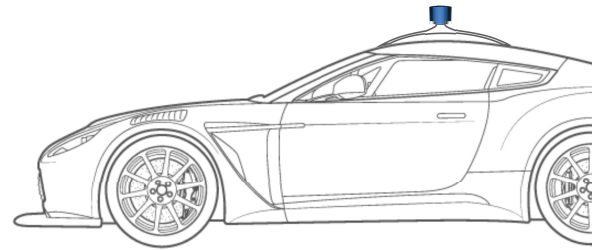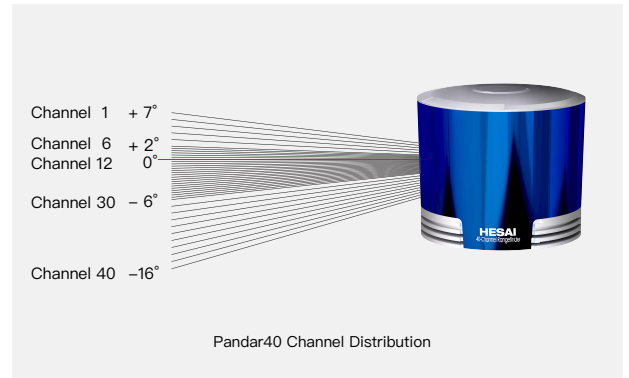# Pandar40

40–Channel Mechanical LiDAR

Pandar40

Pandar40 is a 40–channel mechanical LiDAR. It creates 360° 3D images by rotating 40 laser diodes inside the housing. Pandar40's unique channel distribution makes it ideal for autonomous driving applications.

Pandar40 can detect objects with 20% reflectivity from as far as 200 meters away.

Pandar40 has gone through stringent reliability tests, including HALT (highly accelerated life test), vibration strength test and mechanical resonance test, ensuring excellent and stable performance in harsh environments.

Channel 1	+ 7°
Channel 6	+ 2°
Channel 12	0°
Channel 30	– 6°
Channel 40	–16°

Pandar40 Channel Distribution

Pandar40 serves a wide range of industries, including autonomous driving, HD mapping and logistics.

Unique Advantages of Pandar

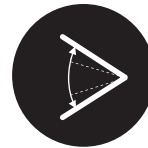| Extended Measurement Range	Optimized Angular Resolution	Compact and Lightweight	Wide Field of View	Customized

Specifications

Sensor			
Operational Principle	Time of Flight	Rotation Rate	10 Hz; 20 Hz
Scanning Method	Mechanical Rotation	FOV (Vertical)	23° (–16° to 7°)
Channel	40	Angular Resolution (Vertical)	0.33° (finest)
Measurement Range	0.3 m to 200 m (at 20% reflectivity)	FOV (Horizontal)	360°
Measurement Accuracy	±5 cm (0.3 m to 0.5 m), ±2 cm (0.5 m to 200 m)	Angular Resolution (Horizontal)	0.2° (10 Hz); 0.4° (20 Hz)

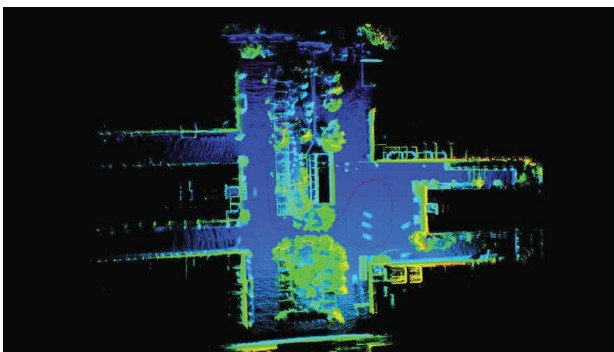| Output			
Data Output	UDP: distance, azimuth angle, intensity	Data Transmission Method	UDP/IP Ethernet (100 Mbps)
Data Points Generated	Single Return Mode: 720,000 points per second Dual Return Mode: 1,440,000 points per second		

| Mechanical/Electrical/Operational			
Size	Height: 101.50 mm; Top Diameter: 116.00 mm; Bottom Diameter: 112.00 mm		
Weight	1.43 kg	Operating Voltage	9 V to 32 V
Power Consumption	15 W	Laser Class	Class 1 Eye Safe
Operating Temperature	−20℃ to 60℃	Environmental Protection	IP67

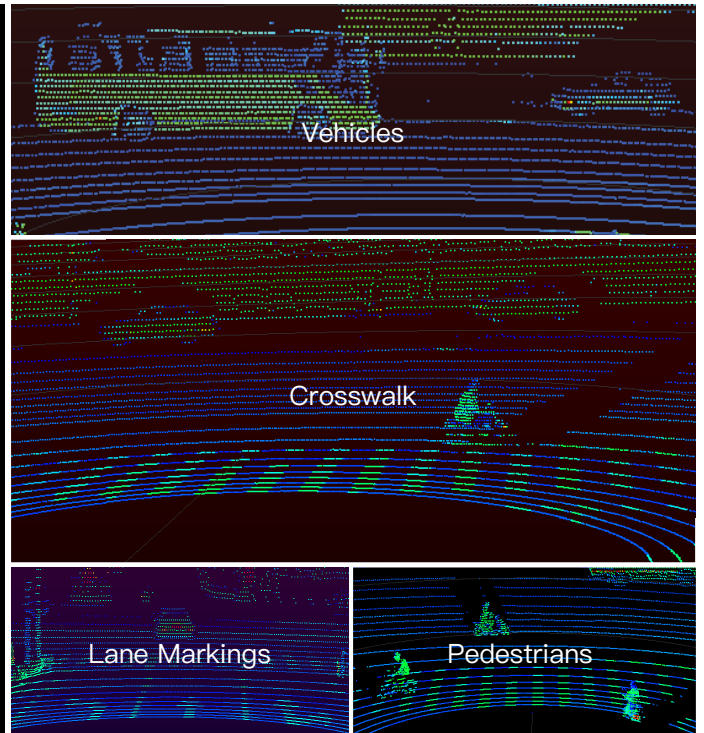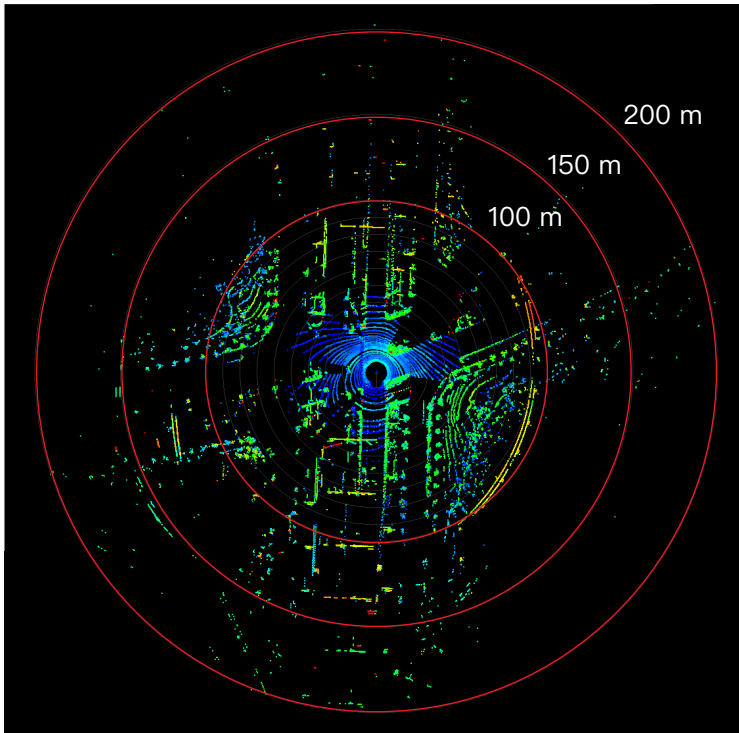# Application Scenarios

Autonomous Driving
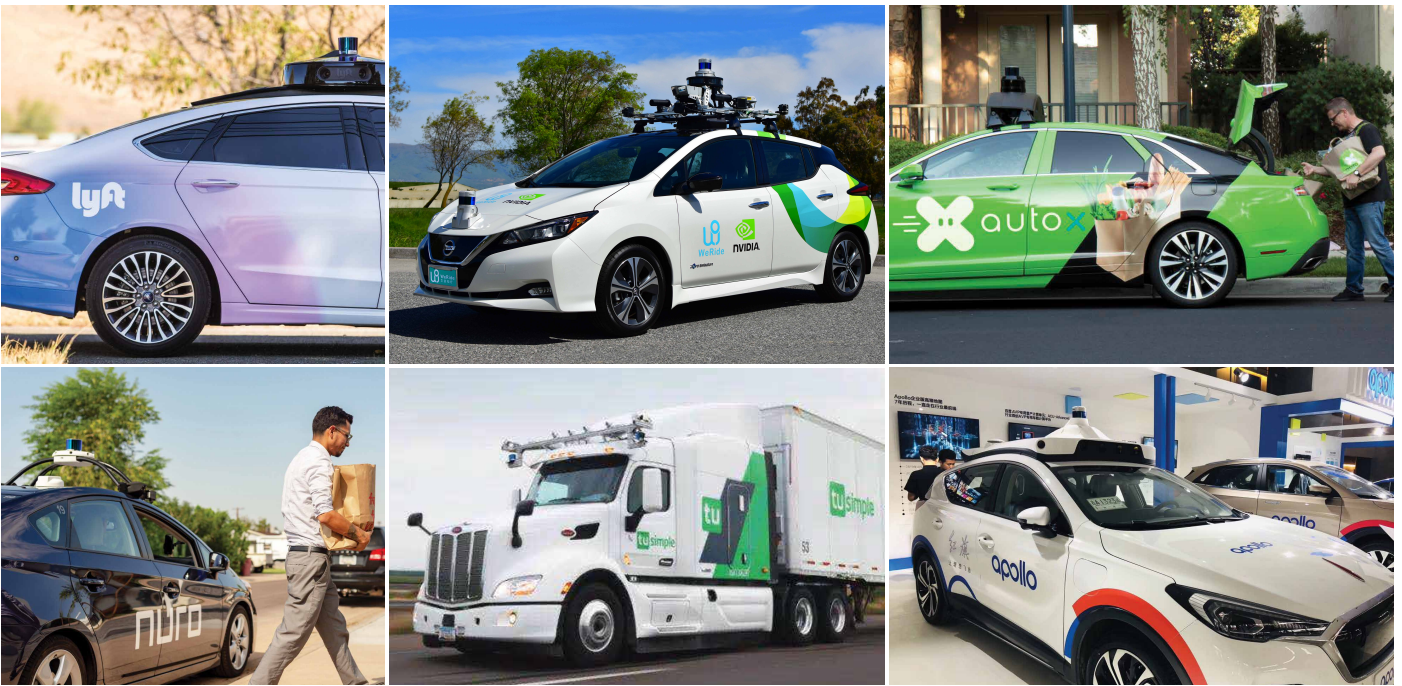
HD Mapping

Autonomous Logistics

200 m

150 m

100 m

Vehicles

Crosswalk

Lane Markings

Pedestrians
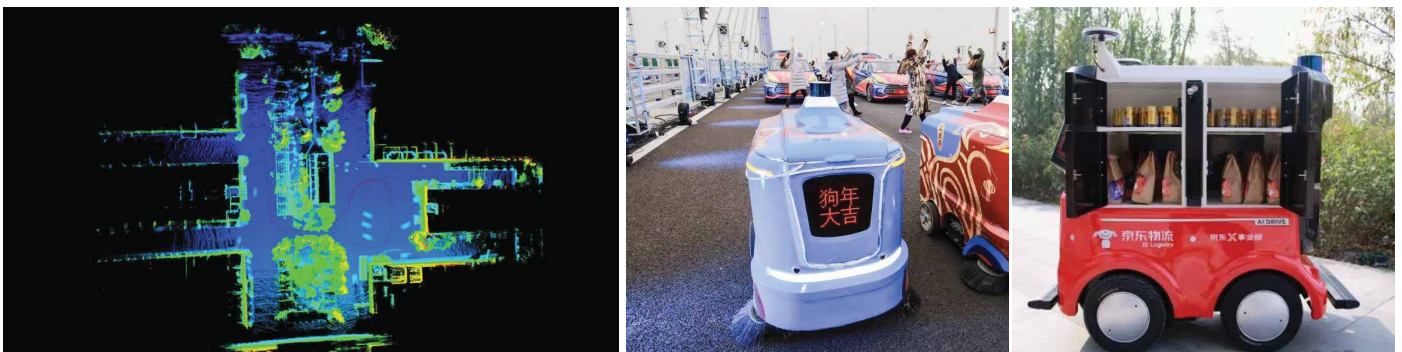
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