

# VLS-FPD3-AR0521-SL

**TechNexion**  
INNOVATORS OF TECHNOLOGY

- onsemi AR0521 5MP Rolling Shutter Sensor
- 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



VizionSDK



VizionViewer™

## Camera Information

CMOS Sensor	onsemi AR0521
Active Pixels	2592 (H) x 1944 (V) = 5 MP
Pixel Size	2.2 $\mu\text{m}$ x 2.2 $\mu\text{m}$
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
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	FPD-Link III
Serializer	TI DS90UB953
Connector	FAKRA SMB Jack Z-Code

## Power

Power over Coax	10.8V - 26.4V
Power Consumption	2592 x 1944 @ 24 fps $\leq$ 1.2W
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

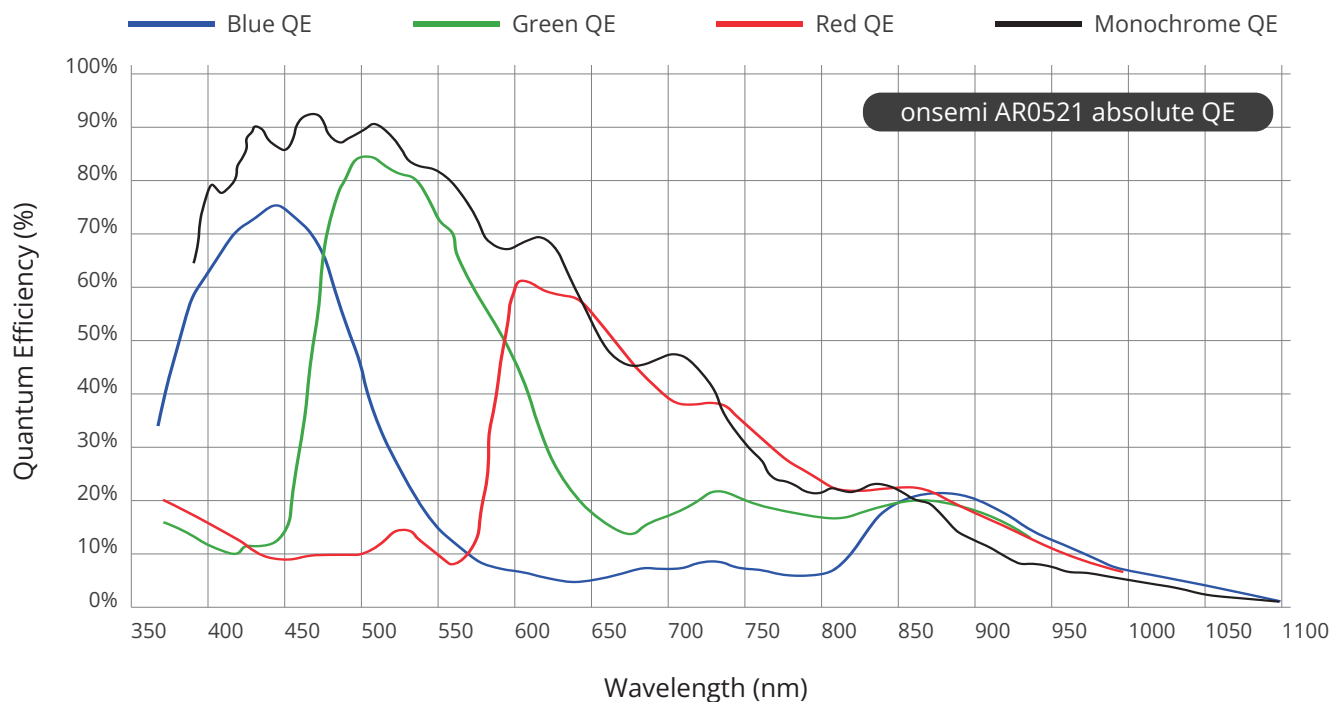
## Environmental and Mechanical

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

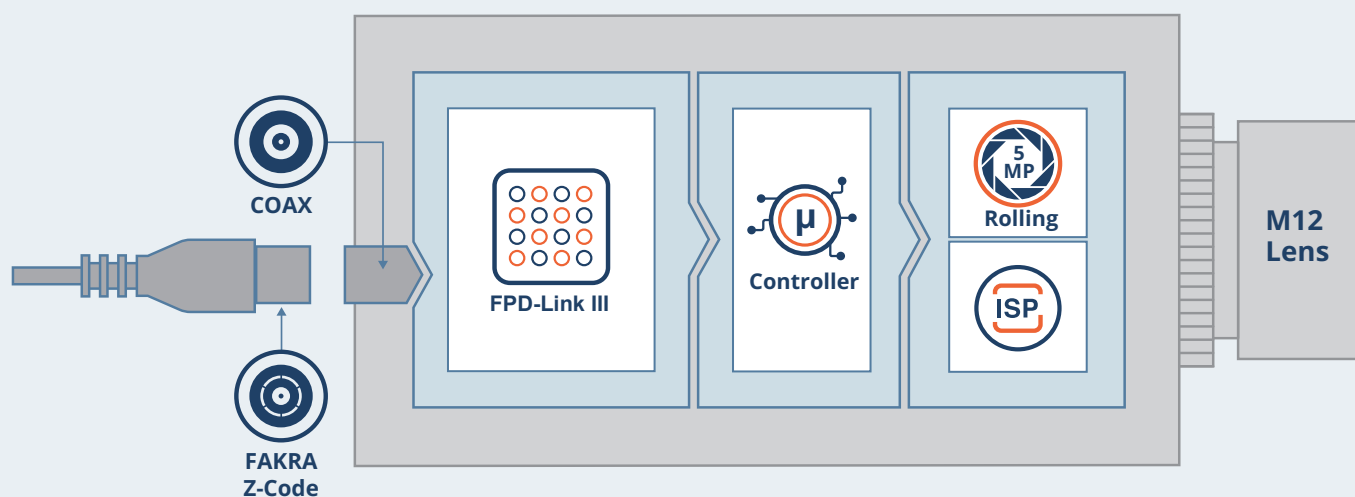
## Certification and Compliance

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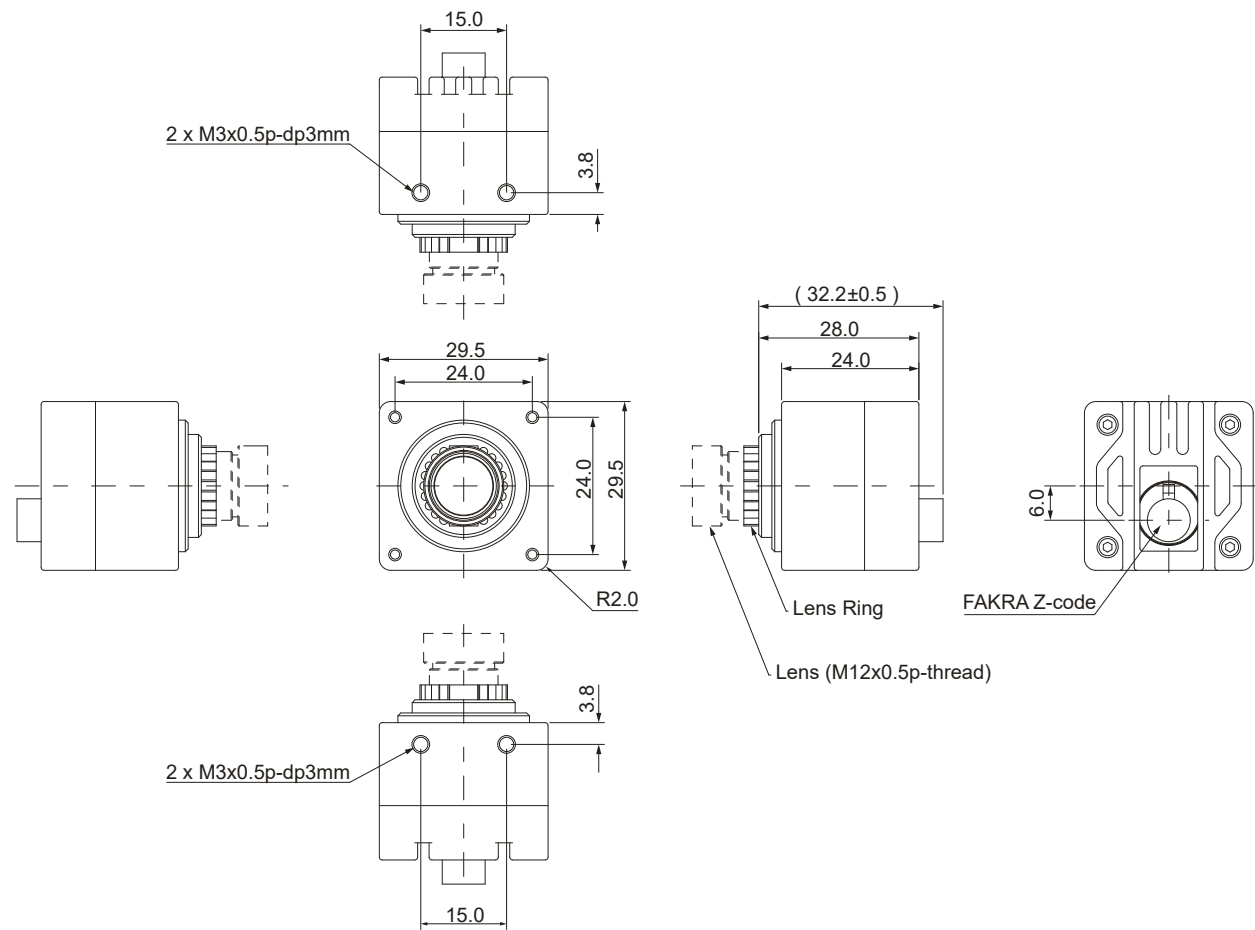
## Spectral Characteristics



## Block Diagram



Dimensions (units in mm)



Order Information

VLS-FPD3-AR0521-x-Sxx-xx-xxxx

Option	Code	Description
Chromaticity	C	Color
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 customized Software loader and special component (BOM)

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-AR0521-C-S34-IR	VLS-FPD3-AR0521-C-S85-IR	VLS-FPD3-AR0521-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

## FPD-Link III Frame Grabber

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.



### UVC Compliant

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



### Autodetect

Zero configuration required to detect any specific TechNexion FPD-Link camera by the framegrabber.



### Software

Linux and Yocto 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.

