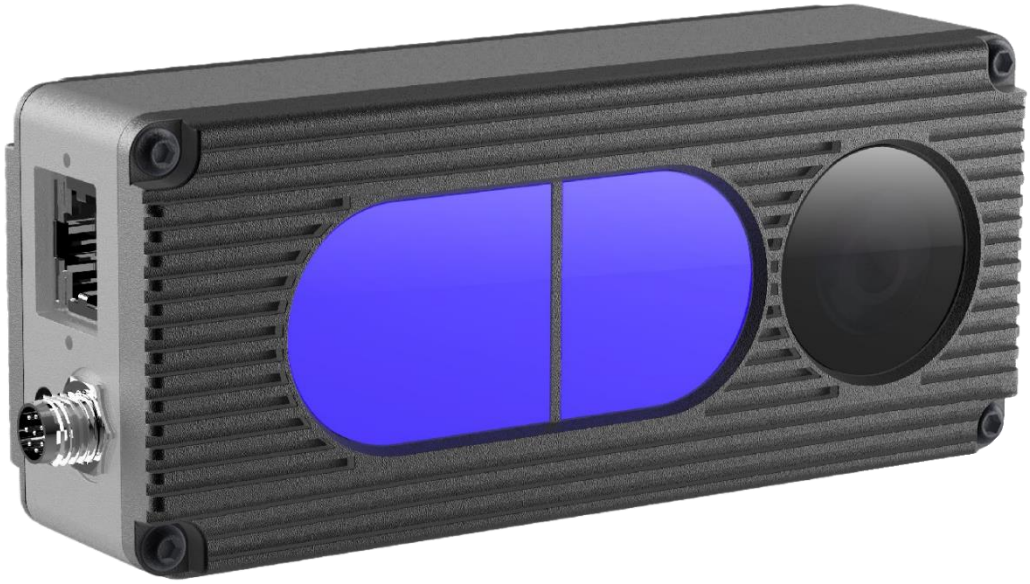
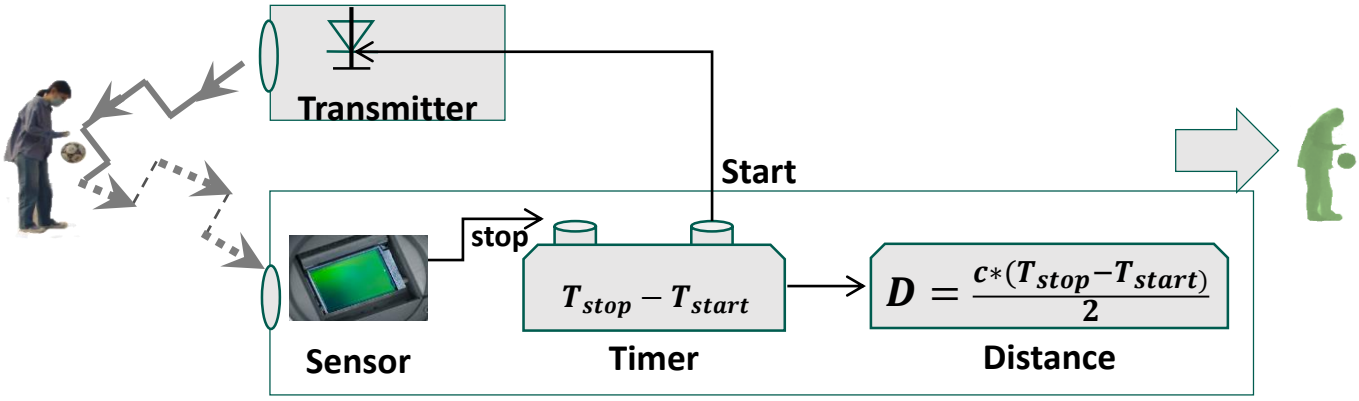
NYX series

Features Nuvoton Pulse iToF sensor

Class 1 Laser Product



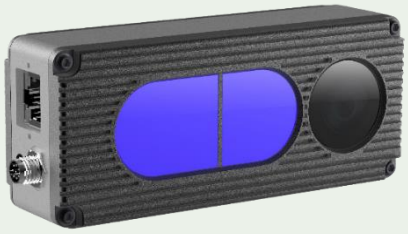
3D Time-of-Flight Principle



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).

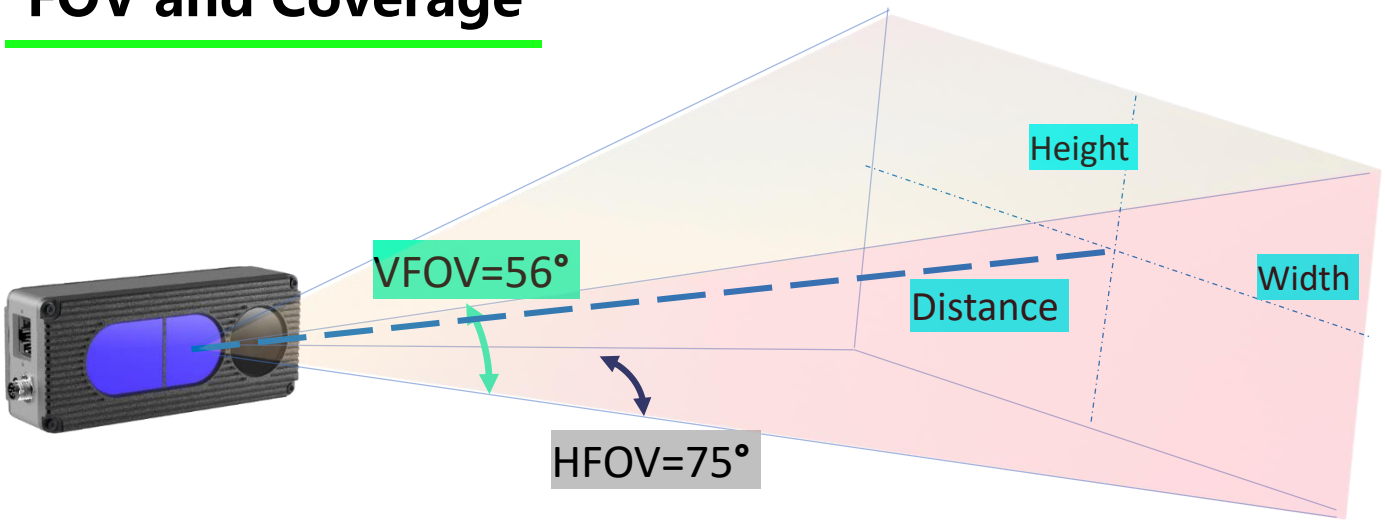
NYX650

Industrial grade high cost performance Nuvoton RGBD camera

Model	NYX650
Interface with Host	
Technology	ToF (Time-of-flight) Depth Camera
Depth Sensor Resolution and Frame rate	640 x 480@30FPS
Depth Sensor Field of View	H-70° V-50°
RGB Sensor Resolution and Frame rate	1600*1200@30fps
RGB Sensor Field of View	H-70° V-50°
Output Formats	16bit (Depth) + 8bit (IR) + JPEG (RGB)
Use Range	0.3m ~ 4.5m*
Accuracy	<2%*
Power Consumption	Average Max. 6W(Ref)
Illumination	940nm, 2 x 6W Optical Power VCSEL
Dimension(L*H*W)	125mm*50mm*34.5mm
Weight	256g
Power Supply	DC power
Interface	Gigabit Ethernet
Digital I/O(Synchronization)	1in, Passive Sync Signal
Enclosure Rating	IP42
Working/Storage Temperature	-20℃-50℃/-30℃-70℃
Software	C/C++ /Python/C #/ROS1/ROS2
Operation System	Windows 7/8/10/11， Linux， Arm Linux
Cooling	Passive, no fan
Certification	FCC/CE/FDA
Eye safety	Class 1

*Accuracy error and Use Range vary with the reflectivity of the measured object

FOV and Coverage



NYX650 ToF FOV 75°(H)*56°(V)

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

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

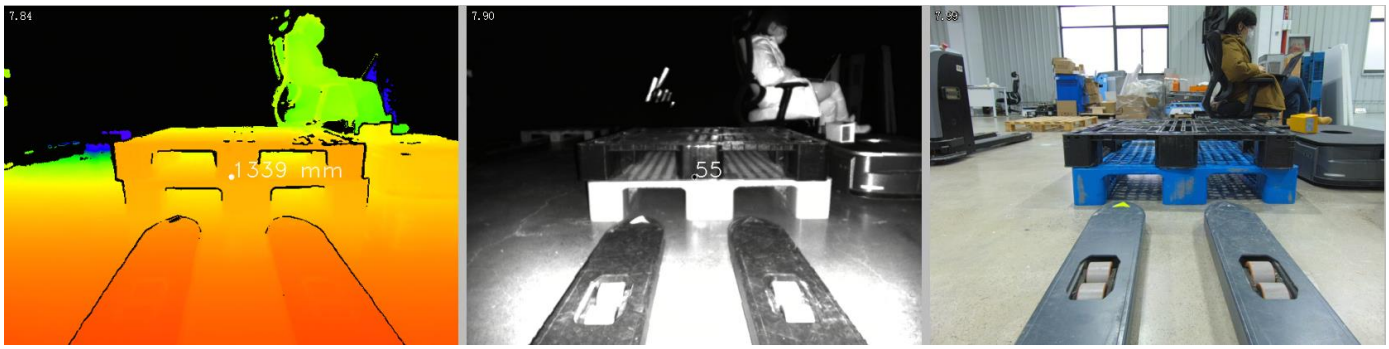
Calculated detectable area from 1, 2, 3, 4meters away

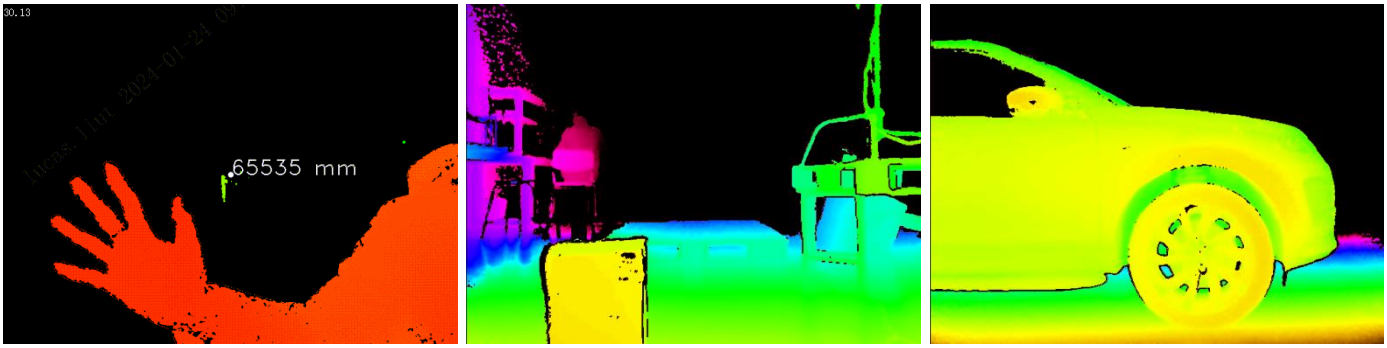
Distance (meter)	Width (meter)	Height (meter)
1	1.53	1.06
2	3.07	2.13
3	4.60	3.19
4	6.13	4.25

* the coverage is still limited by the distance

Key Feature

- Matched depth image and RGB image
- Global shutter exposure, easy to capture moving objects
- High resolution, high frame rate, up to 30fps
- Works well under bright sunshine or in dark scenes
- Low computing load, Various interface schemes
- PoE+ power supply function optional
- IP67 and aviation plugs option selectable
- Stable and mature solution, multiple projects delivered



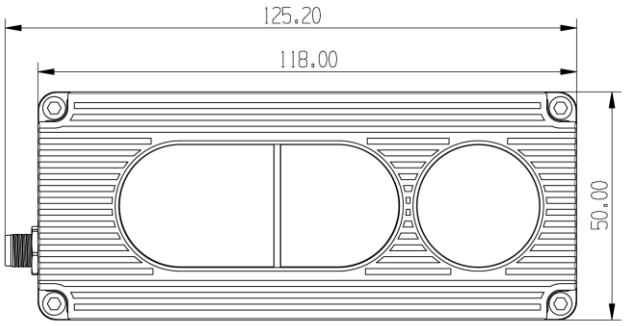


ScepterSDK

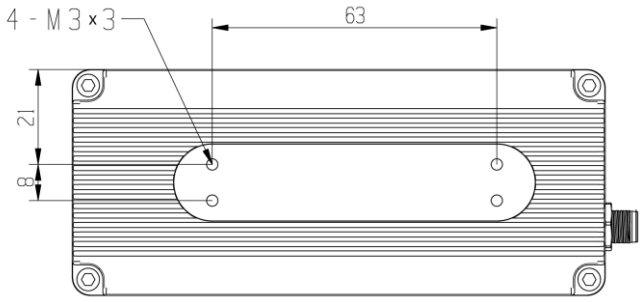
ScepterGUITool	ScepterGUITool is a graphical interface tool developed based on ScepterSDK, which provides depth image color mapping display, 3D point cloud display, filter parameter adjustment, device parameter setting, RGB & Depth alignment and other functions.
Suite for OS and platforms	Support for different operating systems and platforms such as Windows, Ubuntu 16/18/20, Arm Linux. The development kit includes dynamic libraries, C/C + + code samples, OPENCV samples, and precompiled bin files.
Wrappers	Python API, and integration with the following third parties: ROS1, ROS2, C# , etc. Halcon, GenICam will coming soon.
Code Samples	The code samples include operating systems, platforms, and wrappers supported by the SDK. These examples demonstrate how easy it is to use the SDK to embed snippets of code to access the camera into your application. You can view C/C + + samples with examples of point cloud capture and save, parameter settings, and trigger mode settings.

The SDK is still evolving, add new features to extend your project's needs. Click on ScepterSDK to view details or download.

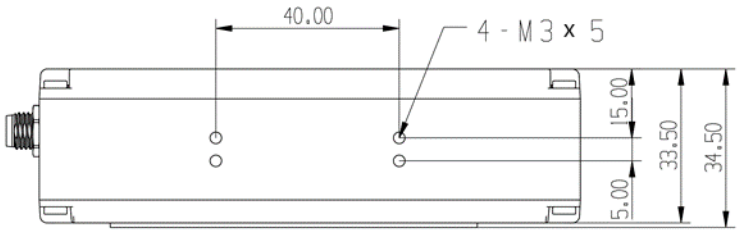
NYX650 Dimension



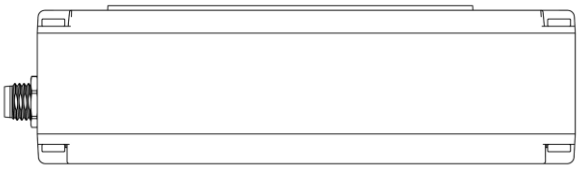
Front View



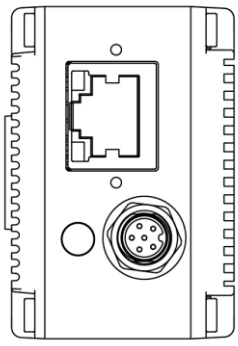
Back View



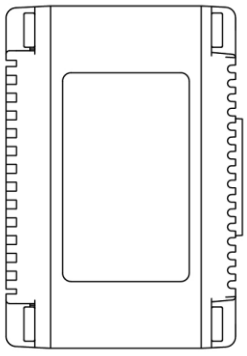
Bottom View



Top View

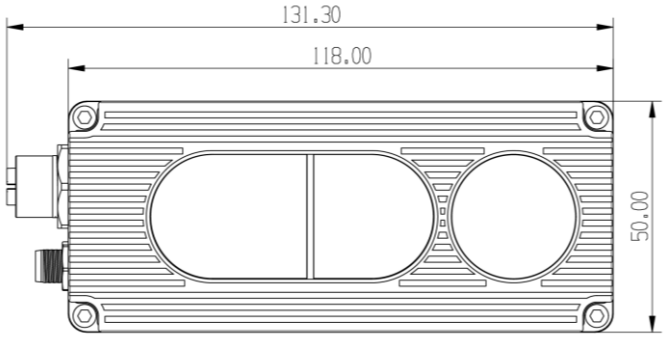


Left View

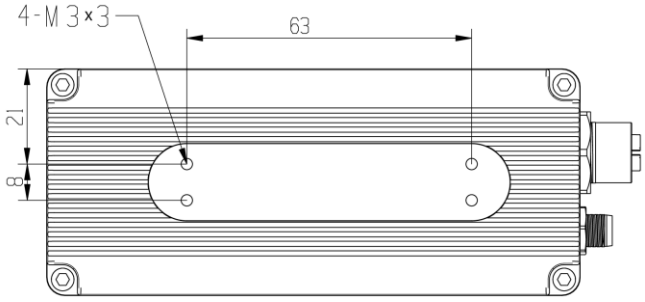


Right View

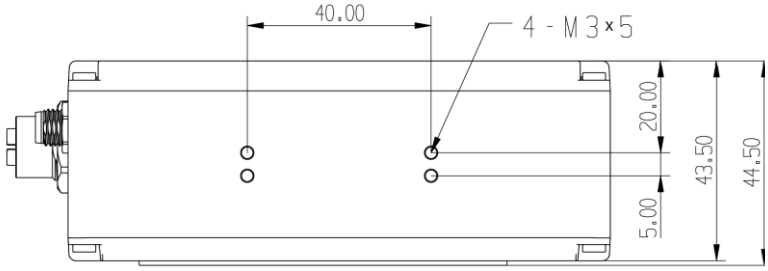
NYX660 Dimension



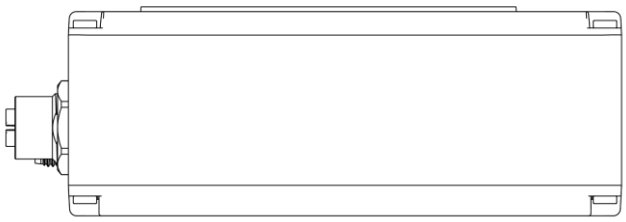
Front View



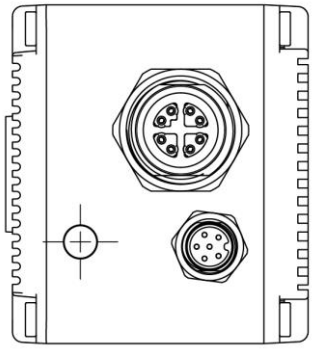
Back View



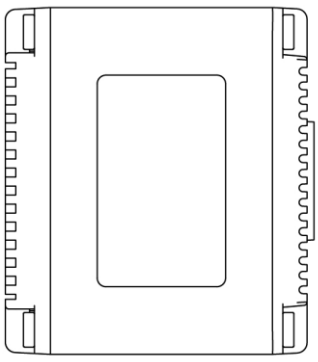
Bottom View



Top View

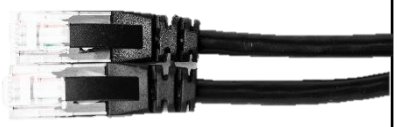


Left View



Right View

Accessories included

Model	Description	Picture
NYX650	-CAT6Ethernet Cable -3m	
	-M6 A CODE Multiple Functional Cable -2m	

About us

Since 2016, the GMI team has been engaged in the research of three-dimensional images, computer vision, image processing, sensor fusion, gesture and facial recognition, and customized the application and solution of ToF (Time-of-Flight) perception technology as the company's long-term development direction. After six years of ToF technology experience, the GMI team not only provides cost-effective standard products, but also provides comprehensive customized services including hardware, software, algorithms and optics.

Contact us

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