



a TKH Vision brand

Polarized exo250ZGE

The Polarized cameras measure the degree of polarization and the planes of polarization from a single image. The high resolution with global shutter, the high optical dynamic and high frame rate allow detailed structural analysis of even moving objects. The cameras are based on our fanless EXO industrial camera with milled aluminum body.

Technical Highlights

- LUT, ROI, Burst Mode
- Electrical and optical inputs
- Up to 60°C operating temperature
- Integrated 4-channel strobe controller
- Industrial TTL-24V I/O interface with SafeTrigger, logic functions, programmable sequencers and timers, RS232 interface

POL
POLARIZED
WAVELENGTH



LED
4 INTEGRATED
LED CONTROLLERS

SEQ
INTEGRATED
SEQUENCER

STT
SAFE TRIGGER
TECHNOLOGY

BST
BURST MODE
TECHNOLOGY

PLC
PROGRAMMABLE
LOGIC CONTROL

Specifications

Resolution [MP]	5 MP
Resolution (h x v)	2448 x 2048 px
Frame rate (max.)	24.5 fps
Frame rate burst mode (max.)	42.7 fps
Chroma	mono polarized
Interface	GigE (RJ-45)

Sensor

Sensor	IMX250MZR (polarized)
Manufacturer	Sony
Sensor type	Area CMOS
Shutter type	global shutter
Sensor size (h x v)	8.45 x 7.07 mm
Optical diagonal	11.01 mm
Sensor format	11.1mm (Type 2/3)
Pixel size (h x v)	3.45 x 3.45 μm

Camera

Exposure modes	MANUAL;AUTO;EXTERNAL
Trigger modes	INTERNAL;SOFTWARE;EXTERNAL
Exposure time (min)	20 μs
Exposure time (max)	60 sec (external ∞)
Pixel format / max	mono8, mono12packed / 12 bit
Gain modes / max	manual, auto / 48 dB
S/N ratio (max)	40 dB (dep. on environment)
Dynamic range (max)	72 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
Shading correction	yes
Defect pixel correction	yes
Sequencer	yes
POE	yes
PTP	yes

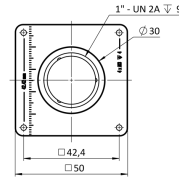
Housing

Lens mount	C-Mount
Dimensions (w x h x d)	50 x 50 x 43 mm
Weight	140 g
Operating temperature (housing)	-10 to 60 $^{\circ}\text{C}$
Ambient humidity	10 to 90 % (non-condensing)
Protection class	IP40
Filter-/Coverglass	K9 - AR coating - 400-850nm

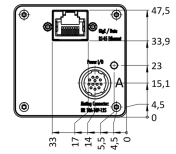
I/O-Interfaces

Input up to 24V	2 x
Input OPTO	1 x
Output open drain	4 x
I/O RS-232	1 x
Power supply	10 to 25 V (DC)
Power consumption	4.5 W (dep. on operating mode)

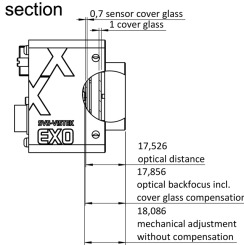
front



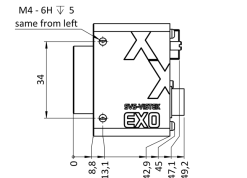
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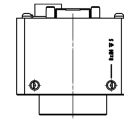
cross section



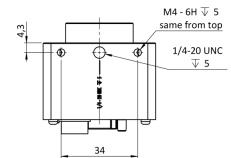
right side



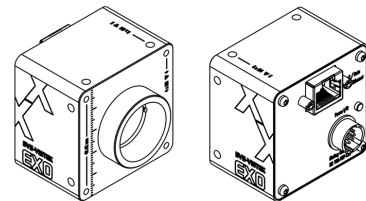
top



bottom

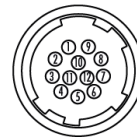


3D



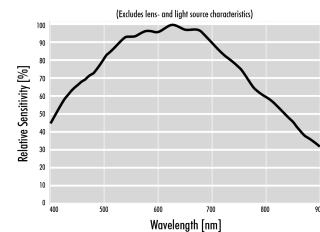
Pinout Mating Connector

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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