



- Power over Ethernet
- GS, GRS, RS shutter modes
- Compact design

### Small and powerful

## Ultra-compact GigE Vision cameras

Mako G-131 with Teledyne e2v EV76C560 runs 62.0 frames per second at 1.3 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 available 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.

## Specifications

|                                    |                                           |
|------------------------------------|-------------------------------------------|
| Interface                          | IEEE 802.3 1000BASE-T, IEEE 802.3af (PoE) |
| Resolution                         | 1280 (H) × 1024 (V)                       |
| Sensor                             | Teledyne e2v EV76C560                     |
| Sensor type                        | CMOS                                      |
| Shutter mode                       | RS, Global reset shutter (GRS)            |
| Sensor size                        | Type 1/1.8                                |
| Pixel size                         | 5.3 $\mu\text{m}$ × 5.3 $\mu\text{m}$     |
| Lens mounts (available)            | C-Mount, CS-Mount                         |
| Max. frame rate at full resolution | 62 fps                                    |
| ADC                                | 10 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 monochrome models measured at full resolution without optical filter. Contact Sales or AE for more information.

|                                |                   |
|--------------------------------|-------------------|
| Quantum efficiency at 529 nm   | 58 %              |
| Temporal dark noise            | 25.7 $\text{e}^-$ |
| Saturation capacity            | 9800 $\text{e}^-$ |
| Dynamic range                  | 51.4 dB           |
| Absolute sensitivity threshold | 26.4 $\text{e}^-$ |

### Output

|                                 |                                          |
|---------------------------------|------------------------------------------|
| Bit depth                       | 8-bit or 10-bit                          |
| Monochrome pixel formats        | Mono8, Mono10                            |
| YUV color pixel formats         | YUV411Packed, YUV422Packed, YUV444Packed |
| RGB color pixel formats         | RGB8Packed, BGR8Packed                   |
| Raw color pixel formats (Bayer) | BayerBG8, BayerBG10                      |

### 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

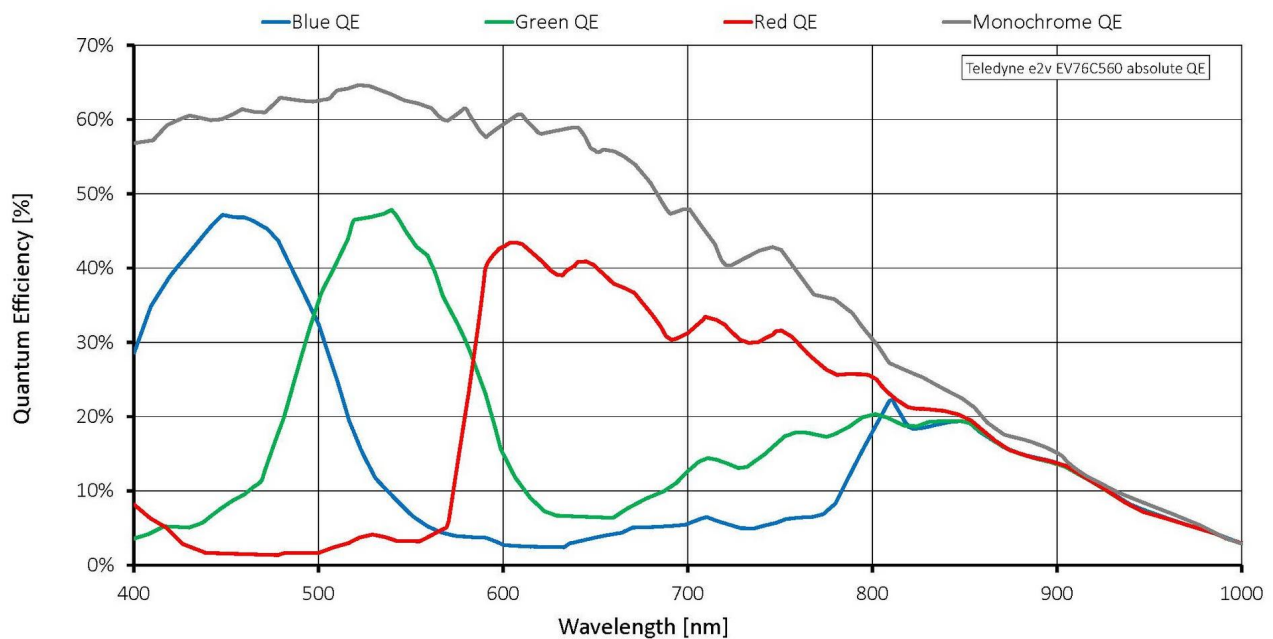
Power requirements (DC)                      10.8 to 26.4 VDC AUX or 802.3at Type 1 PoE

Power consumption                      2.0 W at 12 VDC; 2.2 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
- Auto white balance (color models)

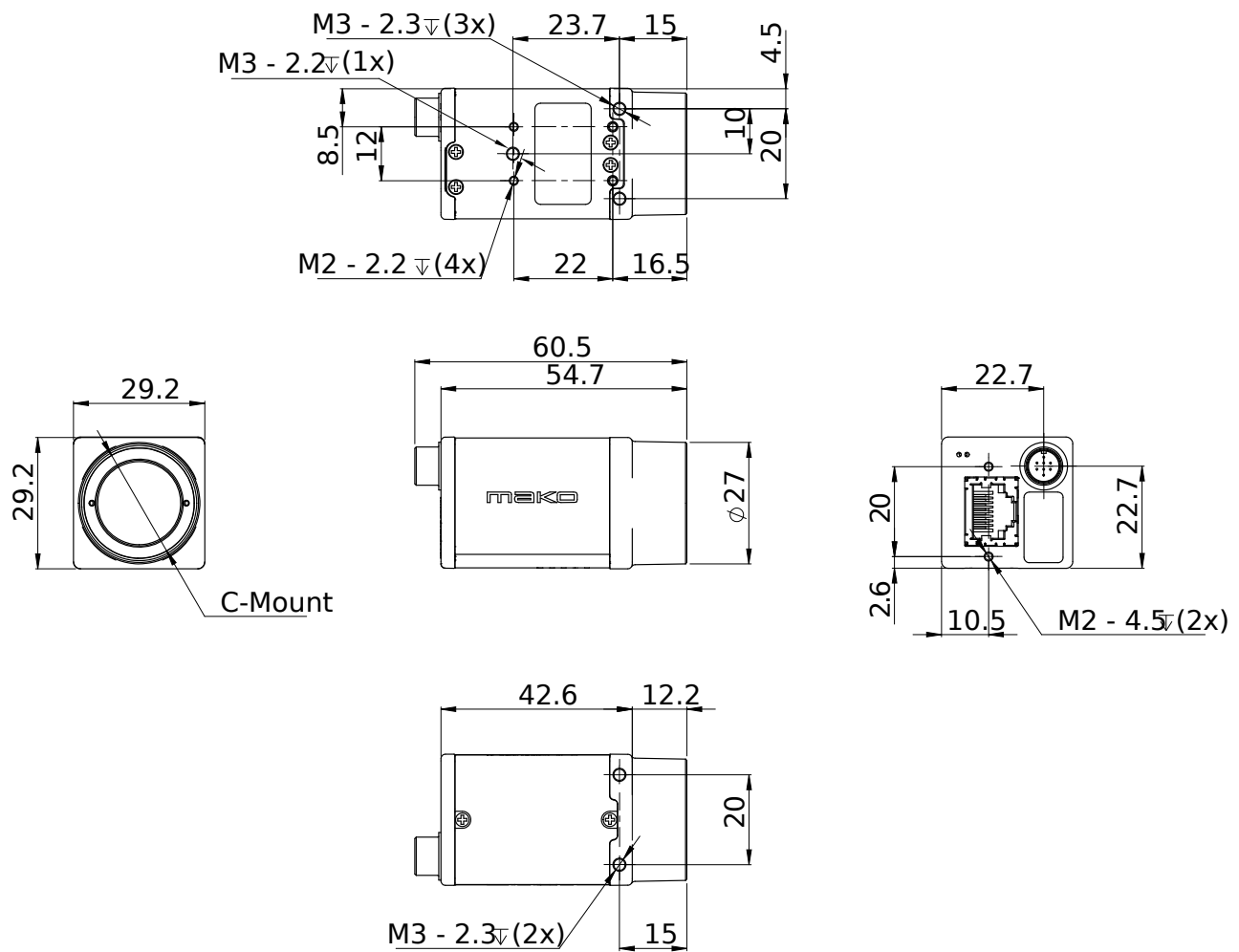
### Image control: Other

- Binning
- 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
- Bandwidth control
- Event channel
- Firmware update in the field
- I/O and trigger control
- Image chunk data
- Stream hold
- Temperature monitoring
- User sets

## Technical drawing



## Applications

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

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