SIMTRUM

Microscope USB 3.0 CCD Camera

MCCD Series

2022 V1

For customized projects please Contact us:

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Microscope USB 3.0 CCD Camera MCCD Series is an ExView HAD CCD series camera. It adopts Sony ExView HAD CCD sensor as the image-picking device. Sony ExView HAD CCD is a CCD that drastically improves light efficiency by including the near-infrared light region as a basic structure of HAD (Hole-Accumulation-Diode) sensor. USB3.0 is used as the data transfer interface.

MCCD series hardware resolutions range from 1.4M to 12M and come with integrated CNC aluminum alloy compact housing.

MCCD series comes with advanced video & image processing application, provides Windows/Linux/ OSX multiple platforms SDK, Native C/C++, C#/VB.NET, DirectShow, Twain Control API;

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

Features

- Standard C-Mount camera with SONY ExView HAD CCD II sensors;
- IR-CUT coated windows
- Up to 1000s long time exposure;
- USB3.0 5Gbit/second interface ensuring high speed data transmission;
- Ultra-Fine colour engine with perfect colour reproduction capability;
- With advanced video & image processing application
- Providing Windows/Linux/Mac OS multiple platforms SDK;
- Native C/C++, C#/VB.NET, DirectShow, Twain Control API;

Specifications

Order Code	Sensor & Size(mm)*	Pixel (μm)	G Sensitivity Dark Signal	FPS/Resolution	Binning	Exposure
MCCD12000KPA NP112000A(New)	12M/ICX834AQG(C) 1“ (13.15x8.77)	3.1x3.1	420mv with 1/30s 15.2mv with 1/30s	3.6@4248x2836 3.6@2124x1418	1x1 2x2	0.06ms~1000s
MCCD12000KMA NM112000A(New)	12M/ICX834ALG(M) 1“ (13.15x8.77)	3.1x3.1	420mv with 1/30s 12mv with 1/30s(F8.0)	3.6@4248x2836 3.6@2124x1418	1x1 2x2	0.06ms~1000s
MCCD09000KPA NP109000A(New)	9.0M/ICX814AQG(C) 1“ (12.47x9.98)	3.69x3.69	580mv with 1/30s 12mv with 1/30s	4.4@3388x2712 4.4@1694x1356	1x1 2x2	0.06ms~1000s
MCCD09000KMA NM109000A(New)	9.0M/ICX814ALG(M) 1“ (12.47x9.98)	3.69x3.69	660mv with 1/30s 12mv with 1/30s(F8.0)	4.4@3388x2712 4.4@1694x1356	1x1 2x2	0.06ms~1000s
MCCD06000KPA NP106000A	6.0M/ICX695AQG(C) 1“ (12.48x9.99)	4.54x4.54	880mv with 1/30s 8mv with 1/30s	7.5@2748x2200 14@2748x1092	1x1	0.06ms~1000s
MCCD06000KMA NM106000A	6.0M/ICX695ALG(M) 1“ (12.48x9.99)	4.54x4.54	1000mv with 1/30s 8mv with 1/30s	7.5@2748x2200 14@2748x1092	1x1	0.06ms~1000s
MCCD02800KPA NP102800A	2.8M/ICX674AQG(C) 2/3“ (8.81x6.63)	4.54x4.54	800mv with 1/30s 4mv with 1/30s	15@1938x1460 17@1610x1212 18@1930x1092	1x1	0.05ms~1000s
MCCD02800KMA NM102800A	2.8M/ICX674ALG(M) 2/3“ (8.81x6.63)	4.54x4.54	950mv with 1/30s 4mv with 1/30s	15@1938x1460 17@1610x1212 18@1930x1092	1x1	0.05ms~1000s
MCCD01400KPB NP101400B(New)	1.4M/ICX825AQA(C) 2/3“ (8.88x6.70)	6.45x6.45	2000mv with 1/30s 4.8mv with 1/30s	25@1376x1040	1x1	0.07ms~1000s
MCCD01400KMB NM101400B(New)	1.4M/ICX825ALA(M) 2/3“ (8.88x6.70)	6.45x6.45	2000mv with 1/30s 4.8mv with 1/30s	25@1376x1040	1x1	0.07ms~1000s

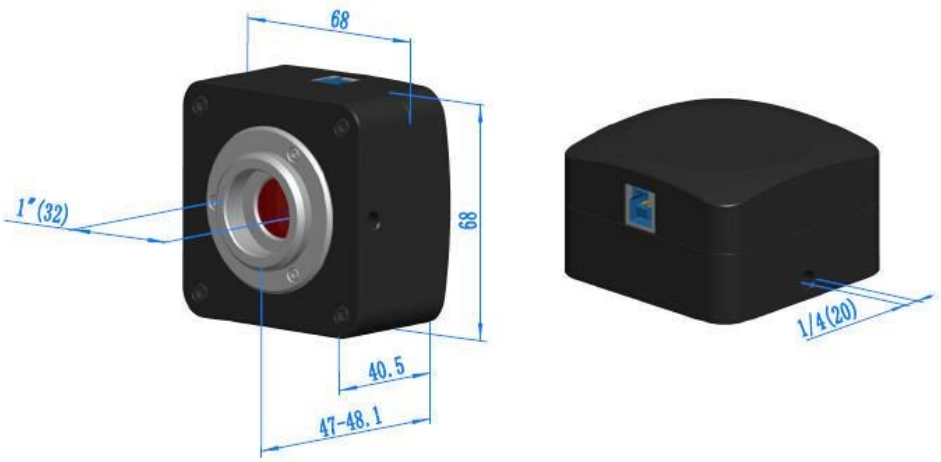
* C: Color; M: Monochrome; Default shutter: Rolling Shutter

Specifications

Other Specifications for MCCD Series	
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 Color Engine/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)
Recording System	Still Picture and Movie
Cooling System*	Two-stage TE-cooling System -45 °C below Camera Body Temperature
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 USB Port
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

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

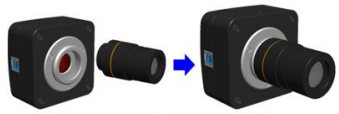


Packing Information

Standard Package		
A	Carton L:50cm W:30cm H:30cm (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 MCCD series USB3.0 C-mount CMOS camera	
D	High-Speed USB3.0 A male to B male gold-plated connectors cable /2m	
E	CD (Drive & utilities software, Ø12cm)	
Optional Accessory		
F	Adjustable lens adapter	C-mount to Dia. 23.2mm eyepiece tube
		C-mount to Dia. 31.75mm eyepiece tube
G	Fixed lens adapter	C-mount to Dia. 23.2mm eyepiece tube
		C-mount to Dia. 31.75mm eyepiece tube
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.)

Note: For F and G optional items, please specify your camera type (C-mount, microscope camera, or telescope camera), SIMTRUM will help you to determine the right microscope or telescope camera adapter for your application.

Extension of MCCD 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	 MCCD + AMAXXX(23.2mm Adapter)	 MCCD + FMAXXX(23.2mm Adapter)
Telescope Camera	 MCCD + AMAXXX(31.75mm Adapter)	 MCCD + FMAXXX(31.75mm Adapter)

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