

Release Notes for IDS Software Suite 4.82.1

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Introduction

These release notes expand the previous release notes for IDS Software Suite 4.82 by further new camera models that are supported from driver 4.82.1 on. Additionally, existing functions were enhanced.

New camera family

GigE uEye CP Rev. 2



The second generation of our GigE uEye CP assists you with classic machine vision applications. 100% quality tested and calibrated: For consistent performance and reliability. Measuring just 29 x 29 x 29 mm, the new CMOS cameras are much more compact than their predecessors and even more powerful: Full GigE speed, single-cable operation up to 100 meters via Power-over-Ethernet (PoE), screw-on connectors, and much more. Ideal for multi-camera operation: An integrated image memory decouples image acquisition from image transfer. Internal camera functions such as pixel preprocessing, LUT or gamma minimize the processing power required.

At a glance	
Interface	Gigabit Ethernet
Sensors	CMOS sensors from Sony, ON Semiconductor, e2v, and CMOSIS
Size	29 x 29 x 49 mm
Connections	RJ45 for Gigabit Ethernet and 8-pin I/O Hirose connector (2 GPIO, trigger, flash)
Special features	PoE (Power-over-Ethernet), integrated image memory

GigE uEye FA



The camera housing, lens tubes and connectors fulfill the prerequisites for protection class IP65/67 and protect the camera from dirt, dust, water splashes or cleaning agents as well as accidental shifting of the optics. The screw-on connectors also meet the most demanding industry requirements – an 8-pin M12 connection with X coding for data transmission and Power-over-Ethernet (PoE) and an 8-pin Binder connector for GPIO, trigger and flash are available. As with the GigE uEye CP Rev. 2, an inte-

grated image memory decouples image acquisition from image transfer. Internal camera functions such as pixel preprocessing, LUT or gamma minimize the processing power required.

At a glance	
Interface	Gigabit Ethernet
Sensors	CMOS sensors from ON Semiconductor and Sony
Size	41 x 53 x 39.7 mm
Connections	M12 8-pin connector with X coding (for data transmission and PoE), 8-pin Binder connector (GPIO, trigger, flash)
Special features	Protection class IP65/67, PoE (Power-over-Ethernet), integrated image memory

New camera models

UI-5130CP Rev. 2

- Global shutter sensor ON Semiconductor PYTHON 500
- Very fast sensor in SVGA resolution (800 x 600 px): 205 fps
- Even higher frame rates can be reached by horizontal or vertical partial reading
- Very large and sensitive pixels: 4.8 µm
- Optical class: 1/3"
- Available as color or monochrome version
- Multi AOI, HDR mode

UI-5140CP Rev. 2

- Global shutter sensor ON Semiconductor PYTHON 1300
- Compact 1/2" sensor, perfectly suited for C-mount lenses
- Large pixel: 4.8 µm
- The most common resolution class: 1280 x 1024 px (1.3 MP)
- Very fast sensor (88 fps @ 1280 x 1024 px)
- Even higher frame rates can be reached by horizontal or vertical partial reading
- Available as color or monochrome version
- Multi AOI, HDR mode

UI-5240CP Rev. 2

- Rolling/global shutter sensor e2v EV76C560
- Wide-angle 1/1.8" sensor with 5.3 µm large pixel
- Common resolution in the machine vision market: 1280 x 1024 px (1.31 MP)
- 60 fps @ 1280 x 1024 px
- Available as color or monochrome version
- Switching between rolling shutter and global shutter
- Multi AOI, sequence AOI, Log Mode

UI-5250CP Rev. 2

- Rolling/global shutter sensor e2v EV76C570
- Wide-angled 1/1.8" sensor
- Pixel size: 4.5 µm

- High resolution: 1600 x 1200 px with 52 fps
- Available as color or monochrome version
- Switching between rolling shutter and global shutter
- Multi AOI, sequence AOI, Log Mode
- Long exposure up to 10 seconds

UI-5260CP Rev. 2 & UI-5260FA

- Global shutter CMOS sensor Sony IMX249
- Resolution of 2.35 MP (1936 x 1216 px), aspect ratio 16:10
- 47 fps at full resolution
- Large 1/1.2" area sensor
- Pixel size: 5.86 µm
- Optical class: 1/1.2"
- 12-bit per pixel
- Long exposure up to 30 seconds
- Available as color or monochrome version

UI-5270CP Rev. 2

- Global shutter CMOS sensor Sony IMX265
- 1/1.8" area scan sensor with pixel size of 3.45 µm
- High resolution of 3.17 MP (2056 x 1542 px)
- Aspect ratio 4:3
- Full resolution with up to 36 fps
- Long exposure of up to 30 seconds
- 12-bit per pixel
- Available as color or monochrome version

UI-5280CP Rev. 2 & UI-5280FA

- Global shutter CMOS sensor Sony IMX264
- High-resolution sensor: 2456 x 2054 px (5.04 MP)
- Compact 2/3" area sensor with an aspect ratio of 5:4
- Optimized Sony CMOS pixel: 3.45 µm
- Frame rate: 23 fps
- 12-bit per pixel
- Long exposure up to 30 seconds
- Available as color or monochrome version

UI-5370CP Rev. 2

- Global shutter sensor CMOSIS CMV4000
- Unique in the market: square-shaped 1" sensor
- Full resolution: 2048 x 2048 px (4.2 MP)
- Light-sensitive, large pixel: 5.5 µm
- Detailed up to 12-bit resolution
- Same speed in both trigger and freerun mode: 28 fps at full resolution
- Multi AOI, HDR mode
- Available as color, monochrome, or NIR version

UI-5860CP Rev. 2

- Rolling shutter CMOS sensor Sony IMX290
- 1/3" sensor with 2.9 µm pixel size
- Aspect ratio 16:9 (1936 x 1096 px)
- Full resolution with up to 135 fps (freerun mode) and 67 fps (triggered mode)
- 12-bit per pixel
- Long exposure up to 120 seconds
- Very light-sensitive BSI sensor
- Available as color or monochrome version

UI-5880CP Rev. 2

- Rolling shutter CMOS sensor Sony IMX178
- 1/1.8" sensor with 2.4 µm pixel size
- Aspect ratio 3:2 (3088 x 2076 px)
- Full resolution (6.41 MP) with up to 58 fps (freerun mode) and 29 fps (triggered mode)
- Very light-sensitive BSI sensor
- 12-bit per pixel
- Long exposure up to 120 seconds
- Available as color or monochrome version

Changed functions

Adaptive hot pixel correction with cluster determining

With the adaptive hot pixel correction, an optional cluster detection can be activated. Clusters are two or more neighboring hot pixels. The cluster correction works with a second hot pixel list (cluster list) that can be created dynamically or once, independently from the hot pixel list. The dynamic cluster correction may cause a high CPU load.

Note: Depending on the image content, the cluster detection may also recognize fine details as clusters. In this case, calibrate the camera against a low-contrast background or darken the camera before calibration.

In addition, the number of corrected hot pixel is displayed in percentage and no longer as an absolute number.

The API functions for the adaptive cluster correction are implemented in the **is_Hotpixel** function and the **AdaptiveCorrection** .NET class.

Enhancement of the sequencer mode

The sequencer mode was extended: Now, you can query for a camera which trigger sources are supported by the camera. The new `IS_SEQUENCER_TRIGGER_SOURCE_SUPPORTED_GET` parameter has been introduced for the **is_Sequencer()** function and the `GetSupportedTriggerSources` method in the .NET **Sequencer** class.

Known issues

- In IDS line scan, the GigE uEye CP Rev. 2 models may lose a line between two images with a pixel clock > 60 MHz.
- The models UI-386xLE and UI-388xLE can only be used with automatic flash.

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