

GOX-24505C-5GE

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.

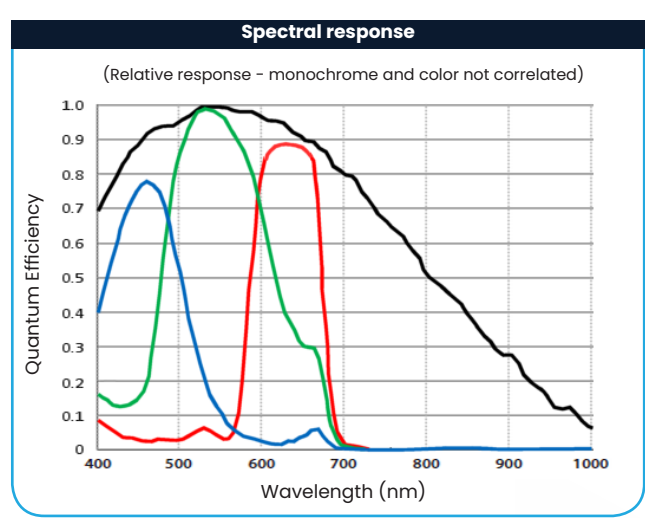
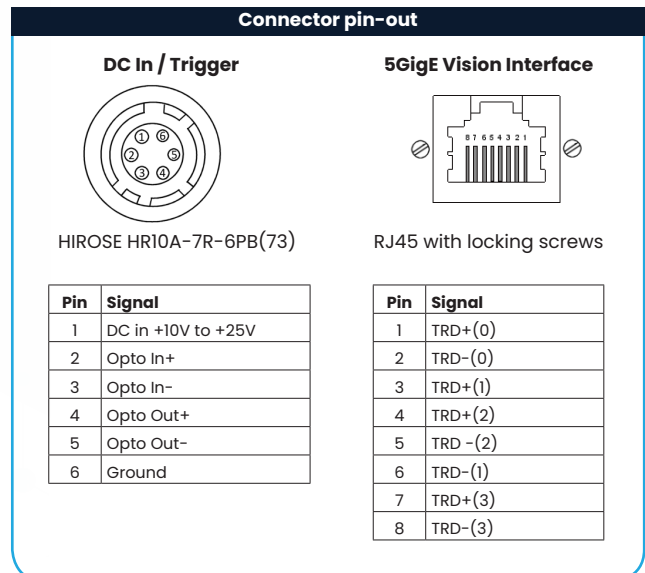
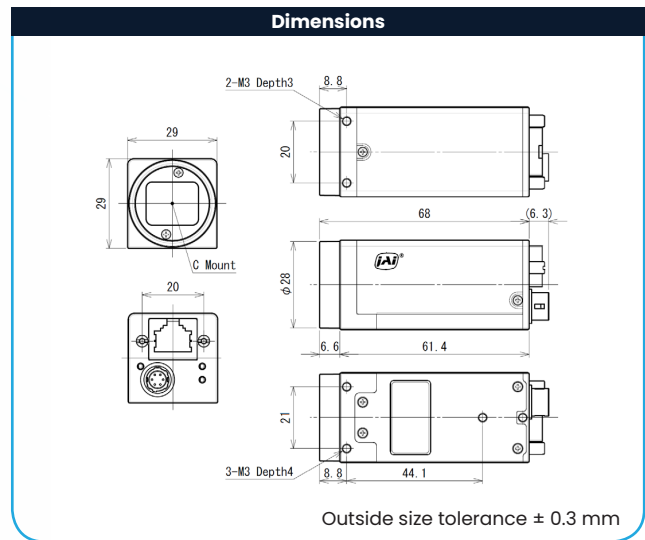
The Go-X Series incorporates the most popular Sony Pregius and Pregius S global shutter CMOS sensors, and several Starvis CMOS sensors with rolling shutter technology. Resolutions range from 2.3 to 24.5 megapixels with a choice of USB3 Vision, GigE Vision (1000BASE-T or 5GBASE-T), or CoaXPress interfaces.

Specification Highlights

SENSOR: IMX540 Pregius S
FORMAT: 1.2"
PIXEL SIZE: 2.4 x 2.4 μm
LENS MOUNT: C-Mount
SPECTRUM: Color (Visible)

SHUTTER: Global Shutter
FRAME RATE: 22 fps
INTERFACE: 5 Gbps GigE Vision
RESOLUTION MP: 24.5 MP
RESOLUTION WxH: 5328 x 4608 px

| Specifications | GOX-24505-5GE |
|----------------------------|---|
| Sensor | 1.2" CMOS global shutter (IMX540) |
| Active pixels | 5328 (h) x 4608 (v) |
| Frame rate, full frame | 22 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 22 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, 2x2 (mono only) |
| Image scaling (Xscale) | Supports independent, sub-pixel rescaling of H and/or V resolution (1/16 max.) |
| EMVA 1288 Parameters | 10-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 24/32-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 |
| Exposure modes | Timed/EPS, RCT, Trigger Width, Auto |
| Electronic shutter | Timed: 3.45 μs to 8 sec. in 1 μs steps Auto: 100 μs to 45.4 ms at full resolution |
| Auto Level Control (ALC) | Shutter range from 100 μs to 45.4 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, edge 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 PoE +10V to +25V DC. 5.1 W typical @ +12 V +36V to +57 V DC. 6.7 W typical @ +48 V |
| Lens mount | C-mount |
| Dimensions (H x W x L) | 29 mm x 29 mm x 68 mm |
| Weight | 95 g |
| Ordering Information | |
| GOX-24505M-5GE | Monochrome camera with 5GigE Vision interface |
| GOX-24505C-5GE | Color camera with 5GigE 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.

Product Highlights

- High performance camera with 24.5-megapixel resolution
- 1.2" CMOS imager (global shutter) features backside illuminated pixel technology
- 5328 x 4608 resolution with 2.74 μm square pixels
- Up to 22 fps over high performance 5GBASE-T interface (5 gigabits per second)
- Can auto-negotiate to 2.5GBASE-T and standard GigE (1000BASE-T)
- 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 GigE Vision interface or via separate 6-pin connector
- C-mount lens mount

Additional Product Images



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