E3IS Series C-mount USB3.0 Camera with Hardware ISP and Video Pipeline

The Basic Characteristic of E3IS Series

E3IS series adopt SONY Exmor sensor as the image-picking device and USB3.0 is used as the transfer interface.
E3IS series hardware resolutions range from 1.5M to 45M and come with the integrated CNC aluminum alloy compact housing.
E3IS series integrated with 12 bit Ultra-Fine Hardware Image Signal Processor Video Pipeline(Ultra-Fine HISP VP) for

Demosaic, Automatic Exposition, Gain Adjustment, One Push White Balance, Chrominance Adjustment, Saturation Adjustment, Gamma Correction, Luminance Adjustment, Contrast Adjustment, Bayer and finally form RAW data for 8/12 bit output. This will move the heavier burden of the processing from the PC to the Ultra-Fine HISP VP and greatly accelerating the processing speed.
E3IS series comes with advanced video & image processing application ToupView/ToupLite; Providing Windows/

Linux/ macOS /Android multiple platform SDK (Native C/C++, C#/VB.NET, Python, Java, DirectShow, Twain, etc);

The E3IS series can be widely used in bright field light environment and microscope image capture and analysis with higher frame rate.

The basic characteristic of E3IS series are as follows:

- SONY Exmor, Exmor R(Back-illuminated), Exmor RS CMOS sensor with USB3.0 interface;
- Real-time 8/12bit depth switch(depending on sensor);
- Ultra-Fine HISP VP and USB3.0 5 Gbps interface ensuring high frame rates;
- Super high sensitivity up to 2188mV(IMX264);
- Ultra-low noise and low power dissipation by using column-parallel A/D conversion;
- With hardware resolution among 1.5M to 45M;
- Rolling shutter or global shutter;
- Standard C-Mount camera;
- CNC aluminum alloy housing;
- With advanced video & image processing application ToupView/ToupLite;
- Providing Windows/Linux/Mac OS multiple platforms SDK;
- Native C/C++, C#/VB.Net, DirectShow, Twain, LabView

E3ISPM Series Datasheet

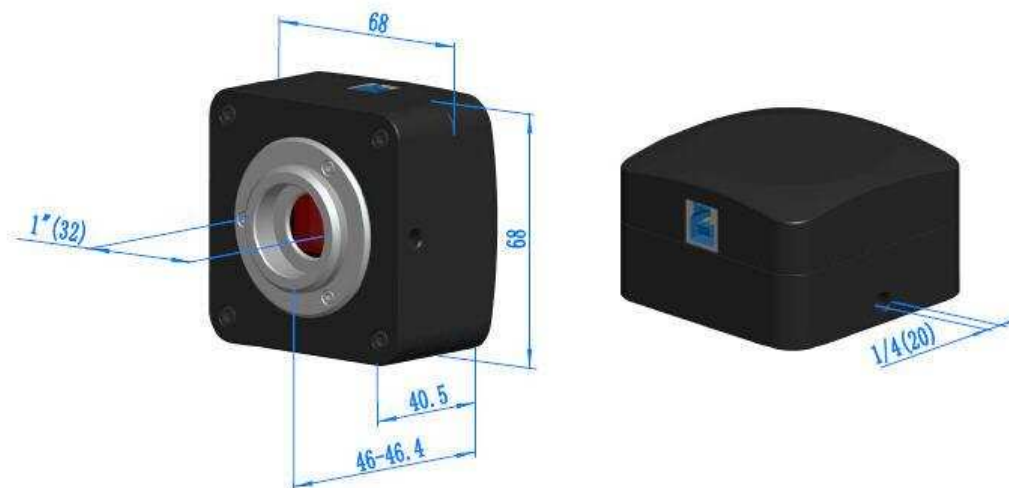| Order Code	Sensor & Size(mm)	Pixel(μm)	G Sensitivity Dark Signal	FPS/Resolution	Binning	Exposure
MP 25	25M/IMX511(C) 1/2.3 " (5.519x5.519)	1.12x1.12	96.3mv with 1/30s 0.1mv with 1/30s	12@4928x4928 46@2464x2464 100@1648x1648	1x1 2x2 3x3	0.013ms~15s

C: Color; M: Monochrome; GS: Global Shutter

Other Specification	
Spectral Range	380-650nm (with IR-cut Filter)
White Balance	ROI White Balance/ Manual Temp Tint Adjustment/NA for Monochromatic Sensor
Color Technique	Ultra-Fine HISPVP /NA for Monochromatic Sensor
Capture/Control SDK	Windows/Linux/macOS/Android Multiple Platform SDK(Native C/C++, C#/VB.NET, Python, Java, DirectShow, Twain, etc)
ADC	8 Bit / 12 Bit
Recording System	Still Picture and Movie
Cooling System*	Natural
Operating Environment	
Operating Temperature(in Centidegree)	-10~ 50
Storage Temperature(in Centidegree)	-20~ 60
Operating Humidity	30~80%RH
Storage Humidity	10~60%RH
Power Supply	DC 5V over PC USB3. 0 Port. Compatible with USB2.0
Software Environment	
Operating System	Microsoft® Windows® XP / Vista / 7 / 8 /10 /11 (32 & 64 bit) OSx(Mac OS X) Linux
PC Requirements	CPU: Equal to Intel Core2 2.8GHz or Higher
	Memory: 2GB or More
	USB Port: USB3.0 High-speed Port
	Display: 17" or Larger
	CD-ROM

Dimension of E3IS Series

The E3IS series body, made from tough, CNC aluminum alloy, ensures a heavy duty, workhorse solution. The camera is ugged,rdesigned with a high quality IR-CUT to protect the camera sensor. No moving parts included. This design ensures a robust solution with an increased lifespan when compared to other industrial camera solutions.

Dimension of E3ISPM Series

Packing Information for E3IS Series

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	Standard Camera Packing List	
A	Carton L:52cm W:32cm H:33cm (20pcs, 12~17Kg/ carton), not shown in the photo	
B	Gift box L:15cm W:15cm H:10cm (0.58~0.6Kg/ box)	
C	One E3ISPM series camera	
D	High-speed USB3.0 A male to B male gold-plated connectors cable /2.0m	
E	CD (Driver & utilities software, Ø12cm)	
	Optional Accessory	
F	Adjustable lens adapter	C-mount to Dia.23.2mm eyepiece tube (Please choose 1 of them for your microscope)
		C-mount to Dia.31.75mm eyepiece tube (Please choose 1 of them for your telescope)
G	Fixed lens adapter	C-mount to Dia.23.2mm eyepiece tube (Please choose 1 of them for your microscope)
		C-Mount to Dia.31.75mm eyepiece tube (Please choose 1 of them for your telescope)
Note: For F and G optional items, please specify your camera type(C-mount, microscope camera or telescope camera) , ToupTek engineer will help you to determine the right microscope or telescope camera adapter for your application;		
H	108015(Dia.23.2mm to 30.0mm ring)/Adapter rings for 30mm eyepiece tube	
I	108016(Dia.23.2mm to 30.5mm ring)/ Adapter rings for 30.5mm eyepiece tube	
J	108017(Dia.23.2mm to 31.75mm Ring)/ Adapter rings for 31.75mm eyepiece tube	
K	Calibration kit	106011/TS-M1(X=0.01mm/100Div.); 106012/TS-M2(X,Y=0.01mm/100Div.); 106013/TS-M7(X=0.01mm/100Div., 0.10mm/100Div.)

Extension of E3IS Series with Microscope or Telescope Adapter

Extension	Picture
C-mount Camera	Machine vision; Medical imaging; Semiconductor equipment; Test instruments; Document scanners; 2D barcode readers; Web camera and security video; Microscope imaging;
Microscope Camera	 E3ISPM+AMAXXX(23.2mm Adapter) E3ISPM+FMAXXX(23.2mm Adapter)
Telescope Camera	 E3ISPM+ATAXXX(31.75mm Adapter) E3ISPM+FTAXXX(31.75mm Adapter)