Allied Vision

Manta
G-223 NIR

- NIR enhanced CMOS sensor
- PoE option
- Angled head and board level variants
- Video-iris lens control

Description

GigE camera with CMOSIS CMV2000, NIR optimized, global shutter

Manta G-223B NIR is a near infrared (NIR) optimized GigE camera with a 2/3'' CMOSIS CMV2000 CMOS sensor and global shutter. This camera offers several modular options.
Options

- Power over Ethernet (PoE)
- Various IR cut/pass filters and lens mounts
- Angled head, board level variants, white medical housing

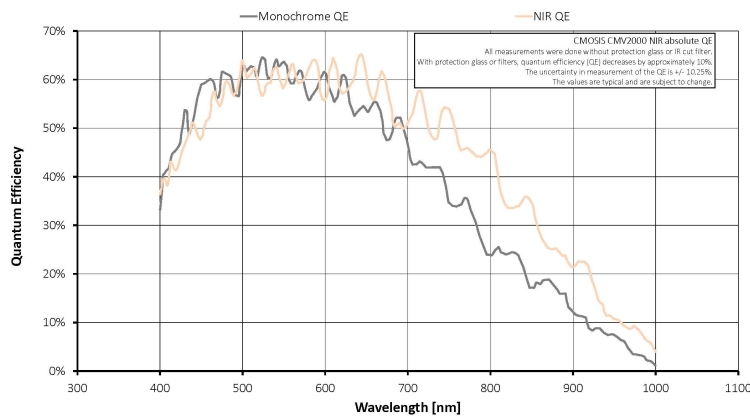See the#Modular Concept#for lens mount, housing variants, optical filters, case design, and other modular options.
Optical filter note: By default, the Manta G-223B NIR model ships with no optical filter.#

Specifications

Manta	G-223 NIR
Interface	IEEE 802.3 1000BASE-T, IEEE 802.3af (PoE) optional
Resolution	2048 (H) × 1088 (V)
Sensor	CMOSIS CMV2000 NIR
Sensor type	CMOS
Cell size	5.5 µm x 5.5 µm
Lens mount	C-Mount
Max frame rate at full resolution	53.7 fps
ADC	12 bit
Image buffer (RAM)	128 MByte
Output	

Manta	G-223 NIR
Bit depth	8-12 bit
Mono modes	Mono8, Mono12Packed, Mono12
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

CMOSIS CMV2000 NIR absolute QE
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 change.

Features

Image optimization features:

- Auto gain (manual gain control: 0 to 26 dB)
- Auto exposure (18 #s to 126 s)
- Auto white balance
- Black level (offset)
- Decimation
- Gamma correction

- Look-up tables (LUTs)
- Piecewise linear HDR mode
- Pixel defect masking
- 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)

Technical drawing

M3x3↓ (4x)

62.3

13.4

26

9

44

29

C-Mount

⌀27.5

71

9.1

9.5

17.6

14.5

19.3

20

80

86.3
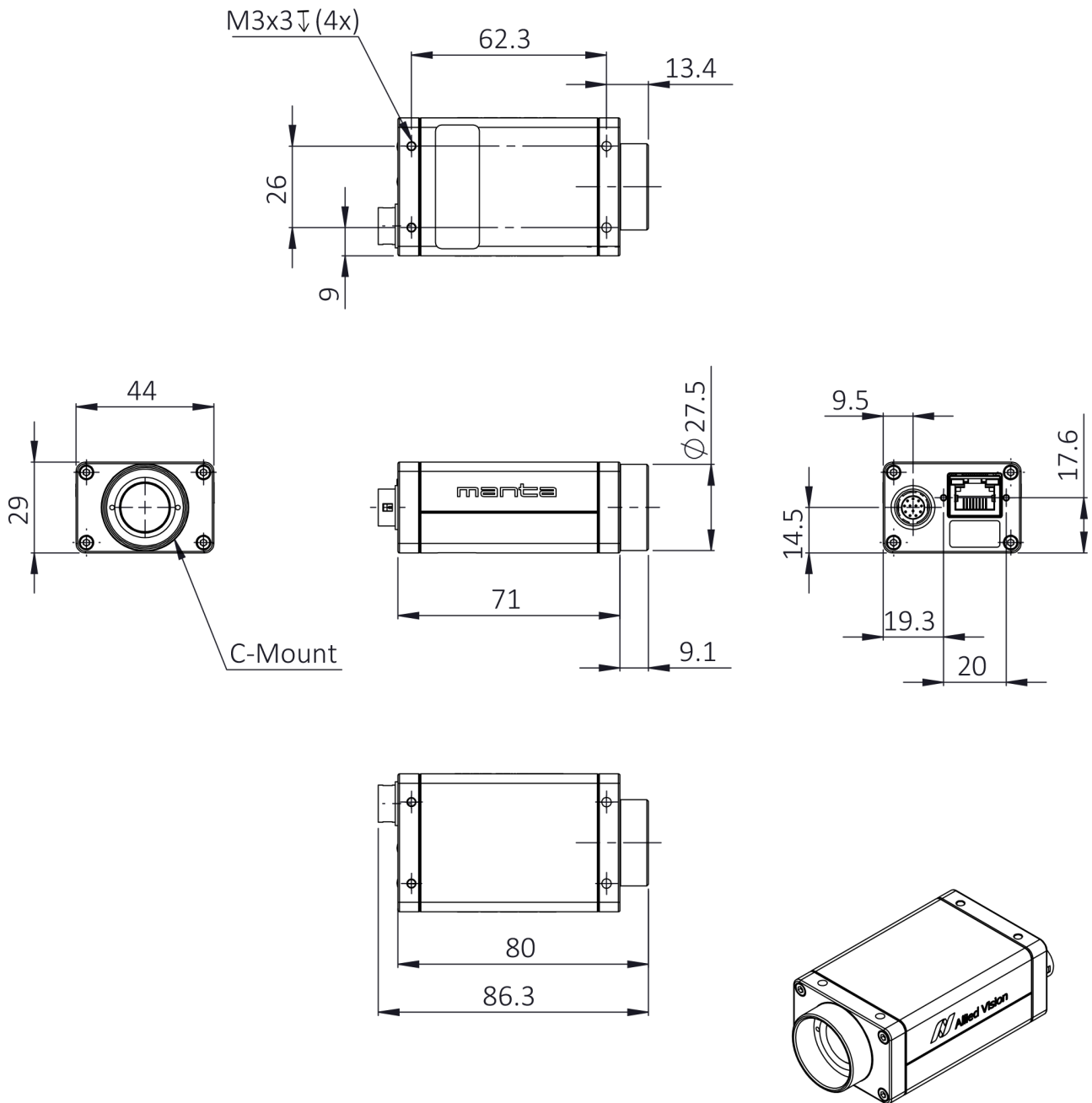
Applications

Manta G-223B NIR is ideal for a wide range of applications including:

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- Multimedia and entertainment
- Machine vision
- Security and surveillance
- Metrology and inspection systems
- Industrial image processing