



a TKH Vision brand

SWIR

exo990MGE

The SWIR cameras based on the EXO and FX0 series offer an extremely wide usable spectral range of 400-1700nm with the Sony SenSWIR sensor. Highly efficient thermal management of the housing is the basis of the outstanding dynamic range and homogeneity of the image. The integrated 4-channel strobe controller supports complex illumination and analysis scenarios.

Technical Highlights

- Switchable active cooling (FX0 only)
- GenICam 3.0, GenTL
- Integrated 4-channel LED strobe controller
- I/O interface with 2xIN, 4xOUT, Opto and RS232
- programmable timer, logic functions and sequencer

ATTENTION: This product is subject to export control and requires written information on intended use and final destination!


SWIR
SHORT WAVELENGTH
INFRARED



LED
4 INTEGRATED
LED CONTROLLERS

SEQ
INTEGRATED
SEQUENCER

STT
SAFE TRIGGER
TECHNOLOGY

PLC
PROGRAMMABLE
LOGIC CONTROL

Specifications

Resolution [MP]	1.3 MP
Resolution (h x v)	1280 x 1024 px
Frame rate(max.)	94.4 fps
Chroma	SWIR
Interface	GigE (RJ-45)

Sensor

Sensor	IMX990AABJ
Manufacturer	Sony
Sensor type	Area SWIR CMOS
Shutter type	global shutter
Sensor size (h x v)	6.4 x 5.12 mm
Optical diagonal	8.2 mm
Sensor format	8.2mm (Type 1/2)
Pixel size (h x v)	5 x 5 µm

Camera

Exposure modes	MANUAL;AUTO
Trigger modes	INTERNAL;SOFTWARE;EXTERNAL
Exposure time (min)	15 µs
Exposure time (max)	0.5 sec
Pixel format / max	mono8, mono12 / 12 bit
Gain modes	manual, auto
Dynamic range (max)	57 dB (dep. on environment)
Internal memory	256 MB SDRAM, 32 MB Flash

Feature Set

AOI	yes
LUT	yes
Offset	yes
Readout control	yes
Binning	yes
Image flip	yes
Two-Point NUC	yes
Defect pixel correction	yes
Sequencer	yes
POE	yes
Dynamic HotPixel Correction	yes

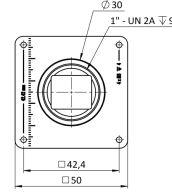
Housing

Lens mount	C-Mount
Dimensions (w x h x d)	50 x 50 x 42.5 mm
Weight	138 g
Operating temperature (housing)	-10 to 60 °C
Ambient humidity	10 to 90 % (non-condensing)
Protection class	IP40

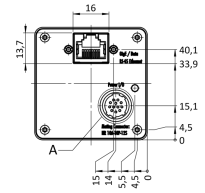
I/O-Interfaces

Input up to 24V	2 x
Input OPTO	1x
Output open drain	4 x
I/O RS-232	1x
Power supply	10 to 25 V (DC)
Power consumption	4 W (dep. on operating mode)

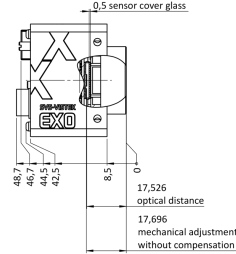
front



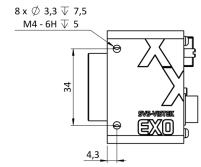
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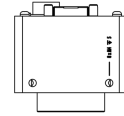
cross section



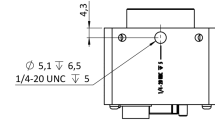
right side



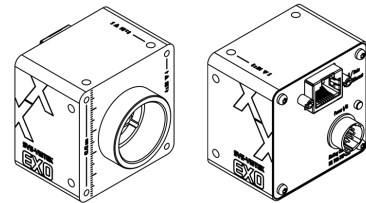
top



bottom

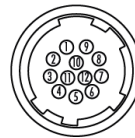


3D



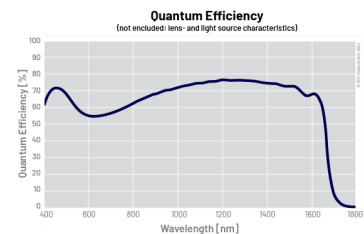
Pinout Mating Connector

Hirose 12 Pin



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)

Spectral Response *



* Sensor data – excludes camera cover- or IR-cut filter characteristics

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