

▪ 5328 x 3040

▪ 36 fps

Go-X Series 

❖ **GOX-16205-CXP**
16.2-megapixel CMOS global shutter

CoaXPress[®]



- **High performance camera with 16.2-megapixel resolution**
- **1.1" CMOS imager (global shutter) features backside illuminated pixel technology**
- **Up to 36 fps at full resolution (5328 x 3040)**
- **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**

Specifications for GOX-16205-CXP

Go-X Series

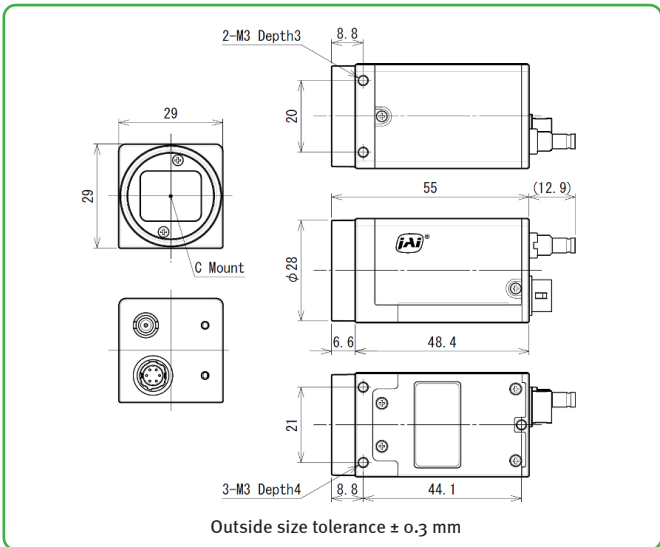
Specifications | GOX-16205-CXP

| | |
|----------------------------|---|
| Sensor | 1.1" CMOS global shutter (IMX542) |
| Active pixels | 5328 (h) x 3040 (v) |
| Frame rate, full frame | 36 frames/sec. @ 8-bit mono/Bayer |
| Active area | 14.6 mm (h) x 8.3 mm (v) - 16.81 mm diagonal |
| Pixel size | 2.74 μm x 2.74 μm |
| Read-out modes | Full ROI (single) 5328 (h) x 3040 (v) up to 36 fps H: 96 to 5328 pixels in 8 pixel steps V: 8 to 3040 lines in 2 line steps ROI (multi) Binning Up to 64 scanning areas - no overlap 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: 3.67 p Color: 2.75 p ($\lambda=527\text{ nm}$) |
| Maximum SNR | Mono: 38.92 dB Color: 38.97 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 27 ms at full resolution |
| Auto Level Control (ALC) | Shutter range from 100 μs to 27 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 | 80G |
| 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-16205M-CXP | Monochrome camera with CoaXPress interface |
| GOX-16205C-CXP | Color camera with CoaXPress interface |

Dimensions



Connector pin-out

DC In / Trigger

HIROSE HR10A-7R-6PB

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

CoaXPress Interface

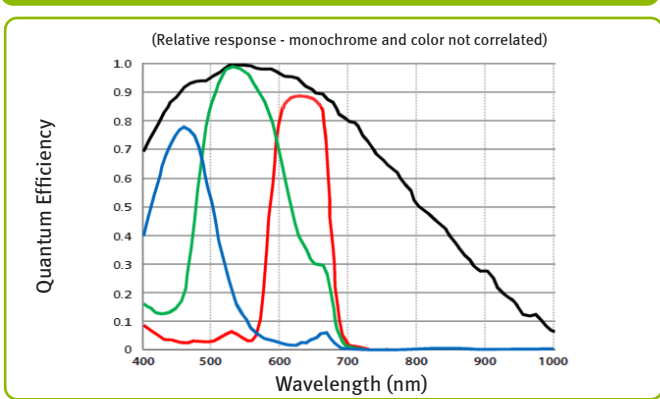
DIN type

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)

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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