



# FXO CoaXPress

fxo421MCX12-2C

## General

|                |                |
|----------------|----------------|
| Model          | fxo421MCX12-2C |
| Product code   | F002267        |
| Product series | FXO CoaXPress  |
| Status         | Available      |

## Sensor

|                                |                                     |
|--------------------------------|-------------------------------------|
| Sensor type                    | Area scan                           |
| Chroma                         | Mono                                |
| Spectrum                       | Visible                             |
| Spectral range                 | 400 nm to 1000 nm                   |
| Resolution                     | 1,936 × 1,464 (2.80 MP)             |
| Sensor model                   | Sony IMX421                         |
| Sensor architecture (material) | cmos                                |
| Shutter type(s)                | Global shutter (GS)                 |
| Sensor size                    | 8.71 × 6.59 mm (10.92 mm, Type 2/3) |
| Pixel size                     | 4.50 µm × 4.50 µm                   |

## Pixel formats

|                          |               |
|--------------------------|---------------|
| Sensor bit depth         | 8-bit, 12-bit |
| Monochrome pixel formats | mono8, mono12 |

## Timing and gain

|                 |                   |
|-----------------|-------------------|
| Max. frame rate | 413.5 fps         |
| Exposure time   | 7 µs to 60 s      |
| Gain            | 0.0 dB to 48.0 dB |

## I/Os and power

|                             |                                                                                                       |
|-----------------------------|-------------------------------------------------------------------------------------------------------|
| Non-isolated lines          | 0 x LVDS input, 0 x LVDS output, 0 x TTL input, 0 x TTL output, 2 x 24V input, 4 x Open drain output, |
| Specific non-isolated lines | 1 x RS232 input, 1 x RS232 output, 0 x RS422 input, 0 x RS422 output,                                 |
| Opto-isolated lines         | 1 x Optical isolated input, 0 x Optical isolated input,                                               |
| I/O connector               | 12-pin Hirose HR10A-10P-12S                                                                           |
| Power supply                | 10 to 25VDC, Power over CoaXPress                                                                     |
| Power consumption           | External: 13 W (typical)                                                                              |

## Operating conditions

|                                 |                 |
|---------------------------------|-----------------|
| Operating temperature (housing) | -10 °C to 60 °C |
|---------------------------------|-----------------|

## Mechanical properties

|                                   |                             |
|-----------------------------------|-----------------------------|
| Body dimensions (L x W x H in mm) | 73 × 50 × 50                |
| Filter/protection glass           | K9 - AR coating - 400-850nm |
| IP class                          | IP30                        |
| Lens mount(s)                     | C-Mount                     |
| Weight                            | 240 g                       |

## On-board memory and FPGA

|                             |          |
|-----------------------------|----------|
| Non-volatile memory (Flash) | 32 MByte |
|-----------------------------|----------|

## Interfaces

|                     |                           |
|---------------------|---------------------------|
| Digital interface   | cxp-12 with 2 connections |
| Interface connector | (micro-BNC)               |
| Vision standard     | CoaXPress 2.0             |

## FW features - image control

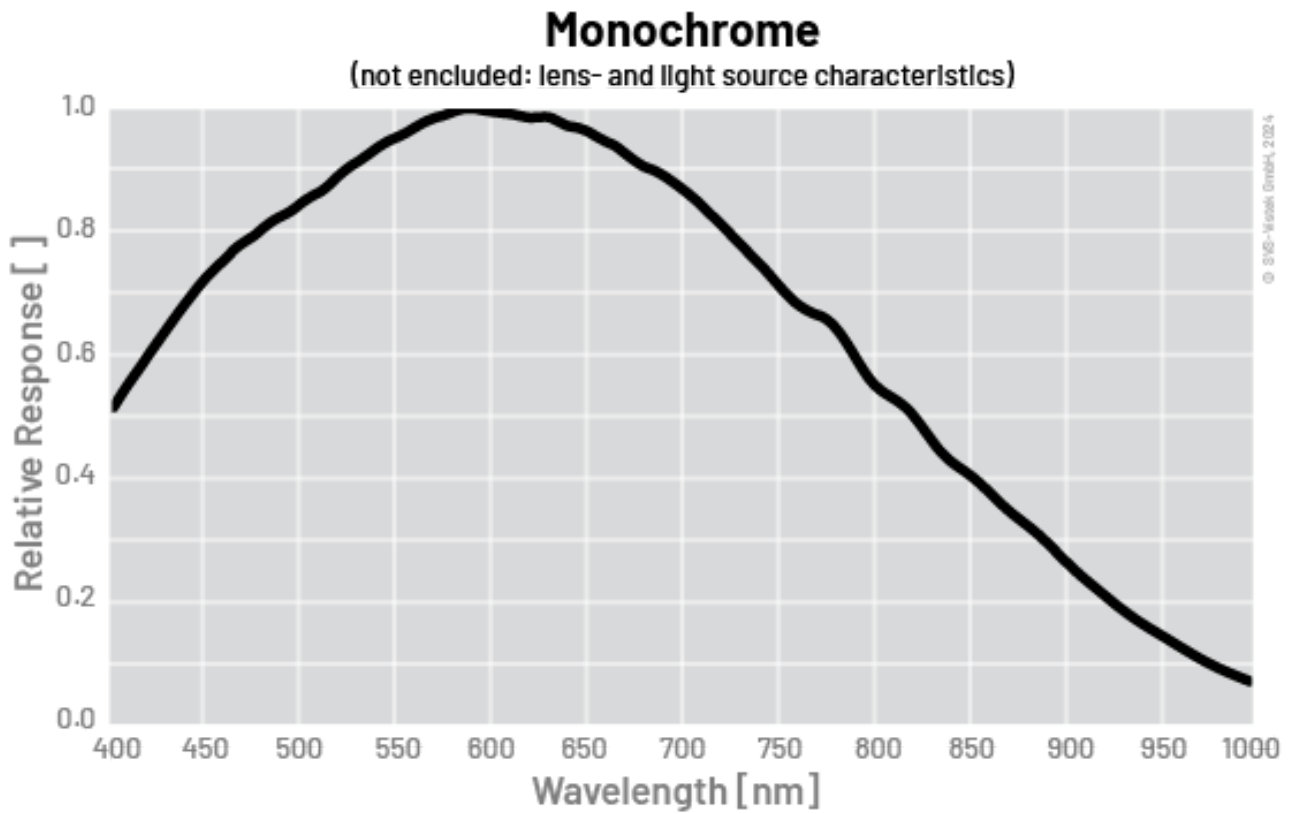
|                        |                                                      |
|------------------------|------------------------------------------------------|
| Exposure modes         | manual, auto, external                               |
| Gain modes             | auto, manual                                         |
| Image control features | roi, lut, mirror-image, dpc, shading-correction, ffc |

## FW features - camera control

|                         |                                      |
|-------------------------|--------------------------------------|
| Trigger modes/sync      | internal, software, external         |
| Camera control features | PoCXP, User Sets, PWM(4), Sequencer, |



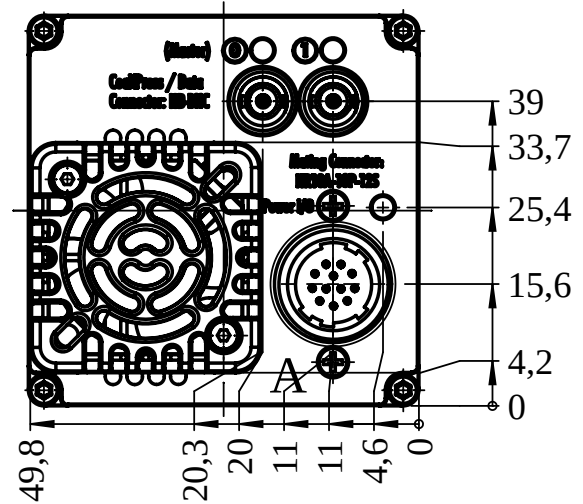
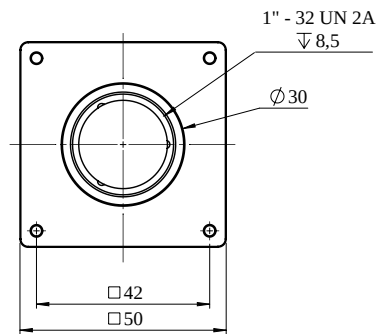
## Quantum Efficiency



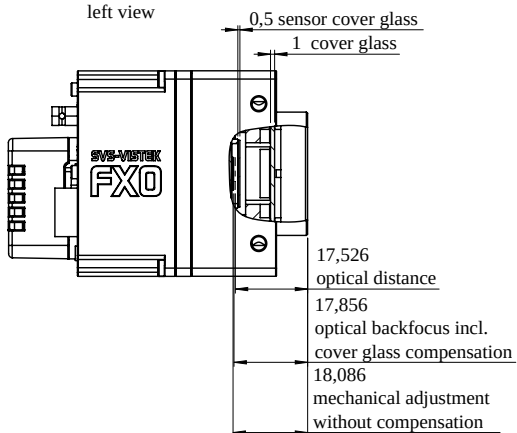
## Technical Drawing

back view

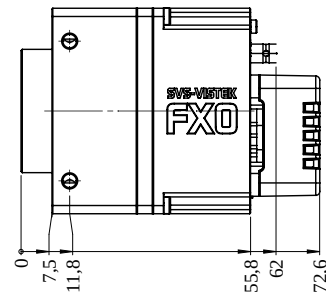
front view



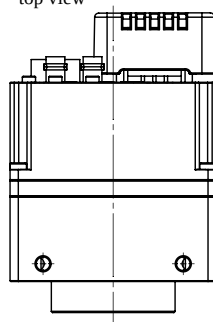
left view



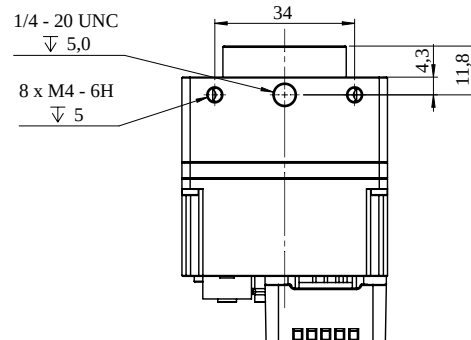
right view

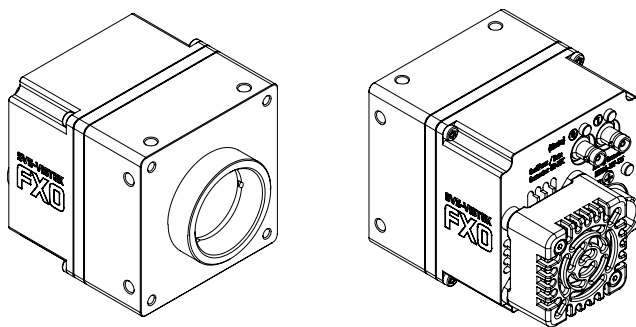


top view



bottom view





## I/O pin assignment



|   |       |                   |    |        |              |
|---|-------|-------------------|----|--------|--------------|
| 1 | VIN - | (GND)             | 7  | OUT 1  | (open drain) |
| 2 | VIN + | (10 V to 25 V DC) | 8  | OUT 2  | (open drain) |
| 3 | IN 4  | (RXD RS232)       | 9  | IN 3 + | (opto In +)  |
| 4 | OUT 4 | (TXD RS232)       | 10 | IN 3 - | (opto In -)  |
| 5 | IN 1  | (0-24V)           | 11 | OUT 3  | (open drain) |
| 6 | IN 2  | (0-24V)           | 12 | OUT 0  | (open drain) |