UI-5040FA-C-HQ Rev.1.2 (AB12614)

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

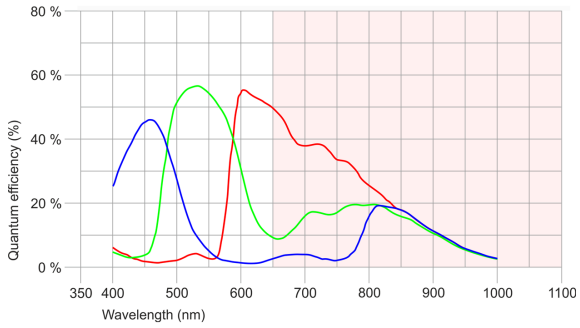




Specification

Sensor

Sensor type	CMOS Color
Shutter	Global Shutter
Sensor characteristic	Linear
Pixel Class	1.6 MP
Resolution	1.57 Mpix
Resolution (h x v)	1448 x 1086 Pixel
Aspect ratio	4:3
ADC	12 bit
Color depth (camera)	12 bit
Optical sensor class	1/2.9"
Optical Size	4.996 mm x 3.747 mm
Optical sensor diagonal	6.25 mm 1/2.9"
Pixel size	3.45 µm
CRA (Chief Ray Angle)	0 °
Manufacturer	Sony
Sensor Model	IMX273LQR-C
Gain (master/RGB)	24x/4x
AOI horizontal	same frame rate
AOI vertical	increased frame rate
AOI image width / step width	256 / 8
AOI image height / step width	4 / 2
AOI position grid (horizontal/vertical)	4 / 2
Binning horizontal	-
Binning vertical	-
Binning method	-
Binning factor	-
Decimation (subsampling) horizontal	same frame rate
Decimation (subsampling) vertical	increased frame rate
Decimation (subsampling) method	M/C automatic



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Model

Pixel clock range	25 MHz - 140 MHz
Frame rate freerun mode	73 fps
Frame rate trigger (continuous)	73 fps
Frame rate trigger (maximum)	77 fps
Exposure time (minimum - maximum)	0.025 ms - 999 ms
Long exposure (maximum)	30000 ms
Power consumption	1.9 W - 3.2 W
Image memory	128 MB
Special features	IDS line scan mode Overlap trigger Sensor source gain Multi-AOI

Ambient conditions

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

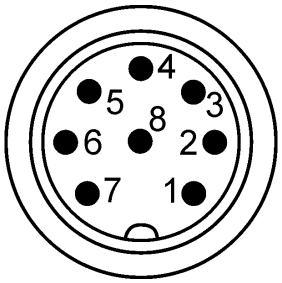
Allowed device temperature during operation	0 °C - 55 °C / 32 °F - 131 °F
Allowed ambient temperature during storage	-20 °C - 60 °C / -4 °F - 140 °F
Humidity (relative, non-condensing)	0 % - 100 %

Connectors

Interface connector	GigE M12, screwable
I/O connector	8-pin Binder connector (Binder series 712: 09-0427-020-08)
Power supply	12 V - 24 V or PoE

Pin assignment I/O connector

1	Trigger input with optocoupler (+)
2	Input power supply (VCC) 12-24 V DC
3	General Purpose I/O (GPIO) 1
4	Ground (GND)
5	Flash output with optocoupler (+)
6	Flash output with optocoupler (-)
7	Trigger input with optocoupler (-)
8	General Purpose I/O (GPIO) 2



Design

Lens Mount	C-Mount
IP code	IP65, IP67
Dimensions H/W/L	41.0 mm x 53.0 mm x 42.7 mm
Mass	173 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	✓

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Flashing	Flashing	-
	PWM flashing	-
Image Adjustments	Auto exposure	-
	Auto gain	-
	Auto whitebalance	-
	Color correction	-
	Gamma	-
	LUT	-
	Mirror/flip	-
On-board Image Processing	Pixel formats	
	Region of interest	✓
	Decimation (FPGA)	-
	Decimation (Sensor)	(2,4)x(2,4)
	Binning (FPGA)	-
Others	Chunks	-
	Sequencer	-
	Firmware update	-
	1st supported firmware version	4.96.1

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