Percipio Industrial 3D Camera

PM801-E1

Depth Onboard Processing	Active Stereo	SDK Win/Linux OpenNI2/ROS
Ethernet	Enclosure Rating IP54	Hardware Trigger
Measurement Range 0.8~4.3m	Sync & Alignment RGB-D	3D Accuracy Submillimeter

Overview

Percipio's 3D smart camera uses innovative active stereo vision technology with core patents to obtain more depth details and more robust environmental adaptability than traditional binocular vision.

PM801-E1 combines the structured light with the mature RGB sensor technology to provide real-time RGB and depth images.

With reliable measurement results and the carbon-fiber body, PM801-E1 is an ideal solution for robotics, logistics, inspection and other applications.

Advantages

PM801-E1 includes two infrared (IR) sensors, one RGB sensor and several structured-light projectors. Comparing to traditional binocular cameras, PM801-E1 provides:

+ More depth details
+ More robust to ambient light interference

Industrial Sensor

PM801-E1 is splash, water, and dust resistant and has been tested under controlled laboratory conditions with a rating of IP54 under IEC standard 60529.

Trigger Mode

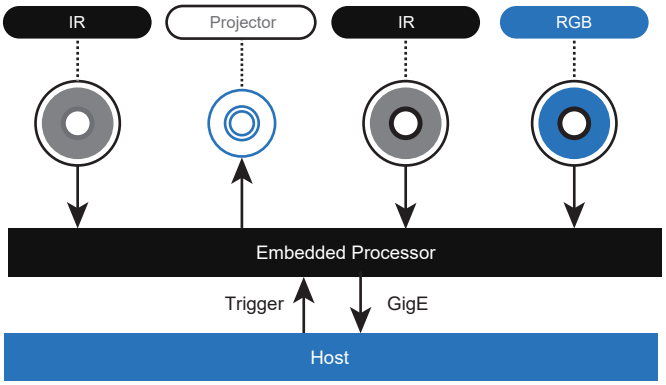
PM801-E1 supports the software trigger and hardware trigger. The customers can synchronize multi-cameras to capture images with the hardware trigger.

High Accuracy

With the innovative multi-laser projecting system, PM801-E1 provides high measurement accuracy in its large working range and wide FOV.

Note:
All cameras have been calibrated with intrinsic parameters before delivery. If you need to calibrate multiple cameras with extrinsic parameters, please contact Percipio technical support.

Principle



Structured-light Projector

Project the structured light to objects for assisting the active stereo system to calculate depth data.

Infrared Sensor

Receive the structured light reflected from the objects surface.

RGB Sensor

Capture RGB images.

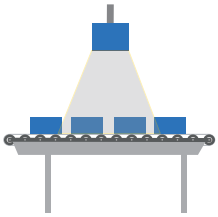
Embedded Processor

Process infrared and RGB images:

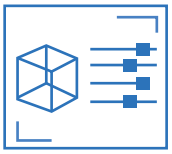
- Calculate depth data and achieve alignment and synchronization with RGB images.
- Upload data through Gigabit Ethernet (GigE).
- Receive trigger signal from the host or the hardware trigger source.

Applications

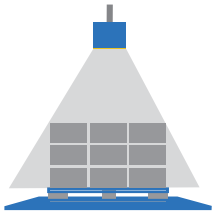
PM801-E1 is suitable for and not limited to the following fields:



Integrity Check

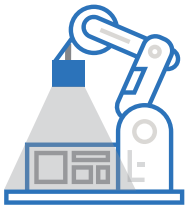


3D Content Generation



Palletizing / Depalletizing

Volume Measurement



Industrial Sorting

Features

The main features of PM801-E1 are shown as follows:

Dimensions&Weight

L x H x W (including interfaces)	385.0 mm x 82.0 mm x 89.6 mm
Weight	1.98 kg

Measurement

Measurement range	800 ~ 4300
FOV(mm)	1000 x 740 @ 800; 3945 x 3800 @ 4300
Z Accuracy	0.5 @ 850; 2.5 @ 2000; 5.0 @ 3000
X/Y Accuracy	2.0 @ 800; 5.0 @ 2000; 7.0 @ 3000

Performance

Depth	1 fps @ 1280×960
	1 fps @ 640×480
	1 fps @ 320×240
RGB	11 fps @ 2592×1944
	16 fps @ 1280×960
	25 fps @ 640×480
RGB-D Sync&Alignment	√
Output data	Point cloud, depth, infrared and RGB images

Software

OS	Linux/Windows/Android/ROS
Development platform	Percipio Camport SDK
API	C/C++

Interface

Power&Trigger	8-pin aviation plug
Ethernet	M12 X-Coding

Electronics

Supply voltage	DC 24 V； IEEE802.3at POE
Power consumption (idle)	6.0 W
Power consumption (continuous)	16.0 W
Power consumption (trigger)	14.0 W

Ambient Data

Operating temperature	0℃～45℃
Storage temperature	-10℃～55℃
Enclosure rating	IP54

Note:
The specs and dimension may change without notice.

For purchase or business cooperation, please email us: info@percipio.xyz
For technical support, please email us: support@percipio.xyz
For more information about Percipio 3D cameras, please visit : www.percipio.xyz
For online documentation, please visit : percipiodc.readthedocs.io

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