

Solid-state lidar_CS40Pro

Product Manual



Product Introduction

CS40Pro is equipped with a PToF image sensor with a resolution of 640*480 and an RGB image sensor, which uses PToF technology to obtain three-dimensional information of objects and space, with a large field of view, Gigabit Ethernet transmission and other excellent performance, providing users with convenient and efficient 3D perception capabilities.

The product uses a high-performance (Cortex-A55 Quad-Core) hardware processing platform, which allows users to integrate a variety of application algorithms and reduce dependence on back-end application platforms. Support CAN, TCP/IP, RS485 protocols to achieve long-distance data transmission.

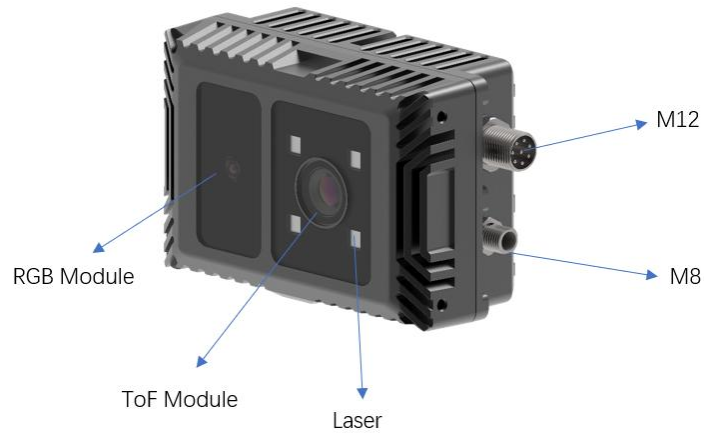
Features

- Gigabit Ethernet transmission, high frame rate, low latency
- High dynamic measurement range (0.5~10m@Ref 90%)
- Sunlight resistant (100Klux)

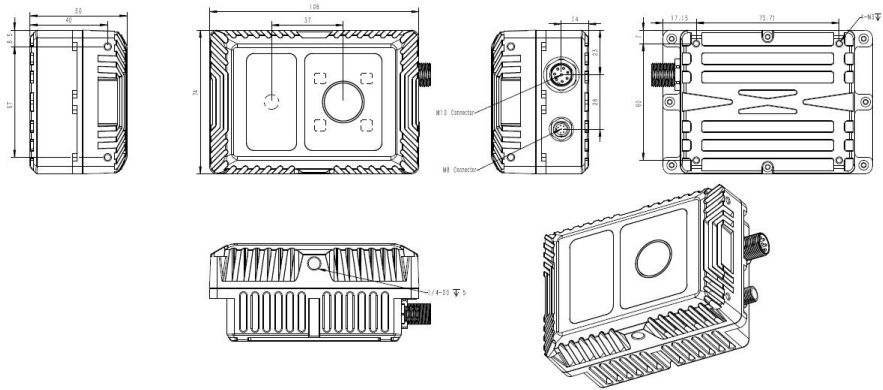
Applicable scenarios

- Outdoor obstacle avoidance
- Security protection
- Industrial visual positioning and guidance
- Route guidance, edge detection

Product Description

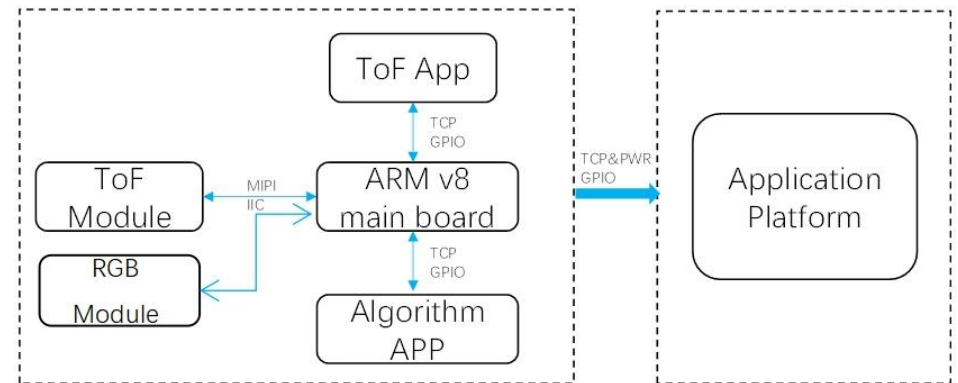


Mechanical structure

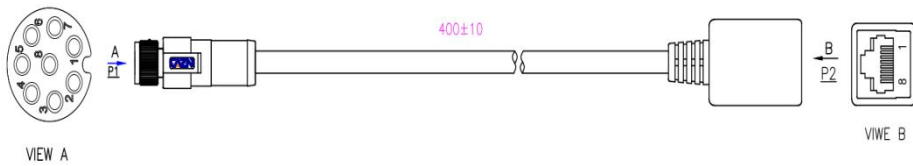


Technical parameters		
Depth image	Resolution/frame rate	640*480 / 30fps
	FOV	H72 x V55°
Color image	Resolution/frame rate	1600*1200 / 30fps
	FOV	D105°
Basic parameters	Working distance	0.3-10m, Outdoor
	VCSEL wavelength	940nm
	precision	±1% @ 90% reflectivity
	Product dimensions	108*74*50mm
	Data transmission	1000M ethernet&RS485
	Power supply mode	12VDC/3A&24VDC/&POE
	power consumption	Average 16.8W
	operating system	Windows, Linux, ROS
	Operating temperature	-20 ~ 75°C
	security	TBD

System architecture



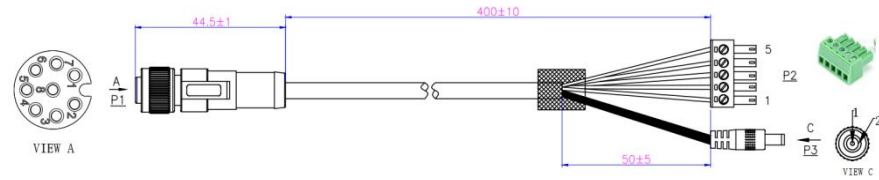
M8 Adapter Cable Description



P1: M8 aircraft head female head_8PIN		P2: RJ45 female	
Pin Number	Signal Name	Pin Number	Signal Name
1	BI_DA+	1	BI_DA+
2	BI_DA-	2	BI_DA-
3	BI_DB+	3	BI_DB+
8	BI_DB-	4	BI_DB-
7	BI_DC+	5	BI_DC+
4	BI_DC-	6	BI_DC-
5	BI_DD+	7	BI_DD+
6	BI_DD-	8	BI_DD-

Schematic diagram and description of the M8 adapter cable

M12 adapter cable description



P1: M12 Aircraft Head Male _8PIN		P2: DGK5.08_5PIN		P3: DC5521 5525 series male	
Pin Number	Signal Name	Pin Number	Signal Name	Pin Number	Signal Name
1	485_P	1	485_P		
2	485_N	2	485_N		
3	CAN_P	3	CAN_P		
4	CAN_N	4	CAN_N		
5	PWR12-24V	/	/	1	PWR12-24V
6		/	/		
7	GND	5	GND	2	GND
8					

Schematic diagram and description of M12 adapter cable

Precautions

- Do not heat this product with other heat sources;
- Do not drop, impact, or disassemble this product to prevent damage to internal components and loss of accuracy;