Industrial LiDAR Leader

TH-1230

TH-1230 is an industrial-grade 2D LiDAR with a modular design that lowers integration barriers. It integrates core capabilities for long-range ranging and high-precision volume measurement in a compact package. It can operate continuously in heavy rain and dusty environments, supports a high scanning frequency of 100Hz, and achieves an angular resolution of up to 0.25° at 100Hz. Its cost-effectiveness ensures continuous and accurate data for

Parameters

Product Model	Th-1230 plus
Overall Dimensions	Rear cable outlet: 130×102×157mm, bottom cable outlet: 108×102×180mm
Bare Weight	<1.5kg
Laser Light Source	905nm
Laser Characteristics	Class 1 laser product, eye-safe (iec 60825-1)
Working Voltage	Radar power supply dc24v±4v heating module power supply dc24v
Starting Current	2a@dc24v (radar side)
Total Power Consumption	Typical ⩽15w, heating ⩽55w
Performance Parameters	
Scanning Angle	270°
Scope Of Work	0.1-80 meters
Measure Distance	30 meters @ 10% reflectivity 80 meters @ 90% reflectivity
Scanning Frequency	25/50/100hz
Angular Resolution	0.0625/0.125/0.25°
Measurement Accuracy	±30mm
Repeatability Accuracy	±20mm
Interface	
Interface Type	Power: 5-core; communication: 4-core; io1: 8-core; io2: 8-core
Power Interface	Working power supply: 1; heating power supply: 1
Communication Interface	Ethernet: 1-channel; rs232 rs485: 1-channel (optional)
Remote Signaling And Control	Remote signal (yx) 2-way; remote control (yk) 2-way, remote control characteristics - dry contact
Synchronization Signal	Synchronization (sync) 1-channel
Environment And Safety	
Operating Temperature	Wide temperature version -55°c ~ +70°c; non-wide temperature version -20°c ~ +55°c
Operating Humidity	0% ~ 95%
Anti Strong Light Interference	80000lx
Product Protection Level	Ip67

Application

Intelligent Transportation

TH-1230 Plus

TH-1230 Plus is an industrial-grade 2D LiDAR designed for complex working conditions. Compared to the TH-1230, the TH-1230 Plus utilizes filtering technology that makes laser measurement applications unaffected by weather. It is resistant to rain, snow, fog, and dust, and has excellent resistance to environmental interference, meeting the needs of highway applications in various complex working conditions.

Parameters

Product Model	TH-1230 Plus
Overall Dimensions	Rear cable outlet: 130×102×157mm, bottom cable outlet: 108×102×180mm
Bare Weight	<1.5kg
Laser Light Source	905nm
Laser Characteristics	Class 1 laser product, eye-safe (iec 60825-1)
Working Voltage	Radar power supply dc24v±4v heating module power supply dc24v
Starting Current	2a@dc24v (radar side)
Total Power Consumption	Typical ⩽15w, heating ⩽55w
Performance Parameters	
Scanning Angle	270°
Scope Of Work	0.1-80 meters
Measure Distance	30 meters @ 10% reflectivity 80 meters @ 90% reflectivity
Scanning Frequency	25/50/100hz
Angular Resolution	0.0625/0.125/0.25°
Measurement Accuracy	±30mm
Repeatability Accuracy	±20mm
Interface	
Interface Type	Power: 5-core; communication: 4-core; io1: 8-core; io2: 8-core
Power Interface	Working power supply: 1; heating power supply: 1
Communication Interface	Ethernet: 1-channel; rs232 rs485: 1-channel (optional)
Remote Signaling And Control	Remote signal (yx) 2-way; remote control (yk) 2-way, remote control characteristics - dry contact
Synchronization Signal	Synchronization (sync) 1-channel
Environment And Safety	
Operating Temperature	Wide temperature version -55°c ~ +70°c; non-wide temperature version -20°c ~ +55°c
Operating Humidity	0% ~ 95%
Anti Strong Light Interference	80000lx
Product Protection Level	Ip67

Application

Intelligent Transportation

TH-K10

TH-K10 is an industrial-grade 2D LiDAR. Its core value lies in its compact size and low cost. It can flexibly adapt to limited installation spaces, lowering the deployment barrier. It boasts a wide angle of sight and precise measurement coverage, making it particularly suitable for short-range measurement scenarios such as conveyor belt material volume measurement, providing stable and practical sensing support for industrial material measurement.

Parameters

Product Model	TH-K10
Dimensions	Rear cable: 87mm × 99mm × 90mm (excluding external leads) Bottom cable: 87mm × 92mm × 97mm (excluding external leads)
Bare Device Weight	500g (including a standard outer lead of 1 meter length)
Laser Light Source	905nm
Laser Characteristics	Class 1 laser product, eye-safe (IEC 60825-1)
Operating Voltage	DC10~32V, recommended voltage: DC24V DC12V
Starting Current	0.5A@DC24V radar side or 1A@DC12V radar side
Power Consumption	⩽5W
Performance Parameters	
Scanning Angle	300°
Working Range	0.3-10m
Measuring Distance	0.3-10m@10%
Scanning Frequency	15/25/50Hz
Angular Resolution	0.075/0.125/0.25°
Measurement Accuracy	±30mm
Repeatability	±20mm
Number of Defense Zones	Obstacle Avoidance: 16 groups × 4, Target Tracking: 16 + 16
Interface	
Interface Type	Power interface: DC5.5-2.1 round hole female socket communication interface: RJ45 network port IO interface: 12 core signal cable
Power Interface	Power Supply: 1
Communication Interface	Network Port: 1
Remote Control	YX: 5-channel, YK: 4-channel, remote control characteristics - NPN open collector
Synchronization Signal	1 Channel
Environment and Safety	
Operating Temperature	-20°C ~ +55°C
Operating Humidity	0% ~ 95%
Comprehensive Environment	Altitude ⩽ 6000m, resistant to moisture and corrosion
Anti-Light Interference	80000lx
Product Protection Level	IP65/IP67

Application

Conveyor Belt Material Volume Measurement

TH-K20

TH-K20 is an industrial-grade 2D LiDAR, featuring the dual advantages of compact size and low cost, specifically designed for equipment obstacle avoidance scenarios. Its compact design allows for flexible integration into limited installation spaces around equipment, eliminating the need for complex modifications to existing equipment layouts. Its performance meets the core requirements of equipment obstacle avoidance, accurately capturing surrounding environmental information and making it a cost-effective choice for such scenarios.

Parameters

Product Model	TH-K20
Dimensions	102mm × 108mm × 117mm (excluding leads)
Bare Device Weight	750g (including 1m standard lead wire)
Laser Light Source	905nm
Laser Characteristics	Class 1 laser product, eye-safe (IEC 60825-1)
Operating Voltage	DC10~32V, recommended voltage: DC24V DC12V
Starting Current	0.5A@DC24V radar side or 1A@DC12V radar side
Power Consumption	⩽5W
Performance Parameters	
Scanning Angle	270°
Working Range	0.5-20m
Measuring Distance	0.5-20m@10%
Transmitting Frequency	72K
Scanning Frequency	15/25/50Hz
Angular Resolution	0.075/0.125/0.25°
Measurement Accuracy	±30mm
Repeatability	±20mm
Number of Defense Zones	Obstacle Avoidance: 16 groups × 4, Target Tracking: 16 + 16
Interface	
Interface Type	Power supply: DC5.5-2.1 round female socket Communication interface: RJ45 network port IO interface: 12-core signal cable
Power Interface	Power Supply: 1
Communication Interface	Network Port: 1
Remote Control	YX: 5-channel, YK: 4-channel, remote control characteristics - NPN open collector
Synchronization Signal	1 Channel
Environment and Safety	
Operating Temperature	-20°C ~ +55°C
Operating Humidity	0% ~ 95%
Comprehensive	Altitude ⩽ 6000m Resistance to moisture, heat and corrosion
Anti-Strong Light Interference	80000lx
Product Protection Grade	IP65/IP67

Application

Equipment Obstacle Avoidance and Anti-Collision

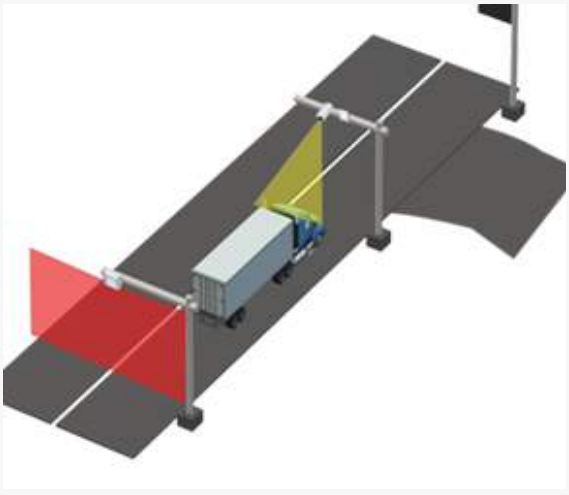
TH-K40/60/100

TH-K series focuses on serving industrial scenarios, with industrial-grade 2D LiDAR as the core positioning. It has excellent resistance to environmental interference and is suitable for medium to long measurement distances of 40-100m. Can adapt to complex environments such as rain, snow, fog, and dust, and can work continuously under extreme temperature conditions. This series continuously provides reliable sensing support for harsh working conditions such as obstacle avoidance and positioning of mining trucks, perfectly adapting to the conventional application needs of industrial scenarios.

Parameters

Product Model	TH-K40	TH-K60	TH-K100
Dimensions	Rear outlet: 136mm×129mm×205.5mm; bottom outlet: 125mm×129mm×217mm		
Bare Weight	<2kg		
Laser Light Source	905nm		
Laser Characteristics	Class 1 laser products, eye safety (IEC 60825-1)		
Operating Voltage	Radar operating voltage: DC10~32V, recommended voltage: DC24V DC12V, heating module power supply: DC24V		
Starting Current	2A@DC24V radar side; 2.5A@DC12V radar side		
Power Consumption	Typical ⩽ 15W, heating ⩽ 55W		
Performance Parameters			
Scanning Angle	270°		
Working Range	0.1-90m	0.1-100m	0.1-250m
Measuring Distance	40m@10%; 90m@90%	60m@10%; 100m@90%	100m@10%; 250m@90%
Scanning Frequency	12.5Hz/25Hz/50Hz/100Hz	12.5Hz/25/50Hz	
Angular Resolution	0.0625/0.125/0.25/0.5°	0.125/0.25/0.5°	
Measuring Accuracy	±30mm	±40mm	±50mm
Repeatability	±20mm	±20mm	±50mm
Number Of Defense Zones	Obstacle avoidance: 16 groups × 4, target tracking: 16 + 16		
Interface			
Interface Type	Power supply: 6-core; Communication: 7-core; IO: 9-core		
Power Interface	Working power: 1; Heating power: 1		
Communication Interface	Network port: 1; R232/RS485: 1 route (optional)		
Remote Control	Remote control (YK) 3-way, dry contact	Remote signal (YX) 2-way; Remote control (YK) 2-way, dry contact	
Synchronization Signal	Sync 1 channel		
Environment And Safety			
Operating Temperature	Wide temperature version -55°C to +70°C; non-wide temperature version -20°C to +55°C		
Operating Humidity	0% ~ 95%		
General Environment	Altitude ⩽ 6000m; heat and humidity resistant; corrosion resistant		
Anti-Light Interference	80000lx		
Product Protection Level	IP68	IP67	IP68

Application



Mining Truck Obstacle Avoidance/Positioning/
Loading Monitoring/Packaging

TH-K130

TH-K130 is an industrial grade 2D LiDAR with strong environmental adaptability and long range measurement as its core highlights: it can maintain stable operation in extreme temperature environments, while also having precise measurement performance and a wide detection range. Even when facing low reflectivity targets at long distances, it can capture data and work with platforms or cranes to meet the volume measurement needs of bulk material.

Parameters

Product Model	TH-K130
Overall Dimensions	Rear outlet: 136mm×129mm×205.5mm; bottom outlet: 125mm×129mm×217mm
Bare Weight	2kg
Suffix Identification	Rear outlet (no mark); bottom outlet (-A); wide temperature (-W); RS232 (-2); RS485 (-4)
Laser Light Source	905nm
Laser Characteristics	Class 1 laser products, eye safety (IEC 60825-1)
Working Voltage	DC10~32V, recommended voltage: DC24V DC12V
Starting Current	2A@DC24V radar side; 2.5A@DC12V radar side
Heating Power Supply	DC24V
Total Power Consumption	Typical ⩽15W, heating ⩽55W
Performance Parameters	
Scanning Angle	270°
Scope Of Work	1~250m
Measure Distance	75m@2%,130m@10%,250m@90%
Scanning Frequency	25Hz
Angular Resolution	0.0625°
Response Time	40ms@25Hz+20ms
Measurement Accuracy	±30mm
Repeatability Accuracy	±30mm
Interface	
Interface Type	Power: 5 cores; Network: 4 cores; IO: 8 cores; IO: 8 cores
Power Interface	Working power supply: 1 circuit; Heating power supply: 1 circuit
Communication Interface	Network port: 1; R232/RS485: 1 (optional)
Remote Signaling And Control	Remote signaling (YX): 2 channels; Remote control (YK): 2 channels, remote control feature - dry contact point
Synchronization Signal	Sync: 1 channel
Remote Control Characteristics	dry contact
Environment And Safety	
Operating Temperature	Wide temperature version -40 ° C~+70 ° C; Non wide temperature version -20 ° C~+55 ° C
Operating Humidity	0% ~ 95%
Comprehensive Environment	Altitude ⩽ 6000m; moisture and heat resistance; corrosion-resistant
Anti Strong Light Interference	80000lx
Product Protection Level	IP67 (IP68 can be customized)

Application

Measurement of material volume

TH-9430/60/100/130

TH-94 series industrial-grade 3D LiDAR features full-area coverage with 90° line scan and 360° field scan capabilities, outputs 3D point clouds, and integrates a 2MP+ camera for auxiliary monitoring. The entire series is explosion-proof certified, boasts IP65 protection, and operates in a full temperature range of -20°C to +60°C. It can flexibly adapt to 3D modeling of various types of bulk materials and silo volume monitoring, meeting the requirements for stable sensing in industrial scenarios.

Parameters

Product Model	TH-9430	TH-9460	TH-94100	TH-94130
Dimensions	Φ274mm×292mm			
Bare Machine Weight	7.7±0.5Kg			
Wire Type	Explosion-proof sealed connector			
Laser Light Source	905nm			
Laser Characteristics	Class 1 laser product, eye-safe (IEC 60825-1)			
Working Voltage	DC24V±10%			
Starting Current	3.5A@DC24V@device side			
Power Consumption	Typical: ⩽50W			
Performance Parameters				
Working Range	0.5~90m	0.5~180m	0.5~250m	0.1~250m
Measuring Distance	15m@2%, 30m@10%, 90m@90%	30m@2%, 60m@10%, 180m@90%	60m@2%, 100m@10%, 250m@90%	70m@2%, 130m@10%, 250m@90%
Scanning Frequency	25Hz/50Hz			
Angular Resolution	0.0625°/0.125°			
Response Time[2]	20ms@50Hz+20ms			
Measurement Accuracy	±30mm	±40mm	±50mm	
Repeatability	±30mm	±40mm	±50mm	
Detection Angle	Radar field of view ⩾90°, video field of view ⩾90°, 0-360° horizontal scan, 0.1-10° s horizontal rotation speed			
Video Features	2.8mm, fixed-focus lens, no fill light, ⩾2MP			
Positioning Accuracy	0.1°@Average Accuracy			
Environment And Safety				
Operating Temperature	-20℃~ + 60℃			
Operating Humidity	0% ~ 95%			
Product Protection Rating	IP65			
Explosion-Proof Marking	Ex tb IIIC T130℃ Db			

Application

Volume Measurement of Bulk Materials

Cutting-edge Innovation Meets Reliability

sales@tianhe-elec.com www.tianhe-elec.com