

GOX-24505C-CXP

Technical Datasheet



See the possibilities

IMX540 Pregius S



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.

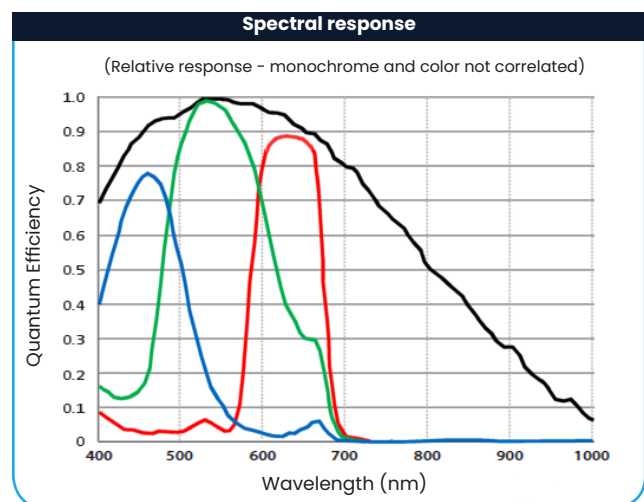
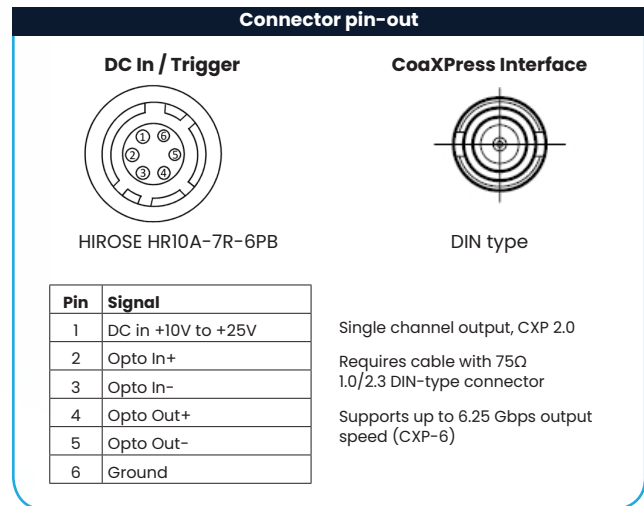
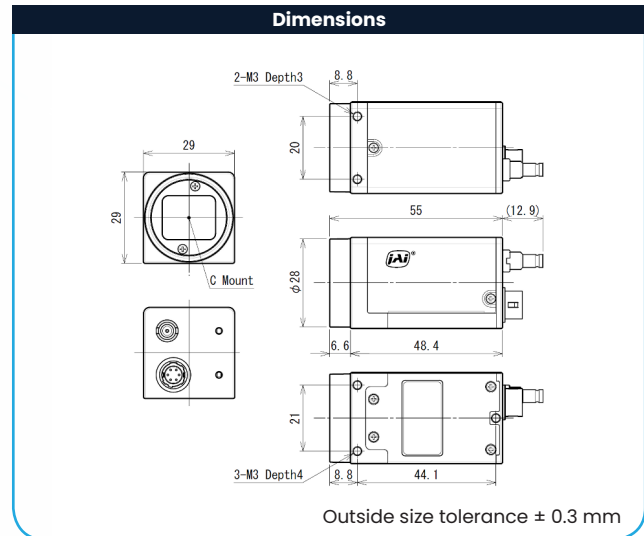
The Go-X Series incorporates the most popular Sony Pregius and Pregius S global shutter CMOS sensors, and several Starvis CMOS sensors with rolling shutter technology. Resolutions range from 2.3 to 24.5 megapixels with a choice of USB3 Vision, GigE Vision (1000BASE-T or 5GBASE-T), or CoaXPress interfaces.

Specification Highlights

SENSOR: IMX540 Pregius S
FORMAT: 1.2"
PIXEL SIZE: 2.74 x 2.74 μm
LENS MOUNT: C-Mount
SPECTRUM: Color (Visible)

SHUTTER: Global Shutter
FRAME RATE: 24 fps
INTERFACE: CoaXPress-I-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 μm x 2.74 μm	
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 μs to 8 sec. in 1 μs steps Auto: 100 μs to 40.6 ms at full resolution	
Auto Level Control (ALC)	Shutter range from 100 μs 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 μm 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



Company and product names mentioned in this datasheet are trademarks or registered trademarks of their respective owners.

JAI A-S and Machine Vision Direct, LLC Cannot be held responsible for any technical or typographical errors and reserves the right to make changes to products and documentation without prior notice