

Manta

G-505



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

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.

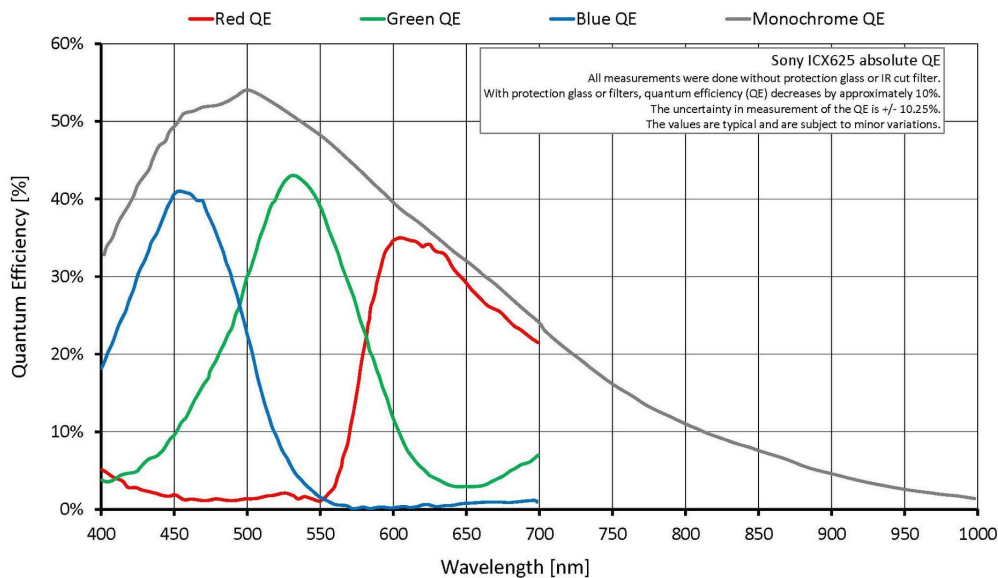
Specifications

Manta	G-505
インターフェイス	IEEE 802.3 1000BASE-T, IEEE 802.3af (PoE) optional
解像度	2452 (H) × 2056 (V)
センサー	Sony ICX625
Sensor type	CCD Progressive
センサーサイズ	Type 2/3
ピクセルサイズ	3.45 μm × 3.45 μm
レンズマウント (標準搭載)	C-Mount
フレームレート (フル解像度)	15 fps
ADC	14 bit
Image buffer (RAM)	128 MByte
Imaging performance	HEADLINE-IP

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.

Quantum efficiency at 529 nm	57 %
Temporal dark noise	8.8 e [−]
Saturation capacity	7500 e [−]
Dynamic range	58.1 dB
Absolute sensitivity threshold	9.3 e [−]
	Output
Bit depth	8/12 Bit
ビデオフォーマット(Mono)	Mono8, Mono12Packed, Mono12
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	2 inputs, 2 outputs

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RS232	1
Operating conditions/dimensions	
Operating temperature	+5 °C to +45 °C ambient (without condensation)
Power requirements (DC)	8 to 30 VDC AUX or 802.3af PoE
消費電力	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)
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 31 dB; 1 dB increments)
- Auto exposure (49 μ s to 38 s; 1 μ s increments)
- Auto white balance (G-505C only)
- Binning
- Black level (offset)
- Color correction, hue, saturation (G-505C only)
- Decimation
- Gamma correction

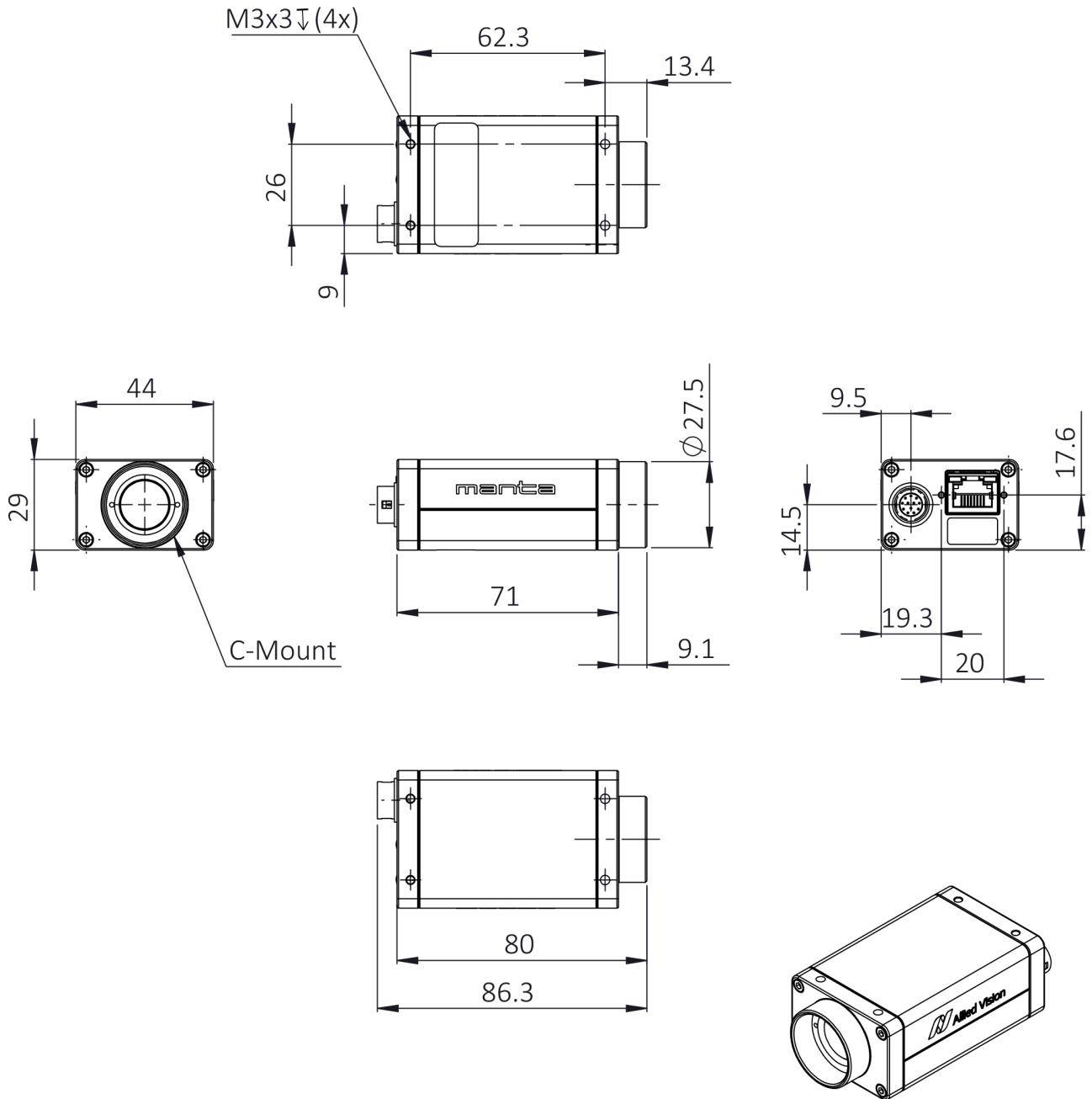


- Three look-up tables (LUTs)
- Region of interest (ROI), separate ROI for auto features
- Reverse X

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