Percipio 3D Camera

FM811-TIX

Onboard Processing **Depth**	Active Stereo ◎ • ◎	Win/Linux OpenNI2/ROS **SDK**
USB 2.0	Enclosure Rating **IP65**	Hardware Trigger
3D Accuracy **Millimeter**	Sync & Alignment **RGB-D**	Laser eye safety **Class 1**
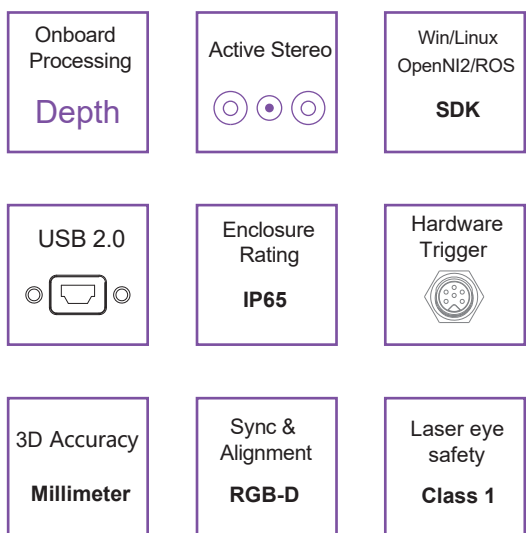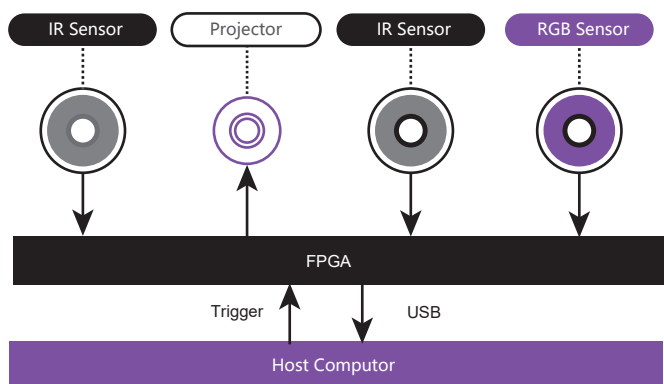
Overview

Thanks to the active stereo vision technology with proprietary intellectual property rights, Percipio smart 3D camera offers more depth details and is more robust to ambient light interference than traditional stereo vision.

Percipio FM811-TIX combines structured light with the proven technology of a RGB sensor and delivers colorful depth images in real time.

The powerful visualization platform, broad support of common programming languages, reliable measurement results and the aluminum alloy body make FM811-TIX become the ideal solution for robotics, logistics and inspection, to name a few examples.

Note:
The specs and dimension may change without notice.

Advantages

Active Stereo

FM811-TIX uses the active stereo vision technology and is fitted with two infrared sensors, one RGB sensor and three structured light projectors. Comparing to the traditional stereo vision camera, FM811-TIX provides:

+ More depth details
+ More robust to ambient light interference

Industrial Design

FM811-TIX features an IP65-rated design with protection from dirt, dust and water splash.

Trigger Mode

FM811-TIX supports software trigger and external hardware trigger. With the external hardware trigger, customers can synchronize multi-cameras to capture images.

High Accuracy Measurement

Thanks to the innovative multi-laser projecting system, FM811-TIX provides high accuracy measurement for stationary objects. With large working range and wide field of view, FM811-TIX can be applied to various scenes.

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

IR Sensor	Projector	IR Sensor	RGB Sensor
◉	◎	◉	◉

FPGA

Trigger — USB

Host Computor

Structured-light Projector
Project speckle pattern onto the target object.

Infrared Sensor
Receive speckle pattern reflected from the target object.

RGB Sensor
Capture color images.

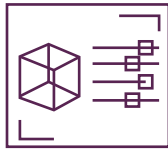**Embedded Processor**
Process infrared and color images:

- Calculate depth image, synchronize and align parameters of color and depth images.
- Upload data through the USB interface.
- Receive trigger signal from the host computer or the external trigger source.
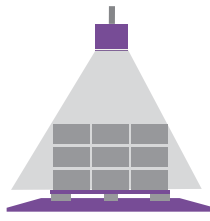
Applications

FM811-TIX is suitable for and not limited to the following fields:
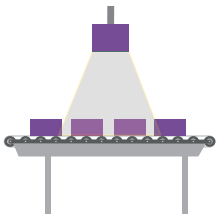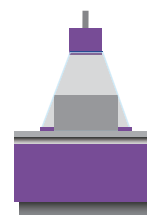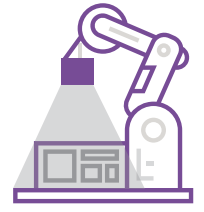
Integrity Check   3D Content Generation   Palletizing / De-palletizing   Dimension Measurement   Industrial Sorting

Features

Dimensions&Weight		Connector	
L x H x W	130.0 mm × 50.9 mm × 77.0 mm	Power	USB 2.0
Weight	520 g	Trigger	5-pin aviation plug
Measurement		**Electronics**	
Baseline	79 mm	Supply voltage	DC 5 V
Measurement range	700 mm ～ 3500 mm	Power (idle)	1.5 W
FOV(H/W)	56° / 46°	Power (work)	3.5 W
Accuracy	1 mm @ 1 m	Power (trigger)	3.0 W
Software		**Ambient Data**	
OS	Linux/Windows/Android/ROS	Operating temperature	0℃～45℃
Development platform	Camport SDK	Storage temperature	-10℃～55℃
API	C / C++	Enclosure rating	IP65

Performance			
Depth	5 fps @ 1280×960	Color	12 fps @ 1280×960
	5 fps @ 640×480		24 fps @ 640×480
	5 fps @ 320×240		24 fps @ 320×240
RGB-D Sync&Alignment		√	
Output data		Point cloud, depth, IR and color images	

For purchase or business cooperation, please email us: info@percipio.xyz

For technical support, please email us: support@percipio.xyz

For more information about Percipio 3D cameras, please visit :   www.percipio.xyz

For online documentation, please visit :   percipiodc.readthedocs.io

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