



# **Alvium** 1800 U-2040c

- IMX541 CMOS sensor
- ALVIUM image processing
- USB3 Vision
- Various hardware options

Hardware option: Closed Housing C-Mount Standard

Alvium 1800 U – Your entry into high-performance imaging

# Industrial USB cameras with attractive price-performance ratio

Alvium 1800 U-2040 with Sony IMX541 runs 17.0 frames per second at 20.4 MP resolution.

Alvium 1800 U is your entry into high-performance imaging with ALVIUM<sup>®</sup> Technology for industrial applications. Equipped with the newest generation of sensors, these small and lightweight cameras deliver high image quality and frame rates at the best price-performance ratio. With its USB3 Vision compliant interface and industrial-grade hardware, it is your workhorse for different machine vision applications whether it is on a PC-based or an embedded system.

Easy software integration with Allied Vision's Vimba Suite and compatibility to the most popular third party image-processing libraries.

See the Alvium Cameras Hardware Options for lens mount and housing options, as well as the Customization and OEM Solutions webpage for additional options.

## Specifications

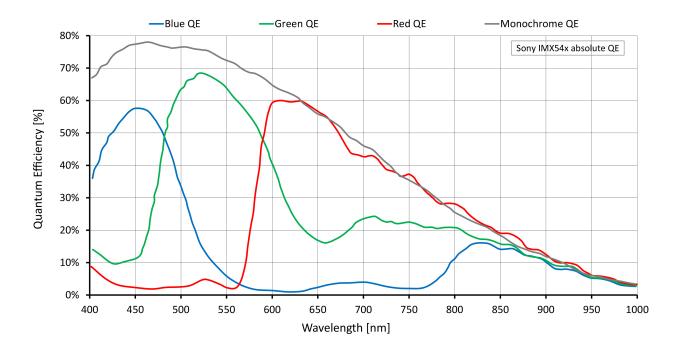
Alvium 1800 U-2040c Closed Housing C-Mount Standard		
Product code		15561
Interface		USB3 Vision
Resolution		4512 (H) × 4512 (V)



Alvium 1800 U-2040c Closed Housing C-Mount Standard		
Spectral range	300 to 1100 nm	
Sensor	Sony IMX541	
Sensor type	CMOS	
Shutter mode	Global shutter	
Sensor size	Type 1.1	
Pixel size	2.74 μm × 2.74 μm	
Lens mount	C-Mount	
Optical Filter	Type Hoya C5000 IR cut filter	
Max. frame rate at full resolution	17 fps at 375 MByte/s, Mono8	
ADC	12 Bit	
Image buffer (RAM)	256 KB	
Non-volatile memory (Flash)	1024 KB	
Output		
Bit depth	Max. 12 Bit	
Monochrome pixel formats	Mono8, Mono10, Mono10p, Mono12, Mono12p	
YUV color pixel formats	YCbCr411_8_CbYYCrYY, YCbCr422_8_CbYCrY, YCbCr8_CbYCr	
RGB color pixel formats	BayerRG8, BayerRG10, BayerRG10p, BayerRG12, Bay- erRG12p, BGR8, RGB8 (default)	
General purpose inputs/outputs (GPIOs)		
TTL I/Os	4 programmable GPIOs	
Operating conditions/dimensions		
Operating temperature	+5 °C to +65 °C (housing)	
Power requirements (DC)	Power over USB 3.1 Gen 1   External power 5.0 V	
Power consumption	USB power: 3.9 W (typical)   Ext. power: 4.1 W (typical)	
Mass	65 g	
Body dimensions (L × W × H in mm)	38 × 29 × 29	
Regulations	2014/30/EU; 2011/65/EU, incl. amendment 2015/863/EU (RoHS); FCC Class B digital device; CAN ICES-003 (B) / NMB-3 (B)	



# Quantum efficiency



## Features

### Image control

#### Auto control

- Auto exposure
- Auto gain
- Auto white balance (color models)
- Auto features regions control
- Auto features algorithms control

#### Other image controls

- Binning
- Black level
- Contrast
- De-Bayering up to 5×5 (color models)



- Exposure time
- Gain
- Gamma
- Hue (color models)
- Saturation (color models)
- DPC (factory calibrated)
- FPNC (factory calibrated)
- Region of interest (ROI)
- Reverse X/Y

### Camera control

- Acquisition frame rate
- I/O and trigger control
- Temperature monitoring (sensor board)
- Status LED luminance control
- Firmware update in the field
- U3 Power Saving Mode

# Technical drawing



#### Camera hardware options

The Alvium Cameras Hardware Options document informs about submodels, such as bare board or open housing cameras with different lens mounts.



