne survey using YellowScan allows for quick and complete data capture of an entire zone while eliminating most logistical challenges and dangers.



YellowScan Mapper LiDAR system.

YellowScan support team in the field with a customer.

YellowScan tools give you better insight into the environment you need to survey.

YellowScan solutions allow you to survey your infrastructure quickly and precisely.

YellowScan helps you find the key to unlocking the secrets of your archaeological site.

# Ultra-compact and lightweight LiDAR systems

for civil engineering,  
corridor mapping  
forestry, environment,  
and archeology



**A**t YellowScan we design, develop and produce UAV mapping solutions for professional applications.

Fully integrated, ultra-light and easy to use, these highly automated data collection tools are used by customers around the world in fields such as surveying, forestry, environmental research, archeology, corridor mapping, civil engineering and mining.

With more than 10 years of field experience, YellowScan is committed to delivering the highest level of performance, reliability and robustness for its solutions. Our platforms are field tested all over the world in multiple environments (tropical forests, bare soils, mountains, rivers, coast lines, open-pit mines, power lines).

Contact us at [contact@yellowscan.fr](mailto:contact@yellowscan.fr)

**YellowScan**

[www.yellowscan.fr](http://www.yellowscan.fr)