

VLS-GM2-AR0145-SL

TechNexion
INNOVATORS OF TECHNOLOGY

- onsemi AR0145 1MP Global Shutter Sensor
- Captures high-speed dynamic targets clearly within an ultra-short exposure time
- S-Mount for Interchangeable Lenses
- 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 AR0145
Active Pixels	1280 (H) x 800 (V) = 1 MP
Pixel Size	2.8 μm x 2.8 μm
Illuminated Type	Front Side Illuminated (FSI)
Maximum S/N Ratio	38 dB
Optical Format	1/4.3" (Diagonal 4.23 mm)
Shutter Type	Global Shutter
Chromaticity	Mono
Maximum Frame Rate (YUV422-UYYV)	1280 x 800 @ 115 fps 1280 x 720 @ 115 fps 640 x 480 @ 115 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	1280 x 800 @ 115 fps \leq 1.32W
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

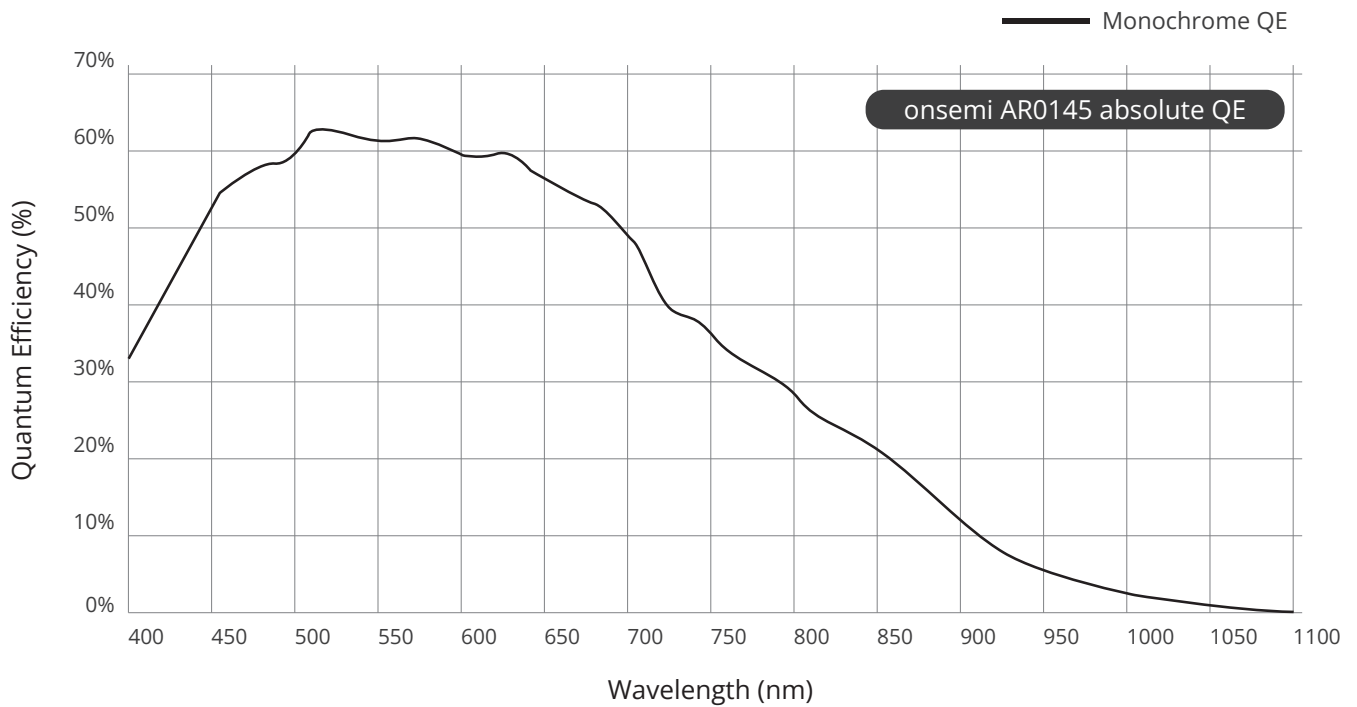
Environmental and Mechanical

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

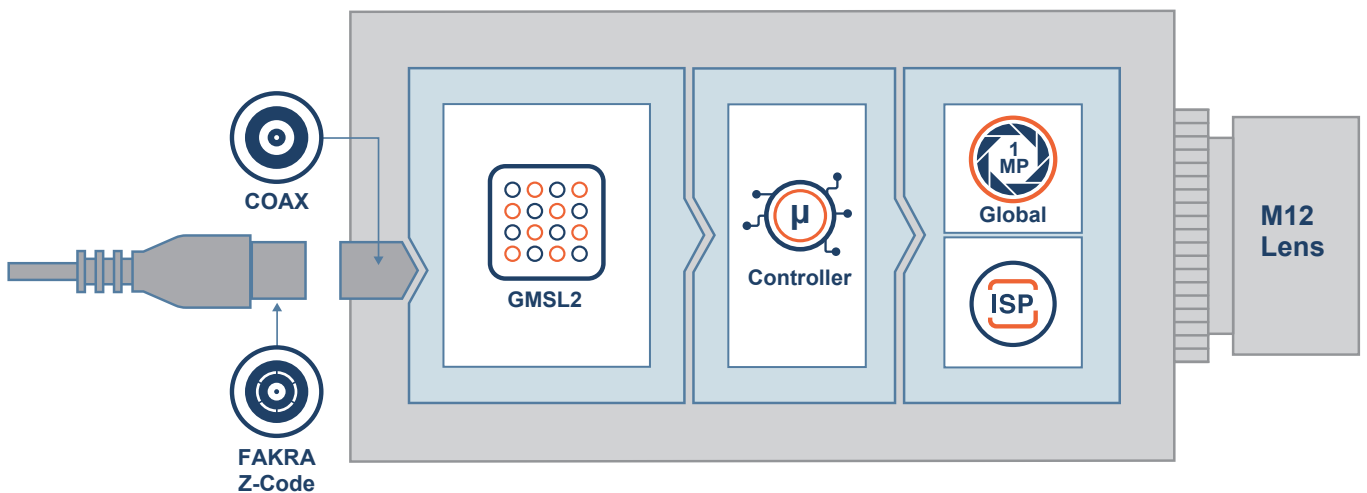
Certification and Compliance

Certification	Compliant with CE / FCC / RoHS / REACH directives
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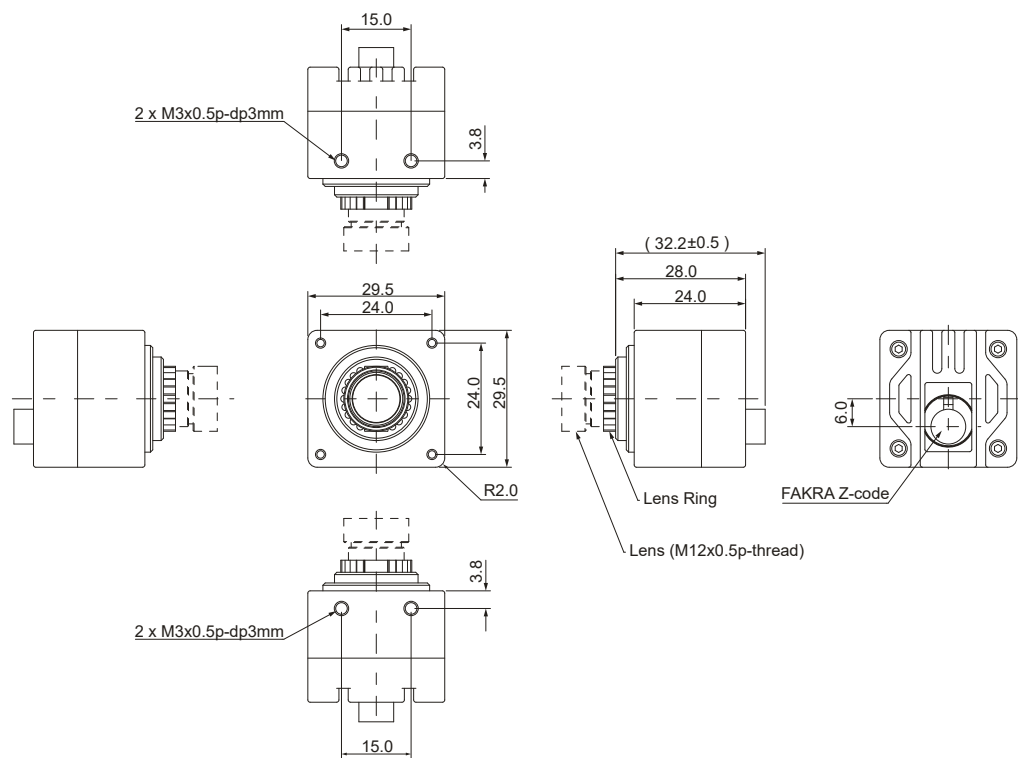
Spectral Characteristics



Block Diagram



Dimensions (units in mm)



Order Information

VLS-GM2-AR0145-x-Sxx-xx-xxxx

Option	Code	Description
Chromaticity	C	Color
	M	Monochrome
Lens	S31	S-Mount Module D-FOV 31°
	S78	S-Mount Module D-FOV 78°
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-AR0145-M-S31-IR	 VLS-GM2-AR0145-M-S78-IR
Focus Type	Fixed Focus	Fixed Focus
Focal Length	8 mm	2.85 mm
Aperture	F1.6	F2.8
Module D-FOV	31.2° ± 5%	78.2° ± 5%
Module H-FOV	26.3° ± 5%	69.5° ± 5%
Module V-FOV	16.3° ± 5%	47.1° ± 5%
TTL	26.2 mm	20 mm
BFL	7.8 mm	2.03 mm
MOD	0.3 m	0.3 m
Distortion	<-5.03%	<-0.35%
IR-Filter	650 nm	650 nm
Lens Structure	6G + IR	2G + 3P + IR
First layer material	Glass	Plastic

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.

