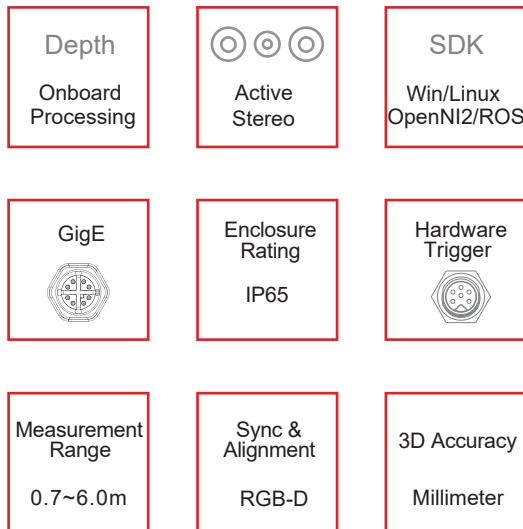**HIFLY TECHNOLOGY**

HF-851

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-851 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-851 is an ideal solution for robotics, logistics, inspection and other applications.

Depth Onboard Processing	**Active Stereo**	**SDK** Win/Linux OpenNI2/ROS
GigE	**Enclosure Rating** IP65	**Hardware Trigger**
Measurement Range 0.7~6.0m	**Sync & Alignment** RGB-D	**3D Accuracy** Millimeter

Advantages

HF-851 includes two infrared (IR) sensors, one RGB sensor and one structured-light projector. Comparing to the traditional binocular cameras, HF-851 provides:

+ More depth details
+ More robust to ambient light interference

Industrial Sensor

HF-851 is splash, water, and dust resistant and has been tested under controlled laboratory conditions with a rating of IP65 under IEC standard 60529.
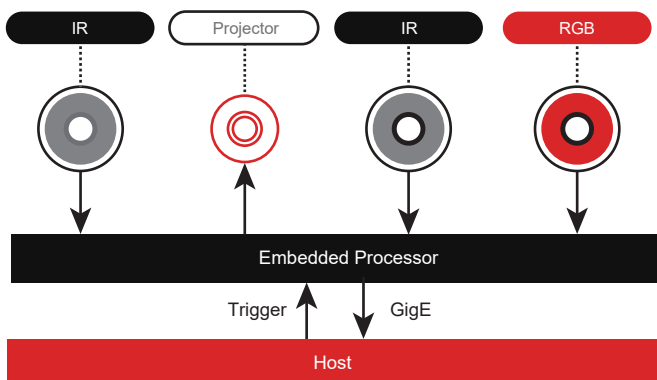
Trigger Mode

HF-851 supports the software and hardware trigger. Customers can synchronize multi-cameras to capture images with the hardware trigger.

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.
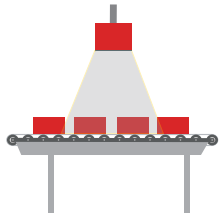
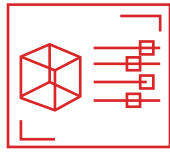### RGB Sensor
Capture RGB images.

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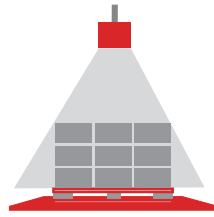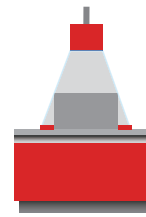- Receive trigger signal from the host or the hardware trigger source.
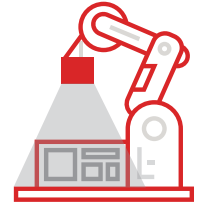
Applications

Integrity Check | 3D Content Generation | Palletizing / Depalletizing | Static Volume Measurement | Industrial Sorting

Features

Dimensions&Weight

L x H x W (excluding interfaces)	140.0 mm × 31.9 mm × 96.0 mm
Weight	650 g

Measurement

Measurement range(mm)	700 ~ 6000
FOV （H/V）	58°/48°
Z Accuracy(mm)	4.27mm@1500mm
X/Y Accuracy(mm)	14.41mm@1500mm

Software

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

Ambient Data

Operating temperature	0℃～45℃
Storage temperature	-10℃～55℃
Enclosure rating	IP 65

Performance

Depth	16 fps @ 1280×960
	26 fps @ 640×480
	26 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

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
Power consumption (trigger)	4.0 W

Note:

The specs and dimension may change without notice.