



# HR Camera Link

## hr49CCL

### General

|                |                |
|----------------|----------------|
| Model          | hr49CCL        |
| Product code   | F004155        |
| Product series | HR Camera Link |
| Status         | Available      |

### Sensor

|                                |                                     |
|--------------------------------|-------------------------------------|
| Sensor type                    | Area scan                           |
| Chroma                         | Color                               |
| Spectrum                       | Visible                             |
| Spectral range                 | 400 nm to 1000 nm                   |
| Resolution                     | 7,008 × 7,000 (49.00 MP)            |
| Sensor model                   | Gpixel GMAX3265-49                  |
| Sensor architecture (material) | cmos                                |
| Shutter type(s)                | Global shutter (GS)                 |
| Sensor size                    | 22.43 × 22.4 mm (31.7 mm, Type 2.3) |
| Pixel size                     | 3.20 μm × 3.20 μm                   |

### Pixel formats

|                   |                 |
|-------------------|-----------------|
| Sensor bit depth  | 8-bit, 10-bit   |
| RGB pixel formats | bayer8, bayer10 |

### Timing and gain

|                 |                   |
|-----------------|-------------------|
| Max. frame rate | 17 fps            |
| Exposure time   | 21 μs to 60 s     |
| Gain            | 0.0 dB to 18.0 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 consumption           | External: 9 W (typical)                                                                               |

## Mechanical properties

|                                   |              |
|-----------------------------------|--------------|
| Body dimensions (L x W x H in mm) | 76 × 70 × 70 |
| IP class                          | IP30         |
| Lens mount(s)                     | M58x0.75     |
| Weight                            | 420 g        |

## On-board memory and FPGA

|                             |          |
|-----------------------------|----------|
| Non-volatile memory (Flash) | 32 MByte |
|-----------------------------|----------|

## Interfaces

|                     |                    |
|---------------------|--------------------|
| Digital interface   | camera link 80-bit |
| Interface connector | SDR                |

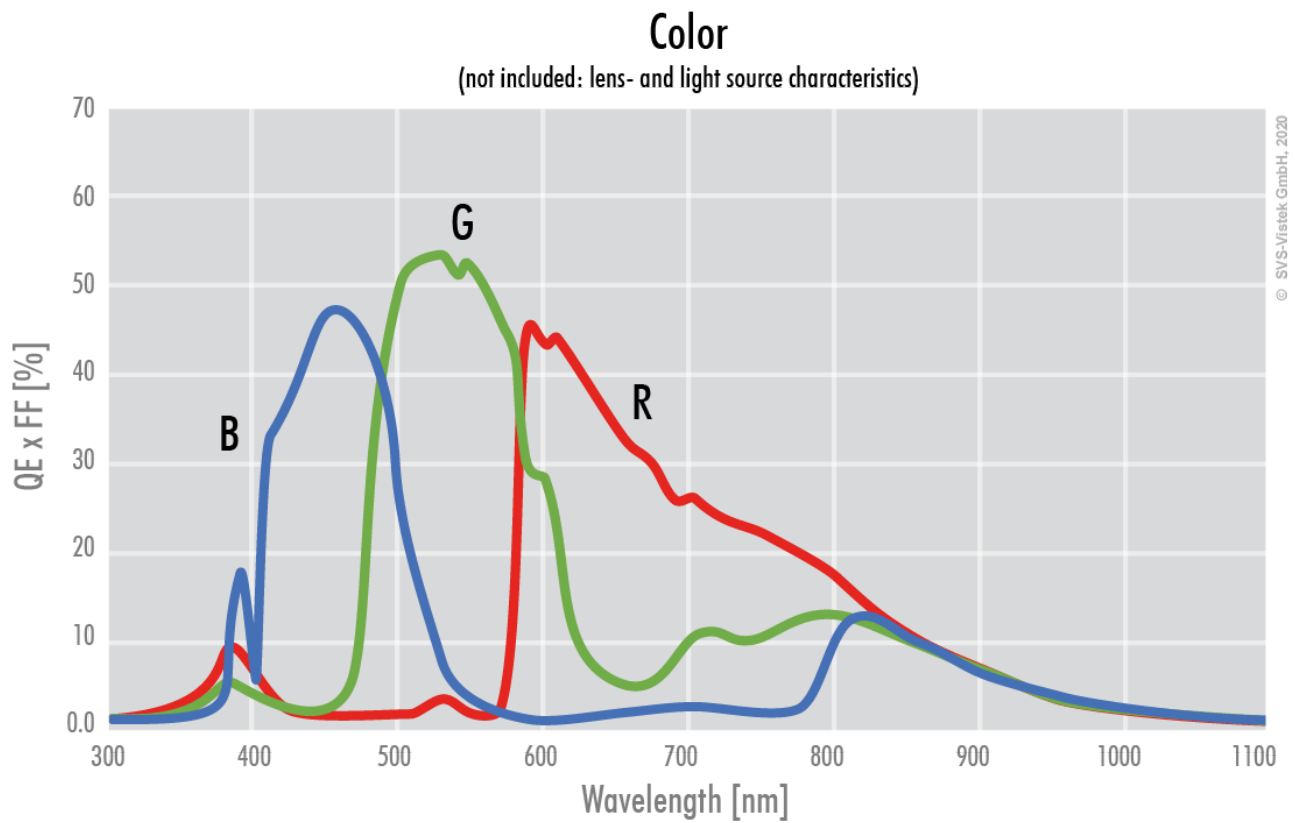
## FW features - image control

|                        |                                                 |
|------------------------|-------------------------------------------------|
| Exposure modes         | manual, auto, external                          |
| Gain modes             | auto, manual                                    |
| White balance modes    | auto, manual                                    |
| Image control features | lut, mirror-image, dpc, shading-correction, ffc |

## FW features - camera control

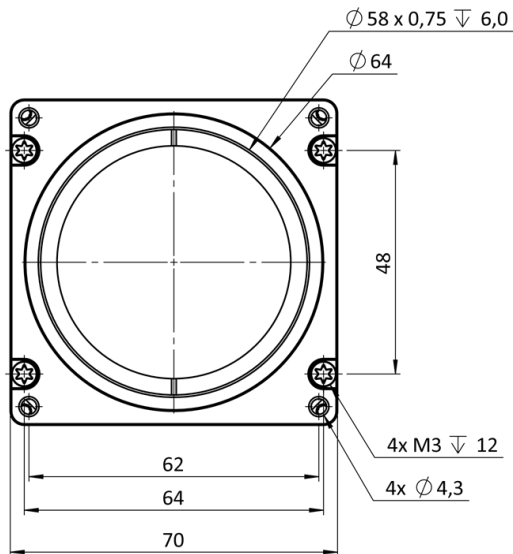
|                         |                               |
|-------------------------|-------------------------------|
| Trigger modes/sync      | internal, software, external  |
| Camera control features | User Sets, PWM(4), Sequencer, |

## Quantum Efficiency

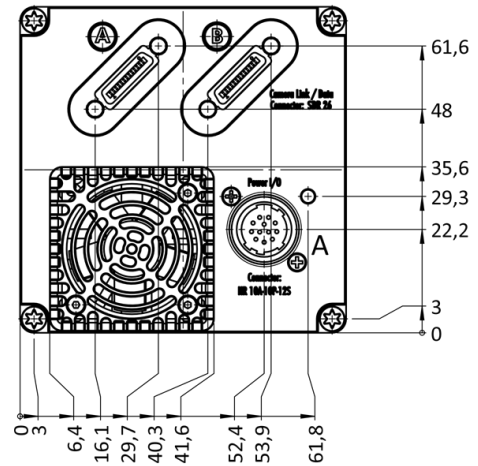


## Technical Drawing

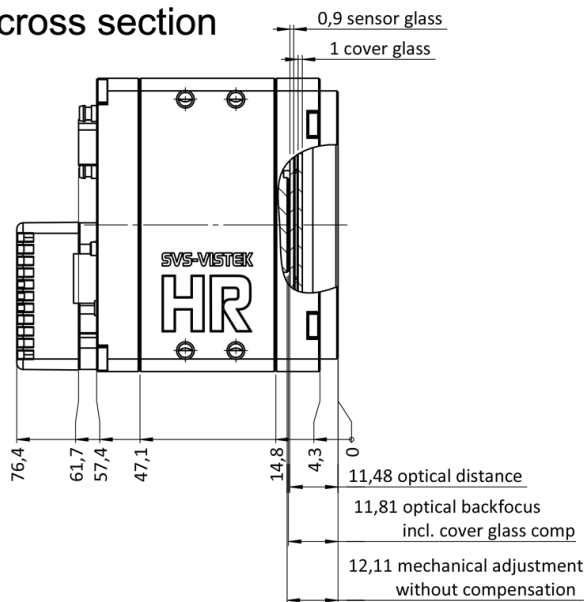
front



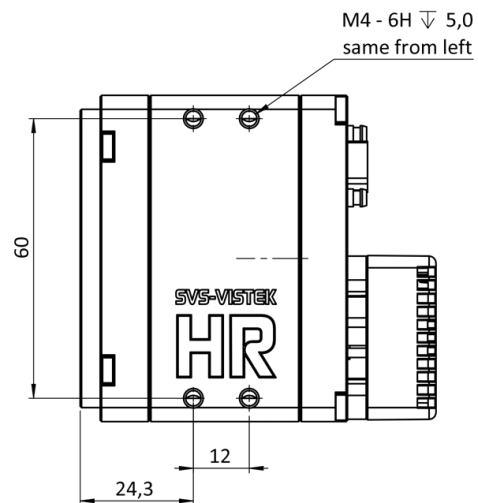
back



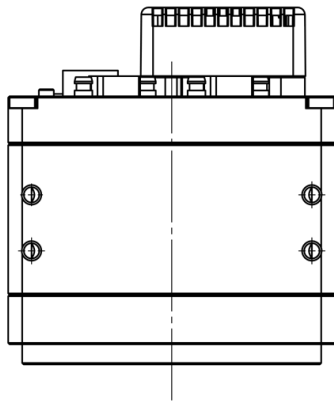
cross section



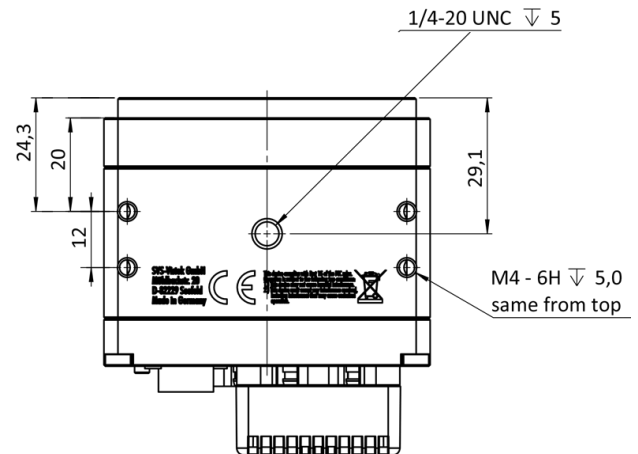
right side



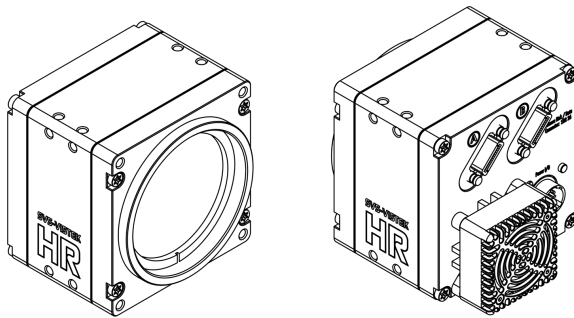
top



bottom



3D



## I/O pin assignment



|   |       |                   |    |        |              |
|---|-------|-------------------|----|--------|--------------|
| 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) |