

## BUC5D Series USB3.0 CMOS Digital Cameras



### Introduction

BUC5D series cameras are ultra-high performance USB3.0 CMOS cameras and they adopt ultra-high performance CMOS sensor as the image capture device and USB3.0 is used as the data transfer interface.

BUC5D hardware resolutions range from 3.0M to 14M and come with the integrated zinc aluminum alloy compact housing.

BUC5D comes 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 BUC5D can be widely used in bright field light environment and microscope image capture and analysis with higher frame rate.

### Features

The basic characteristic of the BUC5D cameras are as follows:

1. Standard C-Mount camera with Aptina CMOS sensor;
2. With hardware resolution from 3.0MP to 18MP;
3. Integrated zinc aluminum alloy housing;
4. USB3.0 5 Gbps interface ensuring high frame rate;
5. With advanced video & image processing application ImageView;
6. Providing Windows/Linux/Mac OS multiple platforms SDK;

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

## Specification

Order Code	Sensor & Size	Pixel(μm)	G Responsivity Dynamic range SNRmax	FPS/Resolution	Binning	Exposure
<b>BUC5D-1800C</b>	18M/AR1820(C) 1/2.3"(6.14x4.61)	1.25x1.25	0.62 V/lux-sec 65.8dB 36.3dB	5.6@4912x3684 18.1@2456x1842 32.2@1228x922	1x1,2x2,4x4	0.1ms~2000ms
<b>BUC5D-1600C</b>	16M/MN34120(C) 1/2.33"(6.18x4.66)	1.335x1.335	R: 2453LSB Gr: 2444LSB Gb: 1054LSB B: 996LSB	6.0@4632x3488 15.0@2320x1740 26.0@1536x1160	1x1, 2x2,3x3	0.2ms~2000ms
<b>BUC5D-1601C</b>	16M/MN34230PLJ (C) 4/3" (17.6x13.3)	3.8x3.8	R: 1315LSB Gr: 2413LSB Gb: 2413LSB B: 1042LSB (Gain = 0dB)	6.0@4648x3506 15.0@2304x1750 30.0@1536x1168	1x1,2x2,3x3	0.06ms~15s
<b>BUC5D-1601M</b>	16M/MN34230ALJ(M) 4/3" (17.6x13.3)	3.8x3.8	A: 2650LSB B: 2650LSB C: 2650LSB D: 2650LSB (Gain = 0dB)	22@4640x3506 36@3840x2160 43@2304x1750 43@1920x1080 49@1536x1168	1x1, 1x1, 2x2, 2x2, 3x3	0.224ms~15s
<b>BUC5D-1400C</b>	14M/MT9F002(C) 1/2.3"(5.73x4.60)	1.4x1.4	0.724v/lux-sec 65.3dB 35.5dB	6.2@4096x3286 20.8@2048x1644 53.3@1024x822	1x1,2x2,4x4	0.224ms~2000ms
<b>BUC5D-1000C</b>	10M/MT9J003(C) 1/2.3" (5.98x4.58)	1.67x1.67	0.31v/lux-sec 65.2dB 34dB	7.2@3584x2746 24.5@1792x1372	1x1,2x2,4x4	0.4ms~2000ms
<b>BUC5D-850C</b>	8.5M/Special(C) 1/2.4"(5.56x4.26)	1.67x1.67	0.31v/lux-sec 65.2dB 34dB	8.3@3328x2548 26.2@1664x1272	1x1,2x2,4x4	0.1ms~2000ms
<b>BUC5D-500C</b>	5.1M/MT9P006(C) 1/2.5" (5.7x4.28)	2.2x2.2	1.76v/lux-sec 67.74dB 38.5dB	14.2@2560x1922 38.3@1280x960 101.2@640x480	1x1,2x2,4x4	0.1ms~2000ms
<b>BUC5D-300C</b>	3.1M/AR0330(C) 1/3" (4.51x3.38)	2.2x2.2	1.9v/lux-sec 100dB 39dB	27.3@2048x1534 53.3@1024x770	1x1, 2x2	0.1ms~2000ms

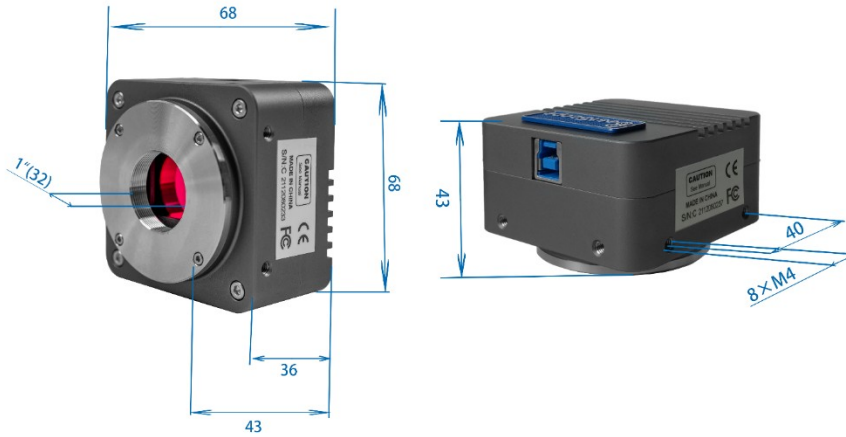
C: Color; M: Monochrome

Other Specification for BUC5D 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
<b>Operating Environment</b>	
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
<b>Software Environment</b>	
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 BUC5D

The BUC5D series body, made from tough, zinc 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 BUC5D

**Packing Information for BUC5D**








Packing Information of BUC5D

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 (0.67~0.7Kg/ box)
C	BUC5D 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)
<p>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.</p>		
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 BUC5D with Microscope or Telescope Adapter

Extension	Picture
C-mount Camera	 <p>Machine vision; Medical imaging; Semiconductor equipment; Test instruments; Document scanners; 2D barcode readers; Web camera and security video; Microscope imaging;</p>
Microscope Camera	 <p>23.2mm Adjustable Adapter</p>  <p>23.2mm Fixed Adapter</p>
Telescope Camera	 <p>31.75mm Adjustable Adapter</p>  <p>31.75mm Fixed Adapter</p>

