



Alvium 1800 U-500

- AR0521 CMOS sensor
- ALVIUM image processing
- USB3 Vision
- Various hardware options

Model without hardware options

Alvium 1800 U – 高性能成像入门之选

高性价比工业级 USB 相机

Alvium 1800 U-500 搭载 ON Semi AR0521SR 传感器，在 68.0MP 分辨率下速度可达 5.0 帧/秒。

Alvium 1800 U 是高性能 ALVIUM® 工业应用成像技术的入门之选。此款产品搭载最新一代传感器，小巧轻盈，可以最理想的性价比提供优异的画质和帧率。相机接口兼容 USB3 Vision 标准，且配备了工业级硬件，无论在 PC 系统还是嵌入式系统中，都可成为各种机器视觉应用的主力机型。

Easy software integration with **Allied Vision's Vimba Suite** and compatibility to the most popular third party image-processing libraries.

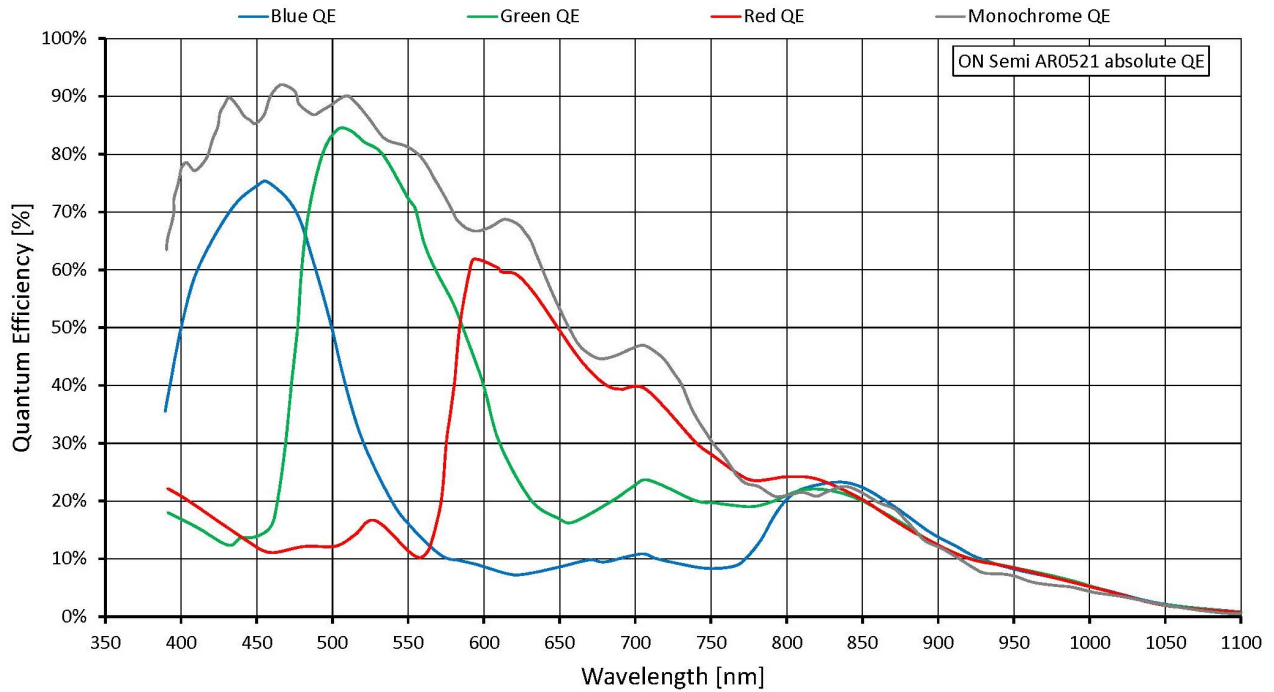
See the **Alvium Cameras Hardware Options** for lens mount and housing options, as well as the **Customization and OEM Solutions webpage** for additional options.

性能参数

Alvium 1800 U-500	
接口	USB3 Vision
分辨率	2592 (H) × 1944 (V)
Spectral range	300 to 1100 nm
传感器	ON Semi AR0521SR
传感器类型	CMOS
快门种类	Rolling shutter

Alvium 1800 U-500	
传感器尺寸	Type 1/2.5
像元尺寸	2.2 μm $\times$ 2.2 μm
Lens mounts (available)	C-Mount
最大满帧帧率	68 fps at $\geq$ 375 MByte/s, Mono8
ADC	10 Bit
缓存 (RAM)	256 KB
非易失性内存 (Flash)	1024 KB
成像性能	
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.	
在波长为 529nm 下, 量子转换效率	79 %
暗噪声	5.9 e^-
饱和电子数	9890 e^-
动态范围	63 dB
绝对灵敏度阈值	7.1 e^-
输出	
Bit 位数	Max. 10 Bit
黑白像素格式	Mono8, Mono10
YUV 彩色像素格式	YCbCr411_8_CbYYCrYY, YCbCr422_8_CbYCrY, YCbCr8_CbYCr
RGB 彩色像素格式	BayerRG8, BayerRG10, BayerRG10p, BGR8, RGB8 (default)
通用输入输出口 (GPIOs)	
TTL I/Os	4 programmable GPIOs
工作条件/尺寸	
工作温度	+5 $^{\circ}\text{C}$ to +65 $^{\circ}\text{C}$ housing temperature (with heat sink)
电源要求 (DC)	Power over USB 3.1 Gen 1 External power 5.0 V
功耗	USB power: 2.2 W (typical) Ext. power: 2.4 W (typical)
重量	15 g (bare board)
尺寸 (L $\times$ W $\times$ H in mm)	13 $\times$ 26 $\times$ 26 (bare board, standard), 13 $\times$ 30 $\times$ 26 (bare board, 90 $^{\circ}$)
符合规范	2011/65/EU, including amendment 2015/863/EU (RoHS)

量子转换效率



特性

Image control

Auto control

- Auto exposure
- Auto gain
- Auto white balance (color models)
- Auto features regions control
- Auto features algorithms control

Other image controls

- 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

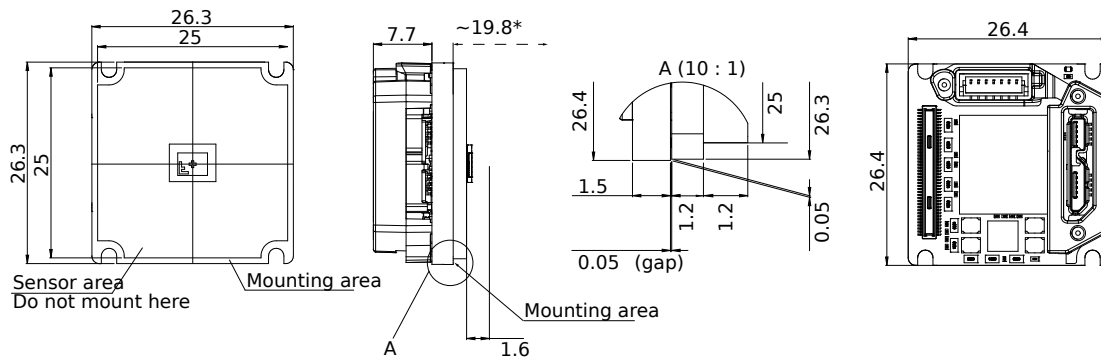
- Sync out modes: Trigger ready, input
- Temperature monitoring (sensor board)
- LED luminance control
- Firmware update

外形尺寸



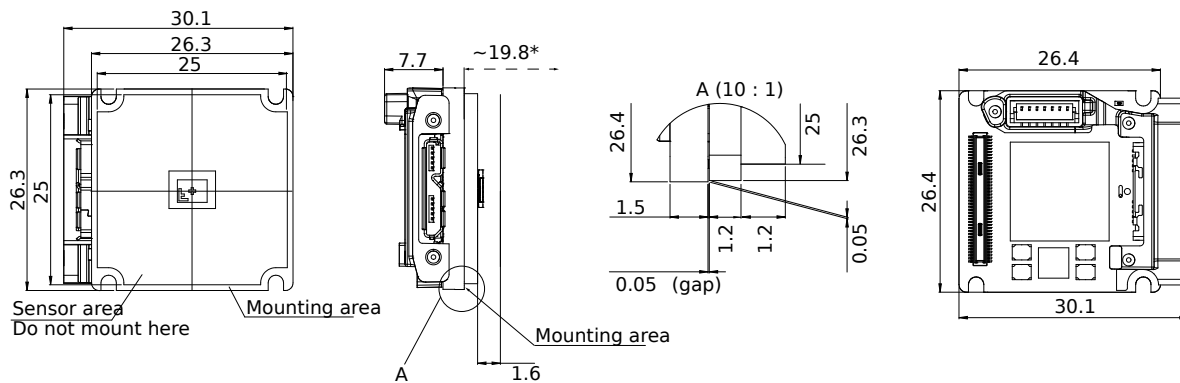
Camera hardware options

Bare Board



*Mechanical length for C-Mount, for other mounts and details, see the user guide.

Bare board 90°



*Mechanical length for C-Mount, for other mounts and details, see the user guide.