



## FXO CoaXPress

fxo541CCX

### General

|                |               |
|----------------|---------------|
| Model          | fxo541CCX     |
| Product code   | F002087       |
| Product series | FXO CoaXPress |
| Status         | Available     |

### Sensor

|                                |                                       |
|--------------------------------|---------------------------------------|
| Sensor type                    | Area scan                             |
| Chroma                         | Color                                 |
| Spectrum                       | Visible                               |
| Spectral range                 | 400 nm to 1000 nm                     |
| Resolution                     | 4,480 × 4,504 (20.20 MP)              |
| Sensor model                   | Sony IMX541                           |
| Sensor architecture (material) | cmos                                  |
| Shutter type(s)                | Global shutter (GS)                   |
| Sensor size                    | 12.28 × 12.34 mm (17.41 mm, Type 1.1) |
| Pixel size                     | 2.74 μm × 2.74 μm                     |

### Pixel formats

|                   |                 |
|-------------------|-----------------|
| Sensor bit depth  | 8-bit, 12-bit   |
| RGB pixel formats | bayer8, bayer12 |

### Imaging performance

|               |         |
|---------------|---------|
| Dynamic range | 72 dB   |
| SNR           | 39.8 dB |

## Timing and gain

|                 |                    |
|-----------------|--------------------|
| Max. frame rate | 35.7 fps           |
| Exposure time   | 21 $\mu$ s 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: 8 W (typical)                                                                               |

## Operating conditions

|                                 |                 |
|---------------------------------|-----------------|
| Operating temperature (housing) | -10 °C to 65 °C |
|---------------------------------|-----------------|

## Mechanical properties

|                                   |              |
|-----------------------------------|--------------|
| Body dimensions (L x W x H in mm) | 70 × 50 × 50 |
| 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 1 connection |
| Interface connector | (micro-BNC)              |
| Vision standard     | CoaXPress 2.0            |

## FW features - image control

|                     |                        |
|---------------------|------------------------|
| Exposure modes      | manual, auto, external |
| Gain modes          | auto, manual           |
| White balance modes | auto, manual           |

## FW features - image control

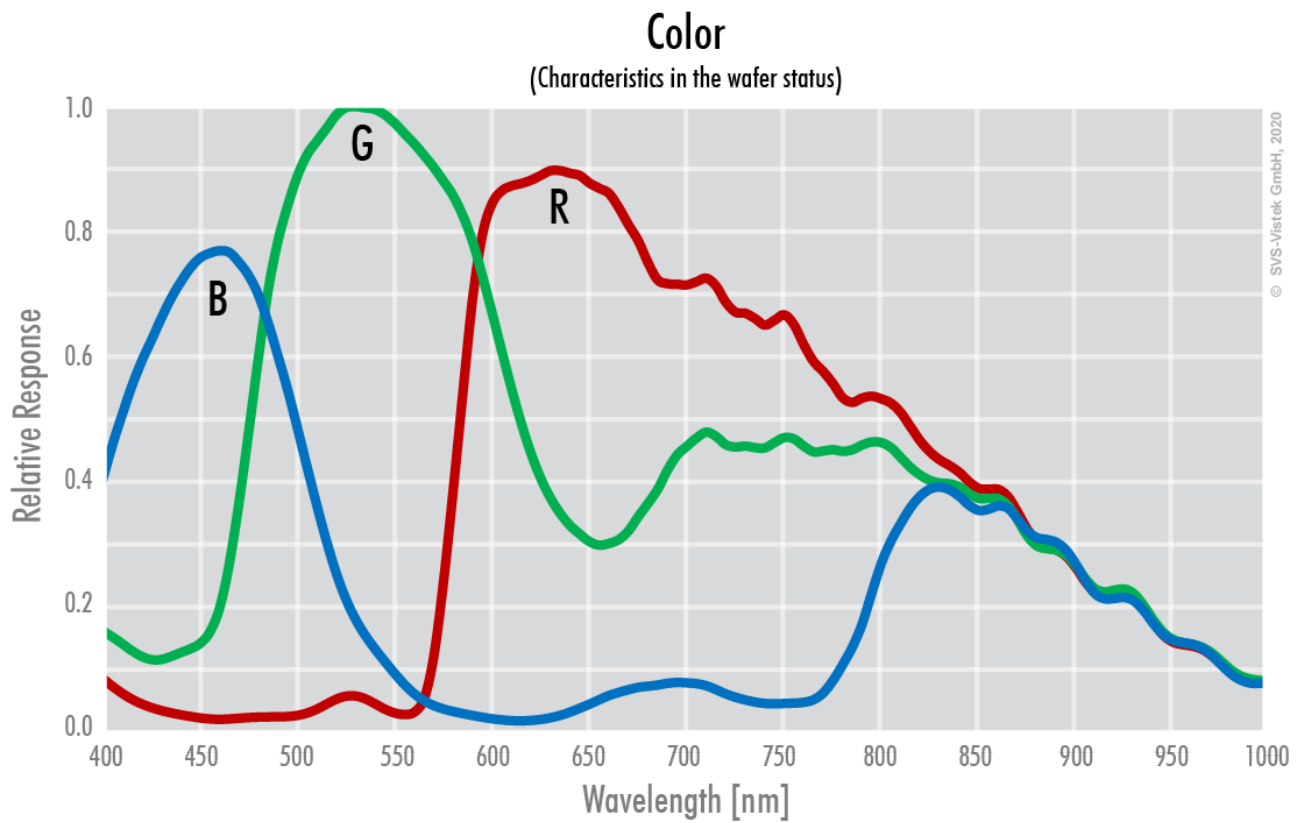
|                        |                        |
|------------------------|------------------------|
| Image control features | roi, lut, mirror-image |
|------------------------|------------------------|

## FW features - camera control

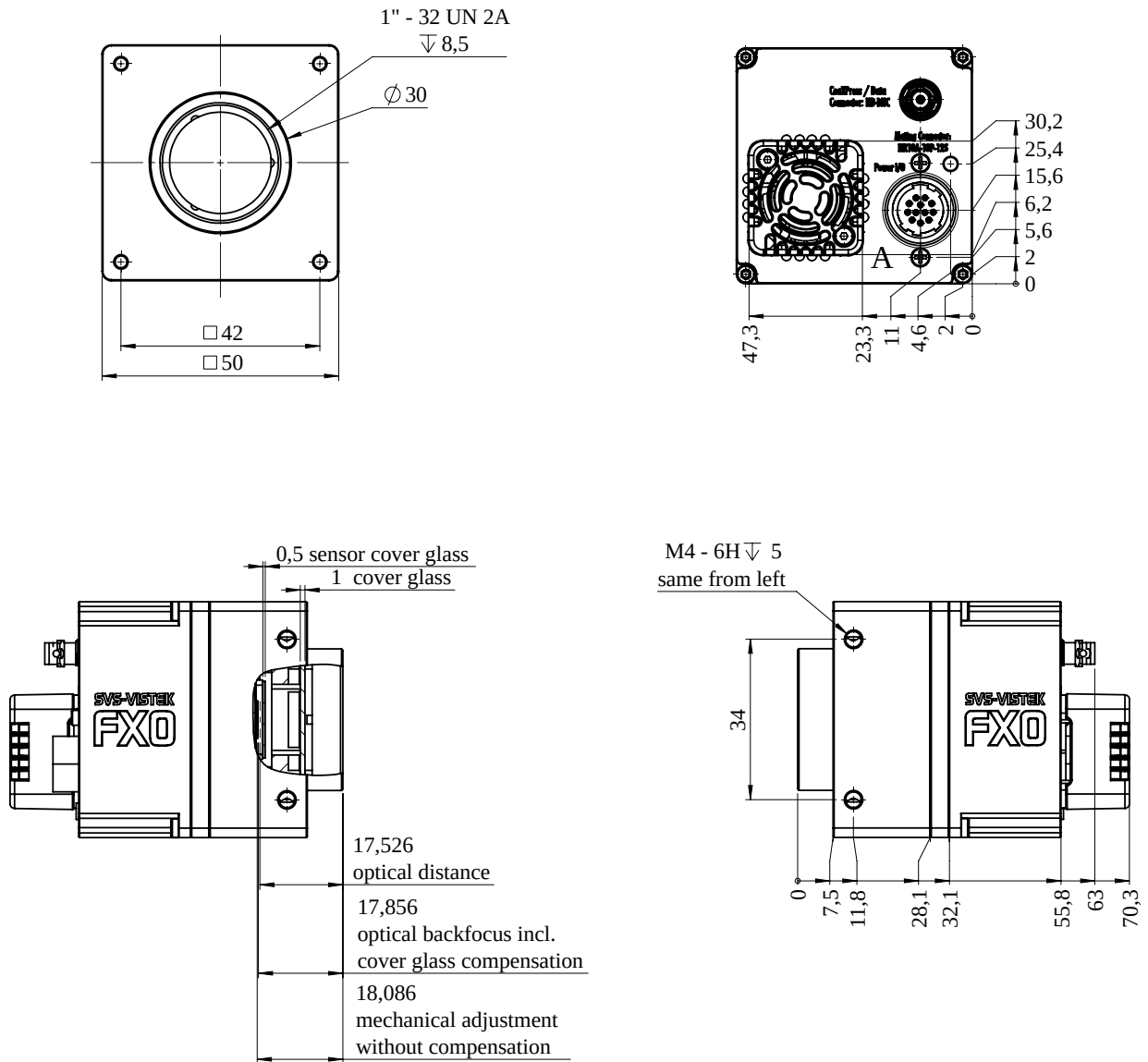
|                    |                              |
|--------------------|------------------------------|
| Trigger modes/sync | internal, software, external |
|--------------------|------------------------------|

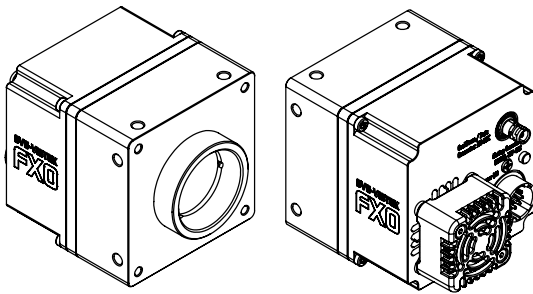
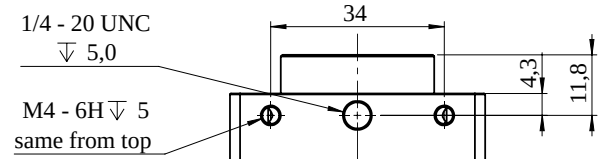
|                         |                                      |
|-------------------------|--------------------------------------|
| Camera control features | PoCxP, User Sets, PWM(4), Sequencer, |
|-------------------------|--------------------------------------|

## Quantum Efficiency



## Technical Drawing





## 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) |