Allied Vision

HR 10GigE

hr51CXGE

General

Model	hr51CXGE
Product code	F004101
Product series	HR 10GigE
Status	Available

Sensor

Sensor type	Area scan
Chroma	Color
Spectrum	Visible
Spectral range	400 nm to 1000 nm
Resolution	8,424 × 6,032 (51.00 MP)
Sensor model	Gpixel GMAX4651
Sensor architecture (material)	cmos
Shutter type(s)	Global shutter (GS)
Sensor size	38.75 × 27.75 mm (47.66 mm, Type Full Frame)
Pixel size	4.60 µm × 4.60 µm

Pixel formats

Sensor bit depth	8-bit, 12-bit
RGB pixel formats	bayer8, bayer12

Imaging performance

Dynamic range	65 dB
SNR	42.6 dB

Timing and gain

Max. frame rate	23.7 fps
Exposure time	17 µs to 60 s
Gain	0.0 dB to 40.0 dB

I/Os and power

Non-isolated lines	0 x LVDS input, 0 x LVDS output, 0 x TTL input, 0 x TTL output, 2 x 24V input, 4 x Open drain output,
Specific non-isolated lines	1 x RS232 input, 1 x RS232 output, 0 x RS422 input, 0 x RS422 output,
Opto-isolated lines	1 x Optical isolated input, 0 x Optical isolated input,
I/O connector	12-pin Hirose HR10A-10P-12S
Power supply	10 to 25VDC, Power over Ethernet (POE+, in option -P)
Power consumption	External: 17 W (typical)

Mechanical properties

Body dimensions (L x W x H in mm)	77 × 70 × 70
Filter/protection glass	IR-Cut 680
IP class	IP30
Lens mount(s)	M58x0.75
Weight	380 g

On-board memory and FPGA

Image buffer (RAM)	448 MByte

Interfaces

Digital interface	10gige
Interface connector	(RJ-45)
Vision standard	GigE Vision 2.0

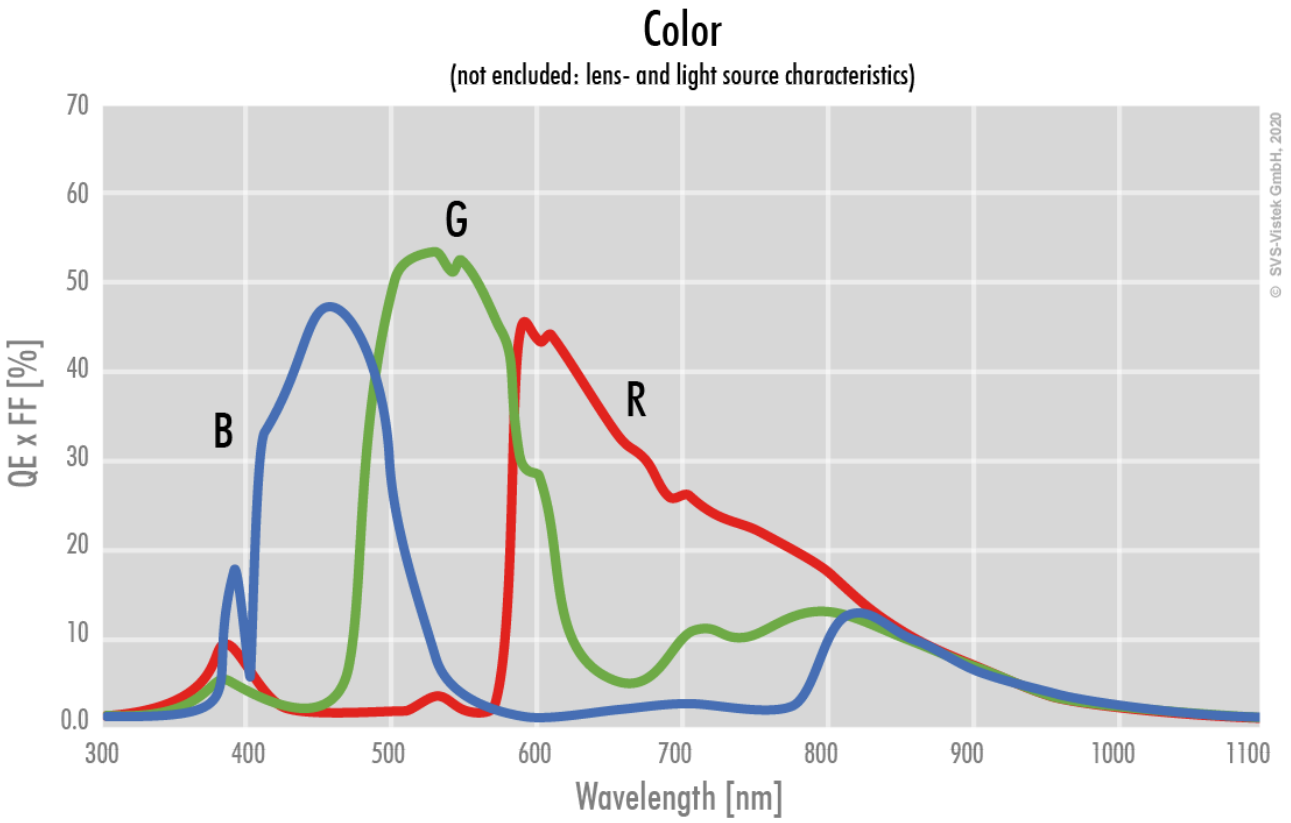
FW features - image control

Exposure modes	manual, auto
Gain modes	auto, manual
White balance modes	auto, manual
Image control features	roi, lut, mirror-image

FW features - camera control

Trigger modes/sync	internal, software, external
Camera control features	User Sets, POE, PWM(4), Sequencer,

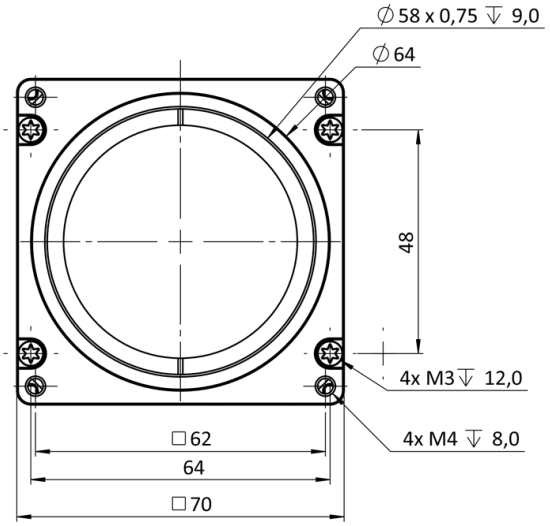
Quantum Efficiency



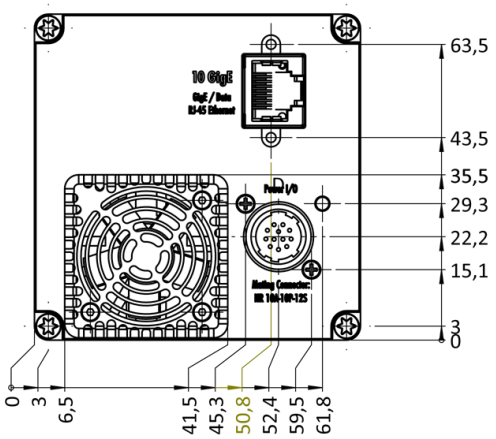
Allied Vision

Technical Drawing

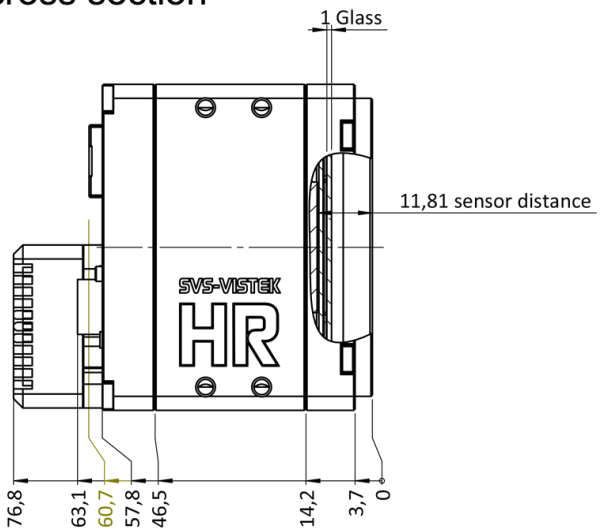
front



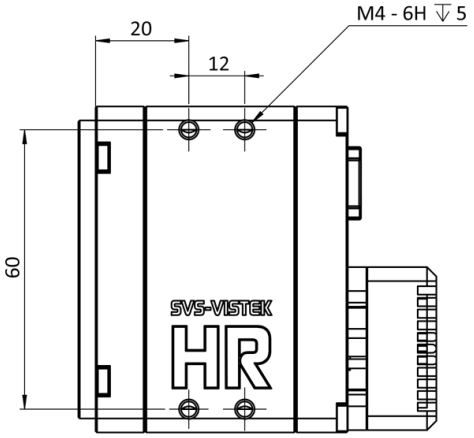
back



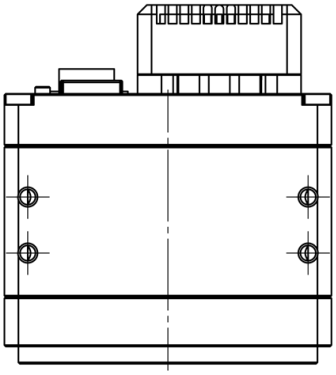
cross section



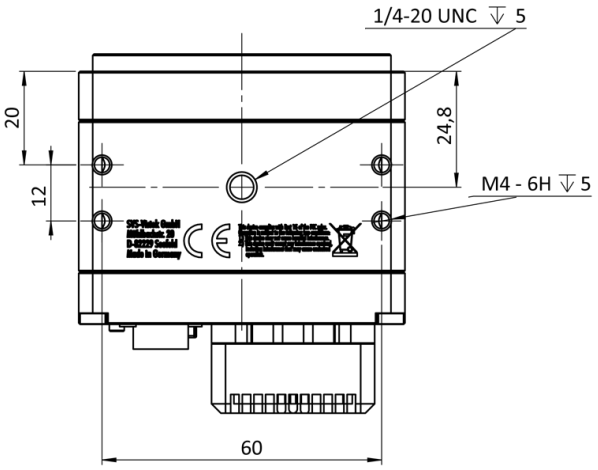
right side



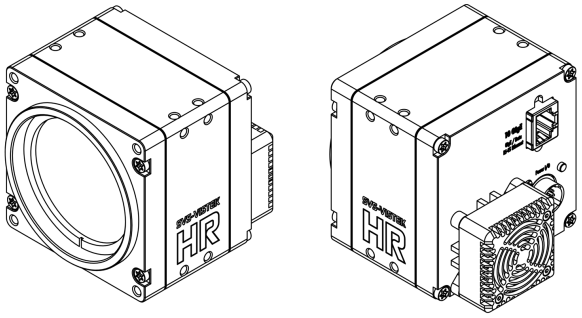
top



bottom

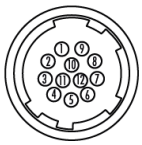


3D



I/O pin assignment

Hirose 12 Pin



1	VIN –	(GND)	7	OUT 1	(open drain)
2	VIN +	(10 V to 25 V DC)	8	OUT 2	(open drain)
3	IN 4	(RXD RS232)	9	IN 3 +	(opto In +)
4	OUT 4	(TXD RS232)	10	IN 3 –	(opto In –)
5	IN 1	(0 - 24V)	11	OUT 3	(open drain)
6	IN 2	(0 - 24V)	12	OUT 0	(open drain)