# shr461MCX

SHR CoaXPress

**Highest resolution made in Germany**

The SHR series combines large pixel structures with highest resolutions. The physical characteristics of large pixels guarantee outstanding image quality. High-quality harmonisation of the pixels with defect pixel correction provides a noise-free image. The camera offers the highest structural precision in sensor adjustment in a massive, thermally highly optimised housing. The large M72 lens mount can be adapted to any lens. This makes the SHR the camera for the most demanding optical tasks.

The high-performance CoaXPress interface enables the fastest high-speed data transfer with excellent latency behaviour. The camera is equipped with a comprehensive I/O interface with galvanic interface separation, sequencer and integrated multi-channel LED light control.

## Technical Highlights

- Outstanding image quality
- High color depth
- High dynamic range
- Excellent image homogeneity
- User defined lens shading correction
- User defined pixel correction
- High-speed CXP-6 and CXP-12 quad interfaces
- Safe signal with Schmitt-trigger, debouncer
- Industrial I/O concept: up to 24 V signal voltage
- GenICam interface
- Industrial TTL-24V I/O interface with SafeTrigger, programmable logic functions, sequencer, timer, RS232

**CoaXPress specific features**

- Quad CoaXPress-6 or CoaXPress-12
- Power over CoaXPress

The SHR offers excellent properties for inspection tasks in the wafer, flat panel or solar panel business. The CoaXPress version provides the benefit of long distance data cables.

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## SHR Series shr461MCX

| | |
|---|---|
| Resolution [MP] | 101.8 MP |
| Resolution (h x v) | 11648 x 8742 px |
| Frame rate (max.) | 8.7 fps |
| Chroma | mono |
| Interface | 4 CXP-6 Connections |

**Sensor**

| | |
|---|---|
| Sensor | IMX461LLA |
| Manufacturer | Sony |
| Sensor type | Area CMOS |
| Shutter type | rolling shutter |
| Sensor size (h x v) | 43.8 x 32.87 mm |
| Optical diagonal | 54.76 mm |
| Sensor format | 55mm (Type 3.4) |
| Pixel size (h x v) | 3.76 x 3.76 µm |

**Camera**

| | |
|---|---|
| Exposure modes | MANUAL;AUTO |
| Trigger modes | INTERNAL;SOFTWARE;EXTERNAL |
| Exposure time (min) | 60 µs |
| Exposure time (max) | 1 sec |
| Pixel format / max | mono8, mono10, mono12, mono16 / 16 bit |
| Gain modes / max | manual, auto / 36 dB |
| Internal memory | 512 MB SDRAM, 160 MB Flash |

**Feature Set**

| | |
|---|---|
| AOI | yes |
| LUT | yes |
| Offset | yes |
| Binning | yes |
| Image flip | yes |
| Shading correction | yes (external) |
| Defect pixel correction | yes |
| Sequencer | yes |

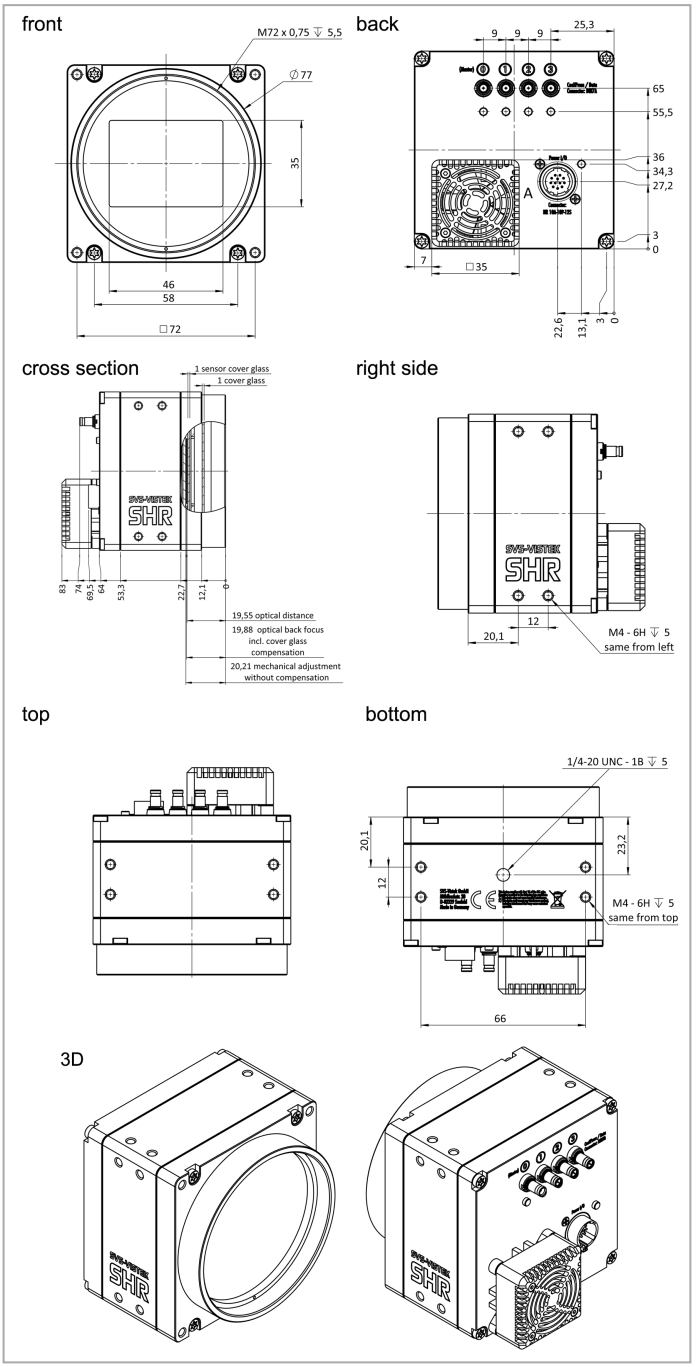
**Housing**

| | |
|---|---|
| Lens mount | M72x0.75 |
| Dimensions (w x h x d) | 80 x 80 x 83 mm |
| Weight | 580 g |
| Operating temperature (housing) | -10 to 70 °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 |
| I/O RS-232 | 1 x |
| Power supply | 10 to 25 V (DC) |
| Power consumption | 14 W (dep. on operating mode) |

## Dimensions [mm]

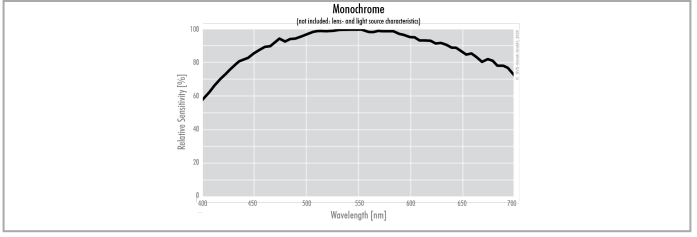



## Pinout Mating Connector

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) |

## Spectral Response *




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