DYNAMIC SOLUTIONS

Jounieh, International Highway
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# YDLIDAR Lidar Sensor X4 PRO

***Features:***

The YDLIDAR X4 PRO is a compact 360° 2D laser rangefinder designed for high-precision, high-frequency distance measurement based on triangulation principles. With built-in optics, electronics, and algorithmic design, the X4 PRO delivers real-time point cloud data and angle information as it continuously rotates. Its strong ambient light resistance, compact form factor, and ROS support make it ideal for robotics applications, research, environmental mapping, and autonomous navigation.

| Specifications | |
|---|---|
| **Ranging Frequency** | 5000 Hz |
| **Scanning Frequency** | 6–12 Hz |
| **Ranging Distance** | 0.12 – 10 m |
| **Field of View** | 360° |
| **Absolute Error** | 2 cm (Distance ≤ 1 m) |
| **Relative Error** | 3.5% (1 m < Distance ≤ 6 m) |
| **Tilt Angle** | 0.25° – 1.75° |
| **Angle Resolution** | 0.43° – 0.86° (based on RPM) |
| **Supply Voltage** | 4.8 – 5.2 V |
| **Starting Current** | 800 – 1000 mA |
| **Working Current** | 330 – 380 mA |
| **Service Life** | ~1500 hours |
| **Operating Temperature** | 0°C to +40°C |
| **Storage Temperature** | –10°C to +60°C |
| **Ambient Light Resistance** | Up to 40,000 lux |
| **Interface** | UART (USB via adapter board) |
| **Laser Wavelength** | 775 – 800 nm |
| **Laser Class** | Class I |

## Pinouts:

| Pin Name | Type | Description |
|---|---|---|
| **VCC** | Power supply | Power input (positive), default: 5 V, range: 4.8 V–5.2 V |
| **Tx** | Output | Serial port output; transmits LiDAR data to peripherals |
| **GND** | Power supply | Power ground (negative), default and fixed: 0 V |
| **M_CTR** | Input | Motor speed control (PWM), default: 2.15 V, range: 0 V–3.3 V |
| **NC** | — | Reserved pin (not connected, no electrical function) |

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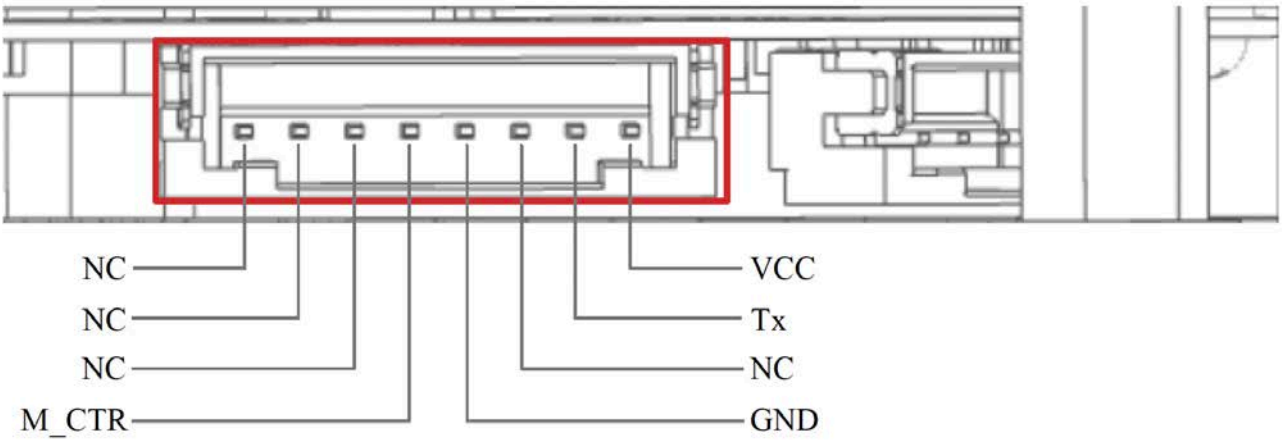
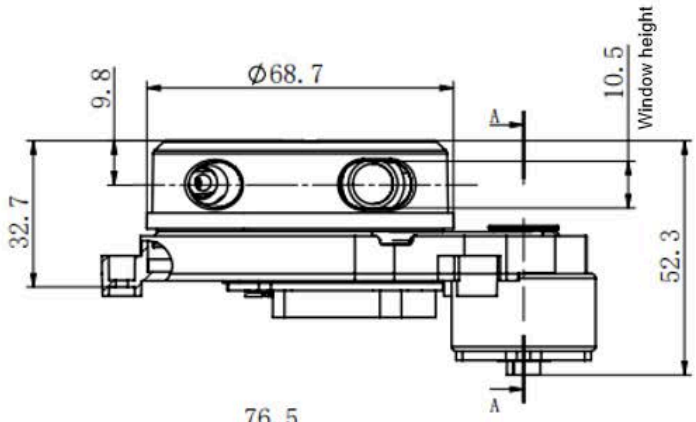
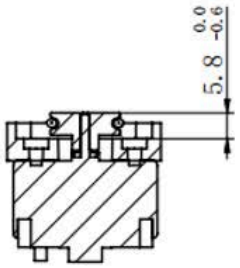
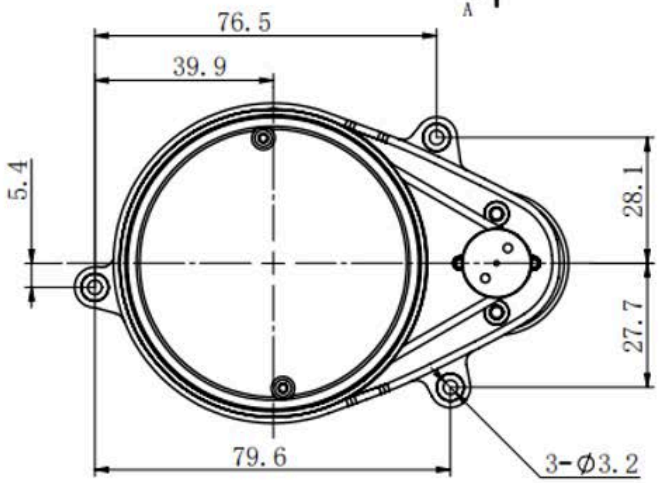



## Product Dimensions:




Section A-A
Proportion 2 : 3

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# Product Pictures: