





# **Alvium** 1800 U-8110

- IMX546 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-811 with Sony IMX546 runs 43.0 frames per second at 8.1 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 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

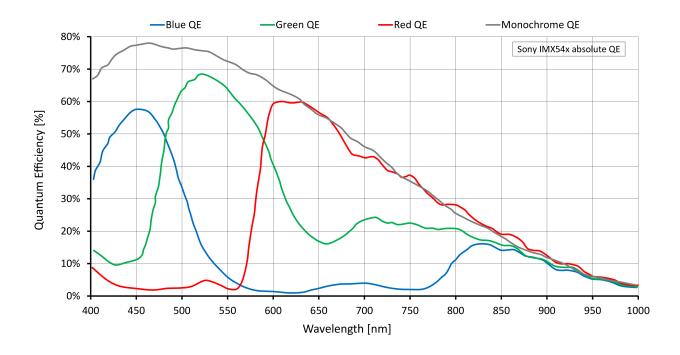
|              | Alvium 1800 U-811c Closed Housing C-Mount Standard |
|--------------|--|
| Product code | 15873  |
| Interface    | USB3 Vision  |
| Resolution   | 2848 (H) × 2848 (V)                                |



| Alvium 1800 U-811c Closed Housing C-Mount Standard |  |  |  |
|--|--|--|--|
| Spectral range                                     | 300 to 1100 nm   |  |  |
| Sensor   | Sony IMX546  |  |  |
| Sensor type  | CMOS   |  |  |
| Shutter mode                                       | Global shutter   |  |  |
| Sensor size  | Type 2/3   |  |  |
| Pixel size   | $2.74  \mu m \times 2.74  \mu m$   |  |  |
| Lens mount   | C-Mount  |  |  |
| Optical Filter                                     | Type Hoya C5000 IR cut filter  |  |  |
| Max. frame rate at full resolution                 | 43 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, BayerRG12p, 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: 3.3 W (typical)   Ext. power: 3.5 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.



