

■ 5472 x 3648

■ 5 fps

Go-X Series 

GigE[®]
VISION

➤ **GOX-20409-PGE**
20-megapixel CMOS rolling shutter



- **1" CMOS imager (rolling shutter with global reset)**
- **Up to 5 fps at full resolution (5472 x 3648)**
- **2.4 μm 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-20409-PGE

Go-X Series

Specifications | GOX-20409-PGE

Sensor	1" CMOS rolling shutter (IMX183)
Active pixels	5472 (h) x 3648 (v)
Frame rate	5 frames/sec. @ 8-bit mono/Bayer
Active area	13.13 mm (h) x 8.75 mm (v) - 15.78 mm diagonal
Pixel size	2.4 μm x 2.4 μm
System clock	74.25 MHz (for pulse generator)
Read-out modes	Full ROI (single): 5472 (h) x 3648 (v) up to 5 fps H: 96 - 5472 pixels in 16-pixel steps V: 8 to 3648 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 +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: 106 μs to 8 s in 1 μs steps Auto: 106 μs to 175 ms at full resolution
Auto Level Control (ALC)	Shutter range from 106 μs to 175 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

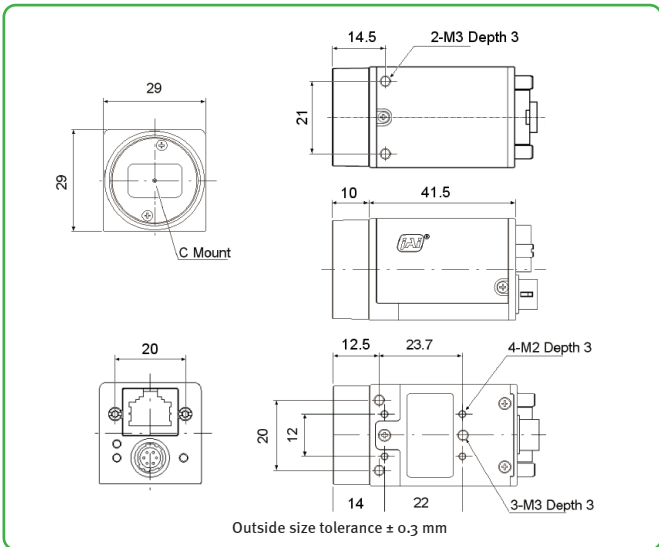
Ordering Information

GOX-20409M-PGE	Monochrome camera with GigE Vision interface
GOX-20409C-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)

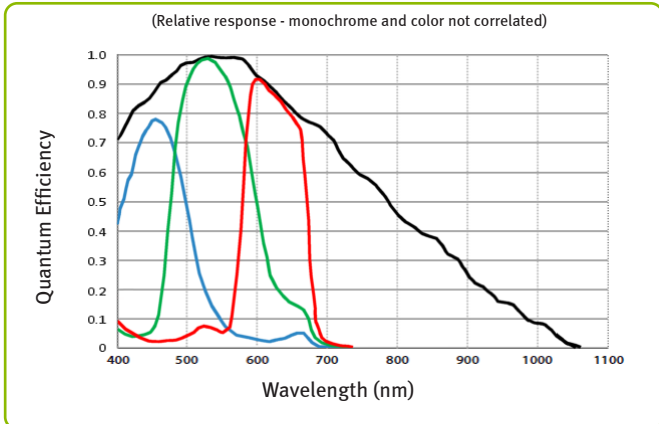
Pin	Signal
1	DC in +10V to +25V
2	Opto In+
3	Opto In-
4	Opto Out+
5	Opto Out-
6	Ground

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



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

See the possibilities

Company and product names mentioned in this datasheet are trademarks or registered trademarks of their respective owners. JAI A-5 Cannot be held responsible for any technical or typographical errors and reserves the right to make changes to products and documentation without prior notice.

July 2021