

▪ 4016 x 3036

▪ 9 fps

Go-X Series 

**GIG**<sup>®</sup>  
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 (4016 x 3036)**
- **1.85  $\mu\text{m}$  square pixels**
- **Backside 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	4016 (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	Full ROI (single) 4016 (h) x 3036 (v) up to 9 fps H: 96 - 4016 pixels in 16-pixel steps V: 8 to 3036 lines in 2-line steps Binning 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 +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	
Trigger input	Opto In, Pulse Generator, Software, NAND Out (2), User Output (4)	
Exposure modes	Timed/EPS, Auto	
Electronic shutter (TriggerMode OFF)	Timed: 80.06 μs to 1.2 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	

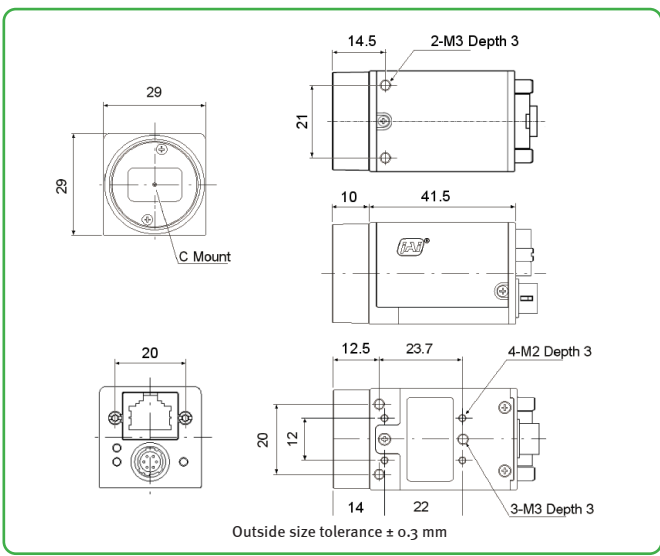
## Ordering Information

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)

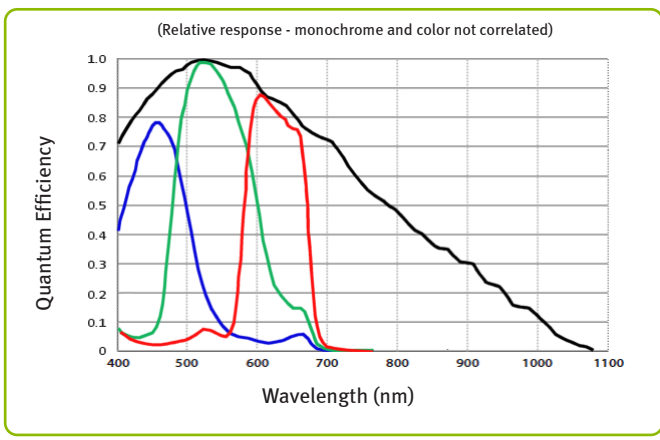
Pin	Signal
1	DC in +10V to +25V
2	Opto In+
3	Opto In-
4	Opto Out+
5	Opto Out-
6	Ground

### 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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