

Mako G

G-040



- Sony IMX287 CMOS sensor
- Power over Ethernet
- IEEE 1588 PTP
- Trigger over Ethernet

GigE Vision camera featuring the Sony IMX287 CMOS sensor

Mako G-040 is a 0.40 megapixel GigE machine vision camera that incorporates the high quality Type 1/2.9 (6.3 mm diagonal) Sony IMX287 CMOS sensor. At full resolution, this camera runs 286 frames per second. With a smaller region of interest, higher frame rates are possible. The Mako G-040 is an ideal replacement for legacy CCD models.

Mako G cameras have an 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-040B) and color (G-040C) models
- GigE Vision interface with Power over Ethernet
- Screw mount RJ45 Ethernet connector for secure operation in industrial environments
- 电器与电子工程师协会 (IEEE) 1588精确时间协议(PTP)允许网络上多个相机和设备的简单同步
- 通过以太网触发 (ToE) 操作命令允许单个电缆解决方案, 以降低系统成本
- 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](#).
- Available with protection glass, IR cut filter, or IR pass filter

See the [Modular Concept](#) for lens mount and optical filter options.



See the [Customization and OEM Solutions](#) webpage for additional options.

性能参数

Mako G	G-040
接口	IEEE 802.3 1000BASE-T, IEEE 802.3af (PoE)
分辨率	728 (H) × 544 (V)
传感器	Sony IMX287
传感器类型	CMOS
Shutter mode	Global shutter
传感器尺寸	Type 1/2.9
像元尺寸	6.9 μm × 6.9 μm
Lens mounts (available)	C-Mount, CS-Mount, S-Mount
最大满帧帧率	286 fps
ADC	12 Bit
缓存 (RAM)	64 MByte
非易失性内存 (Flash)	1024 KByte (for selected models only)

成像性能

成像性能数据是基于欧洲机器视觉协会 (EMVA) 1288发布的3.1版图像传感器和像机特征描述标准中的评估方法。测量值是在没有光学滤波片的全分辨率下，测量单色模型的典型值。请联系销售或工程师了解更多信息。

在波长为529nm下，量子转换效率	64 %
暗噪声	3.2 e ⁻
饱和电子数	21200 e ⁻
动态范围	74.4 dB
绝对灵敏度阈值	4.1 e ⁻

输出

Bit位数	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)

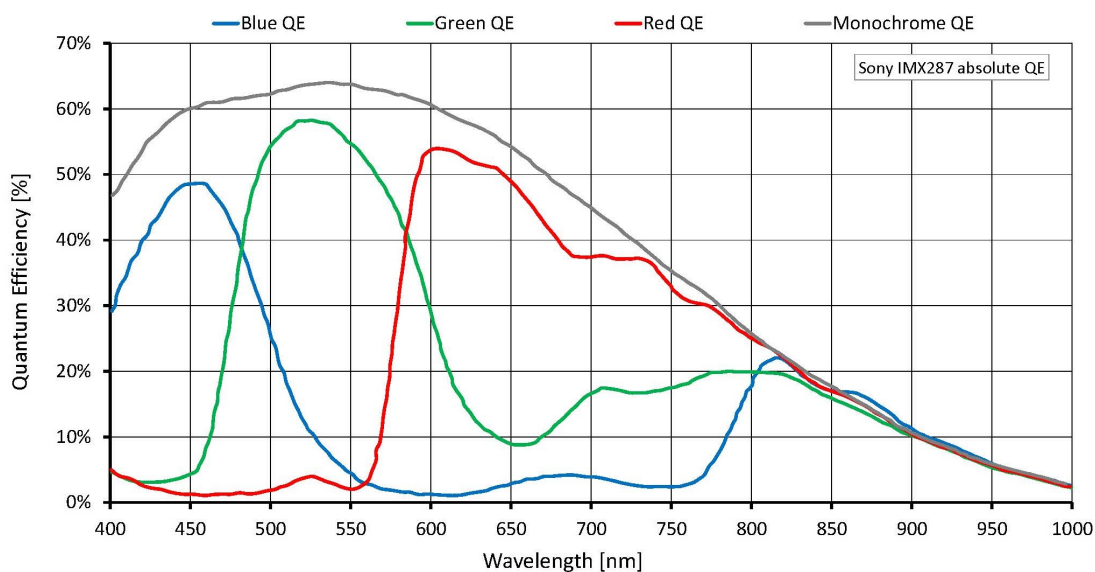
光耦 I/Os	1 input, 3 outputs
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工作条件/尺寸

工作温度	+5 °C to +45 °C housing temperature
电源要求 (DC)	12 to 24 VDC AUX or 802.3at Type 1 PoE
功耗	2.43 W at 12 VDC; 2.69 W PoE
重量	80 g (with C-Mount)

Mako G	G-040
尺寸 (L × W × H in mm)	60.5 × 29.2 × 29.2 (含连接器)
符合规范	CE: 2014/30/EU (EMC), 2011/65/EU, including amendment 2015/863/EU (RoHS); FCC Class B; CAN ICES-003

量子转换效率



特性

Image optimization features:

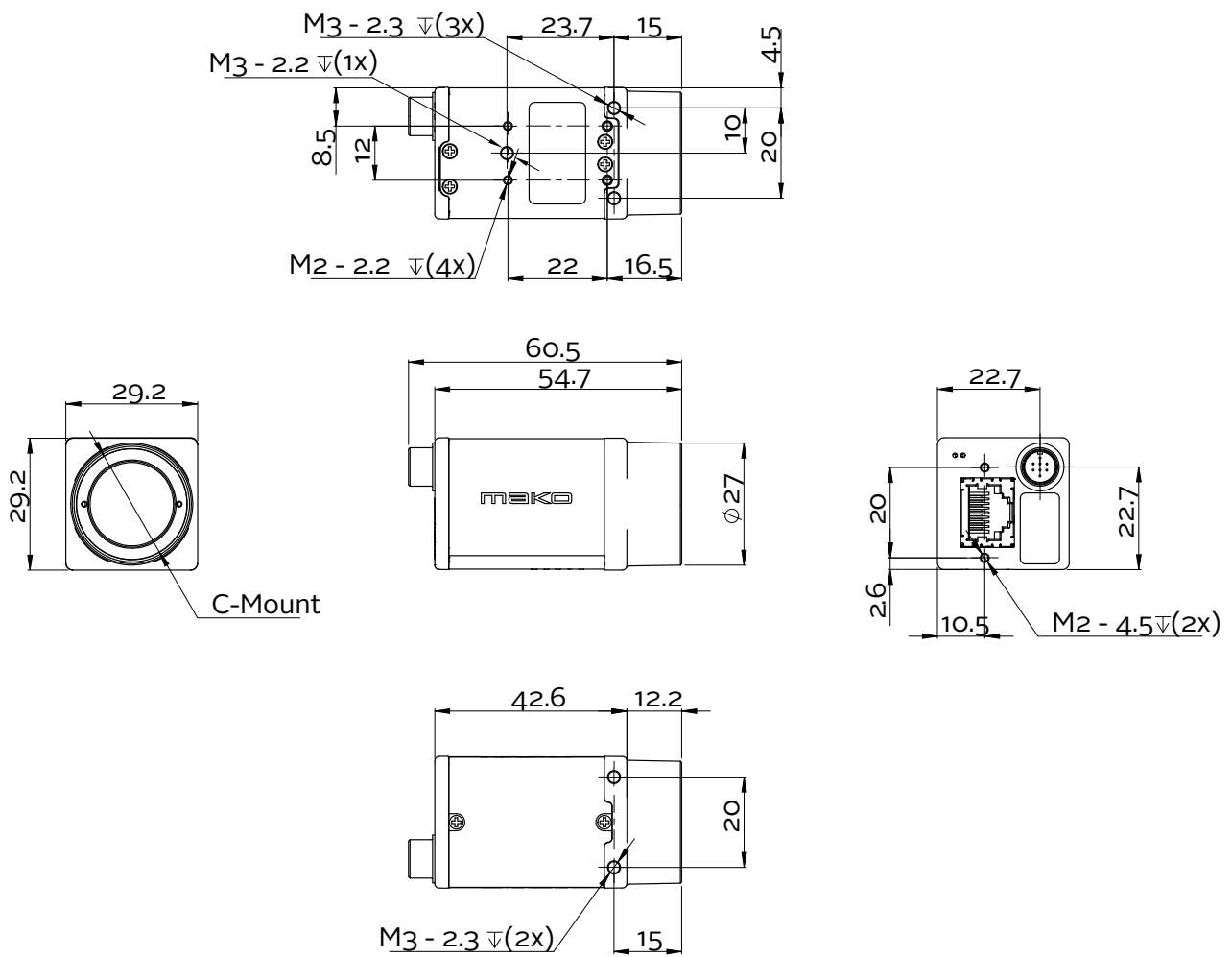
- Auto gain (manual gain control: 0 to 40 dB; 0.1 dB increments)
- Auto exposure (exposure time control varies by pixel format)
- Auto white balance (G-040C only)
- Binning
- Color transformation, hue, saturation (G-040C only)
- Decimation
- Gamma correction
- One look-up table (LUT)
- Region of interest (ROI), separate ROI for auto features



Camera control features:

- Event channel
- Image chunk data
- IEEE1588精确时间协议
- Storable user sets
- StreamBytesPerSecond (bandwidth control)
- Stream hold
- Sync out modes: Trigger ready, input, exposing, readout, imaging, strobe, GPO
- Temperature monitoring (main board)
- 通过以太网触发 (ToE) 操作命令
- Non-volatile memory 1024 KByte (for selected models only)

外形尺寸





应用场景

Mako G-040 is suitable for a wide range of applications including:

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