

■ 4024 x 3036

■ 9 fps

Go-X Series 

**GIG**  
VISION

➤ **GOX-12409-PGE**  
12.2-megapixel CMOS rolling shutter



- *1/1.7" CMOS imager (rolling shutter with global reset)*
- *Up to 9 fps at full resolution (4024 x 3036)*
- *1.85  $\mu\text{m}$  square pixels*
- *Back-side illuminated (BSI) sensor technology for enhanced low-light performance*
- *8/10/12-bit\* output in choice of monochrome or raw Bayer color models*
- *ROI settings for added flexibility*
- *Includes Automatic Level Control (ALC) to maintain exposure in 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-12409-PGE

# Go-X Series

## Specifications | GOX-12409-PGE

Sensor	1/1.7" CMOS rolling shutter (IMX226)
Active pixels	4024 (h) x 3036 (v)
Frame rate	9 frames/sec. @ 8-bit mono/Bayer
Active area	7.44 mm (h) x 5.61 mm (v) - 9.32 mm diagonal
Pixel size	1.85 μm x 1.85 μm
System clock	74.25 MHz (for pulse generator)
Read-out modes	4024 (h) x 3036 (v) up to 9 fps H: 96 - 4024 pixels in 16-pixel steps V: 8 to 3036 lines in 2-line steps 1x2, 2x1, 2x2 (mono only)
EMVA 1288 Parameters	10-bit output format
Absolute sensitivity	Mono: TBD p Color: TBD p (λ = 527 nm)
Maximum SNR	Mono: TBD dB Color: TBD 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 +42 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
Trigger input	Opto In, Pulse Generator, Software, NAND Out (2), User Output (4)
Exposure modes	Timed/EPS, Auto
Electronic shutter	Timed: 80 μs to 8 s in 1 μs steps Auto: 100 μs to 107 ms at full resolution
Auto Level Control (ALC)	Shutter range from 100 μs to 107 ms, gain range from 0 dB to +42 dB. Tracking speeds and max. values adjustable.
Shading correction	Flat shading, color shading (color model)
Pre-processing functions	Blemish compensation (256 user definable)
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

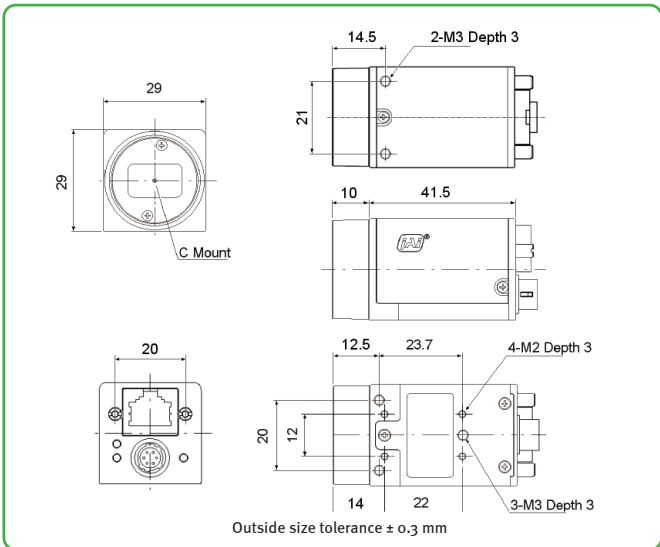
## Ordering Information

GOX-12409M-PGE	Monochrome camera with GigE Vision interface
GOX-12409C-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)

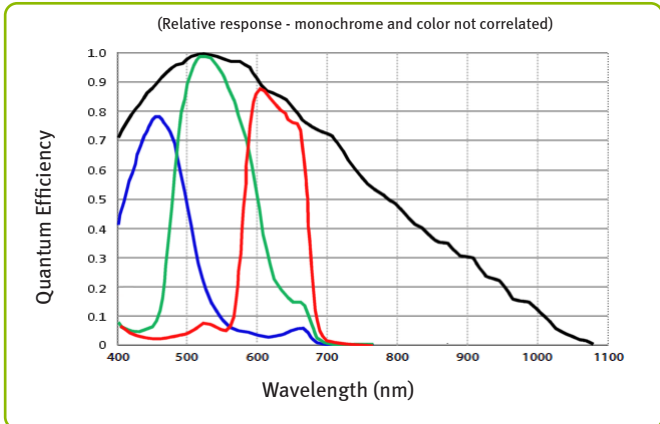
Pin	Signal
1	DC in +10V to +25V
2	Opto In+
3	Opto In-
4	Opto Out+
5	Opto Out-
6	Ground

**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



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