Allied Vision

Manta
G-507

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

Description

GigE Vision camera featuring the Sony IMX264 CMOS sensor, Pregius global shutter

Manta G-507B/G-507C is a machine vision camera that 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 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.
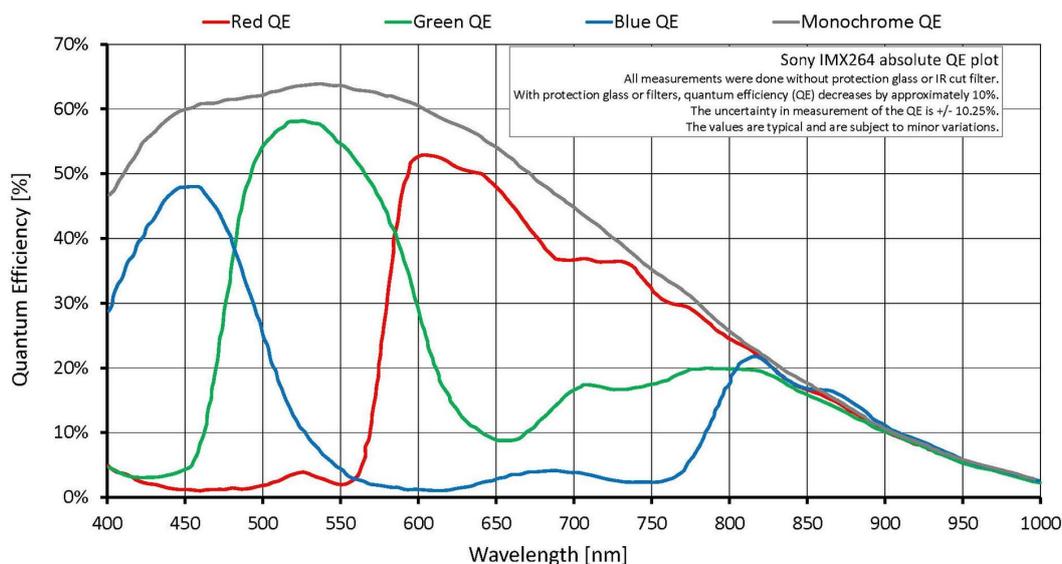
Options:

- Power over Ethernet (PoE)
- Various optical filter and lens mounts
- Angled head, board level variants, white medical housing

See the Modular Concept for lens mount, housing variants, optical filters, case design, and other modular 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

Manta	G-507
Cell size	3.45 µm x 3.45 µm
Lens mount	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
Mono modes	Mono8, Mono12Packed, Mono12
Color modes YUV	YUV411Packed, YUV422Packed, YUV444Packed
Color modes RGB	RGB8Packed, BGR8Packed
Raw modes	BayerRG8, BayerRG12, BayerRG12Packed
General purpose inputs/outputs (GPIOs)	
Opto-isolated I/Os	2 inputs, 2 outputs
RS-232	1
Operating conditions/dimensions	
Operating temperature	+5 °C to +45 °C ambient (without condensation)
Power requirements (DC)	8 to 30 VDC; PoE
Power consumption (@12 V)	2.7 W @ 12 VDC; 3.1 W PoE
Mass	190 g; 200 g (PoE)
Body dimensions (L × W × H in mm)	86.4 × 44 × 29 (including connectors)
Regulations	CE, RoHS, REACH, WEEE, FCC, ICES

Sony IMX264 absolute QE plot
All measurements were done without protection glass or IR cut filter.
With protection glass or filters, quantum efficiency (QE) decreases by approximately 10%.
The uncertainty in measurement of the QE is +/- 10.25%.
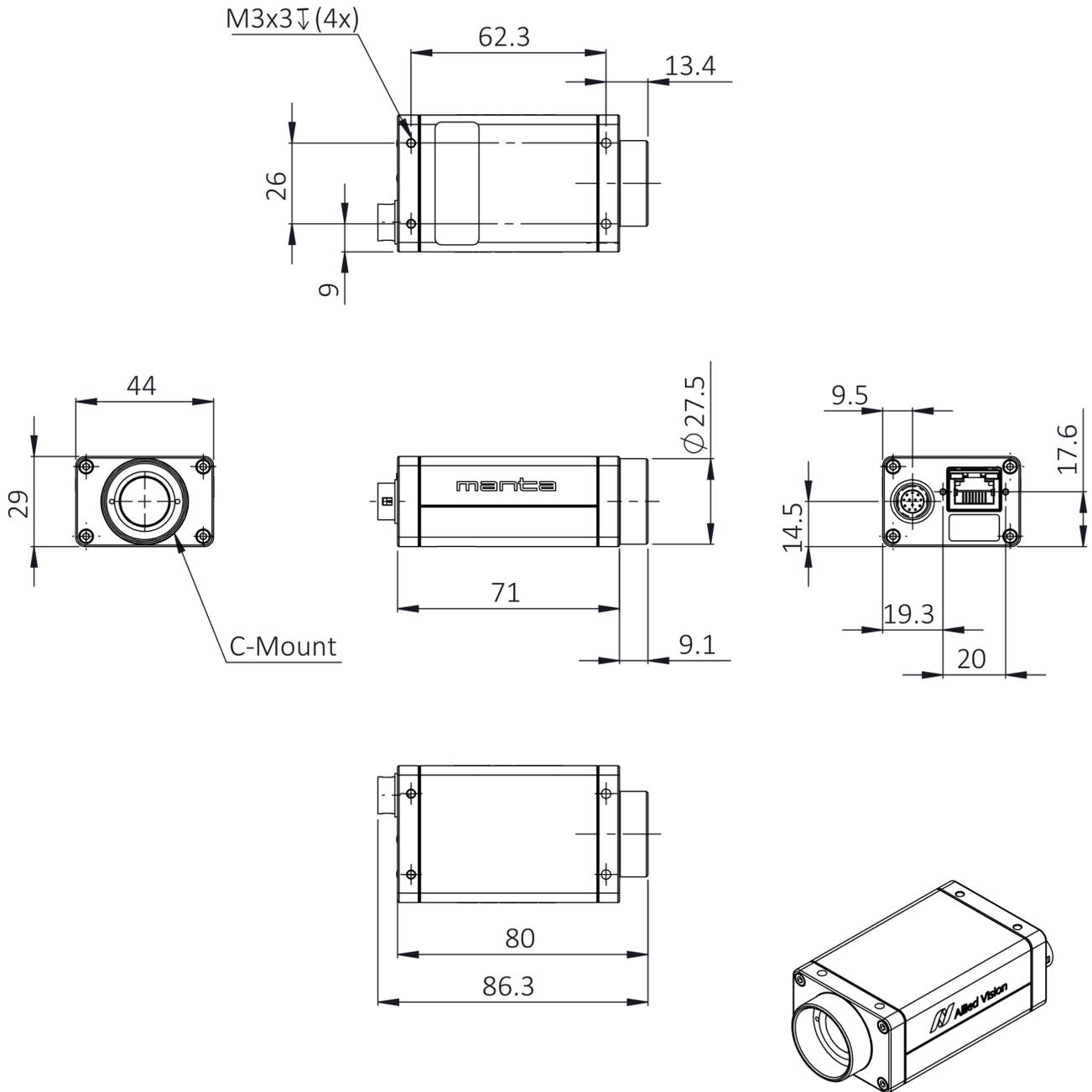The values are typical and are subject to minor variations.

Features

Image optimization features:

- Auto gain (manual gain control: 0 to 40 dB; 1 dB increments)
- Auto exposure (exposure time control varies by per pixel format)
- Auto white balance (color models only)
- Binning
- Black level (offset)
- Color correction, hue, saturation (color models only)
- Decimation
- Gamma correction
- Look-up tables (LUTs) (3)
- 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
- Tap mode switchable in Vimba Viewer 2.0 or later (two-tap, one-tap)
- Temperature monitoring (main board)
- Trigger over Ethernet (ToE) Action Commands

Allied Vision

Technical drawing

M3x3↓ (4x)

62.3

13.4

26

9

44

⌀27.5

29

C-Mount

71

9.1

9.5

17.6

14.5

19.3

20

80

86.3

Applications

Manta G-507B/G-507C 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 / high sensitivity conditions
- Outdoor applications with dynamic lighting situations