

# GOX-2402M-PGE

## Technical Datasheet

IMX392



See the possibilities



## Apex Series



The Go-X Series offers compact, attractively-priced area scan cameras with a blend of features, image quality and industrial grade reliability that is in high demand for the next generation of machine vision systems.

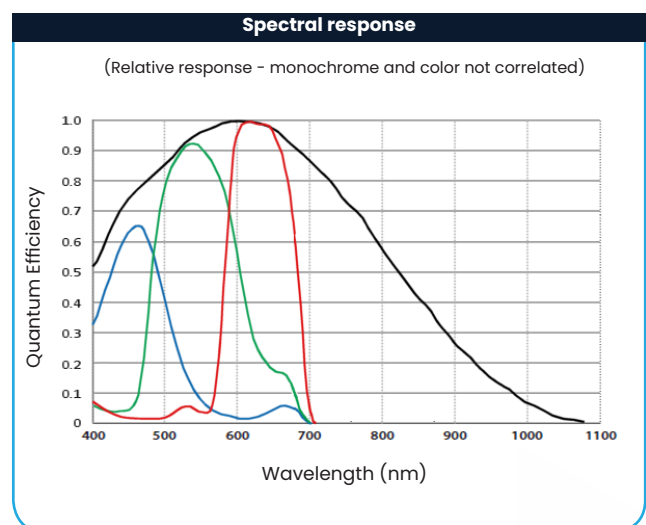
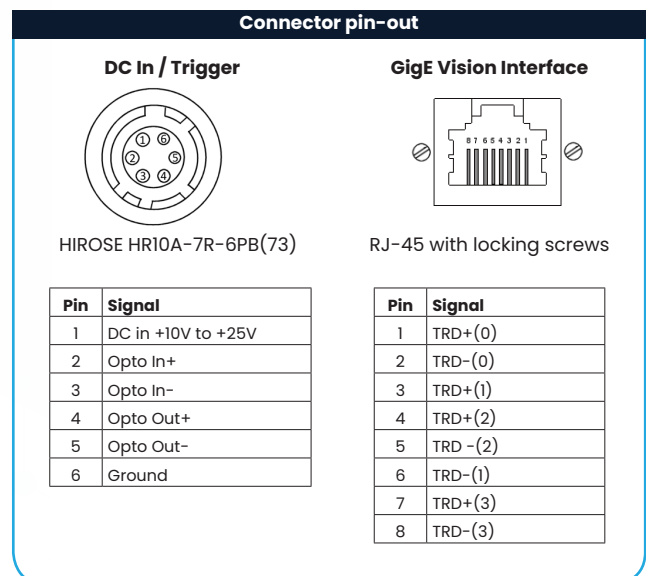
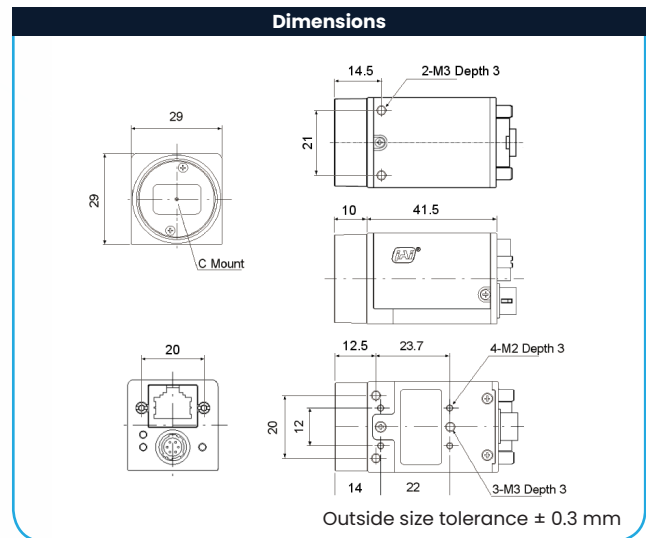
The Go-X Series incorporates the most popular Sony Pregius and Pregius S global shutter CMOS sensors, and several Starvis CMOS sensors with rolling shutter technology. Resolutions range from 2.3 to 24.5 megapixels with a choice of USB3 Vision, GigE Vision (1000BASE-T or 5GBASE-T), or CoaXPress interfaces.

### Specification Highlights

**SENSOR:** IMX392  
**FORMAT:** 1/2.3"  
**PIXEL SIZE:** 3.45 x 3.45  $\mu\text{m}$   
**LENS MOUNT:** C-Mount  
**SPECTRUM:** Monochrome (Visible + NIR)

**SHUTTER:** Global Shutter  
**FRAME RATE:** 50 fps  
**INTERFACE:** GigE Vision 1-Cable (PoE)  
**RESOLUTION MP:** 2.3 MP  
**RESOLUTION WxH:** 1920 x 1200 px

Specifications		GOX-2402-PGE
Sensor		1/2.3" CMOS global shutter (IMX392)
Active pixels		1920 (h) x 1200 (v)
Frame rate		49.9 frames/sec. @ 8-bit mono/Bayer
Active area		6.62 mm (h) x 4.14 mm (v) - 7.81 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)		1920 (h) x 1200 (v) up to 49.9 fps H: 96 - 1904 pixels in 16-pixel steps V: 8 to 1198 lines in 2-line steps
Binning		1x2, 2x1, 2x2 (mono only)
EMVA 1288 Parameters		10-bit output format
Absolute sensitivity		Mono: 3.71 p Color: 4.86 p (λ = 527 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 <sup>†</sup> Color: 8/10/12-bit Bayer <sup>†</sup>
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, 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: 14.73 μs to 8 s in 1 μs steps Auto: 100 μs to 20 ms at full resolution
Auto Level Control (ALC)		Shutter range from 100 μs to 20 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		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		80 G
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-2402M-PGE		Monochrome camera with GigE Vision interface
GOX-2402C-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.

<sup>†</sup>12-bit output only available in video processing bypass mode. See manual for details.

## Product Highlights

- Go-X Series delivers exceptional combination of price and performance
- 2.3-megapixel, 1/2.3" CMOS imager (global shutter)
- Up to 49.9 fps at full resolution (1920 x 1200)
- 3.45  $\mu\text{m}$  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.

## Additional Product Images



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