PERCIPIO
Industrial 3D Camera

FM813-L2-E1

Depth	⊚ ⊙ ⊚	SDK
On-chip Processing	Active Stereo	Win/Linux OpenNI2/ROS

GigE	Enclosure Rating IP54	Trigger

millimeter 3D Accuracy	Measuring Range 1.2~3.5m	Sync & Alignment RGB-D
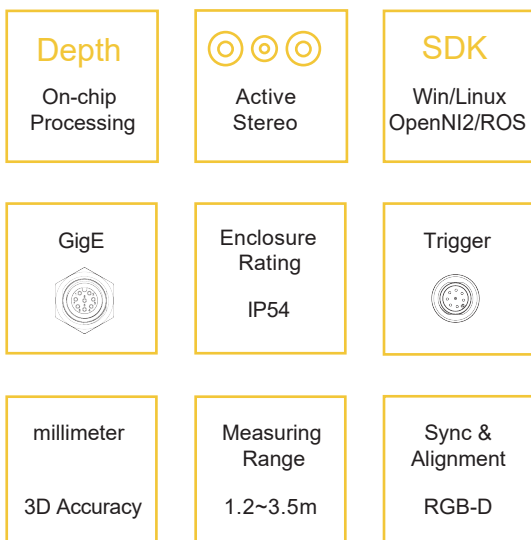
▌ Overview

Percipio FM813-L2-E1 3D camera adopts innovative active stereo vision technology with core patents and uses embedded processor to perform 3D-data calculation for targets.

With the creative design, the 3D camera features outstanding anti-reflection performance, providing an ideal solution for the industrial use, like logistics, metalworking and depalletizing/palletizing.

▌ Advantages

Active Stereo

FM813-L2-E1 adopts active stereo technology featuring two IR sensors, one RGB sensor, five laser projectors.
Comparing to the traditional binocular vision camera, FM813-L2-E1 provides:
+ More depth details
+ More robust environment adaptability

Industrial Suitability

FM813-L2-E1 is designed in an industrial standard. It is splash, water and dust resistant and has been tested under controlled laboratory conditions with a rating of IP54 under IEC standard 60529.

Optimized Imaging for High-reflection Objects

FM813-L2-E1 utilizes its unique design to optimize imaging for high-reflection objects, like metal, painted and electroplated surfaces.

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
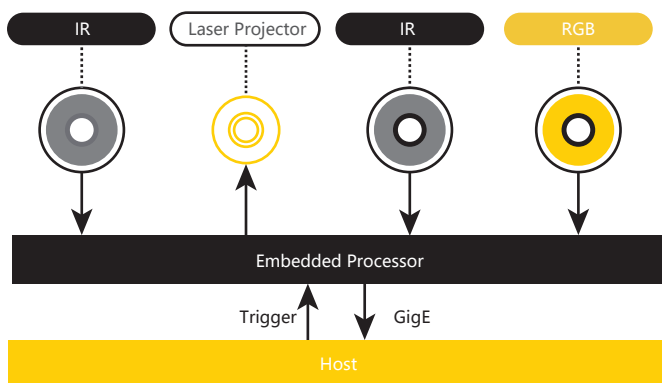
Laser Projector
Project the structured light to objects for assisting the active setero system to calculate depth data.

IR Sensor
Receive the structured light reflected from the object surfaces.
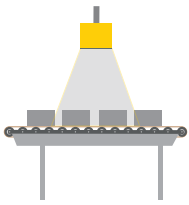
RGB Sensor
Capture RGB images.
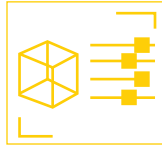
Embedded Processor
Process IR and RGB images:
- Calculate depth data and achieve the synchronization and alignment with RGB images.
- Upload data through the GigE interface.
- Receive trigger signal from the host or the external trigger source.
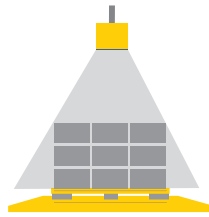
Applications

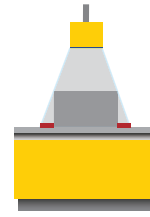FM813-L2-E1 is suitable for and not limited to the following applications:
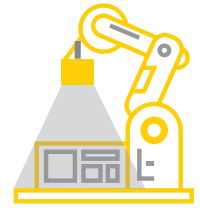
3D Inspection   3D Content Generation   Depalletizing/Palletizing   Industrial Measurement   Industrial Sorting

Features

The main features of FM813-L2-E1 are as follows:

Dimension&Weight

L x H x W	703.4 mm× 511.9 mm× 53.0 mm
Weight	2.36 kg

Measurement

Measurement Range	1200 mm ∼ 3500 mm
FOV (mm)	1400 × 1155 @ 1200
	4370 × 3430 @ 3500
Z Accuracy (mm)	1 @ 2000; 4 @ 2500; 5 @ 3000
X/Y Accuracy (mm)	9 @ 2000; 11 @ 2500; 13 @ 3000

Software

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

Interface

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

Electronics

Supply Votage	DC 24 V
	IEEE802.3at/af POE
Power (Idle Mode)	4.8 W
Power (Continuous Mode)	6.7 W

Ambient Data

Operating Temperature	0℃∼45℃
Storage Temperature	-10℃∼55℃
Enclosure Rating	IP54

Performance

Depth		RGB	
	3 fps @ 1280×960		11 fps @ 2592×1944
	3 fps @ 640×480		13 fps @ 1280×960
	3 fps @ 320×240		13 fps @ 640×480
RGB-D Sync&Alignment		√	
Output Data		Point cloud, depth, IR and RGB images	

Note:
The specs and dimension may change without notice.

PERCIPIO.XYZ