# 3D Imaging Time of Flight Development Platform

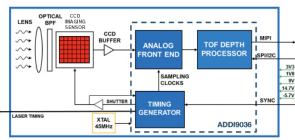


Complete Hardware and Software solution that works out of the box. Simple Software installation gets users up and running in minutes.

**3D Time of Flight** (ToF) creates a depth mapping of objects within the field of view and is a key solution used for developing digital vision for many applications. The development platform comes

with everything a user needs to start working immediately on 3DToF applications, enabling the development of high value features and functions that create product differentiation.







**Development Platform** 

**3DToF Camera Module** 

**Depth Mapping Image** 

#### > Features

- 96Boards mezzanine card
- DragonBoard 410C support
- 6m range, up to 1% accuracy
- Finisar 940 nm wavelength VCSEL, up to 40W output
- VGA resolution up to 30fps
- 90° x 69.2° FOV
- CCD sensor, 640x480
- USB, Ethernet or Wi-Fi to connect to a host computer

- 13.8mm removeable lens
- V4L2 capture driver
- Native/Host SDK
- Support for multiple host OSs: Linux, Windows, MacOS
- OpenCV, python and MATLAB wrapper support
- Evaluation software plus limited demo applications and algorithms included
- Depth mode, IR mode

## **Applications**

- > INDUSTRIAL
  - Automated vehicles
  - Safe zone operation
  - Robotics

#### BUILDING MANAGEMENT

- Surveillance applications
- SLAM

#### > AUTOMOTIVE

- Gesturing
- Passenger Monitoring



Specifications	Typical
DC Input	5 VDC
Range	Up to 6m
FoV	90° x 69.2°
VCSEL	940nm
Accuracy	Near: 20cm to 1.2m; < 2.5% accuracy
	Mid: 1m to 2.6m; < 2% accuracy
	Far: 2.6m to 6m; < 1% accuracy
Frame Rate	Up to 30fps
Resolution	640 x 480
Operating Temperature	0° to 60°C

Specifications	Typical	
I/O Options for DragonBoard 410c	USB 2.0, Ethernet, Wi-Fi 802.11agn, I <sup>2</sup> S, HDMI, I <sup>2</sup> C, MIPI- CSI, MIPI-DSI, SDIO, USB 2.0, 16 Configurable GPIO Additional RPI connector on Mezzanine board for connection to other compatible CPU boards	
Processor	Qualcomm 410E processor	
EEPROM	1Mb storage	
SD/uSD	Removeable uSD card slot	

# **Software Stack**

	User Appli	cations	
	Time of Flight SDK		
96 Board	V4L2 kerne	el driver	
	Gadget USB video kernel driver	Network server	
	USB2.0/3.0 Connectivity	ETH/Wi-Fi	
	<b>1</b>	<b>↓</b>	
	USB2.0/3.0 Connectivity	ETH/Wi-Fi	
	UVC Driver	Network client	
Host PC	Time of Flight SDK		
Windows Ubuntu	TDF Image Pre-processing/Post-processing API  OpenCV  Python  MATLAB		

## **Via Phone**

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