

# Manta

## G-505



- Versatile 5 Megapixel camera
- 15 fps at full resolution
- Power over Ethernet option
- Video-iris lens control

## Description

### GigE Vision camera with the 5 Megapixel Sony ICX625 CCD sensor

Manta G-505 is a 5.0 Megapixel machine vision camera with a GigE compliant Gigabit Ethernet port and Hirose I/O port. Manta G-505 incorporates the high quality Type 2/3 (11.016 mm diagonal) Sony ICX625 CCD sensor with Super HAD CCD technology and global shutter. At full resolution, this camera runs 15.0 frames per second. With a smaller region of interest, higher frame rates are possible.

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-505B) and color (G-505C) 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 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)
- Available with white medical design

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

## Specifications

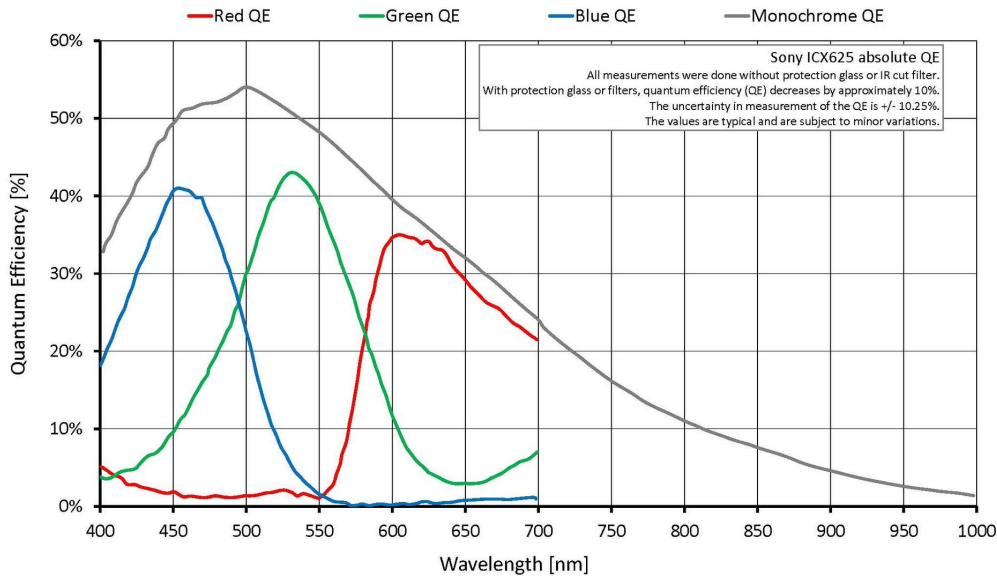
<b>Manta</b>	<b>G-505</b>
Interface	IEEE 802.3 1000BASE-T, IEEE 802.3af (PoE) optional
Resolution	2452 (H) × 2056 (V)
Sensor	Sony ICX625
Sensor type	CCD Progressive
Sensor size	Type 2/3
Pixel size	3.45 μm × 3.45 μm
Lens mount (default)	C-Mount
Max. frame rate at full resolution	15 fps
ADC	14 bit
Image buffer (RAM)	128 MByte
<b>Output</b>	
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
<b>General purpose inputs/outputs (GPIOs)</b>	
Opto-isolated I/Os	2 inputs, 2 outputs
RS232	1
<b>Operating conditions/dimensions</b>	
Operating temperature	+5 °C to +45 °C ambient (without condensation)
Power requirements (DC)	8 to 30 VDC AUX or 802.3af PoE
Power consumption	3.9 W at 12 VDC; 4.5 W PoE
Mass	190 g; 200 g (PoE)
Body dimensions (L × W × H in mm)	86.3 × 44 × 29 (including connectors)

## Manta

Regulations

## G-505

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 31 dB; 1 dB increments)
- Auto exposure (49  $\mu$ s to 38 s; 1  $\mu$ s increments)
- Auto white balance (G-505C only)
- Binning
- Black level (offset)
- Color correction, hue, saturation (G-505C only)
- Decimation
- Gamma correction
- Three look-up tables (LUTs)
- Region of interest (ROI), separate ROI for auto features
- Reverse X

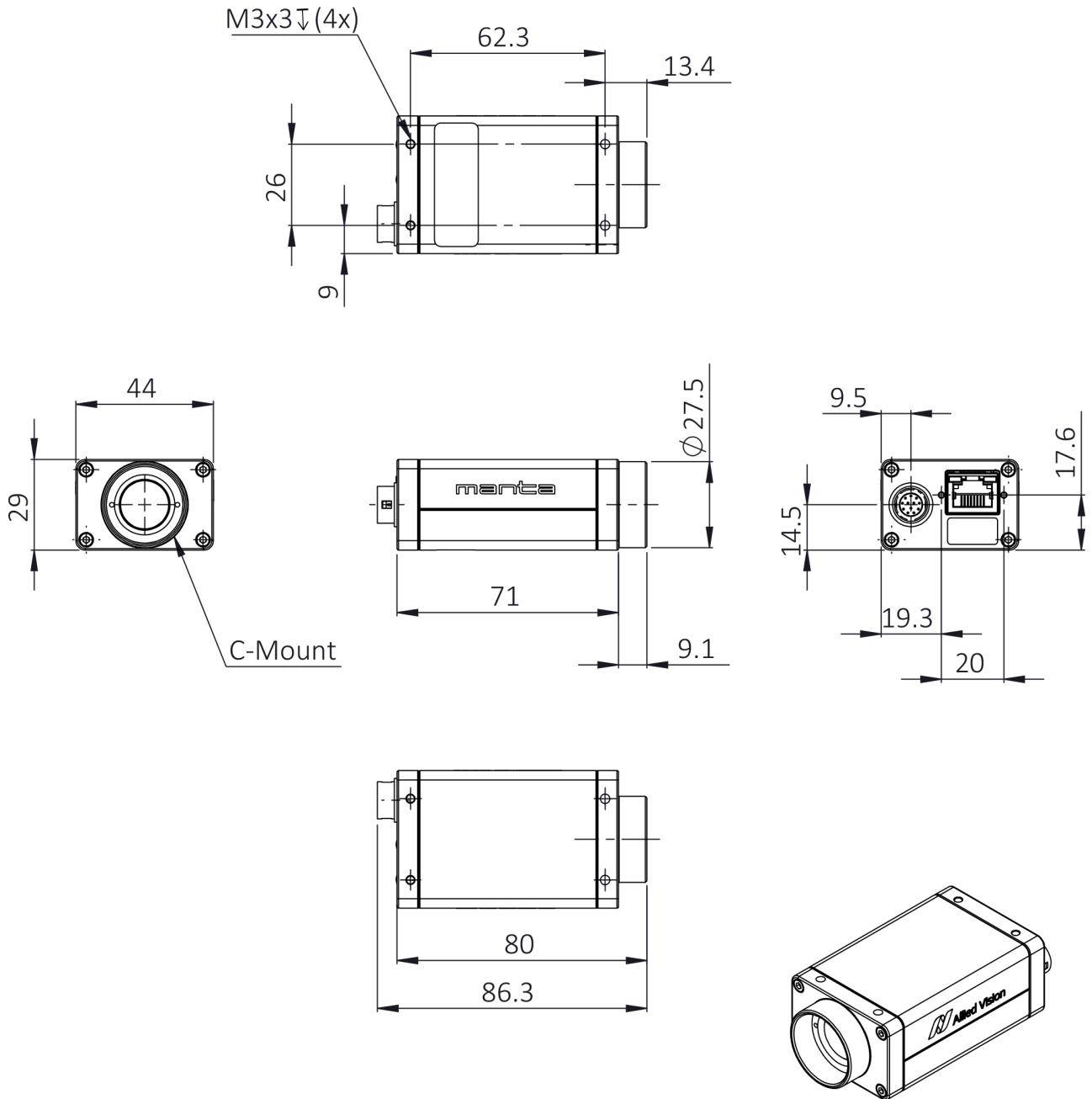
### Camera control features:

- 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-505 is ideal for a wide range of applications including:

- Machine vision
- Inspection and quality control
- Microscopy
- Intelligent traffic solutions (ITS)
- Automation
- Logistics