GOX-12401-PGE

12.3-megapixel CMOS global shutter

GiGE VISION

Compliments of Phase1 Technology
phase1vision.com

- *Go-X Series delivers exceptional combination of price and performance*
- *12.3-megapixel, 1.1" CMOS imager (global shutter)*
- *Up to 9.3 fps at full resolution (4096 x 3000)*
- *3.45 µm square pixels*
- *8/10/12-bit* output in choice of monochrome or raw Bayer color models*
- *ROI settings for added flexibility*
- *Horizontal/vertical image flip function, plus blemish correction and shading compensation*
- *Includes Sequencer function and Automatic Level Control (ALC) for dynamic lighting conditions*
- *Compact size with excellent shock and vibration resistance*
- *Accepts power over GigE Vision interface or separate 6-pin connector*
- *C-mount lens mount*

* Not all processing functions supported with 12-bit output.

Specifications for GOX-12401-PGE

Specifications	GOX-12401-PGE
Sensor	1.1" CMOS global shutter (IMX304)
Active pixels	4096 (h) x 3000 (v)
Frame rate	9.3 frames/sec. @ 8-bit mono/Bayer
Active area	14.13 mm (h) x 10.35 mm (v) - 17.52 mm diagonal
Pixel size	3.45 µm x 3.45 µm
System clock	74.25 MHz (for pulse generator)
Read-out modes Full ROI (single) Binning	 4096 (h) x 3000 (v) up to 9.3 fps H: 96 - 4080 pixels in 16-pixel steps V: 8 to 2998 lines in 2-line steps 1x2, 2x1, 2x2 (mono only)
EMVA 1288 Parameters Absolute sensitivity Maximum SNR	10-bit output format Mono: 3.62 p Color: 3.86 p (λ = 527 nm) Mono: 39.7 dB Color: 39.7 dB
Traditional SNR*	>60 dB mono, >60 dB color (0 dB gain, 10-bit)
Video signal output	Monochrome: 8/10/12-bits† Color: 8/10/12-bit Bayer†
Gain control	Manual/auto 0 dB to +24 dB
White balance	Off, presets, or one-push/continuous AWB
Gamma/LUT	0.45 to 1.0 (9 steps) or 257-point programmable LUT
Synchronization	Internal
Video modes	Normal/Single ROI, Sequencer (Trigger & Command)
Trigger input	Opto In, Pulse Generators (4), Software, NAND Out (2), User Output (4)
Exposure modes	Timed/EPS, RCT, Trigger Width, Auto
Electronic shutter	Timed: 15.26 µs to 8 s in 1 µs steps Auto: 100 µs to 107.5 ms at full resolution
Auto Level Control (ALC)	Shutter range from 100 µs to 107.5 ms, gain range from 0 dB to +24 dB. Tracking speeds and max. values adjustable.
Shading correction	Flat shading, color shading (color model)
Pre-processing functions	H & V flip (mirroring), blemish compensation, H & V decimation
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(EN 55032:2015(CISPR32:2015), EN 55035:2017(CISPR35:2016)), FCC Part 15 Class A, RoHS/WEEE, KC
Power 6-pin PoE	+10V to +25V DC. 2.7 W typical @ +12 V +36V to +57 V DC. 3.7 W typical @ +48 V
Lens mount	C-mount
Dimensions (H x W x L)	29 mm x 29 mm x 51.5 mm
Weight	65 g

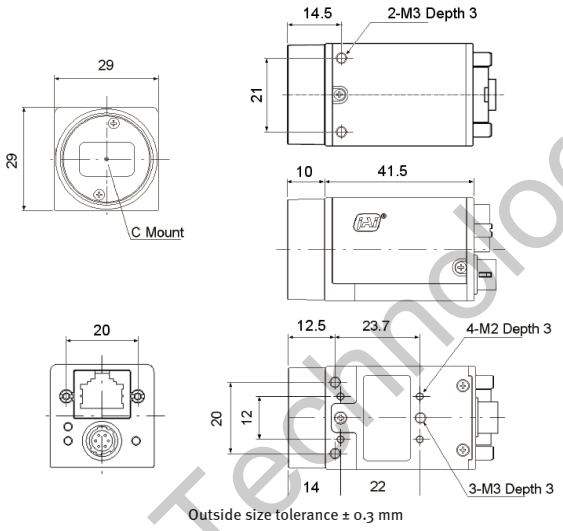
Ordering Information

GOX-12401M-PGE	Monochrome camera with GigE Vision interface
GOX-12401C-PGE	Color camera with GigE Vision interface

*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 only available in video processing bypass mode. See manual for details.

Dimensions



Outside size tolerance ± 0.3 mm

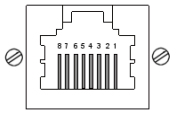
Connector pin-out

DC In / Trigger

HIROSE HR10A-7R-6PB(73)

Pin		
	1	DC in +10V to +25V
	2	Opto In+
	3	Opto In-
	4	Opto Out+
	5	Opto Out-
	6	Ground

GigE Vision Interface

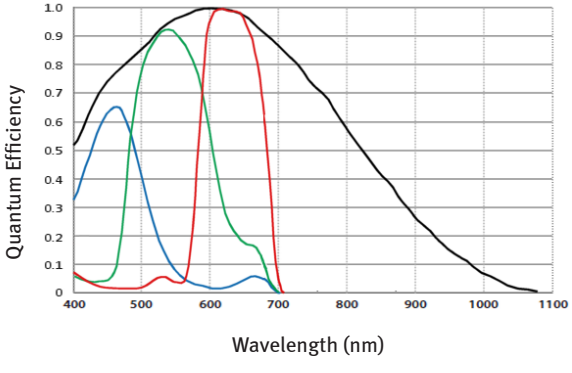


RJ-45 with locking screws

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)

Spectral response

(Relative response - monochrome and color not correlated)



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Compliments of Phase 1 Technology
phase1vision.com

Europe, Middle East & Africa
Phone +45 4457 8888
Fax +45 4491 8880

Asia Pacific
Phone +81 45 440 0154
Fax +81 45 440 0166

Americas
Phone (Toll-Free) 1 800 445 5444
Phone +1 408 383 0300

Visit our website on www.jai.com

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