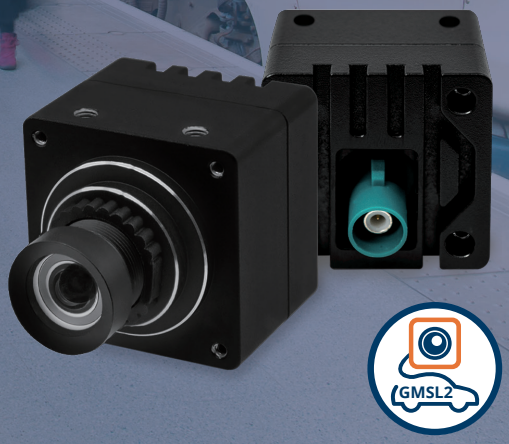
TechNexion
INNOVATORS OF TECHNOLOGY

VLS-GM2-AR0522-SL

- onsemi AR0522 5MP Rolling Shutter Sensor
- Near Infra-Red Enhancement for Outdoor Applications
- Designed for Low Light Applications
- Convenient S-Mount (M12) interchangeable lens
- GMSL2™ (Gigabit Multimedia Serial Link) interface
- FAKRA Z-Code Automotive Connector
- Plug & Play with Linux OS & Yocto
- VizionViewer™ configuration utility
- VizionSDK for custom development



VizionSDK VizionViewer™

Camera Information

CMOS Sensor	onsemi AR0522
Active Pixels	2592 (H) x 1944 (V) = 5 MP
Pixel Size	2.2 µm x 2.2 µm
Illuminated Type	Back Side Illuminated (BSI)
Maximum S/N Ratio	40 dB
Optical Format	1/2.5" (Diagonal 7.13 mm)
Shutter Type	Rolling Shutter
Chromaticity	Color / Mono
Maximum Frame Rate (YUV422-UYVY)	2592 x 1944 @ 24 fps 2560 x 1440 @ 32 fps 1920 x 1080 @ 60 fps 1280 x 960 @ 60 fps 1280 x 720 @ 60 fps 640 x 480 @ 120 fps
Output Format	YUV422-UYVY RGB888 / RGB565 RAW8 / RAW10 / RAW12

Camera Interface

Serial Link	GMSL2
Serializer	MAX96717
Connector	FAKRA SMB Jack Z-Code

Power

Power over Coax	10.8V - 26.4V
Power Consumption	2592 x 1944 @ 24 fps ≤ 1.68W
Standby Power	≤ 0.6W Standby

Software Support

Platform Support	NVIDIA Jetson AGX Orin NVIDIA Jetson Orin Nano / NX NXP i.MX95 NXP i.MX8M Plus Intel Arrow Lake Intel Panther Lake
Operation System	Linux Yocto
Software	VizionViewer™
Development SDK	VizionSDK

Environmental and Mechanical

Dimensions	Standard Lens : 29.5(W) × 29.5(H) × 28(D) mm Fisheye Lens: 29.5(W) × 29.5(H) × 21(D) mm
Weight	≤ 45 grams
MTBF	50,000 Hours
Shock	15G half-sine 11 ms duration
Vibration	1 Grms random 5-500Hz hr/axis
Relative Humidity	10 to 90 %
Operating Temperature	-30°C to + 70°C

Certification and Compliance

Certification	Compliant with CE / FCC / RoHS / REACH directives

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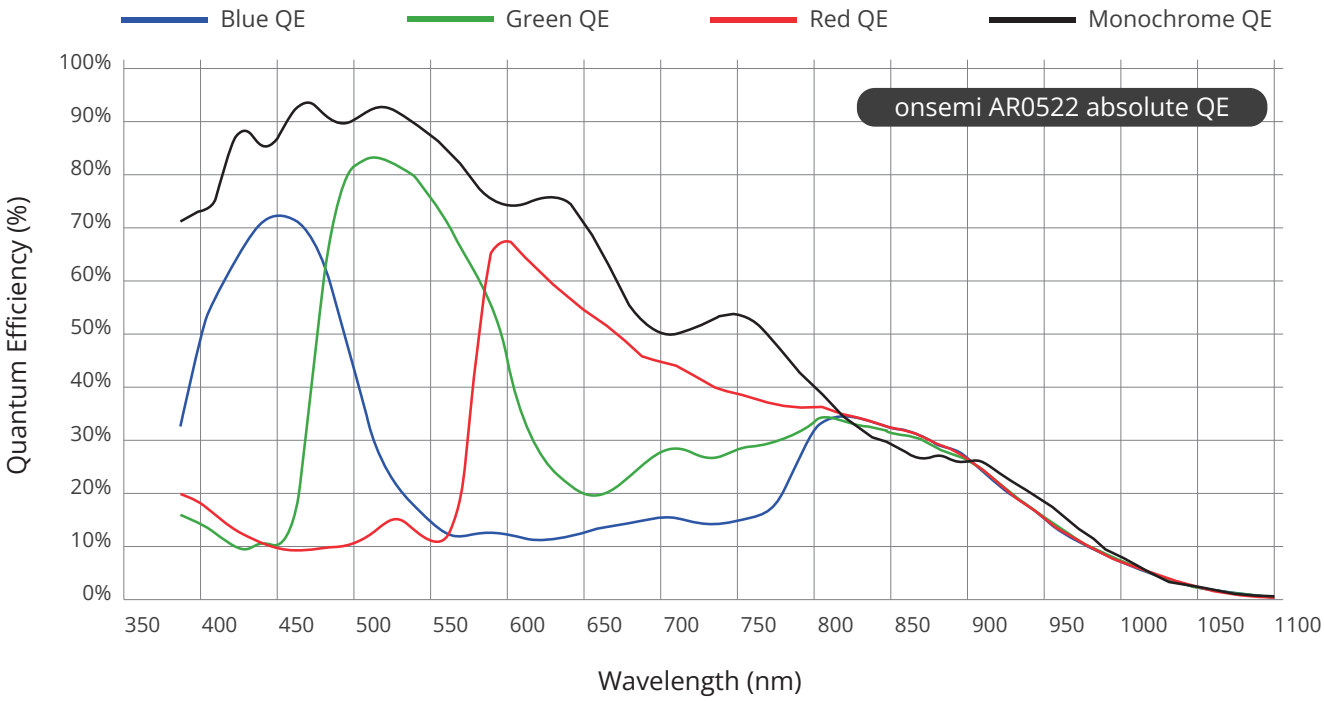
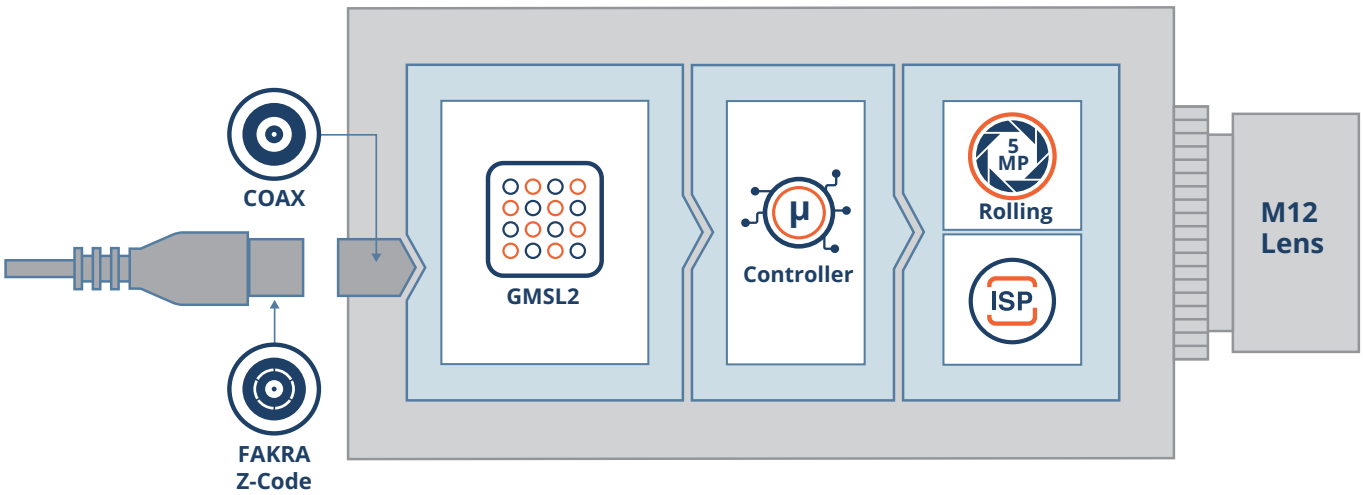
Spectral Characteristics



Block Diagram



For more information:
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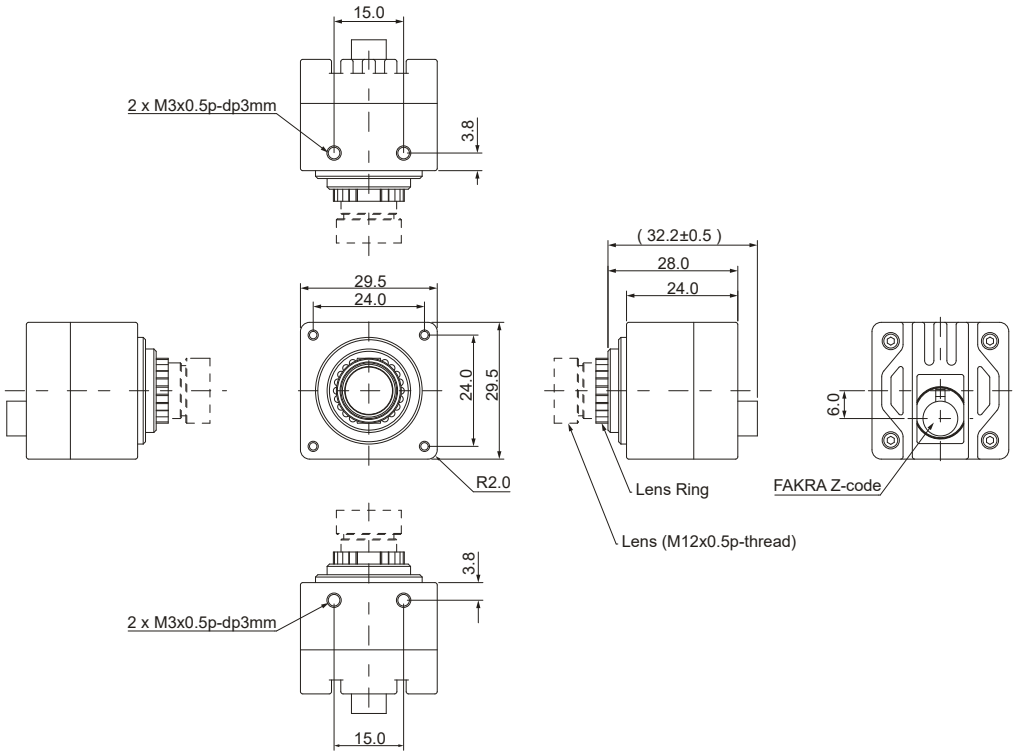
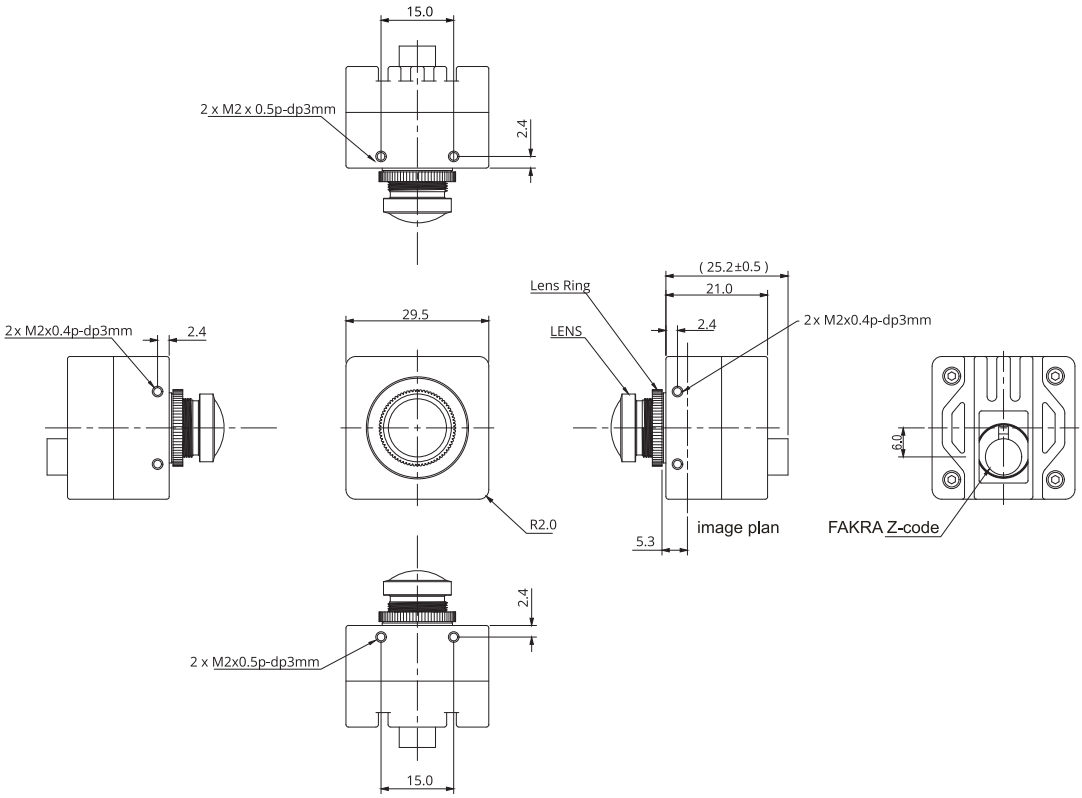
Dimensions - Standard M12 Lens (units in mm)



Dimensions - Fisheye M12 Lens (units in mm)



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Order Information

VLS-GM2-AR0522-x-Sxx-xx-xxxx

Option	Code	Description
Chromaticity	C	Color
	M	Monochrome
Lens	S34	S-Mount Module D-FOV 34°
	S85	S-Mount Module D-FOV 85°
	S140	S-Mount Module D-FOV 140°
	S200	S-Mount Module D-FOV 200°
Filter	-	-
	IR	IR Cut Filter 650nm
Custom ID	xxxx	Custom Part number ID

For customization, please contact your TechNexion sales representative.

Custom Lens Solutions

	 VLS-GM2-AR0522-C-S34-IR	 VLS-GM2-AR0522-C-S85-IR	 VLS-GM2-AR0522-C-S140-IR	 VLS-GM2-AR0522-C-S200-IR *
Focus Type	Fixed Focus	Fixed Focus	Fixed Focus	Fixed Focus
Focal Length	12 mm	3.9 mm	2.87 mm	1.8 mm
Aperture	F2.0	F2.8	F2.8	F2.3
Module D-FOV	33.6° ± 5%	85.2° ± 5%	140.0° ± 5%	200.0° ± 5%
Module H-FOV	26.8° ± 5%	73.0° ± 5%	110.5° ± 5%	180.0° ± 5%
Module V-FOV	20.1° ± 5%	58.1° ± 5%	81.4° ± 5%	135.0° ± 5%
TTL	23.2 mm	22 mm	21 mm	15.9 mm
BFL	7.3 mm	4.54 mm	5.27 mm	4.0 mm
MOD	0.3 m	0.3 m	0.3 m	0.2 m
Distortion	<-2.50%	<1.26%	<-20%	<-98°
IR-Filter	650 nm	650 nm	650 nm	650 nm
Lens Structure	5G + IR	2G + 2P + IR	4G + 1P + IR	6G
First layer material	Glass	Plastic	Glass	Glass

* Note 1 : Refer to **Dimensions - Fisheye M12 Lens.**

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Optional Accessories

An easy to attach A-Mount bracket for TechNexion 30mm enclosed cameras.

300-MOUNT-BRACKET

300-MOUNT-BRACKET on tripod
(tripod not included)

GMSL2 Frame Grabbers

The ease of usage, benefits and integration of a GMSL camera in embedded systems is often made complex by the lack of GMSL ports and connectors on the system. For those scenarios TechNexion developed a range of framegrabbers that easily plug into a USB port and extend the system with 1 to 4 GMSL interconnects.

1-4 Port

Connect up-to 4 GMSL cameras to a single USB port on your x86 or Arm based system.

Software

Linux and Windows systems are supported.

UVC Compliant

Fully plug-n-play in Windows and Linux embedded systems.

VizionViewer™

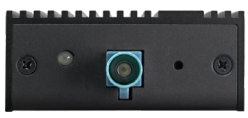
Easy to use software utility providing you with granular camera settings control.

Autodetect

Zero configuration required to detect any specific TechNexion GMSL camera by the framegrabber.

VizionSDK

Hardcode and control your cameras with C++ and Python code.



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