

LiDAR Rotary Scanner LS-PTZ-150



镭神智能

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让驾驶更安全

让机器更智能

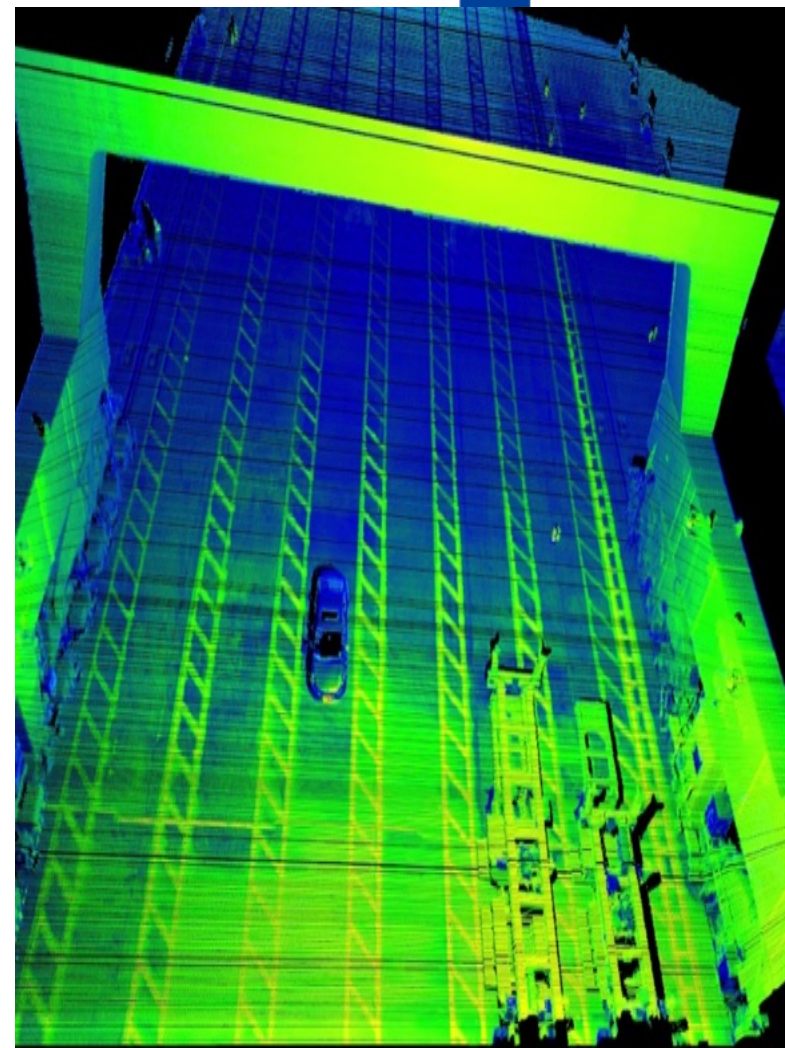
让生活更美好



Product Profile

The LS-PTZ-150 captures real-time, stable, 3D spatial data and quickly analyses it using an embedded 3D point cloud processing algorithm, enabling functions such as volume measurement and more. This makes it an ideal solution for data collection, automation, and digitalization, with applications in mining, port automation, rail transportation, logistics, and beyond.

The system's scanning range and speed are fully customizable. It communicates via a network port protocol, allowing for long-distance data transmission and control. Real-time data output can be seamlessly transmitted to a computer, monitor, or monitoring center through network transmission.



Product Characteristics



Wide Versatility:

- Meets the measurement and modeling needs for various materials including coal, sand, soil, gravel, stones, and wood chips.

Flexible Installation:

- Adjustable height and angle to fit different scenarios and object sizes. Easy to set up with minimal training, allowing anyone to use it quickly.

Strong Adaptability:

- Highly resistant to interference, with strong environmental adaptability. Performs reliably in various lighting conditions, including dim or nighttime environments. Optional high-end versions can handle extreme conditions like rain, snow, fog, and dust.

Powerful Performance:

- Built with an industrial-grade design, the scanner is both rainproof and dustproof, with a measuring range up to 150 meters and centimeter-level accuracy.

Fast Implementation:

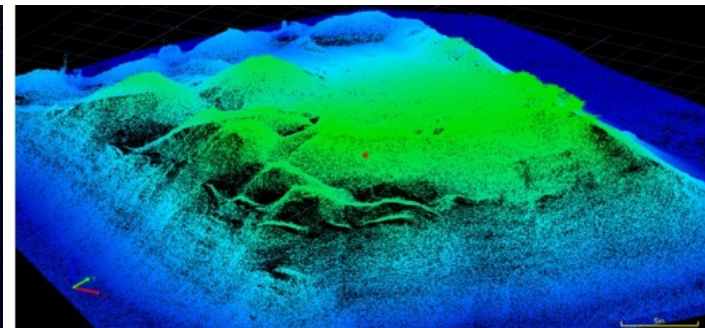
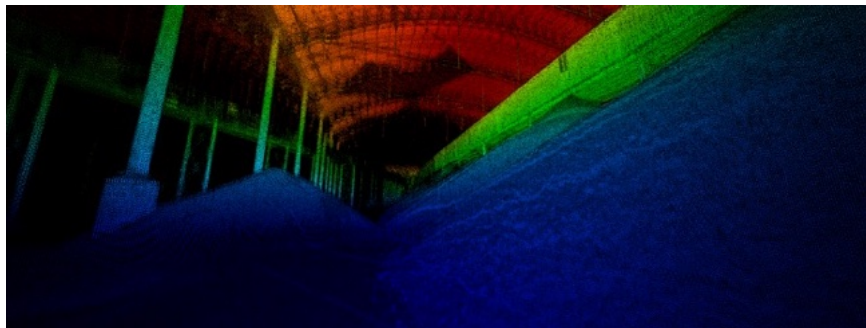
- Quick and easy to deploy, it offers rapid processing and analysis with 3D model displays available on web pages.

Fully Automated:

- Operates entirely through software, adapting to various scenarios, including indoor or outdoor material inventories and intelligent overhead crane operations.

Stable & Long Service Life:

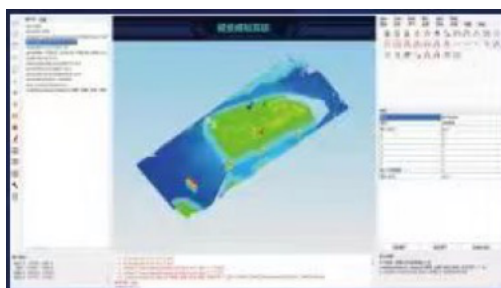
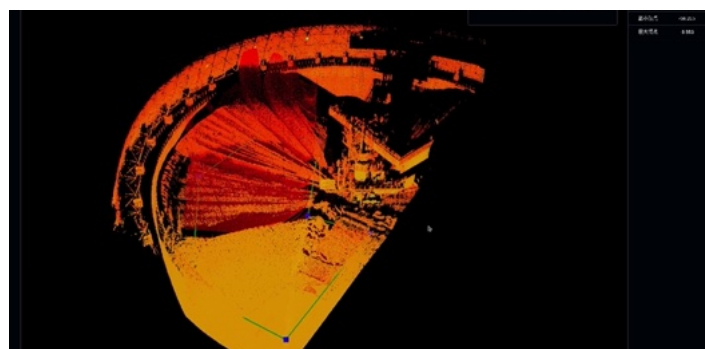
- Features high impact resistance and a durable, high-toughness cable for extended reliability..



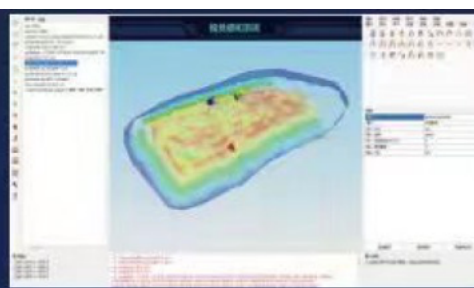
Volume Scanning System



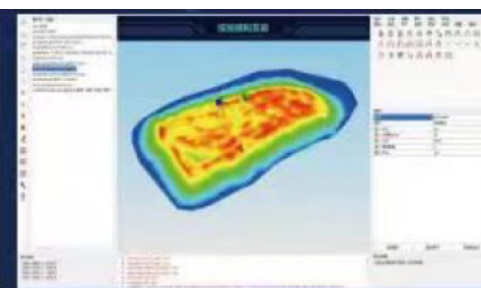
By scanning and modeling materials, the LS-PTZ-150 can perform tasks such as segmentation of cargo locations, point cloud fusion, cavity filling, volume calculation, 3D model display, and material change monitoring. All data is transmitted to the server via network, enabling real-time display on a user interface or web page.



Obtaining Target Point Cloud



Segmentation



Volume Calculation

Installation Options for Different Scale

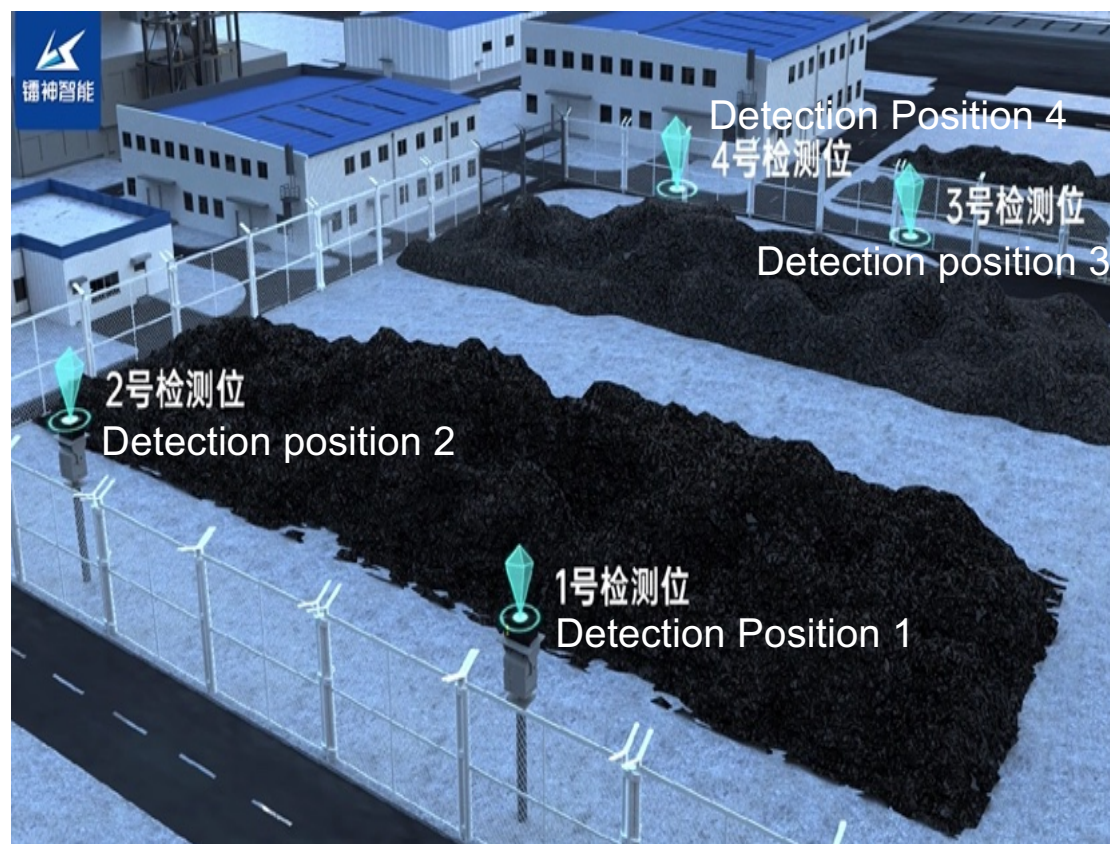


Moderate Area Scale – Single LiDAR Solution

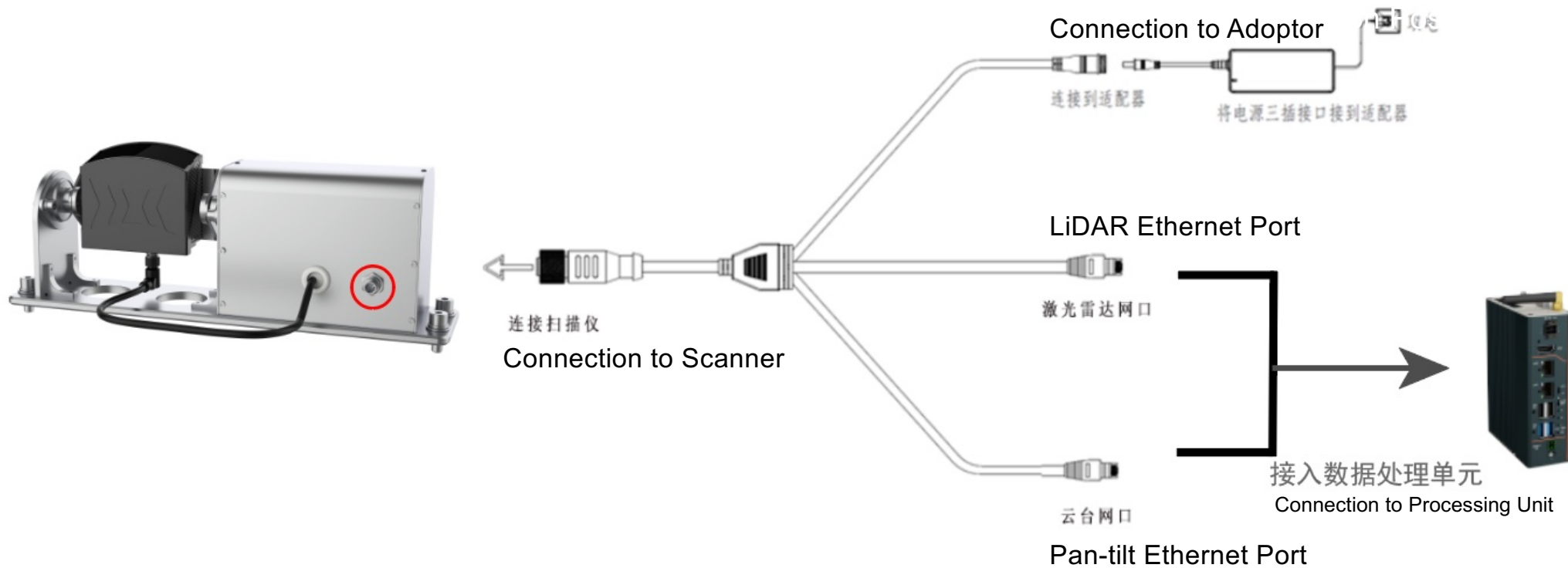
For moderate indoor or outdoor spaces, a single LiDAR unit can cover the area by adjusting its gimbal angle under normal conditions. Typically, this moderate coverage area is within dimensions of 40m x 40m x 12m.

Large Area Scale – Multiple LiDAR Solution

For indoor or outdoor spaces that are too large for a single LiDAR unit to cover, it is recommended to install multiple LiDAR systems at various detection points, significantly expanding the coverage area.



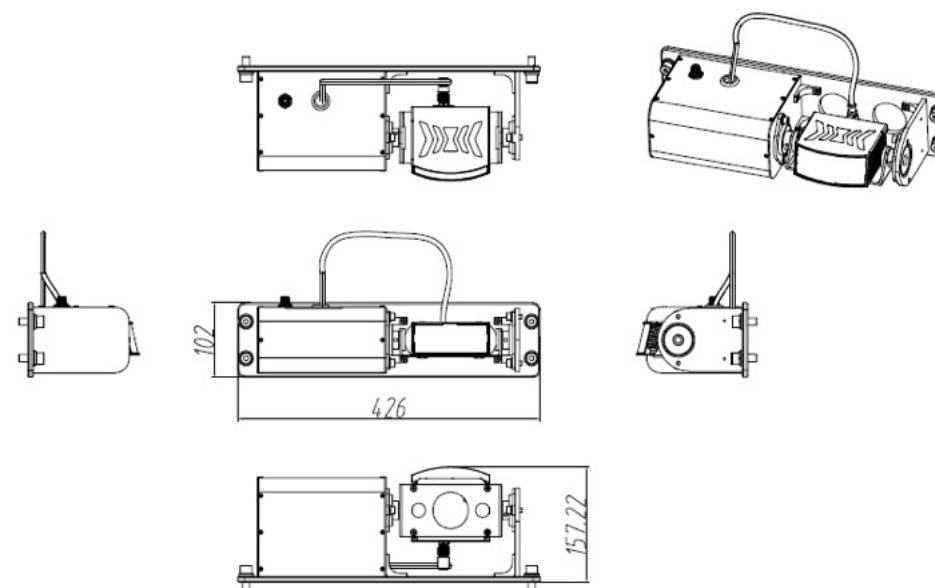
Scanner Wiring



Product Specifications & Parameters






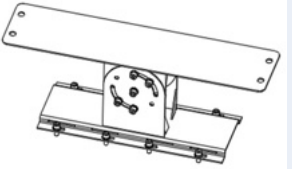
Horizontal Scan FOV	180°
Vertical Scan FOV	120°
Lidar Scanning Accuracy	3cm
Vertical Angle Precision	0.024°
Horizontal Scanning Angle Accuracy	0.02° (minimum)
Data Obtaining Speed	150,000 points / s
Minimum Detection Range	1m
Maximum Detection Range	150m
Laser Wavelength	905
Laser Type	Class I (Human Eye Safety laser)
Interface	Ethernet
Weight	3.5kg
Size	426*102*157mm
IP Grade	IP67
Operating Temperature	-40°C-+60°C
Operating Voltage	24V DC



Product Structure Diagram

LS-PTZ-150 Components List



No.	Components	Model	Specification Parameters	Product Picture	Remarks
1	A LiDAR Scanner	LS-PTZ-150	Scan radius: 150m (@10% reflectivity) Scan rate: 150,000 points/ s Power consumption: 55w		24v Power Supply
2	Data Processing Unit	KAGO-6200	Celeron J6412,8G DDR4,128G SSD, 60W power supply, 2-channel gigabit network port.		
3	The 3D Point-cloud Processing Software		3D point cloud processing algorithm for modeling, data analyzing, volume measurement, etc.		
4	Mounting Bracket		The Angle can be adjusted by 35°, supporting hoop/ screw installation.		Optional

Wide Range of Applications



In industries such as power plants, steel mills, and coal mines, the need for material inventory checks presents a significant challenge due to the large volumes and irregular shapes of materials. The LS-PTZ-150 3D laser scanner effectively addresses this issue. With a range of up to 150 meters and a 180° horizontal rotary field of view (FOV), it scans quickly, taking only seconds to minutes to complete. Its real-time performance significantly enhances the automation of management processes, reducing labor costs and increasing efficiency.

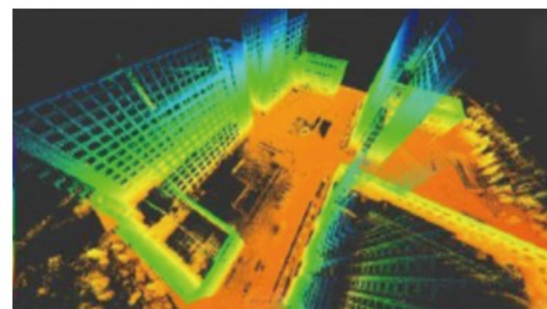
For example, in coal mining, this solution not only facilitates modeling and analysis with a single scanner but also enables networking and data merging from multiple scanners via a LAN. The system works collaboratively, with automatic parameter configuration through control center software, eliminating the need for manual on-site intervention. After scanning, the system synthesizes the collected data, creates a digital model of the coal yard using digital fitting technology, and calculates the coal pile's volume. This volume is then multiplied by the coal's specific gravity to determine the total storage capacity.



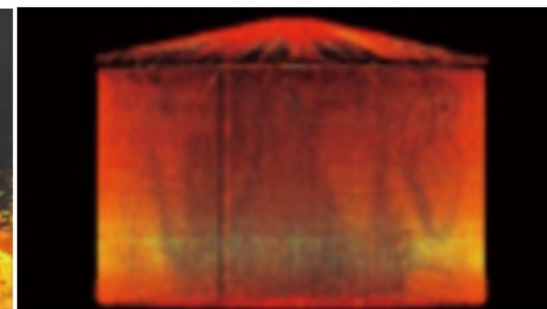
Volume Measurements



Digitization and 3D modeling



Earthwork Surveys



Calibration of Measuring Containers