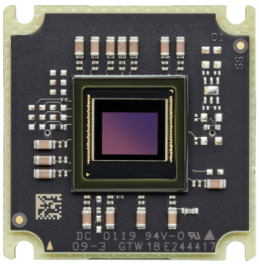
Allied Vision

Alvium
1800 U-158m



- IMX273 CMOS sensor
- ALVIUM image processing
- USB3 Vision
- Various hardware options

Hardware option: Bare Board Standard

Alvium 1800 U – Your entry into high-performance imaging

Industrial USB cameras with attractive price-performance ratio

Alvium 1800 U-158 with Sony IMX273 runs 257.0 frames per second at 1.6 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	14198
Interface	USB3 Vision
Resolution	1456 (H) × 1088 (V)
Spectral range	300 to 1100 nm
Sensor	Sony IMX273
Sensor type	CMOS
Shutter mode	GS (Global shutter)
Sensor size	Type 1/2.9
Pixel size	3.45 µm × 3.45 µm
Lens mounts (available)	C-Mount, CS-Mount, S-Mount
Max. frame rate at full resolution	257 fps at 450 MByte/s, Mono8
ADC	12 Bit
Image buffer (RAM)	256 KByte
Non-volatile memory (Flash)	1024 KByte

Imaging performance

Imaging performance data is based on the evaluation methods in the EMVA 1288 Release 3.1 standard for characterization of image sensors and cameras. Measurements are typical values for monochrome models measured without optical filter.

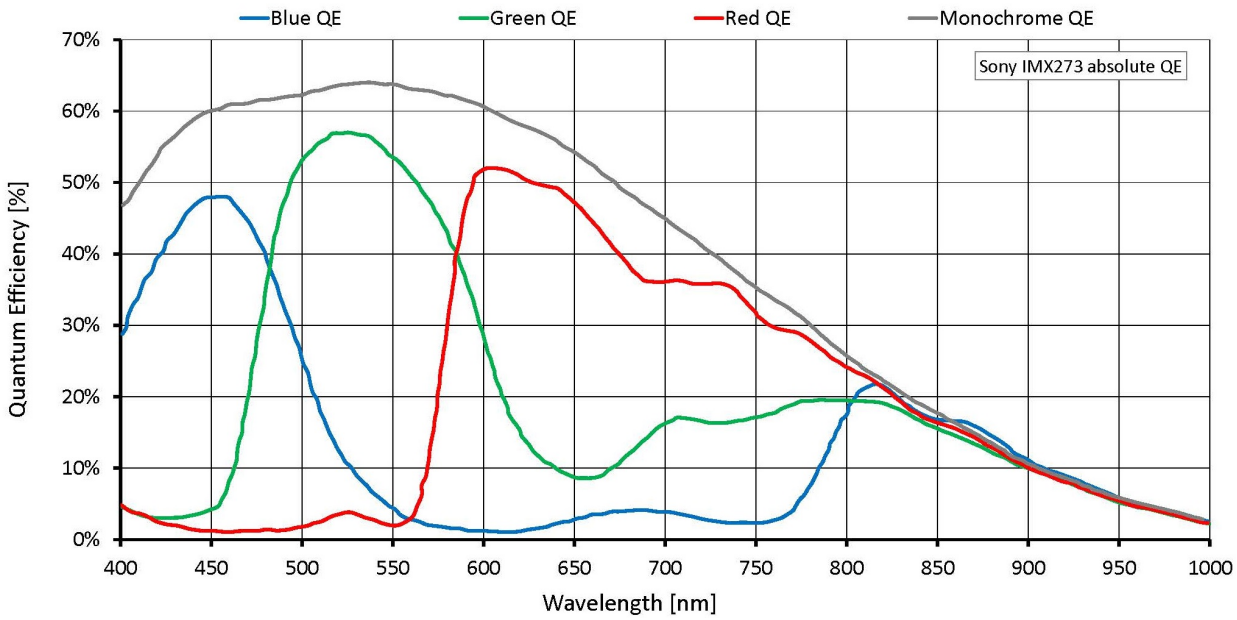
Quantum efficiency at 529 nm	64 %
Temporal dark noise	2.1 e^-
Saturation capacity	10400 e^-
Dynamic range	72 dB
Absolute sensitivity threshold	2.7 e^-

Output	
Bit depth	8-bit, 10-bit, 12-bit; Adaptive (10-bit, 12-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 °C to +85 °C (cooling areas)
Power requirements (DC)	Power over USB 3.1 Gen 1 | External power 5.0 V
Power consumption	USB power: 2.5 W (typical) | Ext. power: 2.6 W (typical)
Mass	15 g
Body dimensions (L × W × H in mm)	14 × 26 × 26

Quantum efficiency



Features

Image control: Auto

- Auto exposure
- Auto gain
- Auto white balance (color models)

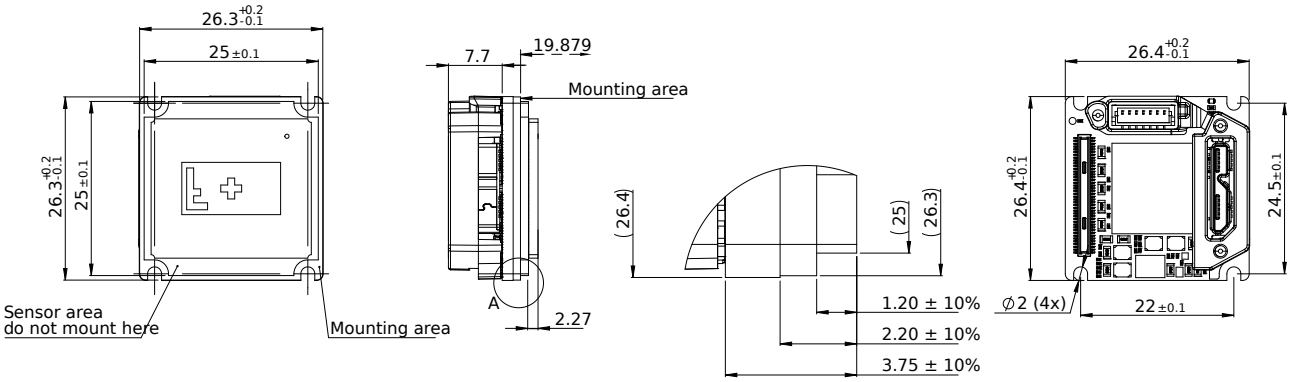
Image control: Other

- Adaptive noise correction
- Binning (digital)
- Binning (digital, sensor)
- Black level
- Color transformation (incl. hue, saturation; color models)
- Contrast
- Custom convolution
- De-Bayering up to 5×5 (color models)
- DPC (defect pixel correction)
- FPNC (fixed pattern noise correction)
- Gamma
- Lens shading correction
- LUT (look-up table)
- Multiple ROIs (regions of interest)
- Reverse X/Y
- ROI (region of interest)
- Sharpness/Blur

Camera control

- Acquisition frame rate
- Bandwidth control
- Counters and timers
- Event channel
- Firmware update in the field
- I/O and trigger control
- Image chunk data
- Power Saving Mode
- Readout modes (SensorBitDepth)
- Sequencer
- Serial I/Os
- Temperature monitoring
- User sets

Technical drawing



Unikeyic Electronics

Global Electronic Components Distributor

Click to view pricing, inventory, delivery, and lifecycle information:

Allied Vision:

14140 18087 ALLIED VISION LENS C-50-2.4-25MP-1.2 ADAPTER BOARD ORIN NANO DEV KIT 11951
12908 15097 15918 1800 C-203C COLOR C-MOUNT OPEN 14158 14661 15921
ALLIED VISION LENS C-35-2.4-25MP-1.2 11492 12319 15899 1800 C-203M MONO C-MOUNT OPEN
ALLIED VISION LENS C-12-2.4-25MP-1.2 DESERIALIZER BOARD GMSL2 COAX TO CSI-2 12345 14829
17186 12310-02 17193 FP3-2050C COLOR C-MOUNT COAX GM2-240C COLOR S-MOUNT COAX 11886
15920 17228 ALLIED VISION LENS C-25-1.8-10MP-2.3