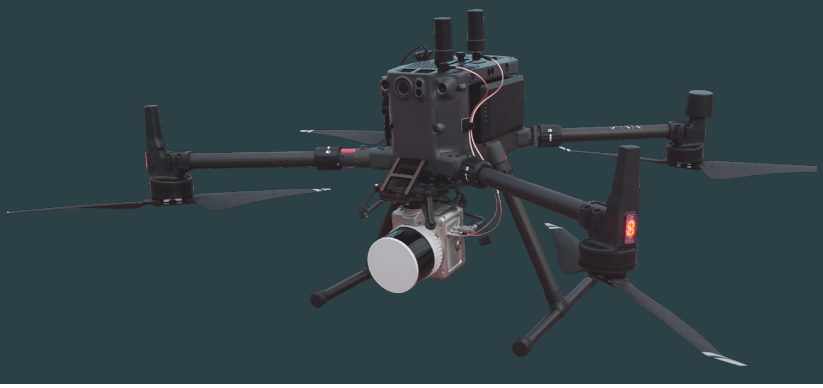
GreenValley International

LiAir X3C-H

Compact UAV LiDAR System



The LiAir X3C-H is a new compact high-performance UAV LiDAR system and is the upgraded version of the LiAir300 by GreenValley International. It adopts a new integrated design style and built-in high-resolution mapping camera, providing higher performance and convenient operation for power-line inspection, topographic surveying, agricultural and forest monitoring, and more.

Advantages

Integrated Design

The operation interface is compact and convenient, with an unpluggable TF Card and engineered data storage model that allows for one-touch operation and copying of laser and camera data.

New Camera, providing ultra-clear picture quality

The built-in high-resolution mapping camera has been upgraded to 26 megapixels, providing ultra-clear picture quality and enabling the creation of high-quality true-color point clouds and orthophotos for Photogrammetry. Additionally, the external camera interface allows for simultaneous mounting of infrared cameras and other camera types, making the LiAir X3C-H a versatile tool for a wide range of applications.

Handheld Accessories

Lightweight and quick-release design, one-button operation for efficient work. 3 hours of extra-long battery life. GNSS module with SLAM technology for signal-blocking resistance, enabling operation in indoor and outdoor spaces. Compatible with multiple fields such as forestry, mining surveying, power monitoring, and building facade surveying.

Lightweight and easy to disassemble

The overall weight of the handheld part is 0.68kg, and the ergonomic design allows for easy grip. The single battery has a battery life of 3 hours, and with one-button operation and installation, it can be used immediately after installation.

High-efficiency operation

3-5cm super high accuracy, point density better than 10,000 points/m^2, effective measurement range of 190m (10% reflectivity), and an operation efficiency of up to 100,000m^2 per hour.

High-precision fusion

From aerial (with GNSS signal) to indoor (without GNSS signal) operation in all spaces, with a flying platform and handheld kit, directly obtain ground point cloud data with absolute coordinates and airborne point cloud data, meeting the needs of multiple scenarios. The point cloud fusion accuracy can reach centimeter level.

Multi-scene operation

With SLAM technology and GNSS module for accurate positioning, it can be used in areas without GNSS signal to generate accurate 3D point cloud models and rich features. It is suitable for multiple applications such as forestry, mining surveying, power monitoring, building scanning, and more.

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Specifications

System Specifications			
Detection Range	80m (reflectance ≥ 10%) 200m (reflectance ≥ 54%) 300m (reflectance ≥ 90%)	System Accuracy (Vertical)	5cm @ 70m
		Typical Flight Speed	5-10 m/s
Weight	1.12kg	Memory	256GB TF Card
Voltage	12~24V	Power Consumption	24W
Operating Temperature	-20~50℃	Storage Temperature	-30~60℃
Communication	WIFI		
LiDAR Unit			
Wavelength	905nm	Number of Channels	32
Point Rate	First Return: 640,000 points/s Dual Return: 1,280,000 points/s Triple Return: 1,920,000 points/s	FOV	360°(Horizontal) × 40.3°(Vertical)
		Returns	3
Inertial Navigation System			
GNSS	GPS, GLONASS, Galileo, BD	Azimuth Accuracy	0.038°
Attitude Accuracy	0.008°	IMU Data Frequency	200HZ
Camera			
Pixels	26 Megapixels	Image Size	6252x4168
Focal Length	16mm/24mm (Equiv. Focal Length)		
Software			
Pre-processing	LiGeoreference	Post-processing	LiDAR360/LiPowerline (Option)

Handheld Accessories

System Parameters					
Handheld Size	L181.8×W108×H88（mm）	Handheld Weight	0.68kg（Including Base）	Voltage	15.2V
Battery Box Size	L146×W57×H148（mm）	Battery Capacity	5870mAh	Antenna	AT-106
Protection Level	IP54	Battery Box Weight	0.81kg	Working Time of One Battery Block	3h
Single-Flight Continuous Operation Time	Maximum 55min	Applicable Environment	Applicable to multiple scenarios both indoors and outdoors		
Mapping Method					
Mapping Principle	SLAM、PPK-SLAM	Real-Time Calculation	Not Supported		
Data Results					
Absolute Accuracy	≤5cm	Point Cloud Format	Las, LiData		