

FPC1 Series **Pro**

OPT-FPC1-020-02

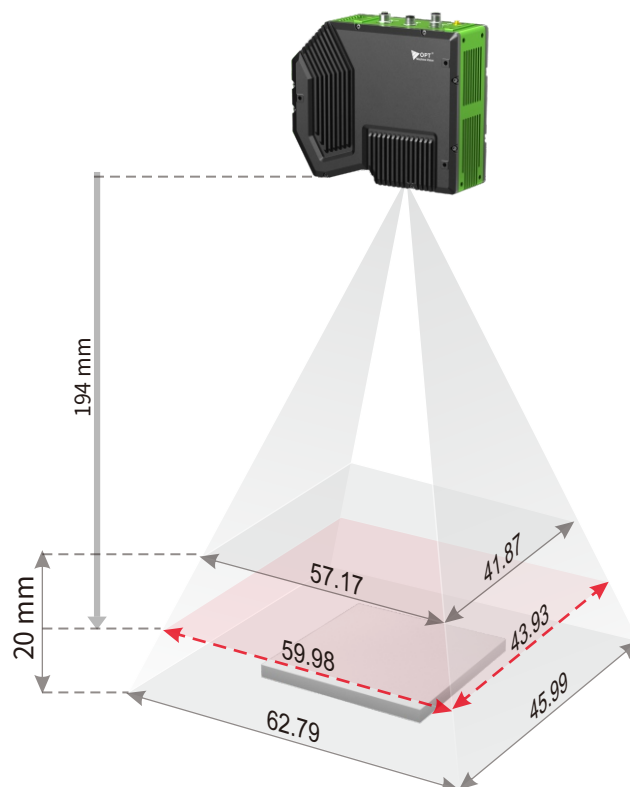


Product Features

- Industrial-grade light product with high frame rate and precision, excellent ambient light resistance. Detection accuracy is comparable to line laser solutions in medium and small field-of-view 3D applications.
- Rich algorithm functions, multiple 3D algorithms, capable of targeted image processing, filtering out invalid point clouds, obtaining ideal imaging results more directly, saving computation time and improving frame rate.
- Comprehensive hardware and software integration the 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.

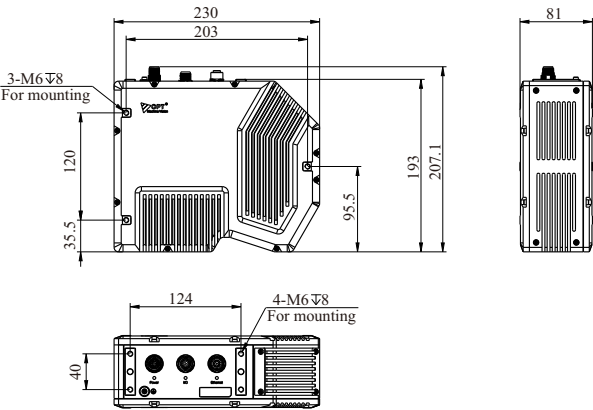
Product Model and Parameters

Model		OPT-FPC1-020-02
Camera Type		Single-Projection Structured Light Camera
Data Resolution		3 MP
Full-Cycle Frame Rate		≤4 FPS
Light Source Color		Blue
Reference Distance		194 mm
Field of View	Near End	57.17 mm × 41.87 mm
	Standard	59.98 mm × 43.93 mm
	Far End	62.79 mm × 45.99 mm
Depth Measurement Range		±10 mm
Pixel Pitch		0.029 mm
Z-Axis Area Repeatability		0.13 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		230 mm × 207.1 mm × 81 mm
Weight		4.2 kg

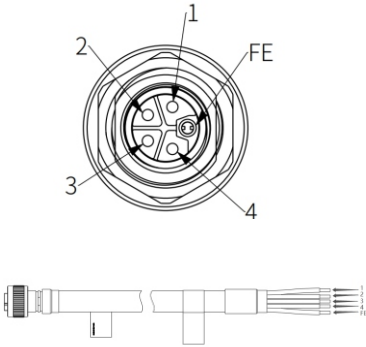


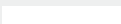
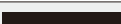
Dimensions(mm)

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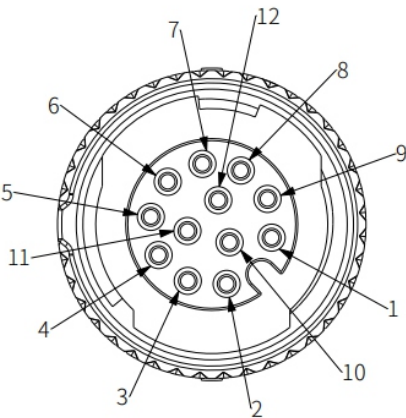


Power Interface Description



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

