VENUSLAB
OPTOELECTRONICS

CCD Cameras

Venuslab ExView U3 Camera

Covers conventional bright field, low-light field, and fluorescence light field microscopic observation

- Adopts Sony ExView HAD CCD chip
- Supports a maximum exposure time of 1 hour
- USB 3.0 (5Gbps) high-speed interface
- Integrated CNC aluminum alloy housing
- Multi-platform SDK (Windows/Linux/macOS/Android)

One Platform Many Possibilities

Contact Us sales@venuslabtech.com

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Get Expert Advice
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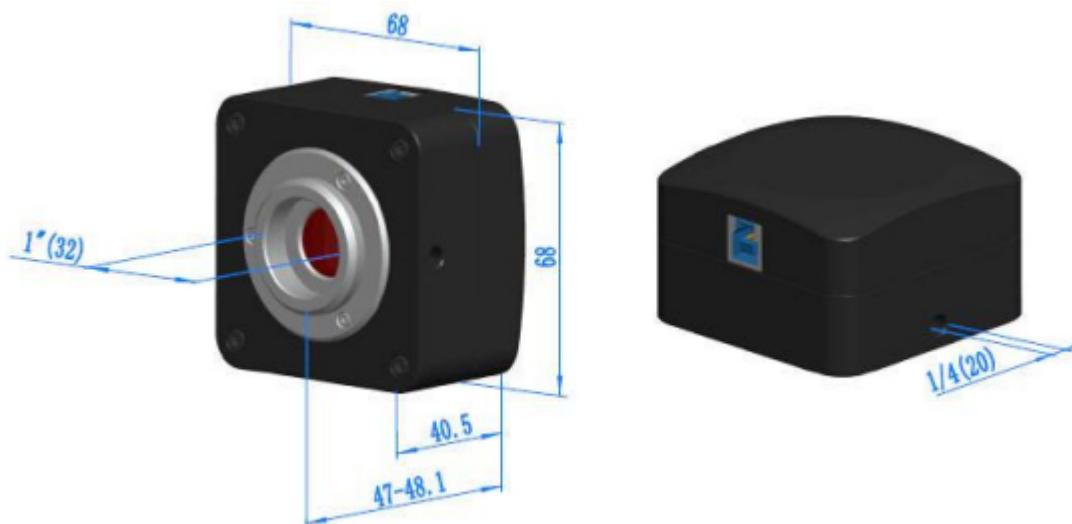
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Overview

Introduction:

The Sony ExView HAD CCD incorporates a technology that converts unconverted near-infrared light into image signals, thereby extending the imaging spectrum from visible light to near-infrared light. This technology greatly enhances the light sensitivity of the sensor. When using the "ExView HAD CCD" chip, high-brightness images can still be obtained in dark environments. Furthermore, the diffused light that previously leaked into the vertical CCD section during photoelectric conversion in the deep layers of the silicon wafer can now be captured by the sensor, thus significantly reducing the sensor's noise.

Features:
• C-mount CCD camera featuring SONY ExView technology
• Integrated CNC aluminum alloy housing
• FPGA-controlled precise exposure with a maximum duration of 1 hour, ensuring the capture of weak fluorescence images
• USB 3.0 (5Gbit/s) interface for high video transmission speed
• Ultra-Fine color engine for accurate color reproduction
• Advanced video and image processing software included with the camera
• Standard SDKs provided for multiple platforms: Windows, Linux, macOS, and Android

Dimension:

Specifications

Common Parameter Specification Table

Hardware Configuration	
Spectral Response Range	380– 650nm (with an infrared cut-off filter installed)
White Balance	ROI white balance (manual Temp-Tint adjustment)
Color Reproduction Tech	Ultra-Fine Color Processing Engine
Capture Control SDK	Multi-platform SDK (Windows/Linux/macOS/Android) supporting Native C++, C#/VB.NET, Python, Java, DirectShow, Twain, etc.
Bit Depth	8 Bit / 14 Bit
Recording Modes	Images and Video
Cooling Method	Passive Cooling
Camera Operating Environment	
Operating Temperature	-10°C ~ 50°C
Storage Temperature	-20°C ~ 60°C

Operating Humidity	30~80%RH
Storage Humidity	10~60%RH
Power Supply	Camera powered via USB 3.0 interface
Software Operating Environment	
Operating System	Microsoft® Windows® XP/Vista / 7 / 8 / 10 / 11 (32 & 64-bit);OS X (Mac OS X)
Computer Configuration	CPU: Intel Core 2 2.8GHz or higher
	Memory: 2GB or more
	USB Port: USB 3.0 high-speed port (USB 2.0 port required)
	Display: 17" or larger
	CD-ROM: Required

Packing List

Packing Information for Venuslab ExView U3 Series

Standard Packaging List		
A	Shipping carton specification: L: 52cm, W: 32cm, H: 32cm (20pcs, 17Kg/carton), not shown in the above figure.	
B	Package box specification: L: 15cm, W: 15cm, H: 10cm (0.7~ 0.75kg per box).	
C	One U3CCD series camera.	
D	High-speed USB 3.0 A-to-B gold-plated data cable, 2.0m.	
E	CD (driver and application software, ?12cm).	
Optional Accessories		
F	Adjustable-focus eyepiece adapter	Dia. 23.2mm eyepiece tube to C-mount (Choose one based on your camera/microscope)	108001/AMA037108002/ AMA050108003/ AMA075108004/ AMA100
		Dia. 31.75mm eyepiece tube to C-mount (Choose one based on your camera/telescope)	108008/ATA037108009/ ATA050108010/ ATA075108011/ATA100
G	Fixed eyepiece adapter	Dia. 23.2mm eyepiece tube to C-mount (Choose one based on your camera/microscope)	108005/FMA037108006/ FMA050108007/ FMA075108008/FMA100
		Dia. 31.75mm eyepiece tube to C-mount (Choose one based on your camera/telescope)	108011/FTA037108012/ FTA050108013/ FTA075108014/FTA100
	For options F & G, confirm your camera model (C-mount, microscope/telescope camera first). VenusLab engineers will assist selection based on your application.	

H	108015 (Dia. 23.2mm 30.0mm adapter) / For 30.0mm-diameter eyepiece tube adapter ring.
I	108016 (Dia. 23.2mm 30.5mm adapter) / For 30.5mm-diameter eyepiece tube adapter ring.
J	108017 (Dia. 23.2mm 31.75mm adapter) / For 31.75mm-diameter eyepiece tube adapter ring.
K	Microruler	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.)

Explore Series

Model	Green Light Sensitivity & Dark Current	Sensor Model and Size	Exposure Time	Sampling Averaging	FPS/Resolution	Pixel Pitch (µm)
NP112000A	420mv with 1/30s 15.2mv with 1/30s	12M/ICX834AQG (C) 1 " (13.15x8.77)	0.06ms~ 1000s	1x1 2x2	3.6@ 4248x2836 3.6@ 2124x1418	3.1x3.1
NM112000A	420mv with 1/30s 12mv with 1/30s (F8.0)	12M/ICX834ALG (M) 1 " (13.15x8.77)	0.06ms~ 1000s	1x1 2x2	3.6@ 4248x2836 3.6@ 2124x1418	3.1x3.1
NP109000A	580mv with 1/30s 12mv with 1/30s	9.0M/ICX814AQG (C) 1 " (12.47x9.98)	0.06ms~ 1000s	1x1 2x2	4.4@ 3388x2712 4.4@ 1694x1356	3.69x3.69
NM109000A	660mv with 1/30s 12mv with 1/30s (F8.0)	9.0M/ICX814ALG (M) 1 " (12.47x9.98)	0.06ms~ 1000s	1x1 2x2	4.4@ 3388x2712 4.4@ 1694x1356	3.69x3.69
NP106000A	880mv with 1/30s 8mv with 1/30s	6.0M/ICX694AQG (C) 1 " (12.48x9.99)	0.06ms~ 1000s	1x1	7.5@ 2748x2200 14@ 2748x1092	4.54x4.54
NM106000A	1000mv with 1/30s 8mv with 1/30s	6.0M/ICX694ALG (M) 1 " (12.48x9.99)	0.06ms~ 1000s	1x1	7.5@ 2748x2200 14@ 2748x1092	4.54x4.54
NP102800A	800mv with 1/30s 4mv with 1/30s	2.8M/ICX674AQG (C) 2/3 " (8.81x6.63)	0.05ms~ 1000s	1x1	15@ 1938x1460 17@ 1610x1212 18@ 1930x1092	4.54x4.54
NM102800A	950mv with 1/30s 4mv with 1/30s	2.8M/ICX674ALG (M) 2/3 " (8.81x6.63)	0.05ms~ 1000s	1x1	15@ 1938x1460 17@ 1610x1212 18@ 1930x1092	4.54x4.54
NP101400B	2000mv with 1/30s 4.8mv with 1/30s	1.4M/ICX825AQA (C) 2/3 " (8.88x6.70)	0.07ms~ 1000s	1x1	25@ 1376x1040	6.45x6.45
NM101400B	2000mv with 1/30s 4.8mv with 1/30s	1.4M/ICX825ALA (M) 2/3 " (8.88x6.70)	0.07ms~ 1000s	1x1	25@ 1376x1040	6.45x6.45

📩 Get in touch with our team to explore configurations,request a quote,or learn more about customized solutions tailored to your needs.

Let us help you moves cience forward—faster ands marter.

Get a Quote

Get Expert Advice
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