Allied Vision

Alvium
G1-1242

- IMX545 CMOS sensor
- GigE Vision
- High bandwidths
- 2 lens mount options

Model without hardware options

Alvium G1 – Reliability designed for the future

Compact GigE camera for constant image quality

Alvium G1-1242 with Sony IMX545 runs 9.3 frames per second at 12.4 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 Vimba X and compatibility to the most popular third party image-processing libraries.

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Specifications

Interface	IEEE 802.3 1000BASE-T, IEEE 802.3af (PoE)
Resolution	4128 (H) × 3008 (V)
Spectral range	300 to 1100 nm
Sensor	Sony IMX545
Sensor type	CMOS
Shutter mode	Global shutter
Sensor size	Type 1/1.1
Pixel size	2.74 µm × 2.74 µm
Lens mounts (available)	C-Mount, CS-Mount
Max. frame rate at full resolution	9.3 fps at 122 MByte/s, Mono8
ADC	12 Bit
Image buffer (RAM)	32 MByte
Non-volatile memory (Flash)	1024 KByte

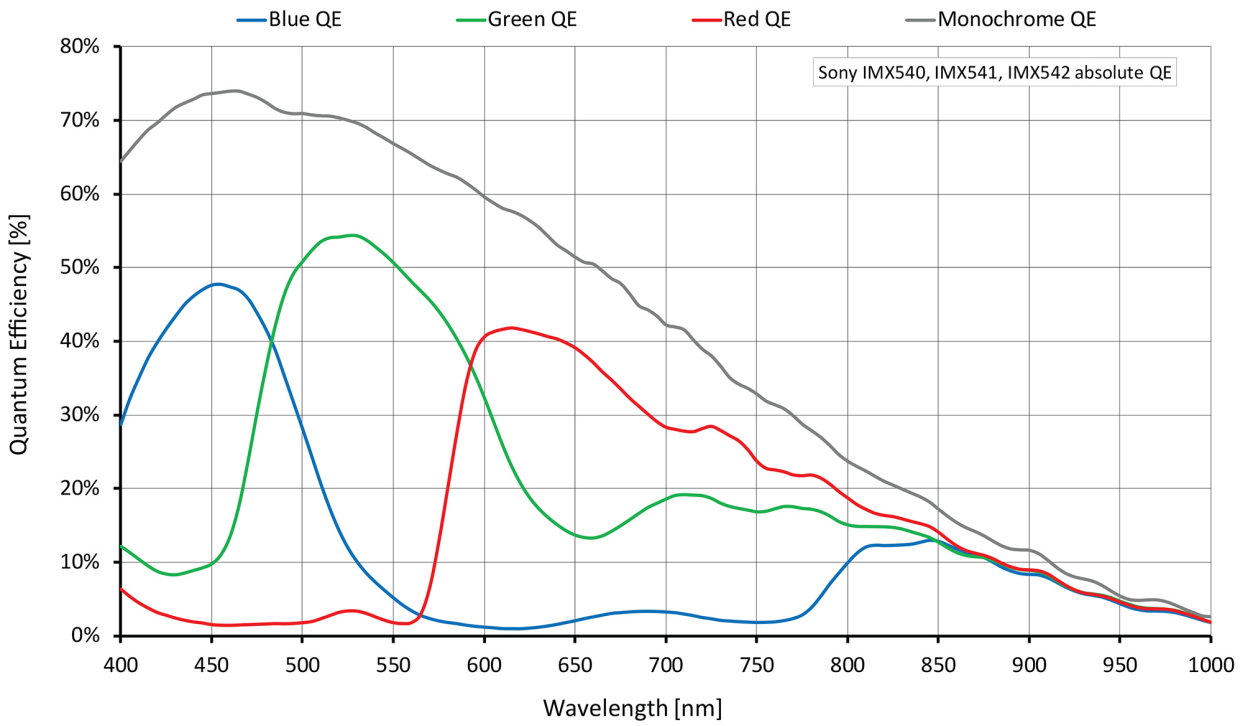
Output	
Bit depth	12-bit Bit
Monochrome pixel formats	Mono8, Mono10, Mono10p, Mono12, Mono12p
YUV color pixel formats	YCbCr411_8_CbYYCrYY, YCbCr422_8_CbYCrY, YCbCr8_CbYCr
RGB color pixel formats	BayerRG8, BayerRG10, BayerRG10p, BayerRG12, BayerRG12p, BGR8, RGB8 (default)

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 +50 °C (housing)
Power requirements (DC)	10.8 to 26.4 VDC AUX | IEEE 802.3af, Power Class 0 PoE
Power consumption	External power: 3.8 W at 12 VDC (typical) | Power over Ethernet: 4.0 W (typical)

Mass	65 g
Body dimensions (L × W × H in mm)	41 × 29 × 29

Quantum efficiency



Features

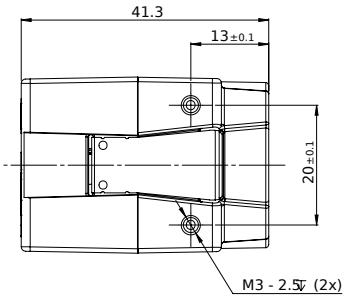
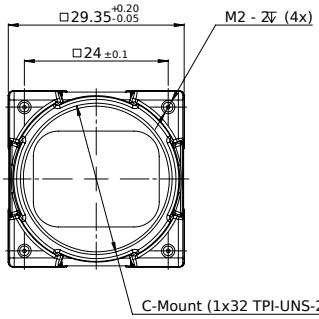
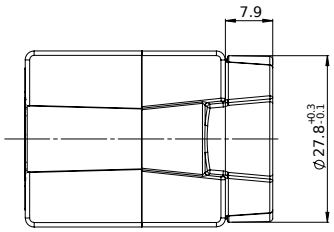
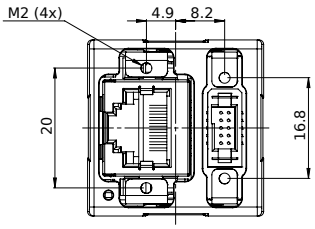
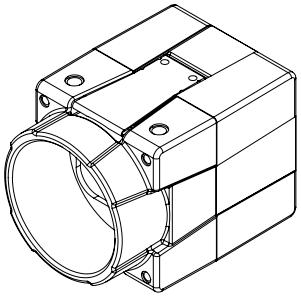
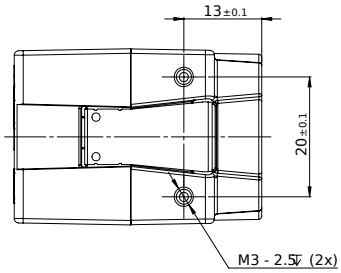
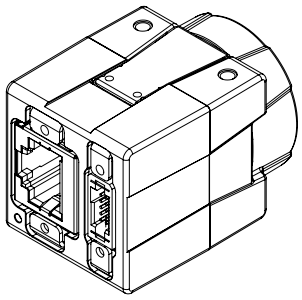
Image control: Auto

- 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
- Bandwidth control
- Counters and timers
- Firmware update in the field
- I/O and trigger control
- Sequencer
- Serial I/Os
- Temperature monitoring
- User sets

Technical drawing