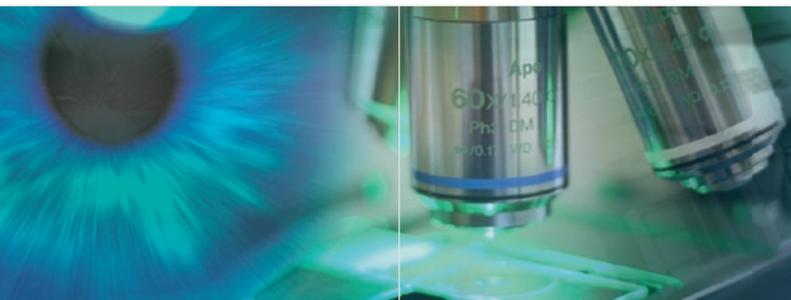


## USB uEye®SE



Your imagination is our challenge

## USB uEye® SE



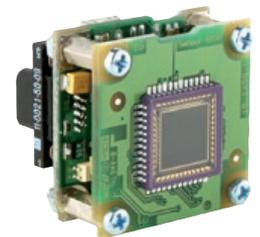
The USB uEye SE camera has a C-mount lens connector and a 32 x 34 x 27.4 - 34.4 mm housing (W x H x D)



Standard USB mini-B connector and lockable micro D-sub connector with USB and I/O



USB uEye SE OEM version 1 with C-mount  
30 x 30 x 27.4 - 34.4 mm (W x H x D)



USB uEye SE OEM version 2 without lens holder  
30 x 30 x 11 - 18 mm (W x H x D)

### uEye® SE - the “universal eye” for machine vision

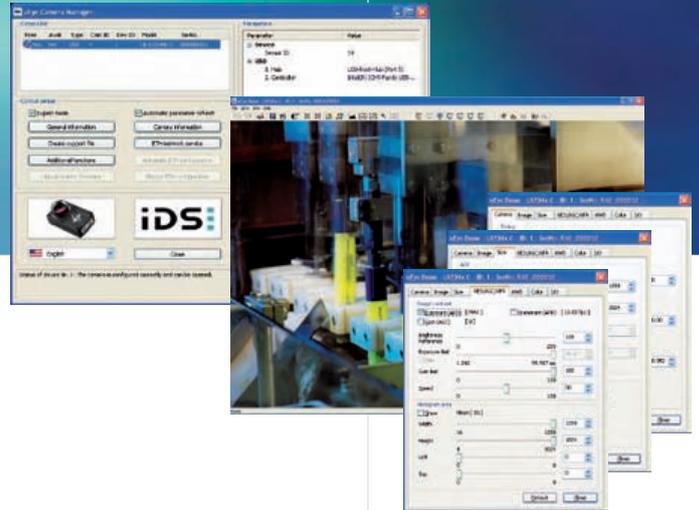
The USB uEye SE family stands out as one of the most compact and cost-effective camera series for industrial, non-industrial and security applications. The cameras are available with various high-quality CCD and CMOS sensors. Through the use of USB technology, the cameras can be interfaced with a vast variety of systems without problems.

### Firmware upload philosophy

The modular uEye concept can also be found in our software: All necessary drivers are only loaded into the camera after it has been connected. With regularly released updates the functionality can thus be enhanced even for already installed cameras.

|                                 | Resolution  | Framerate | Sensor           | Shutter               | B/W | Color | Model     |
|---------------------------------|-------------|-----------|------------------|-----------------------|-----|-------|-----------|
| <b>up to 1 Megapixel</b>        |             |           |                  |                       |     |       |           |
| VGA                             | 640 x 480   | 75 fps    | 1/3" SONY CCD    | global                | x   | x     | UI-2410SE |
| VGA                             | 640 x 480   | 75 fps    | 1/2" SONY CCD    | global                | x   | x     | UI-2210SE |
| WVGA                            | 752 x 480   | 87 fps    | 1/3" Aptina CMOS | <b>global</b>         | x   | x     | UI-1220SE |
| CCIR / PAL                      | 768 x 576   | 52 fps    | 1/2" SONY CCD    | global                | x   | x     | UI-2220SE |
| XGA                             | 1024 x 768  | 30 fps    | 1/3" SONY CCD    | global                | x   | x     | UI-2230SE |
| <b>1 to 2 Megapixel</b>         |             |           |                  |                       |     |       |           |
| 1,3 MPixel                      | 1280 x 1024 | 25 fps    | 1/1.8" E2V CMOS  | <b>global</b>         |     | x     | UI-1240SE |
| 1,3 MPixel                      | 1280 x 1024 | 25 fps    | 1/2" Aptina CMOS | rolling               | x   |       | UI-1540SE |
| 1,3 MPixel                      | 1280 x 1024 | 25 fps    | 1/3" Aptina CMOS | rolling               |     | x     | UI-1640SE |
| 1,3 MPixel                      | 1280 x 960  | 25 fps    | 1/3" SONYA CCD   | global                | x   | x     | UI-2140SE |
| 1,3 MPixel                      | 1280 x 1024 | 15 fps    | 1/2" SONY CCD    | global                | x   | x     | UI-2240SE |
| 2 MPixel                        | 1600 x 1200 | 18 fps    | 1/3" Aptina CMOS | rolling               |     | x     | UI-1550SE |
| 2 MPixel                        | 1600 x 1200 | 12 fps    | 1/2" SONY CCD    | global                | x   | x     | UI-2250SE |
| <b>over 2 Megapixel</b>         |             |           |                  |                       |     |       |           |
| 3,1 MPixel                      | 2048 x 1536 | 11 fps    | 1/2" Aptina CMOS | rolling               |     | x     | UI-1460SE |
| 5 Mpixel                        | 2448 x 2050 | 6 fps     | 2/3" SONY CCD    | global                | x   | x     | UI-2280SE |
| 5 Mpixel                        | 2560 x 1920 | 6 fps     | 1/2" Aptina CMOS | rolling; global start | x   | x     | UI-1480SE |
| 10 MPixel                       | 3840 x 2748 | 3 fps     | 1/2" Aptina CMOS | rolling               | x   | x     | UI-1490SE |
| <b>High Dynamic Range (HDR)</b> |             |           |                  |                       |     |       |           |
| CCIR/ PAL                       | 768 x 576   | 50 fps    | 1/1.8" HDR CMOS  | rolling               | x   |       | UI-1120SE |

## Very Easy Integration Thanks to Comprehensive Software



### Programming: SDK and interfaces

With every uEye camera, you receive a comprehensive software package with drivers for Windows and Linux. Interfaces for various image processing packages, standard drivers such as DirectShow (WDM), a GenICam™ interface as well as our Software Development Kit (SDK) allow individual integration within a very short time.

### Programming: Languages and libraries

To make integration as easy as possible and allow use of your familiar development environment, we support the following programming languages: C, C++, C#, Microsoft .NET and Visual Basic. We also provide 3rd party software drivers for ActiveVision Tools, Common Vision Blox, HALCON, LabView, and NeuroCheck.

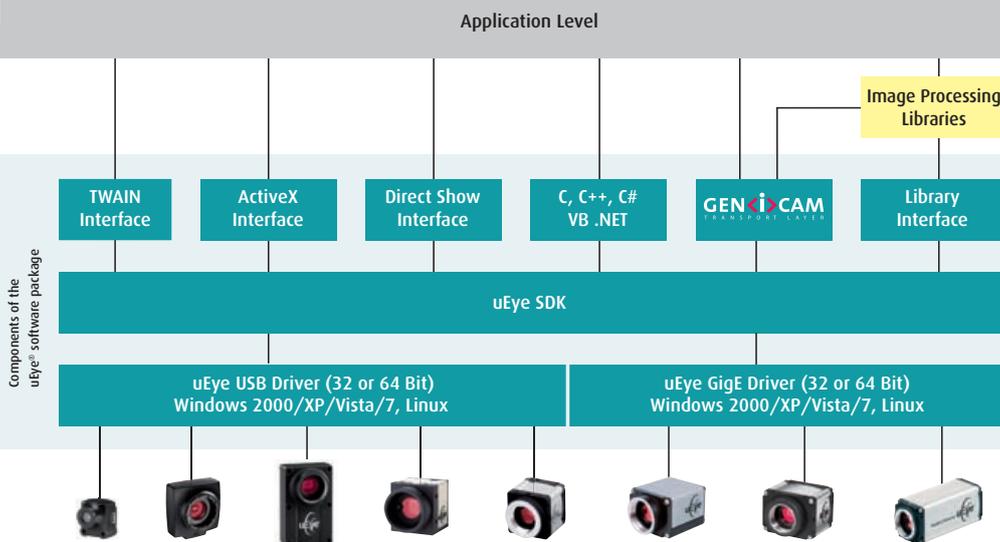
### Tools: Easy configuration

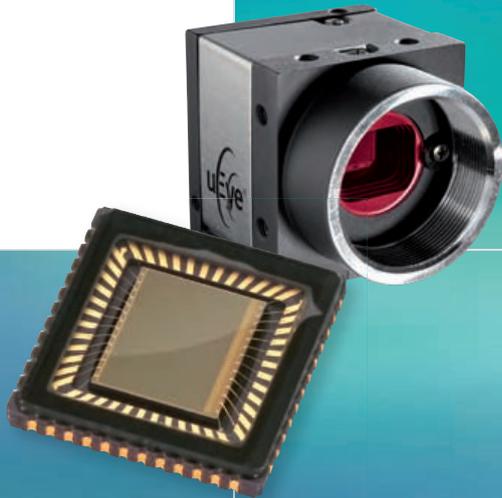
The uEye Camera Manager is the central tool for managing all uEye connected to the system. An expert mode gives you additional details on the connected cameras. This central tool helps you avoid bottlenecks and achieve maximum performance.

### Tools: uEye® Demo

The supplied uEye demo program allows you to start acquiring images with your uEye camera in no time at all. It also allows you to perform image measurement and annotation, in addition to giving you all the tools to configure optimal camera settings for your application.

## The uEye® Software



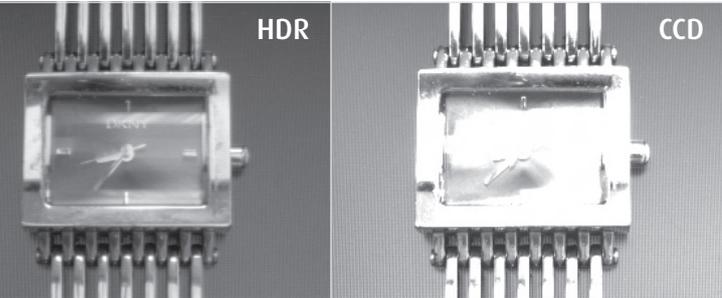
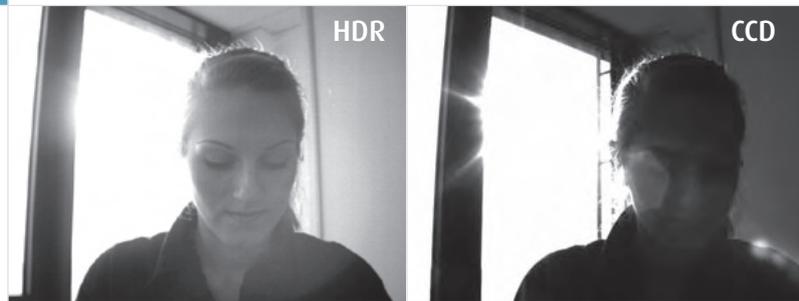


## Ultra High Dynamic Range with the uEye® HDR Sensor

Based on a logarithmic curve, the 1/1.8" HDR CMOS sensor can capture images with an ultra high dynamic range of 120 dB without overexposure – that's 1,000 times more than the dynamic range of a conventional sensor. As the cameras of the GigE uEye series can transfer 12-bit color depth, you can use the full dynamic range of the sensor for your machine vision applications. The low-noise sensor with PAL resolution (768 x 576 pixels) captures up to 50 frames/sec.

### Image capture in strong backlighting

Conventional sensors have difficulties in dealing with strong backlight conditions. The resulting images are often very dark, making people and faces difficult to see in the image. With the HDR sensor, a scene will be clearly visible even where areas are underexposed.

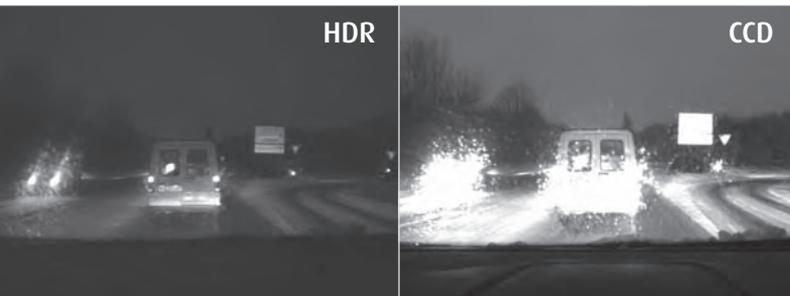
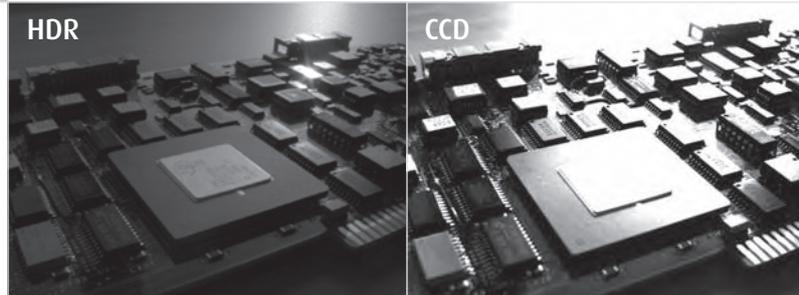


### Image capture of reflective surfaces

Reflective surfaces such as glass, metal or paint can cause glare on important areas of the image. The image data is lost in those areas. uEye HDR cameras allow you to analyze details even in very bright areas of an image.

### Image capture in interfering light

In factory buildings, you often cannot avoid unwanted glare on the object from interfering light sources, such as sunlight. In situations like these, the dynamic range of the HDR CMOS sensor gives you sufficient scope to achieve optimum image quality all the same.

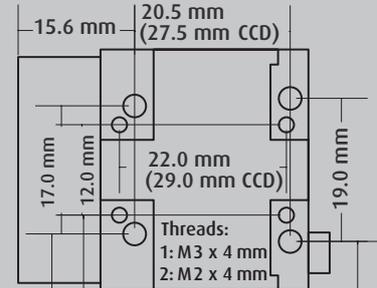
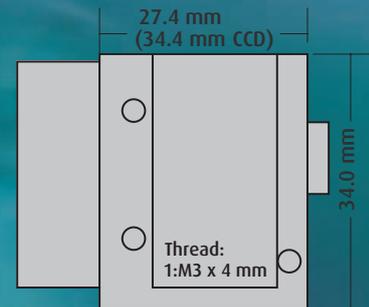
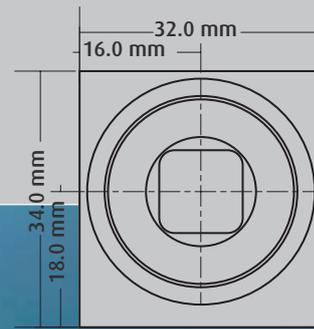


### Image capture under rapidly changing light conditions

Where lighting conditions can change very quickly and unforeseeably, the HDR CMOS sensor is far superior to conventional sensors. It ensures in traffic surveillance systems, for example, that license plates can be identified even in the glare of oncoming headlights without over-lighting areas of the image.

## Key features at a glance

- Universal use with PC, notebook, IPC and embedded systems with USB 2.0
- Resolutions from VGA (640 x 480) to 10 Megapixel (3480 x 2748)
- High-quality CCD and CMOS sensors
- Up to 87 full frames/sec., over 500 frames/sec. with AOI
- Single driver for all uEye cameras
- Camera control and power supply via the USB bus
- Digital input, opto-isolated, can be used for triggering
- Digital output, opto-isolated, can be used for flash control
- Ultra compact housing with C-mount lens connector
- Powerful SDK for Windows 2000/XP/Vista/7 and Linux
- 3rd party drivers for most common image processing software applications, including LabView, HALCON, Common Vision Blox and NeuroCheck
- GenICam™ interface



Scale 1:1 (USB uEye SE) – 3D CAD data on request

