HIFLY TECHNOLOGY

HF-811

Depth Onboard Processing	Active Stereo	SDK Win/Linux OpenNI2/ROS
GigE	Enclosure Rating IP65	Hardware Trigger
Measurement Range 0.7~3.5m	Sync & Alignment RGB-D	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-811 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-811 becomes an ideal solution for robotics, logistics, inspection and other applications.

Advantages

HF-811 includes two infrared (IR) sensors, one RGB sensor and several structured-light projectors. Comparing to the traditional binocular cameras, HF-811 provides:

+ More depth details
+ More robust to ambient light interference

Industrial Sensor

HF-811 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

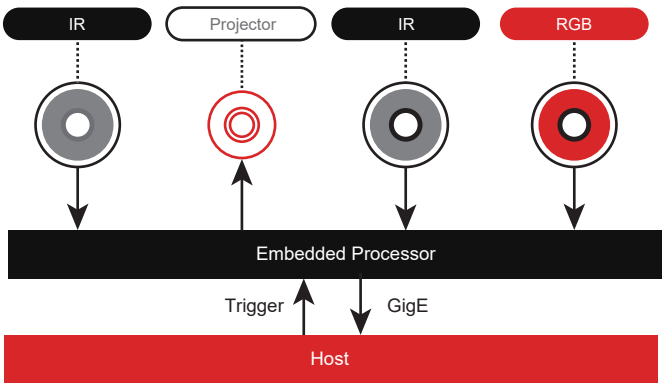
HF-811 supports the software and hardware trigger. The customers can synchronize multi-cameras to capture images with the hardware trigger.

High Accuracy

With the innovative multi-laser projecting system and compact package size, HF-811 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 HIFLY 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

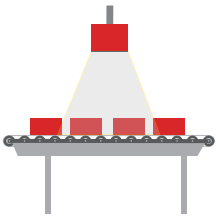
Capture RGB images.

Embedded Processor

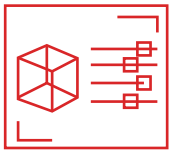
Process infrared and RGB images:

- 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.

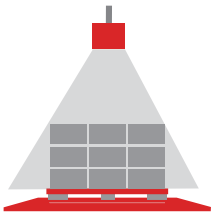
Applications



Integrity Check

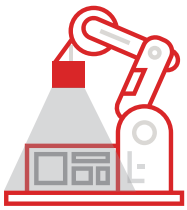


3D Content Generation



Palletizing / De-palletizing

Static Volume Measurement



Industrial Sorting

Features

Dimensions&Weight

L x H x W (excluding interfaces)	140.0 mm × 51.4 mm × 96.0 mm
Weight	860 g

Measurement

Measurement range(mm)	700 ~ 3500
FOV（H/V）	60°/48°
Z Accuracy(mm)	4.85mm@2000mm
X/Y Accuracy(mm)	8.23mm@2000mm

Performance

Depth	5 fps @ 1280×960
	5 fps @ 640×480
	5 fps @ 320×240
RGB	16 fps @ 1280×960
	30 fps @ 640×480
	30 fps @ 320×240
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++、C#、Python、Java

Interface

Power&Trigger	6-pin aviation plug
Ethernet	M12 X-Coding

Electronics

Supply voltage	DC 24V ； IEEE802.3at/af POE
Power consumption (idle)	2.9 W
Power consumption (continuous)	5.2 W

Ambient Data

Operating temperature	0℃ ~ 45℃
Storage temperature	-10℃ ~ 55℃
Enclosure rating	IP65

Note:
The specs and dimension may change without notice.