

# GOX-24505M-CXP

## Technical Datasheet

IMX540 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:** IMX540 Pregius S

**FORMAT:** 1.2"

**PIXEL SIZE:** 2.74 x 2.74  $\mu\text{m}$

**LENS MOUNT:** C-Mount

**SPECTRUM:** Monochrome (Visible + NIR)

**SHUTTER:** Global Shutter

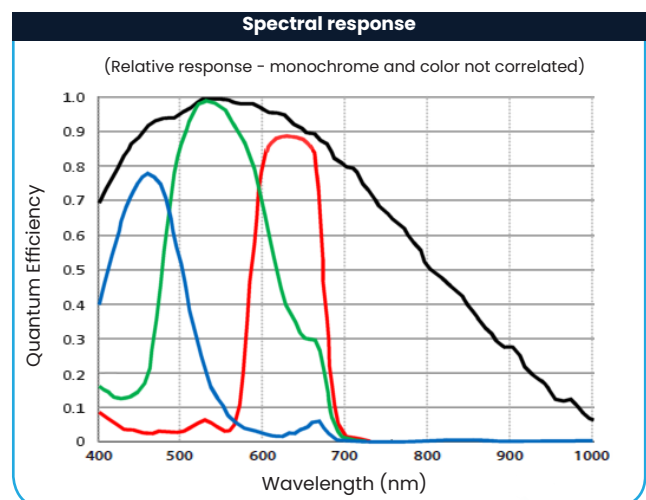
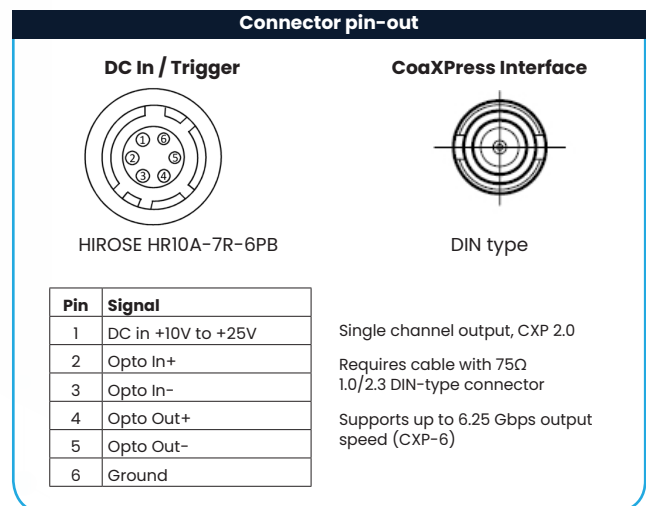
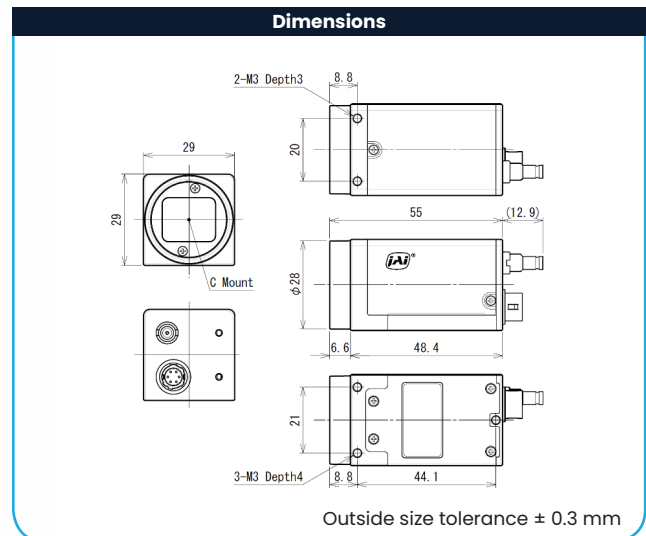
**FRAME RATE:** 24 fps

**INTERFACE:** CoaXPress-1-Cable (PoCXP)

**RESOLUTION MP:** 24.5 MP

**RESOLUTION WxH:** 5328 x 4608 px

Specifications		GOX-24505-CXP
Sensor		1.2" CMOS global shutter (IMX540)
Active pixels		5328 (h) x 4608 (v)
Frame rate, full frame		24 frames/sec. @ 8-bit mono/Bayer
Active area		14.6 mm (h) x 12.6 mm (v) - 19.3 mm diagonal
Pixel size		2.74 $\mu\text{m}$ x 2.74 $\mu\text{m}$
Read-out modes		
Full ROI (single)		5328 (h) x 4608 (v) up to 24 fps H: 96 to 5328 pixels in 8 pixel steps V: 8 to 4608 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 $\mu\text{s}$ to 8 sec. in 1 $\mu\text{s}$ steps Auto: 100 $\mu\text{s}$ to 40.6 ms at full resolution
Auto Level Control (ALC)		Shutter range from 100 $\mu\text{s}$ to 40.6 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-24505M-CXP		Monochrome camera with CoaXPress interface
GOX-24505C-CXP		Color camera with CoaXPress 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.

## Product Highlights

- High performance camera with 24.5-megapixel resolution
- 1.2" CMOS imager (global shutter) features backside illuminated pixel technology
- Up to 24 fps at full resolution (5328 x 4608)
- 2.74  $\mu\text{m}$  square pixels
- 8/10/12-bit output in choice of monochrome or raw Bayer color models
- Flexible ROI & rescaling function 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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