

FPB1 Series **Ultra**

OPT-FPB1-010-02

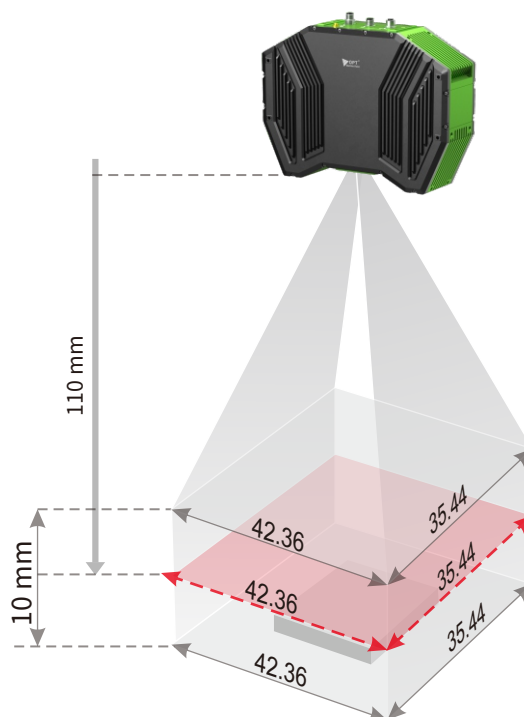


Product Features

- Small field of view, precise-with ambient light resistance, ideal for medium and small field 3D applications comparable to line laser precision.
- Utilizes high-resolution cameras with dual optical projector technology for multi-angle 3D point cloud fusion, meeting three-dimensional accuracy requirements with complete imaging details.
- Comprehensive hardware and software integration. 3D sensors are compatible with Opt's algorithm platform software Smart3, enabling zero-code, visualized graphical programming for rapid deployment.
- Equipped with DLP chips and structured light projection technology, delivering clear images in a single shot, simplifying the system and accommodating higher throughput.
- Processing chips with an integrated design and FPGA edge computing platform enable the camera to directly output high-precision 3D point clouds with faster imaging.
- Pre-calibrated and factory-calibrated cameras allow for direct installation and use, ensuring quicker deployment.

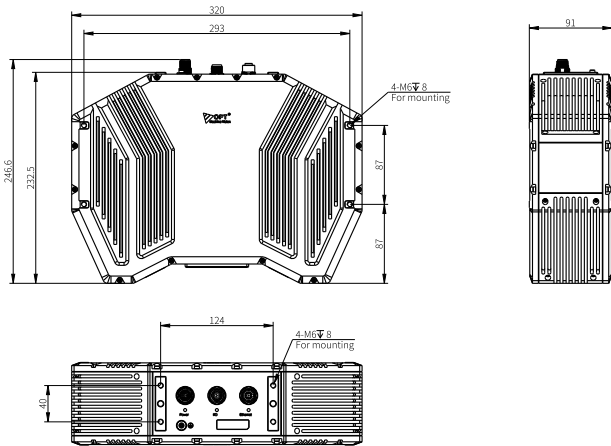
Product Model and Parameters

Model	OPT-FPB1-010-02
Camera Type	Dual-Projection Structured Light Camera
Data Resolution	5 MP
Full-Cycle Frame Rate	2 FPS
Light Source Color	Blue
Reference Distance	110 mm
Standard Field of View	42.36 mm × 35.44 mm
Depth Measurement Range	±5 mm
Pixel Pitch	0.017 mm
Z-Axis Single-Point Repeatability	4 μm
Z-Axis Area Repeatability	0.28 μm
Communication Interface	Gigabit Ethernet
I/O Interface	1 Optocoupler Input
Operating Voltage	24V DC
Power Consumption	180W
SDK Operating System	Linux/Windows
Supported Programming Languages	C/C++/C#/Python
Operating Temperature	-10~45°C
Operating Humidity	<80%RH (non-condensing)
Dimensions	320 mm × 246.5 mm × 91 mm
Weight	7.10 kg

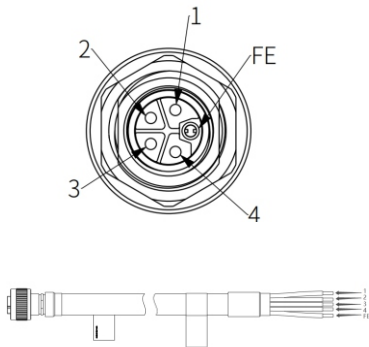


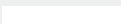
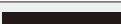
Dimensions(mm)

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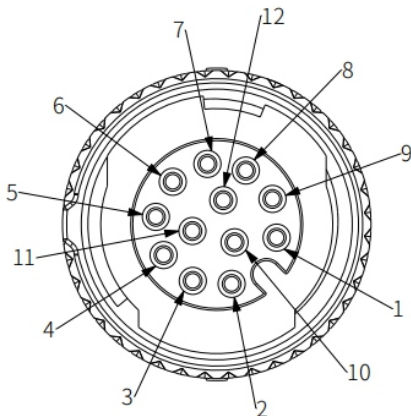


Power Interface Description



No.	Definition	Factory-Matched Cable Color	Color
1	/	GREEN	
2	/	WHITE	
3	24VDC	RED	
4	GND	BLACK	
FE	Shield Ground	FE YELLO GREEN	

I/O Interface Description



Pin	Signal Definition	Description
1	GND	Ground Wire
2	\	\
3	\	\
4	\	\
5	OPT0_DO_COM	Common Digital Output Ground (GND)
6	OPT0_DO2	Common Digital Output 1
7	OPT0_DO1	Common Digital Output 2
8	OPT0_DO0	Common Digital Output 0
9	OPT0_DI_COM	Common Digital Input Ground (GND)
10	OPT0_DI2	Common Digital Input 2
11	OPT0_DI1	Common Digital Input 1
12	OPT0_DI0	Common Digital Input 0

