

LS LIDAR PRODUCT GUIDE

AUTONOMOUS VEHICLE
& ADAS APPLICATIONS



Autonomous vehicle & ADAS



CH Series 128-Channel LiDAR

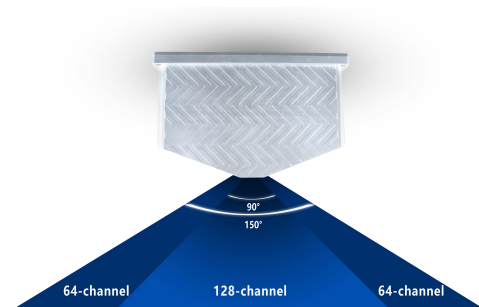


Abstract

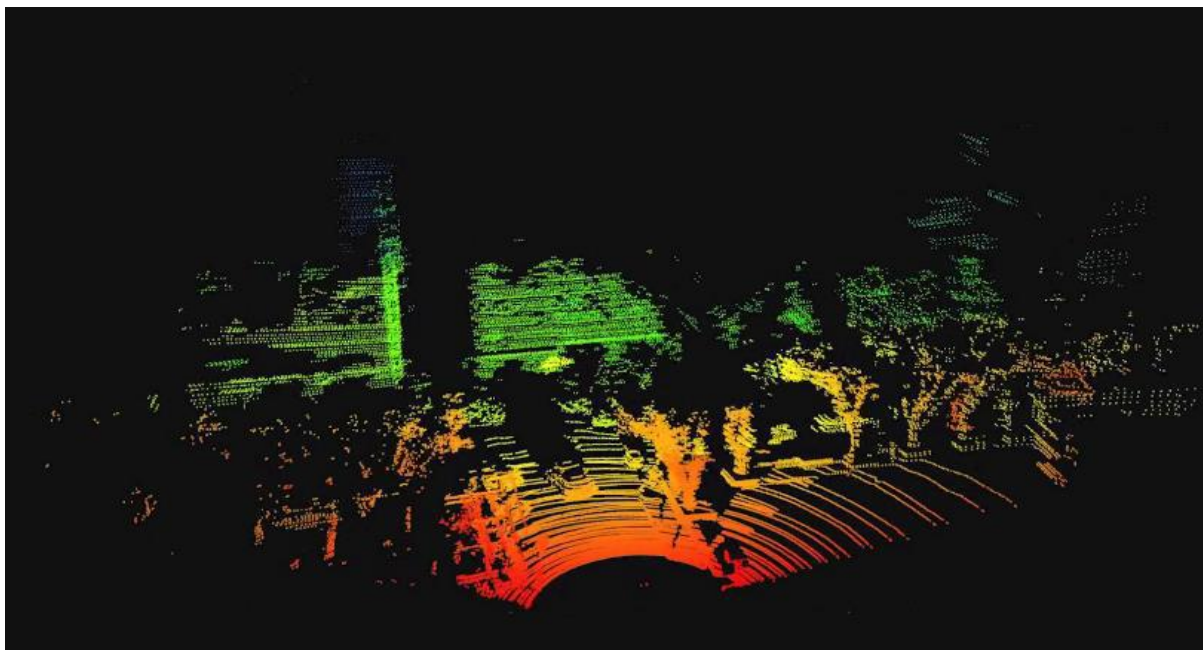
The CH Series 128-Channel LiDAR is designed for Automotive Grade Standards to meet demands of L4 and L5 autonomous cars. With a hybrid solid-state structure. The horizontal FOV is 150°. Its detection range is up to 300m, and the distance accuracy is $\pm 2\text{cm}$, which can work with high-speed, low-speed cars and other scenarios.

Features

- Long range, high density, rich point-cloud
- Automotive Grade design, stable structure and lower power consumption
- Mass production, high cost-effective



Demo



Specifications

Model		CH128
Channel		128
Measurement Technique		Time of Flight (TOF)
Wave Length		905nm
Classification		Class 1 Eye-safe/ IEC 60825-1:2007 & 2014
Measurement Range	Typical	100m / 150m / 200m (Reflectivity 20%)
	Min	90m / 135m / 185m (Reflectivity 20%)
Ranging Accuracy		±5cm (0.5m ~ 10m) , ±2cm (10m ~ 200m)
Data Points Generated		415,000 points per second
Rotation Rate		5 ~ 20Hz
Field of View (FOV)	Horizontal	150°
	Vertical	-17°~ 14.8°
Angular Resolution	Horizontal	5Hz: 0.18°/ 10Hz: 0.36°/ 20Hz: 0.72°
	Vertical	Vertical angle resolution between 0 ° ~ 0.84 ° , with a minimum of 0.23 ° in the middle and a maximum of 0.25 °
Operating Voltage		9V~ 36VDC
Operating Temperature		-40°C ~ 85°C
Communication Interface		1000M Ethernet , PPS
Power Consumption		15W
Shock Test		500m/sec ² , last11ms
Vibration		5Hz-2000Hz , 3G rms
IP		IP 67
Weight		2.5kg
Dimension (L·W·H)		207 * 125 * 142mm

CH Series 120/64-Channel LiDAR (Hybrid Solid-State)



Specifications

Model		CH120	CH64
Channel		120	64
Measurement Technique		TOF	TOF
Wave Length		905nm	905nm
Laser Classification		Class 1 Eye-safe/ IEC 60825-1:2007 & 2014	Class 1 Eye-safe/ IEC 60825-1:2007 & 2014
Measurement Range		100m	100m / 150m / 200m at 20%
Ranging Accuracy		±2cm	±2cm
Data Points Generated		MAX 480,000 points per second	MAX 426,000 points per second
Rotation Rate		5 ~ 20Hz	5 ~ 20Hz
Field of View (FOV)	Horizontal	48°	120°
	Vertical	-13°~ 7°	-13.33°~ 7.67°
Angular Resolution	Horizontal	5Hz:0.06°/ 10Hz:0.12°/ 20Hz:0.24°	5Hz:0.09°/ 10Hz:0.18°/ 20Hz:0.27
	Vertical	0.167°	0.33°
Operating Voltage		9V~ 36VDC	9V~ 36VDC
Operating Temperature		-40°C ~ 85°C	-40°C ~ 85°C
Communication Interface		1000M Ethernet , PPS	1000M Ethernet , PPS
Shock Test		500m/sec ² , last11ms	500m/sec ² , last11ms
Vibration		5Hz-2000Hz , 3G rms	5Hz-2000Hz , 3G rms
IP		IP 67	IP 67
Weight		2.5kg	1.5kg
Dimension (L·W·H)		152.5 * 98*133.2mm	155 * 107.5 * 90mm

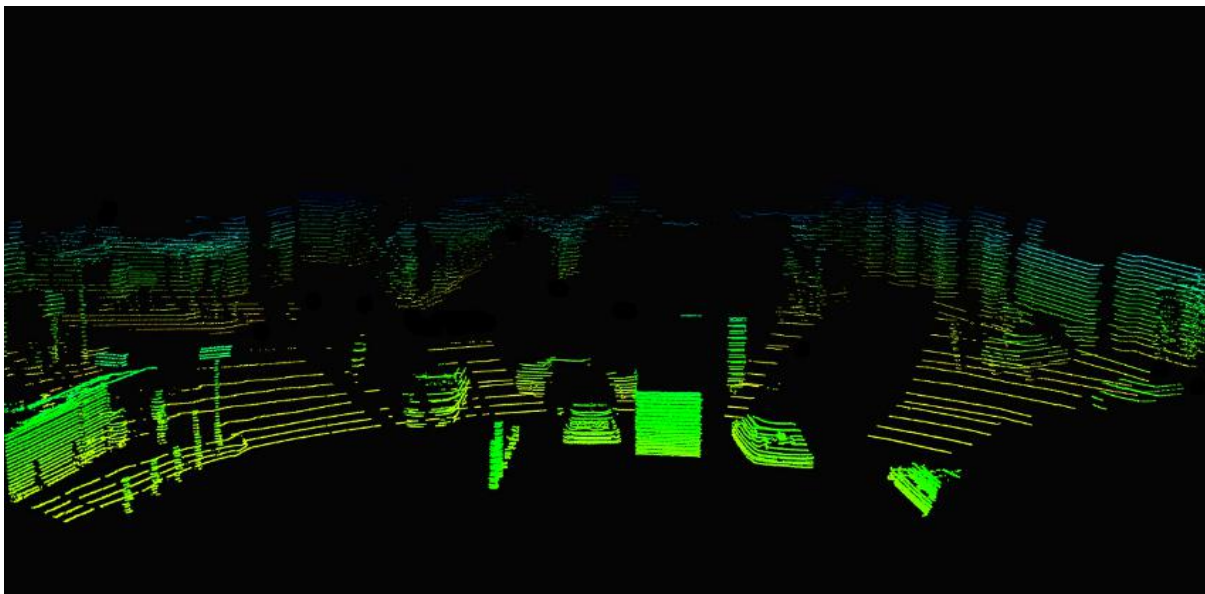
CH Series 32/16-Channel LiDAR



Abstract

CH Series 32 / 16 channel LiDAR is designed for Automotive Grade Standards to meet demands of L4 and L5 autonomous cars. With a hybrid solid-state structure, its measurement range is up to 300 m(CH32 / 16), and the ranging accuracy is $\pm 2\text{cm}$, with 120° horizontal FOV, measuring rate up to 426k pts/s(CH32 / 64), 213k pts/s(CH16), which can work with high-speed, low-speed cars and other scenarios.

Demo



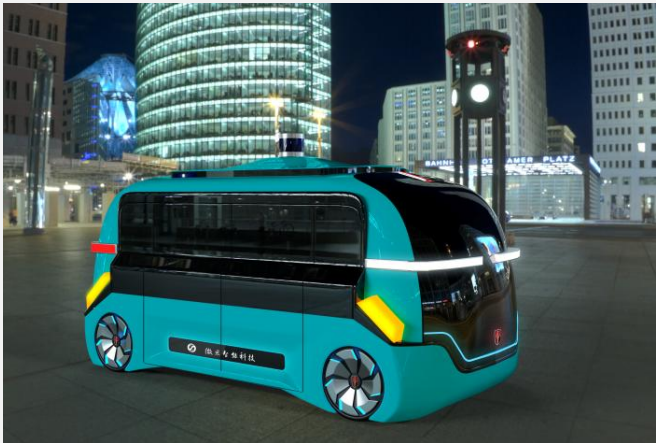
Specifications

Model		CH32	CH16
Channel		32	16
Measurement Technique		Time of Flight (TOF)	
Wave length		905nm	
Laser Classification		Class 1 Eye-safe / IEC 60825-1:2007 & 2014	
Measurement Range (Standard)	Typical	100m / 150m / 200m (Reflectivity 20%)	
	Min	90m / 135m / 180m (Reflectivity 20%)	
	Accuracy	±2cm (0.5m ~ 200m)	
Measurement Range (Enhanced)	Typical	200m (Reflectivity 10%) / 300m (Reflectivity 70%)	
	Min	180m (Reflectivity 10%) / 270m (Reflectivity 70%)	
	Accuracy	±3cm (0.5m ~ 300m)	
Data Points Generated		426,000 points per second	213,000 points per second
Rotation Rate		5 ~ 20Hz	
Field of View (FOV)	Horizontal	120°	
	Vertical	-6.67°~ 4.58°	-4°~ 2°
Angular Resolution	Horizontal	200m: 5Hz: 0.045° / 10Hz: 0.09° / 20Hz: 0.18° 300m: 5Hz: 0.075° / 10Hz: 0.14° / 20Hz: 0.27°	
	Vertical	Vertical angle resolution between 0 ~ 0.81 °, minimum 0.09 ° in the middle and a maximum of 0.47 °	
Operating Voltage		9V~ 36VDC	
Operating Temperature		-40°C ~ 85°C	
Communication Interface		100M Ethernet , PPS	
Power Consumption		10 W	9 W
Shock Test		500m/sec ² , last11ms	
Vibration		5Hz-2000Hz , 3G rms	
IP		IP 67	
Weight		1.5kg	
Dimension (L·W·H)		155 * 107.5 * 90mm	

■ Autonomous vehicle & ADAS



■ Autonomous vehicle & ADAS



Autonomous vehicle & ADAS



Autonomous vehicle & ADAS



Autonomous vehicle & ADAS



■ Autonomous vehicle & ADAS





**Dealer of Leishen LIDAR products and technical solutions
in Australia and New Zealand Region**

Contact: +61 412 75 2033

Email: info@mgwtradeservice.com.au

Website: <https://mgwtradeservice.com.au/leishen-lidar/>

Location: Melbourne, Australia