



DCAM series

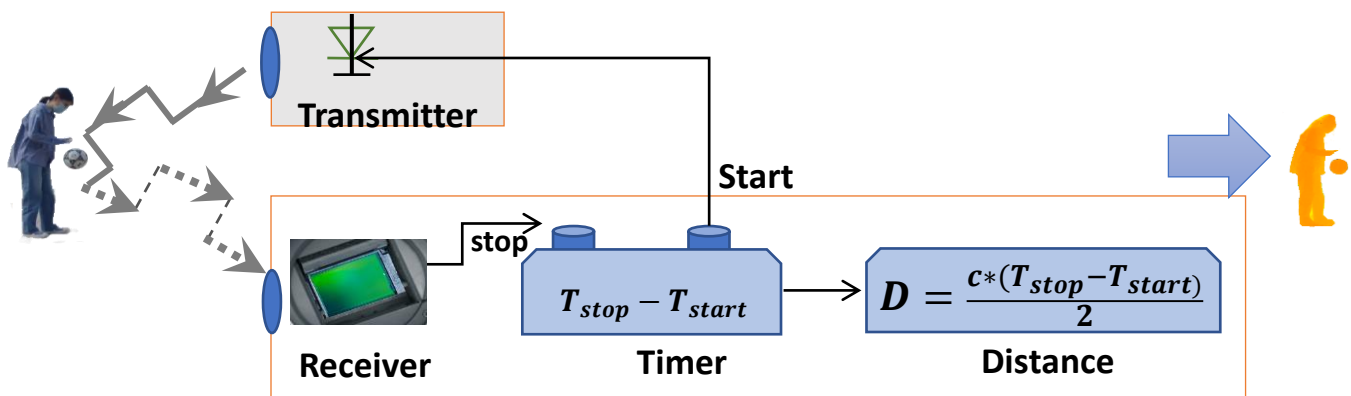
Features Pulse iToF sensor

Class 1 Laser Product



机器视觉产业联盟
China Machine Vision Industry Union

3D Time-of-Flight Principle



A 3D time-of-flight sensor emits modulated infrared light outside the visible range. It is reflected by objects in its field of vision and then captured by the sensor. The time between the emission and reception of the reflected infrared light is called “time-of- flight” (ToF).

DCAM560C



EXW price:

DCAM560C Pro 649usd

DCAM560C Lite 549usd

[Specification Download](#)

[2D Drawing Download](#)

Product Name	DCAM560C Pro	DCAM560C Lite
ToF Sensor	Pulse ToF CCD + RGB	
Emitter	940nm VCSEL * 2, Customizable 850nm	
ToF Resolution/Frame rate	640*480, Max.30fps	
TOF FOV	69°(H)*51°(V) , Customizable 90°(H)*69°(V),100°(H)*77°(V) , 102°(H)*85°(V)	
RGB Module	1600*1200, 30fps	
RGB FOV	77°(H)*55°(V), Customizable Max 85°(H)*70°(V)	
Output Format	RAW12 (Depth/IR) + RGB	
Interface	1000M Ethernet & RS485	
Power Supply	PoE+ or 12V~24V(DC), <5W	12V~24V(DC), <5W
Accuracy	<1%*	
Work Range	0.16 ~ 6m	
Work Temperature	-20°C~50°C	
Operation System & Platform	Windows/Linux/Arm Linux/ROS	
SDK Support	C/C++/Python	
IP Rating	IP67	IP42
Size	105mm*65mm*72.65mm	105mm*65mm*60mm
Back side		

*Test Condition: 22°C room temperature, 300Lux room light on, 40% reflectivity planar grey board, measure depth over 10×10 pixel ROI (region of interest) at image center, repeat 32 times at each position.

DCAM550



EXW price:

DCAM550-U 369usd

DCAM550-P 399usd

DCAM550-E 499usd

[Specification Download](#)

[2D Drawing Download](#)

Product Name	DCAM550-U	DCAM550-P	DCAM550-E
ToF Sensor	Pulse ToF CCD		
Emitter	940nm VCSEL * 2, Customizable 850nm		
ToF Resolution/Frame rate	640*480, Max.30fps		
TOF FOV	69°(H)*51°(V) , Customizable 90°(H)*69°(V),100°(H)*77°(V) , 102°(H)*85°(V)		
Output Format	RAW12 (Depth/IR)		
Interface	USB2.0 & RS485	100M Ethernet & RS485	100M Ethernet & RS485
Power Supply	12V~24V(DC), <5W	PoE+ or 12V~24V(DC), <5W	PoE+ or 12V~24V(DC), <5W
Accuracy	<1%*		
Work Range	0.35~6m		
Work Temperature	-20°C~50°C		
Operation System & Platform	Windows/Linux/Arm Linux/ROS		
SDK Support	C/C++/Python		
IP Rating	IP42		IP67
Size	65mm*65mm*52.7mm		65mm*65mm*59.5mm
Back side			

*Test Condition: 22°C room temperature, 300Lux room light on, 40% reflectivity planar grey board, measure depth over 10×10 pixel ROI (region of interest) at image center, repeat 32 times at each position.

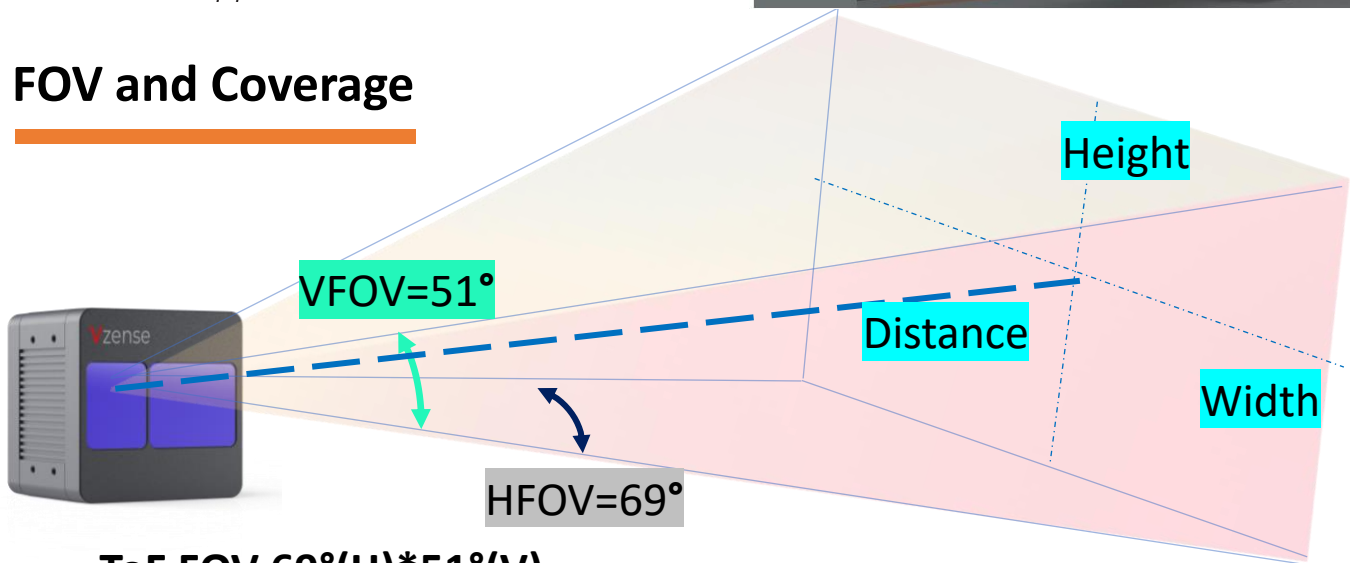
Key Feature

- Matched depth image and RGB image (for DCAM560C series)
- Pulse TOF, global shutter exposure, easy to capture moving objects
- Large FoV, max 102°(H)*85°(V) (customized)
- High resolution, high frame rate, up to 30fps
- Works well under bright sunshine or in dark scenes
- Low computing load, reducing system cost and power consumption
- Various interface schemes to meet different matching requirements
- PoE+ power supply function optional
- IP67 and aviation plugs option selectable
- Stable and mature solution, multi-project production and delivery



DCAM560C acquires Depth, IR & RGB at the same time

FOV and Coverage



ToF FOV 69°(H)*51°(V)

$$Width = \tan\left(\frac{HFOV}{2}\right) * Distance * 2$$

$$Height = \tan\left(\frac{VFOV}{2}\right) * Distance * 2$$

Calculated detectable area from 1, 2, 3, 4meters away

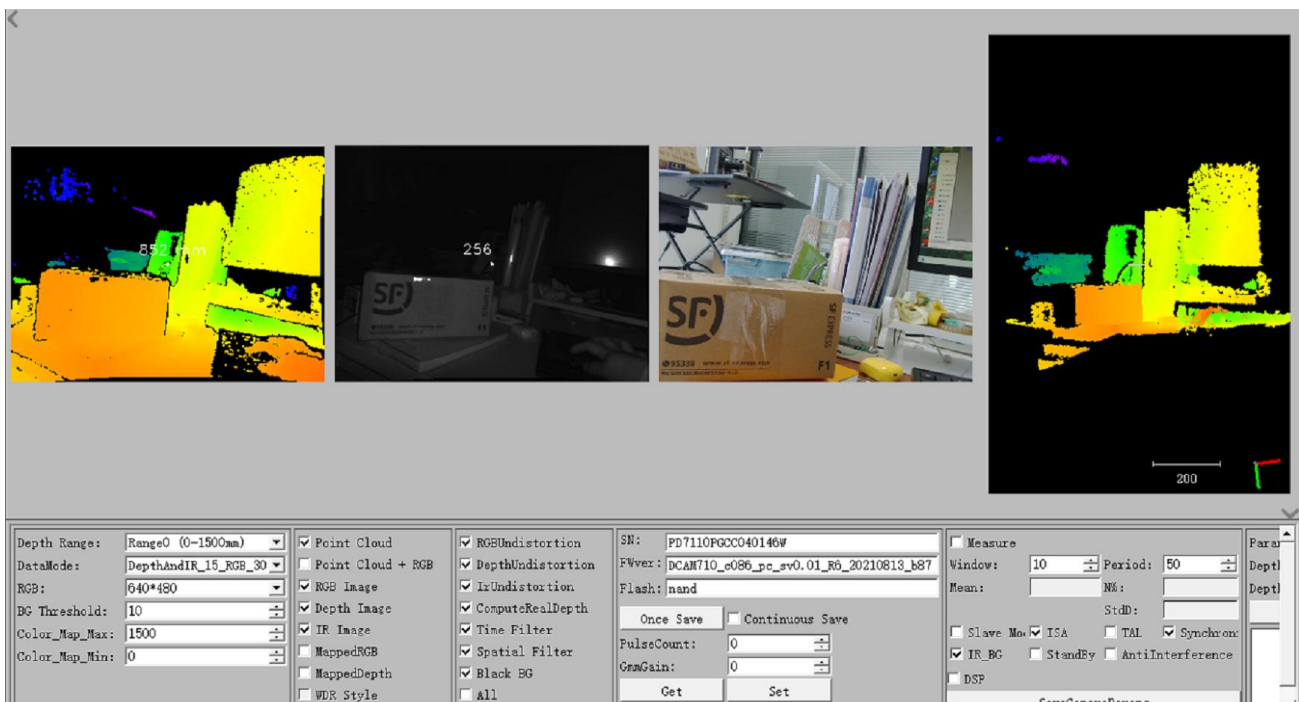
Distance (meter)	ToF FOV 69°(H)*51°(V)		ToF FOV 90°(H)*69°(V)		ToF FOV 100°(H)*77°(V)	
	Width (meter)	Height (meter)	Width (meter)	Height (meter)	Width (meter)	Height (meter)
1.00	1.35	0.93	2.00	1.35	2.38	1.56
2.00	2.7	1.86	4.00	2.7	4.76	3.12
3.00	4.05	2.8	6.00	4.05	7.15	4.68
4.00	5.4	3.73	8.00	5.4	9.53	6.25
5.00	6.74	4.66	10.00	6.74	11.9	7.8

You can also calculate Coverage by yourself:

<https://1drv.ms/x/s!Aq4U4G0CF3nCi3UX37hroT5w4ha-?e=n46lxr>

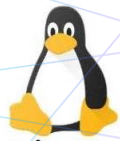
VzenseUTool

Download link: <https://github.com/Vzense/UTool>

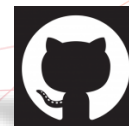


SDK Support(Sample Code Include)

Download link: <https://github.com/orgs/Vzense/repositories>



Linux



C
C++

C#

DCAM550 Accessories included

Product	Part No.	Description	Picture
DCAM550-U	814000300012	-USB cable (Type A with lock to Type A) -Support USB 2.0 -Cord Length: 1.5m	
	814000300019	-DC 12~24V -Cord Length: 2m	
	814000300014	-6pin Multiple Functional Cable -RS485, EXT IO -Cord Length: 1m	
DCAM550-P	814000300015	-CAT5e Ethernet Cable -RJ45 to RJ45 -Cord Length: 3m	
	814000300019	-DC 12~24V -Cord Length: 2m	
	814000300014	-6pin Multiple Functional Cable -RS485, EXT IO -Cord Length: 1m	
DCAM550-E	814000600003	-CAT5e Ethernet Cable -Aviation Connector to RJ45 -Cord Length: 3m	
	814000300018	-9pin Multiple Functional Cable -Cord Length: 2m	

DCAM560C Accessories included

Product	Part No.	Description	Picture
DCAM560C Pro	814000300025	-CAT5e Ethernet Cable -Aviation Connector to RJ45 -Cord Length: 3m	
	814000300026	-M12 Multiple Functional Cable -Cord Length: 2m	
DCAM560C Lite	814000300015	-CAT5e Ethernet Cable -RJ45 to RJ45 -Cord Length: 3m	
	814000300019	-DC 12~24V -Cord Length: 2m	
	814000300014	-6pin Multiple Functional Cable -RS485, EXT IO -Cord Length: 1m	

Suggested PoE+ Injector

Supplier	Model
H3C	EWPAM2NPoE+
TP LINK	TL-PoE+170S

Vzense

ToF sensor & application



About Vzense Technology

Since 2016, Vzense Technology has been continuously pushing the boundaries of TOF sensor development and its application through the projects of global leading customers. Our team has 20+ years of experience in consumer electronics industry and supply chain management. Vzense successfully brought product quality, time of development, cost and advanced AI altogether into our creative products. We shipped over 100 thousand of products to big and small customers in 40+ countries. Our product development and supply chain is based in China and US, engineering service in China, US and EU, resellers in US, EU, and Japan.



机器视觉产业联盟
China Machine Vision Industry Union



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SDK Download:

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