

Solid-state LiDAR_CS40

Product Manual



Product Introduction

CS40 is equipped with a 640*480 resolution PToF image sensor, utilizing PToF technology to capture three-dimensional information of objects and spaces. With a wide field of view, Ethernet transmission, and other outstanding features, it provides users with convenient and efficient 3D perception capabilities.

This product employs a high-performance hardware processing platform, allowing users to integrate various application algorithms, and reducing dependence on backend application platforms. It supports the TCP/IP network communication protocol, enabling long-distance data transmission.

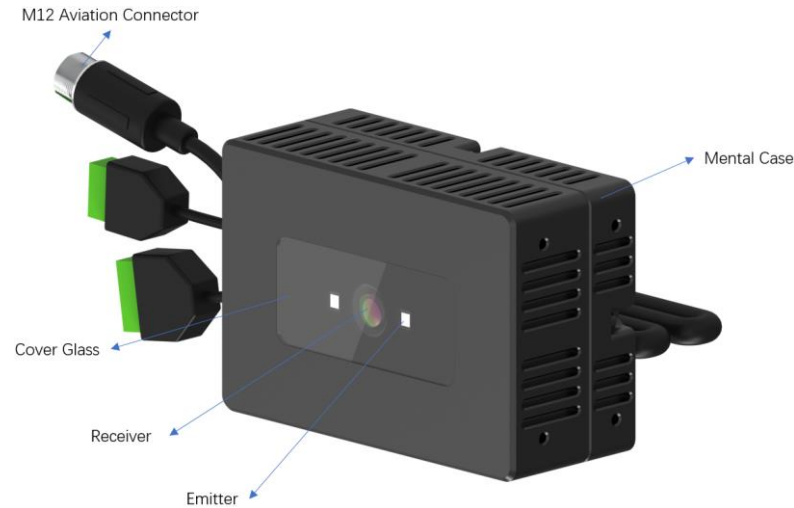
Product Features

- Ethernet transmission with low data latency
- High dynamic measurement range
- Sunlight resistance (up to 120Klux)
- Large field of view: H90°xV70°

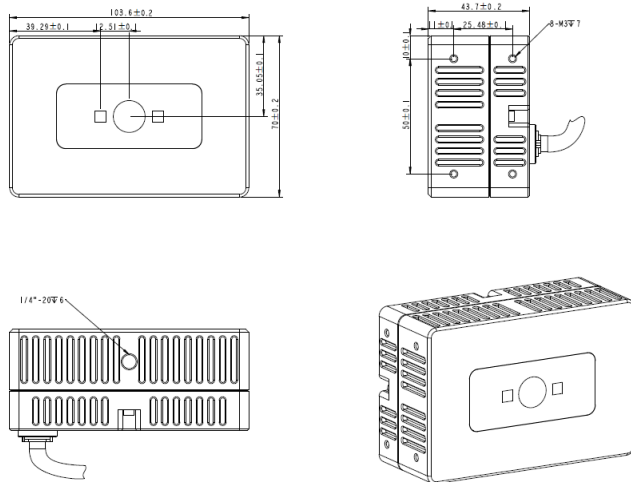
Applicable Scenarios

- Outdoor obstacle avoidance
- Pallet recognition
- Visual positioning and guidance
- Security surveillance

Product Description

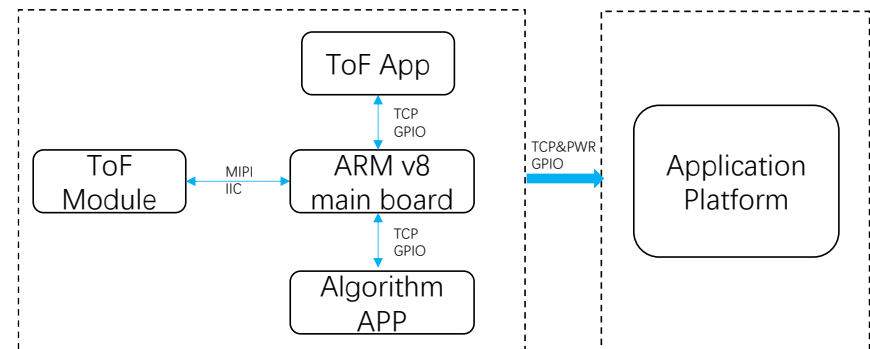


Mechanical Structure

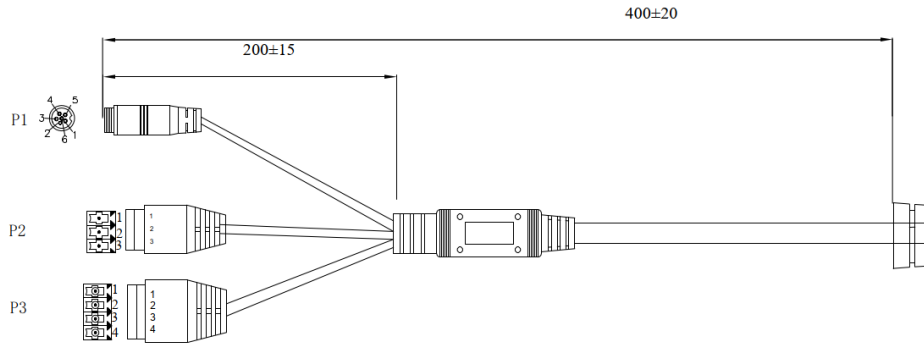


Technical Parameters		
Depth Image	Resolution	640*480/15FPS
	FOV	H90°xV70°
Basic Parameters	Distance	0.2-4m, Outdoor
	VCSEL	940nm
	Accuracy	0.2~0.5m: ±2.0cm @ 90% reflectivity 0.5~4m: ±1.5% @ 90% reflectivity
	Dimensions	103.6mm*70mm*43.7mm
	Data Transmission	TCP/IP
	Powering Method	DC: 12-24V/2A
	Power Consumption	average 4.5W
	System	Win 10, Linux, ROS
	Operating Temperature	-10 ~ 50°C

System Architecture



Tail Line Instructions

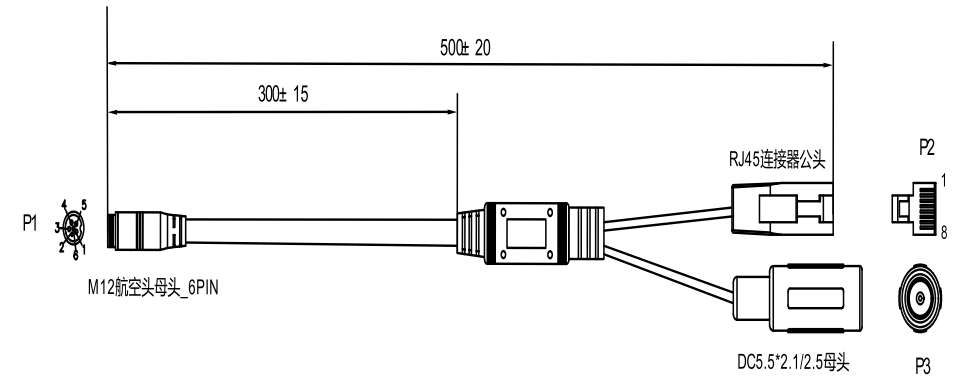


CS40 Tail Cable Schematic

P1:M12 Aviation Plug Male Connector_6PIN		P2:DGK5.08_3PIN		P3:DGK5.08_4PIN	
Pin Number	Signal Name	Pin Number	Signal Name	Pin Number	Signal Name
1	100BASE-T: TX-	1	GND	1	GND
2	100BASE-T: TX+	2	VCSEL_IN	2	RS485_A(P)
3	V+(12-24V/2A)	3	V+(12-24V/2A)	3	RS485_B(N)
4	100BASE-T: RX-	Note: P2 Pin1&Pin3 serve as power interfaces and can be used to supply power to other peripheral devices; Pin2 functions as an external trigger signal for controlling the laser's operational state.		4	GND
5	100BASE-T: RX+				
6	EGND				

CS40 Adapter Cable Instructions

Adapter Cable Instructions



CS40 Adapter Cable Schematic

P1:M12 Aviation Plug Female Connector_6PIN		P2:RJ45 Male Connector		P3:DC5.5*2.5 Male Connector	
Pin Number	Signal Name	Pin Number	Signal Name	Pin Number	Signal Name
1	100BASE-T: TX-	1	100M_TX+	Note: It is recommended to use with a DC5.5*2.5 power adapter with a power range of 12-24V/2A.	
2	100BASE-T: TX+	2	100M_TX-		
3	V+(12-24V/2A)	3	100M_RX+		
4	100BASE-T: RX-	6	100M_RX-		
5	100BASE-T: RX+				
6	EGND				

CS40 Adapter Cable Instructions

Precautions

- Do not heat this product with other heat sources.
- Avoid dropping, impacting, or disassembling the product to prevent damage to internal components and a decrease in accuracy.