Industrial 3D Camera

HF-815-E1

Depth Onboard Processing	**Active Stereo**	**SDK** Win/Linux/ ROS/Android
GigE	**Enclosure Rating** IP65	**PoE** **PoE**
Measurement Range 0.4~8.0 m	**HDR**	**3D Accuracy** Millimeter

Overview

HIFLY'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.

HF-815-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 aluminum alloy body, HF-815-E1 becomes an ideal solution for robotics, logistics, inspection and other applications.

Advantages

HF-815-E1 includes two infrared (IR) sensors, one RGB sensor and several structured-light projectors. Comparing to the traditional binocular cameras, HF-815-E1 provides:

+ More depth details
+ More robust to ambient light interference

Industrial Sensor

HF-815-E1 is splash, water, and dust resistant and has been tested under controlled laboratory conditions with a rating of IP65 under IEC standard 60529.

Trigger Mode

HF-815-E1 supports the software 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 and compact package size, HF-815-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 contactHIFLY technical support.

Principle
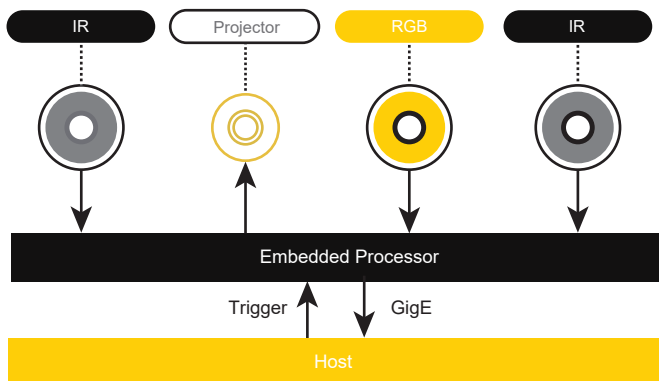
Structured-light Projector
Project the structured light to objects for assisting the active stereo system to calculate depth data.

Infrared Sensor
Receive the structured light reflected from the objects surface.
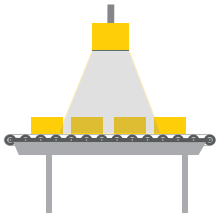
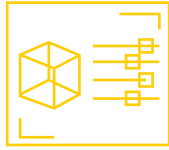**RGB Sensor**
Capture RGB images.

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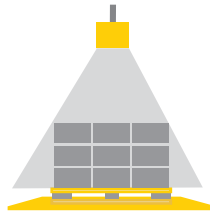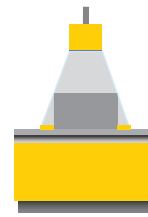- Receive trigger signal from the host or the hardware trigger source.
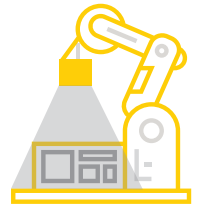
Applications

Integrity Check	3D Content Generation	Palletizing / De-palletizing	Static Volume Measurement	Industrial Sorting

Features

Dimensions&Weight

L x H x W (excluding interfaces)	145.0 mm × 35.0 mm × 90.0 mm
Weight	620 g

Measurement

Measurement range(mm)	400 ~ 8000
FOV （H/V）	60°/48°
Z Accuracy(mm)	0.68mm@800mm
X/Y Accuracy(mm)	3.2mm@1000mm

Software

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

Electronics

Supply voltage	DC 24V ； IEEE802.3at/af POE
Power consumption (idle)	5.0 W
Power consumption (continuous)	11.3 W

Performance

Depth	5 fps @ 1280×960
	5 fps @ 640×480
	5 fps @ 320×240
RGB	4 fps @ 2560 x 1920 @ YUYV
	7 fps @ 1920 x 1440 @ YUYV
	16 fps @ 1280 x 960 @ YUYV
	30 fps @ 640 x 480 @ YUYV
	6 fps @ 2560 x 1920 @ CSI BAYER12GBRG
Output data	Point cloud, depth, infrared and RGB images

Interface

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

Ambient Data

Operating temperature	-10℃ ~ 50 ℃
Storage temperature	-20℃ ~ 55 ℃
Enclosure rating	IP 65

Note:
The specs and dimension may change without notice.