

# FXO SWIR

## fxo993MXGE

### General

|                |            |
|----------------|------------|
| Model          | fxo993MXGE |
| Product code   | F002318    |
| Product series | FXO SWIR   |
| Status         | Available  |

### Sensor

|                                |                                             |
|--------------------------------|---------------------------------------------|
| Sensor type                    | Area scan                                   |
| Chroma                         | Mono                                        |
| Spectrum                       | eXtended SWIR                               |
| Spectral range                 | 400 nm to 1700 nm                           |
| Resolution                     | 2,048 × 1,536 (3.10 MP)                     |
| Sensor model                   | Sony IMX993   InGaAs                        |
| Sensor architecture (material) | cmos                                        |
| Shutter type(s)                | Global shutter (GS)                         |
| Sensor size                    | 7.07 × 5.3 mm (8.83 mm, 8.9mm (Type 1/1.8)) |
| Pixel size                     | 3.45 µm × 3.45 µm                           |

### Pixel formats

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

### Timing and gain

|                 |                   |
|-----------------|-------------------|
| Max. frame rate | 173.4 fps         |
| Gain            | 0.0 dB to 42.0 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/Os and power

|                   |                         |
|-------------------|-------------------------|
| Power supply      | 10 to 25VDC             |
| Power consumption | External: 9 W (typical) |

## Operating conditions

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

## Mechanical properties

|                                   |              |
|-----------------------------------|--------------|
| Body dimensions (L x W x H in mm) | 76 × 50 × 50 |
| IP class                          | IP30         |
| Lens mount(s)                     | C-Mount      |
| Weight                            | 240 g        |

## On-board memory and FPGA

|                             |             |
|-----------------------------|-------------|
| Image buffer (RAM)          | 896 MByte   |
| Non-volatile memory (Flash) | 32000 MByte |

## Interfaces

|                     |         |
|---------------------|---------|
| Digital interface   | 10gige  |
| Interface connector | (RJ-45) |

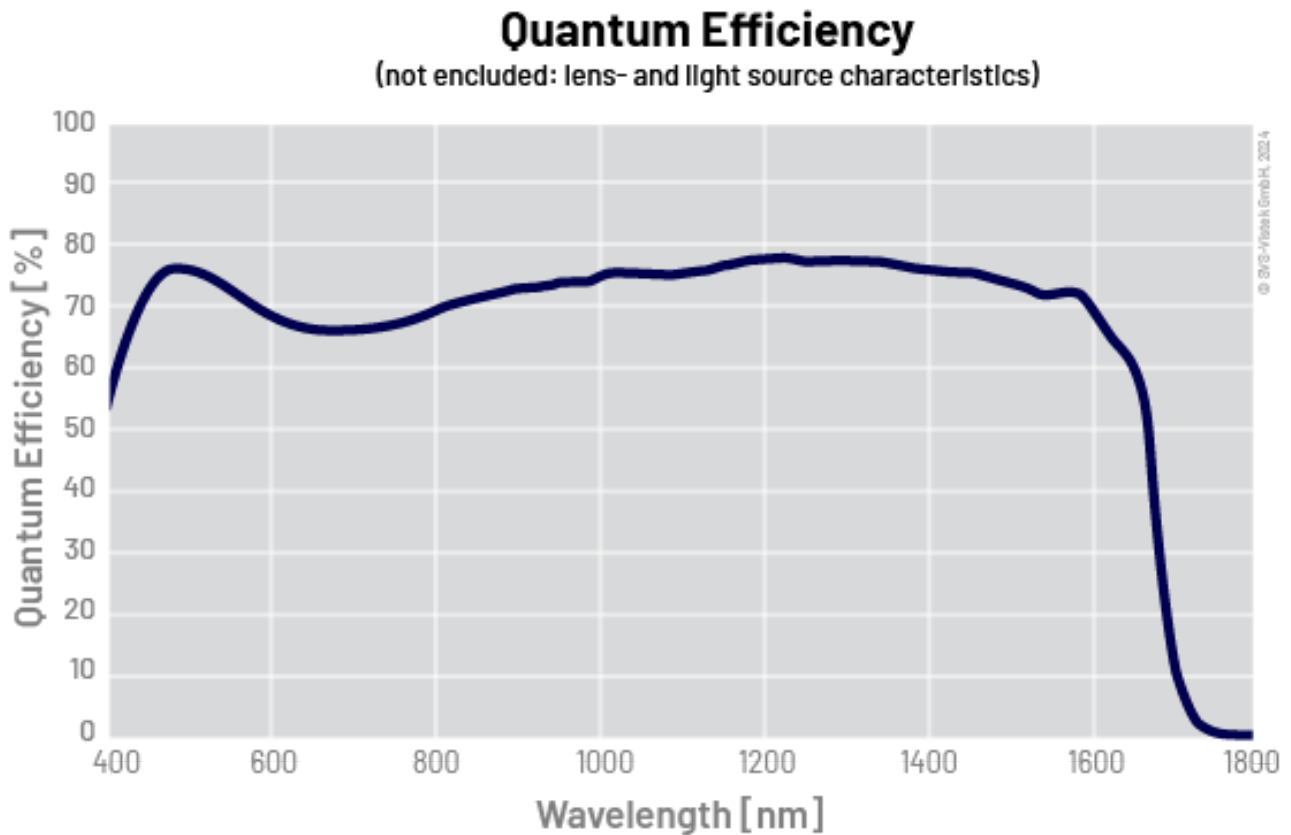
## FW features - image control

|                        |                                             |
|------------------------|---------------------------------------------|
| Exposure modes         | manual, auto                                |
| Gain modes             | auto, manual                                |
| Image control features | roi, lut, mirror-image, dpc, nuc, ffc, dopo |

## FW features - camera control

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

## Quantum Efficiency



## I/O pin assignment

|                                                                                                             |   |       |                   |    |        |              |
|-------------------------------------------------------------------------------------------------------------|---|-------|-------------------|----|--------|--------------|
| <b>Hirose 12 Pin</b><br> | 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) |