

# Alvium

## 1800 U-130 VSWIR



- IMX990 VSWIR sensor
- ALVIUM image processing
- USB3 Vision interface
- Various hardware options

### Model without hardware options

Alvium 1800 U – Your entry into high-performance imaging

Industrial USB cameras with attractive price-performance ratio

Alvium 1800 U-130 VSWIR with Sony IMX990 runs 119.0 frames per second at 1.3 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.

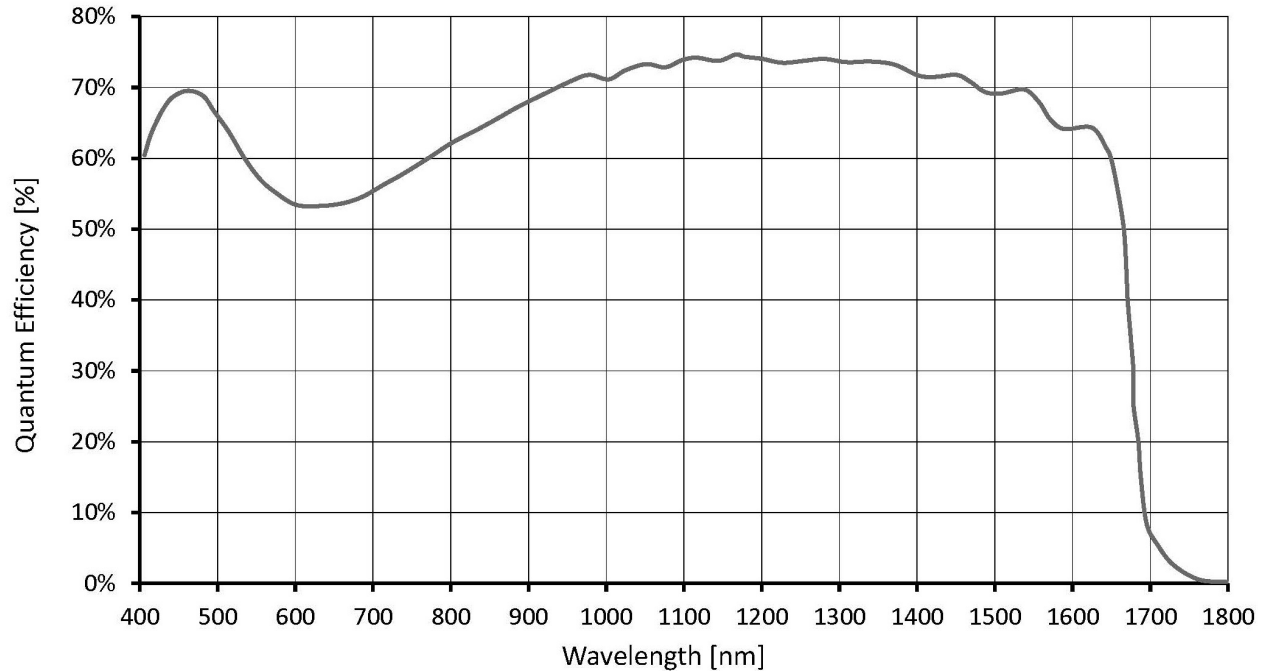
## Specifications

### Alvium 1800 U-130 VSWIR

|                |                     |
|----------------|---------------------|
| Interface      | USB3 Vision         |
| Resolution     | 1296 (H) × 1032 (V) |
| Spectral range | 400 nm to 1700 nm   |

| <b>Alvium 1800 U-130 VSWIR</b>                  |  |
|---|--|
| Sensor  | Sony IMX990  |
| Sensor type                                     | InGaAs   |
| Shutter mode                                    | Global shutter   |
| Sensor size                                     | Type 1/2 VSWIR   |
| Pixel size                                      | 5 $\mu\text{m}$ $\times$ 5 $\mu\text{m}$   |
| Lens mount (default)                            | C-Mount  |
| Max. frame rate at full resolution              | 119 fps using 10-Bit mode  |
| 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  |
| <b>General purpose inputs/outputs (GPIOs)</b>   |  |
| TTL I/Os  | 4 programmable GPIOs   |
| <b>Operating conditions/dimensions</b>          |  |
| Operating temperature                           | -20 °C to +65 °C (housing)   |
| Power requirements (DC)                         | Power over USB 3.1 Gen 1   External power 5.0 V  |
| Mass  | 65 g   |
| Body dimensions (L $\times$ W $\times$ H in mm) | 38 $\times$ 29 $\times$ 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

- Auto exposure
- Auto gain

### Image control: Other

- Binning
- Black level
- DPC (defect pixel correction)
- FPNC (fixed pattern noise correction)
- Gamma
- LUT (look-up table)
- Reverse X/Y

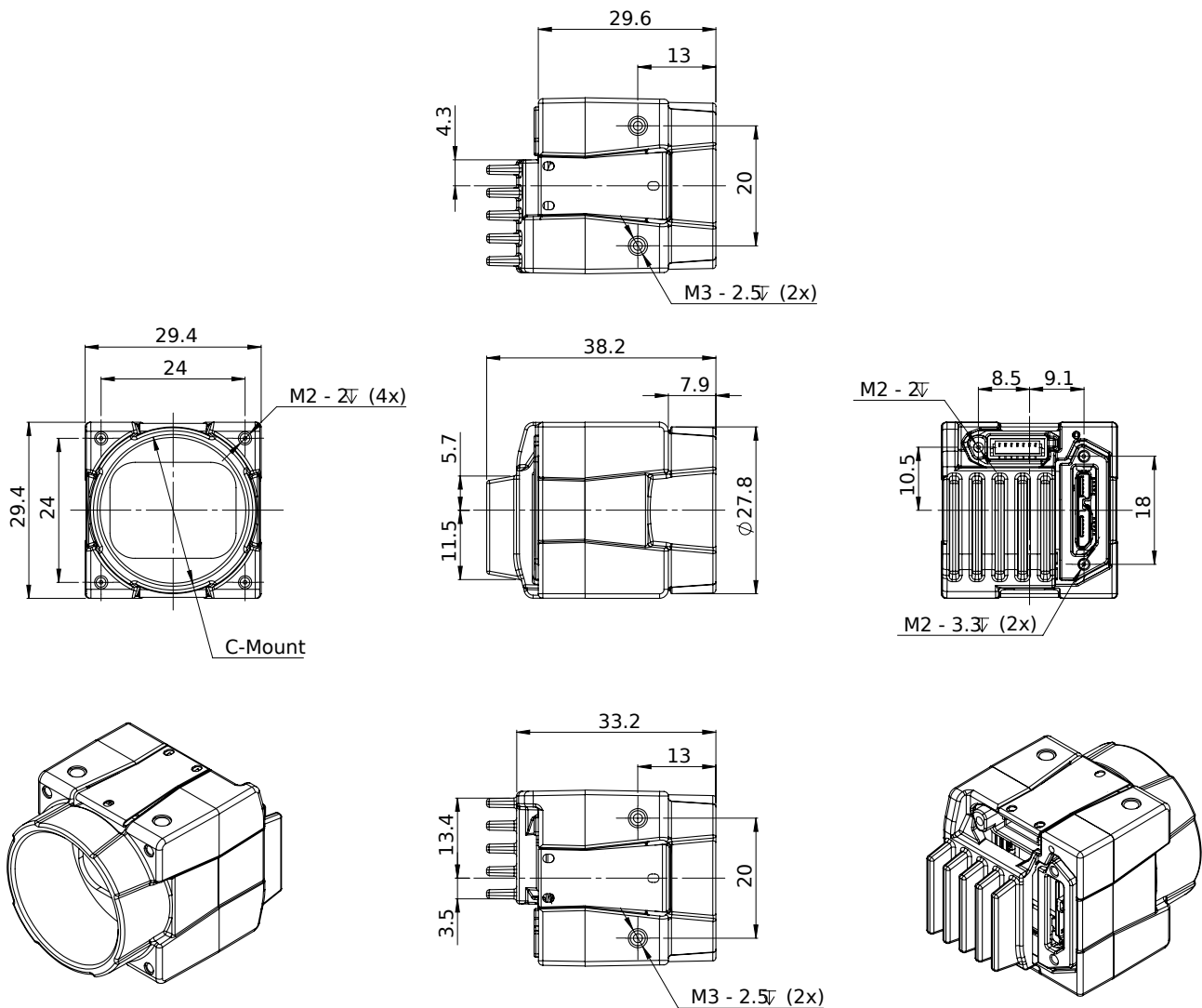


- ROI (region of interest)
- Sharpness/Blur

## Camera control

- Acquisition frame rate
- Bandwidth control
- Firmware update in the field
- I/O and trigger control
- Temperature monitoring
- U3 Power Saving Mode

## Technical drawing



## Applications

Alvium 1800 U-130 VSWIR cameras are sensitive in the visible and the SWIR spectrum and are well-suited for many typical SWIR applications in various industry branches:

- Semiconductor industry: Solar cell and chip inspection
- Recycling industry: Plastic sorting
- Medical imaging, sciences: Hyper- and multi-spectral imaging
- Glass industry: Defect detection through hot glass
- Agriculture industry: Airborne remote sensing



- Printing industry: Seeing hidden features
- Surveillance: Vision enhancement (for example, seeing through fog or haze)
- Security: Counterfeit detection (such as for money, faked hair, or skin)