GreenValley International

LiBackpack C50H

Backpack LiDAR Scanning System

The LiBackpack C50H Backpack Lidar Scanning System is the camera version of the LiBackpack 50 product family, configured with a 360° panoramic camera to acquire image data in parallel with high-precision 3D point cloud data. It can be used in indoor and outdoor integrated surveying, underground space information acquisition, tunneling, digital factory, digital mine, forestry survey, BIM, and building façade surveying.

Advantages

Easy to operate

High level of automatic, ready to use, easy processing, through the LiBackPack processing software, can quickly generate color point cloud data and corresponding panoramic images.

Multifunctional

Equipped with a detachable telescopic pole, telescopic to meet any length, different scenes and different angles of data mapping, and equipped with a control point collection kit, to meet more special scenes.

High efficiency

Real-time high-precision point cloud data display, support online closed-loop and closed-loop optimization, and export the point cloud data and trajectory as soon as the scanning is completed.

Simple and convenient

Real-time display of data on cell phones, tablets, and other mobile devices; supports wireless/wired viewing of data; Strong stability of data transmission, view while collecting.

High Precision

Combine LIDAR and SLAM algorithms to realize integrated indoor and outdoor measurements, centimeter-level data accuracy can be achieved without the need for GNSS signals. Meet the requirements of high point density of 640,000 points/s and long measuring range of 300 m.

Low Cost

No need GPS, the cost is greatly reduced.

Specifications

System Parameters	
Weight (With camera)	7.2kg
Size	1871×325×190mm (extended) 1197×325×190mm (closed)
Relative Accuracy	3cm
Absolute Accuracy	Control point constraint
Scan Rate (Single return)	640,000pts/s
Power Consumption	40W
Work Mode	
Work Mode	Backpack + Handheld

LiDAR Sensor			
Number of Sensors	1	Number of Channels	32 channels
Scan Range	300m	Number of Returns	3
FOV	Horizontal: 360°	Vertical: 40.3° (-20.8° ~19.5°)	
Camera			
Resolution	3840×1920	Frame Rate	30 fps
FOV	360°	Pixels	1800W

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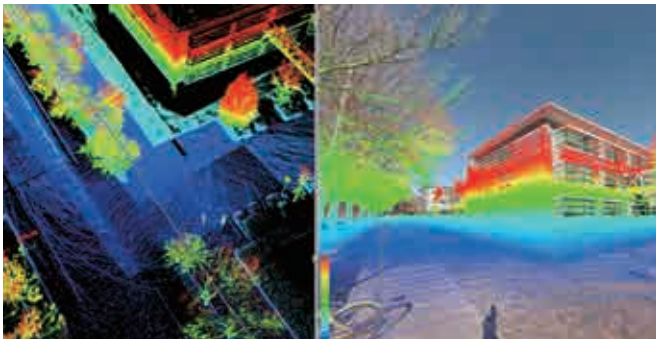
LiFuser-BP Realistic 3D Viewing Software

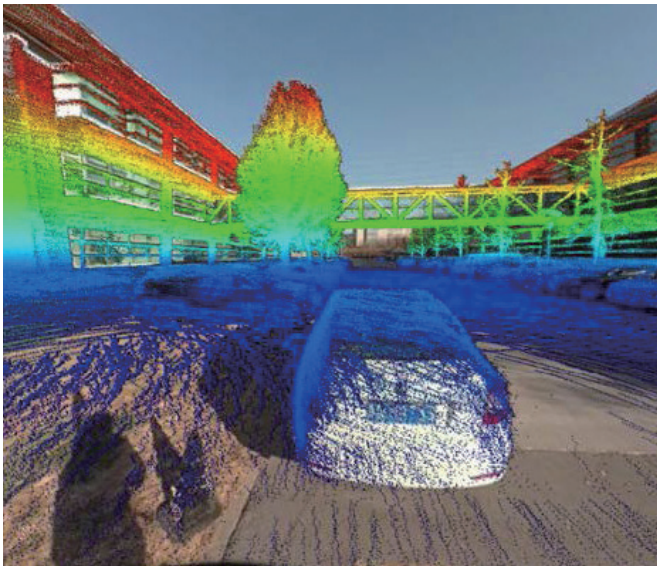


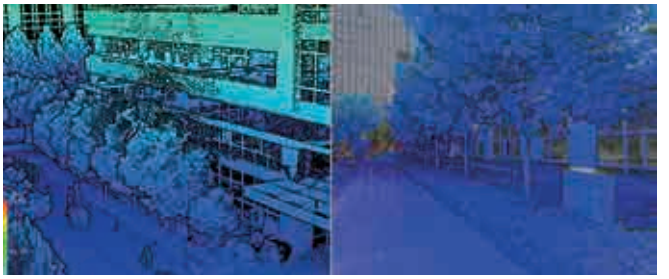
LiFuser-BP is GreenValley's self-developed data fusion software for LiBackpack Lidar scanning systems, including measurement, clipping, profile editing, coordinate transformation, export, and other tools.

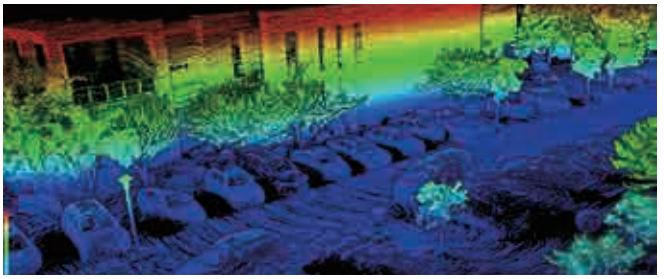
Trajectory processing, high-precision point cloud processing, point cloud data visualization and editing, panoramic calibration, point cloud and panoramic image roaming, and point cloud alignment.

The software supports DGNSS and SLAM processing, provides various processing modes for different scanning scenes, such as general, forestry, outdoor-open, outdoor-tight, and indoor, etc., and also supports customized processing modes, and each processing mode has corresponding default configurations, which ensures that the default parameters can be used in most cases to obtain satisfactory processing results.

Data display







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