

VLS-FPD3-AR0822-SL

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
- S-Mount for Interchangeable Lenses
- FAKRA Z-Code Automotive Connector
- Plug & Play with Linux OS & Yocto
- VizionViewer™ configuration utility
- VizionSDK for custom development



Camera Information

CMOS Sensor	onsemi AR0822
Active Pixels	3840 (H) x 2160 (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
Maximum Frame Rate (YUV422-UYYVY)	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-UYYVY RGB888 / RGB565 RAW8 / RAW10 / RAW12

Camera Interface

Serial Link	FPD-Link III
Serializer	TI DS90UB953
Connector	FAKRA SMB Jack Z-Code

Power

Power over Coax	10.8V - 26.4V
Power Consumption	3840 x 2160 @ 15 fps $\leq$ 1.3W
Standby Power	$\leq$ 0.1W Standby

Software Support

Platform Support	NVIDIA Jetson AGX Orin NVIDIA Jetson Orin Nano / NX NVIDIA Jetson Xavier NX NVIDIA Jetson Nano NXP i.MX95 TI Sitara™ AM68 / AM69 TI Jacinto™ TDA4VM / TDA4VH
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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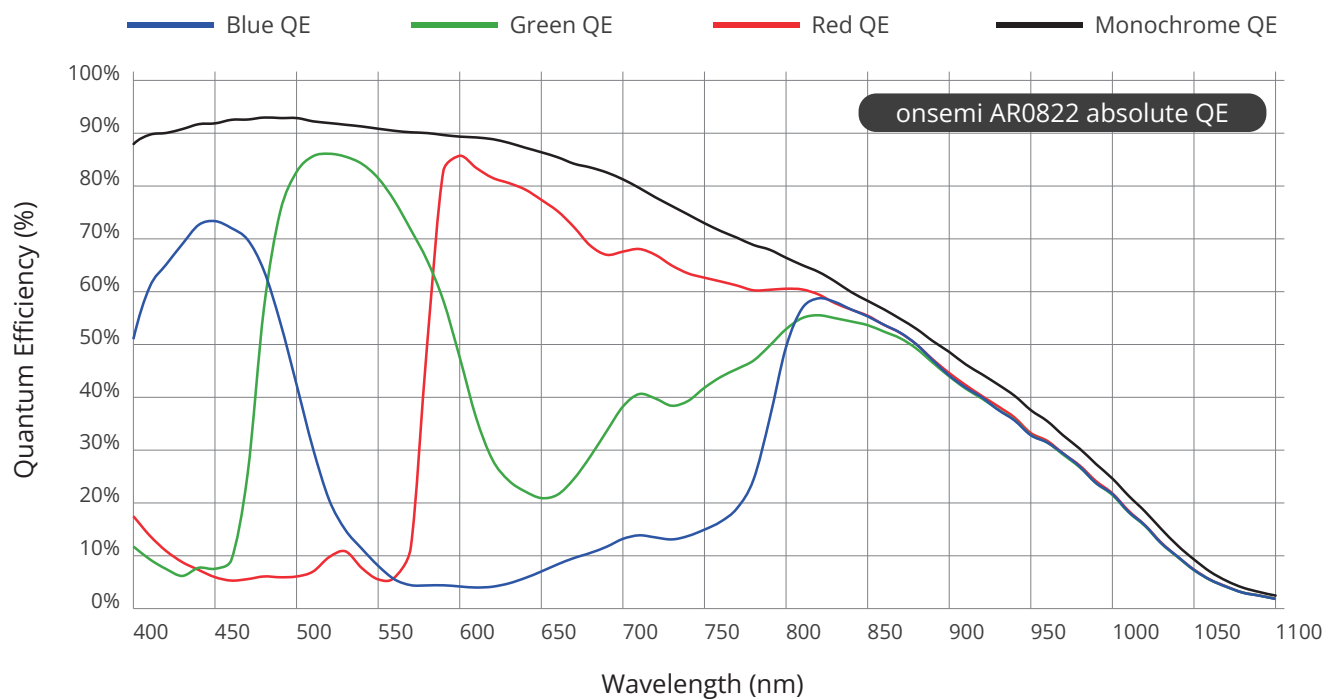


VizionSDK

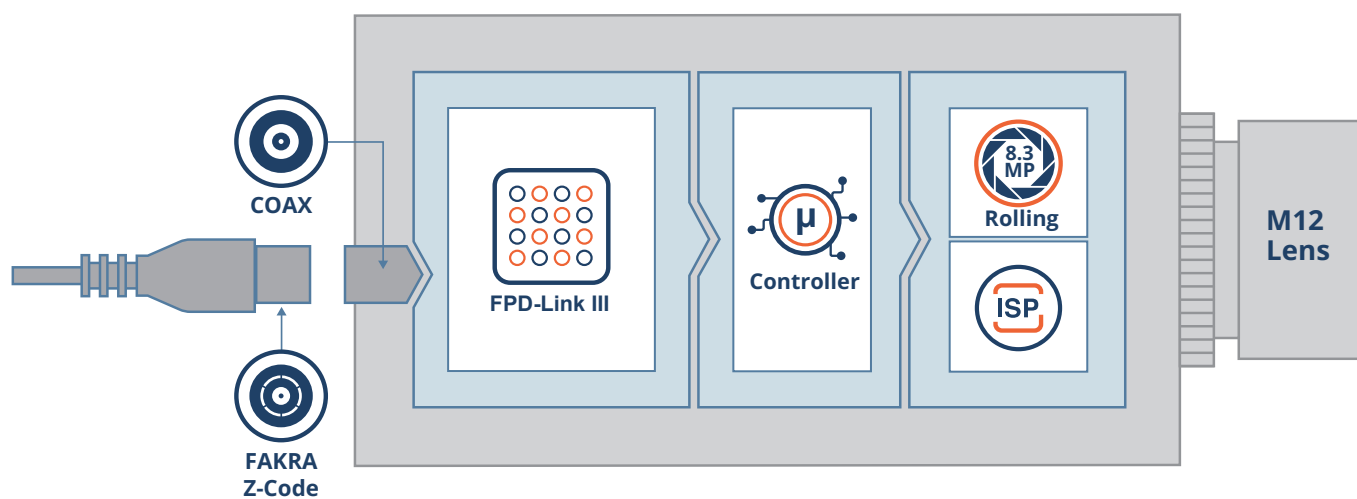


VizionViewer™

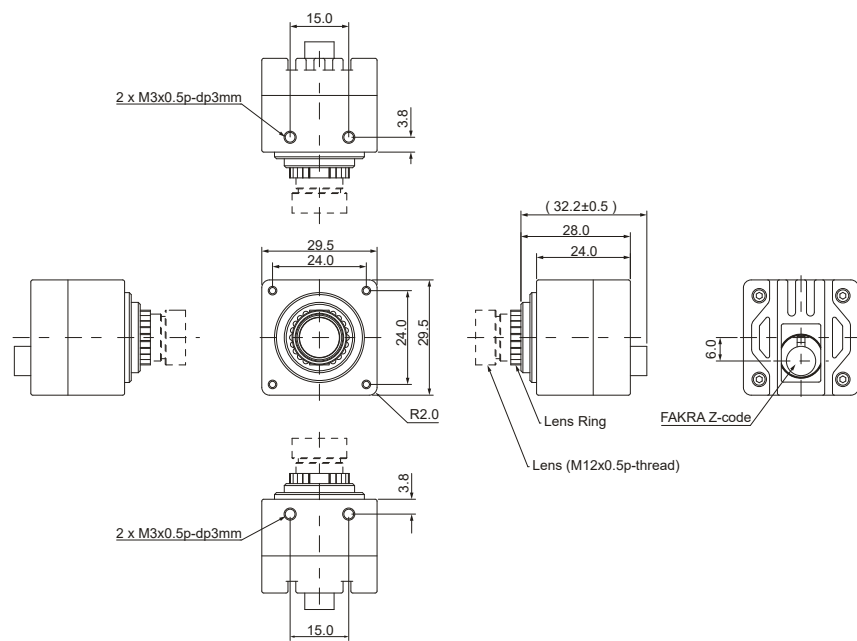
Spectral Characteristics



Block Diagram



Dimensions (units in mm)



Order Information

VLS-FPD3-AR0822-x-Sxx-xx-xxxx

Option	Code	Description
Chromaticity	C	Color
	M	Monochrome
Lens	S42	S-Mount Module D-FOV 42°
	S72	S-Mount Module D-FOV 72°
	S108	S-Mount Module D-FOV 108°
	S150	S-Mount Module D-FOV 150°
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-FPD3-AR0822-C-S42-IR	VLS-FPD3-AR0822-C-S72-IR	VLS-FPD3-AR0822-C-S108-IR	VLS-FPD3-AR0822-C-S150-IR
Focus Type	Fixed Focus	Fixed Focus	Fixed Focus	Fixed Focus
Focal Length	12 mm	6 mm	3 mm	3.2 mm
Aperture	F2.0	F2.8	F2.0	F2.0
Module D-FOV	41.7° ± 5%	72.0° ± 5%	108.6° ± 5%	150.0° ± 5%
Module H-FOV	36.3° ± 5%	64.7° ± 5%	104.0° ± 5%	132.6° ± 5%
Module V-FOV	20.5° ± 5%	39.0° ± 5%	72.2° ± 5%	77.6° ± 5%
TTL	23.09 mm	28.6 mm	29.56 mm	44.98 mm
BFL	5.06 mm	8.8 mm	4.85 mm	6.14 mm
MOD	0.15 m	0.1 m	0.3 m	0.3 m
Distortion	<2%	<0.50%	<-5%	<-32%
IR-Filter	650 nm	650 nm	650 nm	650 nm
Lens Structure	5G + IR	7G + IR	2G + 3P + IR	8G + IR
First layer material	Glass	-	Glass	Glass

FPD-Link III Frame Grabbers

The ease of usage, benefits and integration of a FPD-Link III camera in embedded systems is often made complex by the lack of FPD-Link ports and connectors on the system. For those scenarios TechNexion developed a framegrabber that easily plug into a USB port and extend the system with FPD-Link interconnect.



Up to 15m

Up to 15 meters of data and power transmission over a single COAX cable.



Software

Linux and Yocto 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 FPD-Link camera by the framegrabber.



VizionSDK

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

