

5. USB3.0 CCD Digital Camera

(1) BUC6A Series C-mount USB3.0 CCD Camera



Introduction

BUC6A series USB3.0 CCD digital camera adopt Sony ExView HAD CCD sensor as the image capture device. Sony ExView HAD CCD is a CCD that drastically improves light efficiency by including near infrared light region as a basic structure of HAD (Hole-Accumulation-Diode) sensor. USB3.0 is used as the data transfer interface.

BUC6A series cameras' hardware resolutions range from 2.8M to 6M and come with the integrated CNC aluminum alloy compact housing.

BUC6A series cameras come with advanced video & image processing application ImageView; Providing Windows/Linux/ OSX multiple platforms SDK; Native C/C++, C#/VB.NET, DirectShow, Twain Control API.

The BUC6A series cameras can be widely used in bright field, dark field, fluorescent light environment and microscope image capture and analysis with higher frame rate.

Features

The BUC6A series cameras' characteristic is as follows:

1. Standard C-Mount camera with SONY ExView HAD CCD II sensors;
2. IR-CUT Coated Windows;
3. Up to 1000s long time exposure;
4. USB3.0 5Gbit/second interface ensuring high speed data transmission;
5. Ultra-Fine™ color engine with perfect color reproduction capability;
6. With advanced video & image processing application ImageView;

7. Providing Windows/Linux/Mac OS multiple platforms SDK;

8. Native C/C++, C#/VB.NET, DirectShow, Twain Control API.

Specification

Order Code	Sensor & Size(mm)	Pixel(μm)	G Sensitivity Dark Signal	FPS/Resolution	Binning	Exposure
BUC6A-1200C	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
BUC6A-1200M	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
BUC6A-900C	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
BUC6A-900M	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
BUC6A-600C	6.0M/ICX694AQG(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
BUC6A-600M	6.0M/ICX694ALG(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
BUC6A-280C	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
BUC6A-280M	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
BUC6A-140C	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
BUC6A-140M	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

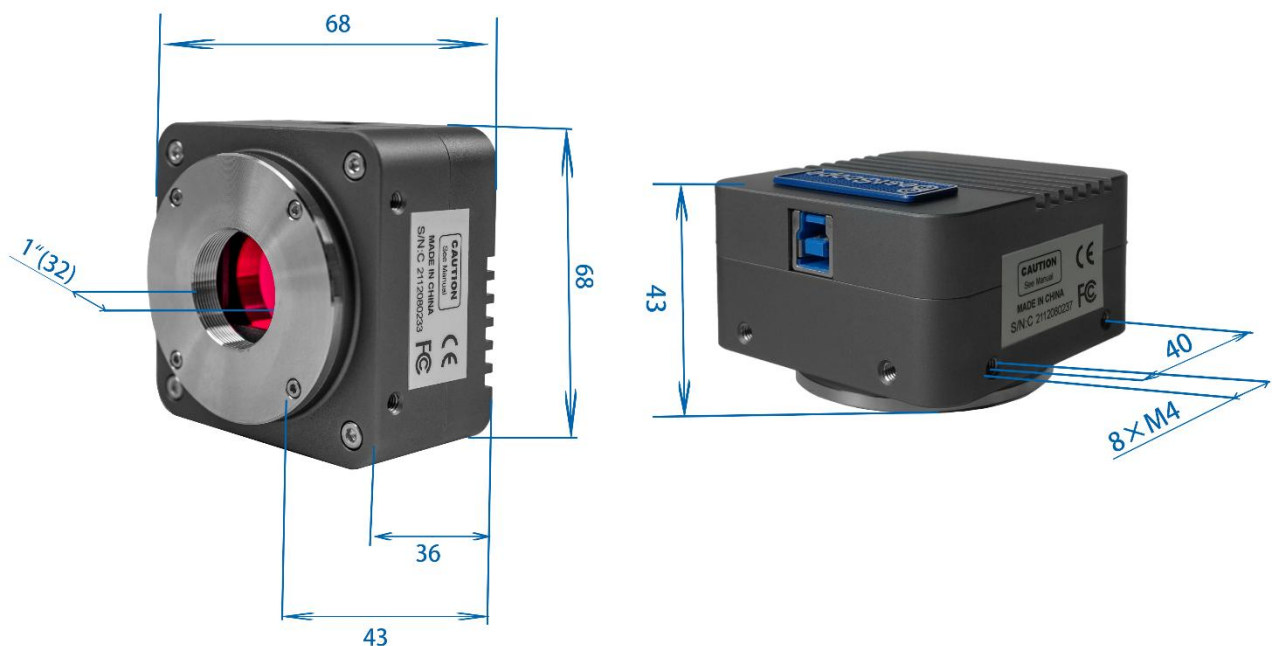
C: Color; M: Monochrome;

Other Specification for BUC6A Camera	
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 API	Native C/C++, C# /VB.Net, DirectShow, Twain
Recording System	Still Picture and Movie
Cooling System	Natural
Operating Environment	
Operating Temperature (in Centigrade)	-10~ 50
Storage Temperature (in Centigrade)	-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 of BUC6A

The BUC6A 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. These measures ensure a rugged, robust solution with an increased lifespan when compared to other industrial camera solutions.



Dimension of BUC6A

Packing Information for BUC6A



Packing Information of BUC6A

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 (0.7~0.75Kg/ box)	
C	BUC6A series USB3.0 C-mount CMOS 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), our 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 BUC6A 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	 23.2mm Adjustable Adapter  23.2mm Fixed Adapter	
Telescope Camera	 31.75mm Adjustable Adapter  31.75mm Fixed Adapter	