Allied Vision

Hardware option: Closed Housing CS-Mount

Alvium
G1-319c

- IMX265 CMOS sensor
- GigE Vision
- High bandwidths
- 3 lens mount options

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

Compact GigE camera for constant image quality

Alvium G1-319 with Sony IMX265 runs 37.0 frames per second at 3.2 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.

Allied Vision

Specifications

Product code	17771
Interface	IEEE 802.3 1000BASE-T, IEEE 802.3af (PoE)
Resolution	2064 (H) × 1544 (V)
Spectral range	300 to 1100 nm
Sensor	Sony IMX265
Sensor type	CMOS
Shutter mode	GS (Global shutter)
Sensor size	Type 1/1.8
Pixel size	3.45 µm × 3.45 µm
Lens mount	CS-Mount
Optical Filter	Type Hoya C5000 IR cut filter
Max. frame rate at full resolution	37 fps at 122 MByte/s, Mono8
ADC	12 Bit
Image buffer (RAM)	32 MByte
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	12-bit
Monochrome pixel formats	Mono8, Mono10, Mono10p, Mono12, Mono12p, Mono12Packed

| YUV color pixel formats	YCbCr411_8_CbYYCrYY, YCbCr422_8_CbYCrY, YCbCr8_CbYCr
RGB color pixel formats	RGB8 (default), BGR8
Raw color pixel formats (Bayer)	BayerRG8, BayerRG10, BayerRG10p, BayerRG12, BayerRG12p, BayerRG12Packed

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 +65 °C (Housing)
Power requirements (DC)	10.8 to 26.4 VDC AUX | IEEE 802.3af, Power Class 0 PoE
Power consumption	External power: 3.0 W at 12 VDC (typical) | Power over Ethernet: 3.3 W (typical)
Mass	70 g
Body dimensions (L × W × H in mm)	36 × 29 × 29

Quantum efficiency
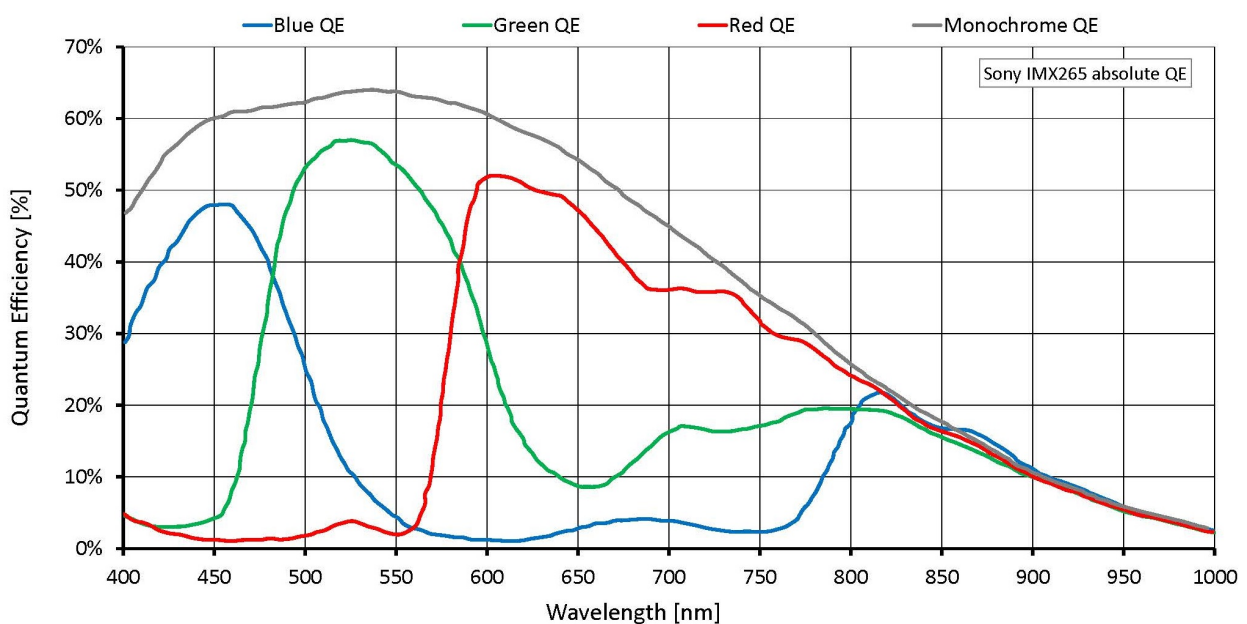
Features

Image control: Auto

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

Image control: Other

- Adaptive noise correction
- Binning (digital)
- 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
- Action commands, incl. ToE (trigger over Ethernet)
- Bandwidth control
- Burst mode
- Counters and timers
- Event channel
- Firmware update in the field
- I/O and trigger control
- Image chunk data
- Power Saving Mode
- PTP (IEEE 1588 Precision Time Protocol)
- Sequencer
- Serial I/Os
- Temperature monitoring
- User sets

![Allied Vision logo] Allied Vision

Technical drawing

36.3

8 ±0.1

20 ±0.1

M3 - 2.5▽ (2x)

□29.35 +0.20 -0.05

□24 ±0.1

M2 - 2▽ (4x)

C-Mount (1x32 TPI-UNS-2B)

2.9

⌀27.8 +0.3 -0.1

M2 (4x)

4.9   8.2

20

16.8

8 ±0.1

20 ±0.1

M3 - 2.5▽ (2x)