

VLS-GM2-AR0522-SL

TechNexion
INNOVATORS OF TECHNOLOGY

- 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



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-UYYV)	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-UYYV 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 $\leq$ 1.68W
Standby Power	$\leq$ 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	29.5(W) x 29.5(H) x 28(D) mm
Weight	$\leq$ 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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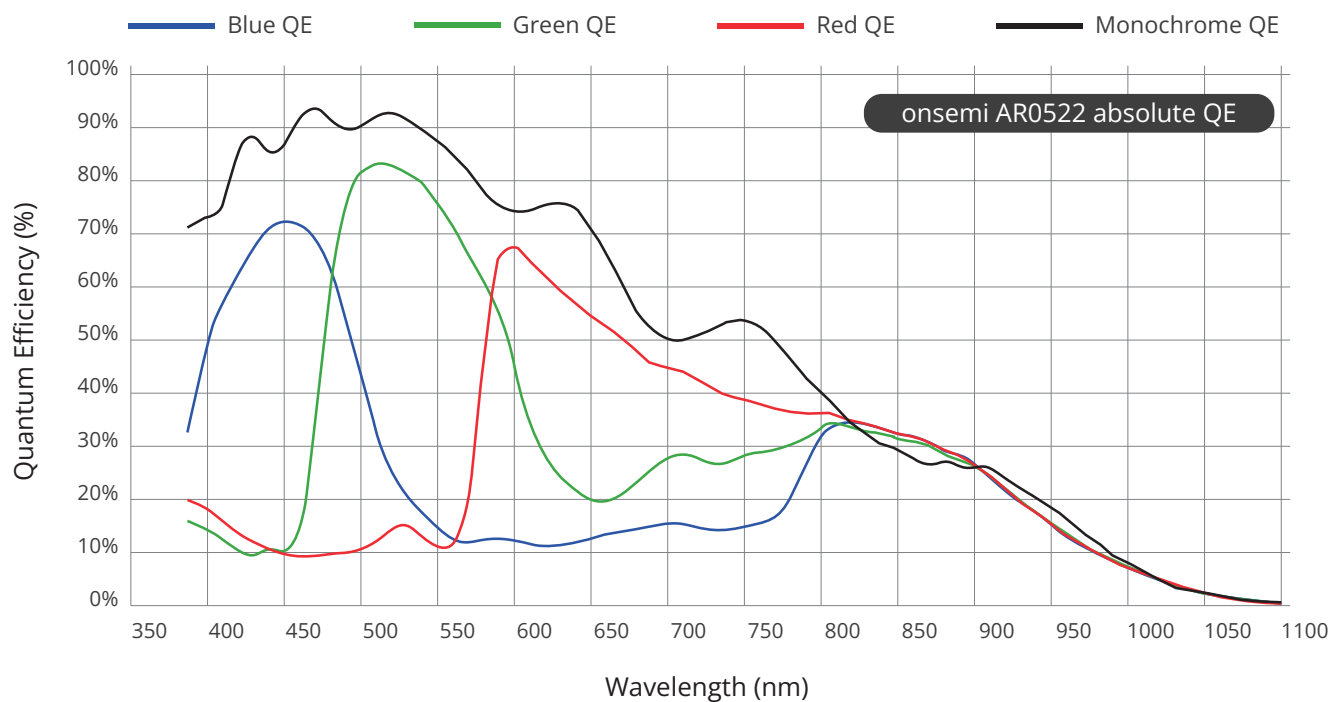


VizionSDK

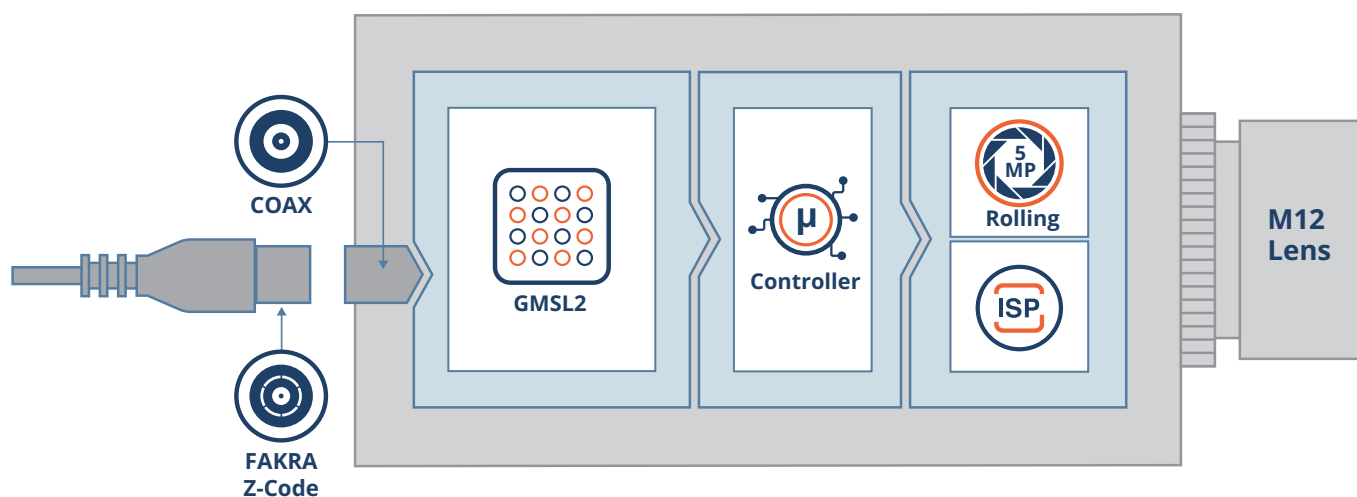


VizionViewer™

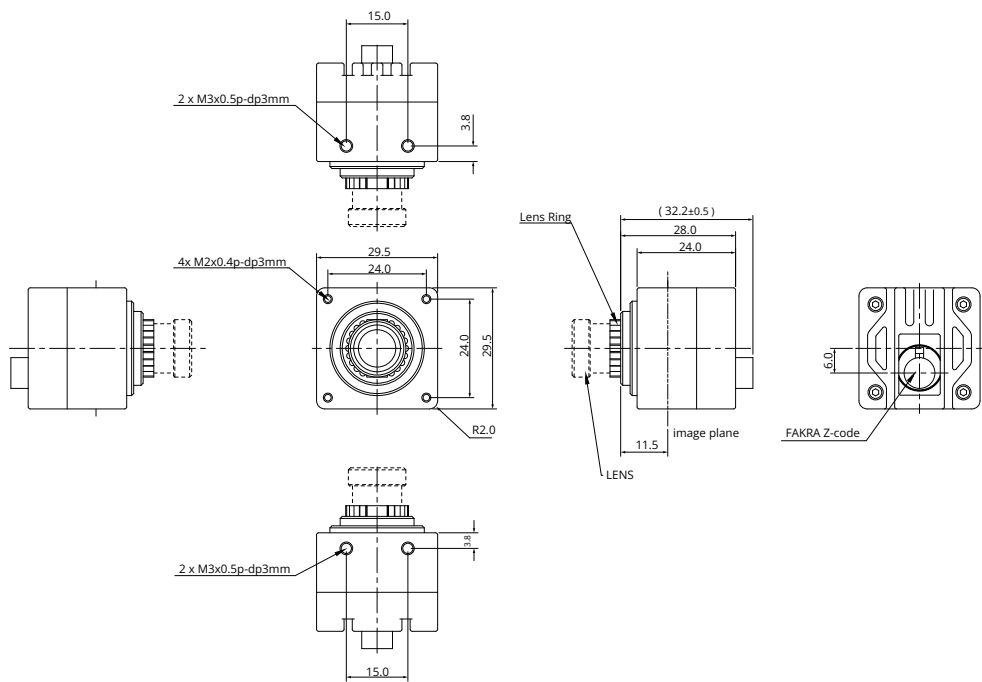
Spectral Characteristics



Block Diagram



Dimensions (units in mm)



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°
Filter	-	-
	IR	IR Cut Filter 650nm
Custom ID	xxxx	Custom Part number ID

For customization, please contact your TechNexion sales representative.

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)

Custom Lens Solutions

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

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.



UVC Compliant

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



Autodetect

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



Software

Linux and Windows systems are supported.



VizionViewer™

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



VizionSDK

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

