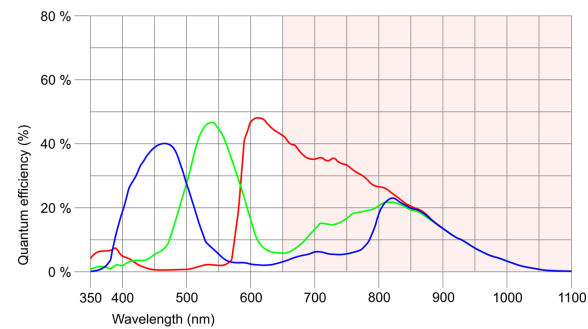


Not recommended for new designs  
The camera model is no longer recommended for new application development.



Specification

|                                         |                      |
|-----------------------------------------|----------------------|
| Sensor                                  |                      |
| Sensor type                             | CMOS Color           |
| 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                            | NOIP1SE1300A-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                      | -                    |
| Binning vertical                        | -                    |
| Binning method                          | -                    |
| Binning factor                          | -                    |
| Decimation (subsampling) horizontal     | increased frame rate |
| Decimation (subsampling) vertical       | increased frame rate |
| Decimation (subsampling) method         | M/C automatic        |



## Model

|                                   |                                                                          |
|-----------------------------------|--------------------------------------------------------------------------|
| Pixel clock range                 | 120 MHz - 320 MHz                                                        |
| Frame rate freerun mode           | 169 fps                                                                  |
| Frame rate trigger (continuous)   | 169 fps                                                                  |
| Frame rate trigger (maximum)      | 169 fps                                                                  |
| Exposure time (minimum - maximum) | 0.035 ms - 434 ms                                                        |
| Long exposure (maximum)           | 5000 ms                                                                  |
| Power consumption                 | 1.7 W - 3.2 W                                                            |
| Image memory                      | 128 MB                                                                   |
| Special features                  | IDS line scan mode<br>Overlap trigger<br>Sensor source gain<br>Multi-AOI |

## Ambient conditions

The temperature values given below refer to the outer device temperature of the camera housing.

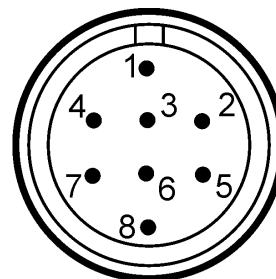
|                                             |                                 |
|---------------------------------------------|---------------------------------|
| Allowed device temperature during operation | 0 °C - 55 °C / 32 °F - 131 °F   |
| Allowed ambient temperature during storage  | -20 °C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

## Connectors

|                     |                                           |
|---------------------|-------------------------------------------|
| Interface connector | USB 3.0 micro-B, screwable                |
| I/O connector       | 8-pin Hirose connector (HR25-7TR-8PA(73)) |
| Power supply        | USB cable                                 |

## 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 | Output supply voltage, 5 V (100 mA) |



## Design

|                  |                             |
|------------------|-----------------------------|
| Lens Mount       | C-Mount                     |
| IP code          | IP30                        |
| Dimensions H/W/L | 29.0 mm x 29.0 mm x 29.0 mm |
| Mass             | 52 g                        |
| Housing material | Magnesium / stainless steel |

## 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                   | ✓ |

Subject to technical modifications (2026-08-27)

## UI-3140CP-C-HQ Rev.2 (AB00614)

|                           |                                |      |
|---------------------------|--------------------------------|------|
| Flashing                  | Flashing                       | -    |
|                           | PWM flashing                   | -    |
| Image Adjustments         | Auto exposure                  | -    |
|                           | Auto gain                      | -    |
|                           | Auto whitebalance              | -    |
|                           | Color correction               | -    |
|                           | Gamma                          | -    |
|                           | LUT                            | -    |
| On-board Image Processing | Mirror/flip                    | -    |
|                           | Pixel formats                  |      |
|                           | Region of interest             | ✓    |
|                           | Decimation (FPGA)              | -    |
|                           | Decimation (Sensor)            |      |
| Others                    | Binning (FPGA)                 | -    |
|                           | Chunks                         | -    |
|                           | Sequencer                      | -    |
|                           | Firmware update                | -    |
|                           | 1st supported firmware version | 4.70 |