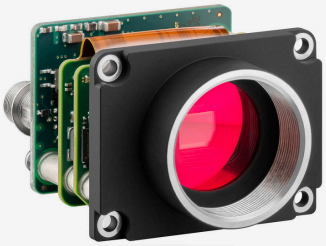
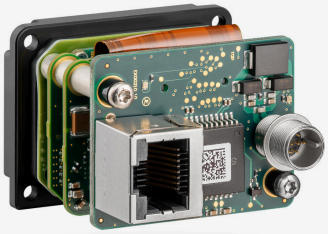
# UI-5141SE-M-GL Rev.4.2 (AB12126)

Not recommended for new designs
The camera model is no longer recommended for new application development.



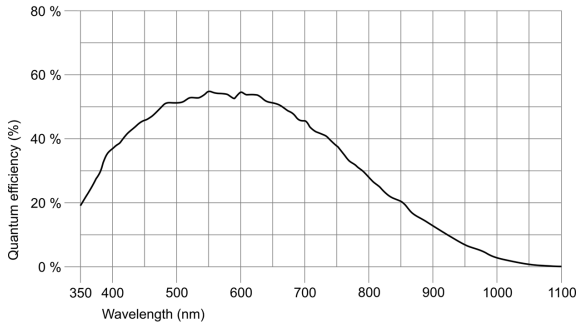





## Specification

### Sensor

| | |
|---|---|
| Sensor type | CMOS Mono |
| Shutter | Global Shutter |
| Sensor characteristic | Linear |
| Pixel Class | 1.3 MP |
| Resolution | 1.31 Mpix |
| Resolution (h x v) | 1280 x 1024 Pixel |
| Aspect ratio | 5:4 |
| ADC | 10 bit |
| Color depth (camera) | 12 bit |
| Optical sensor class | 1/2" |
| Optical Size | 6.144 mm x 4.915 mm |
| Optical sensor diagonal | 7.87 mm 1/2" |
| Pixel size | 4.8 µm |
| CRA (Chief Ray Angle) | 2.7 ° |
| Manufacturer | Onsemi |
| Sensor Model | NOIP1SN1300A-QDI |
| Gain (master/RGB) | 4x/4x |
| AOI horizontal | increased frame rate |
| AOI vertical | increased frame rate |
| AOI image width / step width | 120 / 8 |
| AOI image height / step width | 2 / 2 |
| AOI position grid (horizontal/vertical) | 8 / 2 |
| Binning horizontal | same frame rate |
| Binning vertical | same frame rate |
| Binning method | Horizontal: mean / Vertical: mean |
| Binning factor | 2 |
| Decimation (subsampling) horizontal | increased frame rate |
| Decimation (subsampling) vertical | increased frame rate |
| Decimation (subsampling) method | M/C automatic |





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## Model

| | |
|---|---|
| Pixel clock range | 120 MHz - 152 MHz |
| Frame rate freerun mode | 88 fps |
| Frame rate trigger (continuous) | 88 fps |
| Frame rate trigger (maximum) | 88 fps |
| Exposure time (minimum - maximum) | 0.069 ms - 434 ms |
| Long exposure (maximum) | 5000 ms |
| Power consumption | 1.7 W - 2.8 W |
| Image memory | 128 MB |
| Special features | IDS line scan mode<br>Overlap trigger<br>Sensor source gain<br>Multi-AOI |

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




## Design

| | |
|---|---|
| Lens Mount | C-Mount |
| IP code | - |
| Dimensions H/W/L | 34.0 mm x 44.0 mm x 35.0 mm |
| Mass | 62 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 | ✓ |


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| | | |
|---|---|---|
| Flashing | Flashing | - |
| | PWM flashing | - |
| Image Adjustments | Auto exposure | - |
| | Auto gain | - |
| | Auto whitebalance | - |
| | Color correction | - |
| | Gamma | - |
| | LUT | - |
| | Mirror/flip | - |
| On-board Image Processing | Pixel formats | |
| | Region of interest | ✓ |
| | Decimation (FPGA) | - |
| | Decimation (Sensor) | (2,4)x(2,4) |
| | Binning (FPGA) | - |
| Others | Chunks | - |
| | Sequencer | - |
| | Firmware update | - |
| | 1st supported firmware version | 4.96.1 |


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