

# **Horn-X2 Pro Series Datasheet**

### **High-performance 3D LiDAR**

Benewake Horn-X2 Pro is a 3D LiDAR which combines high-performance, high safety and high reliability. This LiDAR can be applied in a variety of mass transportation application scenarios, such as Cooperative Vehicle Infrastructure System (CVIS), Intelligent airport, Intelligent railway, Intelligent shipping, and so on. Horn-X2 Pro generates a high-density point cloud of up to 600 lines due to the high vertical angle resolution, easily perceiving the surrounding environment. Because of its advanced design, Horn-X2 Pro LiDAR effectively resists strong ambient light interference and works steadily under severe weather conditions.

Horn-X2 Pro supports for multiple working modes, and its performance parameters can be tailored in order to satisfy various complex requirements of customers.

#### **Product Characteristics**

- ✓ 3D Long-range Measurement
- ✓ High-definition Resolution
- ✓ Vertical Fov Adjustable
- Against ambient light &
  Severe weather interference

#### Applications Scenarios

- ✓ CVIS
- Intelligent Railway
- Intelligent Airport
- Intelligent Shipping
- ✓ Others



## 300m@10%

Long-range detection with full reflectivity



**Ultra-high Resolution** 

### 90°\*30°

Large FoV (H\*V)

1-20FPS

Frame Rate Scope

**1550nm** Class 1 Eye Safety **IP67** High Protection Level

\* The above data are the optimal parameters. For more information, please consult the company's website: en.benewake.com

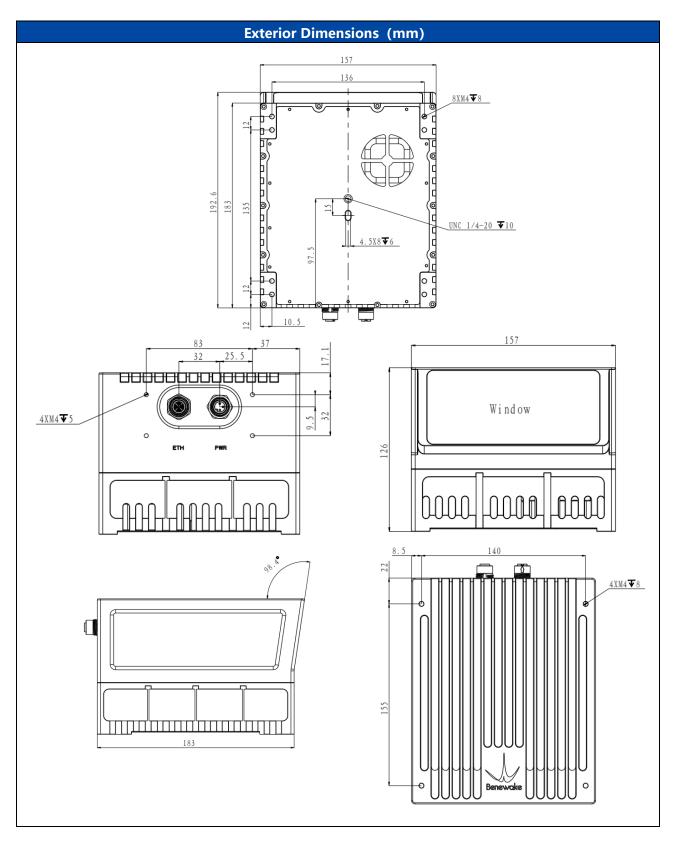


### Horn-X2 Pro Series Parameter Table

PRODUCT PERFORAMNCE			
	@750K points/s	@830K points/s	@620K points/s
Range @100Klux <sup>①</sup>	2m~200m	2m~250m	2m~300m
	@10%Reflectivity	@10%Reflectivity	@10%Reflectivity
FoV	90° (Horizontal) * 30° (Vertical FoV Adjustable)		
Angle Resolution	0.05°~0.2° (Adjustable)		
Precision <sup>2</sup>	1σ=5cm		
Accuracy <sup>3</sup>	±5cm		
Frame Rate	1-20FPS		
Return Mode	Support Last/Further/Strongest return modes		
OPTICAL PERFORMANCE			
Laser Safe Class	Class 1 Eye safety 【IEC60825-1:2014】		
Laser Wavelength	1550nm		
Beam Divergence	1.1mrad		
DATA OUTPUT			
Network Interface	1000Base-T		
Data Protocol	UDP		
Time Synchronization	PPS+GPS、IEEE1588v2		
Working Platforms	Windows, Linux & ROS drives		
COMPEHENSIVE PARAMETERS			
Power Consumption	≤35W		
Operating Voltage	9-36V		
Dimensions	192.6*157*126mm		
Weight	≤3.8KG		
Network Connector	M12 X-code-8pin male		
Power Connector	M12 A-code-8pin female		
Operating Temperature	-40℃~85℃		
Storage Temperature	-40°C~90°C		
Ingress Protection	IP67		
Mounting	Refer to below exterior dimensions		

- This range is measured outdoors under 100Klux or less, and at an ambient temperature of 25°C. Changes in conditions may cause variations in the measurement results. The blind area is 2m within ±25° of the horizontal center FoV.
- This precision is measured at 10% reflectivity in the range of 2-50m at an ambient temperature of 25°C. Changes in conditions may cause variations in the measurement results.
- This accuracy is measured at 90% reflectivity in the range of 2-50m at an ambient temperature of 25°C. Changes in conditions may cause variations in the measurement results.





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- **Disclaimer:** As our products are constantly improving and updating, the specifications of Horn-X2 Pro are subject to change. Please refer to the official website for the latest version.