

Not recommended for new designs
The camera model is no longer recommended for new application development.



Specification

Sensor	
Sensor type	CMOS Color
Shutter	Global Shutter
Sensor characteristic	Linear
Pixel Class	12 MP
Resolution	12.29 Mpix
Resolution (h x v)	4096 x 3000 Pixel
Aspect ratio	4:3
ADC	12 bit
Color depth (camera)	12 bit
Optical sensor class	1.1"
Optical Size	14.159 mm x 10.371 mm
Optical sensor diagonal	17.55 mm 1.1"
Pixel size	3.45 µm
CRA (Chief Ray Angle)	0 °
Manufacturer	Sony
Sensor Model	IMX304LQR-C
Gain (master/RGB)	24x/4x
AOI horizontal	same frame rate
AOI vertical	increased frame rate
AOI image width / step width	264 / 8
AOI image height / step width	2 / 2
AOI position grid (horizontal/vertical)	8 / 2
Binning horizontal	same frame rate
Binning vertical	same frame rate
Binning method	Horizontal: addition / Vertical: addition
Binning factor	2 / 4 / 8
Decimation (subsampling) horizontal	same frame rate
Decimation (subsampling) vertical	same frame rate
Decimation (subsampling) method	M/C automatic



U3-3200SE-C-HQ (AB02354)

Model

Frame rate freerun mode	24 fps
Frame rate trigger (continuous)	24 fps
Frame rate trigger (maximum)	24 fps
Exposure time (minimum - maximum)	0.027 ms - 2000 ms
Long exposure (maximum)	60000 ms
Power consumption	1.6 W - 3.8 W
Image memory	128 MB

Ambient conditions

The temperature values given below refer to the outer device temperature of the camera housing.

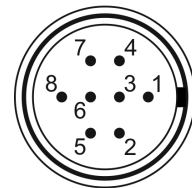
Allowed device temperature during operation	0 °C - 55 °C / 32 °F - 131 °F
Allowed ambient temperature during storage	-20 °C - 60 °C / -4 °F - 140 °F
Humidity (relative, non-condensing)	20 % - 80 %

Connectors

Interface connector	USB Type-C, screwable
I/O connector	8-pin Hirose connector (HR25-7TR-8PA(73))
Power supply	USB cable

Pin assignment I/O connector

1	Ground (GND)
2	Flash output with optocoupler (-) - Line 1
3	General Purpose I/O (GPIO) 1, 3.3 V - Line 2
4	Trigger input with optocoupler (-) - Line 0
5	Flash output with optocoupler (+) - Line 1
6	General Purpose I/O (GPIO) 2, 3.3 V - Line 3
7	Trigger input with optocoupler (+) - Line 0
8	Output supply voltage, 5 V (100 mA)



Design

Lens Mount	C-Mount
IP code	IP30
Dimensions H/W/L	34.0 mm x 44.0 mm x 47.0 mm
Mass	111 g
Housing material	Aluminum

Features

List of on-camera image pre-processing features.

All features of the table are available via our IDS peak software for image pre-processing on the host computer (sensor model dependent).

Image Acquisition	Freerun	✓
	Software trigger	✓
	Hardware trigger	✓
	Trigger controlled exposure	✓
	Denoiser	✓
	Long exposure	✓
	Line scan	✓
Flashing	Flashing	✓
	PWM flashing	✓

Subject to technical modifications (2026-08-20)

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Image Adjustments

Auto exposure	✓
Auto gain	✓
Auto whitebalance	✓
Color correction	✓
Gamma	✓
LUT	✓
Mirror/flip	X/Y

On-board Image Processing

Pixel formats	Mono8 BayerRG8 BayerRG10 BayerRG10p BayerRG12 BayerRG12p BGR8 RGB8 BGR10p32 RGB10p32
Region of interest	✓
Decimation (FPGA)	✓
Decimation (Sensor)	-
Binning (FPGA)	✓
Binning (Sensor)	-

Others

Chunks	✓
Sequencer	-
Events	✓
Firmware update	✓
1st supported firmware version	2.1