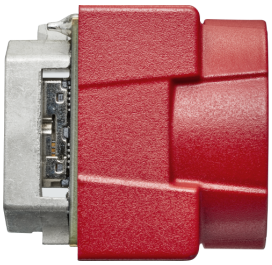
Allied Vision

# Alvium
## 1800 U-030 VSWIR



- IMX991 VSWIR sensor
- ALVIUM image processing
- USB3 Vision interface
- Various hardware options

Hardware option: Open Housing C-Mount Standard

**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 | InGaAs runs 249.0 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 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

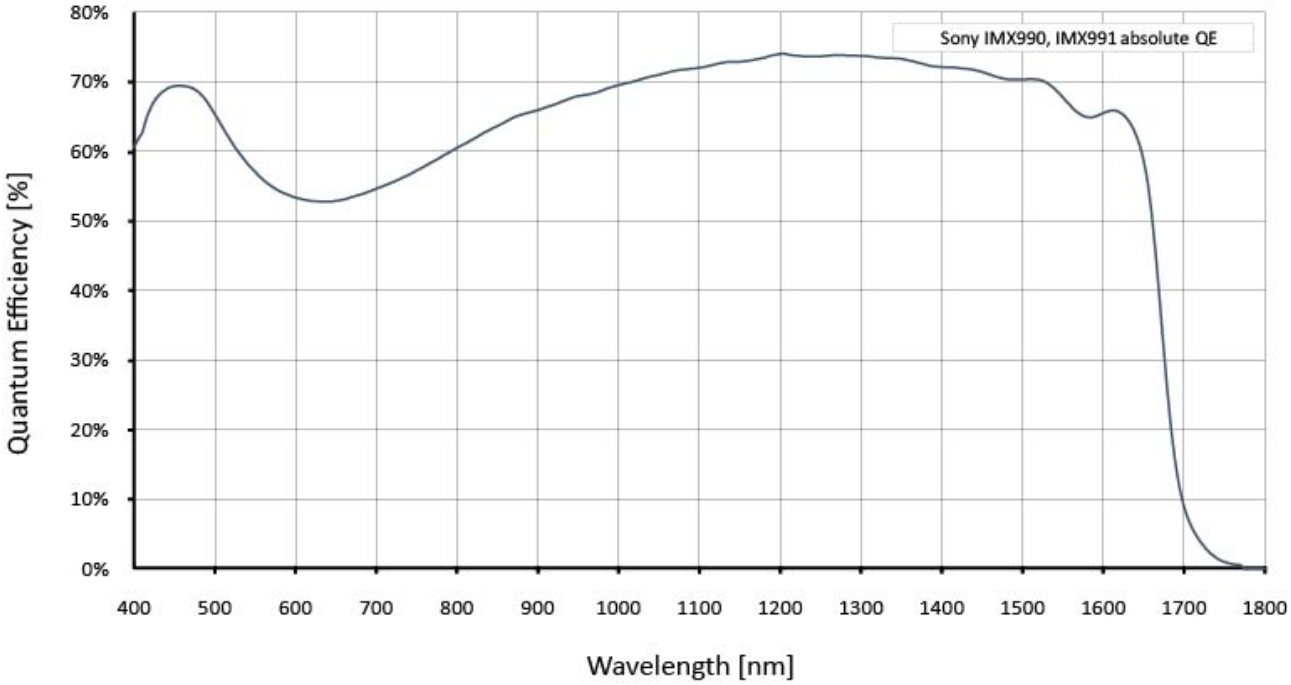
| | |
|---|---|
| Product code | 15967 |
| Interface | USB3 Vision |
| Resolution | 656 (H) × 520 (V) |
| Spectral range | 400 nm to 1700 nm |
| Sensor | Sony IMX991 \| InGaAs |
| Sensor type | InGaAs |
| Shutter mode | GS (Global shutter) |
| Sensor size | Type 1/4 VSWIR |
| Pixel size | 5 µm × 5 µm |
| Lens mount | C-Mount |
| Max. frame rate at full resolution | 249 fps at >=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) |
| Monochrome pixel formats | Mono8 (default), Mono10, Mono10p, Mono12, Mono12p |

| **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: 2.0 W (typical) \| Ext. power: 2.2 W (typical) |
| Mass | 45 g |
| Body dimensions (L × W × H in mm) | 30 × 29 × 29 |

# 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
- Counters and timers
- Firmware update in the field
- I/O and trigger control
- Readout modes (SensorBitDepth)
- Sequencer
- Serial I/Os
- Temperature monitoring
- U3 Power Saving Mode
- User sets

# Technical drawing

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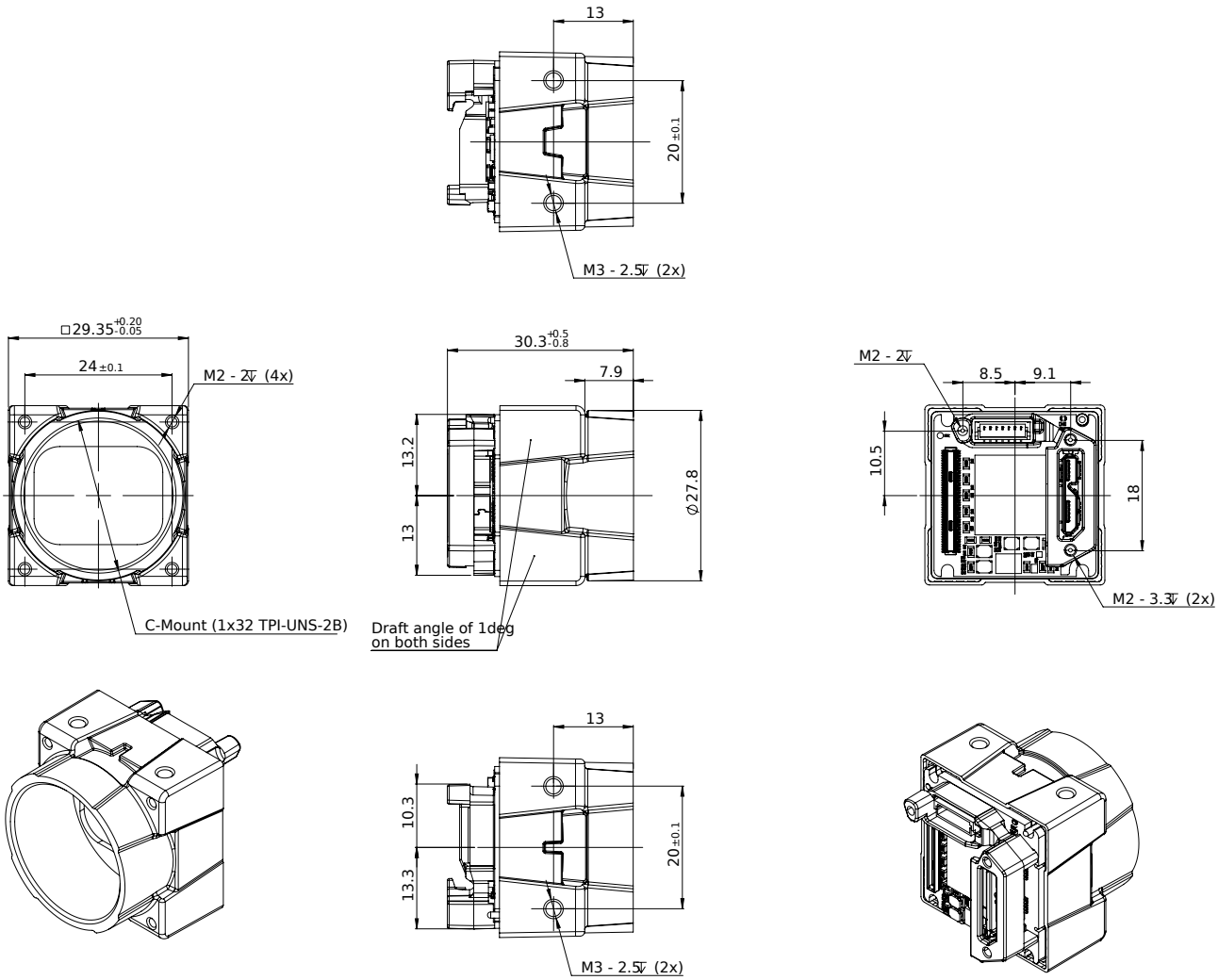


# Applications

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)