Alvium
1800 U-511c

- IMX547 CMOS sensor
- ALVIUM image processing
- USB3 Vision
- Various hardware options

Hardware option: Closed Housing S-Mount Standard

Alvium 1800 U – **Your entry into high-performance imaging**

Industrial USB cameras with attractive price-performance ratio

Alvium 1800 U-511 with Sony IMX547 runs 79.0 frames per second at 5.1 MP resolution.

Alvium 1800 U is your entry into high-performance imaging with ALVIUM® 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 Vimba X and compatibility to the most popular third party image-processing libraries.

In addition to lens mount and housing options, see Customization and OEM Solutions webpage for additional options.

Specifications

Product code	15936
Interface	USB3 Vision
Resolution	2472 (H) × 2064 (V)
Spectral range	300 to 1100 nm
Sensor	Sony IMX547
Sensor type	CMOS
Shutter mode	GS (Global shutter)
Sensor size	Type 1/1.8
Pixel size	2.74 μm × 2.74 μm
Lens mount	S-Mount
Max. frame rate at full resolution	79 fps at 450 MByte/s, Mono8
ADC	12 Bit
Image buffer (RAM)	256 KByte
Non-volatile memory (Flash)	1024 KByte

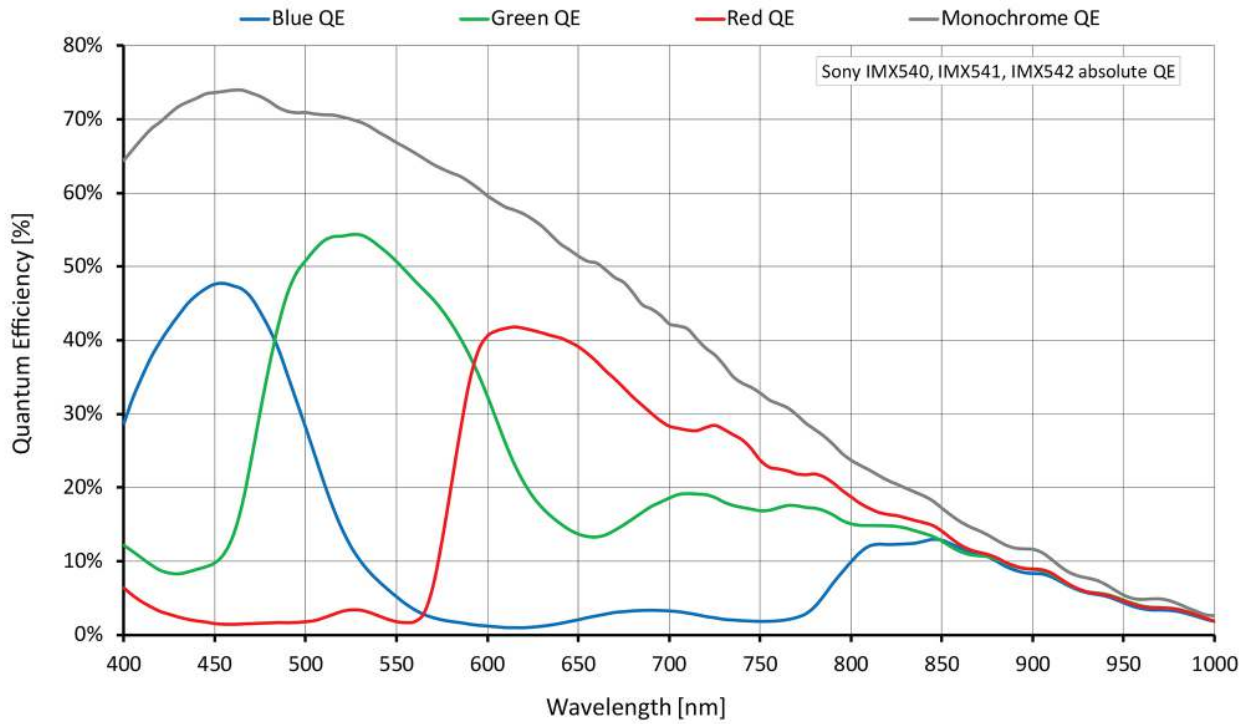| **Output**	
Bit depth	12-bit Bit
Monochrome pixel formats	Mono8, Mono10, Mono10p, Mono12, Mono12p
YUV color pixel formats	YCbCr411_8_CbYYCrYY, YCbCr422_8_CbYCrY, YCbCr8_CbYCr
RGB color pixel formats	BayerRG8, BayerRG10, BayerRG10p, BayerRG12, BayerRG12p, BGR8, RGB8 (default)

General purpose inputs/outputs (GPIOs)	
TTL I/Os	4 programmable GPIOs

Operating conditions/dimensions	
Operating temperature	-20 °C to +65 °C (housing)
Power requirements (DC)	Power over USB 3.1 Gen 1 | External power 5.0 V
Power consumption	USB power: 3.2 W (typical) | Ext. power: 3.4 W (typical)
Mass	60 g

Body dimensions (L × W × H in mm)   33 × 29 × 29

Quantum efficiency

Sony IMX540, IMX541, IMX542 absolute QE

Features

Image control: Auto

- Auto exposure
- Auto gain
- Auto white balance (color models)

Image control: Other

- Adaptive noise correction
- Binning
- Black level
- Color transformation (incl. hue, saturation; color models)
- Contrast
- Custom convolution
- De-Bayering up to 5×5 (color models)
- DPC (defect pixel correction)
- FPNC (fixed pattern noise correction)
- Gamma
- LUT (look-up table)
- Reverse X/Y
- ROI (region of interest)
- Sharpness/Blur

Camera control

- Acquisition frame rate
- Bandwidth control
- Counters and timers
- Firmware update in the field
- I/O and trigger control
- Sequencer
- Serial I/Os
- Temperature monitoring
- U3 Power Saving Mode
- User sets

Technical drawing

24.6
8
20
M3 - 2.5 (2x)

29.4
24
29.4
24
M2 - 2 (4x)
M12x0.5 - 1

33.2
2.9
Ø 21

M2 - 2
8.5 9.1
18
M2 - 3.3 (2x)

33.2
8
13.4
3.5
20
M3 - 2.5 (2x)