

Mako G

G-158



- Power over Ethernet
- IEEE 1588 PTP
- Trigger over Ethernet
- Ultra-compact design

GigE Vision camera featuring the Sony IMX273 CMOS sensor

Mako G-158 is a 1.58 megapixel GigE machine vision camera that incorporates the high quality Type 1/2.9 (6.3 mm diagonal) Sony IMX273 CMOS sensor. At full resolution, this camera runs 75.2 frames per second. With a smaller region of interest, higher frame rates are possible. The Mako G-158 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-158B) and color (G-158C) models
- GigE Vision interface with Power over Ethernet
- Screw mount RJ45 Ethernet connector for secure operation in industrial environments
- IEEE 1588 Precision Time Protocol (PTP) allows for easy synchronization of multiple cameras and devices on network
- Trigger over Ethernet (ToE) Action Commands allow for a single cable solution to reduce system costs
- 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.

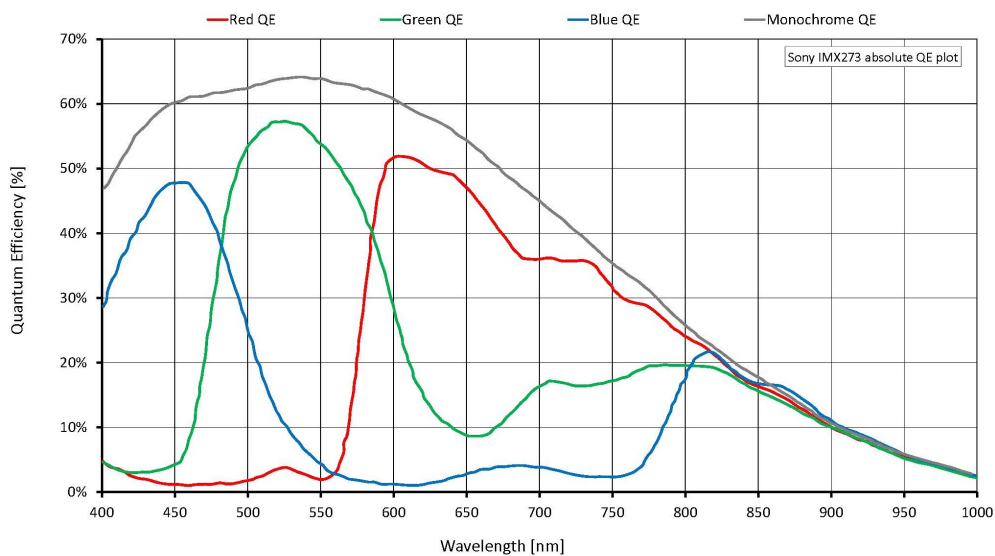
See the [Customization and OEM Solutions](#) webpage for additional options.

Specifications

Mako G	G-158
インターフェイス	IEEE 802.3 1000BASE-T, IEEE 802.3af (PoE)
解像度	1456 (H) × 1088 (V)
センサー	Sony IMX273
Sensor type	CMOS
Shutter mode	Global shutter
センサーサイズ	Type 1/2.9
ピクセルサイズ	3.45 μm × 3.45 μm
Lens mounts (available)	C-Mount, CS-Mount, M12-Mount
フレームレート (フル解像度)	75.2 fps
ADC	12 Bit
Image buffer (RAM)	64 MByte
撮影性能	
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.	
量子効率 (529nm)	64 %
ダークノイズ	2.2 e ⁻
飽和電荷量	10500 e ⁻
ダイナミックレンジ	71.5 dB
限界感度	2.8 e ⁻
Output	
Bit depth	12 Bit
ビデオフォーマット(Mono)	Mono8, Mono12, Mono12Packed
ビデオフォーマット(YUV)	YUV411Packed, YUV422Packed, YUV444Packed
ビデオフォーマット(RGB)	RGB8Packed, BGR8Packed
ビデオフォーマット(Raw)	BayerRG8, BayerRG12, BayerRG12Packed
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)	12 to 24 VDC AUX or 802.3at Type 1 PoE

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消費電力	2.43 W at 12 VDC; 2.68 W PoE
Mass	80 g (with C-Mount)
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

Quantum efficiency



Features

Image optimization features:

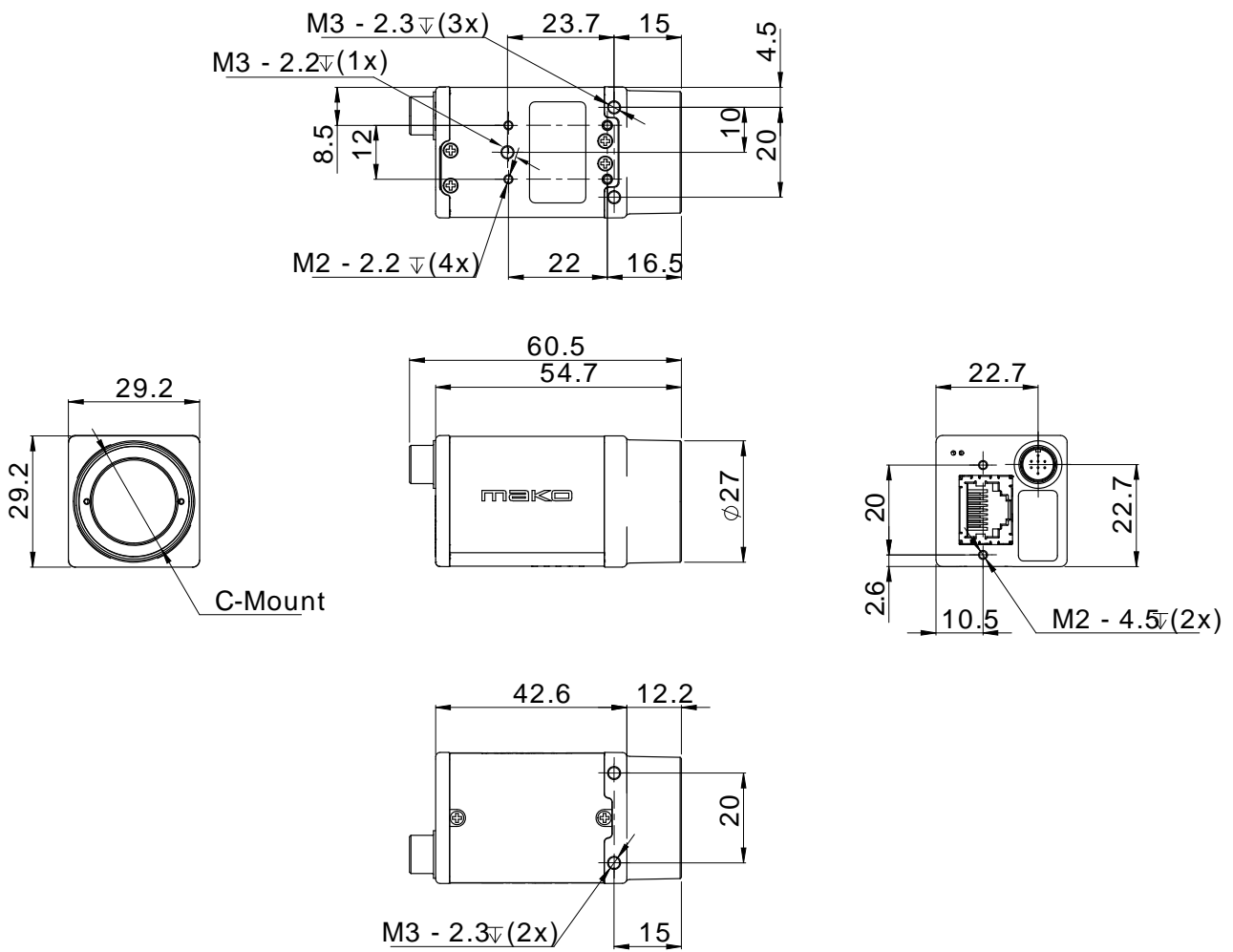
- Auto gain (manual gain control: 0 to 40 dB; 0.1 dB increments)
- Auto exposure (exposure time control varies by pixel format)
- Auto white balance (G-158C only)
- Binning
- Color transformation, hue, saturation (G-158C only)
- Decimation
- Gamma correction
- One look-up table (LUT)
- Region of interest (ROI), separate ROI for auto features



Camera control features:

- Event channel
- Image chunk data
- IEEE 1588 Precision Time Protocol (PTP)
- Storable user sets
- StreamBytesPerSecond (bandwidth control)
- Stream hold
- Sync out modes: Trigger ready, input, exposing, readout, imaging, strobe, GPO
- Temperature monitoring (main board)
- Trigger over Ethernet (ToE) Action Commands

Technical drawing





Applications

Mako G-158 is suitable for a wide range of applications including:

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