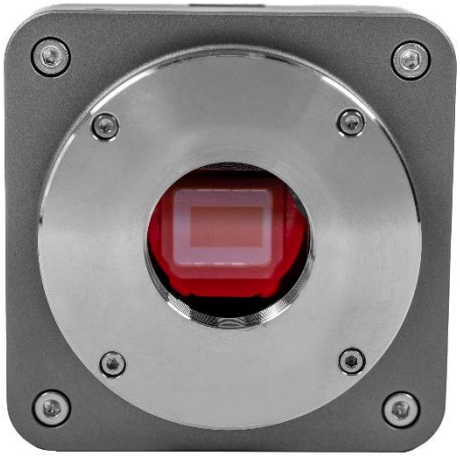
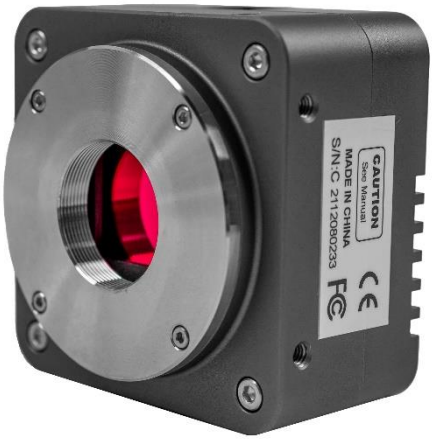
BUC5E Series USB3.0 CMOS Digital Cameras





Introduction

BUC5E series cameras adopt SONY Exmor CMOS sensor as the image capture device and USB3.0 is used as the data transfer interface.

BUC5E hardware resolutions range from 2.3MP to 20MP and come with the integrated CNC aluminum alloy compact housing.

BUC5E 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 BUC5E can be widely used in bright field light environment and microscope image capture and analysis with higher frame rate.

Features

The basic characteristic of BUC5E cameras are as follows:

1. SONY Exmor, Exmor R(Back-illuminated), Exmor RS CMOS sensor with USB3.0 interface;
2. Real-time 8/12/14/16bit depth switch(depending on sensor);
3. Super high sensitivity up to 1120mV(IMX185);
4. Ultra low noise and low power dissipation by using column-parallel A/D conversion;
5. With hardware resolution among 2.3M to 20M;
6. Rolling Shutter or Global Shutter;
7. Standard C-Mount camera;
8. CNC aluminum alloy housing;

9. USB3.0 5 Gbps interface ensuring high frame rates;

10. With advanced video & image processing application ImageView;

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

12. Native C/C++, C#/VB.Net, DirectShow, Twain, LabView.

Specification

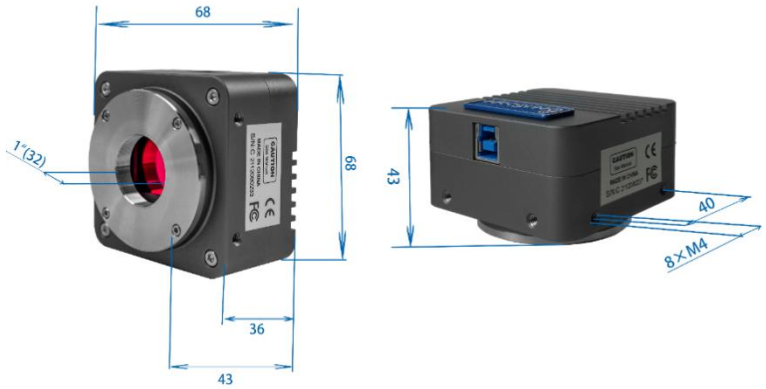
Order Code	Sensor & Size(mm)	Pixel(μm)	G Sensitivity Dark Signal	FPS/Resolution	Binning	Exposure
BUC5E-2000M	20M/IMX183(M) 1 "(13.06x8.76)	2.4 x2.4	776mv with 1/30s 0.21mv with 1/30s	17.5@5440x3648 40@4080x2160 48@2736x1824 60@1824x1216	1x1, 1x1, 2x2, 3x3	0.1ms~60s
BUC5E-2000BC	20M/IMX147(C) 1/2.3 "(6.24x4.67)	1.2 x1.2	130mv with 1/30s 0.1mv with 1/30s	5.2@5200x3888 15@2592x1944 30@1728x1296	1x1, 2x2, 3x3	0.1ms~15s
BUC5E-1230M	12.3M/IMX304(M) 1.1 "(14.13x10.35)	3.45 x3.45	1146mv with 1/30s 0.1mv with 1/30s	23.4@4096x3000 46.3@2048x1500	1x1, 1x1,	0.244ms~15s
BUC5E-1200C	12M/IMX226(C) 1/1.7"(7.40x5.55)	1.85x1.85	280mv with 1/30s 0.1mv with 1/30s	7.1@4000x3000 30@2048x1080	1x1, 2x2	0.244ms~2000 ms
BUC5E-630C	6.3M/IMX178(C) 1/1.8" (7.37x4.92)	2.4x2.4	425mv with 1/30s 0.15mv with 1/30s	15@3072 x2048 26@1536x 1024	1x1, 2x2	0.244ms~2000 ms
BUC5E-630M	6.3M/IMX178(M) 1/1.8" (7.37x4.92)	2.4x2.4	425mv with 1/30s 0.15mv with 1/30s	30@3072 x2048 50@1536x 1024	1x1, 2x2	0.244ms~2000 ms
BUC5E-500M	5.0M/IMX264(M, GS) 2/3" (8.45x7.07)	3.45x3.45	915mv with 1/30s 0.15mv with 1/30s	35@2448x2048 60@1224x1024	1x1, 2x2	0.1ms~60s
BUC5E-310C	3.1M/IMX123(C) 1/2.8" (5.12x3.84)	2.5x2.5	600mv with 1/30s 0.15mv with 1/30s	25@2048x1536 30@1920x1080	1x1	0.244ms~2000 ms
BUC5E-310M	3.1M/IMX265(M, GS) 1/1.8" (7.07x5.30)	3.45x3.45	1146mv with 1/30s 0.15mv with 1/30s	53@2048x1536 85@1024x768	1x1 1x1	0.1ms~15s
BUC5E-230C	2.3M/IMX185(C) 1/1.9" (7.20x4.50)	3.75x3.75	1120mv with 1/30s 0.15mv with 1/30s	38@1920x1200 66@960x600	1x1, 2x2	0.244ms ~2000ms
BUC5E-231C	2.3M/IMX249(C,GS) 1/1.2" (11.25x7.03)	5.86x5.86	1016mv with 1/30s 0.15mv with 1/30s	30@1920x1200	1x1	0.244ms~2000 ms
BUC5E-231M	2.3M/IMX174(M, GS) 1/1.2" (11.25x7.03)	5.86x5.86	1016mv with 1/30s 0.15mv with 1/30s	120@1920x1200	1x1	0.244ms~2000 ms
BUC5E-150M	1.5M/IMX273(M, GS) 1/2.9" (4.968x3.726)	3.45x3.45	1830mv with 1/30s 0.15mv with 1/30s	228@1440x1080 530@720x540	1x1 2x2	0.1ms~60s
BUC5E-120C	1.2M/IMX224(C) 1/3"(4.80x3.60)	3.75 x3.75	2040mv with 1/30s 0.15mv with 1/30s	60@1280x960 120@640x480	1x1, 2x2	0.105ms~15s

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

Other Specification for BUC5E 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 and Labview
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 (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

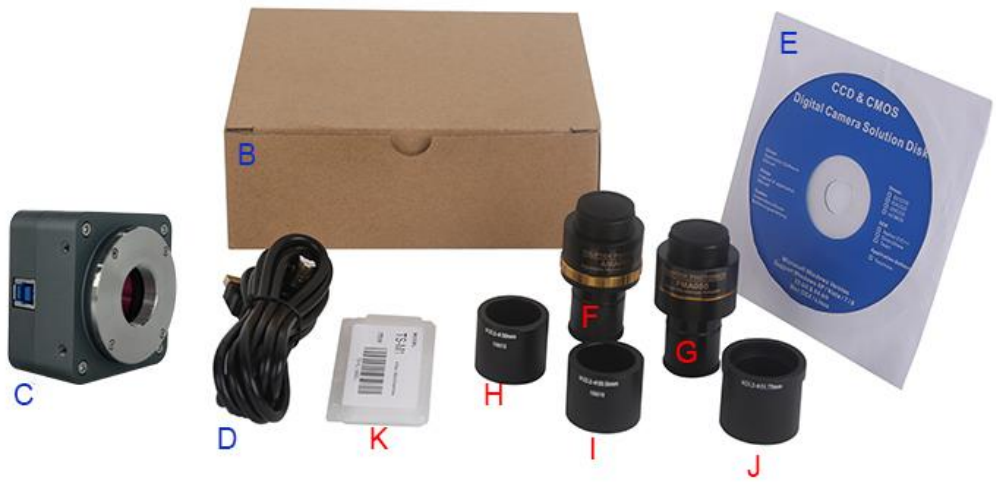
Dimension of BUC5E

The BUC5E 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 BUC5E

Packing Information for BUC5E



Packing Information of BUC5E

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	BUC5E 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 adaptor	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)/Adaptor rings for 30mm eyepiece tube	
I	108016(Dia.23.2mm to 30.5mm Ring)/ Adaptor rings for 30.5mm eyepiece tube	
J	108017(Dia.23.2mm to 31.75mm Ring)/ Adaptor 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 BUC5E with Microscope or Telescope Adapter

<table>
<tr><th>Extension</th><th colspan="2">Picture</th></tr>
<tr><td>C-mount Camera</td><td>  </td><td>Machine vision; Medical imaging;
Semiconductor equipment; Test instruments;
Document scanners; 2D barcode readers;
Web camera and security video;
Microscope imaging;</td></tr>
<tr><td>Microscope Camera</td><td colspan="2" rowspan="2"> 
23.2mm Adjustable Adapter
 
23.2mm Fixed Adapter
 
31.75mm Adjustable Adapte
 
31.75mm Fixed Adapter</td></tr>
<tr><td>Telescope Camera</td></tr>
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Sample Image