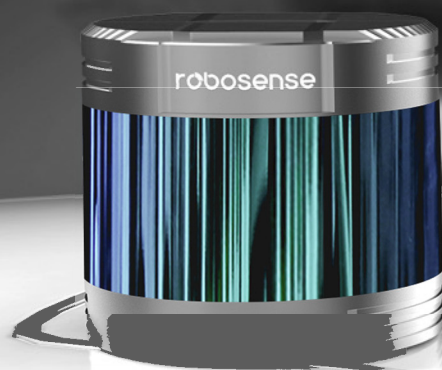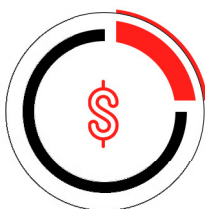# rs ruby lite

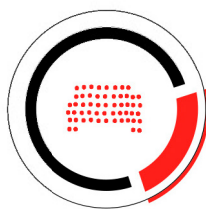## 80 Laser Beams, 0.1° Vertical Angular Resolution

RS-Ruby Lite is an 80 laser-beam LiDAR specially designed for medium-and-high-speed autonomous driving applications, whose performance is close to the 128 laser-beam LiDAR RS-Ruby. With the vertical angular resolution of 0.1° and the ranging capability of 160m@10%, it perfectly fulfills environment sensing requirements of self-driving passenger cars, driverless mining cars, driverless trucks, V2I, etc.

RS-Ruby Lite also inherits the strong stability and reliability of RS-Ruby. It not only meets the requirement of working under low temperature (-30℃) but also achieves breakthrough in all-weather anti-interference against conditions of multiple-LiDAR jamming and various ambient lights.
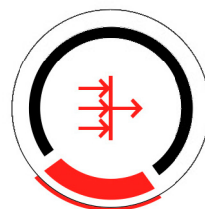
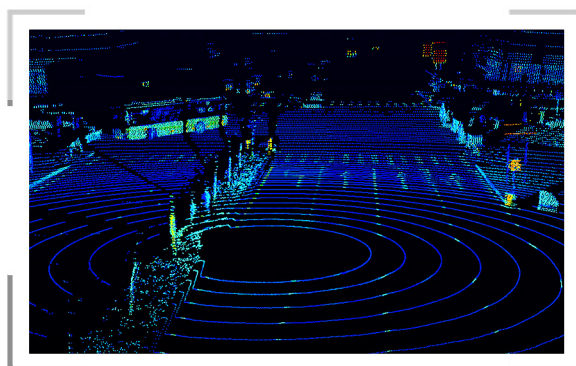# Product Advantages

The Most Affordable

0.1° Vertical Angular Resolution

Resist Interference Of Other LiDAR & Ambient Light

「Road detection point cloud image of the 80 laser-beam LiDAR RS-Ruby Lite」

RoboSense LiDAR

www.robosense.ai

Sensor			
# of Lines	80	Horizontal FoV	360°
Laser Wavelength	905nm	Vertical FoV	40°
Laser Safety	Class 1 eye safe	Horizontal Resolution[2]	0.1°/0.2°/0.4°
Range[1]	230m (160m@10% NIST)	Vertical Resolution	Up to 0.1°
Blind Spot	≤1m	Frame Rate	5Hz/10Hz/20Hz
Range Accuracy (Typical)[3]	Up to ±3cm	Rotation Speed	300/600/1200rpm (5/10/20Hz)

Output	
Points Per Second	1,440,000pts/s (Single Return Mode) 2,880,000pts/s (Dual Return Mode)
Ethernet Connection	1000 Mbps
Output	UDP packets over Ethernet
UDP Packet include	Spatial Coordinates, Intensity, Timestamp, etc.

Mechanical / Electrical / Operational			
Operating Voltage	19–32VDC	Dimension	φ166mm * H148.5 mm
Power Consumption[4]	38W	Operating Temperature[5]	−30℃ ~ +60℃
Weight(without cabling)	~3.75 kg	Storage Temperature	−40℃ ~ +85℃
Time Synchronization	$GPRMC with 1PPS , PTP	Ingress Protection	IP67

Applications
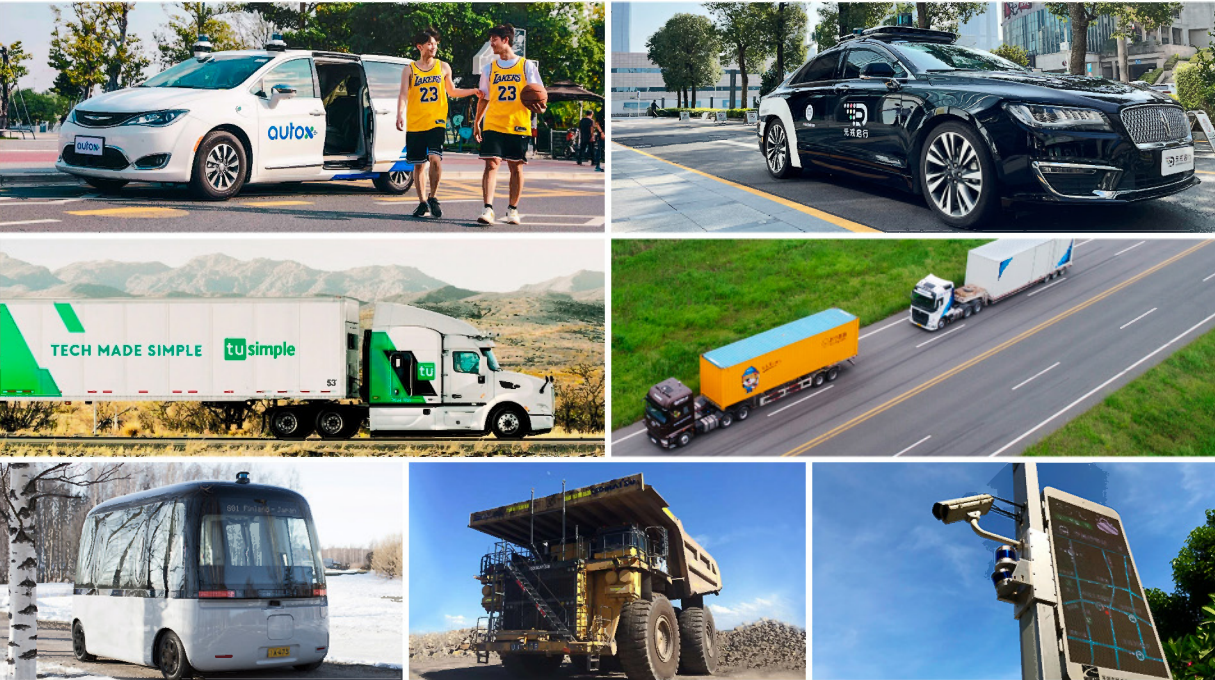
Autonomous driving passenger cars, unmanned mining vehicles,
unmanned trucks, vehicle–to–infrastructure, unmanned buses

1 The range performance is depending on circumstance factors, not only temperature, range and target reflectivity but also including other uncontrollable factors.
2 The corresponding operating frequency of 0.1°/0.2°/0.4° is 5Hz/10Hz/20Hz.
3 The measurement target of accuracy is a 50% NIST diffuse reflectance target, the test performance is depending on circumstance factors, not only temperature, range and target reflectivity but also including other uncontrollable factors.
4 The power consumption is tested under 10Hz frame rate. The result is depending on circumstance factors, not only temperature, range and target reflectivity but also including other uncontrollable factors.
5 The operation temperature is depending on circumstance factors, not only sun load and air flow but also including other uncontrollable factors.