

❖ GO-5101-PGE

5.1-megapixel CMOS global shutter

GiGE[®]
VISION



- 5.1-megapixel 2/3" CMOS imager (global shutter)
- Up to 22.7 fps at full resolution
- 3.45 μm square pixels
- Small size (29 x 29 x 41.5 mm, excluding lens mount)
- 8/10-bit output in a choice of monochrome or raw Bayer color models
- Exposure control from 14 μs to 8 seconds in 1 μs steps
- 2X binning for increased sensitivity (monochrome only)
- ROI mode for flexible windowing and use of smaller optics
- Automatic Level Control (ALC) for dynamic lighting conditions
- Accepts power over GigE Vision interface or separate 6-pin connector
- C-mount lens mount

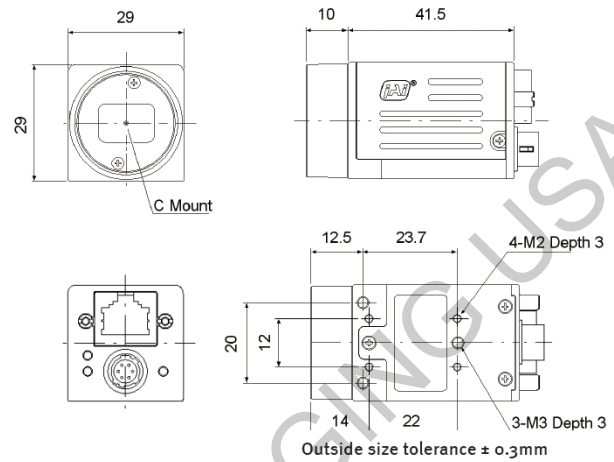


Specifications for GO-5101-PGE

Go Series

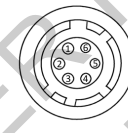
Specifications	GO-5101-PGE
Sensor	2/3" CMOS global shutter (IMX264)
System clock	74.25 MHz (for pulse generator)
Frame rate, full frame	22.7 frames/sec. @ 8-bit
Active area	8.5 mm (h) x 7.09 mm (v), 11.1 mm diagonal
Cell size	3.45 μ m (h) x 3.45 μ m (v)
Active pixels	2454 (h) x 2056 (v)
Read-out modes	Full: 2464 (h) x 2056 (v) up to 22.7 fps ROI (mono): H: 16 to 2464 pixels in 16 pixel steps V: 1 to 2056 lines in 1 line steps ROI (color): H: 16 to 2464 pixels in 16 pixel steps V: 2 to 2056 lines in 2 line steps Binning: 1x2, 2x1, 2x2 (monochrome only)
EMVA 1288 Parameters	At 10-bit output
Absolute sensitivity (mono)	TBD p (λ = 525 nm)
Absolute sensitivity (color)	TBD p (λ = 525 nm)
Maximum SNR (mono)	TBD dB
Maximum SNR (color)	TBD dB
Traditional SNR*	mono: >60 dB (0 dB gain) color: >60 dB (0 dB gain, green,)
Video signal output	mono: 8/10/12-bit monochrome† color: 8/10/12-bit raw Bayer†
Gain control	Manual/auto 0 dB to +24 dB
White balance (GO-5100C)	Manual, one-push auto, or continuous (3000K to 9000K)
Gamma	0.45, 0.6, 1.0 or 257-point LUT
Synchronization	Internal
Video modes	Normal, Single ROI, Sequencer (Trigger & Command), Delayed Readout
Trigger input	Opto In, Pulse Generator, Software, NAND Out (2), User Output (2), Action Commands (2)
Trigger modes	Timed/EPS, Trigger Width, Sequencer
Electronic shutter	Timed exposure: 14 μ s to 8 sec. in 1 μ s steps (8-bit) Auto shutter: 8 sec. to 1/10,000 sec.
Auto Level Control (ALC)	Shutter range from 8 sec. to 1/10,000, gain range from 0 dB to +24 dB Tracking speeds and max values adjustable.
Pre-processing functions	Blemish compensation (256 pixels), shading
Operating temperature	-5°C to +45°C
Storage temperature	-25°C to +60°C
Humidity	20 - 80% non-condensing
Vibration	10 G (20 Hz to 200 Hz XYZ)
Shock	80 G
Regulations	CE (EN61000-6-2, EN61000-6-3), FCC Part 15 class B, RoHS, WEEE
Power	6-pin connector: 12V to 24V DC $\pm$ 10%, 3.3W typical @ 12V PoE: 36V to 57V DC, 3.99W typical @ 48V
Lens mount	C-mount
Dimensions (H x W x L)	29 mm x 29 mm x 41.5 mm (excl. lens mount)
Weight	46 g

Dimensions



Connector pin-out

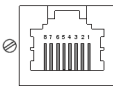
DC In / Trigger



HIROSE HR-10A-7R-6PB(73)

Pin	Signal
1	+12V to +24V DC Input
2	Opto In 1
3	Opto Out 1
4	Opto Out 2
5	Opto Common
6	GND

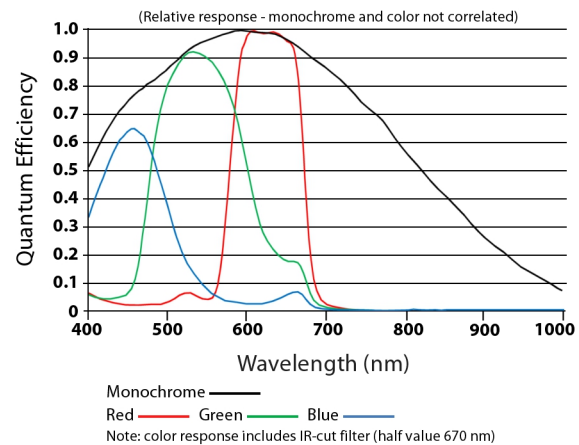
GigE Vision Interface



RJ-45 with locking screws

Pin	Signal
1	TRD+ (0)
2	TRD- (0)
3	TRD+ (1)
4	TRD+ (2)
5	TRD- (2)
6	TRD- (1)
7	TRD+ (3)
8	TRD- (3)

Spectral Response



Ordering Information

GO-5101M-PGE	Monochrome camera with GigE Vision
GO-5101C-PGE	Color camera with GigE Vision

*Traditional SNR is based on random noise in a single frame, where EMVA SNR measurements consider more comprehensive noise sources and variance over time. For a more complete description, see the manual.

†12-bit output available in video processing bypass mode. See manual for details.

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