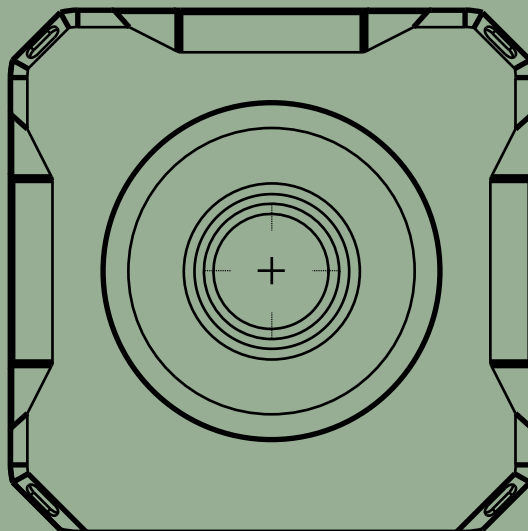


*ZED X One GS

Monocular Camera Overview

The ZED X One GS is the ideal choice for flexible integration and customization of stereo systems or for multiple-camera surround vision.

Its 2.3MP global shutter sensor exposes every pixel simultaneously, eliminating motion blur and rolling shutter distortion to deliver accurate perception, even in the most dynamic environments. Making it the perfect solution for factory automation, logistics, and humanoid platforms.



*ZED X One GS

Datasheet Revision History

Document Version	Description	Revision Date
1.0	● Initial release: Common datasheet with ZED X One 4K	April 2024
2.0	● New release: Separated from ZED X One 4K datasheet	April 2026
2.1	● Added: ZED X One GS Accessories	May 2026
2.2	● Added: Sensor positions	June 2026
2.3	● Added: Compliance and certificates	July 2026

*ZED X One GS

General Specifications

High-performance global shutter

The ZED X One GS captures every movement without sacrificing an ounce of dynamic range or overall image quality. No blurred or curved lines. Just perfect pixels in every scene.

Full HD 60fps

The ZED X One GS delivers high-resolution images at an exceptional frame rate, ensuring sharp detail and smooth motion capture. Perfect for dynamic applications.

Secure GMSL2 connection

GMSL2 connectivity is ideal for robotics. Transmit video without EMI and high data rate through a lockable interface to a Jetson Orin over a distance of up to 15M with low latency.

High-performance IMU

The all-new IMU combines a 16-bit triaxial accelerometer and gyroscope with vibration resistance, ultra low noise and bias for exceptional motion tracking.

Multi-camera synchronization

Hardware synchronization for multiple connected cameras at frame-level within 15 microseconds. Capture RGB and depth images of the same scene with multiple cameras all triggered at the same time.

Low-level camera control

Benefit from low-level control to finely tune image parameters and achieve unparalleled image quality and customization in camera firmware development.

Camera	
Sensor Type	1/2.6" 2.3MP CMOS - Global Shutter
Output Resolution	1920x1200 @60fps
	1920x1080 @60fps
	960x600 @120fps
Image Format	16:10
Output Format	Raw 10 / YUV 4:2:2 (Argus)
Field of View	
Narrow lens	Max. 73°(H) x 45°(V) x 87°(D)
Wide lens	Max. 110°(H) x 80°(V) x 120°(D)
Focal Length	
Narrow lens	4.6mm (0.18")
Wide lens	2.2mm (0.086")
Aperture	
Narrow lens	f/2.0
Wide lens	f/2.2
TV Distortion	
Narrow lens	-6.7% <
Wide lens	< 4.39%
Interface	
GMSL2 Serial Coax GMSL2 Connector - FAKRA Z Type	

Sensors	
Image	RGB Global Shutter Sensor
Motion	BOSCH BMI088 IMU
Physical Specifications	
Dimensions	
Narrow lens	31 x 31 x 49.3 (1.22 x 1.22 x 1.94")
Wide lens	31 x 31 x 52.5mm (1.22 x 1.22 x 2.07")
Mounting	4x M4 (bottom) + 1/4"-20UNC adapter plate
Weight	
Narrow lens	50g (0.11 lb.)
Wide lens	55g (0.12 lb.)
Power	
Power via GMSL2 0.89W (12V)	
Environment	
Operating Temp.	-20°C to +55°C (-4°F to 131°F)
Relative Humidity	90% at 40°C
Warranty	2-year warranty
System Requirements	
System	NVIDIA® Jetson
OS	Jetson Linux (L4T) v35.1 or newer

*ZED X One GS

Detailed Specifications

Image Sensor

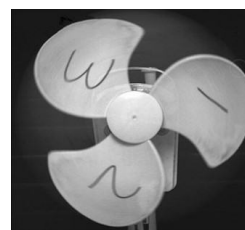
The ZED X One GS sensor delivers 2.3MP clarity and great low-light capabilities, ideal for capturing crisp and distortion-free footage of fast moving objects in robotics applications.

Sensor Type	1/2.6" 2.3MP RGB
Array Size	1928 x 1208 pixels
Pixel Size	3µm x 3µm
Chief Ray Angle	0°
Recommended Lens CRA	0° ± 3°
Shutter	Electronically Synchronized Global Shutter
Output Resolution (Side by side)	1920x1200 @60fps 1920x1080 @60fps cropping mode 960x600 @120fps binning mode
Output Format	RAW10 (v4l2) / NV21 (Argus)
Max S/N Ration	38 dB
Dynamic Range	71.4 dB
Sensitivity	22.3Ke/Lux*s
Camera Control	Exposure, analog & digital gain, gamma, white balance, saturation, sharpness, denoising, brightness, contrast

Distortion free images of fast moving objects



Rolling Shutter



Global Shutter

Motion Sensor BMI088 IMU

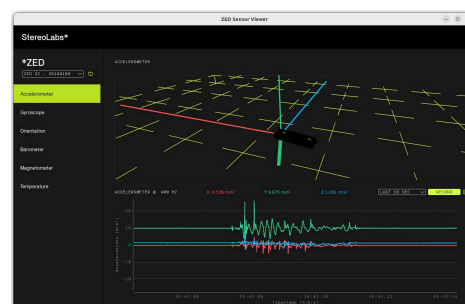
The integrated IMU is a high-performance 6-axis inertial sensor with a 16-bit triaxial accelerometer and gyroscope, providing precise orientation and motion detection of the camera. Offering high vibration robustness and excellent temperature stability, it's ideal for harsh industrial robotics environments.

Motion Sensor	BOSCH BMI088 IMU
Accelerometer Range	± 12G
Accelerometer Resolution	0.36 mg
Accelerometer Noise Density	2.3 mg
Gyroscope Range	± 1000 dps
Gyroscope Resolution	0.03 dps
Gyroscope Noise Density	0.20 dps
Sensitivity Error	± 0.5%
Output Data Rate	200 Hz

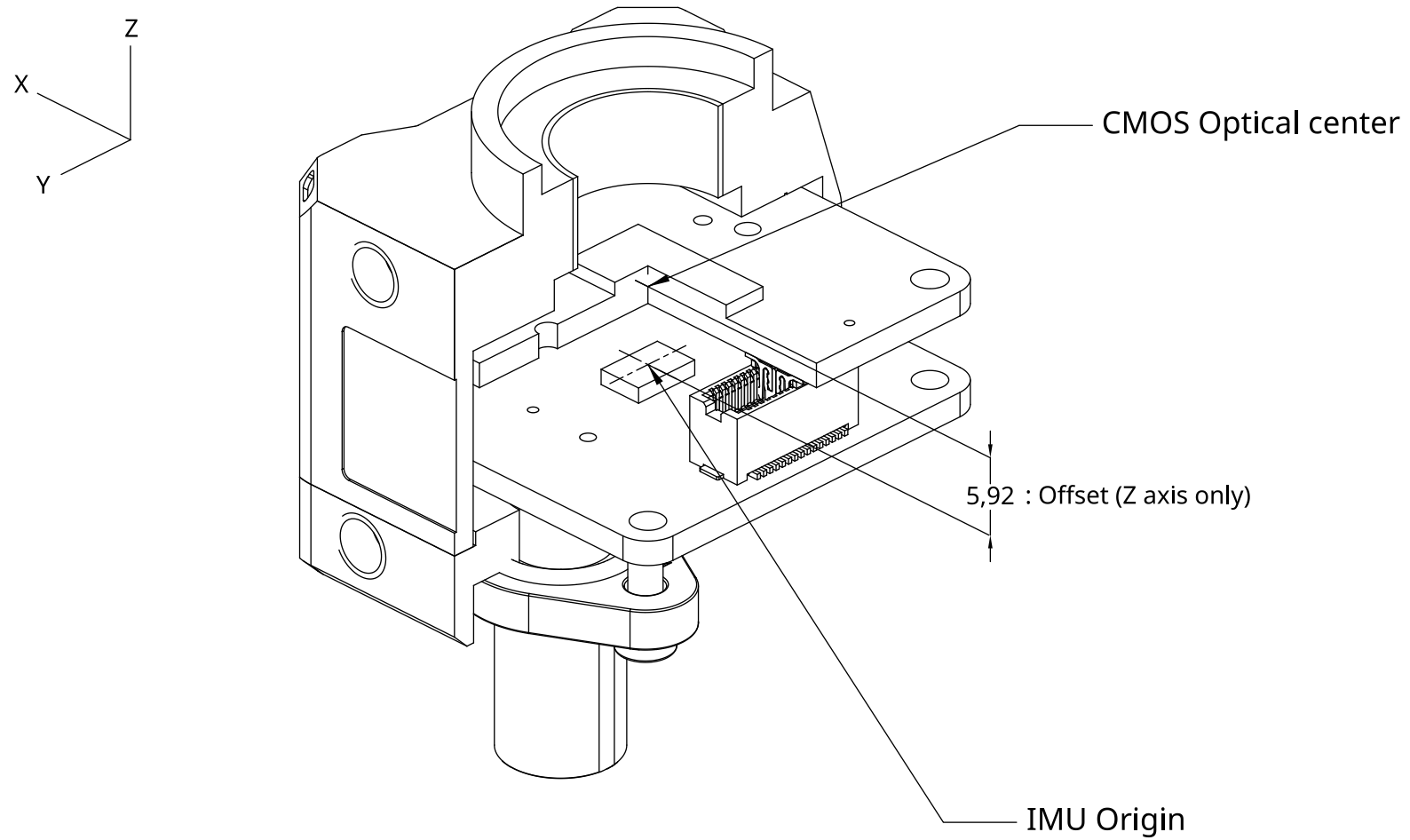
Sensors API

You can access these sensors and acquire sensor data by using the Sensors API.

Please visit stereolabs.com/docs for tutorials.

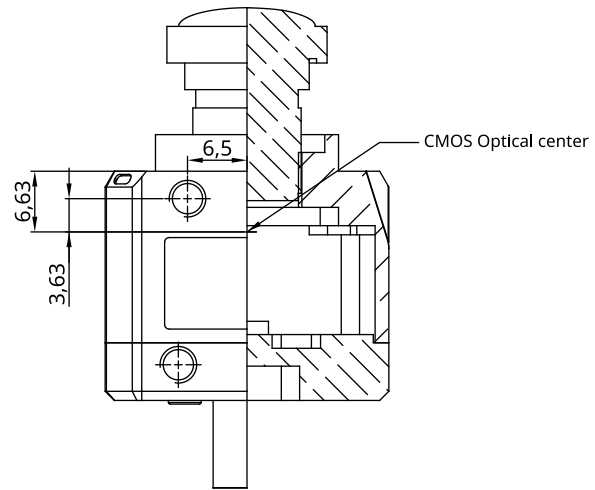


*ZED X One GS Sensor Positions

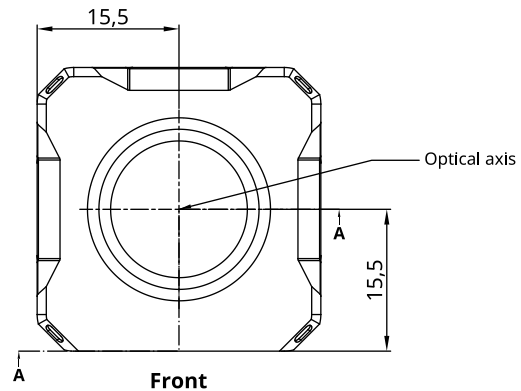


*ZED X One GS Sensor Positions

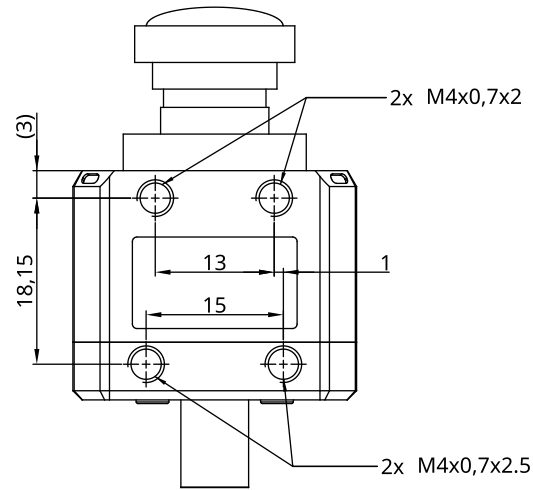
Bottom



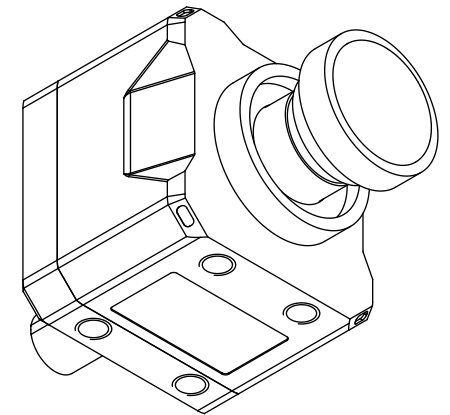
A - A



Front

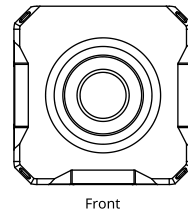
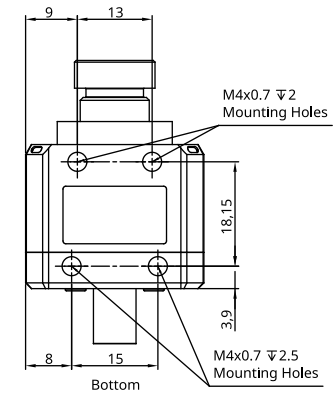
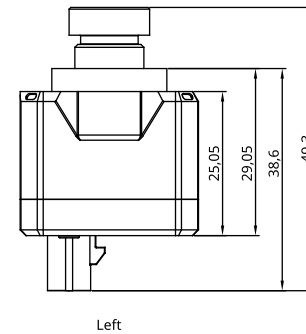
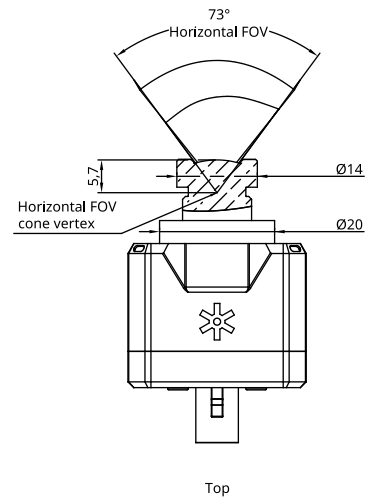
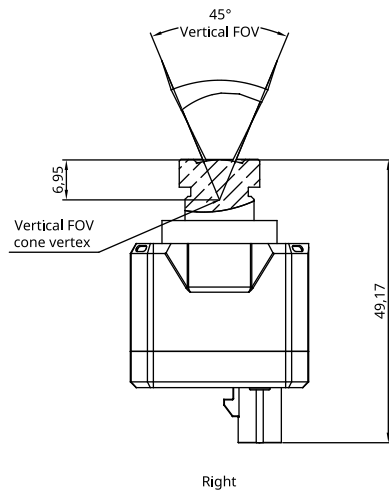
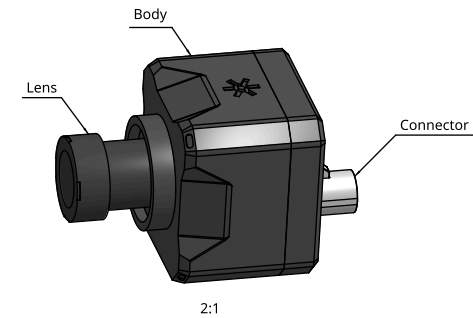
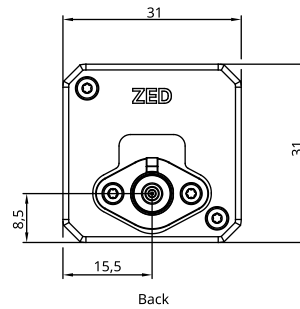


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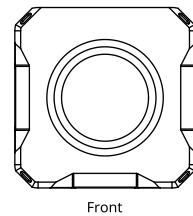
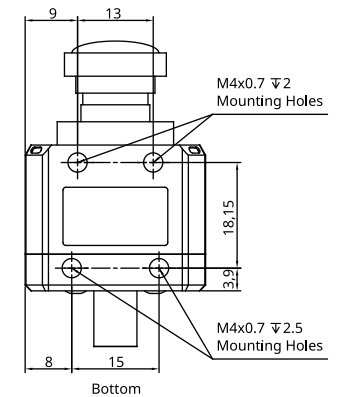
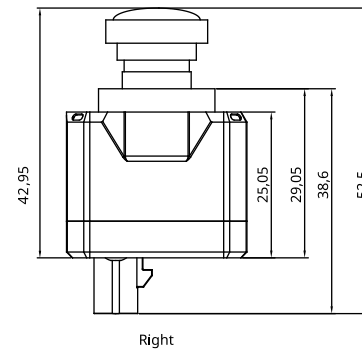
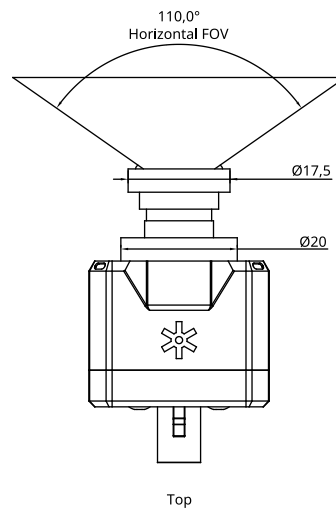
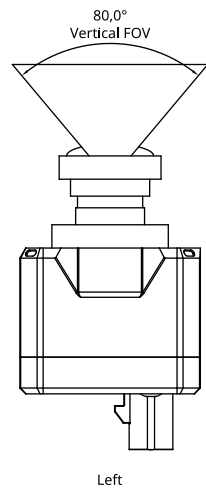
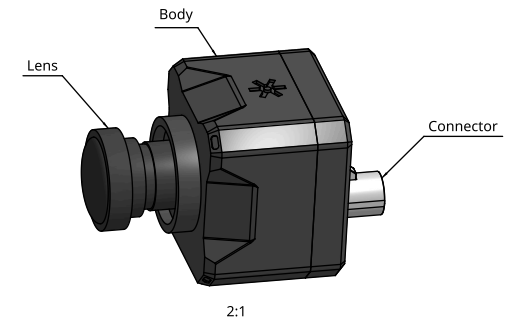
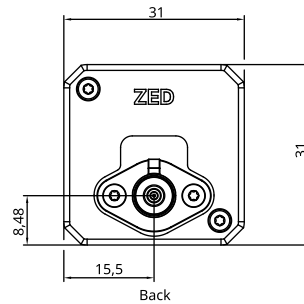


Isometric

*ZED X One GS - Narrow lens Technical Drawings



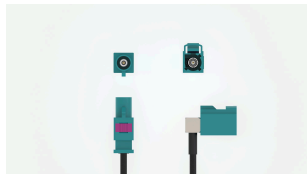
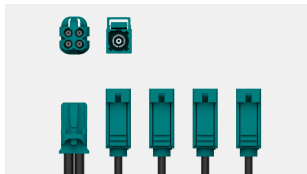
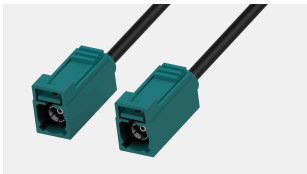
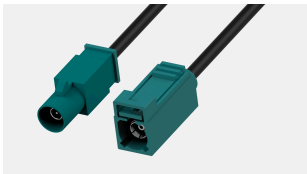
*ZED X One GS - Wide lens Technical Drawings



*ZED X One GS Accessories

FAKRA Z Cables

A wide range of camera cables are readily available, tailored to diverse requirements and applications, offered in varying lengths to suit both compact and expansive setups.



Male to Female		Female to Female	
0.5m (1.6ft)	CBL-310800	0.3m (0.98ft)	CBL-320100
1.5m (4.93ft)	CBL-310100	1.5m (4.93ft)	CBL-320200
5m (16.4ft)	CBL-310200	5m (16.4ft)	CBL-320300
10m (32.8ft)	CBL-310300	10m (32.8ft)	CBL-320400
15m (49.2ft)	CBL-310400		

Female to Female 1-to-4		Right-Angle Extension	
0.5m (1.64ft)	CBL-320510	0.3m (0.98ft)	CBL-310500
		0.5m (1.6ft)	CBL-310900

ZED Box Embedded Computers

Stereolabs ZED Boxes are powered with NVIDIA® Jetson Orin modules and serves as a robust AI embedded computers for autonomous robotics and AI applications.



Model	ZED Box Orin NX
Jetson Modules	Orin NX 8GB, NX 16GB
I/Os	3x USB 3.2 Gen2 (10 Gbps) 1x Gigabit Ethernet 1x HDMI 4x GMSL2 ** WiFi 6 connectivity 1x RTK GNSS GPS Ublox ZED F9P**

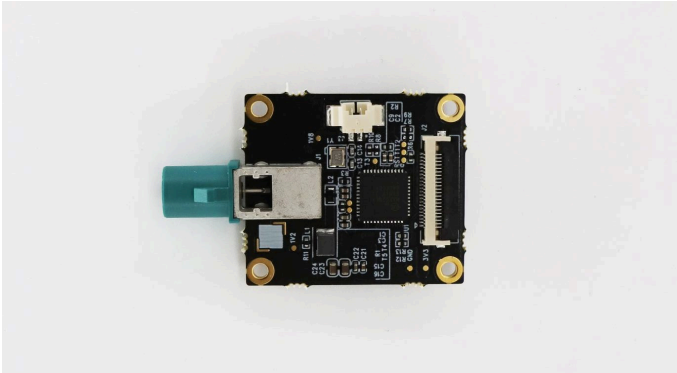
Model	ZED Box Mini
Jetson Modules	Orin Nano 4GB, Nano 8GB, NX 8GB, NX 16GB
I/Os	2x GMSL2 1x USB 3.0 (5 Gbps) 1x Gigabit Ethernet 1x HDMI WiFi 6 connectivity**

** Available as options.
The Multiband GNSS antenna ANN-MB-00 is an additional accessory.

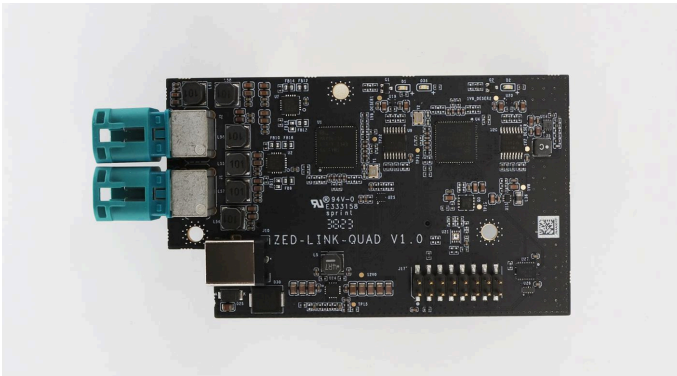
*ZED X One GS Accessories

Capture Cards

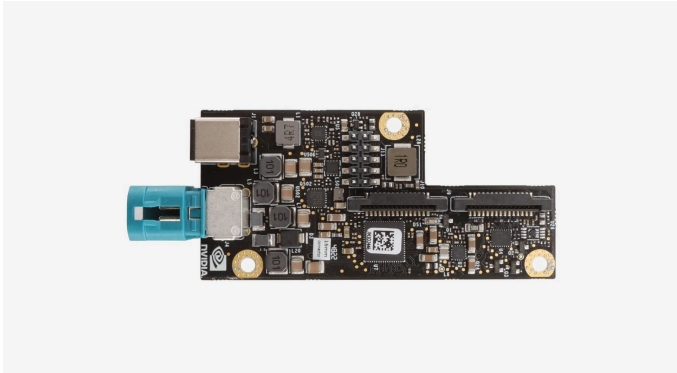
To capture the ZED X One GS on the NVIDIA® Jetson AGX platform, one solution is to utilize a GMSL2 capture card that directly connects to the Jetson's CSI port.



Model	ZED Link Mono Capture Card
Compatibility	NVIDIA® Jetson Orin Platform (NX/Nano) NVIDIA® Jetson Xavier Platform (NX)
Max. number of cameras	Capture 1x GMSL2 camera input in SD/HD, up to 1920x1200@60fps
Deserializer	MAX9296A
Power	Requires external 9-14V power supply.



Model	ZED Link Quad Capture Card
Compatibility	NVIDIA® Jetson Orin Platform (AGX) NVIDIA® Jetson Xavier Platform (AGX)
Max. number of cameras	Capture 8x GMSL2 camera input in SD/HD, up to 1920x1200@30fps
Deserializer	2 x MAX96712
Power	Requires external 9-19V power supply.



Model	ZED Link Duo Capture Card
Compatibility	NVIDIA® Jetson Orin Platform (AGX/NX/Nano) NVIDIA® Jetson Xavier Platform (AGX/NX)
Max. Number of cameras	Capture 4x GMSL2 camera input in SD/HD, up to 1920x1200@30fps
Deserializer	MAX96712
Power	Connects to and is powered by the Samtec port of the Orin/Xavier AGX Developer Kit. Requires external power supply for NX/Nano (9V-19V) when using MIPI port.

*ZED X One GS

Part Numbers & Compliance

ZED X One GS Part Numbers

	ZED X One GS No lens	ZED X One GS Narrow lens (4.6mm)	ZED X One GS Wide lens (2.2mm)
SKU	ZED-411010	ZED-413010	ZED-412010

Standards & Compliance

Certificate	Region
CE Declaration of Conformity	European Union
REACH	European Union
RoHS Compliance	European Union
TSCA	United States
EMC	European Union
Certificate of Origin	Global

