

# Mako G

## G-234



- Sony IMX249 CMOS sensor
- Ultra-compact design
- 10-bit or 12-bit sensor readout
- Power over Ethernet

## 基本描述

### 2.35 Megapixel machine vision camera with Sony IMX CMOS sensor

Mako G-234 is a 2.35 megapixel GigE machine vision camera that incorporates the high quality Type 1/1.2 (13.4 mm diagonal) Sony IMX249 CMOS sensor. At full resolution, this camera runs 41.2 frames per second (10-bit sensor readout). With a smaller region of interest, higher frame rates are possible. The Mako G-234 is an ideal replacement for legacy CCD 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.

#### Benefits and features:

- Monochrome (G-234B) and color (G-234C) 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
- Easy camera mounting via standard M3 threads on top and bottom of housing or optional tripod adapter



- Support for popular third party image-processing libraries including Cognex VisionPro, MathWorks MATLAB, National Instruments LabVIEW, Stemmer Imaging Common Vision Blox, MVTec HALCON and MERLIC

## Options:

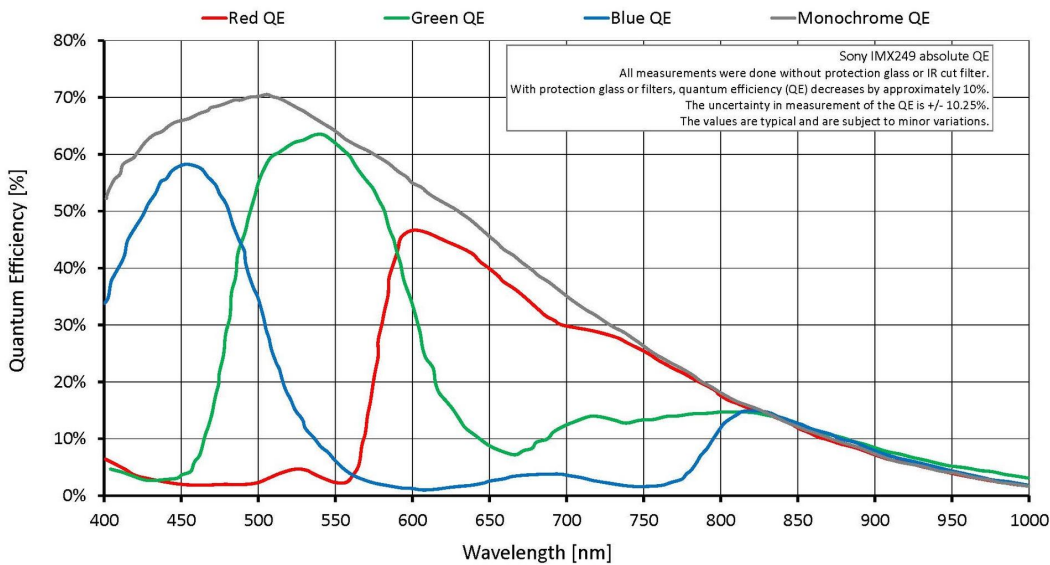
- Available with CS-Mount or CS-Mount with M12-Mount adapter
- Available with Protection glass B 270 (ASG), IRC type Jenofilt 217 (IR cut filter), IRC Hoya C-5000 (IR cut filter), IRP RG715 (IR pass filter), IRP RG830 (IR pass filter)

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

## 性能参数

Mako G	G-234
接口	IEEE 802.3 1000BASE-T, IEEE 802.3af (PoE)
分辨率	1936 (H) × 1216 (V)
传感器	Sony IMX249
传感器类型	CMOS
传感器尺寸	Type 1/1.2
像元尺寸	5.86 μm × 5.86 μm
标准镜头接口	C-Mount
最大满帧帧率	41.2 fps
ADC	12 bit
缓存 (RAM)	64 MByte
非易失性内存 (Flash)	1024 KByte (for selected models only)
输出	
Bit位数	10/12 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 °C to +45 °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

Mako G	G-234
尺寸(L × W × H in mm)	60.5 × 29.2 × 29.2 (including 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 40 dB; 0.1 dB increments)
- Auto exposure (exposure time control varies by pixel format)
- Auto white balance (G-234C only)
- Binning
- Color correction, hue, saturation (G-234C only)
- Decimation
- Gamma correction
- One look-up table (LUT)
- Region of interest (ROI), separate ROI for auto features
- Reverse X/Y

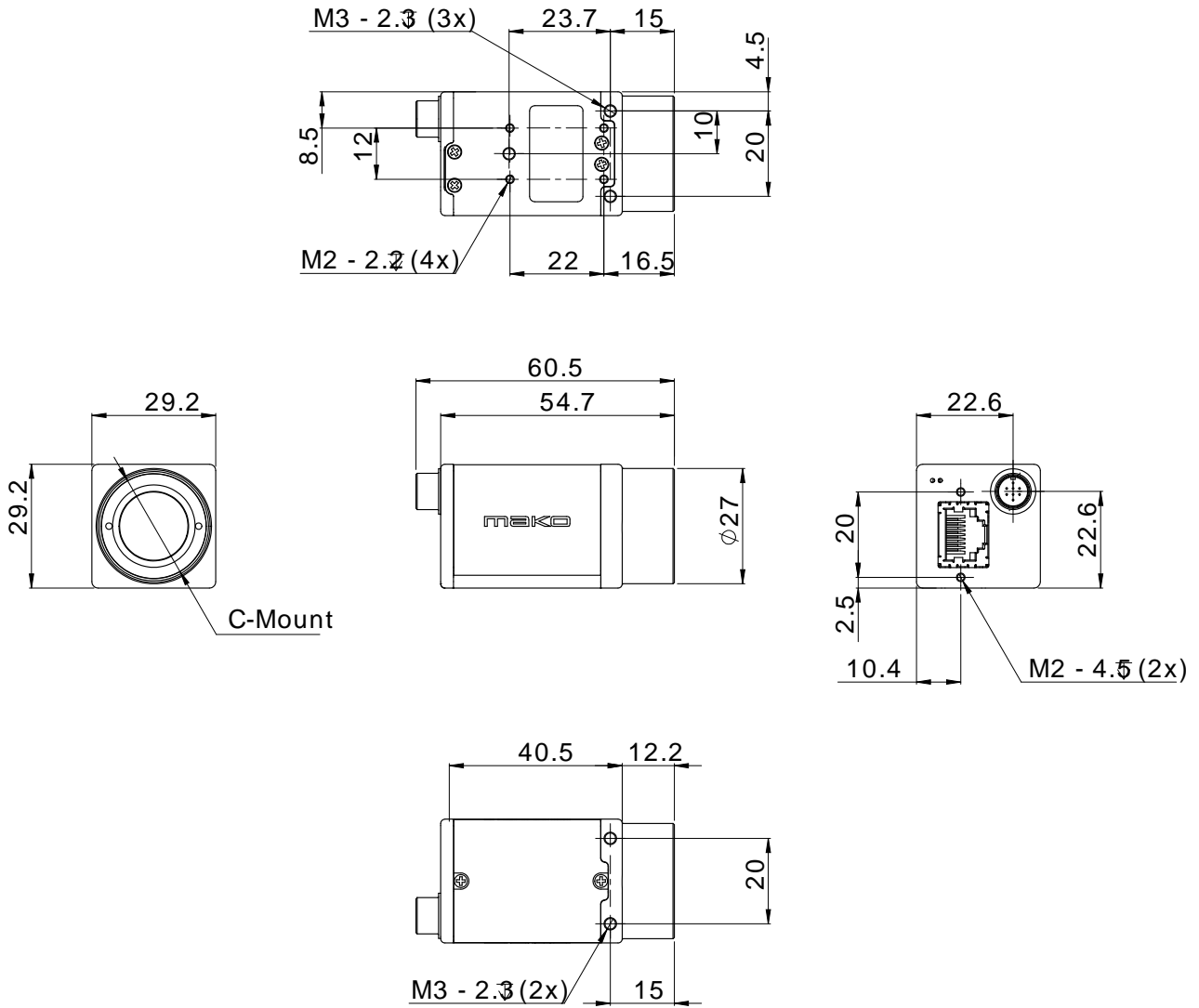
### Camera control features:

- 10-bit or 12-bit sensor readout mode



- 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)
- Non-volatile memory 1024 KByte (for selected models only)

## 外形尺寸





## 应用场景

Mako G-234 is ideal for a wide range of applications including:

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