

▪ 5328 x 3040

▪ 33 fps

Go-X Series 

❖ **GOX-16205-5GE**
16.2-megapixel CMOS global shutter

GigE
VISION

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- **High performance camera with 16.2-megapixel resolution**
- **1.1" CMOS imager (global shutter) features backside illuminated pixel technology**
- **5328 x 3040 resolution with 2.74 μm square pixels**
- **Up to 33 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**

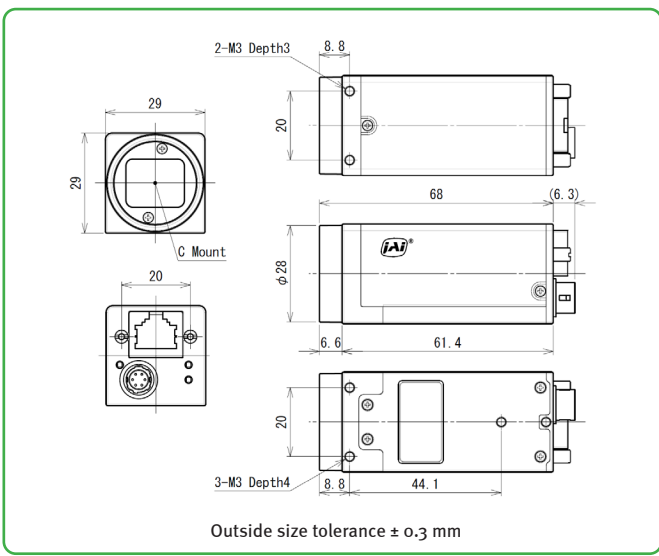
Specifications for GOX-16205-5GE

| Specifications | | GOX-16205-5GE |
|----------------------------|---|--|
| Sensor | | 1.1" CMOS global shutter (IMX542) |
| Active pixels | | 5328 (h) x 3040 (v) |
| Frame rate, full frame | | 33 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) ROI (multi) Binning | 5328 (h) x 3040 (v) up to 33 fps H: 96 to 5328 pixels in 8 pixel steps V: 8 to 3040 lines in 2 line steps Up to 64 scanning areas - no overlap 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 | Absolute sensitivity Maximum SNR | 10-bit output format Mono: TBD p Color: TBD p ($\lambda=527\text{ nm}$) 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 |
| 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/EPIS, RCT, Trigger Width, Auto |
| Electronic shutter | | Timed: 3.5 μs to 8 sec. in 1 μs steps Auto: 100 μs to 30.3 ms at full resolution |
| Auto Level Control (ALC) | | Shutter range from 100 μs to 30.3 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 | | 80G |
| 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. TBD W typical @ +12 V +36V to +57 V DC. TBD W typical @ +48 V |
| Lens mount | | C-mount |
| Dimensions (H x W x L) | | 29 mm x 29 mm x 68 mm |
| Weight | | 94 g |

Ordering Information

| | |
|----------------|---|
| GOX-16205M-5GE | Monochrome camera with 5GigE Vision interface |
| GOX-16205C-5GE | Color camera with 5GigE Vision interface |

Dimensions



Connector pin-out

DC In / Trigger

HIROSE HR10A-7R-6PB(73)

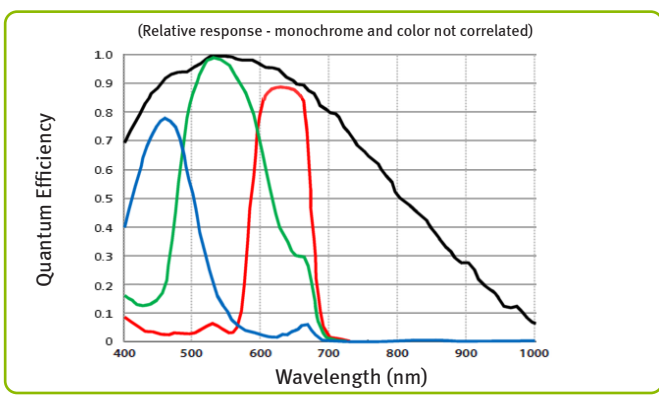
| Pin | Signal |
|-----|--------------------|
| 1 | DC in +10V to +25V |
| 2 | Opto In+ |
| 3 | Opto In- |
| 4 | Opto Out+ |
| 5 | Opto Out- |
| 6 | Ground |

5GigE Vision Interface

RJ45 with locking screws

| Pin | Signal |
|-----|----------|
| 1 | TRD+ (0) |
| 2 | TRD- (0) |
| 3 | TRD+ (1) |
| 4 | TRD+ (2) |
| 5 | TRD- (2) |
| 6 | TRD- (1) |
| 7 | TRD+ (3) |
| 8 | TRD- (3) |

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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