

■ 4512 X 4512

■ 5 fps

Go-X Series 

GOX-20405-PGE

20.3-megapixel CMOS global shutter

GigE
VISION

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Perth: (08) 9242 5411 Melbourne: (03) 9384 1775 Sydney: (02) 9905 1551

Email: sales@adeptturnkey.com.au
Web site: www.adept.net.au



- **High performance camera with 20.3-megapixel resolution**
- **1.1" CMOS imager (global shutter) features backside illuminated pixel technology**
- **2.74 μm square pixels**
- **Up to 5 fps standard output at full resolution (4512 x 4512). Burst mode also available.**
- **Lossless compression function (Xpress) compresses image data to support higher frame rates**
- **8/10/12-bit output in choice of monochrome or raw Bayer color models**
- **Color model includes a 5 x 5 debayering capability for RGB output**
- **Flexible ROI & rescaling function (Xscale) for sub-pixel color/mono binning and resolution matching**
- **Traditional 1x2, 2x1, or 2x2 binning also included on monochrome model**
- **Horizontal/vertical image flip function, plus blemish compensation and shading correction**
- **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 via separate 6-pin connector**
- **C-mount lens mount**

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Specifications for GOX-20405-PGE

Go-X Series

Specifications		GOX-20405-PGE
Sensor	1.1" CMOS global shutter (IMX541)	
Active pixels	4512 (h) x 4512 (v)	
Frame rate, full frame	5 frames/sec. @ 8-bit mono/Bayer Supports higher fps via lossless compression (Xpress mode)	
Active area	12.4 mm (h) x 12.4 mm (v) - 17.48 mm diagonal	
Pixel size	2.74 μm x 2.74 μm	
Read-out modes	Full ROI (single) 4512 (h) x 4512 (v) up to 5 fps H: 96 to 4512 pixels in 8 pixel steps V: 8 to 4512 lines in 2 line steps ROI (multi) Binning Up to 64 scanning areas - no overlap 1x2, 2x1, 2x2 (mono only)	
Image scaling (Xscale)	Supports independent, sub-pixel rescaling of H and/or V resolution (1/16 max.)	
EMVA 1288 Parameters	12-bit output format Mono: TBD p Color: TBD p (λ= 527 nm) Mono: TBD dB Color: TBD dB	
Traditional SNR (Dark)*	>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 or 24/30/36-bit RGB	
Gain	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	
Time synchronization	Support for Precision Time Protocol (IEEE 1588)	
Trigger input	Opto In, Pulse Generators (4), Software, NAND Out (2), User Output (4), Actions (ToE)	
Exposure modes	Timed/EPS, RCT, Trigger Width, Auto	
Electronic shutter	Timed: 3.5 μs to 8 sec. in 1 μs steps Auto: 100 μs to 200 ms at full resolution	
Auto Level Control (ALC)	Shutter range from 100 μs to 200 ms, gain range from 0 dB to +42 dB. Tracking speeds and min/max values adjustable.	
Shading correction	Flat shading, color shading (color model)	
Video processing functions	H & V flip (mirroring), blemish compensation, gradation compression, color enhancement & color conversion (color model)	
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. 4.1 W typical @ +12 V +36V to +57 V DC. 4.1 W typical @ +48 V
Lens mount	C-mount	
Dimensions (H x W x L)	29 mm x 29 mm x 55 mm	
Weight	65 g	

Ordering Information

GOX-20405M-PGE	Monochrome camera with GigE Vision interface
GOX-20405C-PGE	Color camera with GigE Vision interface

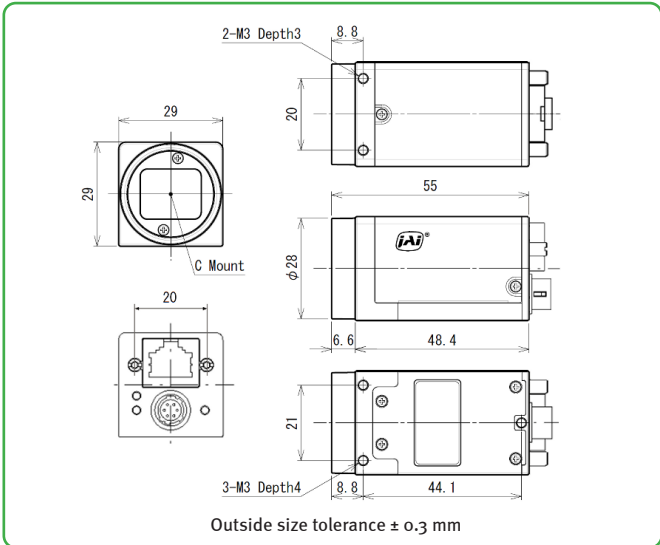
Europe, Middle East & Africa
 Phone +45 4457 8888
 Fax +45 4491 8880

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

Dimensions



Connector pin-out

DC In / Trigger

HIROSE HR10A-7R-6PB(73)

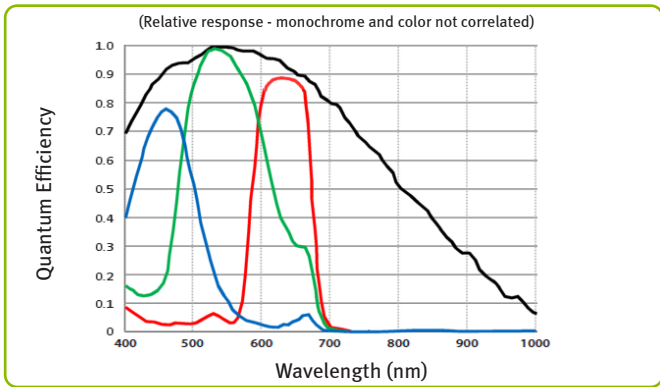
Pin	Signal
1	DC in +10V to +25V
2	Opto In+
3	Opto In-
4	Opto Out+
5	Opto Out-
6	Ground

GigE Vision Interface

RJ45 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



*Traditional SNR is based on random noise in a single frame, where EMVA SNR measurements consider more comprehensive noise sources and variance over time.

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See the possibilities