



## General

|                 |              |
|-----------------|--------------|
| Model:          | hr51CCX      |
| Product code:   | F004103      |
| Product series: | HR CoaXPress |
| Status:         | Available    |

## Sensor

|                                 |  |
|---------------------------------|--|
| Sensor type:                    | Area scan                                    |
| Chroma:                         | Color  |
| 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   |
| RGB pixel formats: | bayer8, bayer12 |

## Imaging performance

|                |         |
|----------------|---------|
| Dynamic range: | 65 dB   |
| SNR:           | 42.6 dB |

## Timing and gain

|                  |                    |
|------------------|--------------------|
| Max. frame rate: | 30 fps             |
| Exposure time:   | 16 $\mu$ s 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,   |
| Power supply:                | 10 to 25VDC, Power over CoaXPress   |
| Power consumption:           | External: 13 W (typical)  |

## Mechanical properties

|                                    |              |
|------------------------------------|--------------|
| Body dimensions (L x W x H in mm): | 76 x 70 x 70 |
| Filter/protection glass:           | IR-Cut 680   |
| IP class:                          | IP30         |
| Lens mount(s):                     | M58x0.75     |
| Weight:                            | 380 g        |

## On-board memory and FPGA

|                              |           |
|------------------------------|-----------|
| Non-volatile memory (Flash): | 160 MByte |
|------------------------------|-----------|

## 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                |
| White balance modes:    | auto, manual                |
| Image control features: | FW Features - Image Control |

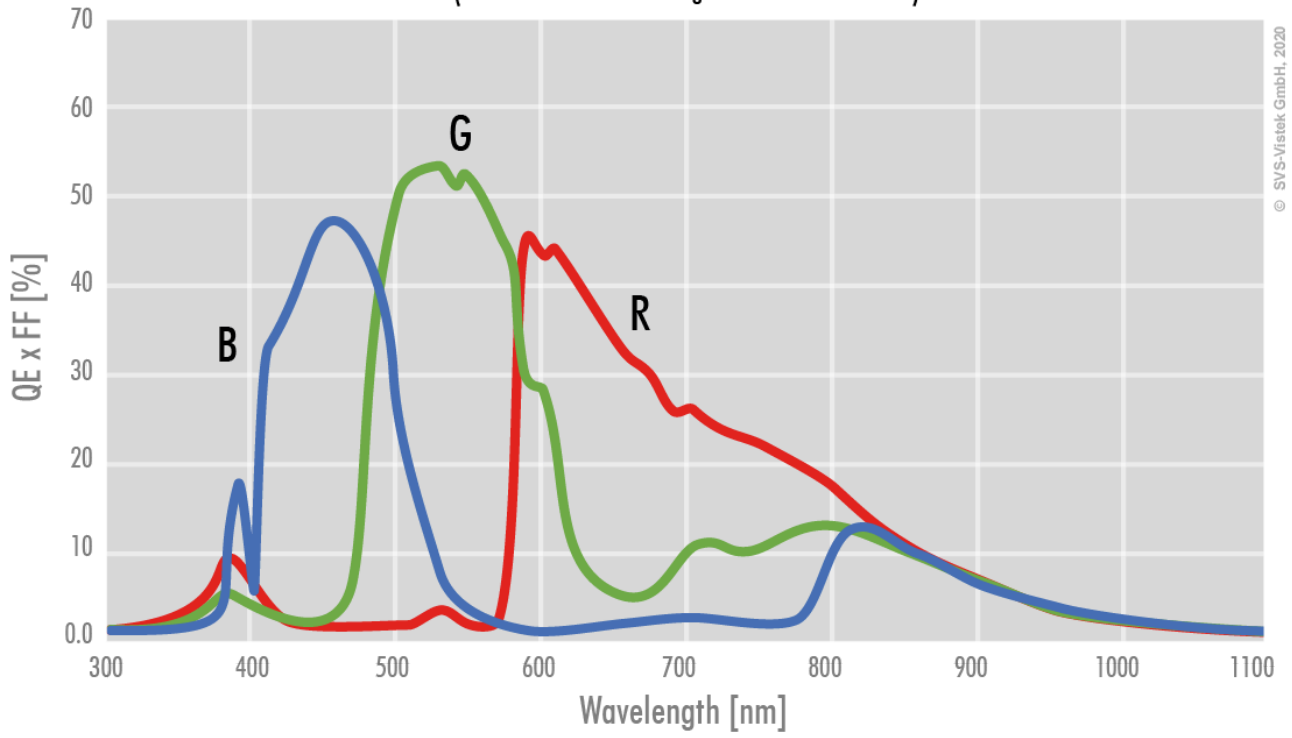
## FW features - camera control

Trigger modes/sync: INTERNAL,SOFTWARE,EXTERNAL

Camera control features: PoCxP, User Sets, PWM(4), Sequencer,

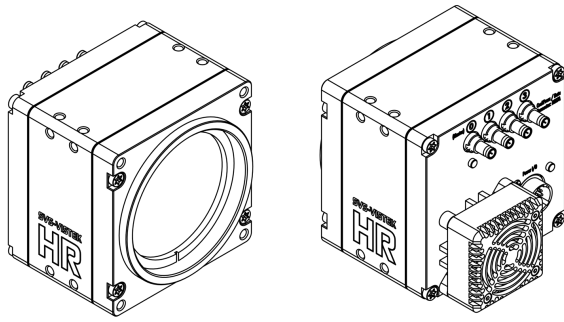
## Color

(not included: lens- and light source characteristics)





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) |