

# SentiAcu PAL-A

## *Datasheet*

The PAL-A is a high-performance LiDAR that could be used as a core perception sensor in various scenarios. It has an equivalent of 256 lines and an ultra-high resolution of up to  $0.1^{\circ} \times 0.1^{\circ}$ , enabling its robust detection capabilities within the entire field of view.

The 2D scanning system and array-based transceiver design adopted by PAL-A allow a sustainable upgrading LiDAR performance, thus better enhance perception for various applications.

PAL-A has strong environmental adaptability and is not affected by severe environments. It can be widely used in industrial and transportation scenarios such as highways, railways, civil aviation and so on.

### Product Features

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Long range detection  
capability



Ultra-high angular  
resolution



Adjustable ROI  
in entire FoV



Low power  
consumption

### Applications

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ADAS



Smart Industry



Smart Transportation



Last mile delivery

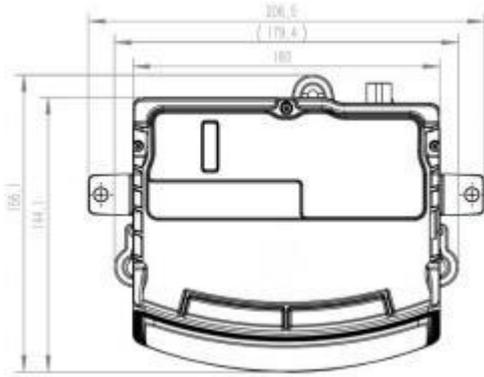


# Specifications

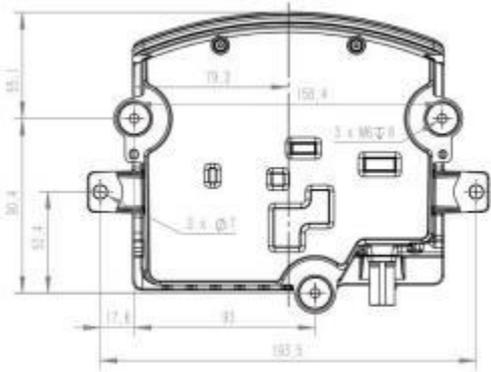
Product Performance				
Performance parameters	Detection range	200m @10% reflectivity <sup>①</sup>		
	Minimum range	≤1.2m		
	FoV (H × V)	ROI Region	Non-ROI Region	
		120°×8°	120°×25.6°	
	Resolution (H × V)	0.1°×0.1°	0.2°×0.1°	
	Point cloud data-rate	1.536M pts/s (without ROI) 2.016Mpts/s (with ROI)		
Precision <sup>②</sup>	5cm @1 σ			
Frame rate	10Hz			
Echo mode	Single & Dual Echo			
Number of equivalent lines	256			
Laser Parameters				
Laser wavelength	905nm			
Laser safety	Class 1 Eye-safe [IEC60825 - 1:2014]			
Data Output				
Data interface	1000Base-T1 Automotive Ethernet			
Transmission protocol	UDP			
Supported platforms	Windows、Linux (Ubuntu) & ROS drive			
Time synchronization	gPTP PTP NTP			
Mechanical/Electrical				
Average power consumption	≤15W			
Operating voltage	9~32V			
Operating temperature	-40℃ ~ +85℃			
Storage temperature	-40℃ ~ +105℃			
Dimensions (L×W×H)	49 x 160 x 144 mm			
Weight	1.2Kg			
Device interface	TE 2446023-1			
Protection level	IP67 & IP6K9K			



## Dimensions (unit: mm)



Top view



Bottom view



Front view



Side view

### Notes to the specifications:

- 1 The detection range is based on outdoor 100Klux ambient light condition, and any changes in environmental conditions may cause changes in the measurement results.
- 2 The ranging precision is based on measurements taken at an ambient temperature of 25°C and it may vary due to various factors such as detection range, reflectivity, and other environmental conditions.

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