



Manta G-145 NIR

Description

NIR optimized camera with Sony ICX285, excellent anti-blooming

The Manta G-145B NIR is an NIR optimized camera with the popular Sony ICX285 EXview HAD sensor. Besides the enhanced NIR sensitivity, it is distinguished by an excellent anti-blooming. The Manta G-145B NIR provides three modes with higher frame rates or higher NIR sensitivity. These modes are switchable during operation. Like all other Mantas, the G-145B NIR is available with many modular options like angled heads, board level versions, or optional PoE (Power over Ethernet).

- Sony ICX285 (type 2/3), EXview HAD CCD, enhanced NIR sensitivity
- Three switchable modes with higher NIR sensitivity or higher frame rates
- Trigger
 - External trigger event: rising/falling/any edge, level high/low
 - External trigger delay: 0 to 60 seconds in 1 μ s increments
- Sync modes
 - Trigger ready, trigger input, exposing, readout, imaging, strobe, GPO
- Modular options
 - Various IR cut/pass filters, removed cover glass
 - Board level version
 - Angled head
 - White medical housing
 - PoE (Power over Ethernet)
 - **Removed cover glass**

Specifications

Manta G-145 NIR	
Interface	IEEE 802.3 1000baseT
Resolution	1388 x 1038
Sensor	Sony ICX285
Sensor type	CCD Progressive
Sensor size	Type 2/3
Cell size	6.45 µm
Lens mount	C
Max frame rate at full resolution	14 fps
A/D	14 bit
On-board FIFO	32 MB
Output	
Bit depth	8-12 bit
Mono modes	Mono8, Mono16, Mono12 packed
Raw modes	Bayer8, Bayer16, Bayer12 packed
General purpose inputs/outputs (GPIOs)	
Opto-coupled I/Os	2 inputs, 2 outputs
RS-232	1
Operating conditions/Dimensions	
Power requirements (DC)	8 V - 30 V
Power consumption (12 V)	<3.6 W
Mass	<200 g
Body Dimensions (L x W x H in mm)	86.4 x 44 x 29 mm incl. connectors
Regulations	CE, FCC Class B, RoHS

[Download Manta technical drawing \(click here\)](#)



Smart features

- Three operating modes with higher NIR sensitivity or higher frame rates
- ROI (Region of Interest Readout)
- Exposure
 - Auto/one push/programmable
 - Exposure time ≈ 4.3 ms to 60 s
- Gain
 - Auto/one push/programmable
 - Manual gain control: 0 to 33 dB (1 dB/step)
- Three look-up tables (LUTs), gamma correction
- DSP subregion (selectable ROI for auto features)
- Binning (up to 8×14 , independent x and y binning)
- Sub-sampling (decimation)
- Stream hold
- StreamBytesPerSecond (easy bandwidth control)
- Event channel
- Chunk data
- 5 storable user sets

Applications

The Manta G-145B NIR is a very affordable GigE Vision camera with excellent sensitivity in the visible spectrum, optimized NIR sensitivity, and outstanding anti-blooming. On request, board level versions with separate sensor head (up to 200 mm distance to camera mainboard) are available.

- Machine vision, visible and NIR spectrum
- Applications which require switching NIR sensitivity on/off
- Food inspection
- Medical and healthcare
- Microscopy
- ITS/Traffic monitoring
- ... and many more