

Manta

G-235



- Latest Sony CMOS sensor
- Power over Ethernet option
- Angled-head and board level variants
- Video-iris lens control

Description

GigE Vision camera featuring the Sony IMX174 CMOS sensor

Manta G-235 is a machine vision camera that incorporates the high quality Type 1/1.2 (13.4 mm diagonal) Sony IMX174 CMOS sensor with Pregius global shutter technology. At full resolution, this camera runs 50.7 frames per second. With a smaller region of interest, higher frame rates are possible. The Manta is one of Allied Vision's versatile GigE Vision cameras with a wide range of features. Particular highlights are the three look-up tables, sophisticated color correction capabilities, a robust metal housing, and many modular options. By default monochrome models ship with protection glass B 270 (ASG) and color models ship with an IRC Hoya C-5000 IR cut filter.

Benefits and features:

- Monochrome (G-235B) and color (G-235C) models
- GigE Vision interface with Power over Ethernet option
- Screw mount RJ45 Ethernet connector for secure operation in industrial environments
- Supports cable lengths up to 100 meters (CAT-5e or CAT-6)
- Trigger over Ethernet (ToE) Action Commands allow for a single cable solution to reduce system costs
- 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 Power over Ethernet (PoE) compliant interface
- Available with CS-Mount or M12-Mount adapter

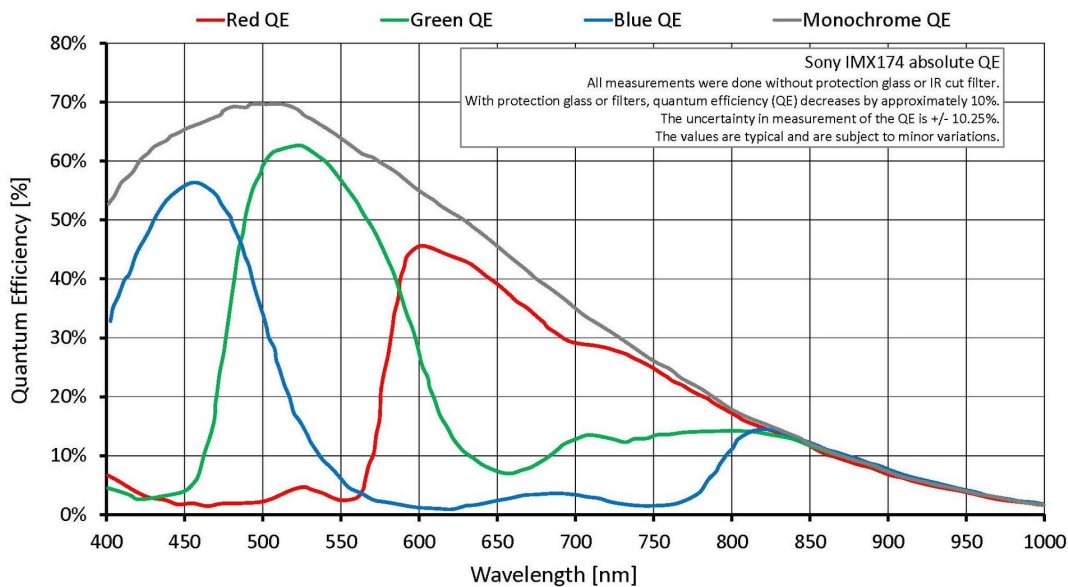


- Available with Protection glass B 270 (ASG), IRC type Jenofilt 217 (IR cut filter), IRC Hoya C-5000 (IR cut filter), IRP RG715 (IR pass filter), IRP RG830 (IR pass filter)
- Available with various angled-head housings or board level version
- Available with white medical design

See the [Modular Concept](#) for lens mount, housing variants, optical filters, case design, and other modular options. See the [Customization and OEM Solutions](#) webpage for additional options.

Specifications

| Manta | G-235 |
|---|---|
| Interface | IEEE 802.3 1000BASE-T, IEEE 802.3af (PoE) optional |
| Resolution | 1936 (H) × 1216 (V) |
| Sensor | Sony IMX174 |
| Sensor type | CMOS |
| Sensor size | Type 1/1.2 |
| Pixel size | 5.86 μm × 5.86 μm |
| Lens mount (default) | C-Mount |
| Max. frame rate at full resolution | 50.7 fps |
| ADC | 12 bit |
| Image buffer (RAM) | 128 MByte |
| Output | |
| Bit depth | 8/12 bit |
| Monochrome pixel formats | Mono8, Mono12Packed, Mono12 |
| YUV color pixel formats | YUV411Packed, YUV422Packed, YUV444Packed |
| RGB color pixel formats | RGB8Packed, BGR8Packed |
| Raw pixel formats | BayerRG8, BayerRG12, BayerRG12Packed |
| General purpose inputs/outputs (GPIOs) | |
| Opto-isolated I/Os | 2 inputs, 2 outputs |
| RS232 | 1 |
| Operating conditions/dimensions | |
| Operating temperature | +5 °C to +45 °C ambient (without condensation) |
| Power requirements (DC) | 8 to 30 VDC; PoE |
| Power consumption | 2.8 W at 12 VDC; 3.3 W PoE |
| Mass | 190 g; 200 g (PoE) |
| Body dimensions (L × W × H in mm) | 86.4 × 44 × 29 (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:

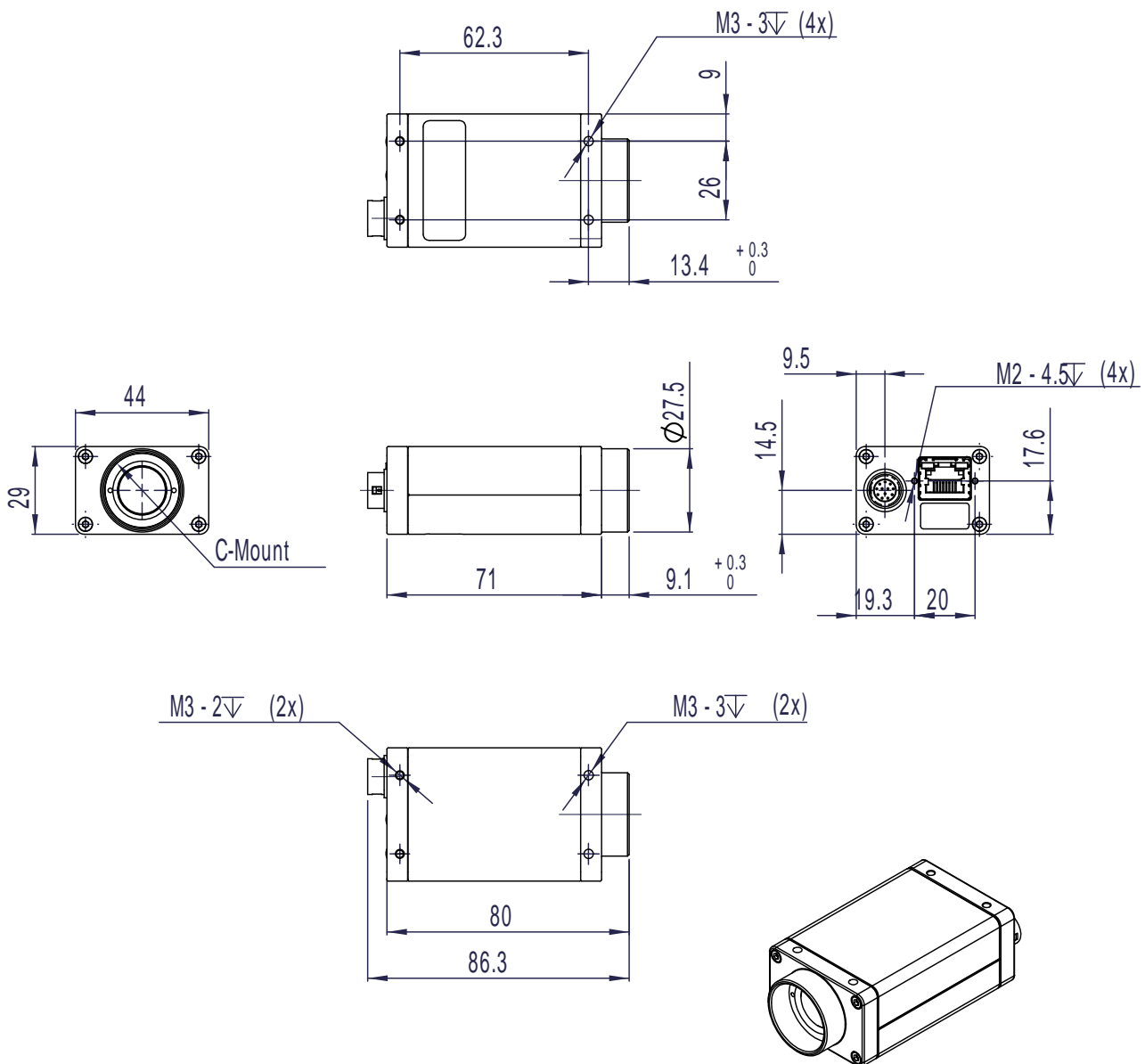
- Auto gain (manual gain control: 0 to 40 dB; 0.1 dB increments)
- Auto exposure (exposure time control varies by pixel format)
- Auto white balance (G-235C only)
- Binning
- Black level (offset)
- Color correction, hue, saturation (G-235C only)
- Decimation
- Gamma correction
- Three look-up tables (LUTs)
- Region of interest (ROI), separate ROI for auto features
- Reverse X/Y

Camera control features:

- Auto-iris (video type)
- Event channel
- Image chunk data
- IEEE 1588 Precision Time Protocol
- Storable user sets
- StreamBytesPerSecond (easy 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

Manta G-235 is ideal for a wide range of applications including:

- Machine Vision
- Broadcast analysis requiring Full HD such as sports analytics
- Industrial inspection
- Security and surveillance
- Intelligent traffic solutions (ITS), traffic (traffic monitoring, speed enforcement, toll collection)
- Low light or high sensitivity conditions
- Outdoor applications with dynamic lighting situations