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| **Press release** | **May 18, 2021** |
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Allied Vision releases high-performance Alvium 1800 USB cameras with up to 24.6 MP resolution

Sony 4th generation IMX sensors IMX540, IMX541, and IMX542 now available in Allied Vision’s Alvium 1800 USB camera series

*Stadtroda, Germany, May 18, 2021* – With Alvium 1800 U-2460, Alvium 1800 U-2040, and Alvium 1800 U-1620 Allied Vision adds three high-performance Sony fourth generation IMX back-illuminated CMOS sensors with Pregius S global shutter technology to its Alvium Camera Series.   
The Alvium 1800 USB cameras combine a compact sugar cube format with large high-resolution sensors and thus offer the highest possible resolution within such a small housing.

**USB cameras with high quality Sony sensors**Available with both an USB3 and a MIPI CSI-2 interface the **Alvium 1800 C/U-2460** delivers images with a resolution of 24.6 Megapixel thanks to Sony’s high-resolution IMX540 sensor. The **Alvium 1800 U-2040** is the first model of the Alvium USB3 camera series with a square sensor. It combines a square sensor format with a C-mount in a sugar cube housing and is thus an ideal choice for microscopy applications. It features the 20.4 MP Sony IMX541 sensor enabling a frame rate of 17 fps. **Alvium 1800 U-1620** is equipped with the IMX542 sensor with a 16:9 wide screen format offering almost twice the resolution of the comparable 2nd generation Sony IMX sensor IMX265 with the same size making it especially attractive for ITS applications demanding high resolution images.

The three sensors feature an improved back side illuminated pixel architecture that can capture light more effectively, which leads to improved quantum efficiency (QE) compared to 2nd and 3rd generation IMX sensors. High quantum efficiency, lower readout noise and higher spatial resolution result in excellent image quality with high dynamic range. Because of the decreased pixel size of 2.74µm higher pixel densities (i.e. resolutions) for the same optical format are possible.

**Near Infrared (NIR) enhanced color camera**In addition to the three cameras with Sony 4th generation IMX sensors Allied Vision adds the NIR-enhanced Alvium 1800 U-501c NIR as a color camera to the existing monochrome version. It is equipped with OnSemi’s rolling shutter sensor AR0522 which has a particularly good performance in the NIR region of the spectrum (i.e. above 750nm wavelength). It therefore performs very well in low light scenarios (e.g. at dusk or dawn).

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

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| **Model** | **Alvium 1800 U-1620** | **Alvium 1800 U-2040** | **Alvium 1800 U-2460** | **Alvium 1800 U-501c NIR** |
| Sensor | Sony IMX542 | Sony IMX541 | Sony IMX540 | OnSemi AR0522 |
| Sensor type | CMOS Global shutter | CMOS Global shutter | CMOS Global shutter | CMOS Rolling shutter |
| Sensor size | Type 1.1 | Type 1.1 | Type 1.2 | Type 1/2.5 |
| Pixel size | 2.74 μm × 2.74 μm | 2.74 μm × 2.74 μm | 2.74 μm × 2.74 μm | 2.2 μm × 2.2 μm |
| Resolution  (H × V) | 16.2 MP 5328 × 3040 | 20.4 MP 4512 × 4512 | 24.6 MP 5328 × 4608 | 5.0 MP 2592 × 1944 |
| Aspect ratio | 16:9 | 1:1 | 7:6 | 4:3 |
| Frame rate | 22 fps | 17 fps | 14 fps | 68 fps |

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).

**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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