

LiHAWK

Aerial LiDAR Surveying System



LiHawk is an aerial LiDAR surveying system designed for large area and long-range 3D data collection projects. The system is designed to be mounted to a fixed-wing airplane platform or multi-rotor UAV and features a RIEGL VUX-1LR²² laser scanner coupled with a best-in-class inertial measurement unit (IMU) for increased point cloud accuracy and precision. LiHawk is well-suited for projects aiming to map terrain features beneath forest canopies and extract structural parameters from forest LiDAR data. The centimeter-level accuracy of this measurement device will meet the rigorous accuracy demands of civil engineering and critical infrastructure maintenance professionals. And the high-definition digital camera module can be used to generate photogrammetry products as well as true color 3D point clouds during each LiDAR survey.

Multi-rotor UAV Platform



Fixed-wing Airplane Platform



Specifications

Laser Sensor	RIEGL VUX-1LR ²²
Max. Measurement Rate	1,500,000 pts / sec
Scan Rate	10 Hz -200 Hz
Field of View	360°
Scan Range	1,845 m @ Reflectance ≥ 80%
System Accuracy	Flight Height: 200 m
	Horizontal Accuracy < 10 cm
	Vertical Accuracy < 10 cm
POS System Performance	Attitude: 0.005° (1σ)
	Azimuth: 0.009° (1σ)
Weight Incl.Camera	4.35 kg
Dimensions (Main Unit)	297 * 180 * 147 mm
Flight Time	More than one hour
Camera	SONY A7RII (24 mm prime lens)
Acquisition Software	LiAcquire-VUX
Post-Processing Software (Optional)	LiDAR360 & LiPowerline



Multi-Platform

The system can be mounted on different platforms (e.g. UAV LiAir series or fixed-wing airplane platform) for data collection.



High-Integration

LiHawk is a highly integrated LiDAR system, with only 4.0 kg weight without a camera. The system supports an external solid-state drive to store the collected data, which eliminates the time to download data from the system and improves operational efficiency.



One-Stop Solution

GVI supports self-developed software for data collection, data georeferencing, data post-processing and data analysis. GVI's Software Suite provides you a one-stop solution without using any other third-party software.