HIFLY TECHNOLOGY

HF-461

Overview

HIFLY's HF-461 adopts the time-of-flight method of measurement, and uses embedded processor to calculate depth images. Meanwhile, it supports the third-party SoC development.

HF-461 provides an ideal solution for various industrial applications, like volume measurement, 3D inspection and AGV.

35.8mm
67.5mm
96.4mm

Advantages

Time of Flight (ToF)

ToF technology featuring one laser projector,
one ToF sensor and one RGB sensor. Compare to active stereo cameras, it offers:

+ Stable accuracy less affected by distance.
+ Distinct identification of small objects in the short range, like cables and cones.

Configurable Depth Quality

Supports setting the quality of depth images in three grades (BASIC/MEDIUM/HIGH) according to the applications.
Setting to the HIGH grade, the camera provides a better depth quality, but a lower frame rate than the BASIC grade.
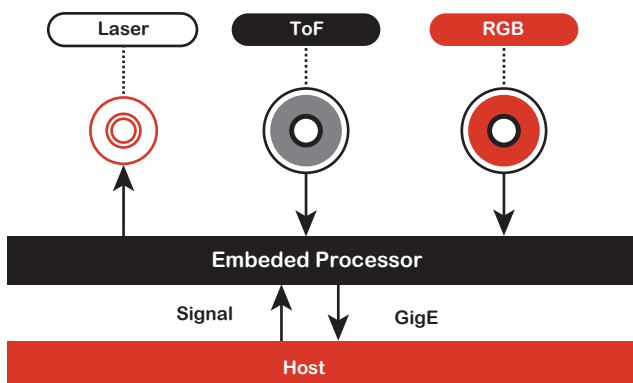
Easy to Integrate

Due to its compact and lightweight housing, HF-461easy to integrate into various applications.

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.

Depth	ToF	SDK
Onboard Processing	Measuring Principle	Win/Linux OpenNI2/ROS

Ethernet	Accuracy	Compact
	Millimeter	Easy to Integrate

Measurement Range	Alignment	RGB
0.1~10.0 m	RGB-D	2M Pixels

Principle

Laser   ToF   RGB

Embeded Processor

Signal   GigE

Host

Laser Projector
Consecutively project the modulated light to the object surface.

ToF Sensor
Receive the modulated light reflected from the object surface.
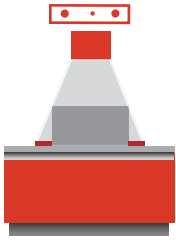
RGB Sensor
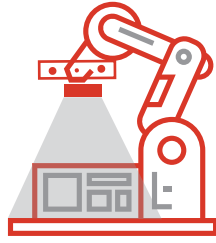Capture RGB images.

Embedded Processor
Process RGB images and the data from the ToF sensor.

- Calculate depth data and achieve alignment with RGB images.

- Upload data through Gigabit Ethernet (GigE).
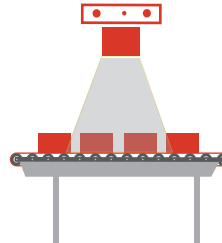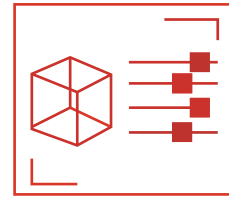
- Receive the signal from the host.

Applications

Volume Measurement	Robot Recognition, Positioning and Grabbing	3D Inspection	3D Content Generation

Features

Dimensions&Weight

L x H x W (excluding interfaces)	96.4 mm x 67.5 mm x 35.8 mm
Weight	315 g

Interface

Power&Trigger	HR10A-7P-6S (HRS)
Ethernet	RJ45

Measurement

Measurement Range (m)	0.1 ~ 10.0
FOV（H/V）	65°/50°
Z Accuracy (mm)	±5+1% of depth [400, 2200]
	±15+1% of depth (2200, 4300]

Electronics

Supply Voltage	DC 12 V / 24 V
Power (Idle Mode)	1.5 W
Power (Continuous Mode)	6.3 W

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	IP50

Performance

Depth images	640×480	**RGB Images**	29 fps @ 1920×1080
	320×240		29 fps @ 1280×720
	160×120		29 fps @ 640×360
Depth Quality	Basic; Medium; High	**RGB-D Alignment**	√
Output Data		Point cloud, depth, infrared and RGB images	

Note:
The specs and dimension may change without notice.