

# Mako G

## G-032



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

## 基本描述

### 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-032 is offered in both monochrome (G-032B) and color (G-032C) models.

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 MByte 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.

### Options:

- Various optical filter and lens mounts options

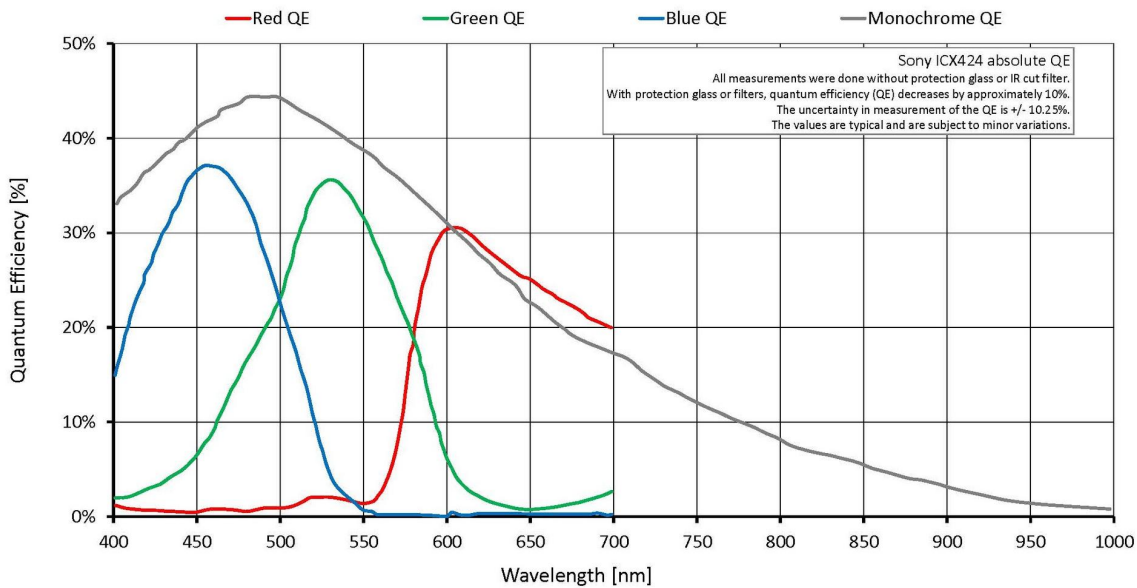
See the [Modular Concept](#) for lens mount, optical filter, and housing design options.  
See the [Customization and OEM Solutions](#) page for additional options.

## 性能参数

Mako G	G-032
接口	IEEE 802.3 1000BASE-T, IEEE 802.3af (PoE)
分辨率	658 (H) × 492 (V)



Mako G	G-032
传感器	Sony ICX424
传感器类型	CCD Progressive
传感器尺寸	Type 1/3
像元尺寸	7.4 $\mu\text{m}$ $\times$ 7.4 $\mu\text{m}$
标准镜头接口	C-Mount
最大满帧帧率	102.3 fps
ADC	14 bit
缓存 (RAM)	64 MByte
非易失性内存 (Flash)	1024 KByte (for selected models only)
输出	
Bit位数	8/12 bit
黑白像素格式	Mono8, Mono12, Mono12Packed
YUV彩色像素格式	YUV411Packed, YUV422Packed, YUV444Packed
RGB彩色像素格式	RGB8Packed, BGR8Packed
原始像素格式	BayerRG8, BayerRG12, BayerRG12Packed
通用输入输出(GPIOs)	
光耦 I/Os	1 input, 3 outputs
工作条件/尺寸	
工作温度	+5 $^{\circ}\text{C}$ to +45 $^{\circ}\text{C}$ housing temperature
电源要求 (DC)	12 to 24 VDC; PoE
功耗	2.4 W at 12 VDC; 2.8 W PoE
重量	80 g
尺寸(L $\times$ W $\times$ H in mm)	60.5 $\times$ 29.2 $\times$ 29.2 (incl. connectors)
符合规范	CE: 2014/30/EU (EMC), 2011/65/EU, including amendment 2015/863/EU (RoHS); FCC Class B; CAN ICES-003



## 特性

### 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 (easy bandwidth control)
- Stream hold
- Sync out modes: Trigger ready, input, exposing, readout, imaging, strobe, GPO
- Temperature monitoring (main board only)
- Non-volatile memory 1024 KByte (for selected models only)

## 外形尺寸





## 应用场景

Mako G-032 is an inexpensive industrial GigE camera with a compact form factor. It is suitable for all typical machine vision applications:

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