



Alvium

1800 U-030 VSWIR

- IMX991 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-030 VSWIR with Sony IMX991 runs 240.0 frames per second at 0.3 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.

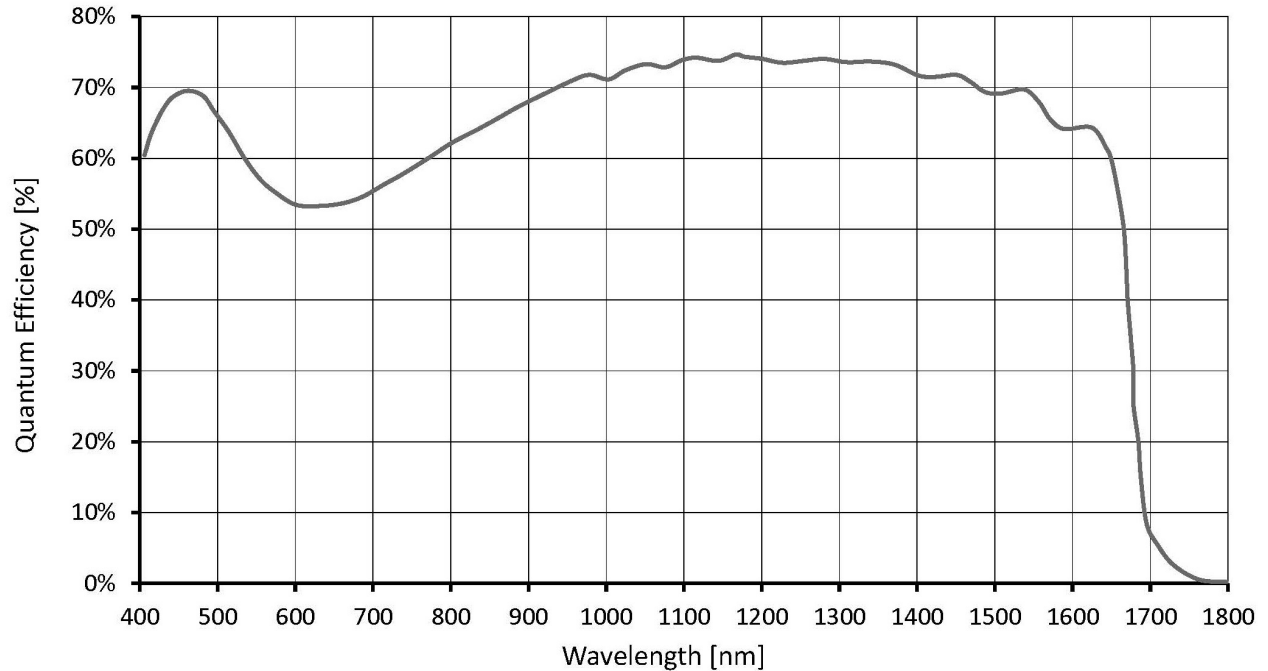
Specifications

Alvium 1800 U-030 VSWIR

Interface	USB3 Vision
Resolution	656 (H) × 520 (V)
Spectral range	400 nm to 1700 nm

Alvium 1800 U-030 VSWIR	
Sensor	Sony IMX991
Sensor type	InGaAs
Shutter mode	Global shutter
Sensor size	Type 1/4 VSWIR
Pixel size	5 μm \times 5 μm
Lens mount (default)	C-Mount
Max. frame rate at full resolution	240 fps at \geq 200 MByte/s, Mono8
ADC	12 Bit
Image buffer (RAM)	256 KByte
Non-volatile memory (Flash)	1024 KByte
Output	
Bit depth	8-bit, 10-bit, 12-bit; Adaptive (10-bit, 12-bit) Bit
Monochrome pixel formats	Mono8, Mono10, Mono10p, Mono12, Mono12p
General purpose inputs/outputs (GPIOs)	
TTL I/Os	4 programmable GPIOs
Operating conditions/dimensions	
Operating temperature	-20 $^{\circ}\text{C}$ to +65 $^{\circ}\text{C}$ (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

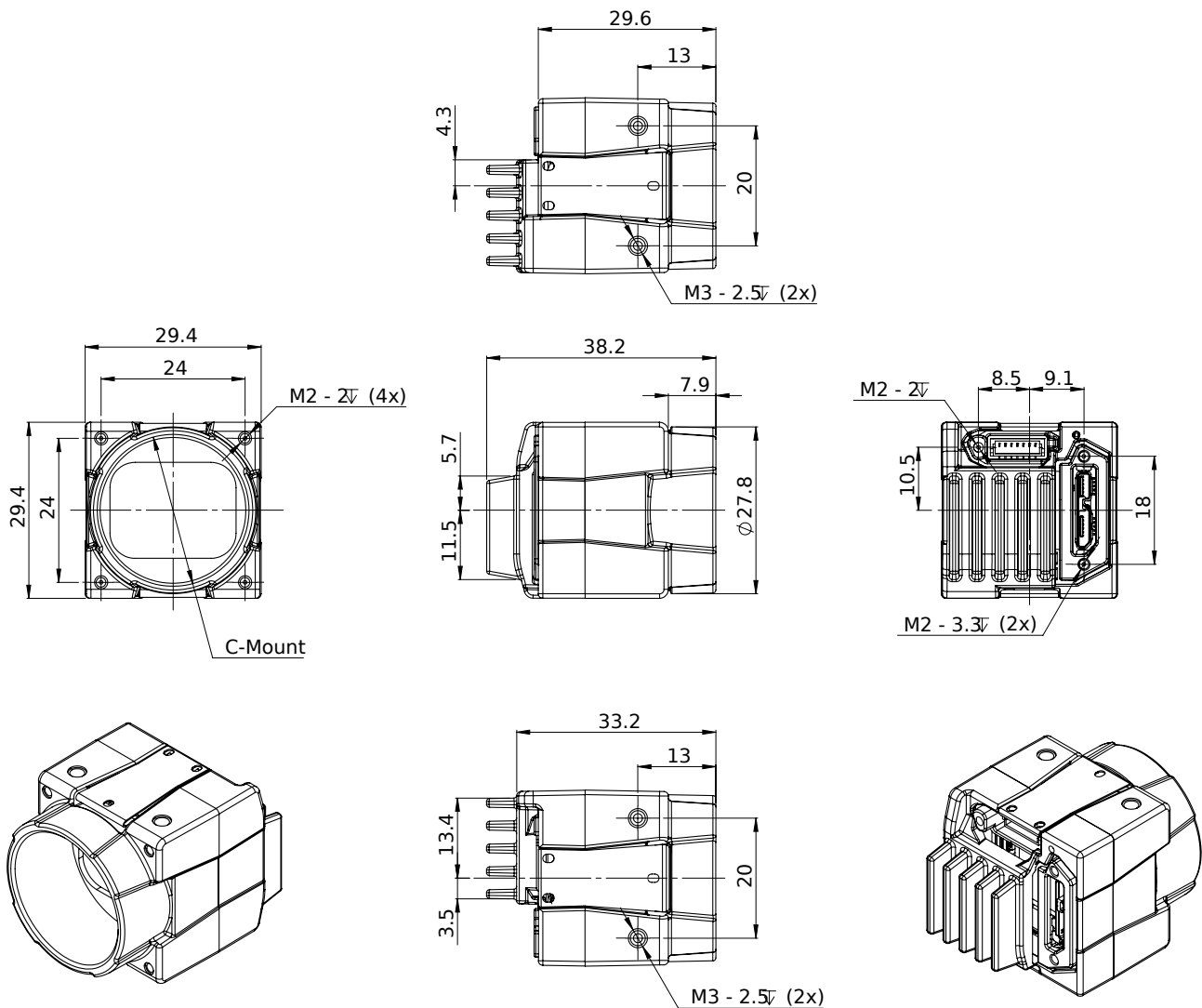
- Adaptive noise correction
- Binning
- Black level
- Contrast
- Custom convolution
- DPC (defect pixel correction)
- Gamma

- 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
- Readout modes (SensorBitDepth)
- Temperature monitoring
- U3 Power Saving Mode
- User sets

Technical drawing



Applications

Alvium 1800 U-030 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)