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| **Press release** | **June 21, 2022** |
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Now available: Fast and feature-rich Alvium USB cameras

Allied Vision expands its Alvium USB camera series with new features and models featuring fast Sony 3rd generation IMX sensors

*Stadtroda, Germany, June 21, 2022* – With Alvium 1800 U-052 and Alvium 1800 U-291, Allied Vision adds two small Sony third generation IMX CMOS sensors with Pregius S global shutter technology to its Alvium Camera Series with USB3 Vision interface.  **Alvium 1800 U-051** delivers images with a resolution of 0.5 Megapixel at a frame rate of up to 626 frames per second. Thanks to the large pixel size of 9 x 9 µm provided by **Sony’s IMX426 sensor,** the camera offers a very high sensitivity. **Alvium 1800 U-291** is equipped with the **Sony IMX421 sensor** combining a small sensor size (2/3’’) with a high readout rate of up to 141 frames per second (in 8-bit mode).

**Selection of bit depth**With the new feature ADC (analog-to-digital converter) selection, Allied Vision offers the user the possibility to operate the new Alvium 1800 U-052 and Alvium 1800 U-291 with varying sensor bit depths. By choosing the bit depth of the readout mode between 12bpp (bit per pixel), 10 bpp, and 8bpp the user can speed up the cameras up to twice its speed (e.g. Alvium 1800 U-052 from 343 fps at 12-bit to 626 fps at 8-bit) depending on the application needs. If a smaller region of interest of the image is selected, the speed can be increased even further.

These fast USB cameras are especially suited for inspection applications in factory automation with fast moving objects or conveyer belts, like for example fruit or material sorting, bottle inspection, as well as for ITS applications.

**New Alvium 1800 U models at a glance**

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| **Model** | **Sensor** | **Sensor type** | **Sensor size** | **Pixel size** | **Resolution on (H × V)** | **Frame rate** |
| **1800 U-052** | IMX426 | CMOS  Global shutter | 1/1.7” | 9 µm ×  9 µm | 816 × 624 0.5 MP | 626 fps at 8 bit |
| **1800 U-291** | IMX421 | CMOS  Global shutter | 2/3” | 4.5 µm × 4.5 µm | 1944 × 1472 2.8 MP | 141 fps at 8 bit |

All cameras will be available with different housing variants (closed housing, open housing, bare board) as well as different lens mount options. The USB interface can be located either on the camera back side or left side (as seen from the sensor).   
Together with the Alvium USB cameras Allied Vision also releases the Alvium 1800 C-052 and Alvium 1800 C-291 with a MIPI CSI-2 interface and featuring the same Sony IMX Sensors as the USB models.

**New features for 1800 USB cameras**In addition to the ADC selection, the Alvium USB camera series also offers an enlarged feature set. All Alvium 1800 U camera models now feature a unique **convolution filter with a 5x5 matrix** including an adaptive noise reduction mode. This filter can be used to reduce the noise in the image while keeping the corners and edges. This is especially important for applications selecting objects by edge detection. By choosing the custom convolution mode the user can define his own 5 x 5 convolution filter kernel to obtain for example a specific image deformation such as edge detection and relief effects.

Furthermore, the user can now **save the different camera controls in** 4 individual sets of up to 77 features as for example different selection of exposure time, customized convolution filters, and readout modes. Depending on the application or environment, predefined user sets can then be selected. The default set which is loaded when starting the camera can also be configured individually.

Another new SNFC compliant feature of the camera, the **Timer control,** opens up the possibility for the user to precisely synchronize the illumination, e.g. by a stroboscopic flash unit, and the image acquisition of the camera.

**USB cameras with short delivery times**Allied Vision is continuously expanding the scope of the Alvium 1800 U camera series with powerful models. With these two new sensors and the enhanced feature set, the Alvium USB camera series offers a wide range of high-quality sensors and high-performance cameras for different machine vision applications whether it is on a PC-based or an embedded system.

With its Alvium USB cameras powered by ALVIUM**®** Technology, Allied Vision bypasses the supply shortage on the chip market that numerous camera manufacturers are currently facing. **Allied Vision can supply Alvium USB cameras with short delivery times.**

**Allied Vision company profile**For more than 30 years, Allied Vision has been helping people to reach their imaging goals. Allied Vision supplies camera technology and image capture solutions for industrial inspection, medical and scientific imaging, traffic monitoring and many more application areas in digital imaging. With a deep understanding of customers’ needs, Allied Vision finds individual solutions for every application, a practice which has made Allied Vision one of the leading camera manufacturers worldwide in the machine vision market.

The company has nine locations in Germany, Canada, the United States, Singapore and China and is represented by a network of sales partners in over 30 countries. Allied Vision is member of the TKH Group.

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