

# Mako G

## G-032



- Ultra-compact design
- Affordable
- Power over Ethernet
- High frame rate

## Description

### GigE camera with Sony ICX424 CCD sensor, 102.3 fps

Mako G-032 is a 0.3 megapixel GigE machine vision camera that incorporates the high quality Type 1/3 (6.0 mm diagonal) Sony ICX424 CCD sensor with HAD technology. At full resolution, this camera runs 102.3 frames per second. With a smaller region of interest, higher frame rates are possible.

Mako G cameras have the same ultra-compact form factor and the same mounting positions as many analog cameras. All models include Power over Ethernet (PoE), three opto-isolated outputs, and a 64 MB image buffer. The image quality profits from the precisely aligned sensor. By default monochrome models ship with no optical filter and color models ship with IRC Hoya C-5000 IR cut filter.

### Benefits and features:

- Monochrome (G-032B) and color (G-032C) models
- GigE Vision interface with Power over Ethernet
- Screw mount RJ45 Ethernet connector for secure operation in industrial environments
- Supports cable lengths up to 100 meters (CAT-5e or CAT-6)
- Comprehensive I/O functionality for simplified system integration
- Popular C-Mount lens mount
- Easy camera mounting via standard M3 threads on top and bottom of housing or optional tripod adapter
- Easy software integration with Allied Vision's [Vimba SDK](#) and compatibility to the most popular [third party image-processing libraries](#).

### Options:

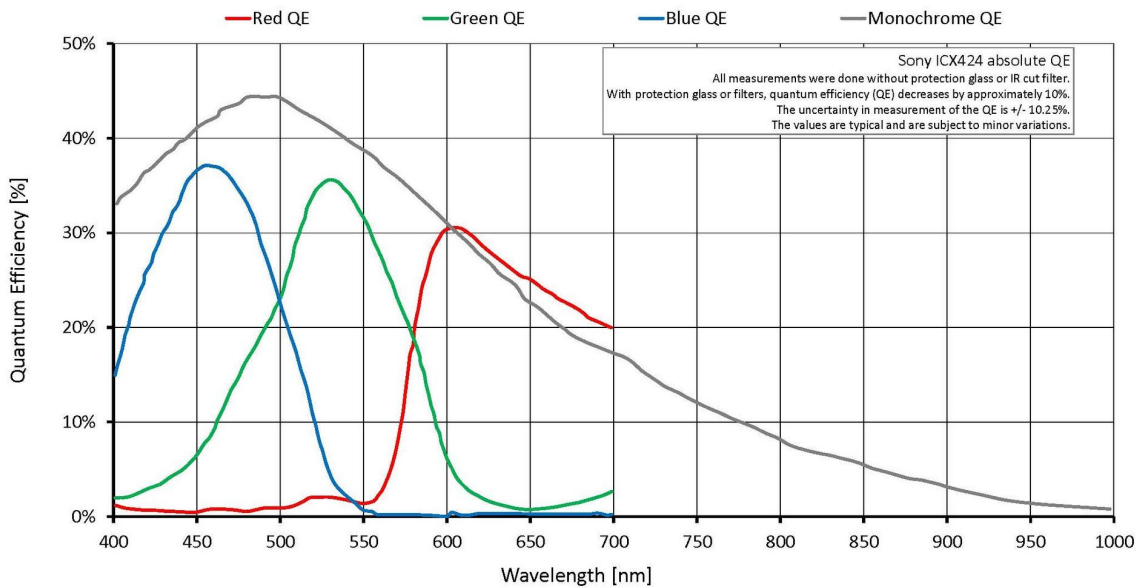
- Available with CS-Mount or M12-Mount adapter
- Available with Protection glass B 270 (ASG), IRC type Jenofilt 217 (IR cut filter), IRC Hoya C-5000 (IR cut filter), IRP RG715 (IR pass filter), IRP RG830 (IR pass filter)



See the [Modular Concept](#) for lens mount and optical filter options.  
 See the [Customization and OEM Solutions](#) webpage for additional options.

## Specifications

<b>Mako G</b>	<b>G-032</b>
Interface	IEEE 802.3 1000BASE-T, IEEE 802.3af (PoE)
Resolution	658 (H) × 492 (V)
Sensor	Sony ICX424
Sensor type	CCD Progressive
Sensor size	Type 1/3
Pixel size	7.4 μm × 7.4 μm
Lens mount (default)	C-Mount
Max. frame rate at full resolution	102.3 fps
ADC	14 bit
Image buffer (RAM)	64 MByte
<b>Output</b>	
Bit depth	8/12 bit
Monochrome pixel formats	Mono8, Mono12, Mono12Packed
YUV color pixel formats	YUV411Packed, YUV422Packed, YUV444Packed
RGB color pixel formats	RGB8Packed, BGR8Packed
Raw pixel formats	BayerRG8, BayerRG12, BayerRG12Packed
<b>General purpose inputs/outputs (GPIOs)</b>	
Opto-isolated I/Os	1 input, 3 outputs
<b>Operating conditions/dimensions</b>	
Operating temperature	+5 °C to +45 °C housing temperature
Power requirements (DC)	12 to 24 VDC AUX or 802.3at Type 1 PoE
Power consumption	2.4 W at 12 VDC; 2.8 W PoE
Mass	80 g
Body dimensions (L × W × H in mm)	60.5 × 29.2 × 29.2 (including connectors)
Regulations	CE: 2014/30/EU (EMC), 2011/65/EU, including amendment 2015/863/EU (RoHS); FCC Class B; CAN ICES-003



## Features

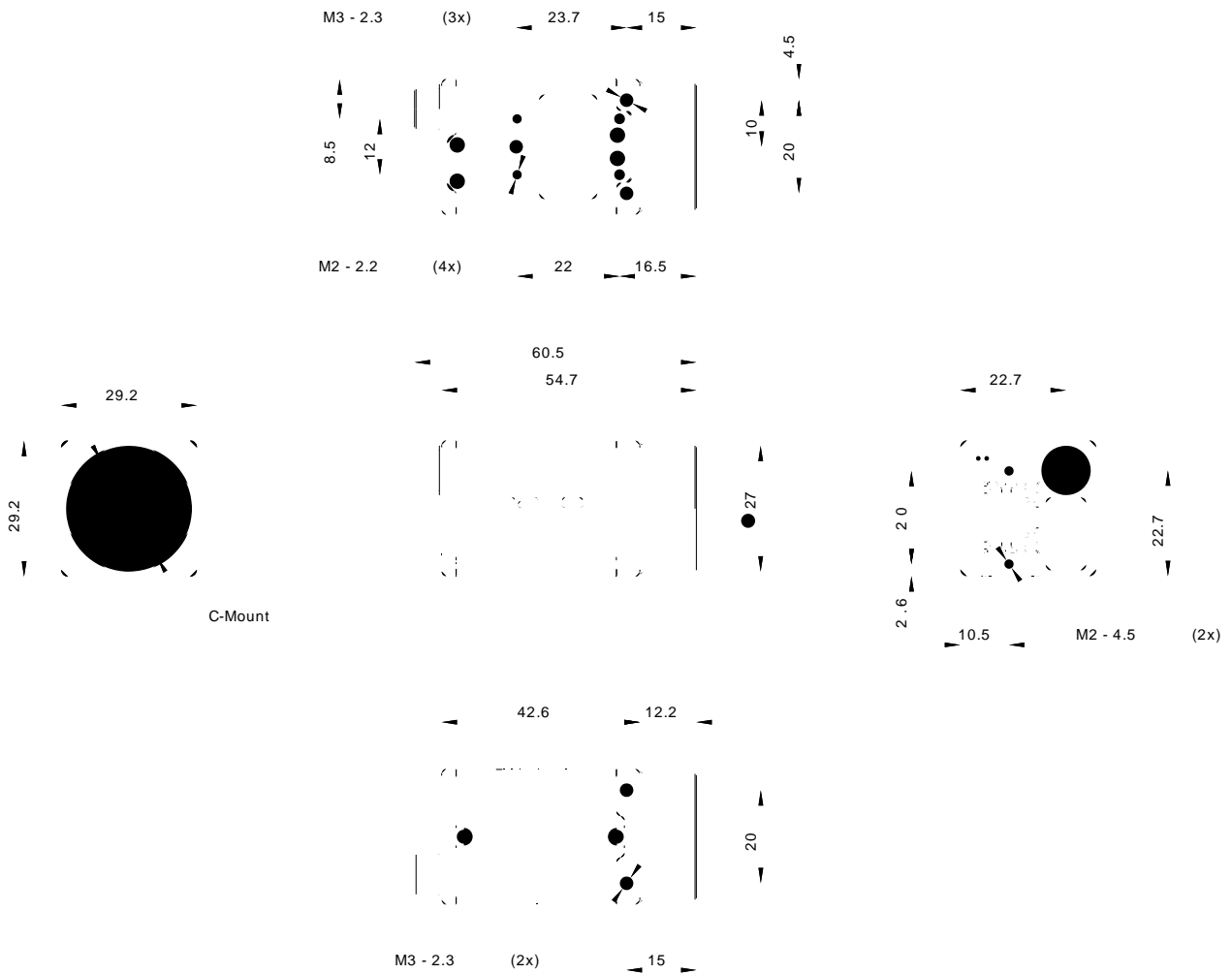
### Image optimization features:

- Auto gain (manual gain control: 0 to 30 dB; 1 dB increments)
- Auto exposure (manual exposure control: 10  $\mu$ s to 93 s; 1  $\mu$ s increments)
- Auto white balance (G-032C only)
- Binning
- Color correction, hue, saturation (G-032C only)
- Gamma correction
- One look-up table (LUT)
- Region of interest (ROI), separate ROI for auto features

### Camera control features:

- Event channel
- Image chunk data
- Storable user sets
- StreamBytesPerSecond (bandwidth control)
- Stream hold
- Sync out modes: Trigger ready, input, exposing, readout, imaging, strobe, GPO
- Temperature monitoring (main board only)

## Technical drawing





## Applications

Mako G-032 is ideal for a wide range of applications including:

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