

GOX-8105C-CXP

Technical Datasheet

IMX546 Pregius S



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.

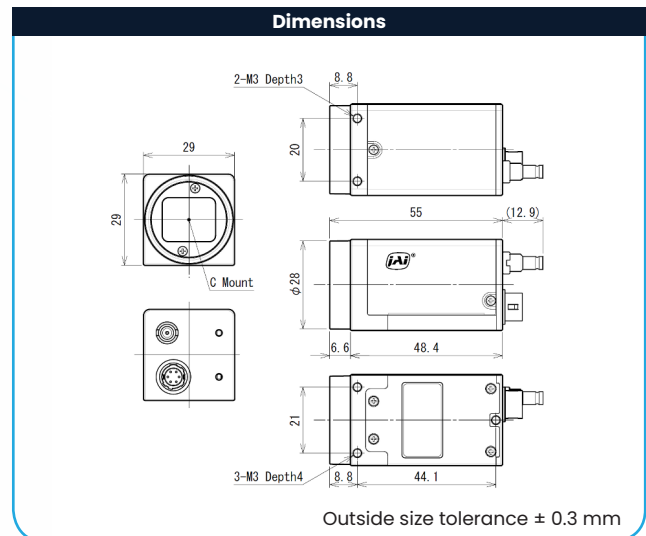
The Go-X Series incorporates the most popular Sony Pregius and Pregius S global shutter CMOS sensors, and several Starvis CMOS sensors with rolling shutter technology. Resolutions range from 2.3 to 24.5 megapixels with a choice of USB3 Vision, GigE Vision (1000BASE-T or 5GBASE-T), or CoaXPress interfaces.

Specification Highlights

SENSOR: IMX546 Pregius S
FORMAT: 2/3"
PIXEL SIZE: 2.74 x 2.74 μm
LENS MOUNT: C-Mount
SPECTRUM: Color (Visible)

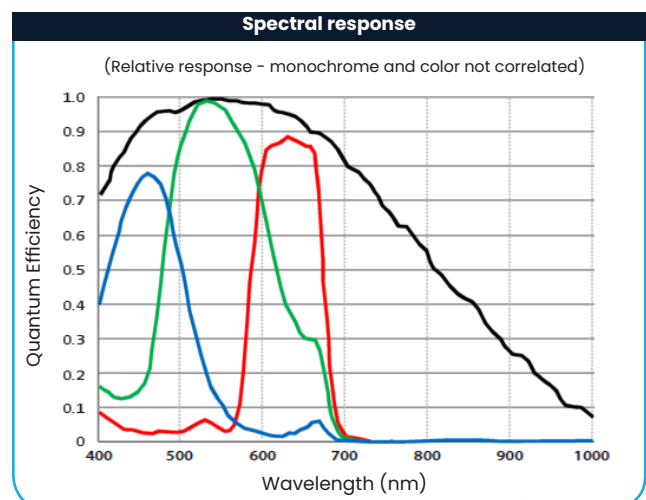
SHUTTER: Global Shutter
FRAME RATE: 71 fps
INTERFACE: CoaXPress-1-Cable (PoCXP)
RESOLUTION MP: 8.1 MP
RESOLUTION WxH: 2856 x 2848 px

Specifications		GOX-8105-CXP
Sensor		2/3" CMOS global shutter (IMX546)
Active pixels		2856 (h) x 2848 (v)
Frame rate, full frame		71 frames/sec. @ 8-bit mono/Bayer
Active area		7.8 mm (h) x 7.8 mm (v) - 11.05 mm diagonal
Pixel size		2.74 μm x 2.74 μm
Read-out modes		
Full ROI (single)		2856 (h) x 2848 (v) up to 71 fps H: 96 to 2856 pixels in 8 pixel steps V: 8 to 2848 lines in 2 line steps
ROI (multi)		Up to 64 scanning areas - no overlap
Binning		1x2, 2x1, or 2x2 (mono only)
Image scaling		Supports independent, sub-pixel rescaling of H and/or V resolution (1/16 max.)
EMVA 1288 Parameters		12-bit output format
Absolute sensitivity		Mono: TBD p Color: TBD p ($\lambda = 527 \text{ nm}$)
Maximum SNR		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
Synchronization		Internal
Trigger input		CXP In, Opto In, Pulse Generators (4), Software, NAND Out (2), User Output (4)
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 13.6 ms at full resolution
Auto Level Control (ALC)		Shutter range from 100 μs to 13.6 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, edge enhancement, 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		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 PoCXP	+10V to +25V DC. 4.1 W typical @ +12 V Supported
Lens mount		C-mount
Dimensions (H x W x L)		29 mm x 29 mm x 55 mm
Weight		60 g
Ordering Information		
GOX-8105M-CXP		Monochrome camera with CoaXPress interface
GOX-8105C-CXP		Color camera with CoaXPress interface



Connector pin-out

DC In / Trigger		CoaXPress Interface
HIROSE HR10A-7R-6PB		DIN type
Pin	Signal	Single channel output, CXP 2.0 Requires cable with 75 Ω 1.0/2.3 DIN-type connector Supports up to 6.25 Gbps output speed (CXP-6)
1	DC in +10V to +25V	
2	Opto In+	
3	Opto In-	
4	Opto Out+	
5	Opto Out-	
6	Ground	



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

Product Highlights

- High performance camera with 8.1-megapixel resolution
- 2/3" CMOS imager (global shutter) features backside illuminated pixel technology
- Up to 71 fps at full resolution (2856 x 2848)
- 2.74 μm square pixels
- 8/10/12-bit output in choice of monochrome or raw Bayer color models
- Flexible ROI & rescaling function (Xscale) for sub-pixel color/mono binning and resolution matching
- Traditional 1x2, 2x1, or 2x2 binning also included on monochrome models
- Horizontal/vertical image flip function, plus blemish compensation and shading correction
- Bayer model includes 5x5 debayering function plus built-in color conversion and temperature presets
- Includes Sequencer function and Automatic Level Control (ALC) for dynamic lighting conditions
- Compact size with excellent shock and vibration resistance
- Accepts power over CoaXPress interface or via separate 6-pin connector
- C-mount lens mount

Additional Product Images



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