

Manta

G-507



- Sony IMX264 CMOS sensor
- Power over Ethernet option
- Angled-head and board level variants
- Video-iris lens control

Description

5.1 Megapixel machine vision camera with GigE interface

Manta G-507 is a 5.1 Megapixel machine vision camera with a GigE compliant Gigabit Ethernet port and Hirose I/O port. Manta G-507 incorporates the high quality Type 2/3 (11.1 mm diagonal) Sony IMX264 CMOS sensor with Pregius global shutter technology. At full resolution, this camera runs 23.7 frames per second. With a smaller region of interest, higher frame rates are possible. The Manta G-507 is an ideal replacement for legacy CCD models.

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-507B) and color (G-507C) 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

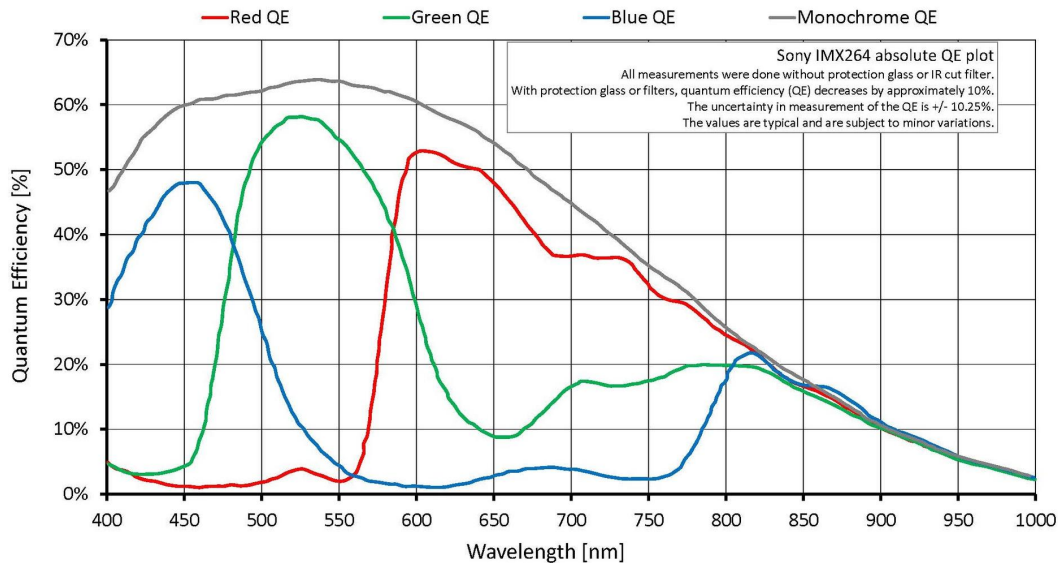
Manta	G-507
Interface	IEEE 802.3 1000BASE-T, IEEE 802.3af (PoE) optional
Resolution	2464 (H) × 2056 (V)
Sensor	Sony IMX264
Sensor type	CMOS
Sensor size	Type 2/3
Pixel size	3.45 μm × 3.45 μm
Lens mount (default)	C-Mount
Max. frame rate at full resolution	23.7 fps
ADC	12 bit
Image buffer (RAM)	128 MByte
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; 3.0 W PoE
Mass	190 g; 200 g (PoE)
Body dimensions (L × W × H in mm)	86.3 × 44 × 29 (including connectors)

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Regulations

G-507

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; 1 dB increments)
- Auto exposure (exposure time control varies by pixel format)
- Auto white balance (G-507C only)
- Binning
- Black level (offset)
- Color correction, hue, saturation (G-507C only)
- Decimation
- Gamma correction
- Three look-up tables (LUTs)
- Region of interest (ROI), separate ROI for auto features
- Reverse X/Y

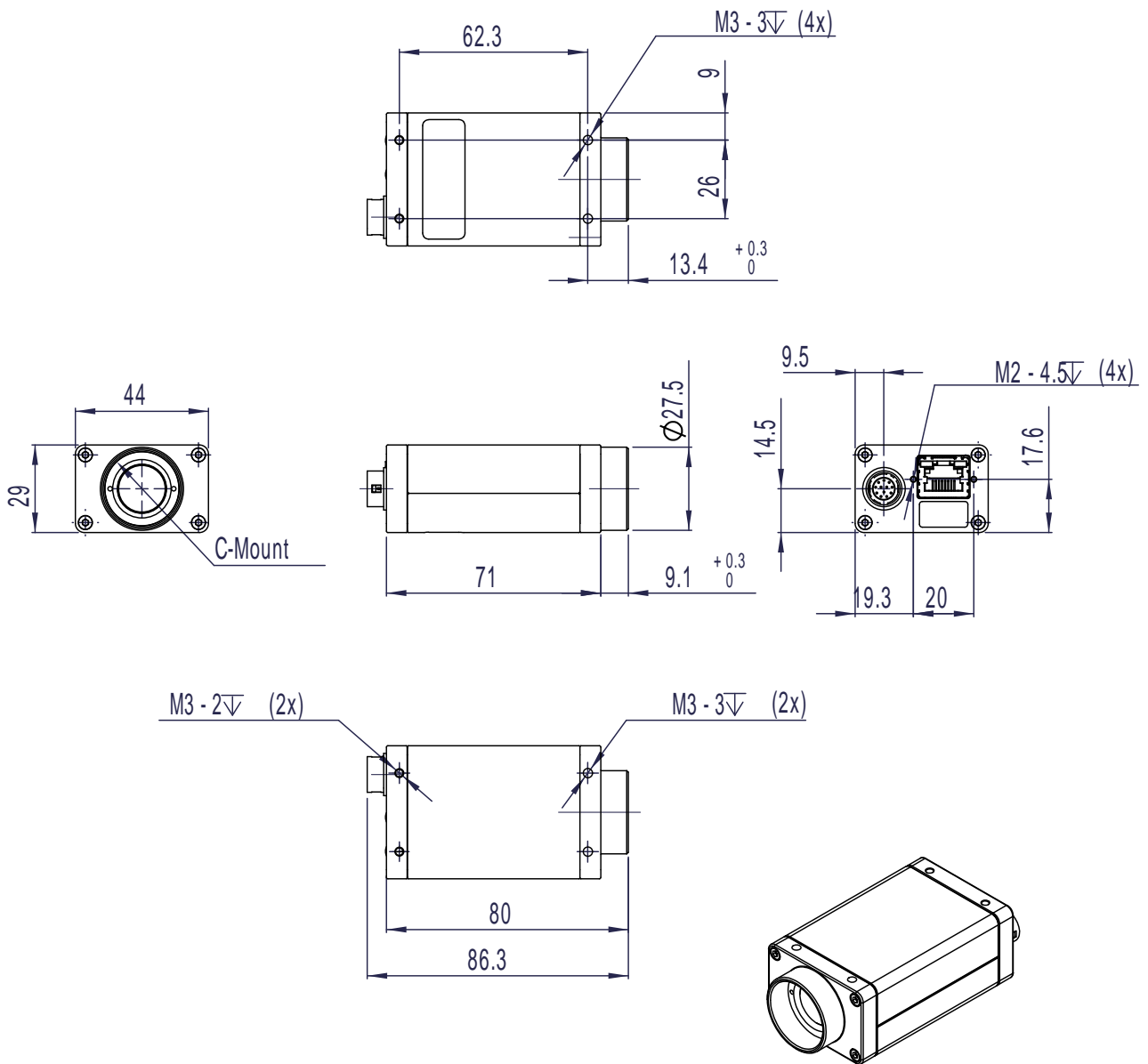
Camera control features:

- Auto-iris (video type)



- Event channel
- Image chunk data
- IEEE 1588 Precision Time Protocol
- Storable user sets
- StreamBytesPerSecond (easy bandwidth control)
- StreamHold
- 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-507 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