

■ 4096 x 3000

■ 9 fps

Go-X Series 

GiG
VISION

➤ **GOX-12401-PGE**
12.3-megapixel CMOS global shutter



- *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

Go-X Series

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) 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 Binning 1x2, 2x1, 2x2 (mono only)
EMVA 1288 Parameters	10-bit output format
Absolute sensitivity	Mono: 3.62 p Color: 3.86 p ($\lambda = 527 \text{ nm}$)
Maximum SNR	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

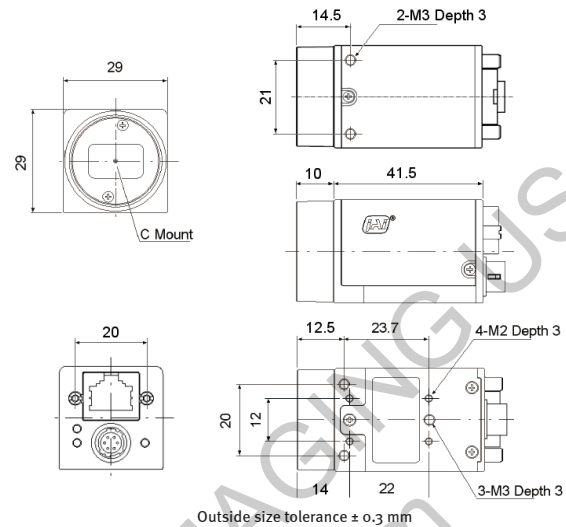
Ordering Information

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.

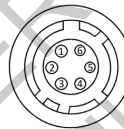
[†]12-bit output only available in video processing bypass mode. See manual for details.

Dimensions



Connector pin-out

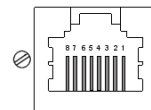
DC In / Trigger



HIROSE HR10A-7R-6PB(73)

Pin	Signal
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

