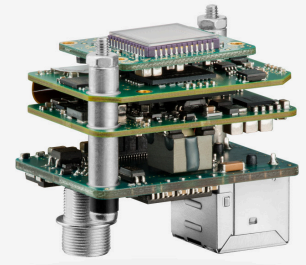
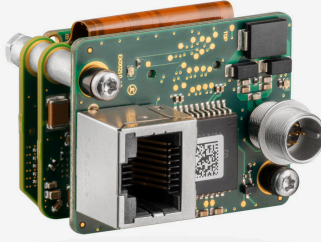
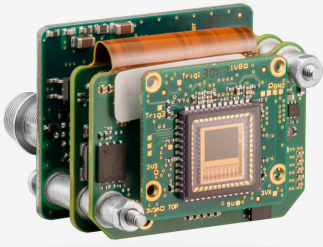


In series

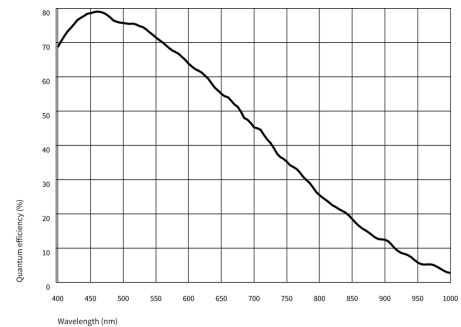
The model is in series and available for the long term.



Specification

Sensor

| | |
|---|----------------------|
| Sensor type | CMOS Mono |
| Shutter | Global Shutter |
| Sensor characteristic | Linear |
| Readout mode | - |
| Pixel Class | 8 MP |
| Resolution | 8.13 Mpix |
| Resolution (h x v) | 2856 x 2848 Pixel |
| Aspect ratio | 1:1 |
| ADC | 12 bit |
| Color depth (camera) | 12 bit |
| Optical sensor class | 2/3" |
| Optical Size | 7.825 mm x 7.804 mm |
| Optical sensor diagonal | 11.05 mm 2/3" |
| Pixel size | 2.74 µm |
| Manufacturer | Sony |
| Sensor Model | IMX546-AAMJ-C |
| Gain (master/RGB) | 16x/- |
| AOI horizontal | same frame rate |
| AOI vertical | increased frame rate |
| AOI image width / step width | 256 / 2 |
| AOI image height / step width | 1 / 1 |
| AOI position grid (horizontal/vertical) | 2 / 1 |
| Binning horizontal | increased frame rate |
| Binning vertical | increased frame rate |
| Binning method | M/C automatic |
| Binning factor | 2x2 |
| Decimation (subsampling) horizontal | increased frame rate |
| Decimation (subsampling) vertical | increased frame rate |
| Decimation (subsampling) method | M/C automatic |
| Decimation (subsampling) factor | 2x2 |



Subject to technical modifications (2026-01-20)

Model

| | |
|-----------------------------------|--------------------|
| Frame rate freerun mode | 15 fps |
| Frame rate trigger (continuous) | 15 fps |
| Frame rate trigger (maximum) | 16 fps |
| Exposure time (minimum - maximum) | 0.023 ms - 2000 ms |
| Long exposure (maximum) | 120000 ms |
| Power consumption | 2 W - 4 W |
| Image memory | 128 MB |

Ambient conditions

For PCB versions, refer to the separate hints in the respective documentation.

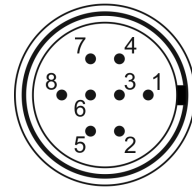
| | |
|---|---------------------------------|
| Allowed device temperature during operation | 0 °C - 55 °C / 32 °F - 131 °F |
| Allowed device temperature during storage | -20 °C - 60 °C / -4 °F - 140 °F |
| Humidity (relative, non-condensing) | 20 % - 80 % |

Connectors

| | |
|---------------------|---|
| Interface connector | GigE RJ45 |
| I/O connector | 8-pin Hirose connector (HR25-7TR-8PA(73)) |
| Power supply | 12 V - 24 V or PoE |

Pin assignment I/O connector

| | |
|---|---|
| 1 | Ground (GND) |
| 2 | Flash output with optocoupler (-) - Line 1 |
| 3 | General Purpose I/O (GPIO) 1 - Line 2 |
| 4 | Trigger input with optocoupler (-) - Line 0 |
| 5 | Flash output with optocoupler (+) - Line 1 |
| 6 | General Purpose I/O (GPIO) 2 |
| 7 | Trigger input with optocoupler (+) - Line 0 |
| 8 | Input power supply (VCC) 12-24 V DC |



Design

| | |
|------------------|-----------------------------|
| Lens Mount | No mount |
| IP code | - |
| Dimensions H/W/L | 31.5 mm x 40.0 mm x 30.0 mm |
| Mass | 22 g |
| Housing material | - |

Features

List of on-camera image pre-processing features.

All features of the table are available via our IDS peak software for image pre-processing on the host computer (sensor model dependent).

| | | |
|-------------------|-----------------------------|---|
| Image Acquisition | Freerun | ✓ |
| | Software trigger | ✓ |
| | Hardware trigger | ✓ |
| | Trigger controlled exposure | ✓ |
| | Denoiser | ✓ |
| | Long exposure | ✓ |
| | Line scan | ✓ |
| Flashing | Flashing | ✓ |
| | PWM flashing | ✓ |

GV-51J2SE-M Rev.4.2 (1009724)

| | | |
|---------------------------|--------------------------------|---|
| Image Adjustments | Auto exposure | ✓ |
| | Auto gain | ✓ |
| | Auto whitebalance | - |
| | Color correction | - |
| | Gamma | ✓ |
| | LUT | ✓ |
| | Mirror/flip | X/Y |
| On-board Image Processing | Pixel formats | Mono8 Mono10 Mono10p Mono12 Mono12p |
| | Region of interest | ✓ |
| | Decimation (FPGA) | ✓ |
| | Decimation (Sensor) | 2x2 |
| | Binning (FPGA) | ✓ |
| | Binning (Sensor) | 2x2 Increases frame rate. |
| | | |
| Others | IP settings | ✓ |
| | Bandwidth management | ✓ |
| | Chunks | ✓ |
| | Sequencer | - |
| | PTP | ✓ |
| | Firmware update | ✓ |
| | 1st supported firmware version | 3.31 |