



Manta G-145B NIR

- NIR-enhanced
- Power over Ethernet option
- Angled-head and board level variants
- Video-iris lens control

Simplify your setup of multi-camera applications

Modular machine vision camera with GigE Vision interface

Manta G-145B NIR with Sony ICX285 runs 15.0 frames per second at 1.4 MP resolution.

Manta is Allied Vision’s most versatile GigE Vision camera series. It provides the largest choice of image sensors and its advanced feature set simplifies the setup of multi-camera applications. With its modular hardware concept, Manta offers nearly endless configuration possibilities to adapt the camera to your application.

Easy software integration with Allied Vision’s **Vimba Suite** and compatibility to the most popular **third party image-processing libraries**.

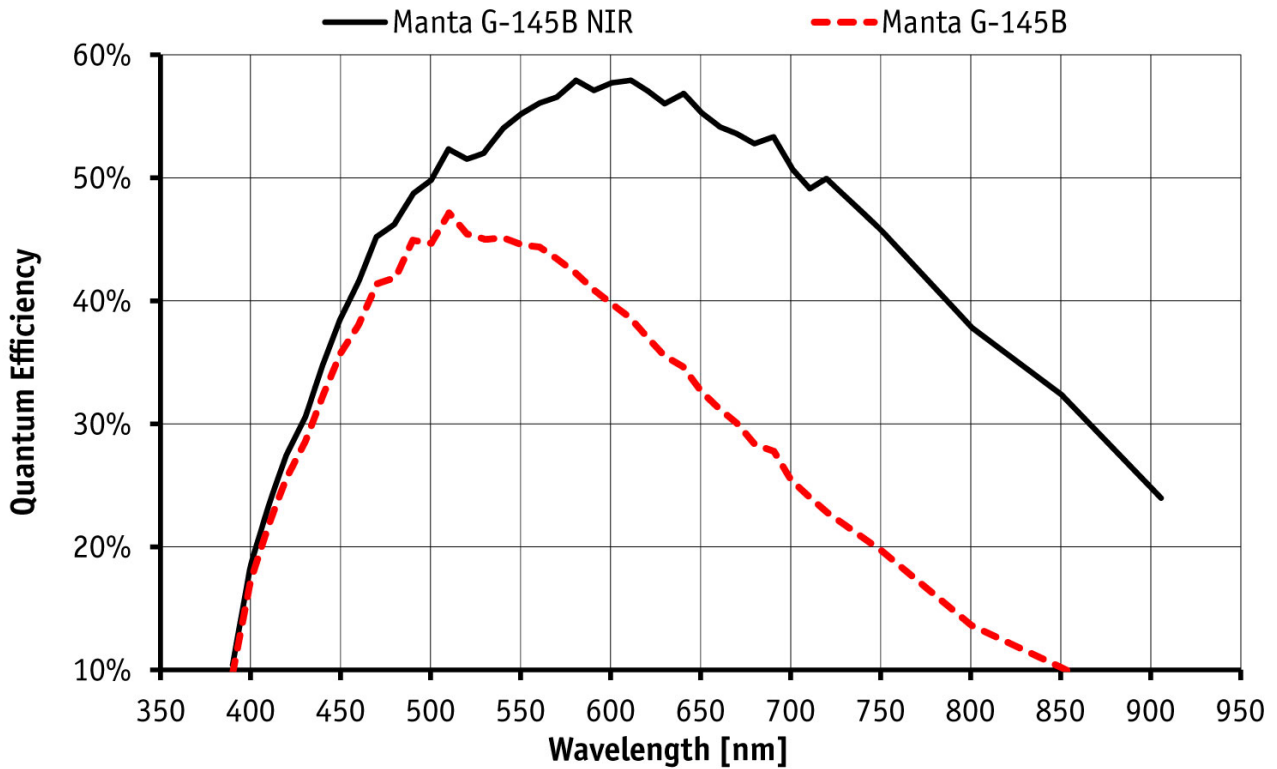
See the **Modular Concept** for lens mount, housing variants, optical filters, case design, and other modular options. See the **Customization and OEM Solutions** webpage for additional options.

Specifications

Manta G-145B NIR	
Interface	IEEE 802.3 1000BASE-T, IEEE 802.3af (PoE) optional
Resolution	1388 (H) × 1038 (V)
Sensor	Sony ICX285
Sensor type	CCD Progressive
Shutter mode	Global shutter
Sensor size	Type 2/3
Pixel size	6.45 μm × 6.45 μm

Manta G-145B NIR	
Lens mounts (available)	C-Mount, CS-Mount, S-Mount
Max. frame rate at full resolution	15.0 fps
ADC	12 Bit
Image buffer (RAM)	32 MByte
Imaging performance	
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 NIR models measured at full resolution without optical filter. Contact Sales or AE for more information.	
Quantum efficiency at 529 nm	54 %
Quantum efficiency at 850 nm	22 %
Temporal dark noise	8.8 e ⁻
Saturation capacity	17900 e ⁻
Dynamic range	65.6 dB
Absolute sensitivity threshold	9.4 e ⁻
Output	
Bit depth	8/12 Bit
Monochrome pixel formats	Mono8, Mono12, Mono12Packed
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 AUX or IEEE 802.3af PoE
Power consumption	External power: 4.2 W at 12 VDC Power over Ethernet: 4.9 W
Mass	200 g; 210 g (PoE)
Body dimensions (L × W × H in mm)	86.4 × 44 × 29 (including connectors)
Regulations	CE: 2014/30/EU (EMC), 2011/65/EU, including amendment 2015/863/EU (RoHS); FCC Class B; CAN ICES-3 (B)

Quantum efficiency



Features

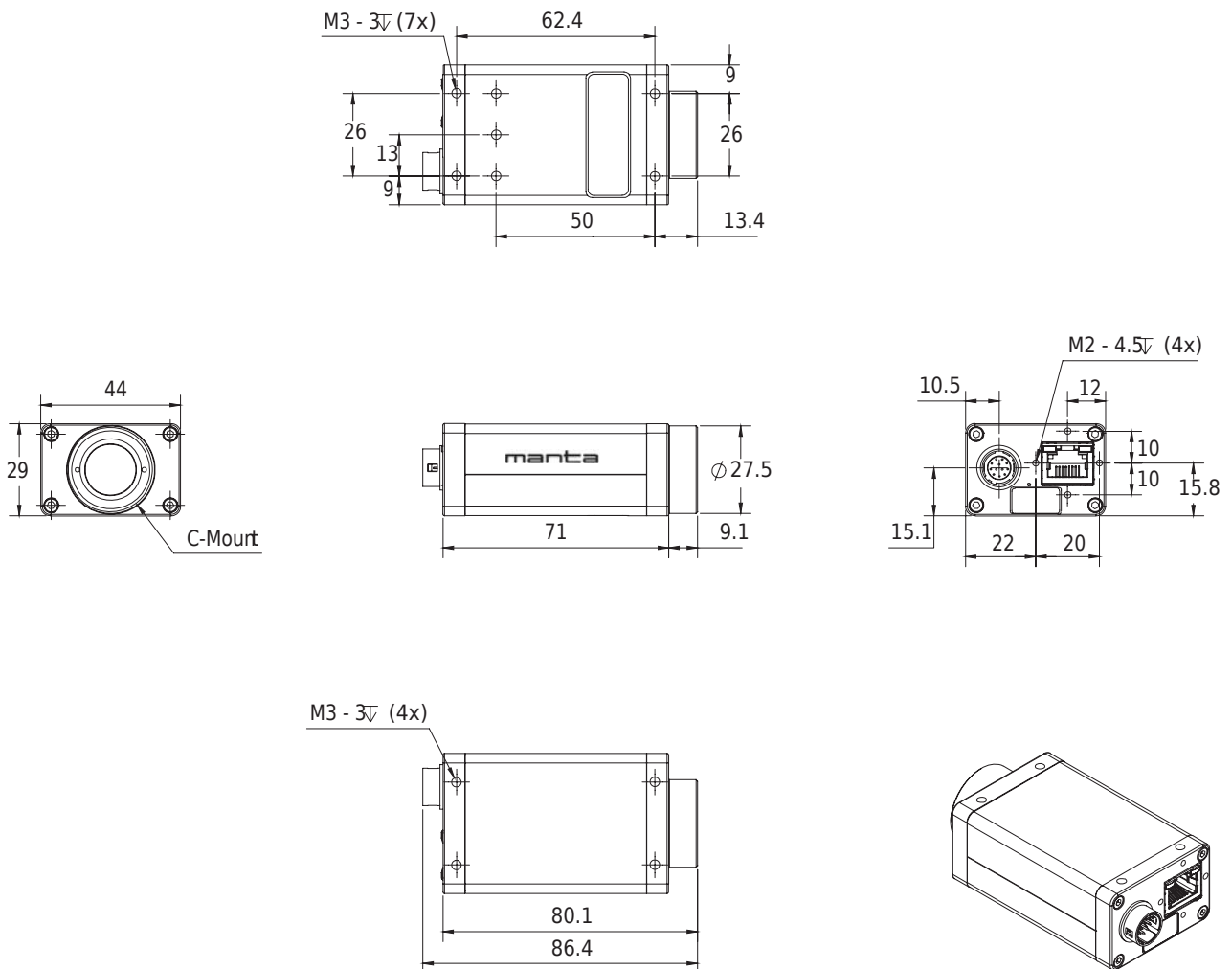
Image optimization features:

- Auto gain (manual gain control: 0 to 33 dB; 1 dB increments)
- Auto exposure (manual exposure control: $\approx 20 \mu\text{s}$ to 60 s, depending on NIR mode)
- Binning
- Black level (offset)
- Decimation
- Gamma correction
- Three look-up tables
- Region of interest, separate region for auto features
- Three operating modes with higher NIR sensitivity or higher frame rates
- ReverseX

Camera control features:

- Auto-iris (video type)
- Event channel
- Image chunk data
- Storable user sets
- StreamBytesPerSecond (bandwidth control)
- Stream hold
- Sync out modes: Trigger ready, input, exposing, readout, imaging, strobe, GPO

Technical drawing



Applications

Manta G-145B NIR is ideal for a wide range of applications including:

- Machine vision, visible and NIR spectrum
- Applications which require switching NIR sensitivity on/off
- Food inspection
- Medical and healthcare
- Microscopy
- Intelligent traffic solutions (ITS) and Traffic monitoring