



- IMX249 CMOS sensor
- ALVIUM image processing
- GigE Vision
- 3 lens mount options

Model without hardware options

### Alvium G1 – Reliability designed for the future

Compact GigE camera for constant image quality

Alvium G1-234 with Sony IMX249 runs 40.0 frames per second at 2.4 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 Allied Vision's **Vimba Suite** 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                         | 1936 (H) × 1216 (V)                       |
| Spectral range                     | 300 to 1100 nm                            |
| Sensor                             | Sony IMX249                               |
| Sensor type                        | CMOS                                      |
| Shutter mode                       | Global shutter                            |
| Sensor size                        | Type 1/1.2                                |
| Pixel size                         | 5.86 μm × 5.86 μm                         |
| Lens mounts (available)            | C-Mount, CS-Mount, S-Mount                |
| Max. frame rate at full resolution | 40 fps at 122 MByte/s, Mono8              |
| ADC                                | 12 Bit                                    |
| Image buffer (RAM)                 | 32 MByte                                  |
| Non-volatile memory (Flash)        | 1024 KByte                                |

### Output

|                          |  |
|--------------------------|--|
| Bit depth                | 10-bit, 12-bit; Adaptive (10-bit, 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)

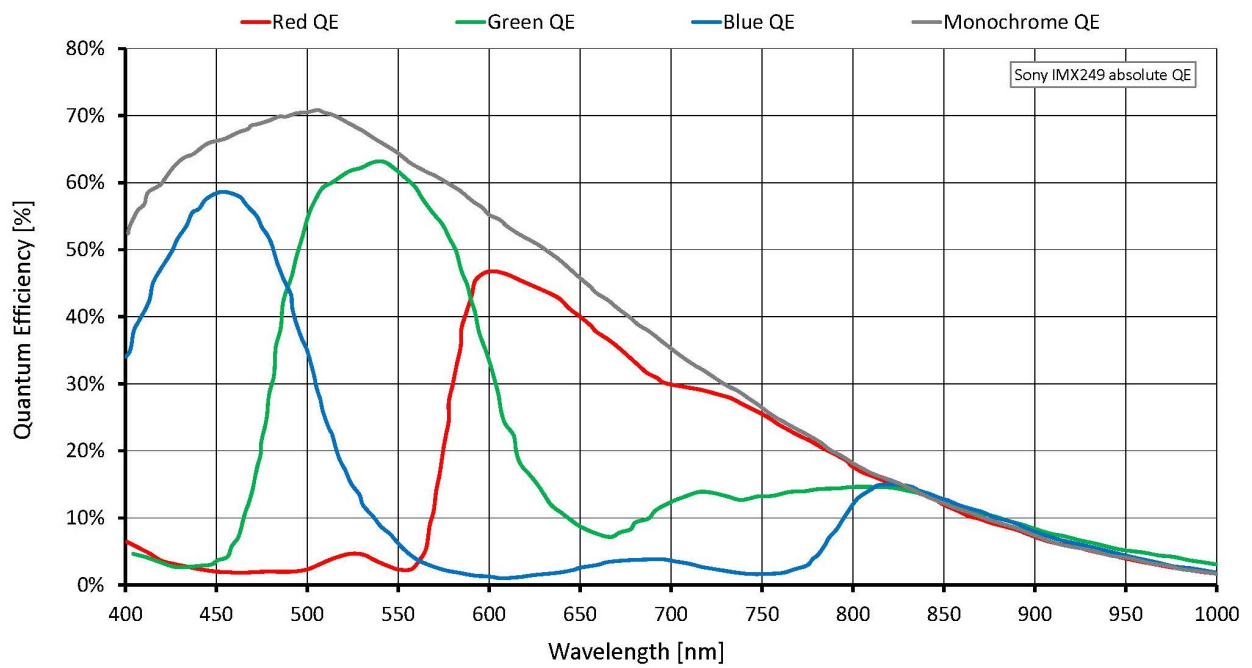
|                    |                   |
|--------------------|-------------------|
| TTL I/Os           | 2 GPIOs (LVTTTL)  |
| Opto-isolated I/Os | 1 input, 1 output |

### 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: 3.0 W at 12 VDC (typical)   Power over Ethernet: 3.3 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
- Readout modes (SensorBitDepth)
- Serial I/Os
- Temperature monitoring
- User sets

Technical drawing

