



- PoE option
- IEEE 1588 PTP
- Trigger over Ethernet
- Auto iris
- Angled head option
- Board level option

Simplify your setup of multi-camera applications

Modular machine vision camera with GigE Vision interface

Manta G-419 with CMOSIS/ams CMV4000 runs 28 frames per second at 4.2 MP resolution.

Manta is Allied Vision's most versatile GigE Vision camera series. It provides the largest choice of image sensors and its advanced feature set simplifies the setup of multi-camera applications. With its modular hardware concept, Manta offers nearly endless configuration possibilities to adapt the camera to your application.

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

See the **Modular Concept** for lens mount, housing variants, optical filters, case design, and other modular options. See the **Customization and OEM Solutions** webpage for additional options.

Specifications

Interface	IEEE 802.3 1000BASE-T, IEEE 802.3af (PoE) optional
Resolution	2048 (H) × 2048 (V)
Sensor	CMOSIS/ams CMV4000
Sensor type	CMOS
Shutter mode	GS (Global shutter)
Sensor size	Type 1
Pixel size	5.5 µm × 5.5 µm
Lens mounts (available)	C-Mount, CS-Mount
Max. frame rate at full resolution	28 fps
ADC	12 Bit
Image buffer (RAM)	128 MByte

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 at full resolution without optical filter. Contact Sales or AE for more information.

Quantum efficiency at 529 nm	74 %
Temporal dark noise	13.7 e ⁻
Saturation capacity	9600 e ⁻
Dynamic range	56.5 dB
Absolute sensitivity threshold	14.2 e ⁻

Output

Bit depth	8-bit or 12-bit
Monochrome pixel formats	Mono8, Mono12, Mono12Packed
YUV color pixel formats	YUV411Packed, YUV422Packed, YUV444Packed
RGB color pixel formats	RGB8Packed, BGR8Packed, RGBA8Packed, BGRA8Packed
Raw color pixel formats (Bayer)	BayerGB8, BayerGB12, BayerGB12Packed

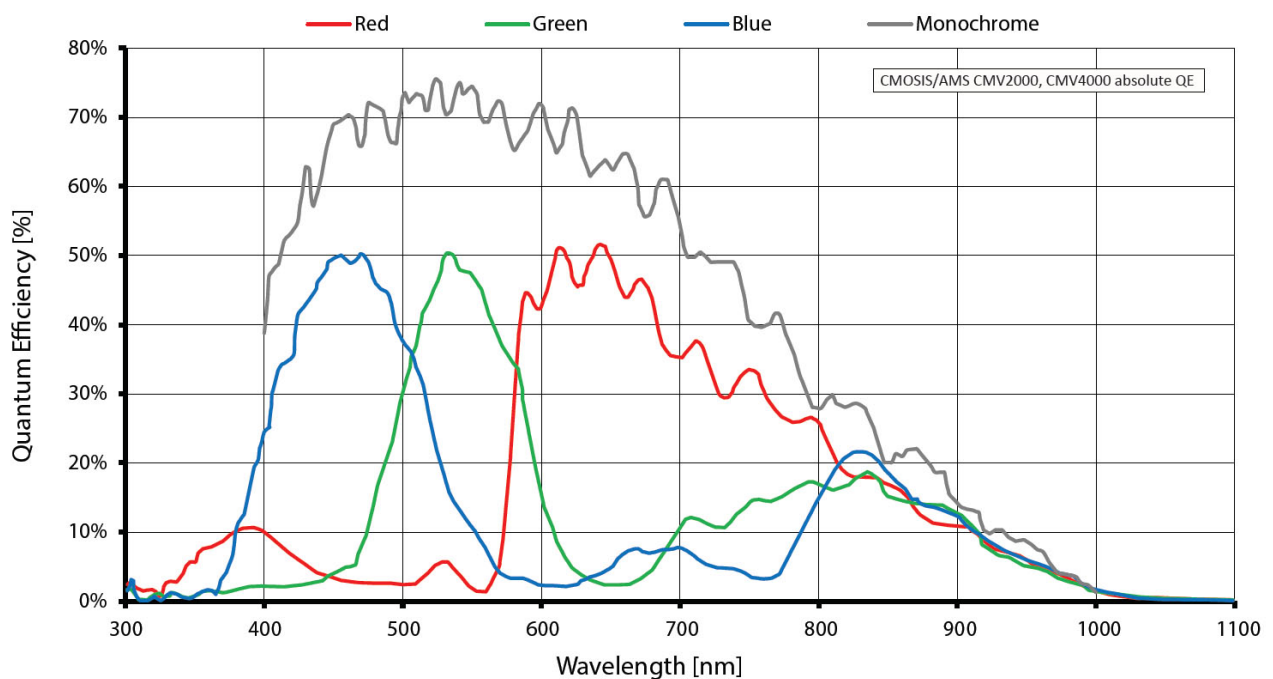
General purpose inputs/outputs (GPIOs)

Opto-isolated I/Os	2 inputs, 2 outputs
RS232	1

Operating conditions/dimensions

Operating temperature	+5 °C to +45 °C ambient (without condensation)
Power requirements (DC)	8 to 30 VDC AUX or IEEE 802.3af PoE
Power consumption	External power: 2.7 W at 12 VDC Power over Ethernet: 3.1 W
Mass	190 g; 200 g (PoE)
Body dimensions (L × W × H in mm)	86.4 × 44 × 29 (including connectors)

Quantum efficiency



Features

Image control: Auto

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

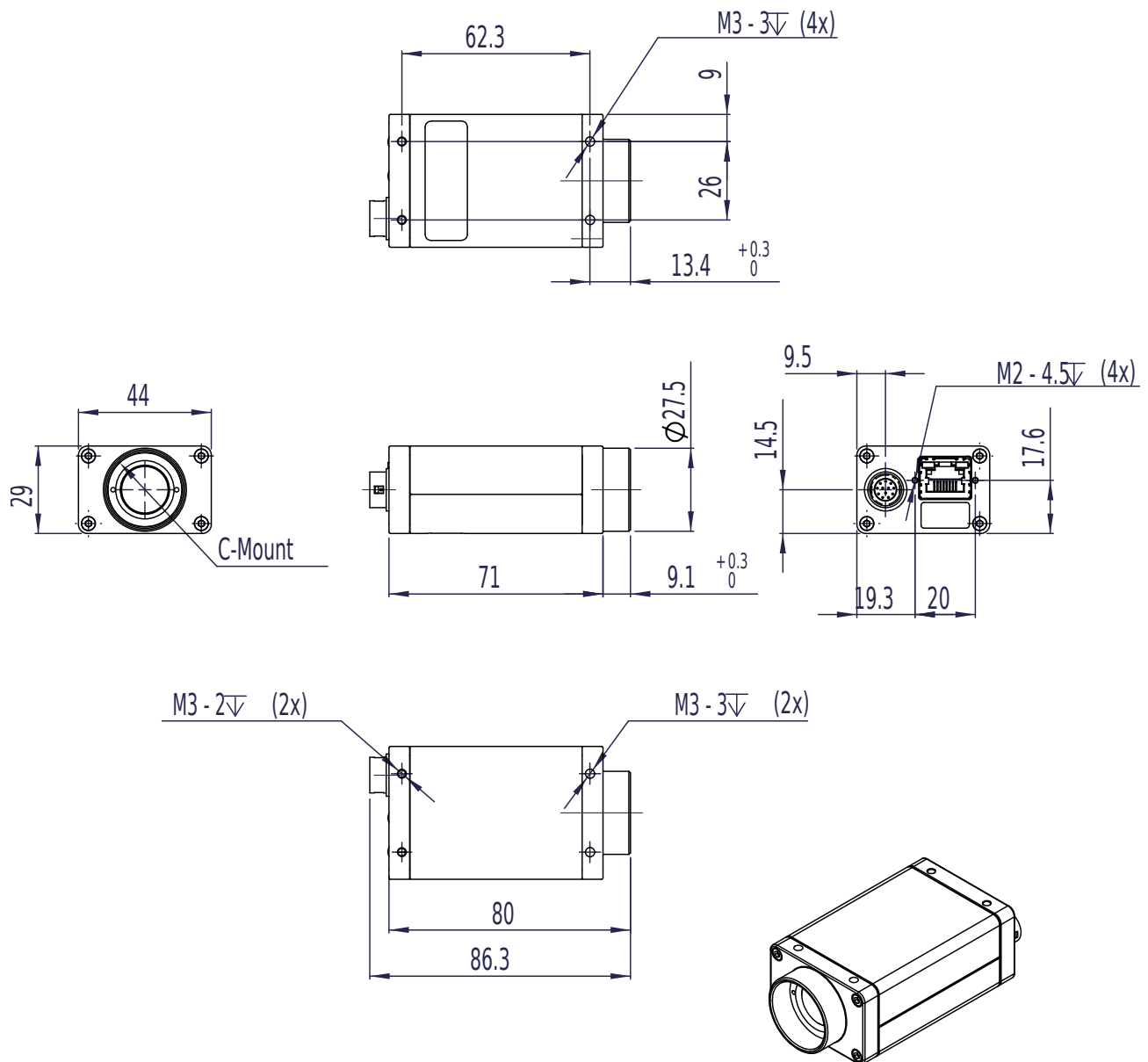
Image control: Other

- Black level
- Color transformation (incl. hue, saturation; color models)
- Decimation
- DPC (defect pixel correction)
- Gamma
- LUT (look-up table)
- Reverse X/Y
- ROI (region of interest)

Camera control

- Acquisition frame rate
- Action commands, incl. ToE (trigger over Ethernet)
- Auto iris
- Bandwidth control
- Event channel
- Firmware update in the field
- I/O and trigger control
- Image chunk data
- PTP (IEEE 1588 Precision Time Protocol)
- Stream hold
- Temperature monitoring
- User sets

Technical drawing



Applications

Manta G-419 is ideal for a wide range of applications including:

- Multimedia and entertainment
- Machine vision
- Security and surveillance
- Metrology and inspection systems
- Industrial image processing