Allied Vision

EXO USB3

exo428CU3



General

Model	exo428CU3
Product code	F001930
Product series	EXO USB3
Status	Available

Sensor

Sensor type	Area scan
Chroma	Color
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 (GS)
Sensor size	14.44 × 9.9 mm (17.5 mm, Type 1.1)
Pixel size	4.50 µm × 4.50 µm

Pixel formats

Sensor bit depth	8-bit, 12-bit
RGB pixel formats	bayer8, bayer12packed

Timing and gain

Max. frame rate	51.3 fps
Exposure time	14 µs to 60 s
Gain	0.0 dB to 48.0 dB

Allied Vision

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 consumption	External: 4.5 W (typical)

Operating conditions

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

Mechanical properties

Body dimensions (L x W x H in mm)	43 × 50 × 50
Filter/protection glass	IR-Cut - 680nm
IP class	IP40
Lens mount(s)	C-Mount
Weight	140 g

On-board memory and FPGA

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

Interfaces

Digital interface	usb3.0
Interface connector	(Micro-B)
Vision standard	USB3 Vision

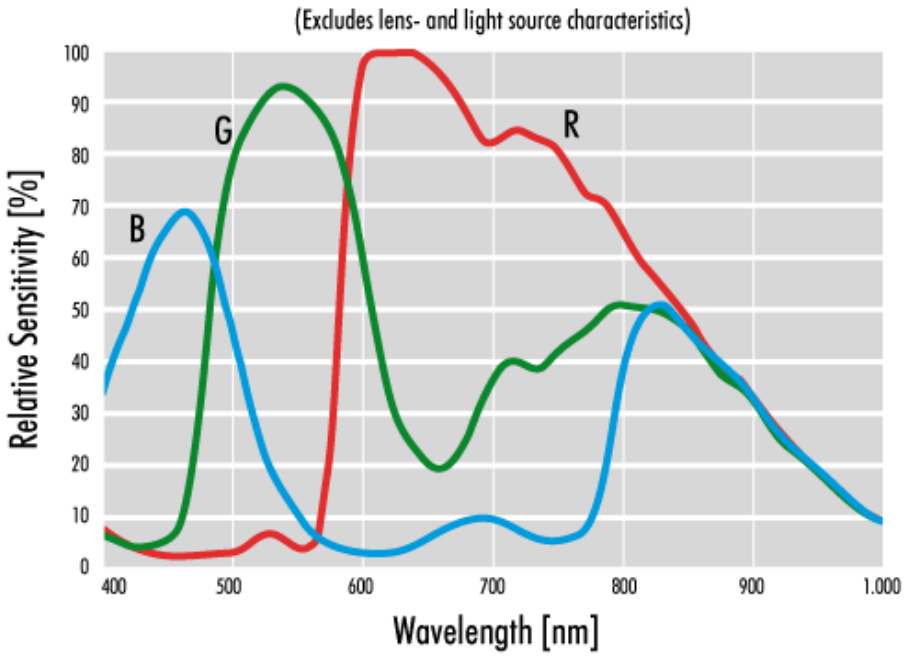
FW features - image control

Exposure modes	manual, auto, external
Gain modes	auto, manual
White balance modes	auto, manual
Image control features	roi, lut, mirror-image, dpc, shading-correction

FW features - camera control

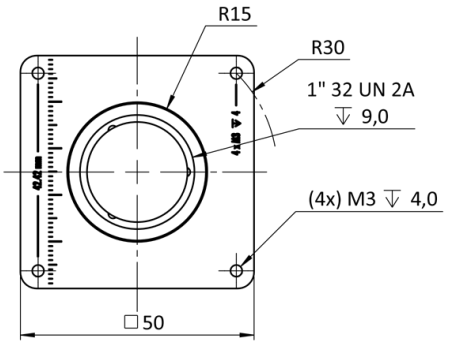
Trigger modes/sync	internal, software, external
Camera control features	User Sets, PWM(4), Sequencer,

Quantum Efficiency

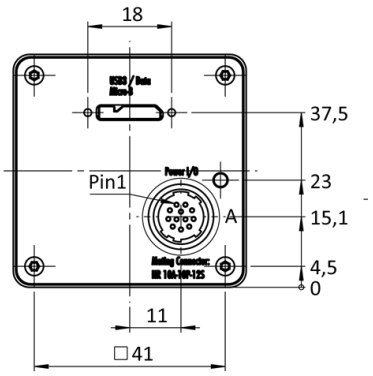


Technical Drawing

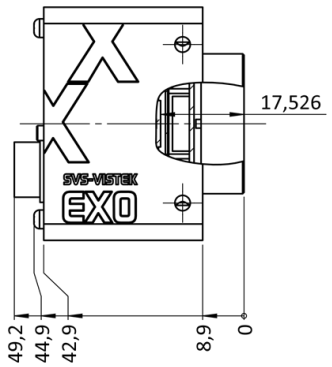
front



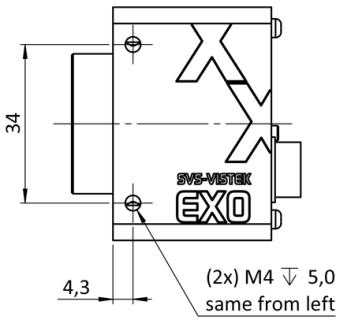
back



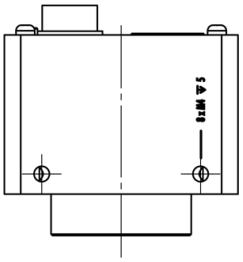
cross section



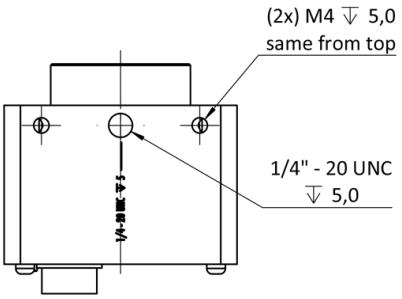
right side



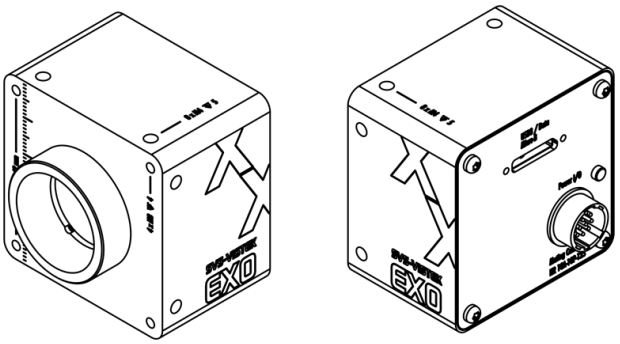
top



bottom

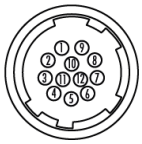


3D



I/O pin assignment

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)