

hr51 CXGE

HR 10 GigE



The HR 10 GigE series with its high-end high-resolution CCD and CMOS sensors permits making full use of the sensor bandwidth. 10 GigE delivers up to 1.1 GB/s of image data with distances up to 100m .

The clean design according to well established standards like GigE Vision, 10 GigE Vision and GenICam ensure rapid integration into the final application. The camera features a rich choice of industrial hardware and software features. Burst mode enables even higher trigger frequencies.

Best suited for applications such as optical metrology, surface control, quality control or monitoring of large areas.

Technical Highlights

- > Defect pixel correction, lens shading correction
- > ROI, LUT, binning, gamma, offset, autoexposure
- > GenICam interface with GenTL driver
- > Integrated multi channel LED strobe controller
- > POE (Power Over Ethernet) single cable option
- > Industrial TTL-24V I/O interface with SafeTrigger, programmable logic functions, sequencer and timer, RS232
- > M58 lens interface (F-Mount optional)

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HR Series

hr51CXGE

| | |
|---------------------|-------------------|
| Resolution [MP] | 51 MP |
| Resolution (h x v) | 8424 x 6032 px |
| Frame rate (max.) | 23.7 fps |
| Chroma | color |
| Interface | 10GigE |
| Sensor | |
| Sensor | GMAX4651 |
| Manufacturer | Gpixel |
| Sensor type | Area CMOS |
| Shutter type | global shutter |
| Sensor size (h x v) | 38.75 x 27.75 mm |
| Optical diagonal | 47.66 mm |
| Sensor format | 35mm Full Frame |
| Pixel size (h x v) | 4.6 x 4.6 μ m |

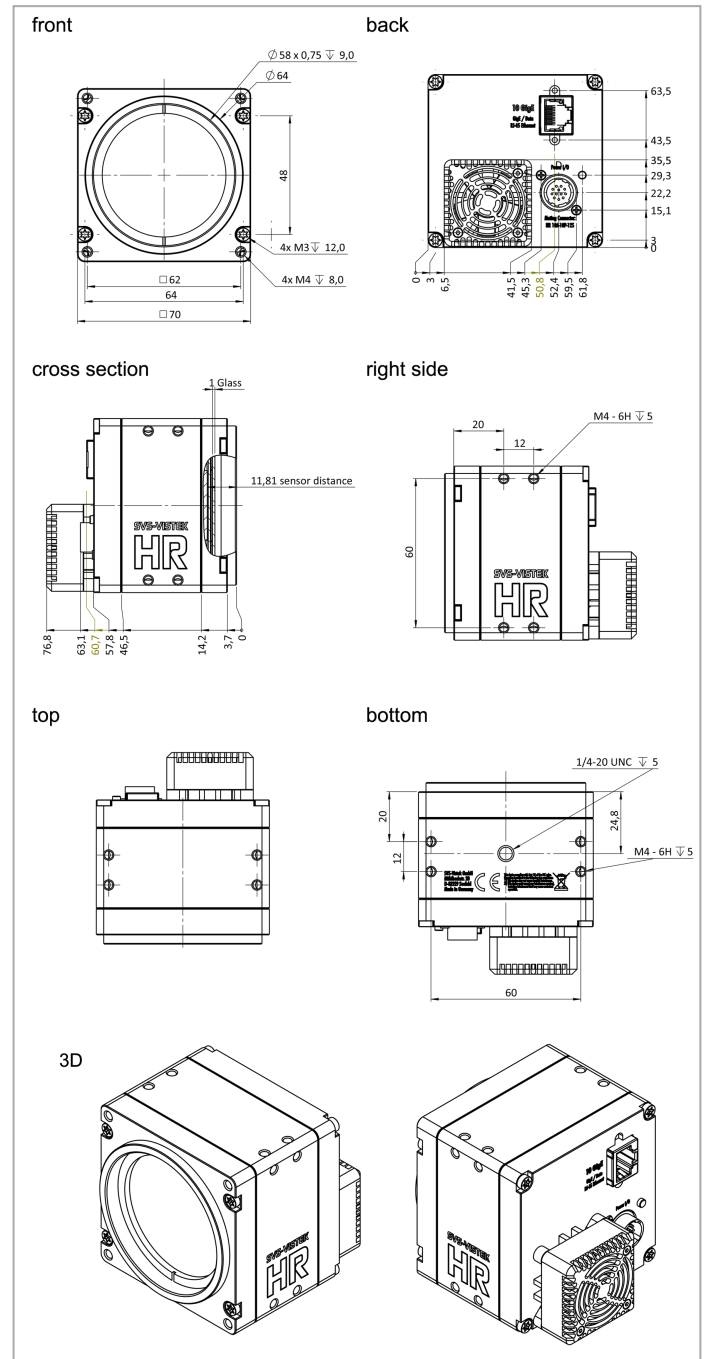
| | |
|---------------------|-------------------------------|
| Camera | |
| Exposure modes | MANUAL;AUTO |
| Trigger modes | INTERNAL;SOFTWARE;EXTERNAL |
| Exposure time (min) | 80 μ s |
| Exposure time (max) | 1 sec |
| Pixel format / max | bayer8, bayer12 / 12 bit |
| Gain modes | manual, auto |
| S/N ratio (max) | 42.6 dB (dep. on environment) |
| Dynamic range (max) | 65 dB (dep. on environment) |
| Internal memory | 512 MB SDRAM |

| | |
|-------------------------|----------------------|
| Feature Set | |
| Manual white balance | yes |
| Automatic white balance | yes |
| AOI | yes |
| LUT | yes |
| Offset | yes |
| Binning | yes |
| Image flip | yes |
| Sequencer | yes |
| POE | yes (POE+)(optional) |

| | |
|------------------------|-----------------------------|
| Housing | |
| Lens mount | M58x0.75 |
| Dimensions (w x h x d) | 70 x 70 x 76.8 mm |
| Weight | 380 g |
| Ambient temperature | -10 to 45 °C |
| Ambient humidity | 10 to 90 % (non-condensing) |
| Protection class | IP30 |

| | |
|-----------------------|-----|
| I/O-Interfaces | |
| Input up to 24V | 2 x |
| Input OPTO | 1 x |
| Output open drain | 4 x |

Dimensions [mm]



Pinout Mating Connector

| | | | | | | | | | | | | |
|---------------------------|---|---------------|----------------------|---------------------------|----------------------|--------------------|----------------------|---------------------|-----------------------|----------------|-----------------------|----------------|
| | Hirose 12 Pin | | | | | | | | | | | |
| | <table border="0"> <tr> <td>1 VIN - (GND)</td> <td>7 OUT 1 (open drain)</td> </tr> <tr> <td>2 VIN + (10 V to 25 V DC)</td> <td>8 OUT 2 (open drain)</td> </tr> <tr> <td>3 IN 4 (RXD RS232)</td> <td>9 IN 3 + (opto In +)</td> </tr> <tr> <td>4 OUT 4 (TXD RS232)</td> <td>10 IN 3 - (opto In -)</td> </tr> <tr> <td>5 IN 1 (0-24V)</td> <td>11 OUT 3 (open drain)</td> </tr> <tr> <td>6 IN 2 (0-24V)</td> <td>12 OUT 0 (open drain)</td> </tr> </table> | 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) |
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Spectral Response *

I/O RS-232

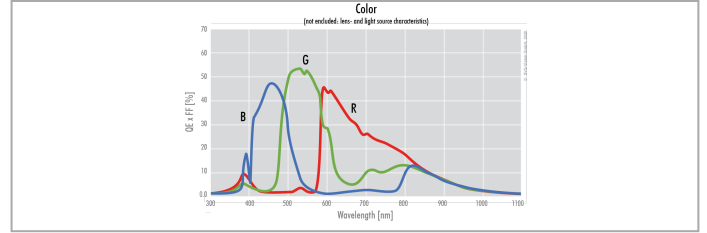
1 x

Power supply

10 to 25 V (DC)

Power consumption

13 W (dep. on operating mode)



* Sensor data — excludes camera cover- or IR-cut filter characteristics