



General

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|-----------------|-----------|
| Model: | exo428MGE |
| Product code: | F002195 |
| Product series: | EXO GigE |
| Status: | Available |

Sensor

| | |
|---------------------------------|---|
| Sensor type: | Area scan |
| Chroma: | Mono |
| Spectrum: | Visible |
| Spectral range: | 400 nm to 1000 nm |
| Resolution: | 3,208 × 2,200 (7.10 MP) |
| Sensor model: | Sony IMX428 |
| Sensor architecture (material): | cmos |
| Shutter type(s): | global-shutter |
| Sensor size: | 14.44 × 9.9 mm (17.5 mm, 17.6mm (Type 1.1)) |
| Pixel size: | 4.50 μm × 4.50 μm |

Pixel formats

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|---------------------------|---------------------|
| Sensor bit depth: | 8-Bit,12-Bit,12-Bit |
| Monochrome pixel formats: | mono8, mono12packed |

Imaging performance

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|----------------|---------|
| Dynamic range: | 72 dB |
| SNR: | 39.5 dB |

Timing and gain

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|------------------------|--------------------|
| Max. frame rate: | 17.4 fps |
| Max. frame rate burst: | 27 fps |
| Exposure time: | 21 μ 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, |
| Power supply: | 10 to 25VDC, Power over Ethernet |
| Power consumption: | External: 5 W (typical) |

Operating conditions

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

Mechanical properties

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|------------------------------------|-----------------------------|
| Body dimensions (L x W x H in mm): | 43 × 50 × 50 |
| Filter/protection glass: | K9 - AR coating - 400-850nm |
| IP class: | IP40 |
| Lens mount(s): | C-Mount |
| Weight: | 140 g |

On-board memory and FPGA

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|------------------------------|-----------|
| Image buffer (RAM): | 192 MByte |
| Non-volatile memory (Flash): | 32 MByte |

Interfaces

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

FW features - image control

| | |
|-----------------|------------------------|
| Exposure modes: | Manual, Auto, External |
|-----------------|------------------------|

FW features - image control

Gain modes: Auto, Manual

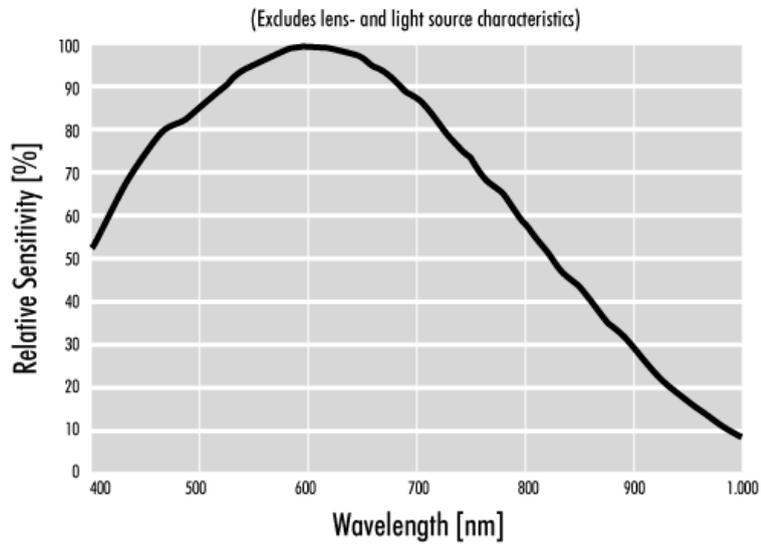
Image control features: FW Features - Image Control

FW features - camera control

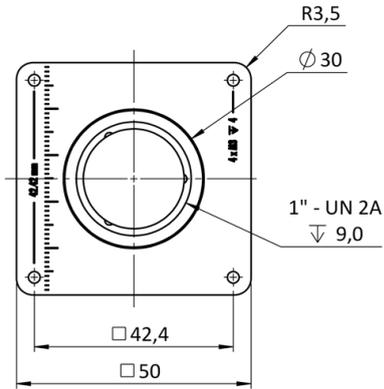
Trigger modes/sync: INTERNAL,SOFTWARE,EXTERNAL

Camera control features: PTP, BurstMode, User Sets, POE, PWM(4), Sequencer,

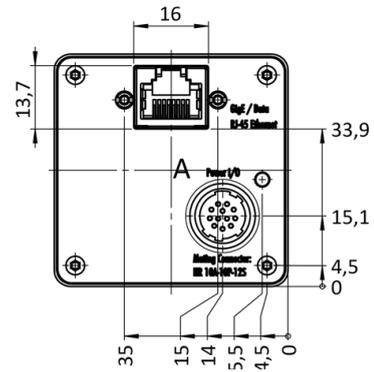
Quantum Efficiency



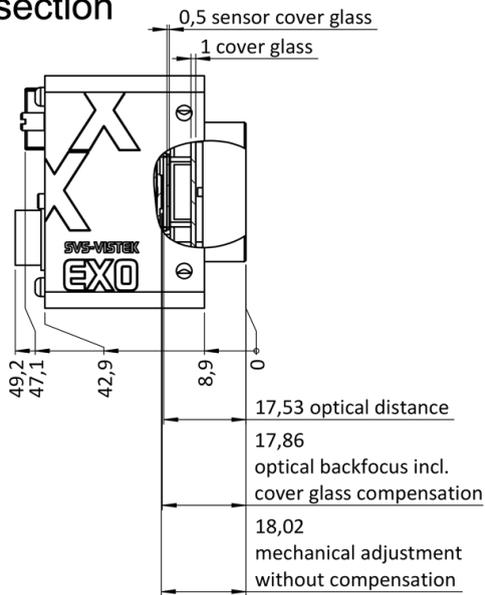
front



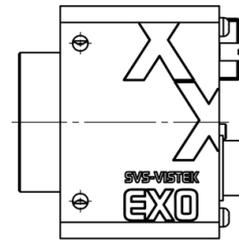
back



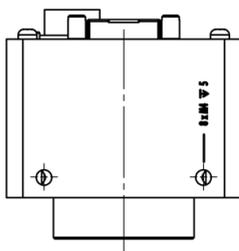
cross section



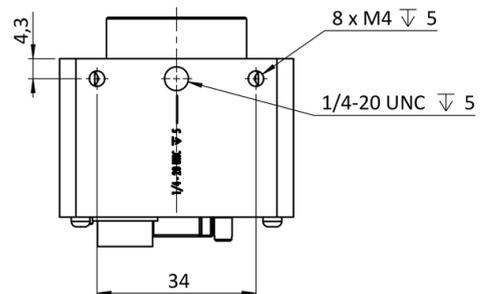
right side

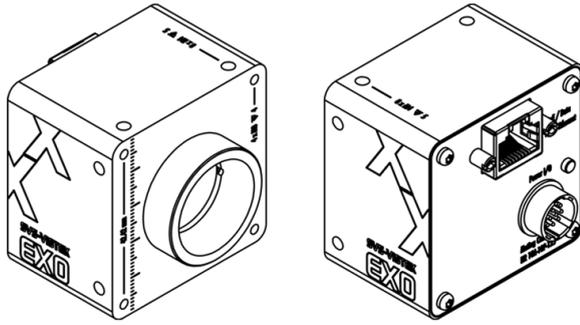


top



bottom





I/O pin assignment



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|---|-------------------------|----|--------------------|
| 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) |