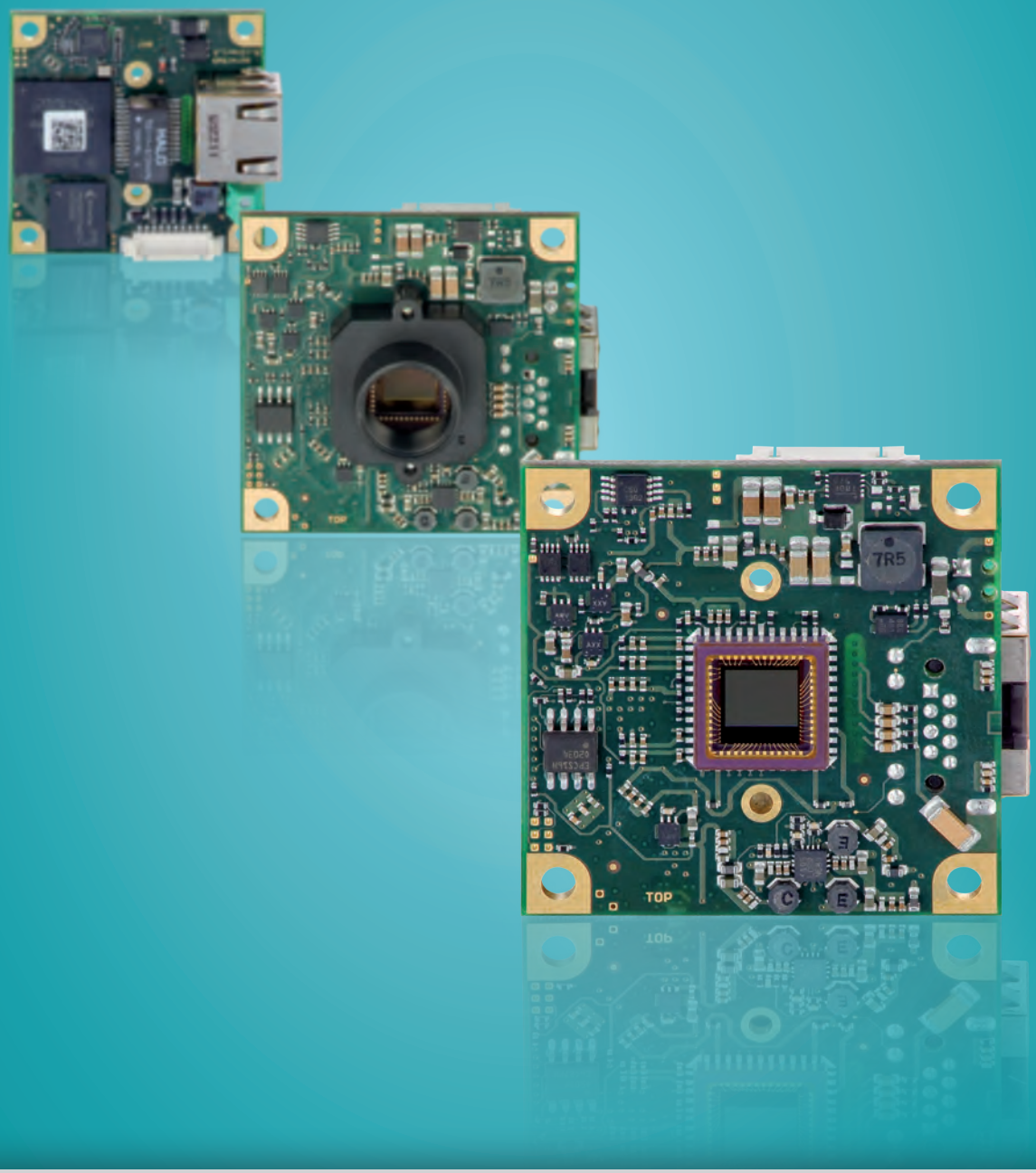
GigE uEye® LE

Most compact CMOS board-level camera with Gigabit Ethernet interface



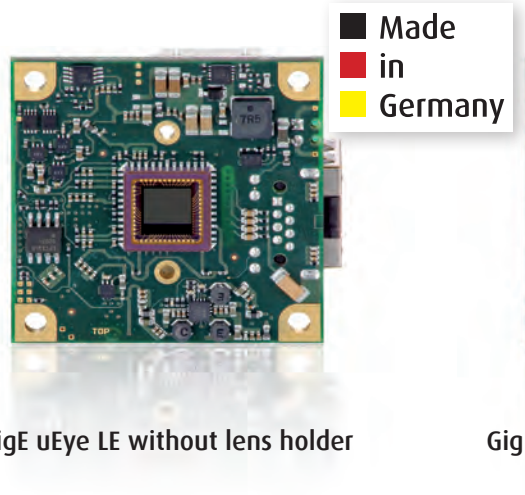
IDS

GigE uEye LE:
ideal project based camera from IDS

Lightweight and compact yet offering highest performance – the new GigE uEye LE is the most compact board-level industrial camera with Gigabit Ethernet in the market. With a size of only 45 x 45 mm, its low weight and GigE cable lengths the camera offers outmost flexibility regarding possible applications, especially where space is limited as in robotics or embedded systems. Thanks to its GigE interface the camera offers frame rates of 50 frames per second at full 1.3 megapixel resolution. Cable lengths of up to 100 meters add great flexibility. The camera is perfectly suited for all industrial applications due to its digital in- and outputs for trigger, flash, pulse width modulation, 2 GPIOs and the I²C bus to control external devices.

Hardware features:

- Gigabit Ethernet interface for fast data transfer and high cable lengths
- Compact and lightweight
- Range of I/Os and I²C bus to control external devices
- 32 MB internal memory
- A M12 lens mount from Lensation is available as an option



GigE uEye LE without lens holder

GigE uEye LE with M12 lens holder

GigE uEye LE back view

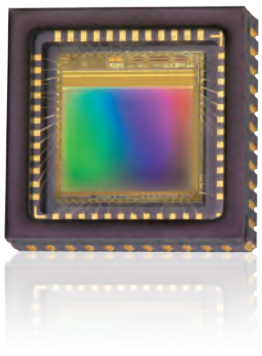
Outstanding sensor features:

- Modern e2v CMOS sensors offering CCD image quality
- NIR (near-infrared) version with outstanding performance at 850 nm
- Wide-angle optical 1/1.8" sensor format
- Suitable for a great range of applications, thanks to four shutter modes
- Log-mode for capturing excellent images even in high dynamic scenes
- Multiple areas of interest (AOIs) to capture up to four features simutaneously
- Sequence-AOI to capture images with different parameters
- Linescan-mode

Sensor

The USB uEye LE is fitted with the modern and sophisticated 1.3 megapixel CMOS sensor from e2v which offers outstanding sensitivity and is available in color, mono and NIR versions. The camera is particularly suited for applications in ITS, quality control, microscopy, medical engineering or machine vision.

The sensor delivers 50 fps at full resolution in addition to a great range of features, including Log-mode, Linescan-mode, multiple AOI, sequence AOI and four shutter-modes.



Sensor features

Best image quality for all applications

e2v's EV76C560/EV76C661 is the first sensor to offer four shutter modes and to switch during between individual modes whilst the camera is in operation. As a result, the sensor offers greatest flexibility if requirements change and is also suited for a broad range of applications: e.g. in ITS, barcode- and OCR recognition and medical engineering. The efficient shutter modes guarantee ideal quantum efficiency and hence excellent image quality. With four shutter modes to choose from, it's easy to adjust the shutter mode according to the signal-to-noise ratio for distortion-free images or in critical lighting situations.

Log-mode

The sensor allows capturing highly dynamic scenes at best image quality even in difficult light conditions and global shutter mode thanks to its Log-mode feature. Log-mode parameters can easily be adjusted via uEye Cockpit to get the best setting according to the requirements of various situations. Hence, the sensor is the perfect replacement for costly HDR sensor solutions.

Multiple Areas of interest (AOI)

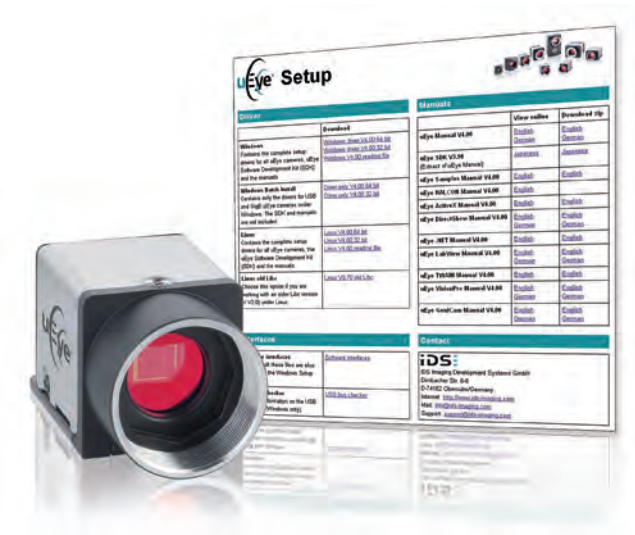
Up to four AOIs can be captured simultaneously using the multiple AOI feature. This feature is perfect to capture multiple features at high frames rates, e.g. in bottle inspection.

Sequence-AOI

Different regions of interest can be captured successively with pre-defined parameters, including position, exposure time, gain and readout. The resulting image sequences can be summarized into one ideal image.

The uEye software package: It's so easy

The well-known and sophisticated IDS software package offers driver versions for Windows and Linux as well as software interfaces, e.g. HALCON. Additionally, the IDS Camera Manager is the central administration tool for all IDS uEye cameras. The uEye Cockpit is the most comfortable tool to install and to set camera parameters. Without changing a single line of programming code, the software enables users to install the cameras easily as well as to determine the most ideal parameters for each image. This tool also allows adapting the exposure time, frame rate and trigger and flash settings.



As an added benefit one driver and one API (application programming interface) are enough to integrate and simultaneously operate USB 2.0, USB 3.0 and GigE cameras. Hence, no single line of programming code needs to be amended when changing camera interfaces. Firmware and driver updates are uploaded when initializing the cameras. Regular updates ensure that also cameras in the field benefit from highest functionality. This high level of interoperability and interchangeability of interfaces and hence customer benefit is only offered by IDS.

Available models

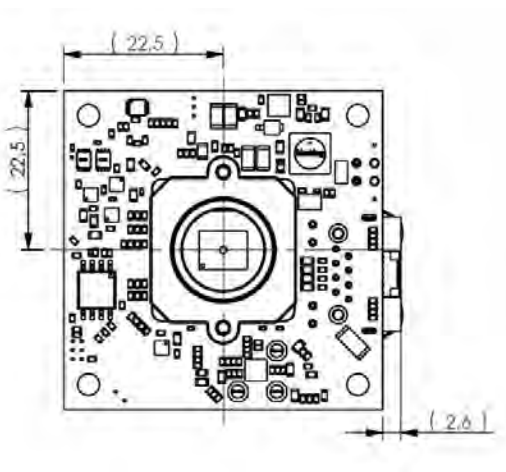
Model	Sensor
UI-5241LE-NIR	Near-infrared
UI-5241LE-C	Color
UI-5241LE-M	Monochrom
UI-5242LE-NIR	Nah-Infrarot
UI-5242LE-C	Color
UI-5242LE-M	Monochrome

Technical data

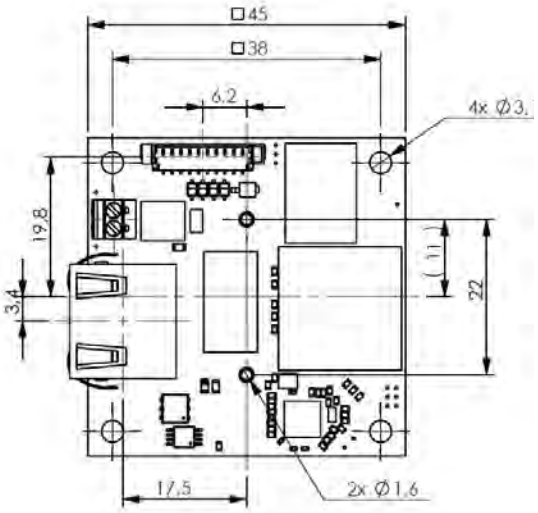
Interface	Gigabit Ethernet (1000MBit/100MBit)
Sensor	e2v CMOS-Sensor EV76C560/EV76C661
Resolution	1280 x 1024 pixel
Bit depth	10 bit
Shutter	Global/Rolling (switchable)
Max. frame rate (freerun)	50 fps
Digital I/Os	Trigger, Flash, 2 GPIOs, I²C
Size	H: 45.00 mm, W: 45.00 mm, D: 26.40 mm
Weight	10.00 g (UI-5241LE), 14.00 g (UI-5242LE)
Power supply	12 - 24 V
Power consumption	max. 2 W
Lens mount	UI-5241x available with M12 lens holder

Technical specification

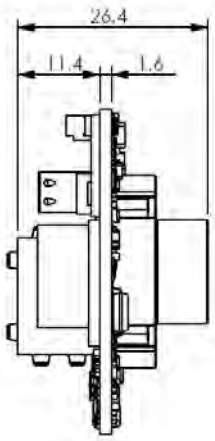
Dimensions in mm



Front view



Back view



Side view

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