

VCS-AR2020-SL

TechNexion
INNOVATORS OF TECHNOLOGY

- onsemi AR2020 20MP Rolling Shutter Sensor
- Designed to deliver high-quality performance consuming very low power
- S-Mount for Interchangeable Lenses
- UVC USB Type-C 5 Gbps Connector
- Plug & Play with Windows & Linux OS
- VizionViewer™ configuration utility
- VizionSDK for custom development



Camera Information

CMOS Sensor	onsemi AR2020
Active Pixels	5120 (H) x 3840 (V) = 20MP
Pixel Size	1.4 μm x 1.4 μm
Illuminated Type	Back Side Illuminated (BSI)
Maximum S/N Ratio	39.9 dB
Optical Format	1/1.8" (Diagonal 8.96 mm)
Shutter Type	Rolling Shutter
Chromaticity	Color / Mono
Maximum Frame Rate (YUV422-UYYV)	4208 x 3156 @ 10 fps 2560 x 1920 @ 25 fps 1920 x 1440 @ 40 fps 1280 x 960 @ 100 fps 1280 x 720 @ 120 fps 640 x 480 @ 120 fps
Maximum Frame Rate (MJPEG)	4208 x 3156 @ 12 fps 2560 x 1920 @ 30 fps 1920 x 1440 @ 60 fps 1280 x 960 @ 120 fps 1280 x 720 @ 120 fps 640 x 480 @ 120 fps
Output Format	YUV422-UYYV MJPEG (JPG)

Camera Interface

Connector	USB Type-C 5 Gbps
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Power

Supply Voltage	5V $\pm$ 5%
Power Consumption	$\leq$ 1.3W
Standby Power	$\leq$ 0.3W Standby

Software Support

Operation System	UVC Plug-and-play Windows 10/11 Linux Yocto
Software	VizionViewer™
Development SDK	VizionSDK

Environmental and Mechanical

Dimensions	29.5(W) x 29.5(H) x 28.5(D) mm
Weight	$\leq$ 44 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
NDAA	Compliant with NDAA Section 889

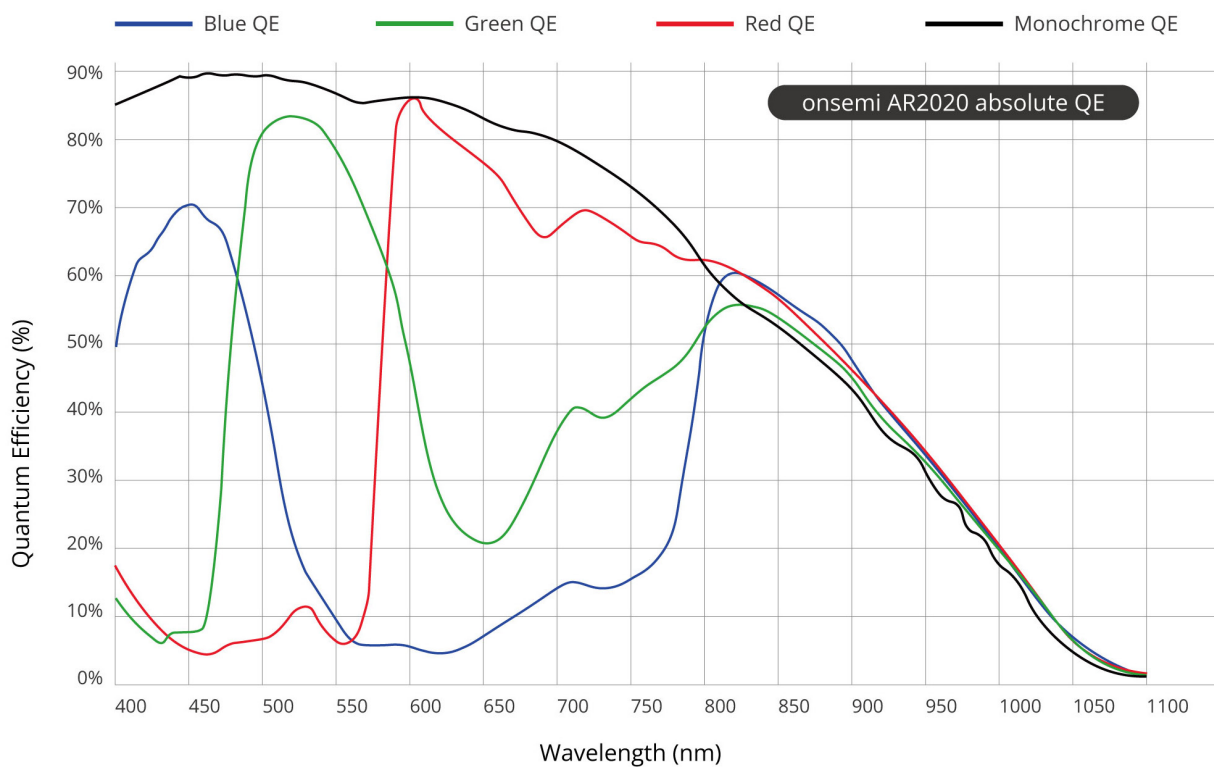


VizionSDK

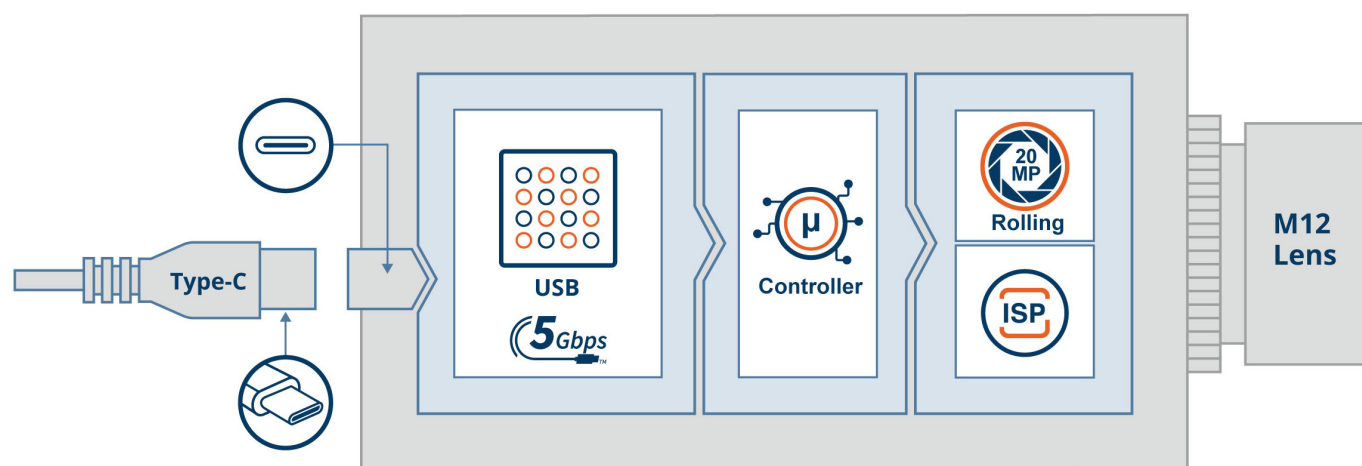


VizionViewer™

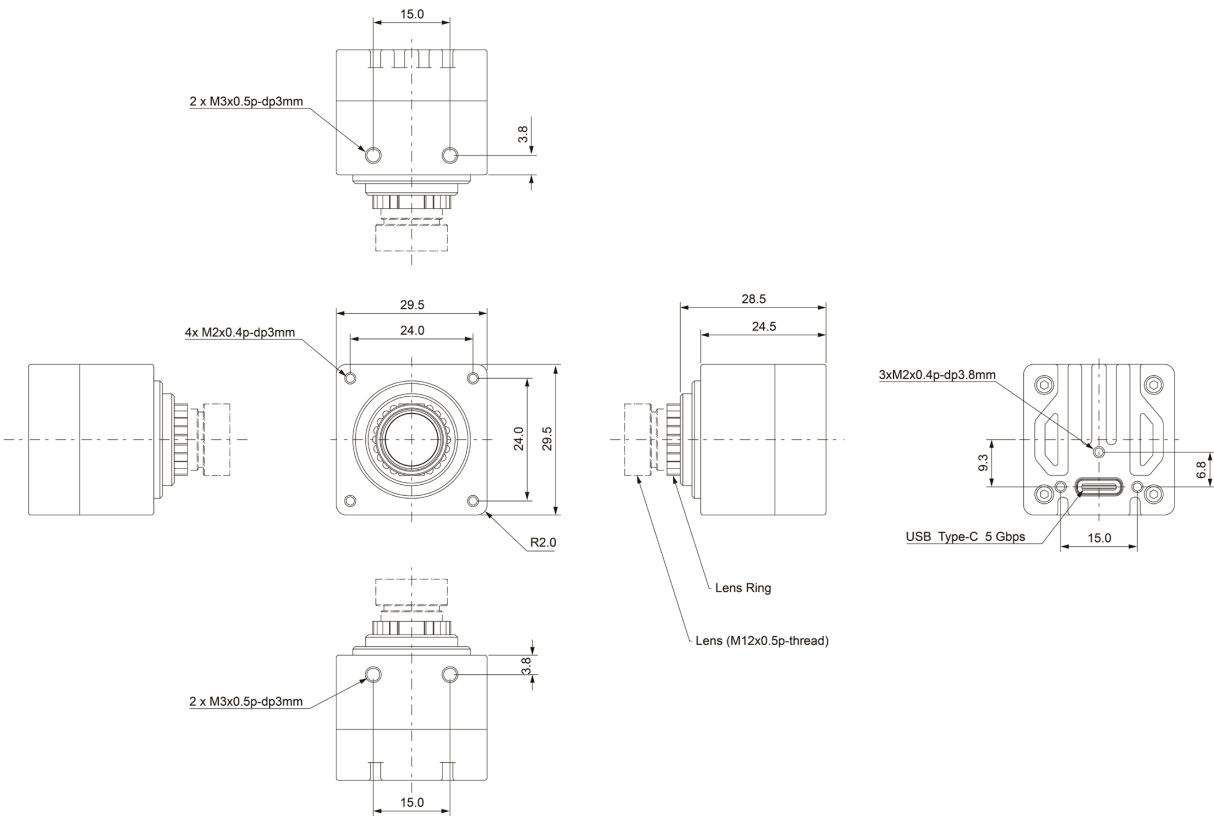
Spectral Characteristics



Block Diagram

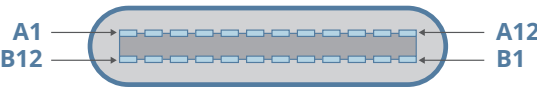


Dimensions (units in mm)



Unit:mm

Connector Pin Definition



No.	Pin Define	No.	Pin Define
A1	GND	B12	GND
A2	TXP1	B11	RXP1
A3	TXN1	B10	RXN1
A4	VBUS1	B9	VBUS3
A5	CC1	B8	SBU2
A6	DP1	B7	DN2
A7	DN1	B6	DP2
A8	SBU1	B5	CC2
A9	VBUS2	B4	VBUS4
A10	RXN2	B3	TXN2
A11	RXP2	B2	TXP2
A12	GND	B1	GND

Lens Information

	
	VCS-AR2020-C-S40-IR
Focus Type	Fixed Focus
Focal Length	12 mm
Aperture	F2.8
Module D-FOV	40.6° ± 5%
Module H-FOV	32.9° ± 5%
Module V-FOV	25° ± 5%
TTL	26 mm
BFL	9.86 mm
MOD	0.3 m
Distortion	<-0.01%
IR-Filter	650 nm
Lens Structure	6G + IR
First layer material	Glass

Order Information

VCS-AR2020-x-Sxx-xx-xxxx

Option	Code	Description
Chromaticity	C	Color
	M	Monochrome
Lens	S40	S-Mount Module D-FOV 40°
Filter	-	-
	IR	IR Cut Filter 650nm

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)