Allied Vision

GigE VISION

Mako
G-419B NIR

- NIR enhanced sensor
- Power over Ethernet
- IEEE 1588 PTP
- Trigger over Ethernet
- Compact design

Small and powerful

Ultra-compact GigE Vision cameras

Mako G-419B NIR with CMOSIS/ams CMV4000 NIR runs 26.0 frames per second at 4.2 MP resolution.

Mako is an attractively priced GigE Vision-compliant camera in a compact rugged industrial housing. Many models include advanced functionalities such as Precision Time Protocol (PTP), Trigger over Ethernet (ToE) Action Commands, and Power over Ethernet (PoE). Screw mount RJ45 connector and multiple I/Os facilitate your straightforward system integration. Mako cameras are also avilable as Near Infrared (NIR) and polarizer variants.

Easy software integration with Allied Vision's Vimba Suite 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.

Allied Vision

Specifications

Interface	IEEE 802.3 1000BASE-T, IEEE 802.3af (PoE)
Resolution	2048 (H) × 2048 (V)
Sensor	CMOSIS/ams CMV4000 NIR
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	26 fps
ADC	12 Bit
Image buffer (RAM)	64 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 NIR models measured at full resolution without optical filter. Contact Sales or AE for more information.

Quantum efficiency at 529 nm	79 %
Quantum efficiency at 850 nm	44 %
Temporal dark noise	13.6 e^-
Saturation capacity	9500 e^-
Dynamic range	56.6 dB
Absolute sensitivity threshold	14.1 e^-

Output

Bit depth	8/12 Bit
Monochrome pixel formats	Mono8, Mono12, Mono12Packed

General purpose inputs/outputs (GPIOs)

Opto-isolated I/Os	1 input, 3 outputs

Operating conditions/dimensions

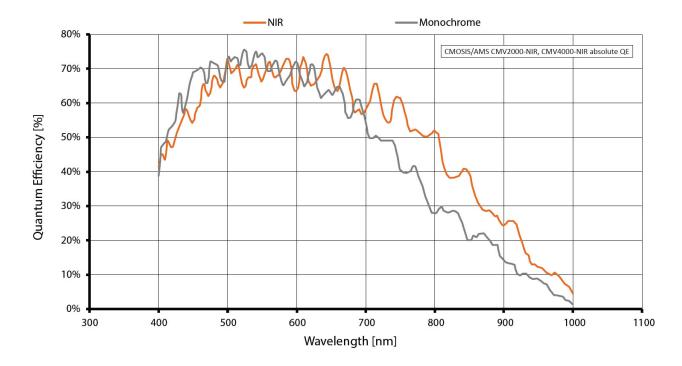|	
Operating temperature	+5 °C to +45 °C housing temperature
Power requirements (DC)	10.8 to 26.4 VDC AUX or 802.3at Type 1 PoE
Power consumption	2.3 W at 12 VDC; 2.7 W PoE
Mass	80 g (with C-Mount)
Body dimensions (L × W × H in mm)	60.5 × 29.2 × 29.2 (including connectors)

Quantum efficiency

Features

Image control: Auto
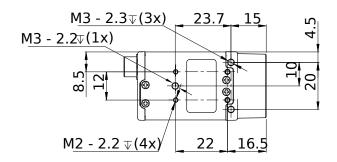
- Auto exposure
- Auto gain

Image control: Other

- Black level
- DPC (defect pixel correction)
- Gamma
- HDR mode
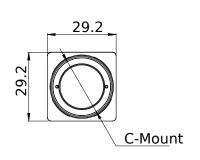- LUT (look-up table)
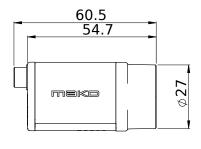- ROI (region of interest)

Camera control

- Acquisition frame rate
- 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
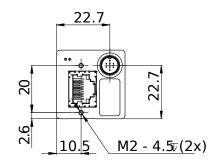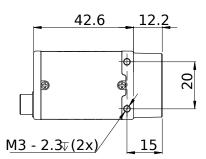- ToE (trigger over Ethernet, action commands)
- User sets

Applications

Mako G is suitable for all typical applications in machine vision:

- Robotics
- Quality control
- Inspection, surveillance
- Industrial imaging
- Machine vision
- Logistics