



- AR0521 CMOS sensor
- GigE Vision
- High bandwidths
- 3 lens mount options

Model without hardware options

### **Alvium G1 – Reliability designed for the future**

Compact GigE camera for constant image quality

Alvium G1-500 with ON Semi AR0521SR runs 23.0 frames per second at 5.0 MP resolution.

Alvium G1 is the first GigE Vision camera powered by ALVIUM® Technology, Allied Vision's ASIC chip. It combines the advantages of the established GigE Vision standard with the flexibility of the Alvium platform. In addition to a comprehensive feature set and a broad sensor selection, it offers great versatility. With its very compact housing and industrial standard hardware, it can easily be integrated into any vision system while ensuring long-term availability and reliability.

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

## Specifications

Interface	IEEE 802.3 1000BASE-T, IEEE 802.3af (PoE)
Resolution	2592 (H) × 1944 (V)
Spectral range	300 to 1100 nm
Sensor	ON Semi AR0521SR
Sensor type	CMOS
Shutter mode	Rolling shutter
Sensor size	Type 1/2.5
Pixel size	2.2 μm × 2.2 μm
Lens mounts (available)	C-Mount, CS-Mount, S-Mount
Max. frame rate at full resolution	23 fps at 122 MByte/s, Mono8
ADC	10 Bit
Image buffer (RAM)	32 MByte
Non-volatile memory (Flash)	1024 KByte

### Output

Bit depth	10-bit Bit
Monochrome pixel formats	Mono8, Mono10, Mono10p
YUV color pixel formats	YCbCr411_8_CbYYCrYY, YCbCr422_8_CbYCrY, YCbCr8_CbYCr
RGB color pixel formats	BayerGR8, BayerGR10, BayerGR10p, BGR8, RGB8 (default)

### General purpose inputs/outputs (GPIOs)

TTL I/Os	2 GPIOs (LVTTL)
Opto-isolated I/Os	1 input, 1 output

### Operating conditions/dimensions

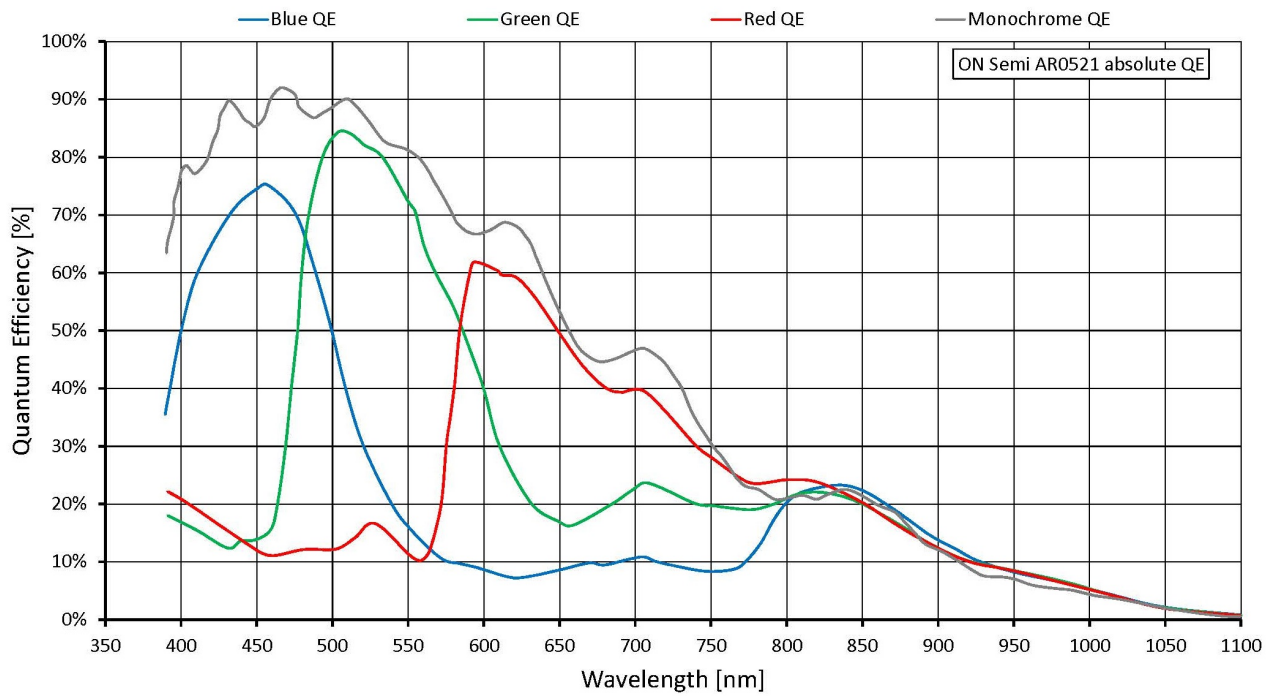
Operating temperature	-20 °C to +55 °C (housing)
Power requirements (DC)	10.8 to 26.4 VDC AUX   IEEE 802.3af, Power Class 0 PoE
Power consumption	External power: 2.9 W at 12 VDC (typical)   Power over Ethernet: 3.2 W (typical)
Mass	65 g

Body dimensions (L × W × H in mm) 41 × 29 × 29

Regulations

CE: 2014/30/EU (EMC), 2011/65/EU, including amendment 2015/863/EU (RoHS); FCC Class B; CAN ICES-3 (B)

## Quantum efficiency



## Features

### Image control: Auto

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

### Image control: Other

- Adaptive noise correction
- Binning
- 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
- LUT (look-up table)
- Reverse X/Y
- ROI (region of interest)
- Sharpness/Blur

### Camera control

- Acquisition frame rate
- Action commands, incl. ToE (trigger over Ethernet)
- Bandwidth control
- Counters and timers
- Firmware update in the field
- I/O and trigger control
- Readout modes (SensorBitDepth)
- Serial I/Os
- Temperature monitoring
- User sets

Technical drawing

