

GO-5101-PGE
5.1-megapixel CMOS global shutter

- **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)**
- **8/10/12-bit output* in a choice of monochrome or raw Bayer color models**
- **Exposure control from 14.7 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**

* Some video processing functions not available with 12-bit output

Specifications for GO-5101-PGE

Go Series

Specifications GO-5101-PGE

Sensor	2/3" CMOS global shutter (IMX264)	
Active pixels	2464 (h) x 2056 (v)	
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 μm x 3.45 μm	
System clock	74.25 MHz (for pulse generator)	
Read-out modes	Full ROI (mono)	2464 (h) x 2056 (v) up to 22.7 fps 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 8/10-bit only)
EMVA 1288 Parameters	12-bit output format	
Absolute sensitivity	Mono: 3.03 p Color: 3.46 p (λ = 525 nm)	
Maximum SNR	Mono: 39.76 dB Color: 39.88 dB	
Traditional SNR*	mono	>60 dB (0 dB gain, 10-bit)
	color	>60 dB (0 dB gain, 10-bit, green)
Video signal output	mono	8/10/12-bit monochrome†
	color	8/10/12-bit raw Bayer†
Video modes	Normal, Single ROI, Sequencer (Trigger & Command), Delayed Readout	
Gain	Manual/auto 0 dB to +24 dB	
White balance (GO-5100C)	Manual, one-push auto, or continuous (3000K to 9000K)	
Gamma/LUT	0.45, 0.6, 1.0 or 256-point LUT	
Trigger input	Opto In (1), Pulse Generator, Software, NAND Out (2), User Output (2), Action (2)	
Exposure modes	Timed/EPS, Trigger Width, Auto	
Electronic shutter	Timed: 14.7 μs to 8 sec. in 1 μs steps Trigger Width: 14.7 μs to ∞ sec. in 1 μs steps	
Auto Level Control (ALC)	Shutter range from 100 μs to 44.053 ms, gain range from 0 dB to +24 dB. Tracking speeds and min/max values adjustable	
Pre-processing functions	Shading correction, blemish compensation (256 pixels)	
Operating temp. (ambient)	-5°C to +45°C (20 to 80% non-condensing)	
Storage temp. (ambient)	-25°C to +60°C (20 to 80% non condensing)	
Vibration	10G (20 Hz to 200 Hz, XYZ directions)	
Shock	80G	
Regulations	CE (EN61000-6-2, EN61000-6-3) FCC Part 15 Class B, RoHS/WEEE, KC	
Power	6-pin PoE	+12V to +24V DC ± 10%. 3.3 W typical @ +12 V +36V to +57V DC. 3.99 W typical @ +48 V
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	

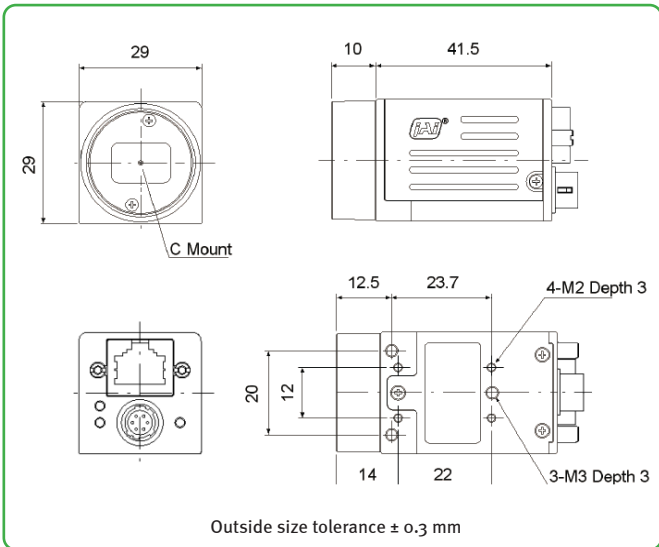
Ordering Information

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.

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

Dimensions



Connector pin-out

DC In / Trigger

HIROSE HR10A-7R-6PB(73)

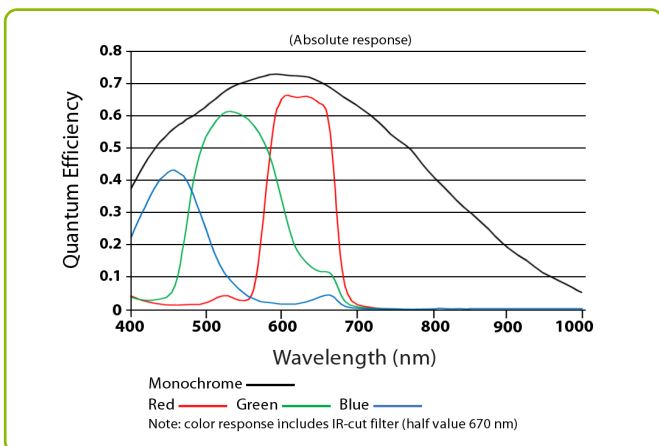
Pin	Signal
1	DC in +12V to +24V
2	Opto In 1
3	Opto Out 1
4	Opto Out 2
5	Opto Common
6	Ground

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)

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