HESAI

JT128

Mini Hyper-Hemispherical 3D Lidar

Hyper-Hemispherical Sensing
360° x 187° ultra-wide FOV

High-Resolution 3D Detection
128 vertical channels

Miniature Size
30 mm exposed window height

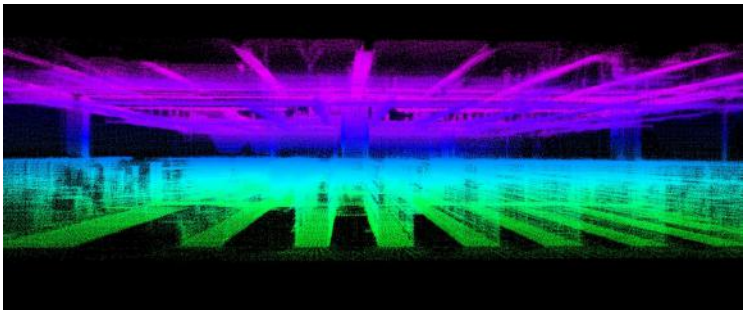
60 m Detection Range
10,000 m²+ detection coverage

Blockage Detection
Cover lens contamination & rain drops detection

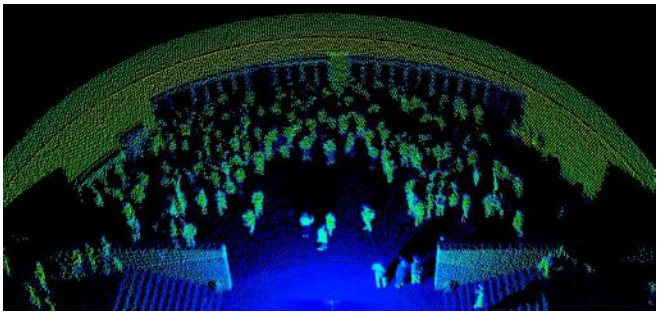
SPECS

RANGING CAPABILITY	30 m @10% reflectivity, up to 60 m	DIMENSIONS (DIAMETER X HEIGHT)	Φ 60 x H 68 mm
FOV	360° (H) x 187° (V)	WEIGHT	250 g

POINT CLOUD



JT128 SLAM Performance



JT128 Live Demo

APPLICATIONS

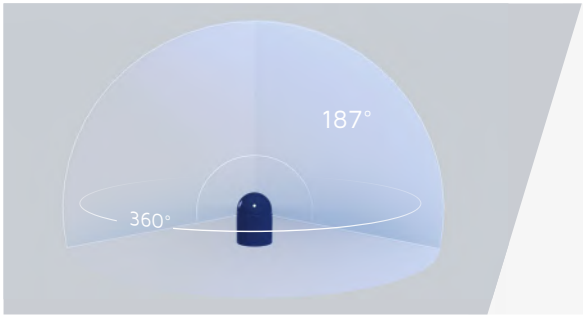
PRODUCT HIGHLIGHTS

COMPACT DESIGN FOR SEAMLESS INTEGRATION

30 mm
Window Height
Embedded installation

30% ↓
Diameter
Compared with similar products

70% ↓
Volume
Compared with similar products



WORLD'S WIDEST HYPER-HEMISPHERICAL FOV

360° x 187°
Ultra-wide FOV

60% ↑
Wider than similar products

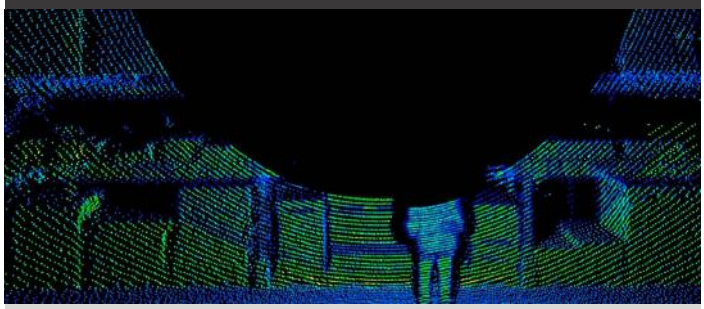
REAL-TIME COVER LENS SELF-INSPECTION

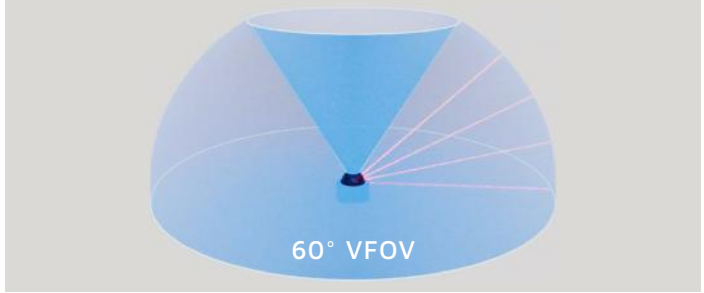
99.9%
Noise Filtering

- Contamination detection
- Rain drops detection

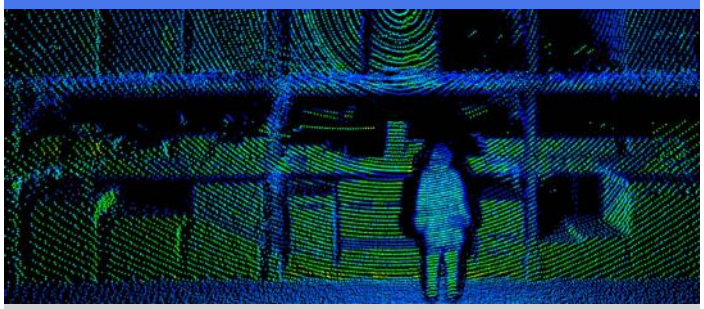
WIDER VIEW, STRONGER ENVIRONMENTAL PERCEPTION

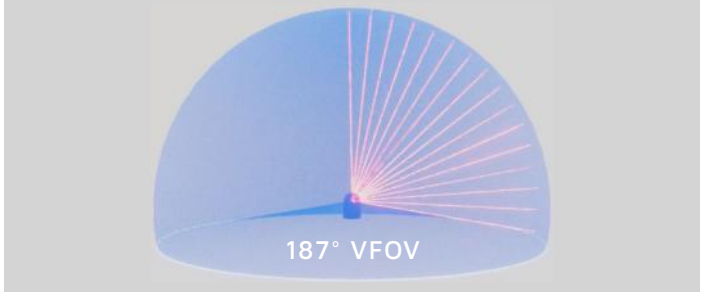
OTHER WIDE-FOV LIDAR (WITH BLIND SPOTS)





HESAI JT128 (NO BLIND SPOTS)





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HESAI

JT16

16-Channel Mini 3D Lidar

Miniature Size

75% volume reduction, flexible installation[1]

Ultra-Lightweight

Lightweight materials, < 200 g

Energy-Efficient

35% reduction in power consumption, longer duration[2]

Affordability

Lower cost, higher performance

Blockage Detection

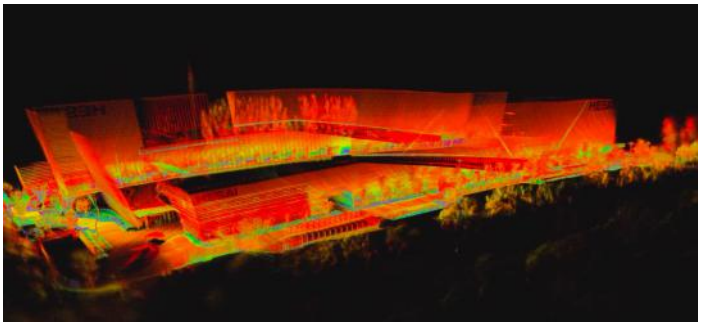
Real-time cover lens self-inspection

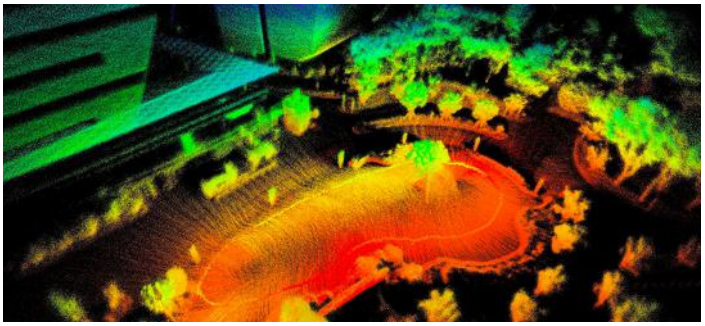
1. Compared with previous-generation 16-channel lidar
2. Compared with similar products

SPECS

RANGING CAPABILITY	30 m @10% reflectivity, up to 100 m	DIMENSIONS	Φ 55 x H 64 mm
FOV	360° (H) x 40° (V)	WEIGHT	< 200 g
RESOLUTION	0.6° (H) x 2.67° (V)	NOISE LEVEL	< 30 dB
PRECISION	3 cm	POWER CONSUMPTION	4.3 W

SLAM POINT CLOUD

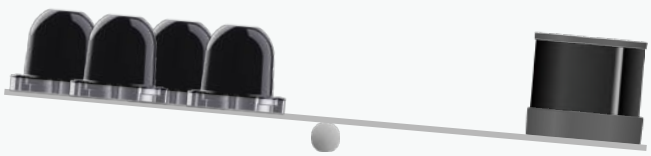




APPLICATIONS

PRODUCT HIGHLIGHTS

SMALLER & LIGHTER



JT16 X 4 Previous 16-channel lidar x 1

< 200 g, 75% Lighter Compared with Previous 16-Channel Lidar

- Miniature size, flexible installation
- Ultra-lightweight with advanced polymer composites
- Advanced lidar architecture design, innovative optical-mechanical structure

CALIBRATION FREE

Integrated Pre-Calibrated System

- Built-in IMU: cost saving
- Optimized algorithm: synchronized output of calibrated data

REAL-TIME COVER LENS SELF-INSPECTION

Intelligent Waveform Processing Engine

- Contamination detection
- Rain drops detection

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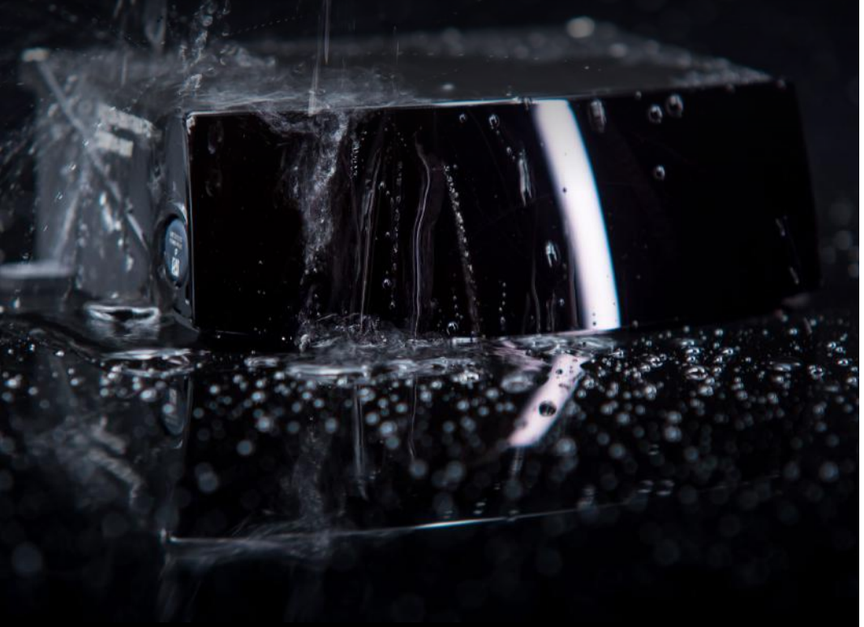
AT128

Automotive Ultra-High Resolution
Long-Range Lidar

- Real 128-channel, image-level perception
- Ultra-high overall resolution
- 210 m detection range (@10% reflectivity)



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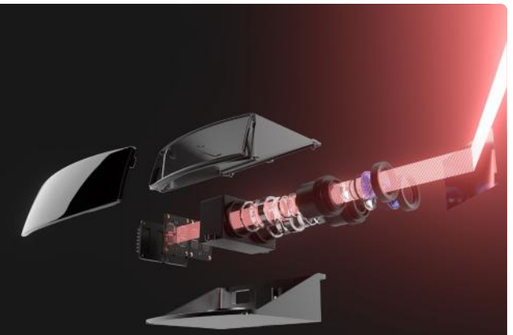
AT128

Proprietary Vertical Integration Technology

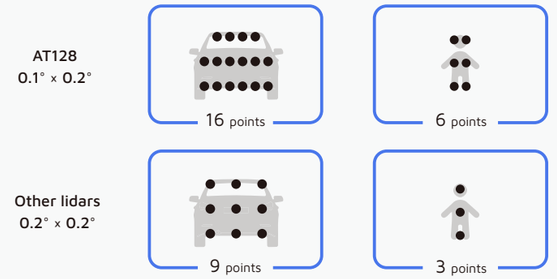
Hesai has successfully integrated hundreds of components into a small and compact lidar.

The proprietary technology increases detection accuracy, consistency, and reliability for mass production, while also significantly reducing cost.

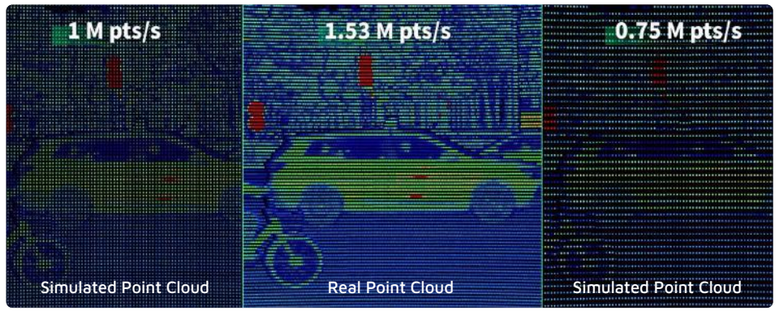


Small Form Factor, Seamless Vehicle Integration

Ultra-High Point Density, Image-Like Resolution



* Lidar is 200 m away from the target.



AT128 GENERATES OVER 1.53 MILLION POINT RATE

Automotive-Grade Reliability for Mass-Production

KEY SPECIFICATIONS

PIXEL RESOLUTION
1200 x 128

RANGE CAPABILITY
210 m @ 10% reflectivity

POINT RATE
Single Return: 1,536,000 points/s
Dual Return: 3,072,000 points/s

FIELD OF VIEW
120° (H) x 25.4° (V)

RESOLUTION
0.1° (H) x 0.2° (V)

FRAME RATE
10 Hz, 20 Hz

DIMENSIONS (W X D X H)
136 x 114 x 49 mm

POWER CONSUMPTION
13.5 W

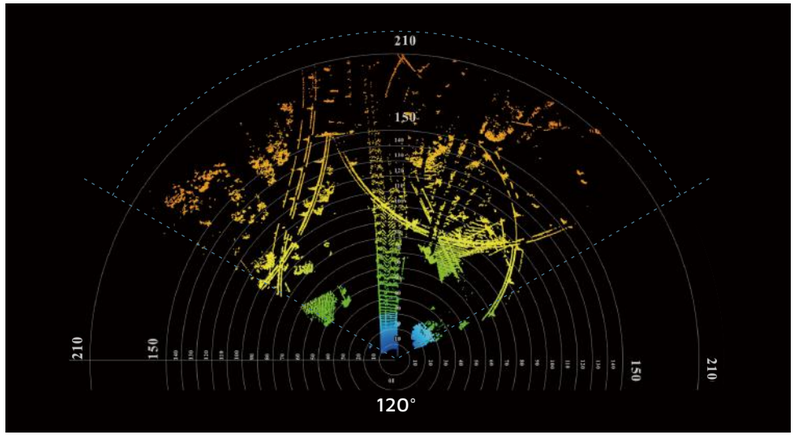
OTHER FEATURES

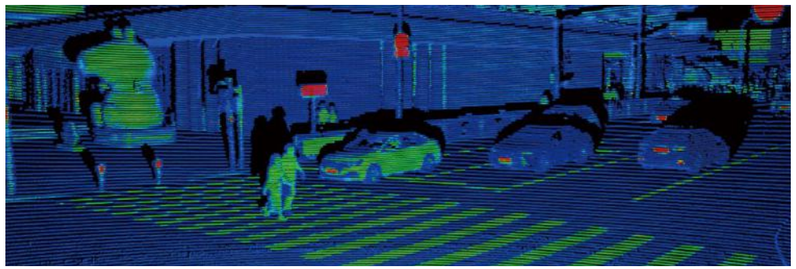
INTERFERENCE REJECTION
Proprietary technology to individually encode each laser beam, rejecting interference from all other lidars.

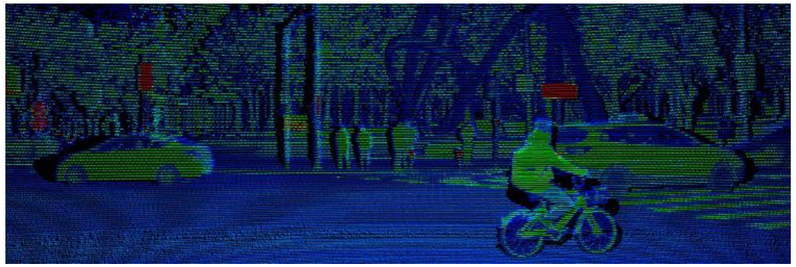
FUNCTIONAL SAFETY
ISO 26262 ASIL B compliant
Comprehensive safety mechanisms, diagnostic coverage >90%
FHTI (Fault Handling Time Interval) ≤100 ms.

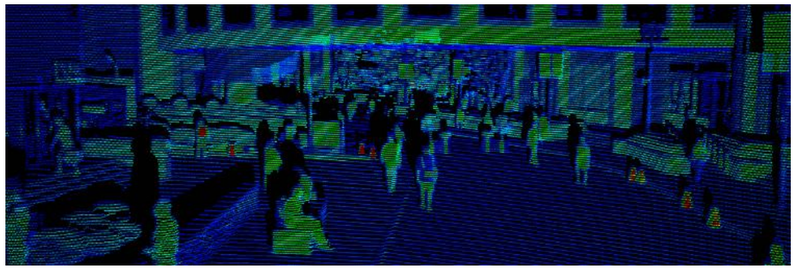
CYBERSECURITY
Product development process rigorously follows ISO 21434 standards, performing 100% overall cybersecurity risk management, with over 10 cybersecurity mechanisms.

POINT CLOUD









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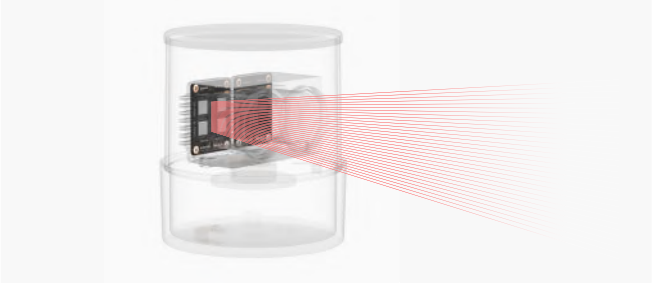
OT128

Next Generation
High Performance 360° Spinning Lidar



OT128 is Hesai's next generation of L4 autonomous driving lidar, achieving a superb balance between performance, cost, and reliability. The automotive-grade OT128 can sense up to 200 meters with 360° horizontal FOV, making it the best choice for cost-effective lidar in large-scale autonomous vehicle deployment.

Key Specifications

Range Capability	200 m (@10% reflectivity, 100 klux)	Instrument Range	0.3 to 230 m
FOV	360° (H) x 40° (V)	Point Rate	3,456,000 pts/s (single return) 6,912,000 pts/s (dual return)
Angular Resolution	0.1° (H) x 0.125° (V) (Finest)	Frame Rate	10 Hz; 20 Hz
Range Accuracy	±3 cm (3 to 200 m)	Size	Height: 132.3 mm Max. Diameter: 118.0 mm
Power Consumption	29 W	Ingress Protection	IP6K9K & IP6K7
Automotive-Grade Standards	ISO 21434 Cybersecurity, Class 1 Eye Safety, ISO 26262 ASIL B Functional Safety		

Applications

Robotaxi | Robotruck | Robobus | Last Mile Delivery | V2X | Port Automation

Product Highlights

Designed for Mass Production

Modular design for high integration and automated production, balancing product performance with superior cost-effectiveness

360° Full Coverage FOV

Achieving full 360° coverage with just one primary lidar sensor makes integration easier and enhances algorithm compatibility

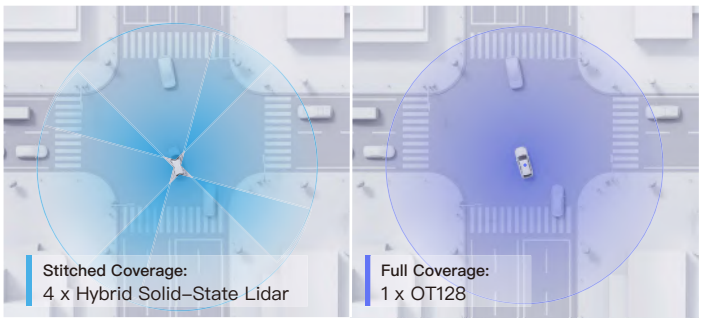
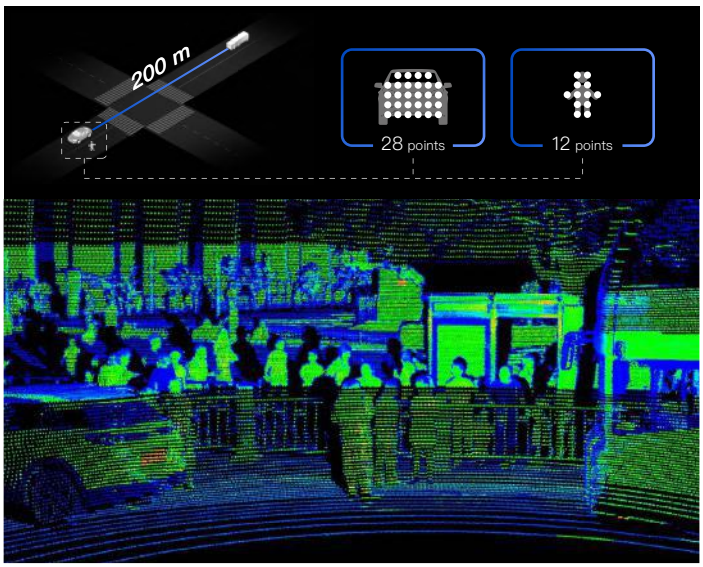


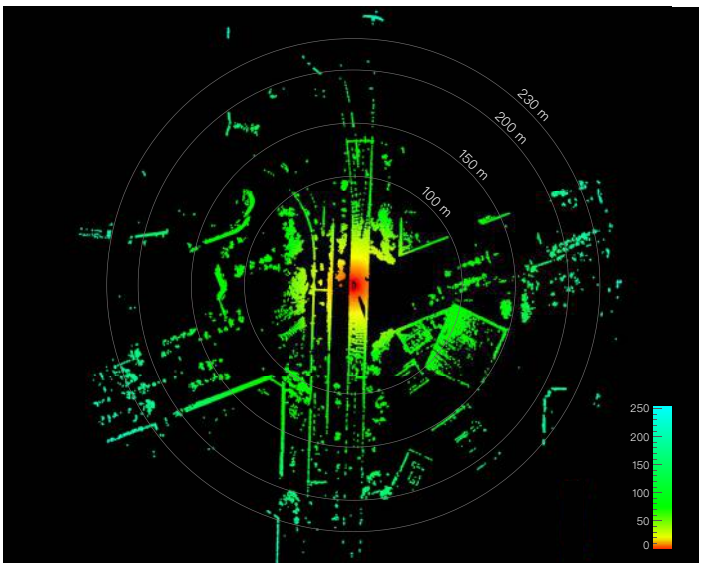
Image-Like Resolution

With a finest resolution of 0.1° (H) x 0.125° (V), OT128 enables the perception of cars and pedestrians even 200 meters away

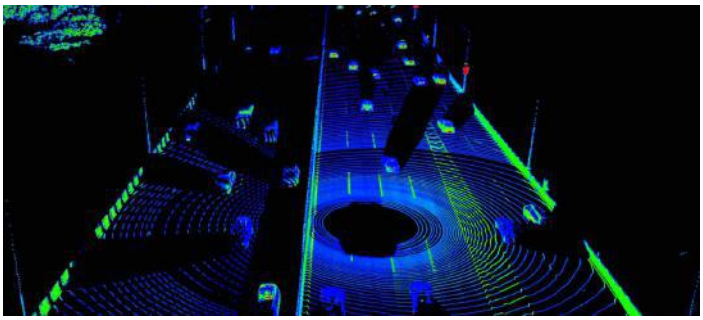


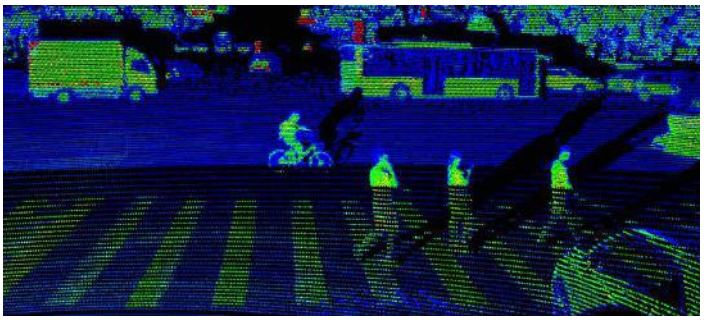
200 m Range Capability

Sensing objects over 200 m in 100 klux ambient light with 10% standard reflectivity, up to 230 m instrument range



Point Cloud





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QT128

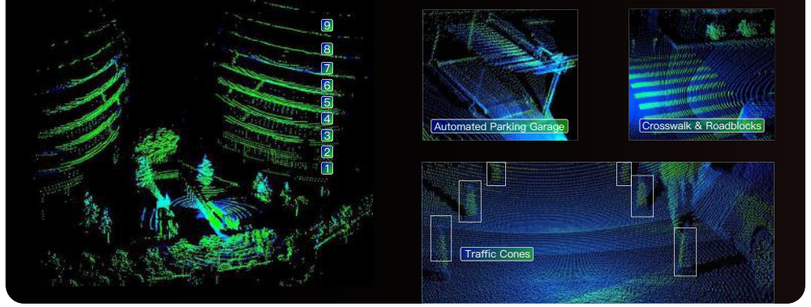
128-Channel
Ultra-Wide View Lidar

- 105° Ultra-Wide Vertical FOV
- Optimized for Superior Perception
- Automotive Grade

QT128

105° Ultra-Wide Vertical FOV

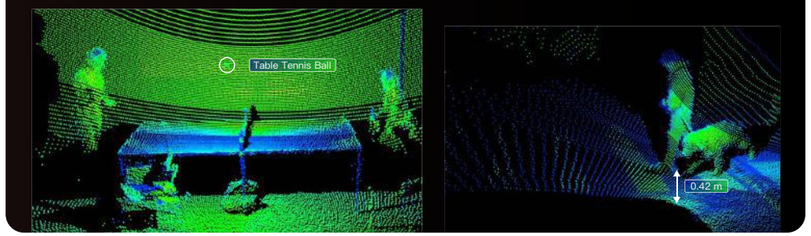
QT128 has the largest vertical FOV of comparable lidar products on the market, enabling superior blind spot coverage. For example, the sensor can simultaneously detect high-rise buildings, pedestrians, cars, and traffic cones.



Strict Automotive-Grade Reliability Testing

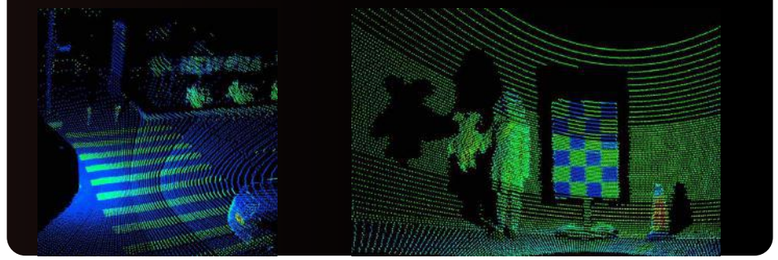
128 Channels, Higher Resolution

QT128 has 128 vertical channels, doubling the number from the previous generation. Cars, pedestrians, and small animals at extremely close range can still be clearly detected.



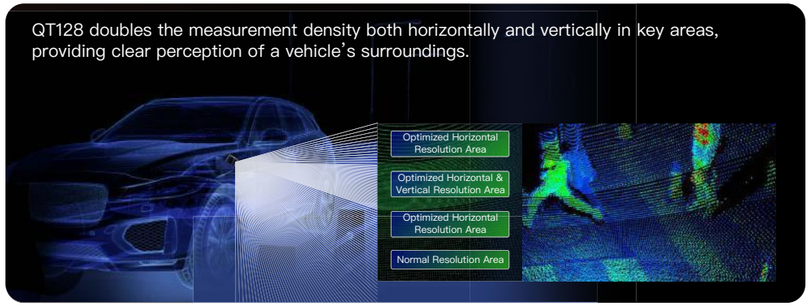
High-Quality Reflectivity Information

Provides accurate reflectivity information to enhance object recognition.



Optimized Channel Distribution, Superior Perception

QT128 doubles the measurement density both horizontally and vertically in key areas, providing clear perception of a vehicle's surroundings.



Light and Compact

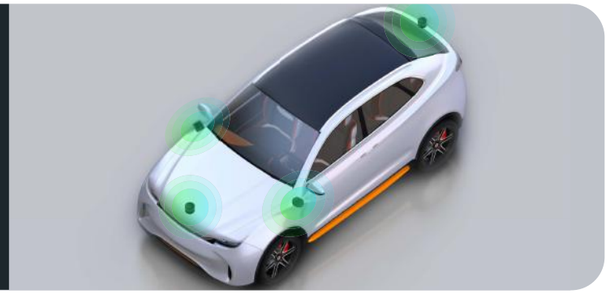
83 mm tall

738 g

QT128

Applications

Robotaxi



Robotrucks

Delivery Robots

Shuttle Buses

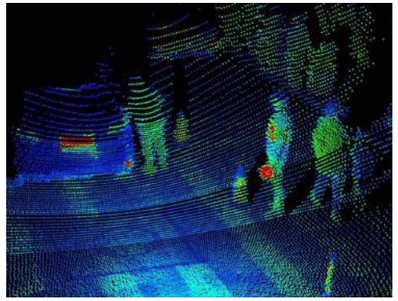
QT128

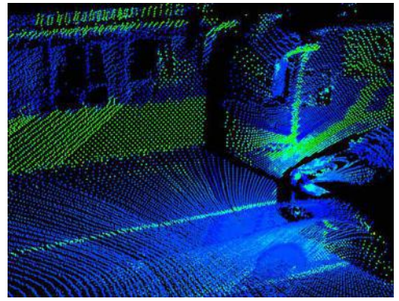
Key Specifications

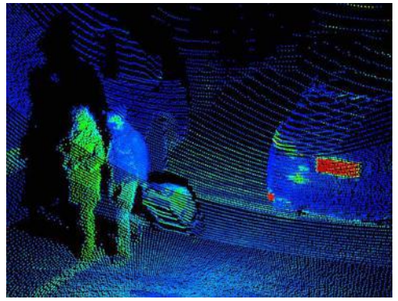
Channel	128	Laser Class	Class 1 Eye Safe
Instrument Range	0.05 to 50 m	Range Capability	20 m (at 10% reflectivity)
Range Accuracy	±3 cm (typical)	Range Precision	2 cm (typical)
FOV (Horizontal)	360°	Resolution (Horizontal)	Finest at 0.4° (10 Hz)
FOV (Vertical)	105.2°	Resolution (Vertical)	Finest at 0.4°
Power Consumption	12 W	Rated Voltage Range	DC 12 to 48 V
Operating Temperature	–40℃ to 85℃	Ingress Protection	IP6K7 & IP6K9K
Weight	0.7 kg	Dimensions	Height: 83.9 mm Top/Bottom: Φ85.9/87.0 mm

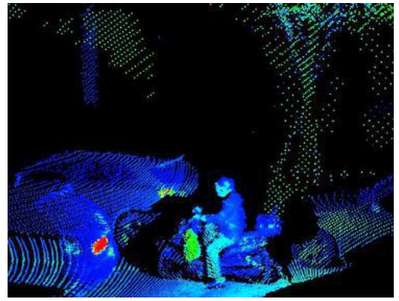
QT128

Point Cloud









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XT32/16

32/16-Channel Mid-Range Lidar

- Minimum Range of Zero
- High Precision
- Cost-Efficient

XT32/16

Key Specifications

Instrument Range 0.05 to 120 m	Range Capability 80 m @10% reflectivity (Channels 9 to 24)
Range Accuracy ±1 cm (typical)	Range Precision 0.5 cm (1σ, typical)
Vertical FOV XT16: 30° (–16° to 15°) XT32: 31° (–16° to 15°)	Vertical Resolution XT16: 2° XT32: 1°
Frame Rate 5 Hz, 10 Hz, 20 Hz	Horizontal Resolution 0.09° (5 Hz)/0.18° (10 Hz) 0.36° (20 Hz)
Ingress Protection IP6K7	Operating Temperature –20°C to 65°C
Weight 0.8 kg	Dimensions Height: 76.00 mm Top/Bottom: Φ100.0/103.0 mm
Power Consumption XT16: 9 W (typical) XT32: 10 W (typical)	Operating Voltage DC 9 to 36 V
Clock Source GPS/PTP	Data Points Generated XT16: Single Return: 320,000 pts/sec Dual Return: 640,000 pts/sec XT32: Single Return: 640,000 pts/sec Dual Return: 1,280,000 pts/sec

XT32/16

Applications

Ummaned Logistics

UAV

Factory AGVs

XT32/16

Product Superiority

Outstanding Precision

Superior to comparable products on the market.

Minimum Range of Zero

XT series continuously outputs valid point cloud even when objects directly touch the lidar's cover lens. This enables the self-detection of lens smear and occlusion.

Strong Range Capability

Range detection up to 120 m, POD>90% when detecting 10% reflectivity targets at 80 m (middle 16 channels).

High-Quality Reflectivity Information

High accuracy and consistency, greater dynamic range, and provides more accurate reflectivity information.

Reliability

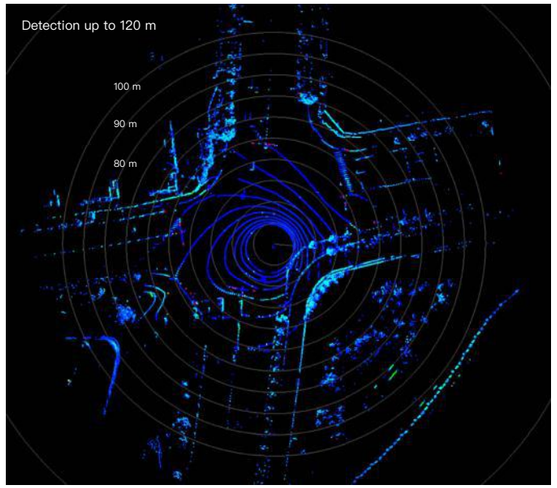
Have passed strict reliability tests including High-temperature operation, Low-temperature wakeup+operation, Thermal Shock/Air-to-Air, Vibration with Thermal Cycling, Mechanical Shock, Humid Heat Cyclic, Frost, Water and Dust Proof, and Shipping Vibration. Robust and reliable in various operation environments.

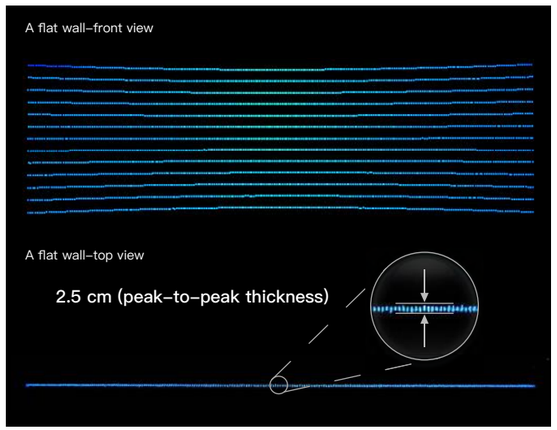
Interference Rejection

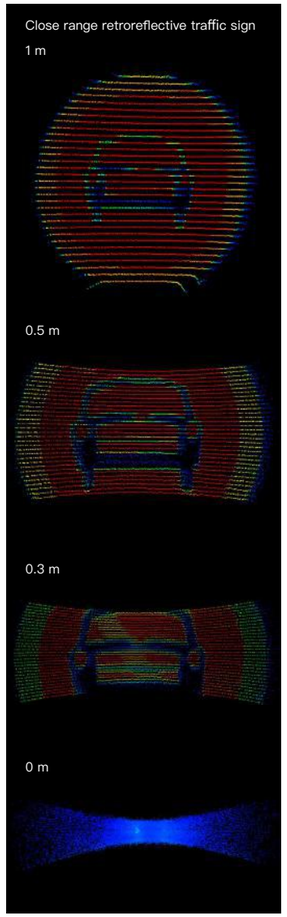
Every pulse has its own 'fingerprint', rejecting noise when multiple lidars operate closely together.

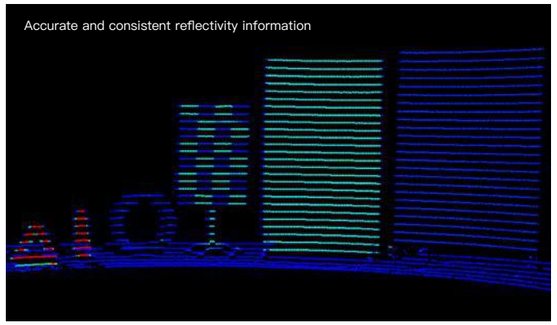
XT32

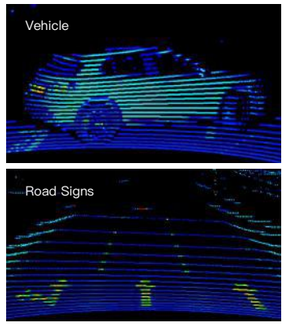
Point Cloud











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XT32/16

Product Superiority

Outstanding Precision

Superior to comparable products on the market.

Minimum Range of Zero

XT series continuously outputs valid point cloud even when objects directly touch the lidar's cover lens. This enables the self-detection of lens smear and occlusion.

Strong Range Capability

Range detection up to 120 m, POD>90% when detecting 10% reflectivity targets at 80 m (middle 16 channels).

High-Quality Reflectivity Information

High accuracy and consistency, greater dynamic range, and provides more accurate reflectivity information.

Reliability

Have passed strict reliability tests including High-temperature operation, Low-temperature wakeup+operation, Thermal Shock/Air-to-Air, Vibration with Thermal Cycling, Mechanical Shock, Humid Heat Cyclic, Frost, Water and Dust Proof, and Shipping Vibration. Robust and reliable in various operation environments.

Interference Rejection

Every pulse has its own 'fingerprint', rejecting noise when multiple lidars operate closely together.

XT32

Point Cloud