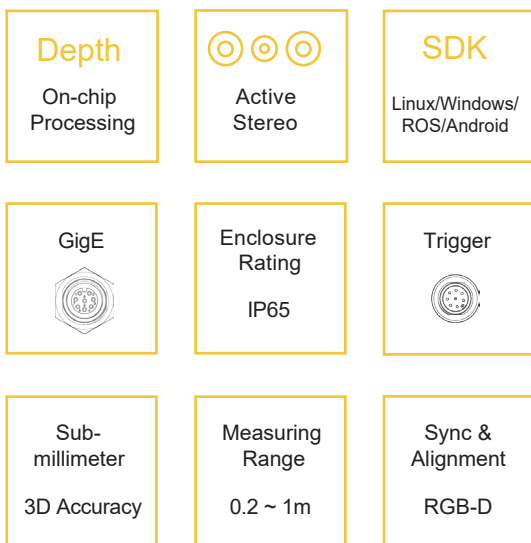


PERCIPIO

Industrial 3D Camera

PS800-E1



Overview

Percipio's PS800-E1 3D camera adopts innovative active stereo vision technology with core patents and uses embedded processor to perform 3D-data calculation for targets.

PS800-E1 achieves highly accurate 3D detection of small stationary objects in application like identification, classification, positioning and so on.

PS800-E1 has a 5 megapixel RGB sensor that provides high-definition RGB images with distinct details.

Advantages

Active Stereo

PS800-E1 adopts active stereo technology featuring two IR sensors, one RGB sensor, one laser projector and one IR floodlighting system.

Comparing to the traditional binocular vision camera, PS800-E1 provides:

- + More depth details
- + More robust to ambient light interference

Industrial Suitability

PS800-E1 is designed for a harsh industrial environment.

- + Its aluminum alloy housing features a robust structure and optimum heat dissipation.
- + It is splash, water and dust resistant and has been tested under controlled laboratory conditions with a rating of IP65 under IEC standard 60529.

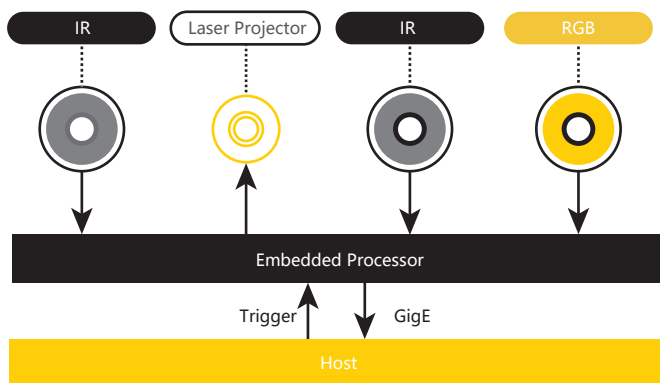
High Accuracy

With its accuracy up to submillimeter, PS800-E1 is applicable to recognize and measure static small objects at short distances, providing an ideal solution for robot guiding, logistics automation, 3D inspection and so on.

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



Laser Projector

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

IR Sensor

Receive the structured light reflected from the object surfaces.

RGB Sensor

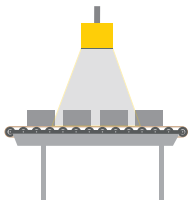
Capture RGB images.

Embedded Processor

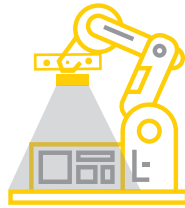
Process IR and RGB images:

- Calculate depth data and achieve the synchronization and alignment with RGB images.
- Upload data through the GigE interface.
- Receive trigger signal from the host or the external trigger source.

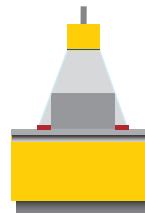
Applications



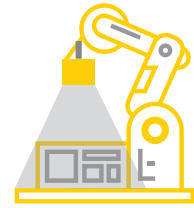
Integrity Check



Robot Guiding



Volume Measurement



Industrial Sorting

Features

Dimension&Weight

L x H x W (excluding interfaces)	140.6 mm * 47 mm * 60mm
Weight	555 g

Measurement

Measurement Range	200 mm ~ 1000 mm
FOV (H/V)	63°/48°
Z Accuracy (mm)	±0.1mm@200mm; ±0.5mm@500mm
X/Y Accuracy (mm)	1.2mm@500mm

Software

OS	Linux/Windows/Android/ROS
Development Platform	Percipio Camport SDK
API	C/C++, C#, Python, Java

Performance

Depth	1.0 ~ 2.5 fps @ 1280 x 960	RGB	4 fps @ 2560 x 1920
	1.0 ~ 2.5 fps @ 640 x 480		7 fps @ 1920 x 1440
	1.0 ~ 2.5 fps @ 320 x 240		16 fps @ 1280 x 960
RGB-D Sync&Alignment	√		30 fps @ 640 x 480
Output Data	Point cloud, depth, IR and RGB images		

Interface

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

Electronics

Supply Voltage	DC 24 V
	IEEE802.3at/af POE
Power (Idle Mode)	4.5 W
Power (Continuous Mode)	10.5 W
Power (Trigger Mode)	6.6 W

Ambient Data

Operating Temperature	0°C ~ 45°C
Storage Temperature	-10°C ~ 55°C
Enclosure Rating	IP65

Note:
The specs and dimension may change without notice.



PERCIPIO.XYZ

For purchase or business cooperation, please email us:

info@percipio.xyz

For technical support, please email us:

support@percipio.xyz

For more information on Percipio 3D cameras, please visit:

www.percipio.xyz

For online documentation, please visit:

doc.percipio.xyz/cam/last/