GreenValley International

LiAir H800

UAV LiDAR System

LiAir H800 is a next-generation medium-to-long-range UAV LiDAR system developed by GVI. It integrates lightweight LiDAR, a self-developed inertial navigation system, and a built-in highresolution mapping camera, combining the advantages of lightweight and long-range capabilities. With the support of flight control software GreenValley App and data processing software LiGeoreference, provides more efficient all-in-one solution tasks for power line inspection, forest monitoring, emergency disaster assessment, and more.

Advantages

▌ Lightweight & Long-range

Integrated with lightweight LiDAR, the total weight of the device is 2.25 kg, and it can be equipped with M350/M300 RTK for operations. With a data frequency of 2000 kHz, it can achieve a maximum range of 1000 m. It supports unlimited waveform returns for data collection, enabling complete terrain data acquisition even in vegetated areas.

▌ High Efficiency & High Accuracy

With a horizontal field of view of 100 degrees, at a flight height of 200 m, the effective swath width of a single pass is greater than 450 m. The system has a repeat ranging accuracy of 3 mm, and the vertical positioning error at a flight height of 200 m is less than 5 cm.

▌ Adaptive Scan Speed, Point Cloud Distribution More Evenly

Offering 9 different configurations for flight height, data frequency, and energy settings, the device can adaptively adjust the scan speed to ensure consistent line spacing and point spacing in different survey areas, ensuring uniform distribution of point clouds and preserving the 3D spatial characteristics of objects with greater accuracy.

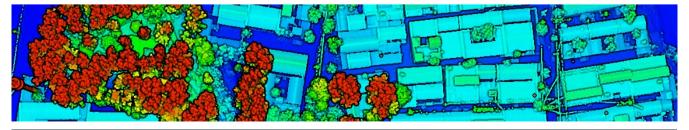### ▌ Built-in Camera, Ultra-clear Picture Quality

Built-in 26-megapixel high-resolution mapping camera, 200 m altitude can obtain 4.7 cm resolution images, and can generate high-quality color point clouds, meeting the production requirements for mapping products.

▌ Intelligent Flight Control Mode

Intelligent judgment of flight altitude, automatic start of data collection in the air, and automatic stop of collection on the ground, ensure the integrity of the surveyed area while minimizing data redundancy to the maximum extent possible.

▌ Support of GreenValley Flight Assistant

GreenValley App supports status monitoring, parameter adjustment and 3D real-time point cloud display. The simpler and clearer design of the interface provides a more convenient flight experience.

Specifications

System Parameters

Detection Range	350 m @ 10% reflectivity 790 m @ 50% reflectivity 1000 m @ 80% reflectivity	Accuracy (Vertical)	±5 cm
Weight	2.25 kg	Memory	256 GB TF Card
Voltage	18~24 V	Storage Temperature	-30~60 ℃
Power Consumption	61 W	Operating Temperature	-20~50 ℃
Communication	WIFI		

LiDAR Unit

Wavelength	1535 nm	Repeatability Accuracy	3 mm @100 m
FOV	100°	Data Frequency	100~2000 kHz
Number of Returns	Unlimited Waveform Returns [1]		

Inertial Navigation System

GNSS	GPS, GLONASS, Galileo, BD	Azimuth Accuracy	0.019°
IMU Data Frequency	1000 Hz	Attitude Accuracy	0.006°

Camera

Pixels	26 MP	Focal Length	16 mm / 24 mm (Equiv. Focal Length)
Point Cloud Formats	6252×4168		

Software

Control Software	GreenValley	Pre-processing	LiGeoreference
Post-Processing	LiDAR360 / LiPowerline (Optional)		

[1] The theoretical maximum number of returns can only be achieved under specific conditions and is constrained by the actual test scenario.