



# HR 10GigE

hr455MXGE

## General

|                |           |
|----------------|-----------|
| Model          | hr455MXGE |
| Product code   | F004098   |
| Product series | HR 10GigE |
| Status         | Available |

## Sensor

|                                |  |
|--------------------------------|--|
| Sensor type                    | Area scan                                      |
| Chroma                         | Mono   |
| Spectrum                       | Visible  |
| Spectral range                 | 400 nm to 1000 nm                              |
| Resolution                     | 9,568 × 6,380 (61.00 MP)                       |
| Sensor model                   | Sony IMX455                                    |
| Sensor architecture (material) | cmos   |
| Shutter type(s)                | rolling-shutter                                |
| Sensor size                    | 35.98 × 23.99 mm (43.24 mm, 43.3mm (Type 2.7)) |
| Pixel size                     | 3.76 μm × 3.76 μm                              |

## Pixel formats

|                          |                       |
|--------------------------|-----------------------|
| Sensor bit depth         | 8-Bit,12-Bit,16-Bit   |
| Monochrome pixel formats | mono8, mono12, mono16 |

## Imaging performance

|               |         |
|---------------|---------|
| Dynamic range | 81.4 dB |
| SNR           | 47 dB   |

## Timing and gain

|                 |                    |
|-----------------|--------------------|
| Max. frame rate | 18 fps             |
| Exposure time   | 34 $\mu$ s to 60 s |
| Gain            | 0.0 dB to 36.0 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 Ethernet (POE+, in option -P)   |
| Power consumption           | External: 18 W (typical)  |

## Operating conditions

|                                 |                 |
|---------------------------------|-----------------|
| Operating temperature (housing) | -10 °C to 60 °C |
|---------------------------------|-----------------|

## Mechanical properties

|                                   |                    |
|-----------------------------------|--------------------|
| Body dimensions (L x W x H in mm) | 78 x 70 x 70       |
| Filter/protection glass           | N-BK7 - AR coating |
| IP class                          | IP30               |
| Lens mount(s)                     | M58x0.75           |
| Weight                            | 420 g              |

## On-board memory and FPGA

|                    |           |
|--------------------|-----------|
| Image buffer (RAM) | 448 MByte |
|--------------------|-----------|

## Interfaces

|                     |         |
|---------------------|---------|
| Digital interface   | 10gige  |
| Interface connector | (RJ-45) |

## FW features - image control

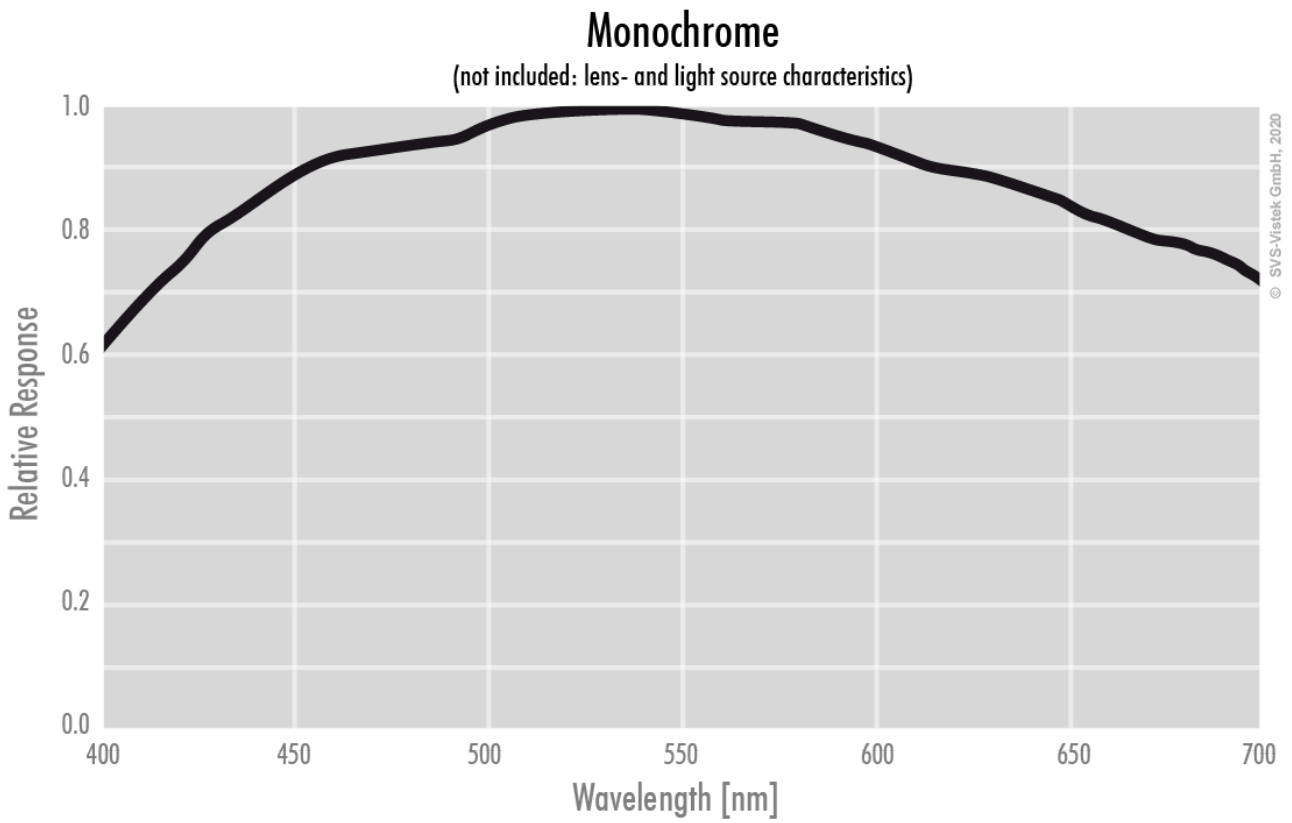
|                        |                             |
|------------------------|-----------------------------|
| Exposure modes         | Manual, Auto, External      |
| Gain modes             | Auto, Manual                |
| Image control features | FW Features - Image Control |

## FW features - camera control

Trigger modes/sync INTERNAL,SOFTWARE,EXTERNAL

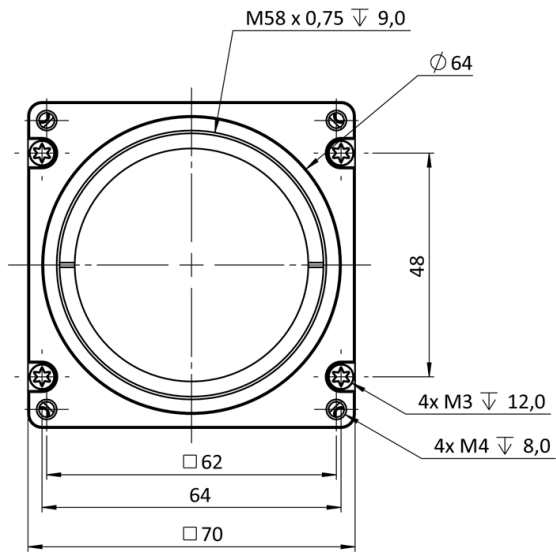
Camera control features User Sets, POE, PWM(4), Sequencer,

Quantum Efficiency

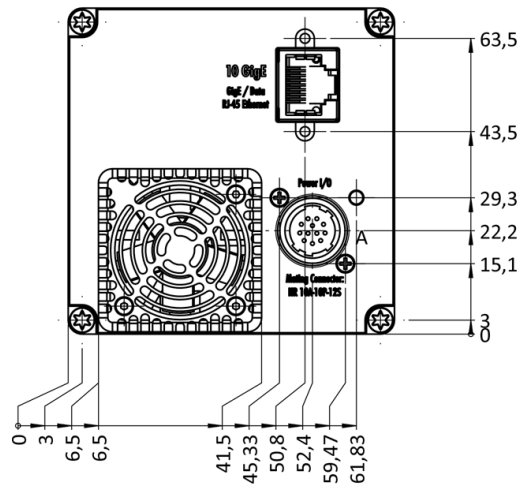


Technical Drawing

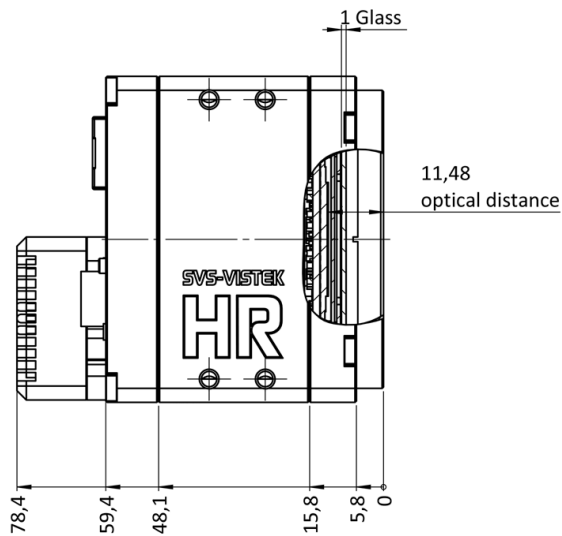
front



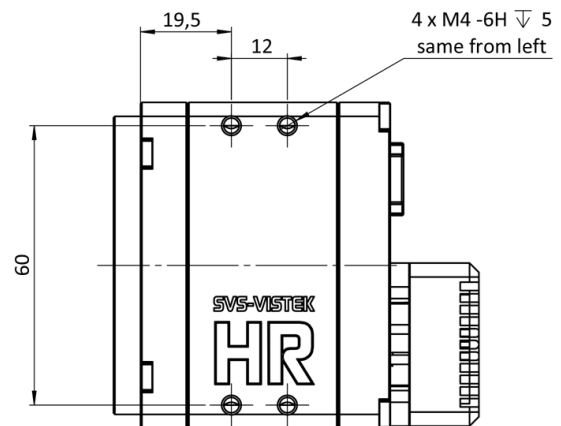
back



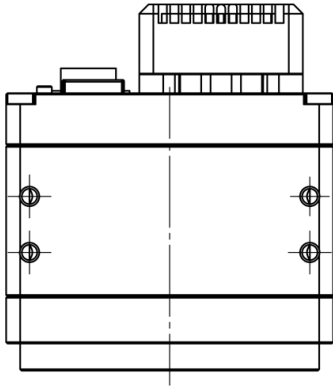
cross section



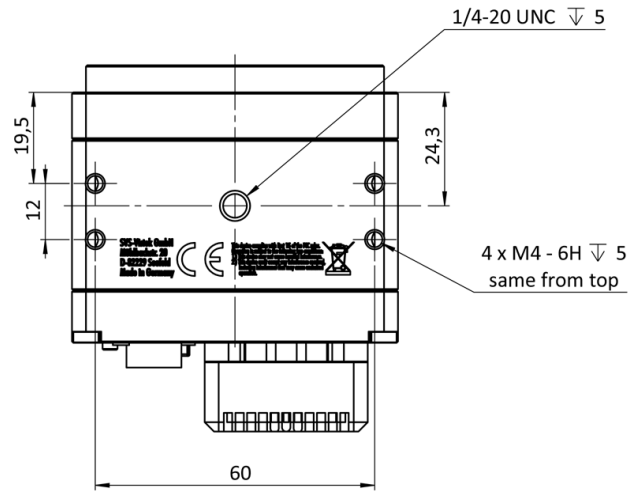
right side



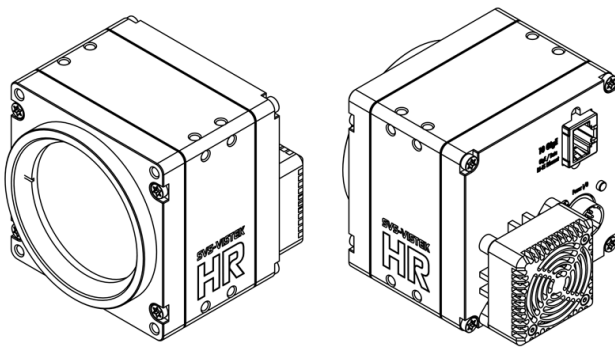
top



bottom



3D



## I/O pin assignment



|   |                       |    |                    |
|---|-----------------------|----|--------------------|
| 1 | VIN - (GND)           | 7  | OUT 1 (open drain) |
| 2 | VIN + (10V to 25V 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) |