



### General

Model:	hr51MCX
Product code(s):	F004102
Product series:	HR CoaXPress
Status:	Available

### Sensor

Sensor type:	Area scan
Chroma:	Mono
Spectrum:	Visible
Spectral range:	400 nm to 1000 nm
Resolution:	8,416 × 6,032 (51.00 MP)
Sensor model:	Gpixel GMAX4651
Sensor architecture (material):	cmos
Shutter type(s):	global-shutter
Sensor size:	38.71 × 27.75 mm (47.63 mm, 35mm Full Frame)
Pixel size:	4.60 μm × 4.60 μm

### Pixel formats

Sensor bit depth:	8-Bit, 12-Bit
Monochrome pixel formats:	mono8, mono12

## Imaging performance

Dynamic range:	65 dB
SNR:	42.6 dB

## Timing and gain

Max. frame rate:	30 fps
Exposure time:	60 $\mu$ s (max)
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,
Power supply:	10 to 25VDC
Power consumption:	External: 13 W (typical at 12 VDC)

## Mechanical properties

Body dimensions (L x W x H in mm):	76 x 70 x 70
Filter/protection glass:	N-BK7 - AR coating 380-850nm
IP class:	IP30
Lens mount(s):	M58x0.75
Weight:	380 g

## On-board memory and FPGA

Non-volatile memory (Flash):	160 KByte
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## Interfaces

Digital interface:	cxp-6 with 4 connections
Interface connector:	(Din1.0/2.3)

## FW features - image control

Exposure modes:	Manual, Auto
Gain modes:	Auto, Manual
Image control features:	FW Features - Image Control

## FW features - camera control

Trigger modes/sync:	INTERNAL,SOFTWARE,EXTERNAL
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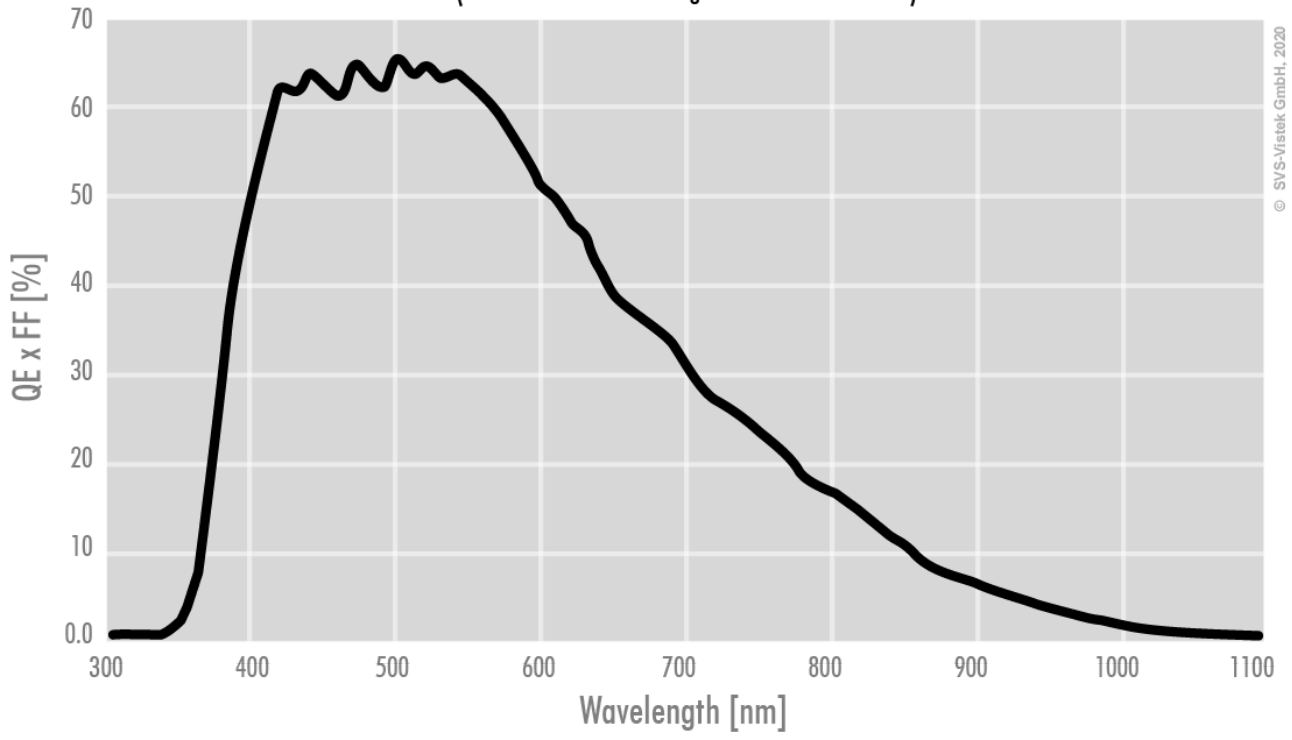
## FW features - camera control

Camera control features:

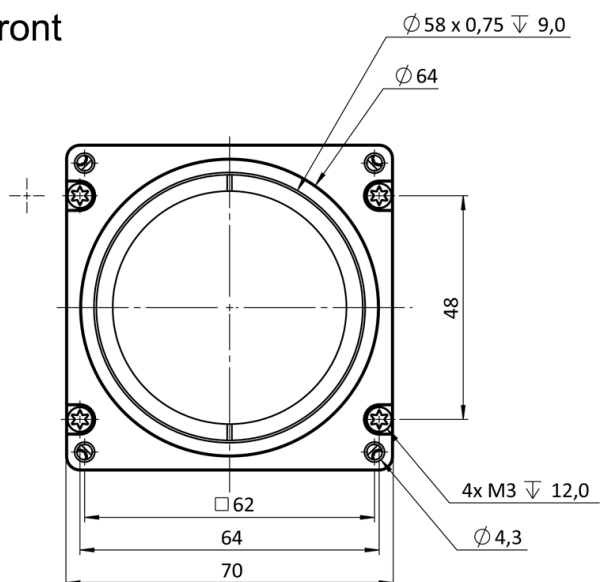
PoCxP, User Sets, PWM(4), Sequencer,

### Monochrome

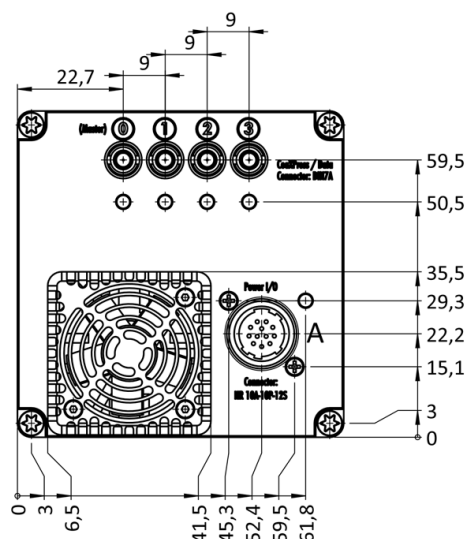
(not included: lens- and light source characteristics)



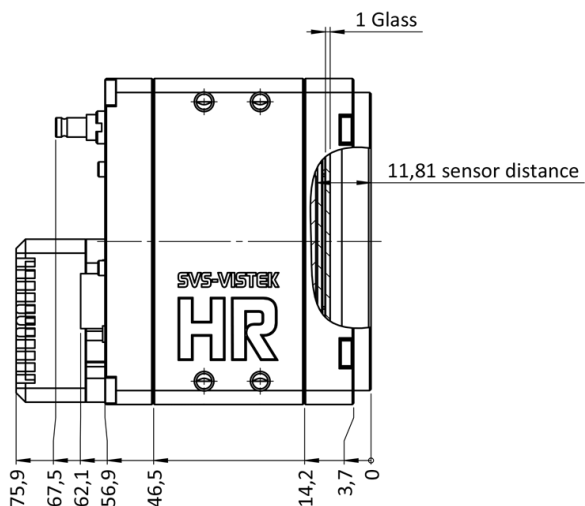
front



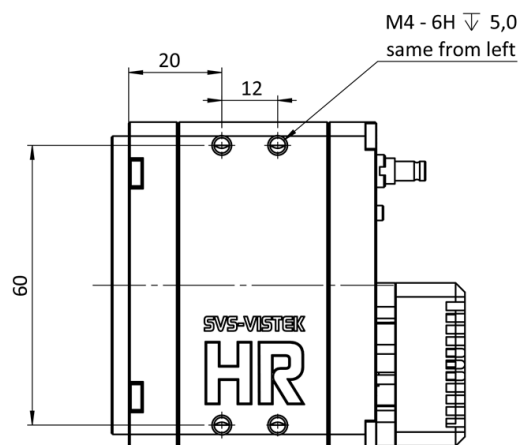
back



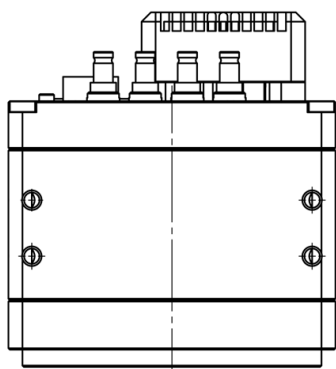
cross section



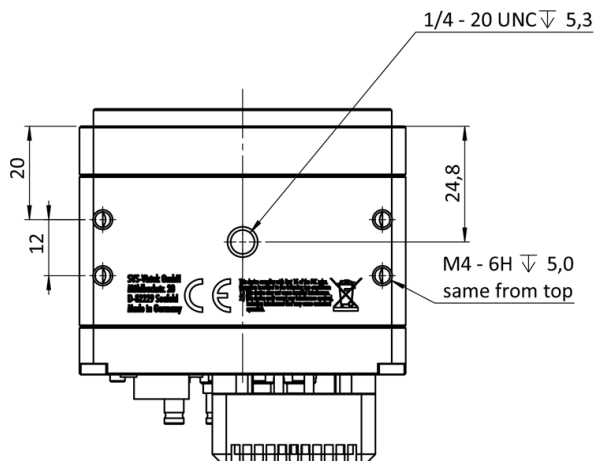
right side



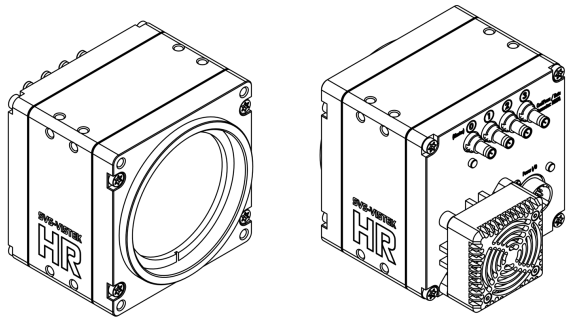
top



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)