routescene®

UAV LiDAR solutions and software

Easily collect and process LiDAR 3D mapping data

Our mission is to enable our customers to create powerful 3D spatial outputs to make well judged decisions and plans. Using Routescene's trusted products you can solve problems, save time, improve efficiencies and increase productivity.

The Routescene approach

6 step project workflow
Planning, data capture and processing workflows to bring efficiencies and improve productivity.

Comprehensive training and support
You'll have access to our world-class customer support and training to help you get the most out of your system.

Credibility
Since 2005 we have applied our expertise in surveying, LiDAR, GIS, dynamic data capture and data management to develop our products.

UAV LiDAR system options
We offer a range of options to meet different application, performance and price requirements.

Data processing software
To visualize and process LiDAR data to deliver final outputs. Using our software you can vastly reduce your LiDAR data processing time.

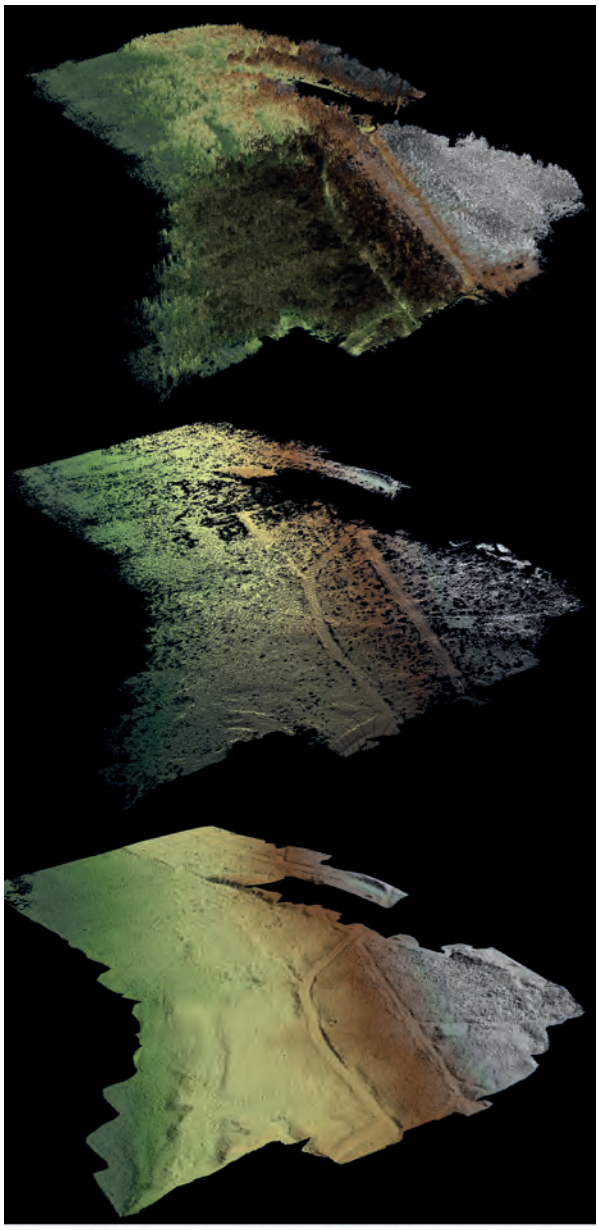
High calibre system
At Routescene we are renowned for our high calibre system design, manufacture and service delivery.

Quality Assurance
To reduce errors and achieve quality results.

Quality Assurance and Quality Control are essential to ensure the data delivered to the end customer is as accurate as possible and the level of accuracy can be proven.

Routescene QA/QC elements

- ✓ QA Monitor: real-time survey monitoring web application
- ✓ Ground Control Targets: to improve accuracy and provide QA
- ✓ Post processing tools for system calibration
- ✓ Data processing tools to improve and verify accuracy
- ✓ Generate a Quality Assurance Report to ASPRS standards



What is included in a Routescene® solution?

Hardware

We provide all the hardware you require to collect your survey data.

There are 8 main hardware components in each system:

1. LidarPod©
The "LidarPod" is the integrated 3D mapping tool. It is a self-contained unit which includes a LiDAR sensor, RTK GNSS/INS sensor, data storage and radio telemetry.

Available in a number of configurations, you can choose from a range of LiDAR sensors and GNSS/INS sensors to suit your performance and price requirements.

2. Dual GNSS antenna and antenna poles
To provide a high accuracy heading solution even when flying at low speeds.

3. UAV radio telemetry antenna
To enable remote control of the LidarPod direct from the Ground Station using a UHF band for reliable communications.

4. Ground Station
The Ground Station enables the command and control of the LidarPod. Providing real-time monitoring of the survey mission, it aids Quality Assurance and ensures you are immediately alerted of any technical issues.

5. Optional RTK GNSS receiver
Allows the Ground Station to transmit RTK corrections to the LidarPod and log the observations for post-processing purposes. This option is ideal if you want the results as soon as possible, prefer not to post-process or do not have any GNSS base stations within 60miles / 100km of your survey site.

6. UAV Mounting Kit
Specially designed to dampen the vibration from the UAV. Made from carbon fiber, it is lightweight and easy to integrate onto any multi rotor drone capable of safely carrying a payload of at least 5.5 lbs / 2.5kg.

7. Peripherals
A range of tools, equipment, spares and manuals to enable you to quickly become operational.

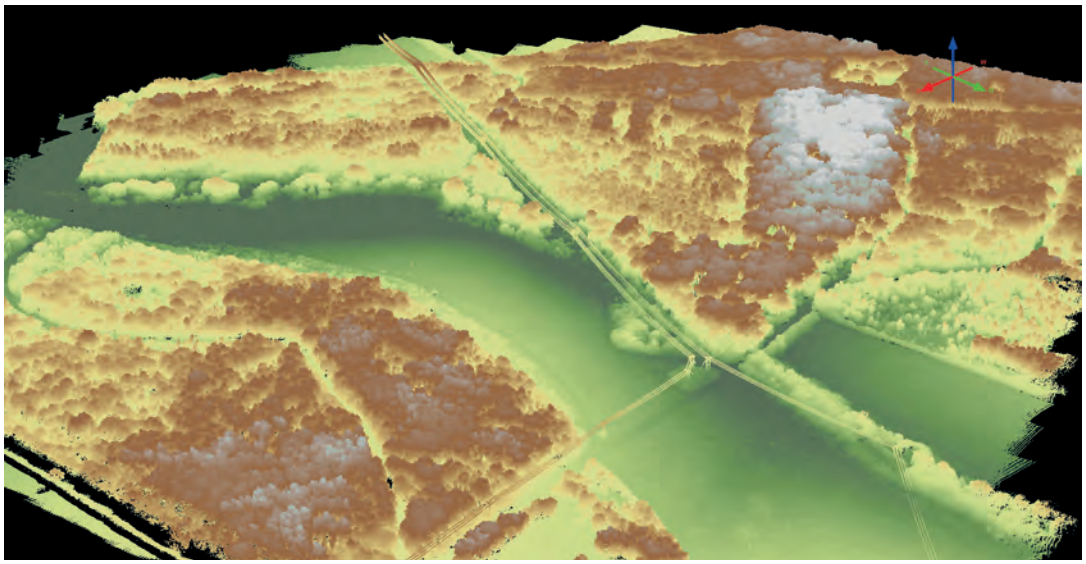
8. Optional Ground Control Targets
Deploying Ground Control Targets on known Ground Control Points prior to a UAV LiDAR survey will provide the assurance that the survey has been properly executed.

For technical specifications of the LidarPod configurations and hardware refer to www.routescene.com/lidar-mapping-systems/uav-lidar-systems

Software – LidarViewer Pro

Powerful LiDAR software to simplify complex data processing tasks.

High resolution LiDAR data is difficult and time consuming to analyze. It's made more complicated because the data has been dynamically captured and you need to undertake a boresight alignment to calibrate your system. Using LidarViewer Pro you can handle large and complex data with ease.



Improved project efficiency
Achieved through batch processing using filters, filter chains, layers and workflows combined with a fast processing speed.

Single, desktop based software
You can process all of your LiDAR data in one application and you can use it securely in the field wherever you are.

Compare and correlate different data layers
Using LidarViewer Pro's multiple layers functionality you can build a complete picture of your survey site.

Data processing workflows
Complex tasks are more manageable with LidarViewer Pro's suite of tools and workflows – you can save, share and repeat tasks easily.

High quality results
In LidarViewer Pro you can produce a Quality Assurance Report to ASPRS standards for every survey you perform to verify your results.

Create digital outputs
You can provide usable digital outputs, such as a canopy height model or a classified point cloud, simply and quickly using LidarViewer Pro.

Why choose LidarViewer Pro?

You can georeference, clean, reduce, analyze and visualize your data to create actionable business information.

- ✓ 50+ pre-defined filters ready for use
- ✓ Drag and drop filters to create filter chains for batch processing
- ✓ Manually edit your LiDAR point clouds
- ✓ Multiple layers functionality to analyze different types of information
- ✓ Ready made filter chains for popular tasks such as to create a Digital Terrain Model
- ✓ Run filter chains sequentially to produce a workflow
- ✓ Save and share filter chains and workflows with colleagues
- ✓ Gives you the flexibility to easily analyze all or part of the data you have collected
- ✓ Built-in Quality Assurance process
- ✓ 1 year support and maintenance agreement included

Find out more at
www.routescene.com/software

Applications

Integrated LiDAR systems and software for a diverse range of survey and mapping needs.

Survey and mapping

Achieve precision and efficiency using our LiDAR mapping systems and software, created by surveyors for professionals.

Typical projects include land use planning, for residential, commercial, industrial, or mixed use areas; planning for greenways and recreational areas; to infrastructure development.

Forestry

High resolution data to visualize and analyze the canopy, the forest layers and the ground.

For forestry management: (planning, development and maintenance); forest health; woodland valuation; natural resource and wildlife monitoring; managing the impact of environmental issues.

Environmental

Detailed UAV LiDAR data for environmental monitoring and modelling.

Common uses include conservation; land and erosion monitoring; drainage; environmental disaster recovery.

Research

Proven products for environmental, forestry and geospatial research.

Projects include mapping of land movement; identification of landforms; mapping vegetation structure; assessing flood risk; forestry and forest fire research.

Utilities

For corridor and asset mapping and management.

Industry-specific uses include vegetation management along powerlines, overland pipelines, telecoms, rail or road; wildfire mitigation; preparation for extreme weather; asset location.

Archaeology

LiDAR offers superb vegetation penetration to visualize and analyze archaeological sites.

Applications include achaeology; forensic archaeology; cultural heritage and preservation of areas of natural or historic interest.

Want to know more?

Read our case studies: www.routescene.com/case-studies

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