



# Alvim

## 1800 U-511C

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

**Hardware option:** Open Housing C-Mount 90°

Alvim 1800 U – Your entry into high-performance imaging

Industrial USB cameras with attractive price-performance ratio

Alvim 1800 U-511 with Sony IMX547 runs 66.0 frames per second at 5.1 MP resolution.

Alvim 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 **Allied Vision's Vimba Suite** and compatibility to the most popular third party image-processing libraries.

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

## Specifications

### Alvim 1800 U-511c Open Housing C-Mount 90°

Product code	15952
Interface	USB3 Vision
Resolution	2464 (H) × 2064 (V)

## Alvium 1800 U-511c Open Housing C-Mount 90°

Spectral range	300 to 1100 nm
Sensor	Sony IMX547
Sensor type	CMOS
Shutter mode	Global shutter
Sensor size	Type 1/1.8
Pixel size	2.74 $\mu\text{m}$ $\times$ 2.74 $\mu\text{m}$
Lens mount	C-Mount
Optical Filter	Type Hoya C5000 IR cut filter
Max. frame rate at full resolution	66 fps at 375 MByte/s, Mono8
ADC	12 Bit
Image buffer (RAM)	256 KB
Non-volatile memory (Flash)	1024 KB
<b>Output</b>	
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, BayerRG12p, BGR8, RGB8 (default)
<b>General purpose inputs/outputs (GPIOs)</b>	
TTL I/Os	4 programmable GPIOs
<b>Operating conditions/dimensions</b>	
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: 3.2 W (typical)   Ext. power: 3.4 W (typical)
Mass	50 g
Body dimensions (L $\times$ W $\times$ H in mm)	30 $\times$ 32 $\times$ 29
Regulations	2011/65/EU, including amendment 2015/863/EU (RoHS)

## 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.

