VLS-GM2-AR0822-CB

TechNexion
INNOVATORS OF TECHNOLOGY

- onsemi AR0822 8MP Rolling Shutter Sensor
- 4K HDR Imaging Capabilities
- Near Infra-Red Enhancement for Outdoor Applications
- Designed for Low Light Applications
- C-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

GMSL2

VizionSDK   VizionViewer™

Camera Information

CMOS Sensor	onsemi AR0822
Active Pixels	3848 (H) x 2168 (V) = 8 MP
Pixel Size	2.0 μm x 2.0 μm
Illuminated Type	Back Side Illuminated (BSI)
Maximum S/N Ratio	40.5 dB
Optical Format	1/1.8" (Diagonal 8.81 mm)
Shutter Type	Rolling Shutter
Chromaticity	Color / Mono
HDR Support	Yes
Maximum Frame Rate (YUV422-UYVY)	3840 x 2160 @ 15 fps 2560 x 1440 @ 30 fps 1920 x 1080 @ 60 fps 1280 x 720 @ 60 fps 640 x 480 @ 60 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	3840 x 2160 @ 15 fps ≤ 1.56W
Standby Power	≤ 0.6W Standby

Software Support

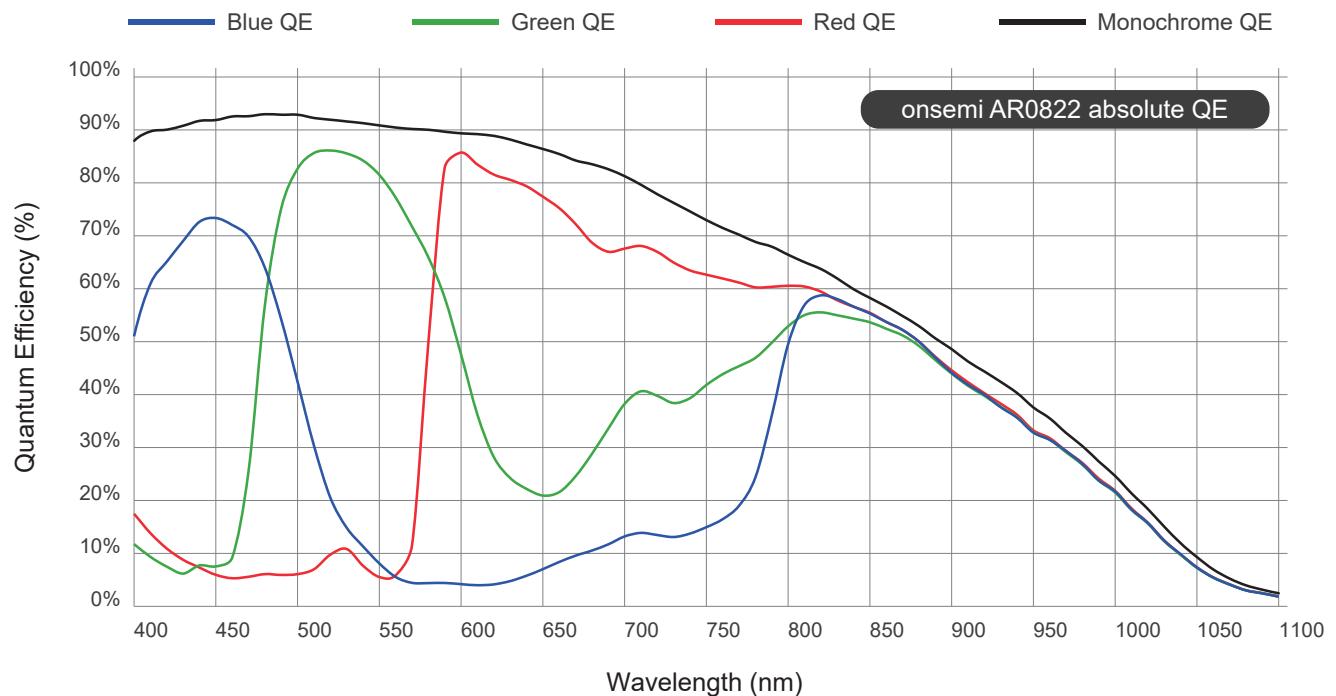|	
Platform Support	NVIDIA Jetson AGX Orin NVIDIA Jetson Orin Nano / NX NXP i.MX95 NXP i.MX8M Plus Intel Arrow Lake Intel Panther Lake
Operation System	Linux Yocto
Software	VizionViewer™
Development SDK	VizionSDK

Environmental and Mechanical

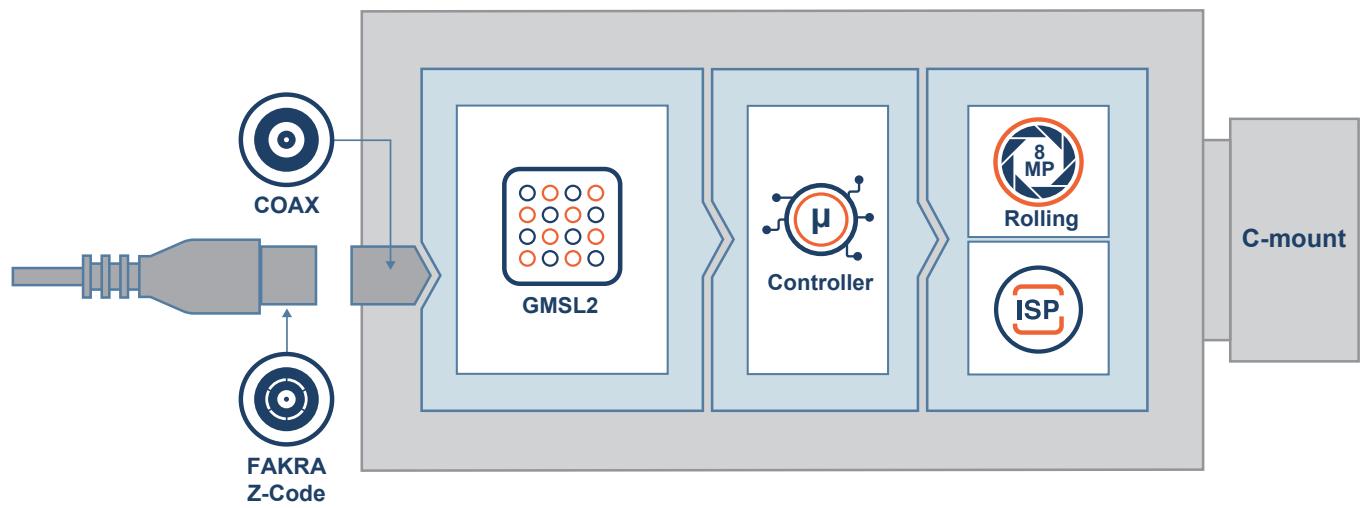|	
Dimensions	29.5(W) x 29.5(H) x 33.2(D) mm
Weight	≤ 40 grams
MTBF	50,000 Hours
Shock	15G half-sine 11 ms duration
Vibration	1 Grms random 5-500Hz hr/axis
Relative Humidity	10 to 90 %
Operating Temperature	-30°C to + 70°C

Certification and Compliance

Certification	Compliant with CE / FCC / RoHS / REACH directives

Spectral Characteristics

Chart legend: Blue QE, Green QE, Red QE, Monochrome QE

onsemi AR0822 absolute QE

Y-axis: Quantum Efficiency (%) — 0%, 10%, 20%, 30%, 40%, 50%, 60%, 70%, 80%, 90%, 100%

X-axis: Wavelength (nm) — 400, 450, 500, 550, 600, 650, 700, 750, 800, 850, 900, 950, 1000, 1050, 1100

Block Diagram

COAX

FAKRA Z-Code

GMSL2

µ Controller

8 MP Rolling

ISP

C-mount

Dimensions (units in mm)

15.0

2x M3x0.5p-dp2.5mm

5.0

4x M2x0.4p-dp3mm

29.5

24.0

24.0

29.5

Ø28.0

1-32UNF (thread)

R2.0

(37.5±0.5)

33.2

24.9

6.0

FAKRA Z-code

2x M3x0.5p-dp2.5mm

5.0

15.0
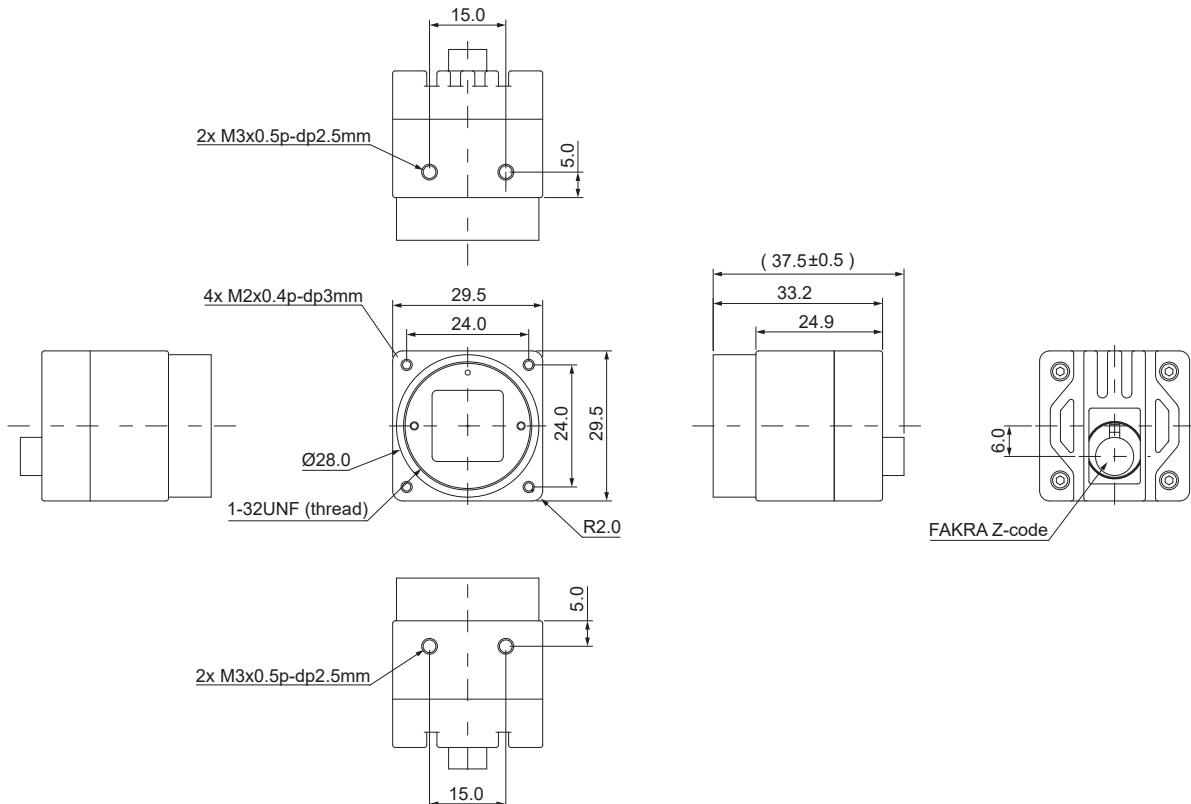
Order Information

VLS-GM2-AR0822-x-CB-xx-xxxx

Option	Code	Description
Chromaticity	C	Color
	M	Monochrome
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 bracketfor TechNexion 30mm enclosed cameras.

300-MOUNT-BRACKET

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

Custom Lens Solutions

Our C-mount cameras can be paired with a variety of off-the-shelf lenses. Customers are welcome to choose their own, or alternatively our engineers are on standby to assist with selecting the right camera lens for different applications.

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.