BestScope Microscope Digital Cameras

Introduction of our Cameras....3
Camera & Microscope Configuration....4
1. CMOS Digital Eyepiece Cameras....7
(1) MDE-130 Microscope Digital Eyepiece....7
(2) MDE2 Series USB2.0 CMOS Eyepiece Camera....8
(3) MDE3 Series USB2.0 Eyepiece Camera (with Reduction Lens)....11
(4) MDE4 Series USB3.0 Eyepiece Camera....14
2. USB2.0 CMOS Microscope Digital Cameras....17
(1) BUC1C Series Microscope Digital Cameras....17
(2) BUC2 Series Microscope Digital Cameras....21
(3) BUC2B Series Microscope Digital Cameras....23
(4) BUC2D Series USB2.0 Graphics Accelerated Microscope Camera....25
(5) BUC2E Series C-mount USB2.0 CMOS Camera....27
3. USB2.0 CCD Digital Cameras....31
(1) BUC4C Series C-mount USB2.0 CCD Camera....31
(2) BUC4D Series C-mount USB2.0 CCD Camera....35
4. USB3.0 CMOS Digital Camera....39
(1) BUC3D Series C-mount USB3.0 CMOS Camera....39
(2) BUC5C Series USB3.0 CMOS Digital Cameras....43
(3) BUC5D Series USB3.0 CMOS Digital Cameras....45
(4) BUC5E Series USB3.0 CMOS Digital Cameras....50
(5) BUC5F Series C-mount USB3.0 CMOS Camera(HISPVP)....55
(6) BUC5H Series USB3.0 Digital camera....60
(7) BU3M42 Series M42 and M42 to C or F Mount USB3.0 CMOS Camera....62
(8) BUC5IA Series Cooled C-mount USB3.0 CMOS Camera....67
(9) BUC5IB Series Cooled C-mount USB3.0 CMOS Camera....71
5. USB3.0 CCD Digital Camera....77

(1) BUC6A Series C-mount USB3.0 CCD Camera....77
(2) BUC6B Series TE-Cooling C-mount USB3.0 CCD Camera....82
6. WIFI CMOS Digital Camera....86
(1) BWC Series C-mount WiFi CMOS Camera....86
(2) BWHC Series C-mount WIFI+HDMI CMOS Camera....91
(3) BWHC-1080BAF/DAF Auto Focus WIFI+HDMI CMOS Camera....98
(4) BWHC-4K 4K UHD HDMI/GigE/WiFi Multi-outputs Digital Camera....104
7. BHC Series HDMI Digital Camera....113
(1) BHC3E-1080P HDMI Digital Camera....113
(2) BHC3-1080P/1080P PLUS HDMI Digital Camera....116
(3) BHC3-1080AF Autofocus HDMI Digital Camera....121
(4) BHC4-1080P HDMI+USB Digital Camera....126
(5) HDS800C 4K UHD HDMI Camera....133
(6) HDS800C PLUS 4K UHD Image Measuring Camera....140
8. BLC Series LCD Digital Camera....143
(1) BLC-350 PLUS Tablet Digital Camera....143
(2) BLC-450 HD LCD Digital Camera....146
(3) BLC-600/BLC-600 PLUS/BLC-600AF HD LCD Digital Camera....148
9. Accessories....151
(1) HD1080LCD HDMI LCD Displayer....151
(2) Eyepiece Adapter (Reduction lens)....157
(3) DSLR Camera Eyepiece Adapter....162
(4) BCN series C-mount Adapters for Trinocular Tube of Olympus, Zeiss, Leica, Nikon Microscope....162
(5) BCF Series Adapters for Leica, Zeiss, Nikon, Olympus Microscopes....171
(6) BCF0.5X-C and BCF0.66X-C C-mount Adapters....172

Introduction of our Cameras

Our wide range of digital cameras provide diverse options for your microscopes, telescopes and Industrial machine vision applications. Our digital cameras including USB2.0, USB3.0 CMOS digital cameras, USB2.0, USB3.0 CCD digital cameras, HDMI digital cameras, VGA digital cameras, WIFI digital cameras and LCD digital cameras.

(1) Microscope

BestScope will work with you to choose and integrate the optimal cameras for your microscopy project. Ideal for use in any laboratory setting, our cameras let you capture high-quality image with your existing microscope equipment.

For microscope camera, high quality adapter will be the key point to ensure the high quality digital image. BestScope has designed many different adapters for different microscopes, such as Zeiss, Nikon, Leica and Olympus through the straight phototube and other microscopes through the 3rd ocular tube or eyepiece tube.

Our microscopy cameras and associated software are designed to offer consistent high-quality image acquisition, performance and processing.

(2) Telescope

BestScope's cameras also support telescopes. The cameras work perfectly with any kind of optical telescope. The images of the observed object can be accurately displayed on a computer screen. With the software ImageView, it is very convenient to preview live images and to capture still pictures. The powerful advanced software ImageView is included with the camera ensures simple and convenient operation on the captured images.

How do you mount a BestScope's camera for telescope onto a telescope? It is simple and easy. Remove the eyepiece from the telescope's ocular tube. Insert a camera with adapter for telescope into the ocular tube and secure it by tightening the locking-screw. Plug the camera into the USB2.0 port on your computer. That's all!

(3) Machine Vision

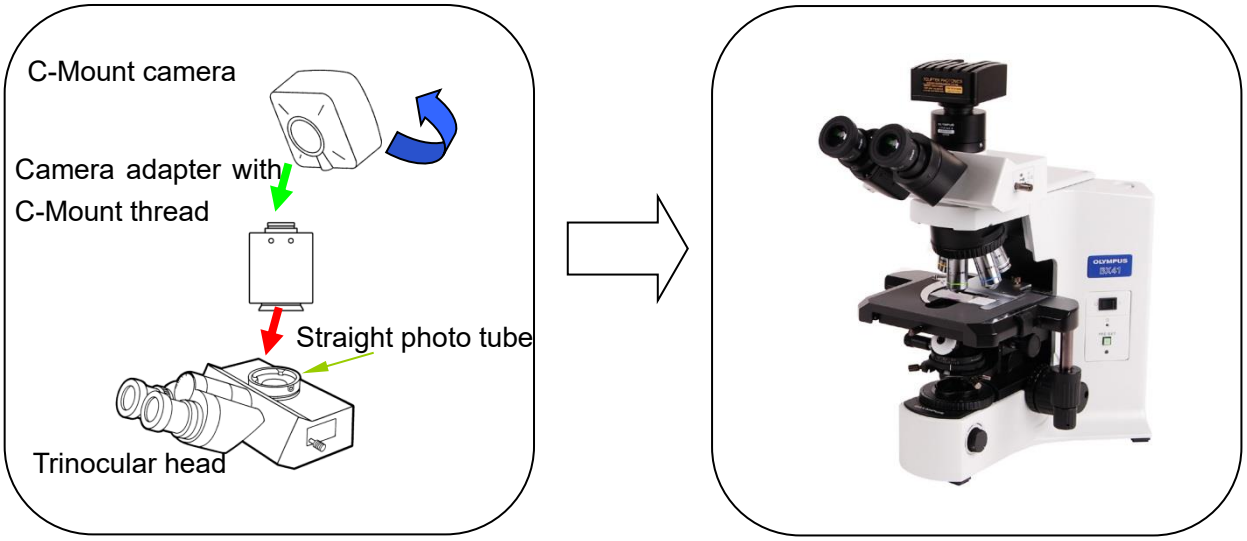
BestScope's experience in the machine vision industry will assist you with selecting and integrating the optimal industrial cameras best suited to your applications. The leading Software Developers Kit (SDK) streamlines and simplify the integration of cameras into your machine vision project.

Along with our wide range of standard CMOS and CCD cameras, we provides custom design services to alter our existing cameras, or creating one for your unique requirements. One of the many advantages of choosing BestScope to supply you and your business is the flexibility to opportunities in an ever-changing global market. With all the choices that are available to you, we ensure you that you're getting the cameras that will perform high quality. We are pride ourselves on the quality of our digital cameras, including the after sales support that you receive with your purchase. The opportunity to provide you a reliable and innovative leading camera and software solution for your application would be our pleasure.

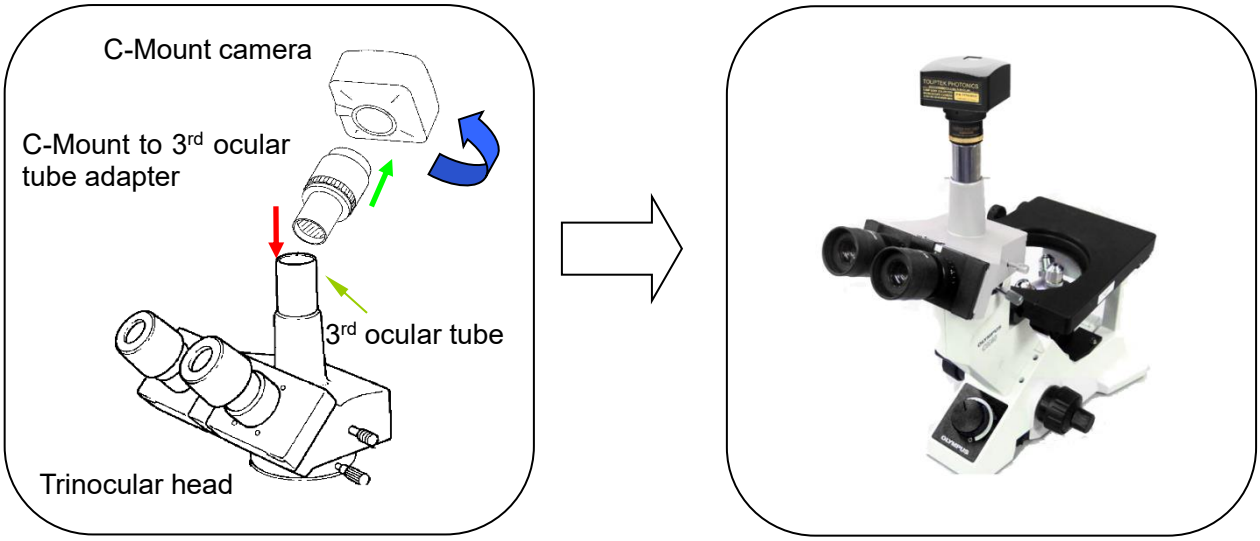
Camera & Microscope Configuration

(1) Trinocular Digital Microscope

A. Attach the C-mount camera and Adapter to the straight photo tube.

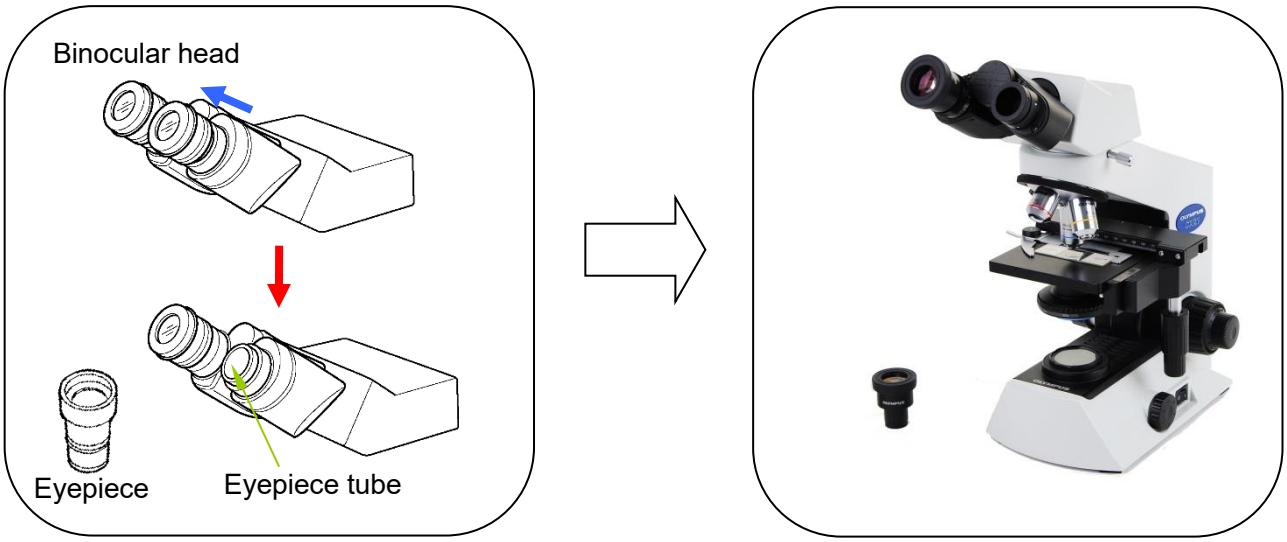


B. Attach the C-Mount camera and Adapter to the trinocular tube(23.2mm).

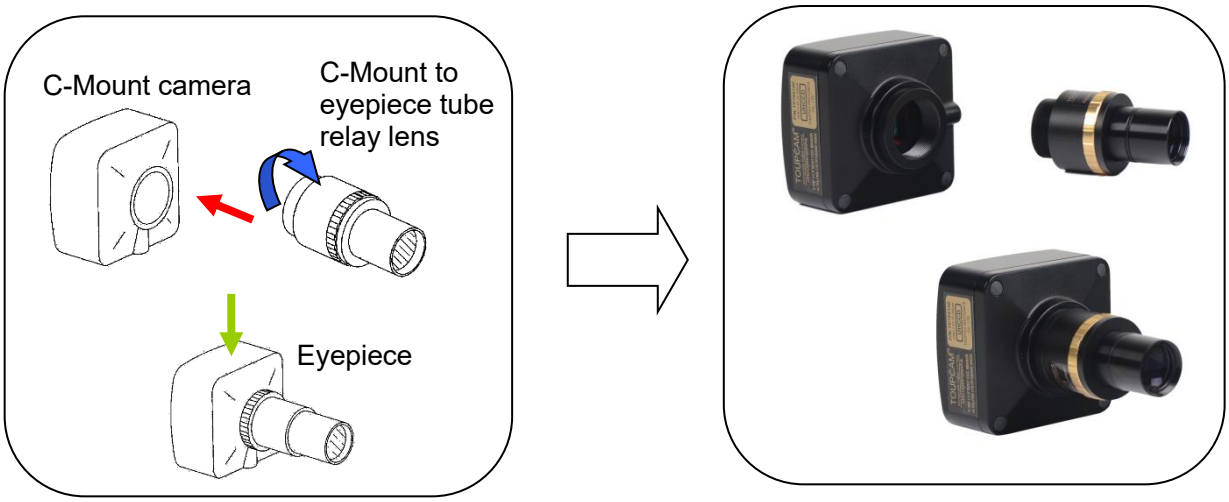


(2) Binocular Digital Microscope

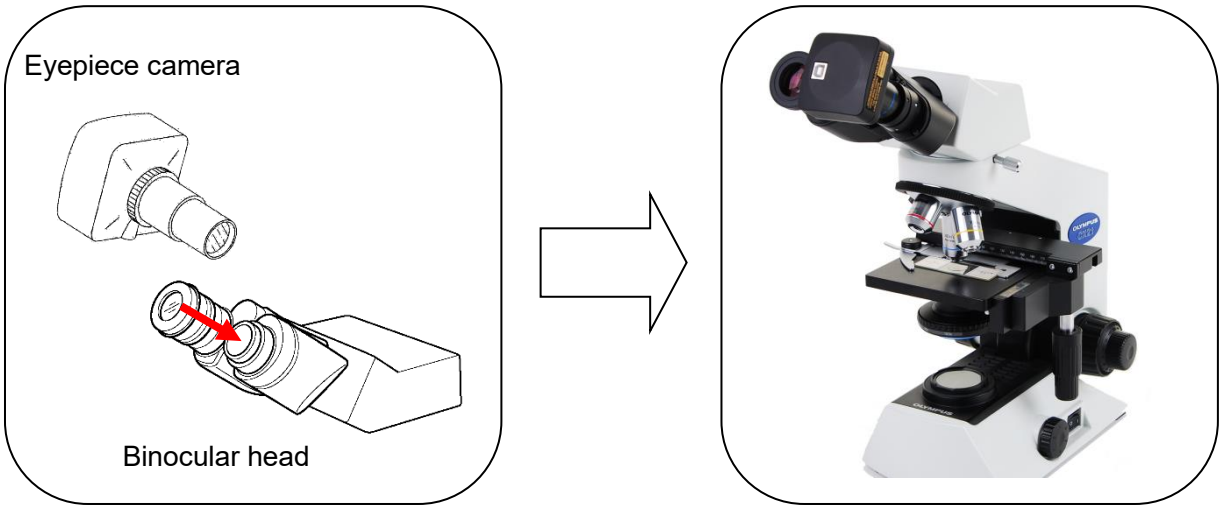
STEP 1: Remove the eyepiece from the ocular tube or eyepiece tube.



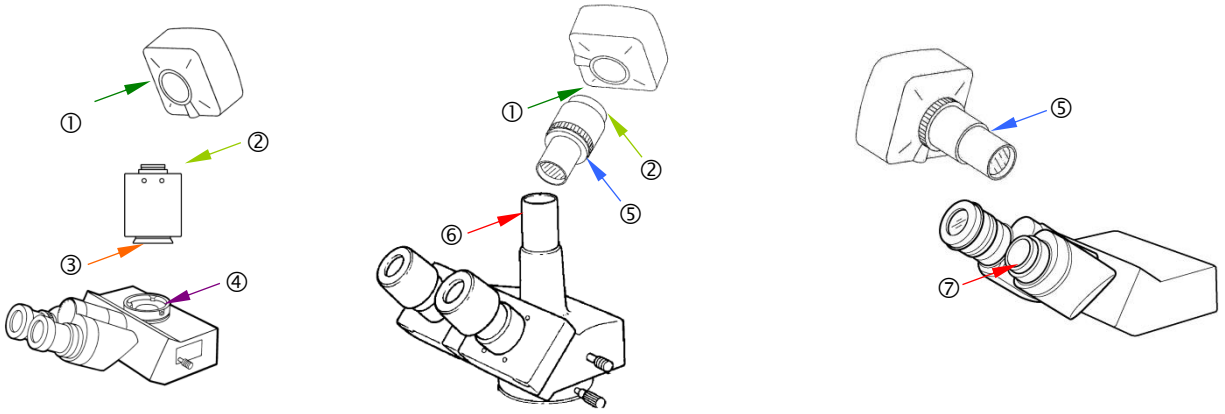
STEP 2: Attach (Screw) the camera Adapter to the C-mount camera.



STEP 3: Attach (Insert) the eyepiece camera into the ocular tube or eyepiece tube.



(3) Size Description of the Connection Parts



① Standard C-Mount: Dia.1 inch (25.4mm) female thread.
② Standard C-Mount: Dia.1 inch (25.4mm) male thread.
③ Camera Adapter connector: size varies according to microscope brands.
④ Straight photo tube: size varies according to microscope brands.
⑤ Relay lens: standard eyepiece connector size, Dia.23.2mm (male).
⑥ 3rd ocular tube: standard eyepiece connector size, Dia.23.2mm (female).
⑦ Ocular tube: standard eyepiece connector size, Dia.23.2mm (female).

1. CMOS Digital Eyepiece Cameras

(1) MDE-130 Microscope Digital Eyepiece

Introduction

MDE-130 Microscope Digital Eyepiece is used to improve a traditional microscope to a digital microscope. It can be used with monocular, binocular or trinocular microscopes. It can be directly connected to a PC via USB2.0 interface. The analysis software can take images, take videos and measure the objects.

Specification

Image Sensor	1/3.2” CMOS Colorful Sensor
Image Resolution	1280×1024
Image frame Rate	7.5fps@1280×1024
Sensitivity	1.8v@550um/lux/s
Image Format	JPG, BMP
Video Format	AVI
Data Output	USB2.0, 480Mb/s
Power Supply	USB2.0, 500mA
SNR	42.3dB
Dynamic Range	71dB
White Balance	Auto, Manual
Exposure	Auto, Manual
Camera Image Control	Brightness, Saturation, Contrast, Gamma Value, Sharpness, R,G,B Gain, White Balance
Connecting Mode	Directly Insert it into Eyepiece Tube of Microscope (23.2mm or 30mm)
Storage Temperature	-20°C ~ +60°C
Working Temperature	0°C ~ +40°C
Standard Configuration	MDE-130 Digital Camera Eyepiece, CD with Driver and software, 23.2mm Eyepiece Adapter and 30mm connecting ring, Packing Box
Dimension & G.W.	18cm*17cm*8cm, 0.4kg

(2) MDE2 Series USB2.0 CMOS Eyepiece Camera

Introduction

MDE2 series are economic version with simple and compact structure CMOS eyepiece cameras(digital eyepiece). USB2.0 is used as the data transfer interface.

The MDE2 series come with high-speed USB2.0 interface and high frame rate video display, which keep the screen smooth without interruption;

Also the MDE2 comes with advanced video & image processing application ImageView;

The MDE2 can be widely used to transfer the monocular or binocular student microscopes to digital microscope.

With 23.2 to 30mm or 23.2 to 30.75 convert ring, the MDE2 camera can also change the stereo microscope to digital stereo microscope.

Feature

1. Microscope eyepiece camera with 23.2 diameter and compact size;
2. Easy to extend to C or CS- Mount camera with high quality lens(optional);
3. High-quality camera with Aptina CMOS sensor;
4. Auto white balance and auto-exposure; Brightness, contrast, chroma and saturation can be adjusted;
5. High-speed USB2.0 interface and high frame rate video display keep the screen smooth without interruption;
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 Responsivity Dynamic range SNRmax	FPS/Resolution	Binning	Exposure
MDE2-500C	5.0M/Aptina(C) 1/2.5“ (5.70x4.28)	2.2x2.2	NA	2@2592x1944 3@2048x1536 5@1600x1200 7.5@1280x1024	N/A	Auto
MDE2-300C	3.0M/Aptina(C) 1/2.7“ (4.506x3.379)	2.2x2.2	NA	3@2048x1536 5@1600x1200	N/A	Auto

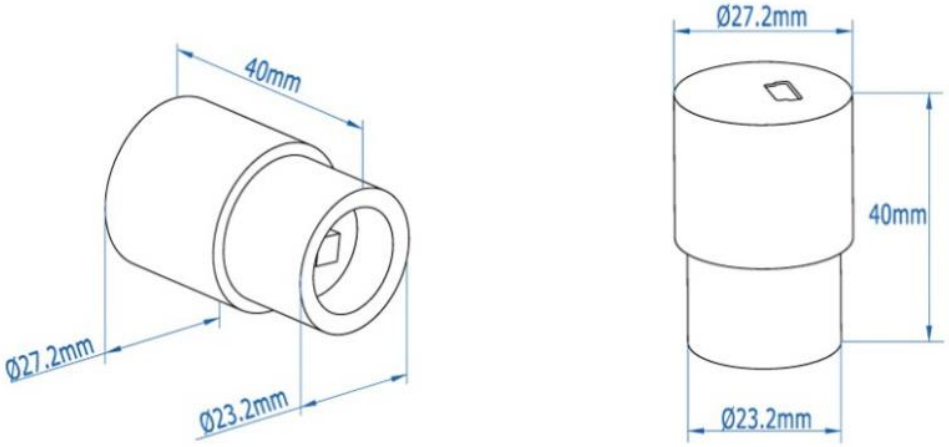
				7.5@1280x1024		
MDE2-200C	2.0M/Aptina(C) 1/3.2“ (4.48x3.36)	2.8x2.8	NA	5@1600x1200 7.5@1280x1024 20@800x600 22@640x480	N/A	Auto
MDE2-200BC	2.0M/OV2710(C) 1/2.7”(5.76x3.24)	3x3	3.3V/ Lux-sec 69dB 39dB	25@1920x1080 30@1280x1024 30@1280x720	N/A	Auto
MDE2-130C	1.3M/Aptina(C) 1/3“ (4.60x3.70)	3.6x3.6	NA	7.5@1280x1024 12.5@1024x768 12.5@800x600	N/A	Auto
MDE2-92C	0.92M/BG0703(C) 1/2.7” (5.80x3.28)	4.5x4.5	5.8V/ Lux-sec 65dB 43dB	25@1280x720 25@640x480	N/A	Auto
MDE2-35C	0.35M/Aptina(C) 1/4“ (3.58x2.69)	5.6x5.6	NA	30@640x480	N/A	Auto

C: Color; M: Monochrome;

Other Specification for MDE2 Camera	
Spectral Range	380-650nm (with IR-cut Filter)
White Balance	Auto White Balance
Color Technique	N/A
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: USB2.0 High-speed Port
	Display: 17” or Larger
	CD-ROM

Dimension

The MDE2’s body is made of aluminum alloy blackening, ocular housing: Dia.27.2 X 40mm ensures a heavy duty, workhorse solution. The camera is designed with a high quality IR-CUT filter to filter the infrared light and protect the camera sensor. No moving parts included. These measures ensure a rugged, robust solution with an increased lifespan when compared to other camera solutions.



Dimension of MDE2

Packing Information for MDE2

Packing Information of MDE2

Standard Camera Packing List		
A	Carton L:52cm W:32cm H:33cm (50pcs, 12~17Kg/ carton), not shown in the photo	
B	Gift box L:14.5cm W:9.5cm H:6.0cm (0.15~0.16Kg/ box)	
C	MDE2 series USB2.0 eyepiece camera	
D	High-Speed USB2.0 A male to mini B 5-pin male gold-plated connectors cable /1.5m	
E	CD (Driver & utilities software, Ø8cm)	
Optional Accessory		
F	C-Mount Adapter Housing:108027(HS502)	
G	108015(Dia.23.2mm to 30.0mm Ring)/Adapter rings for 30mm eyepiece tube	
H	108016(Dia.23.2mm to 30.5mm Ring)/ Adapter rings for 30.5mm eyepiece tube	
I	108017(Dia.23.2mm to 31.75mm Ring)/ Adapter rings for 31.75mm eyepiece tube	
J	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.)

(3) MDE3 Series USB2.0 Eyepiece Camera (with Reduction Lens)

Introduction

MDE3 is an extension of ’s MDE2 series camera with fixed reduction lens to increase the field of view from the microscope eyepiece tube. The MDE3 is still an economic version with simple and compact structure CMOS eyepiece camera. USB2.0 is used as the data transfer interface.

The MDE3 series cameras come with high-speed USB2.0 interface and high frame rate video display keep the screen smooth without interruption; Also the MDE3 come with advanced video & image processing application ImageView.

The MDE3 can be widely used to transfer the mono or binocular student microscopes to digital microscope.

With 23.2 to 30mm or 23.2 to 30.75 convert ring, the MDE3 camera can also change the stereo microscope to digital stereo microscope.

Features

The basic characteristic of MDE3 cameras are as follows:

1. Microscope eyepiece camera with 23.2 diameter and compact size;

2. An extension of ’s MDE2 series cameras with fixed reduction lens to ensure the full field of view of the microscope from the eyepiece can be imaged to the CMOS sensor;

3. High-quality camera with Aptina CMOS sensor;

4. Auto white balance and auto-exposure; Brightness, contrast, chroma, and saturation can be adjusted;

5. High-speed USB2.0 interface and high frame rate video display keep the screen smooth without interruption;

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

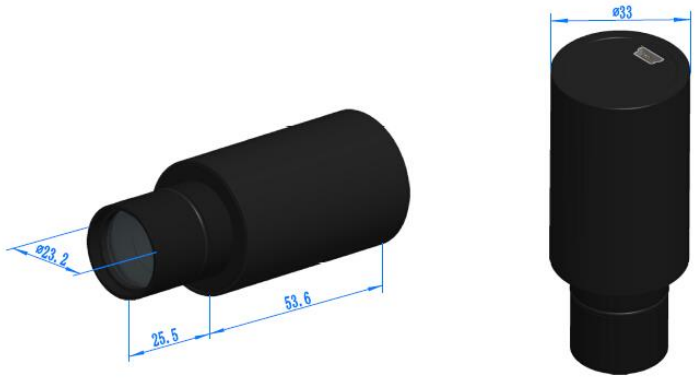
Order Code	Sensor & Size(mm)	Pixel(μm)	G Responsivity Dynamic range SNRmax	FPS/Resolution	Binning	Exposure
MDE3-500C	5.0M/Aptina(C) 1/2.5" (5.70x4.28)	2.2x2.2	NA	2@2592x1944 3@2048x1536 5@1600x1200 7.5@1280x1024	N/A	Auto
MDE3-300C	3.0M/Aptina(C) 1/2.7" (4.51x3.38)	2.2x2.2	NA	3@2048x1536 5@1600x1200 7.5@1280x1024	N/A	Auto
MDE3-200C	2.0M/Aptina(C) 1/3.2" (4.48x3.36)	2.8x2.8	NA	5@1600x1200 7.5@1280x1024 7.5@1280x960 20@800x600	N/A	Auto
MDE3-130C	1.3M/Aptina(C) 1/3" (4.60x3.70)	3.6x3.6	NA	7.5@1280x1024 12.5@1024x768 12.5@800x600	N/A	Auto
MDE3-35C	0.35M/Aptina(C) 1/4" (3.58x2.6)	5.6x5.6	NA	30@640x480	N/A	Auto

C: Color; M: Monochrome;

Other Specification for MDE3 Camera	
Spectral Range	380-650nm (with IR-cut Filter)
White Balance	Auto White Balance
Color Technique	N/A
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:USB2.0 High-speed Port
	Display:17" or Larger
	CD-ROM

Dimension of MDE3

The MDE3 body, made from aluminum alloy blackening, ocular housing: Dia.33 X 79.1mm ensures a heavy duty, workhorse solution. The camera is designed with a high quality IR-CUT filter to filter the infrared light and 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 MDE3

Packing Information for MDE3

Packing Information of MDE3

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 (0.25~0.26Kg/ box)	
C	SPCMOS series eyepiece camera	
D	High-Speed USB2.0 A male to mini B 5-pin male gold-plated connectors cable /1.5m	
E	CD (Driver & utilities software, Ø8cm)	
Optional Accessory		
F	108015(Dia.23.2mm to 30.0mm Ring)/Adapter rings for 30mm eyepiece tube	
G	108016(Dia.23.2mm to 30.5mm Ring)/ Adapter rings for 30.5mm eyepiece tube	
H	108017(Dia.23.2mm to 31.75mm Ring)/ Adapter rings for 31.75mm eyepiece tube	
I	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.)

(4) MDE4 Series USB3.0 Eyepiece Camera

Introduction

MDE4 is an economic version with simple and compact structure USB3.0 CMOS eyepiece camera. USB3.0 is used as the data transfer interface.

Microscope eyepiece camera with 23.2 diameter and compact size;

The MDE4 comes with high-speed USB3.0 interface and high frame rate video display keep the screen smooth without interruption; Also the MDE4 comes with advanced video & image processing application ImageView.

The MDE4 can be widely used to transfer the mono or binocular student microscopes to digital microscope.

With 23.2 to 30mm or 23.2 to 30.75 convert ring, the MDE4 camera can also change the stereo microscope to digital stereo microscope.

Feature

The basic characteristic of MDE4 cameras are as follows:

1. Microscope eyepiece camera with 23.2 diameter and compact size;
2. Easy to extend to C or CS- Mount camera with high quality lens(optional);
3. High-quality camera with Aptina CMOS sensor;
4. Auto white balance and auto-exposure; Brightness, contrast, chroma, and saturation can be adjusted;
5. High-speed USB3.0 interface and high frame rate video display keep the screen smooth without interruption;
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	Pixel(μm)	G Responsivity Dynamic range SNRmax	FPS/Resolution	Binning	Exposure
MDE4-500BC	5.0M/SC5033(C) 1/2.7"(5.18x3.89)	2.0x2.0	2 V/lux-sec 64dB 35dB	15@2560x1920 20@2048x1536 20@1600x1200 30@800x600	1x1,2x2	Auto

C: Color; M: Monochrome;

Other Specification for MDE4 Camera	
Spectral Range	380-650nm (with IR-cut Filter)
White Balance	Auto White Balance
Color Technique	N/A
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 USB3.0 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 MDE4

The MDE4 body, made from aluminum alloy blackening, ocular housing: Dia.32 X 56mm ensures a heavy duty, workhorse solution. The camera is designed with a high quality IR-CUT filter to filter the infrared light and 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.

Dimension of MDE4

Packing Information for MDE4

Packing Information of MDE4

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 (0.25~0.35Kg/ box)	
C	MDE4 series camera	
D	High-Speed USB3.0 USB315-ATA | USB 3.0 A Male to A Male Cable,1.5m	
E	CD (Driver & utilities software, Ø8cm)	
Optional Accessory		
F	C-Mount Adapter Housing:108027(HS502)	
G	108015(Dia.23.2mm to 30.0mm Ring)/Adapter rings for 30mm eyepiece tube	
H	108016(Dia.23.2mm to 30.5mm Ring)/ Adapter rings for 30.5mm eyepiece tube	
I	108017(Dia.23.2mm to 31.75mm Ring)/ Adapter rings for 31.75mm eyepiece tube	
J	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.)

2. USB2.0 CMOS Microscope Digital Cameras

(1) BUC1C Series Microscope Digital Cameras

Introduction

BUC1C series cameras adopt ultra-high performance CMOS sensor as the image-capture device. USB2.0 is used as the data transfer interface.

BUC1C series cameras' hardware resolutions ranges from 0.35M to 14M and come with the zinc aluminum alloy compact housing. BUC1C come with advanced video & image processing application ImageView; Providing Windows/Linux/OSX multiple platform SDK; Native C/C++, C#/VB.NET, DirectShow, Twain Control API; The BUC1C can be widely used in bright field light environment and microscope image capture and analysis with moderate frame rate.

Feature

The basic features of BUC1C cameras are as follows:

1. Standard C-Mount with Aptina CMOS sensor;
2. With hardware resolution among 0.35M to 14M;
3. Durable zinc aluminum alloy housing;
4. USB2.0 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 Responsivity Dynamic range SNRmax	FPS/Resolution	Binning	Exposure
BUC1C-1400C	14M/MT9F002(C) 1/2.3"(6.451x4.603)	1.4x1.4	0.724v/lux-sec 65.3dB 35.5dB	1.8@4096x3288 10@2048x1644 27@1024x822	1x1, 2x2, 4x4	0.4ms~2000ms
BUC1C-1000C	10M/MT9J003(C) 1/2.3" (6.44x4.616)	1.67x1.67	0.31v/lux-sec 65.2dB	1.9@3584x2748 8@1792x1374	1x1, 2x2, 4x4	0.4ms~2000ms

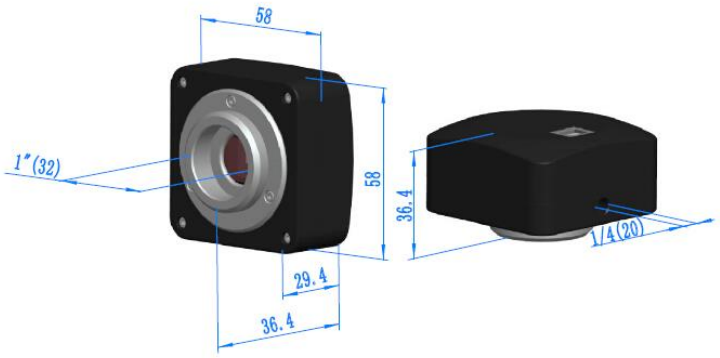
			34dB	27@896x684		
BUC1C-900C	9M/Special(C) 1/2.4"(5.825x4.369)	1.67x1.67	0.31v/lux-sec 65.2dB 34dB	1.9@3488x2616 8@1744x1308 27@872x654	1x1, 2x2, 4x4	0.4ms~2000ms
BUC1C-800C	8M/Special(C) 1/2.5"(5.451x4.088)	1.67x1.67	0.31v/lux-sec 65.2dB 34dB	1.9@3264x2448 8@1600x1200 27@800x600	1x1, 2x2, 4x4	0.4ms~2000ms
BUC1C-500C	5.1M/MT9P001(C) 1/2.5" (5.7x4.28)	2.2x2.2	0.53 V/lux-sec 66.5dB 40.5dB	5@2592x1944 18@1280x960 60@640x480	1x1, 2x2, 4x4	0.294ms~2000 ms
BUC1C-300C	3.1M/MT9T001(C) 1/2" (6.55x4.92)	3.2x3.2	1.0 V/lux-sec 61dB 43dB	8@2048x1536 22@1024x768 43@680x510	1x1, 2x2, 3x3	0.244ms~2000m s
BUC1C-200C	2.0M/Special(C) 1/2.6"(5.12x3.84)	3.2x3.2	1.0 V/lux-sec 61dB 43dB	16@1600x1200 50@800x600	1x1, 2x2	0.128ms~2000m s
BUC1C-123C	1.23M/SC1235(C) 1/3" (4.80x3.60)	3.75x3.75	4.5V/lux-sec 74dB 38dB	15@1280x960 15@1280x720	1x1, 1x1	0.14ms~2000ms
BUC1C-130M	1.3M/MT9M001(M) 1/2" (6.66x5.32)	5.2x5.2	2.1 V/lux-sec 68.2dB 45dB	20@1280x1024	1x1	0.14ms~500ms
BUC1C-35C	0.35M/MT9V011(C) 1/4" (3.58x2.69)	5.6x5.6	1.9V/lux-sec 60dB 45dB	30@640x480 80@320x240	1x1, 2x2	0.111ms~192ms

C: Color; M: Monochrome;

Other Specification for BUC1C 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:USB2.0 High-speed Port
	Display:17" or Larger
	CD-ROM

Dimension of BUC1C

The BUC1C 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 BUC1C

Packing Information for BUC1C

Packing Information of BUC1C

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 (0.5~0.55Kg/ box)	
C	BUC1C series USB2.0 C-mount CMOS camera	
D	High-speed USB2.0 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), 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 BUC1C 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 Adapter)	 (23.2mm Adapter)
Telescope Camera	 (31.75mm Adapter)	 (31.75mm Adapter)

(2) BUC2 Series Microscope Digital Cameras

BUC2-130C

BUC2-320C

BUC2-500C

BUC2 Series digital cameras are mainly designed for microscopes to capture microscope images, videos and display real-time live video on your PC screen. Each package comes with a high-resolution digital camera, a reduction lens, a user-friendly software and a 30mm adapter. 30.5mm adapter is optional.

Feature

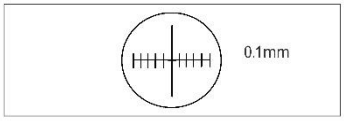
1. With high resolution sensor, providing high quality image and widely used in academic and medical field for high precision and resolution image capturing and processing;
2. Very convenient to Use, just insert it into Eyepiece Tube or Top Tube of Trinocular Head;
3. Getting Real-time and Non-compressing Video Data and Capturing Image Directly;
4. Easy and fast software installation;
5. User-friendly image processing software with measurement function;
6. Multi-Language software (Chinese, English, Germen, French, Japanese, Polish, Arabic);
7. Compatible with Windows 2000/ XP/ Vista/Win7/Win 8/Win 10/Mac.

Packing Contents

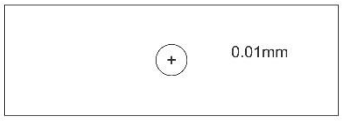
The BUC2 series camera packaging box includes:

1. The BUC2 Camera device with USB2.0 cable;
2. 30mm connecting ring(Optional: 30.5mm connecting ring);
3. 0.45× microscope adapter(23mm);
4. CD: Include driver, “ScopeImage 9.0” software and User manual.

Optional (choose to buy): 0.01mm(for biological and other high power microscopes) or 0.1mm(for stereo and other low power microscopes) Calibration Slide(Stage Micrometer).



0.1mm Calibration slide

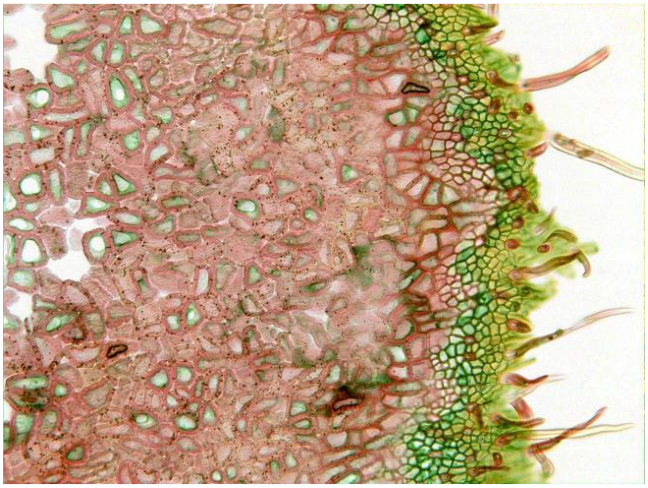


0.01mm Calibration slide

Specification

Model	BUC2-130C	BUC2-320C	BUC2-500C
Image Sensor	1/3 inch 1.3MP CMOS Sensor	1/2 inch 3.2MP CMOS Sensor	1/2 inch 5.0MP CMOS Sensor
Active pixels	1280×1024	2048×1536	2592×1944
Pixel size	5.2μm×5.2μm	3.2μm × 3.2μm	2.2μm×2.2μm
Frame rate	15fps@1280×1024	9fps@ 2048×1536	6fps@2592×1944
Sensitivity	>1.0 V/lux-sec (550nm)	>1.0V/lux-sec (550nm)	>0.53V/lux-sec (550nm)
Dynamic range	61dB		
SNR	43dB		
Shutter type	Electronic rolling shutter		
Operating Temperature	0°C ~ 60°C		
Image Output	USB2.0, 480Mb/s		
Software	ScopeImage 9.0		
Operating System	Windows 2000/ XP/ Vista/Win7/Win 8/Mac		

Sample Images



(3) BUC2B Series Microscope Digital Cameras

BUC2B Series USB2.0 digital cameras are mainly designed for microscopes to capture microscope images, videos and display real-time live video on your PC screen. They come with a high-resolution digital camera, built-in IR filter and user-friendly software. Adapters for all sizes of microscopes are optional. The cameras can provide high quality image and are widely used in academic and medical field for high precision and resolution image capturing and processing.

Packing Contents

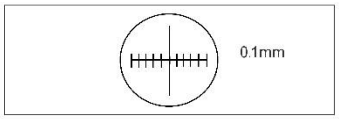
BUC2B Camera device include:

1. A digital camera with a C-mount and 1.8m USB cable.
2. CD including driver, software and instruction manual.

BUC2B PACK include:

1. The BUC2B Camera device with a C-mount and 1.8m USB cable;
2. 0.45×(BUC2B-320C comes with a 0.5× adapter) video adapter(23mm) and 30mm, 30.5mm connecting rings;
3. CD including driver, software and instruction manual.
4. 0.01mm(for biological and other high power microscopes) Calibration Slide(stage micrometer).

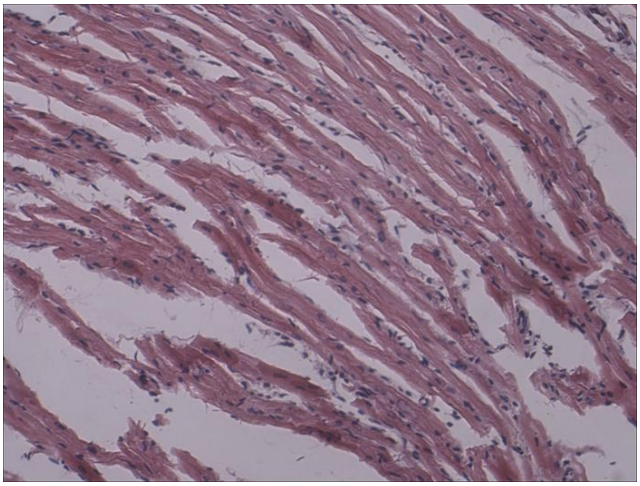
Optional (choose to buy): 0.1mm(for stereo and other low power microscopes) Calibration Slide.

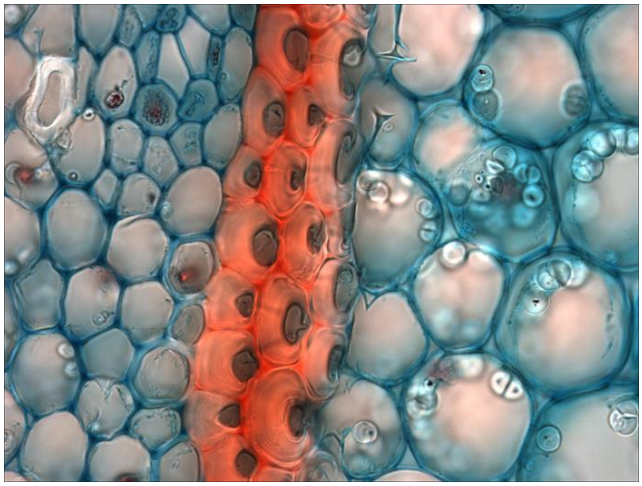


Specification

Model	BUC2B-130C	BUC2B-320C	BUC2B-500C	BUC2B-1000C
Image Sensor	1/2.5" CMOS Sensor, Micron MT9P031	1/2" CMOS Sensor, Micron MT9T001	1/2.5" CMOS Sensor, Micron MT9P031	1/2.3" CMOS Sensor, Micron MT9J001
Effective Pixels	1.3MP	3.2MP	5.0MP	10.0MP
Resolution	1272×952	2048×1536	2592×1944	3856×2764
Pixel Size	2.2μm×2.2μm	3.2μm×3.2μm	2.2μm×2.2μm	1.67μm×1.67μm
Frame Rate	16fps@1272×952 46fps@632×472	12fps@2040×1528 33fps@1016×760 46fps@632×472	6fps@2584×1936 15fps@1272×952 23fps@632×472	3fps@3656×2740 7fps@1824×1362 33fps@908×672
Sensitivity	1.4 V/lux-S(550nm)	1.0 V/lux-S(550nm)	1.4 V/lux-S(550nm)	0.44 V/lux-S(550nm)
Exposure Time	0.001-0.2 sec	0.001-0.5 sec	0.001-0.5 sec	0.001-0.5 sec
Dynamic Range	60dB	54dB	60dB	56dB
SNR	40.5dB	43dB	40.5dB	43dB
Color Depth	24bit			
A/D	8-bit			
Exposure Control	Auto/Manual			
White Balance	Auto/Manual			
Scan Mode	Progressive Scan			
Shutter Type	Electronic rolling shutter			
Filter	RGB filter			
Lens Interface	C/CS			
Data Output	USB2.0, 480Mb/s			
Power Supply	USB2.0, 500mA			
Working Temperature	0°C ~ 60°C			
Storage Temperature	-20°C ~ 70°C			
Working Humidity	45%~ 85%			
Operating System	Windows 2000/XP/ Vista/Win7/Win8/Win 10/Mac			
Size and Weight	69mm×87mm×44mm, 220g			

Sample Images





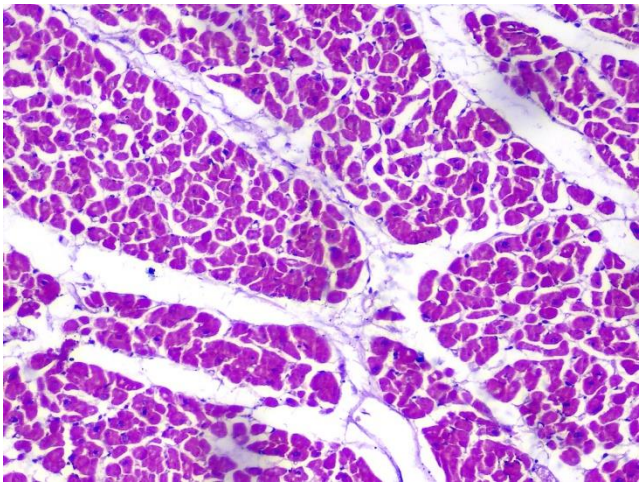
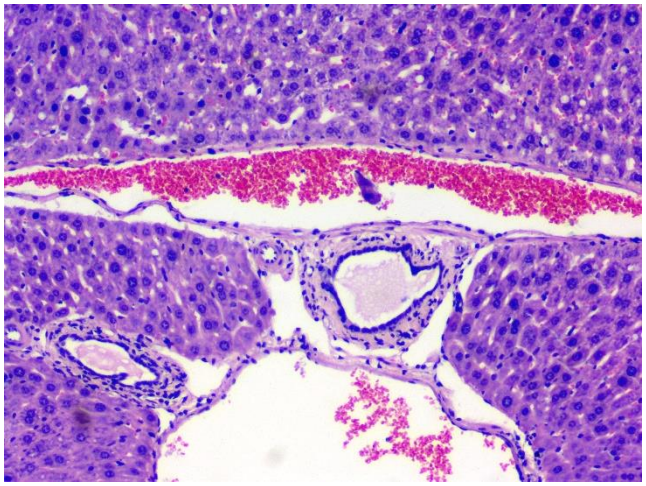
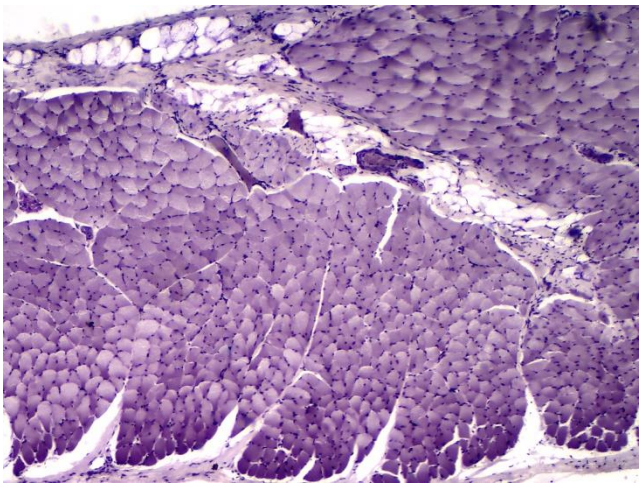
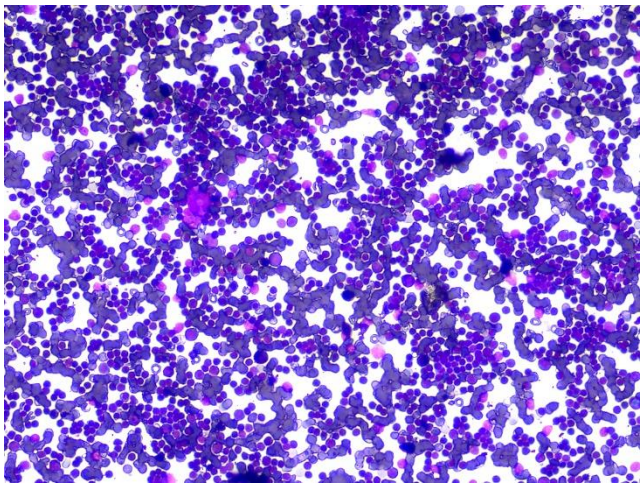
(4) BUC2D Series USB2.0 Graphics Accelerated Microscope Camera

With Innovative customized ISP technology, the BUC2D series cameras' frame rate has been greatly improved. The frame rate of uncompressed original imaging is 2MP@30fps, 5MP@22fps, 12MP@15fps. This series digital cameras provide simple and economical microscopy imaging. They are widely used in academic and medical fields for precision and high resolution microscope image capturing and processing.

Specification

Model	BUC2D-200C	BUC2D-500C	BUC2D-1200C
Sensor Model	Sony, IMX323LQN-C	Sony, IMX335LQN-C	Panasonic, MN34120
Sensor Size	1/2.9"	1/2.8"	1/2.33"
Resolution	2MP, 1920x1080	5MP, 2560x1920	12MP, 4000x3000
Pixel Size	2.8μmx2.8μm	2.0 μmx2.0μm	1.335μmx1.335μm
Frame Rate	30fps	22fps	15fps
Color/Mono	Color		
Shutter Type	Rolling Shutter		
Exposure Mode	Auto/Manual		
Picture Format	TIFF/JPG/PNG/DICOM		
Operating System	Windows 7/8/10 (32 Bit/64 Bit)		
PC Software	Capture 2.0		
SDK	C/C++, C#, Directshow		
Optical Interface	C-Mount		
Data Interface	USB2.0		
Operating Temperature	0-60℃		
Operating Humidity	10%-85%		
Camera Size	68X68X42.5(mm)		
Camera Weight	253g		
Note:	Capture 2.0 software does not support the dark field image processing module, real-time image stitching and real-time depth of field fusion function module when it is used with BUC2D cameras.		

Sample Images

(5) BUC2E Series C-mount USB2.0 CMOS Camera

Introduction

BUC2E series cameras adopt SONY Exmor CMOS sensor as the image-picking device and USB2.0 is used as the data transfer interface.

BUC2E hardware resolutions range from 1.2M to 8.3M and come with the integrated CNC aluminum alloy compact housing.

BUC2E 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 BUC2E can be widely used in bright field light environment and microscope image capture and analysis with higher frame rate.

Features

The basic characteristic of BUC2E cameras are as follows:

1. SONY Exmor, Exmor R(Back-illuminated), Exmor RS CMOS sensor with USB2.0 interface;
2. Real-time 8/12/14/16bit depth switch(depending on sensor);
3. Super high sensitivity up to 2040mV(IMX224);
4. Ultra low noise and low power dissipation by using column-parallel A/D conversion;
5. With hardware resolution among 1.2M to 8.3M;
6. Rolling Shutter;
7. Standard C-Mount camera;
8. CNC aluminum alloy housing;
9. USB2.0 interface ensuring high speed data transmission;
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.

Specification

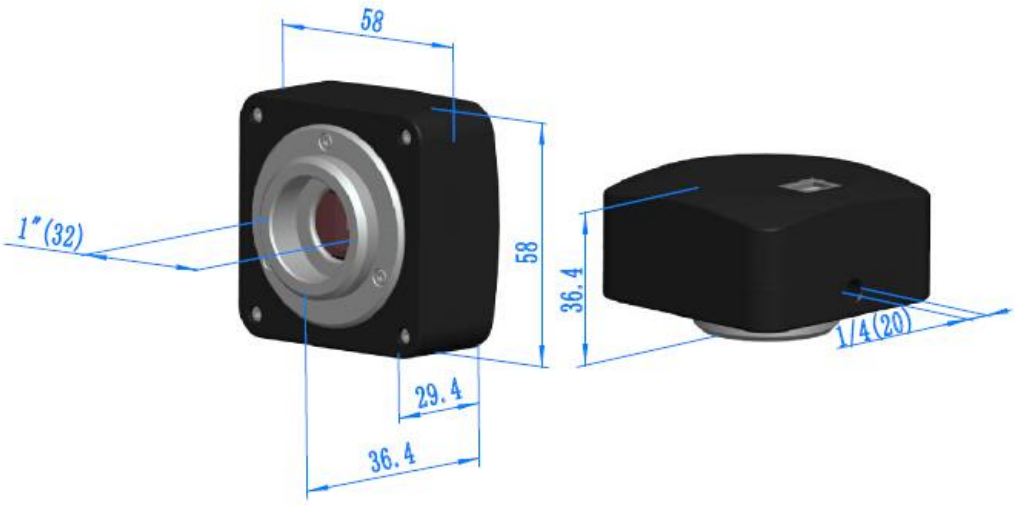
Order Code	Sensor & Size(mm)	Pixel(μm)	G Sensitivity Dark Signal	FPS/Resolution	Binning	Exposure
BUC2E-830C	8.3M/IMX274(C) 1/2.5"(6.22x3.50)	1.62x1.62	236mv with 1/30s 0.1mv with 1/30s	4@3840x2160 16@1920x1080	1x1 2x2	0.244ms~15s
BUC2E-660C	6.6M/IMX326(C) 1/2.9"(4.98x3.50)	1.62x1.62	236mv with 1/30s 0.1mv with 1/30s	5@3072x2160 6@2592x1944 6@3072x1728 7@2160x2160	1x1 1x1 1x1 1x1	0.244ms~15s
BUC2E-530C	5.3M/IMX178(C) 1/1.9" (7.37x4.15)	2.4x2.4	425mv with 1/30s 0.15mv with 1/30s	5.5@3072 x1728 35@1280x720	1x1, 2x2	0.105ms~15s
BUC2E-500C	5.0M/IMX335(C) 1/2.8" (5.18x3.89)	2.0x2.0	505mv with 1/30s 0.13mv with 1/30s	6.4@2592 x1944 26.7@1296x972	1x1, 2x2	0.1ms~15s
BUC2E-310C	3.1M/IMX123(C) 1/2.8" (5.12x3.84)	2.5x2.5	600mv with 1/30s 0.15mv with 1/30s	10.5@2048x1536 15@1920x1080	1x1	0.105ms~15s
BUC2E-200C	2.0M/IMX290(C) 1/2.8"(5.56x3.13)	2.9 x2.9	1300mv with 1/30s 0.15mv with 1/30s	17@1920x1080	1x1	0.105ms~15s
BUC2E-120C	1.2M/IMX224(C) 1/3"(4.80x3.60)	3.75 x3.75	2040mv with 1/30s 0.15mv with 1/30s	27@1280x960 54@640x480	1x1, 2x2	0.105ms~15s

C: Color; M: Monochrome;

Other Specification for BUC2E 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 (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: USB2.0 Port
	Display: 17" or Larger
	CD-ROM

Dimension of BUC2E

The BUC2E 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.



Dimension of BUC2E

Packing Information for BUC2E

Packing Information of BUC2E

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 (0.5~0.55Kg/ box)		
C	BUC2E series USB2.0 C-mount CMOS camera		
D	High-speed USB2.0 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)	BCN2A-0.37× BCN2A-0.5× BCN2A-0.75×
		C-mount to Dia.31.75mm eyepiece tube (Please choose 1 of them for your telescope)	BCN3A-0.37× BCN3A-0.5×

			BCN3A-0.75×
G	Fixed lens Adapter	C-mount to Dia.23.2mm eyepiece tube (Please choose 1 of them for your microscope)	BCN2F-0.37× BCN2F-0.5× BCN2F-0.75×
		C-Mount to Dia.31.75mm Eyepiece Tube (Please choose 1 of them for your telescope)	BCN3F-0.37× BCN3F-0.5× BCN3F-0.75×
	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 BUC2E 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 Adapter) (23.2mm Adapter)	
Telescope Camera	 (31.75mm Adapter) (31.75mm Adapter)	

3. USB2.0 CCD Digital Cameras

(1) BUC4C Series C-mount USB2.0 CCD Camera

Introduction

BUC4C series CCD cameras are ultra-high performance Super HAD CCD camera. The cameras adopt Sony Super HAD CCD sensor as the image capture device; The Super HAD CCD is a version of Sony's high performance CCD HAD (Hole-Accumulation Diode) sensor with sharply improved sensitivity by the incorporation of a new semiconductor technology developed by Sony Corporation. USB2.0 is used as the data transfer interface.

BUC4C series CCD cameras come with advanced video & image processing application ImageView; Providing Windows/Linux/OSX multiple platform SDK; Native C/C++, C#/VB.NET, DirectShow, Twain Control API;

The BUC4C series CCD cameras can be widely used in bright field, dark field, fluorescent light environment for microscope image capture and analysis.

Features

The BUC4C's basic characteristic is as follows:

1. Standard C-Mount camera with SONY Super HAD CCD 0.8~5.2M sensor;
2. USB2.0 interface ensuring high speed data transmission;
3. Ultra-Fine color engine with perfect color reproduction capability;
4. With advanced video & image processing application ImageView;
5. Providing Windows/Linux/Mac OS multiple platforms SDK;
6. Native C/C++, C#/VB.NET, DirectShow, Twain Control API.

BUC4C Datasheet

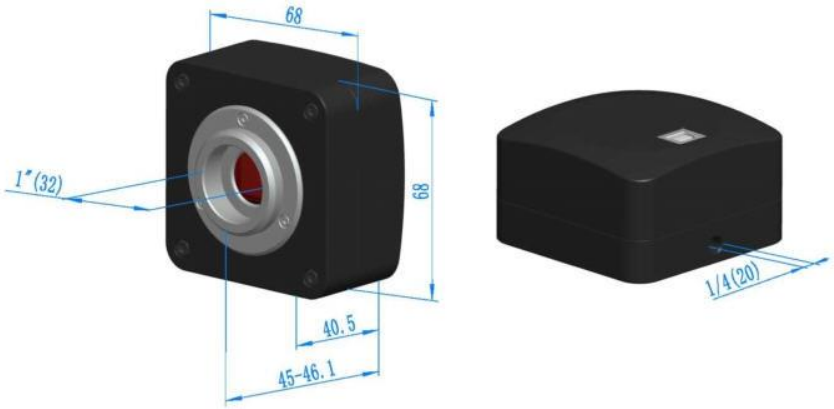
Order Code	Sensor & Size(mm)	Pixel Size(μm)	G Sensitivity Dark Signal	FPS/Resolution	Binning	Exposure
BUC4C-520C	5.2M/ICX655AQ(C) 2/3“ (8.44x7.07)	3.45x3.45	420mv with 1/30s 4mv with 1/30s	4.3@2448x2050 10.5@960x720	1x1	0.22ms~60s
BUC4C-510C	5.1M/ICX452AQ(C) 1/1.8“ (7.19x5.39)	2.775x2.775	260mv with 1/30s 16mv with 1/30s	4@2592x1944 35@560x420	1x1, 2x2	0.212ms~77ms
BUC4C-500C	5.0M/ICX282AQ(C) 2/3“ (8.70x6.53)	3.40x3.40	280mv with 1/30s 16mv with 1/30s	4.5@2560x1920 9@1280x960	1x1, 2x2	0.203ms~60s
BUC4C-200C	2.0M/ICX274AQ(C) 1/1.8“ (7.04x5.28)	4.40x4.40	420mv with 1/30s 8mv with 1/30s	10@1600x1200	1x1	0.135ms~60s
BUC4C-140BC	1.4M/ICX205AK(C) 1/2“ (6.32x4.76)	4.65x4.65	400mv with 1/30s 16mv with 1/30s	15@1360x1024	1x1	0.127ms~60s
BUC4C-140M	1.4M/ICX205AL(M) 1/2“ (6.32x4.76)	4.65x4.65	450mv with 1/30s 16mv with 1/30s	15@1360x1024	1x1	0.127ms~60s

C:Color; M:Monochrome;

Other Specification for BUC4C	
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:USB2.0 High-speed Port
	Display:17” or Larger
	CD-ROM

Dimension of BUC4C

The BUC4C 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 BUC4C

Packing Information of BUC4C

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 (0.67~0.8Kg/ box)	
C	BUC4C series camera	
D	High-speed USB2.0 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) , 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 BUC4C 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 Adapter)	 (23.2mm Adapter)
Telescope Camera	 (31.75mm Adapter)	 (31.75mm Adapter)

(2) BUC4D Series C-mount USB2.0 CCD Camera

Introduction

BUC4D series CCD digital cameras adopt Sony ExView HAD(Hole-Accumulation-Diode) 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 sensor. USB2.0 port is used as the data transfer interface.

BUC4D series cameras come with advanced video & image processing software ImageView; Providing Windows/Linux/OSX multiple platform SDK; Native C/C++, C#/VB.NET, DirectShow, Twain Control API;

BUC4D series cameras can be widely used in low light environment and microscope fluorescence image capture and analysis.

Features

The BUC4D's basic characteristic is as follows:

1. Standard C-Mount camera with SONY ExView 0.3M~1.4M sensors;
2. USB2.0 interface ensuring high speed data transmission;
3. Ultra-Fine color engine with perfect color reproduction capability;
4. With advanced video & image processing application ImageView;
5. Providing Windows/Linux/Mac OS multiple platforms SDK;
6. Native C/C++, C#/VB.NET, DirectShow, Twain Control API.

BUC4D Datasheet

Order Code	Sensor & Size(mm)	Pixel(μm)	G Sensitivity Dark Signal	FPS/Resolution	Binning	Exposure
BUC4D-140C	1.4M/ICX285AQ(C) 2/3" (10.2x8.3)	6.45x6.45	1240mv with 1/30s 10mv with 1/30s	15@1360x1024	1x1	0.12ms~240s
BUC4D-140M	1.4M/ICX285AL(M) 2/3" (10.2x8.3)	6.45x6.45	1300mv with 1/30s 11mv with 1/30s	15@1360x1024	1x1	0.12ms~240s
BUC4D-44M	0.44M/ICX829AL(M) 1/2''(7.40X5.95)	8.6X8.3	2800mv with 1/30s 2mv with 1/30s	46@748X578	1X1	0.20ms~3600s
BUC4D-30M	0.3M ICX618AL(M) 1/4" (4.46x3.80)	5.6x5.6	1200mv with 1/30s 4mv with 1/30s	72@640x480	1x1	0.06ms~40s

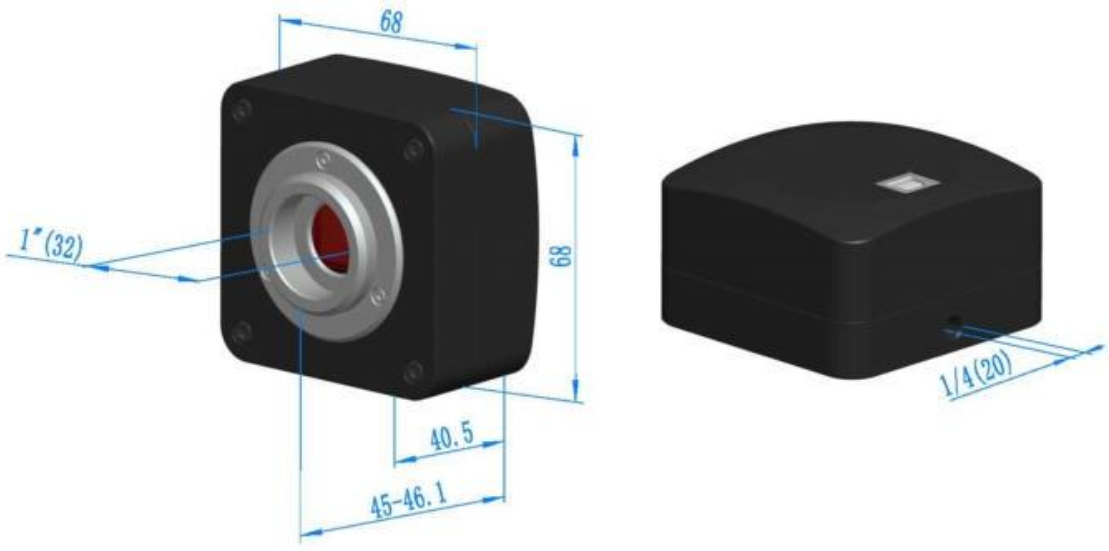
C: Color; M: Monochrome;

Other Specification for BUC4D Cameras	
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:USB2.0 High-speed Port
	Display:17" or Larger
	CD-ROM

Dimension of BUC4D

The BUC4D 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 BUC4D

Packing Information of BUC4D

Packing Information of BUC4D

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 (0.67~0.80Kg/ box)	
C	BUC4D series USB2.0 C-Mount camera	
D	High-speed USB2.0 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), 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 BUC4D 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 Adapter)	 (23.2mm Adapter)
Telescope Camera	 (31.75mm Adapter)	 (31.75mm Adapter)

4. USB3.0 CMOS Digital Camera

(1) BUC3D Series C-mount USB3.0 CMOS Camera

Introduction

BUC3D series cameras are ultra-high performance USB3.0 CMOS cameras and they adopt ultra-high performance CMOS sensor as the image-picking device and USB3.0 is used as the data transfer interface.

BUC3D series cameras hardware resolutions range from 5.0M to 10M and come with the CNC aluminum alloy compact housing.

BUC3D 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 BUC3D series cameras 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 BUC3D cameras are as follows:

1. Standard C-Mount camera with Aptina CMOS sensor;
2. CNC aluminum alloy housing;
3. USB3.0 5 Gbps interface ensuring high frame rate;
4. With advanced video & image processing application ImageView;
5. Providing Windows/Linux/Mac OS multiple platforms SDK;
6. Native C/C++, C#/VB.NET, DirectShow, Twain Control API.

Specification

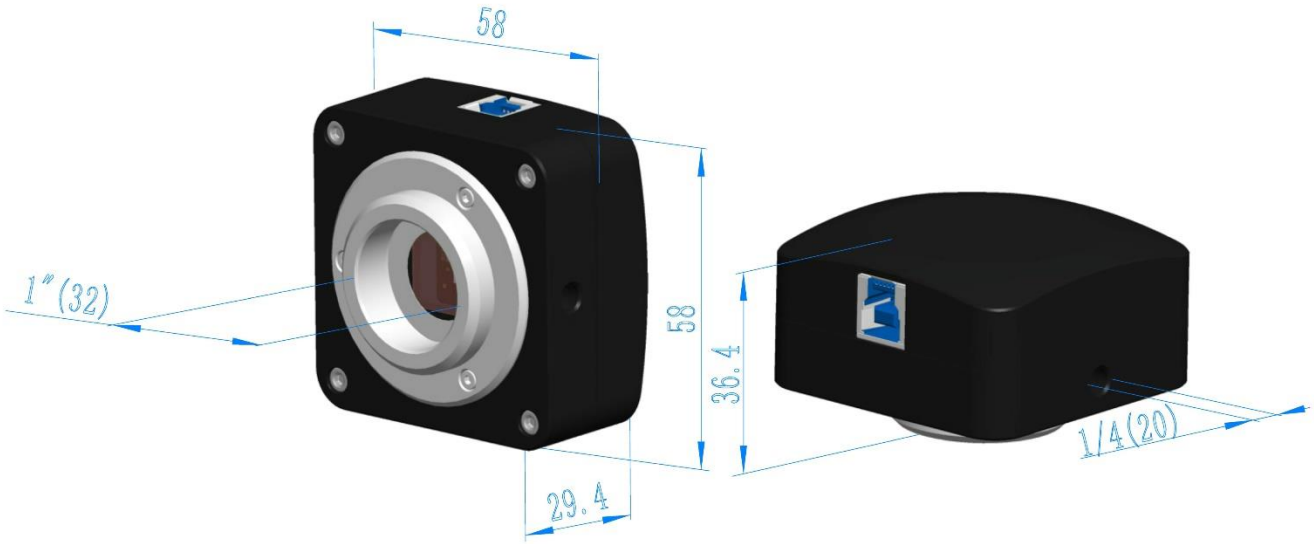
Order Code	Sensor & Size	Pixel(μm)	G Responsivity Dynamic range SNRmax	FPS/Resolution	Binning	Exposure
BUC3D-500C	5.1M/MT9P006(C) 1/2.5“ (5.70x4.28)	2.2x2.2	1.76v/lux-sec 67.74dB 38.5dB	14.0@2592x1944 29.4@1280x960 103.1@640x480	1x1 2x2 4x4	0.1ms~2000ms
BUC3D-1000C	10M/MT9J003(C) 1/2.3“ (5.98x4.58)	1.67x1.67	0.31v/lux-sec 65.2dB 34dB	7.2@3664x2748 23.8@1832x1374 77.4@912x686	1x1 2x2 4x4	0.1ms~2000ms

C: Color; M: Monochrome;

Other Specification for BUC3D 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 BUC3D

The BUC3D body, made from tough, 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.



Dimension of BUC3D

Packing Information for BUC3D

Packing Information of BUC3D

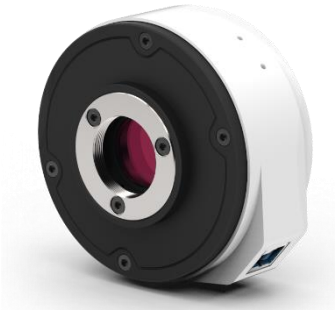
Standard Camera Packing List		
A	Carton L:52cm W:32cm H:33cm (20pcs, 12~17Kg/ carton), not shown in the photo	
B	Gift box L:15cm W:15cm H:10cm (0.67~0.7Kg/ box)	
C	BUC3D series USB3.0 C-mount CMOS camera	
D	High-speed USB3.0 A male to B male gold-plated connectors cable /2.0m	
E	CD (Driver & utilities 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 BUC3D 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 Adapter)	 (23.2mm Adapter)
Telescope Camera	 (31.75mm Adapter)	 (31.75mm Adapter)

(2) BUC5C Series USB3.0 CMOS Digital Cameras

BUC5C-300C/500C



BUC5C-1600C

BUC5C Series USB3.0 digital cameras adopt the latest USB3.0 technology, the speed is much faster than USB2.0 digital cameras. They are widely used in academic and medical fields for precision and high resolution microscope image capturing and processing.

Features

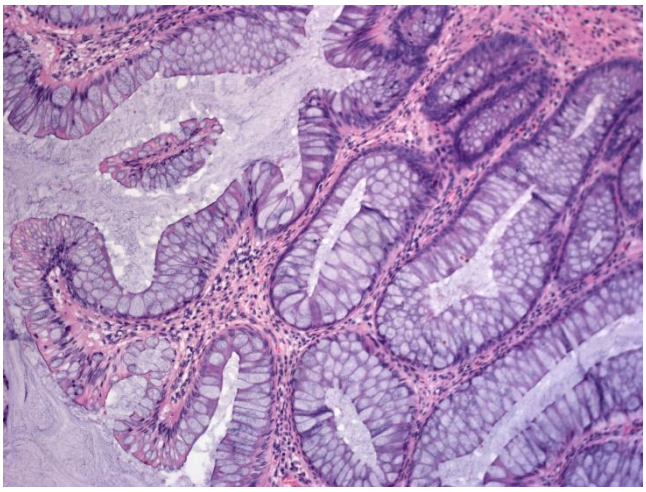
1. The cameras have high resolution sensor and excellent color reproduction ability;
2. With USB3.0 interface, the cameras have high speed data transmission;
3. User-friendly image processing software with measurement function;
4. Compatible with Windows 2000/ XP/ Vista/Win7/Win 8/Win 10, 32bit&64bit, Mac operation system;
5. 0.45X adapters and micrometers are optional.

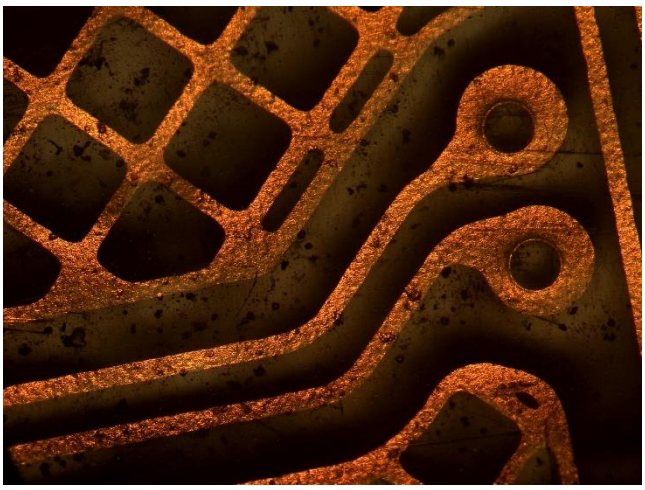
Specification

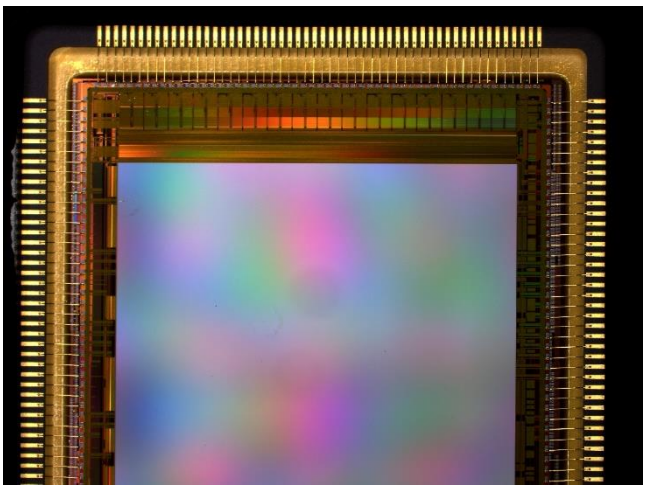
Model	BUC5C-300C	BUC5C-500C	BUC5C-1600C
Sensor	CMOS	Micron MT9P031	Panasonic MN34120
Color/Monochrome	Color	Color	Color
Sensor Size	1/2.7 inch	1/2.5 inch	1/2.33 inch
Image Processor	Built-in ISP image processor	Built-in ISP image processor	Built-in image processor
Image Transmission Control	——	——	High-speed FPGA+high speed DDR
Color Temperature	——	——	1900K-8000K
Pixel Size	3.0μm × 3.0μm	2.2μm × 2.2μm	1.335μm × 1.335μm
Effective Pixels	2.0MP	5.0MP	16.0MP
Max. Resolution	2304H × 1296V	2584H × 1936V	4608H × 3456V
Scan Mode	Progressive	Progressive	Progressive
Shutter	Rolling shutter	Rolling shutter	Rolling shutter
Frame Rate	8fps @ 3MP (2304 × 1296)	14fps @ 2584 × 1936	5fps @ 16MP (4608 × 3456)
	30fps @ 2MP (1920 × 1080)	23fps @ 2040 × 1528	25fps @ 4MP (2304 × 1728)

		30fps @1592 × 1192	30fps @ 1600 × 1200
		35fps @1016 × 760	30fps @ 1280 × 960
Color Depth	24 bit	24 bit	24 bit
A/D	8 bit	8 bit	8 bit
Exposure Control	Manual/Auto	Manual/Auto	Manual/Auto
Exposure Time(s)	0.001-0.033s	0.001-1s	0.001-1s
White Balance	Manual/Auto	Manual/Auto	Manual/Auto
Data Interface	USB3.0/5Gb/s	USB3.0/5Gb/s	USB3.0/5Gb/s
Operating system	Windows 2000/XP/ Vista/Win7/Win8/Win10, 32bit & 64bit		Windows 2000/XP/ Vista/Win7/Win8/Win10, 32bit & 64bit, Mac/Linux
Power Supply	USB3.0 Power Supply, 300～500mA@5V		
Operating Temperature	0-60℃		
Operating Humidity	45%-85%		
Storage Temperature	-20-70℃		
Optical Port	Standard C-mount		

Sample Images







(3) 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
BUC5D-1800C	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

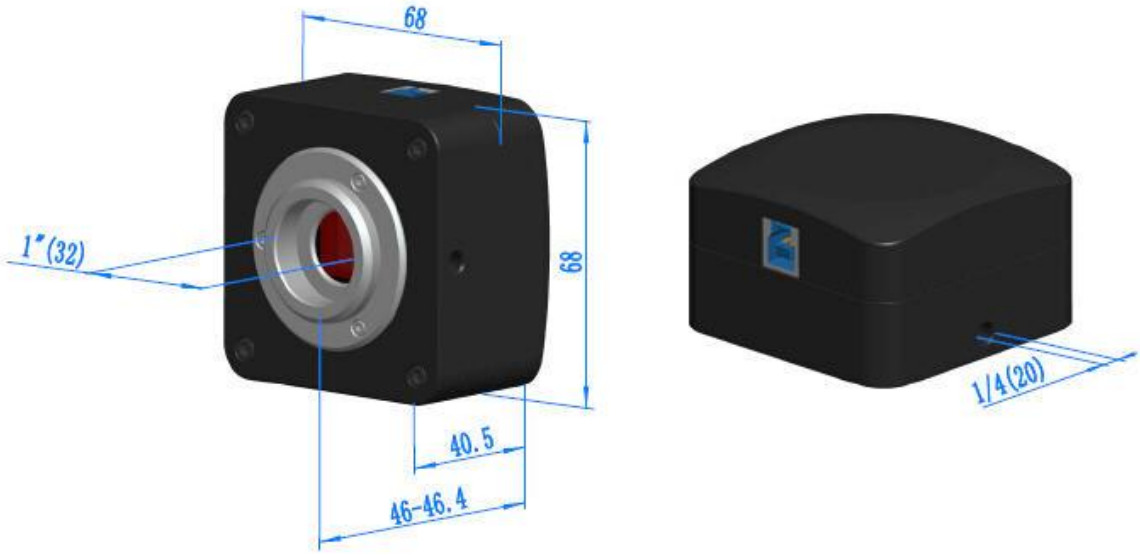
BUC5D-1600C	16M/MN34120(C) 1/2.33"(6.18x4.66)	1.335x1.335	R: 2453LSB Gr: 2444LSB Gb: 1054LSB B: 996LSB	6.0@4632x3488 15.0@2320x1740 26.0@1536x1160	1x1, 2x2,3x3	0.2ms~2000ms
BUC5D-1601C	16M/MN34230PLJ (C) 4/3" (17.6x13.3)	3.8x3.8	R: 1315LSB Gr: 2413LSB Gb: 2413LSB B: 1042LSB (Gain = 0dB)	6.0@4648x3506 15.0@2304x1750 30.0@1536x1168	1x1,2x2,3x3	0.06ms~15s
BUC5D-1601M	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
BUC5D-1400C	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~2000 ms
BUC5D-1000C	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
BUC5D-850C	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
BUC5D-500C	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
BUC5D-300C	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
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 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.



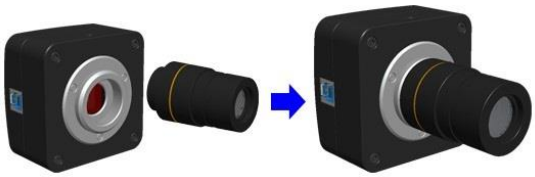
Dimension of BUC5D

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)
	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 BUC5D 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 Adapter)	 (23.2mm Adapter)
Telescope Camera	 (31.75mm Adapter)	 (31.75mm Adapter)

(4) 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

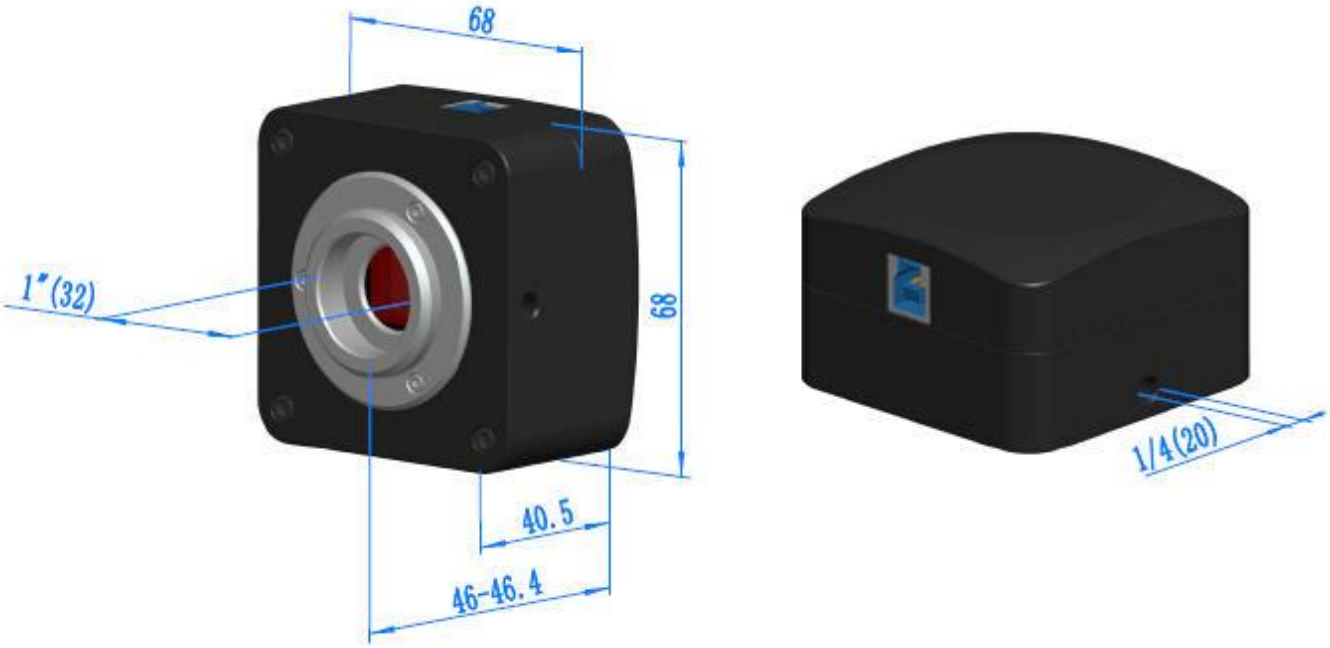
C: Color; M: Monochrome; GS: Global Shutter

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.



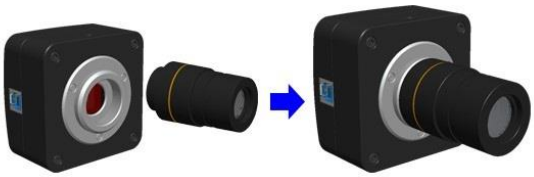
Dimension of BUC5E

Packing Information for BUC5E

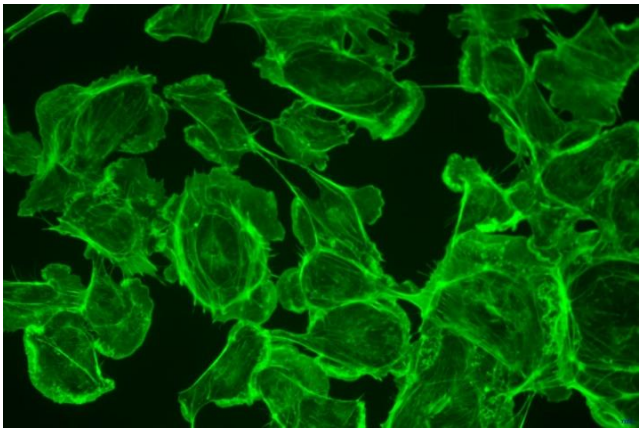
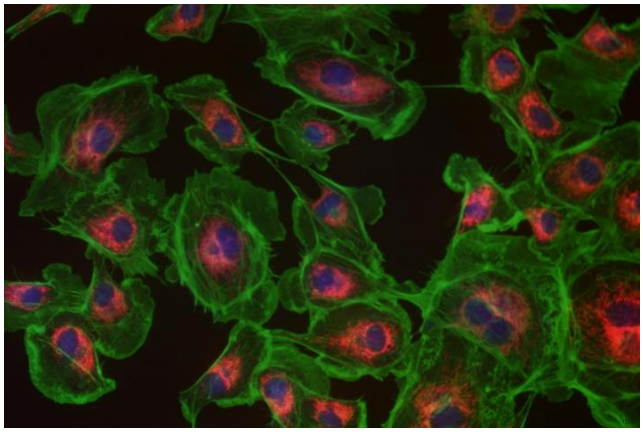
Packing Information of BUC5E

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

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 Adapter)  (23.2mm Adapter)	
Telescope Camera	 (31.75mm Adapter)  (31.75mm Adapter)	

Sample Image

(5) BUC5F Series C-mount USB3.0 CMOS Camera(HISPVP)

BUC5F series USB3.0 digital cameras adopt SONY Exmor CMOS sensor as the image-picking device and USB3.0 is used as the transfer interface.

BUC5F series cameras hardware resolutions range from 1.5MP to 21MP and come with the integrated CNC aluminum alloy compact housing.

BUC5F series cameras integrated with 12 bit Ultra-fine™ Hardware Image Signal Processor Video Pipline(Ultra-fine™ HISPVP) for Demosaic, Adjustments, Automatic Exposition, Gain Adjustment, One Push White Balance, Chrominance Adjustment, Saturation Adjustment, Gamma Correction, Luminance Adjustment, Contrast Adjustment, Bayer and finally form RAW data for 8/12 bit out. This will move the heavy burden of the processing from the PC to the Ultra-fine™ HISPVP and greatly accelerating the processing speed.

BUC5F 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 BUC5F series cameras can be widely used in bright field, dark field, fluorescent light environment and normal microscope image capture and analysis with higher frame rate.

Feature

The basic characteristic of BUC5F series cameras are as follows:

1. SONY Exmor, Exmor R(Back-illuminated), Exmor RS CMOS sensor with USB3.0 interface;
2. Real-time 8/12bit depth switch(depending on sensor);
3. Ultra-fine™ HISP VP and USB3.0 5 Gbps interface ensuring high frame rates (Up to 17 frames for 21MP Resolution);
4. Super high sensitivity up to 2350mV(IMX385);
5. Ultra low noise and low power dissipation by using column-parallel A/D conversion;
6. With hardware resolution among 1.5M to 21M;
7. Rolling Shutter or Global Shutter;
8. Standard C-Mount camera;
9. CNC aluminum alloy housing;

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

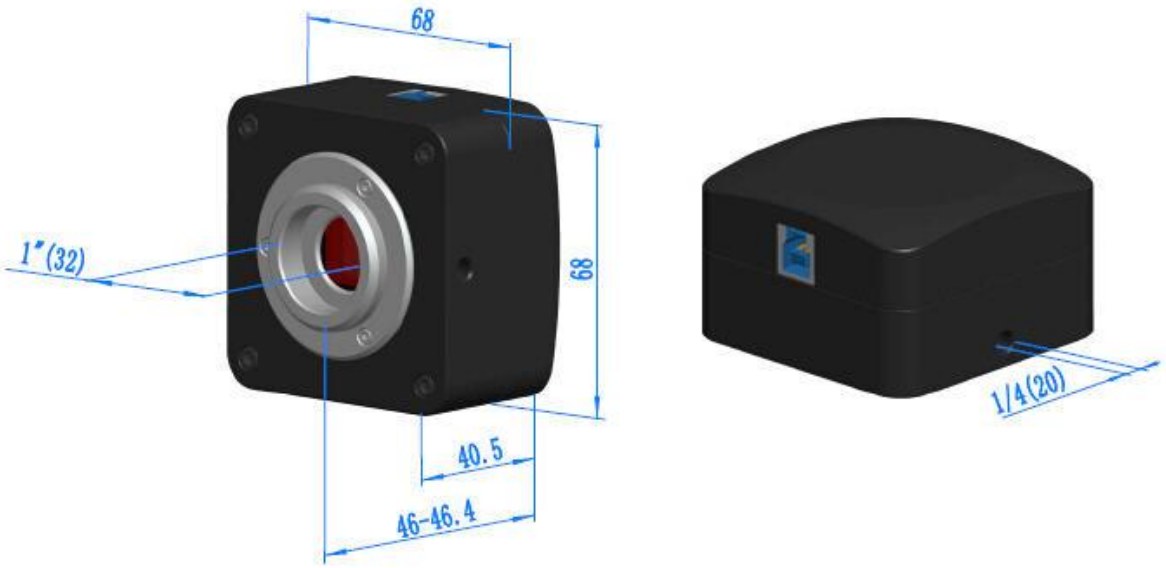
Order Code	Sensor & Size(mm)	Pixel Size(μm)	G Sensitivity Dark Signal	FPS/Resolution	Binning	Exposure
BUC5F-2100C	21M/IMX269 (C) 4/3 "(17.4x13.0)	3.3 x3.3	399mv with 1/30s 0.1mv with 1/30s	17@5280x3954 17@3952x3952 56@2640x1976 67@1760x1316 192@584x438	1x1 1x1 2x2 3x3 9x9	0.1ms~15s
BUC5F-2000C	20M/IMX183(C) 1"(13.06x8.76)	2.4 x2.4	462mv with 1/30s 0.21mv with 1/30s	15@5440x3648 50@2736x1824 60@1824x1216	1x1 2x2 3x3	0.1ms~15s
BUC5F-1800C	18M/SONY Special(C) 1/2.2" (5.86x4.46)	1.2 x1.2	130mv with 1/30s 0.1mv with 1/30s	17@4880x3720 40@2448x1836 50@1728x1296	1x1 2x2 3x3	0.1ms~15s
BUC5F-1560C	15.6M/SONY Special (C) 1.1 "(13.0x13.0)	3.3 x3.3	399mv with 1/30s 0.1mv with 1/30s	17@3952x3952 56@1976x1976 67@1316x1316	1x1 2x2 3x3	0.1ms~15s
BUC5F-1230C	12.3M/IMX304(C, **GS**) 1.1"(14.13x10.35)	3.45x3.45	1146mv with 1/30s 0.1mv with 1/30s	23.4@4096x3000 46.3@2048x1500	1x1 1x1	0.244ms~15s
BUC5F-1200C	12M/IMX226(C) 1/1.7"(7.40x5.55)	1.85x1.85	280mv with 1/30s 0.1mv with 1/30s	25@4000x3000 50@2048x1080	1x1 2x2	0.1ms~15s
BUC5F-900C	9.0M/IMX305(C, **GS**) 1" (14.13x7.45)	3.45x3.45	1146mv with 1/30s 0.15mv with 1/30s	34@4096x2160 60@2048x1080	1x1 1x1	0.1ms~15s
BUC5F-830C	8.3M/IMX274(C) 1/2.5"(6.22x3.50)	1.62x1.62	236mv with 1/30s 0.1mv with 1/30s	32@3840x2160 65@1920x1080	1x1 2x2	0.244ms~15s
BUC5F-830BC	8.3M/IMX334(C) 1/1.8"(7.68x4.32)	2.0x2.0	505mv with 1/30s 0.1mv with 1/30s	35@3840x2160 60@1920x1080	1x1 2x2	0.02ms~15s
BUC5F-830CC	8.3M/IMX485(C) 1/1.2"(11.14x6.26)	2.9x2.9	2188mv with 1/30s 0.15mv with 1/30s	45@3840x2160 70@1920x1080	1x1 2x2	0.02ms~15s
BUC5F-630C	6.3M/IMX178(C) 1/1.8" (7.37x4.92)	2.4x2.4	425mv with 1/30s 0.15mv with 1/30s	30@3072 x2048 38@1536x 1024	1x1 2x2	0.1ms~15s
BUC5F-630BC	6.3M/IMX178(C) 1/1.8" (7.37x4.92)	2.4x2.4	425mv with 1/30s 0.15mv with 1/30s	59@3072 x2048 59@1536x 1024	1x1 2x2	0.02ms~15s
BUC5F-500C	5.0M/IMX264(C, **GS**) 2/3" (8.45x7.07)	3.45x3.45	1146mv with 1/30s 0.15mv with 1/30s	35@2448x2048 50@1224x1024	1x1 1x1	0.1ms~15s
BUC5F-310C	3.1M/IMX123(C) 1/2.8" (5.12x3.84)	2.5x2.5	600mv with 1/30s 0.15mv with 1/30s	50@2048x1536 50@1920x1080	1x1 1x1	0.1ms~15s
BUC5F-310BC	3.1M/IMX265(C, **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
BUC5F-200C	2M/IMX385(C) 1/2" (7.2x4.05)	3.75x3.75	2350mv with 1/30s 0.15mv with 1/30s	125@1920x1080	1x1	0.1ms~15s
BUC5F-150C	1.5M/IMX273(C, **GS**) 1/2.9" (4.968x3.726)	3.45x3.45	1146mv with 1/30s 0.15mv with 1/30s	164@1440x1080 320@720x540	1x1 2x2	0.1ms~15s

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

Other Specification for BUC5F Series Cameras	
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™ HISPVP /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

The BUC5F body, made from tough, CNC aluminum alloy, ensures a heavy duty, workhouse 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.



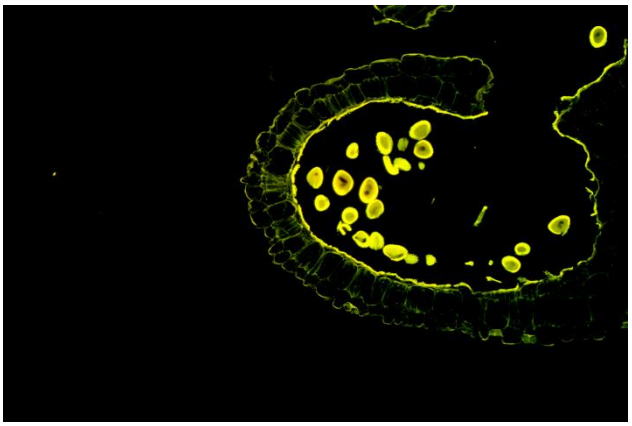
Packing Information for BUC5F

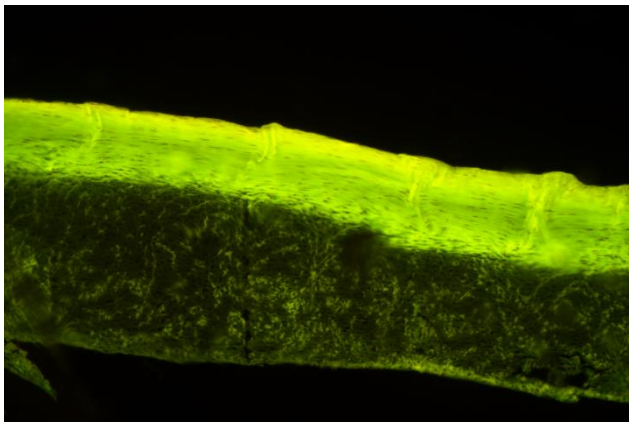
Standard Camera Packing List		
A	Carton L:52cm W:32cm H:33cm (20pcs, 12~17Kg/ carton), not shown in the photo	
B	Gift box L:15cm W:15cm H:10cm (0.58~0.6Kg/ box)	
C	BUC5F series USB3.0 C-mount CMOS camera	
D	High-speed USB3.0 A male to B male gold-plated connectors cable /2.0m	
E	CD (Driver & utilities 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	(Dia.23.2mm to 30.0mm Ring)/Adaptor rings for 30mm eyepiece tube	
I	(Dia.23.2mm to 30.5mm Ring)/ Adaptor rings for 30.5mm eyepiece tube	
J	(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 BUC5F 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 Adapter)	 (23.2mm Adapter)
Telescope Camera	 (31.75mm Adapter)	 (31.75mm Adapter)

Sample Image





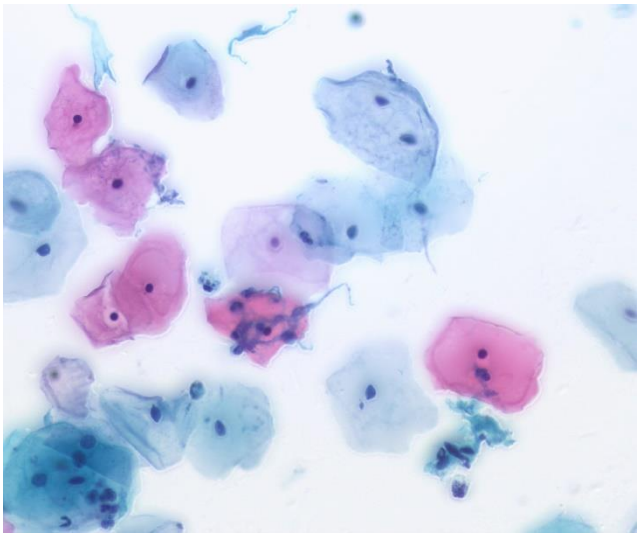
(6) BUC5H Series USB3.0 Digital camera

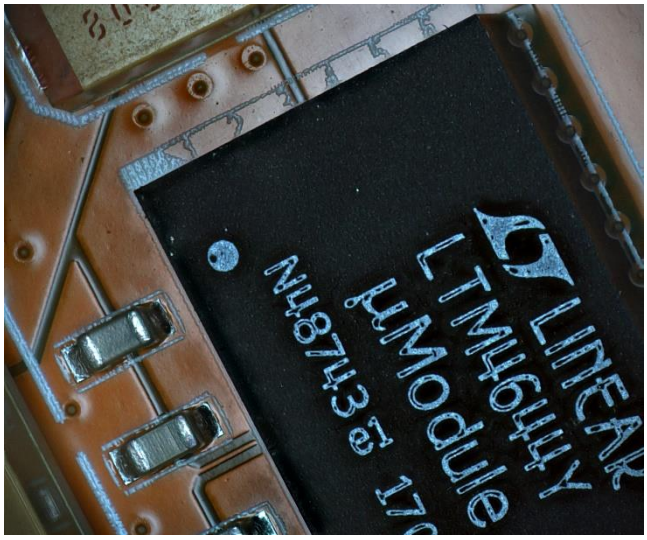
BUC5H series USB3.0 digital cameras use Sony sensor, the software has real-time image stitching & depth-of-field fusion function, BUC5H-500C has global shutter, BUC5H-2000C has 1-inch sensor. The BUC5H series cameras can be widely used with bright field, dark field, polarizing, fluorescent microscopes and normal microscope image capture and analysis with high frame rate.

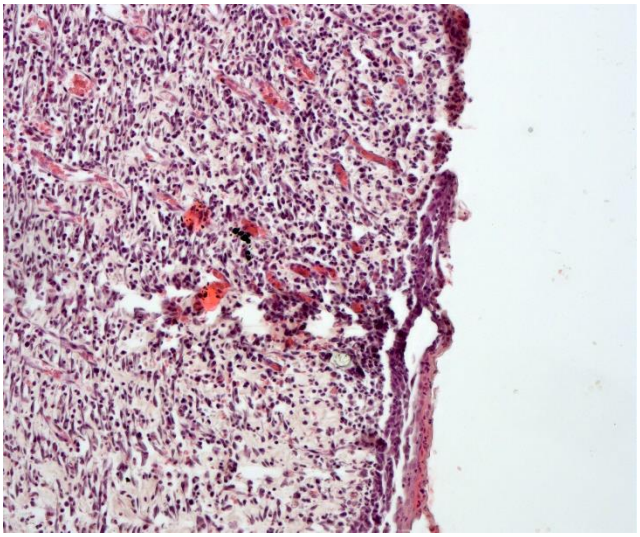
Specification

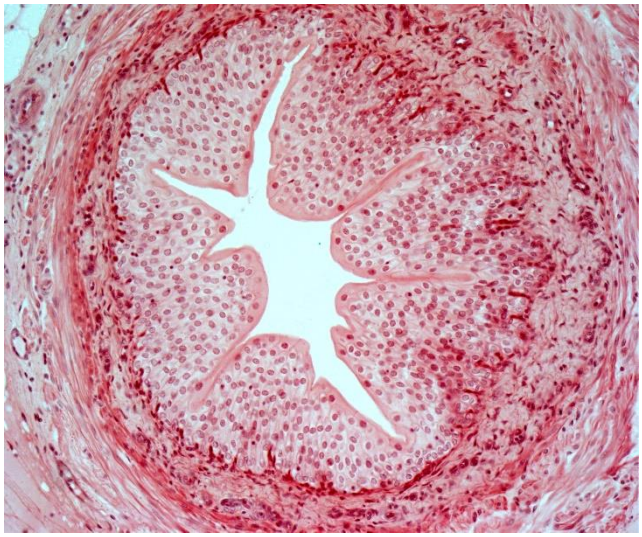
Model	BUC5H-500C	BUC5H-600C	BUC5H-2000C
Shutter Mode	Global	Rolling	Rolling
Sensor Model	IMX264LQR-C	IMX178LQJ-C	IMX183CQJ-J
Sensor Type	CMOS 2/3" Color	CMOS 1/1.8" Color	CMOS 1" Color
Pixel Size	3.45x3.45(μm)	2.4x2.4(μm)	2.4x2.4(μm)
Resolution	2448(H)x2048(V)	3072(H)x2048(V)	5472(H)x3648(V)
Frame Rate	35fps(2448x2048) 35fps(1224x1024 2x2bin) 88fps(1224x1024)	41fps(3072x2048) 41fps(1536x1024 2x2bin)	15fps(5472x3648) 53fps(2736x1824 2x2bin) 67fps(1824x1216 3x3bin)
Color Temperature	2000-15000K		
Picture Format	JPG/PNG/TIFF		
Interface	Data Interface: USB3.0, Optical Interface: Standard C-Mount		
Multiple Cameras	Supports 4 Cameras Simultaneously in SDK		
PC Software	Capture V2.0		
Operating System	Windows is supported and Linux/Mac is under development		
PC Configuration	CPU: Intel Core i5 or better(Quad or more Core); RAM: 8G or more, OS: Windows 7/8/10 64bit		
Size & Weight	Size: 68x68x46mm Weight: 330g		

Sample Image









(7) BU3M42 Series M42 and M42 to C or F Mount USB3.0 CMOS Camera

BU3M42's different views

BU3M42+F-mount

BU3M42 + F-mount+Lens

BU3M42 with F-mount+Lens

BU3M42 with F-mount and Lens

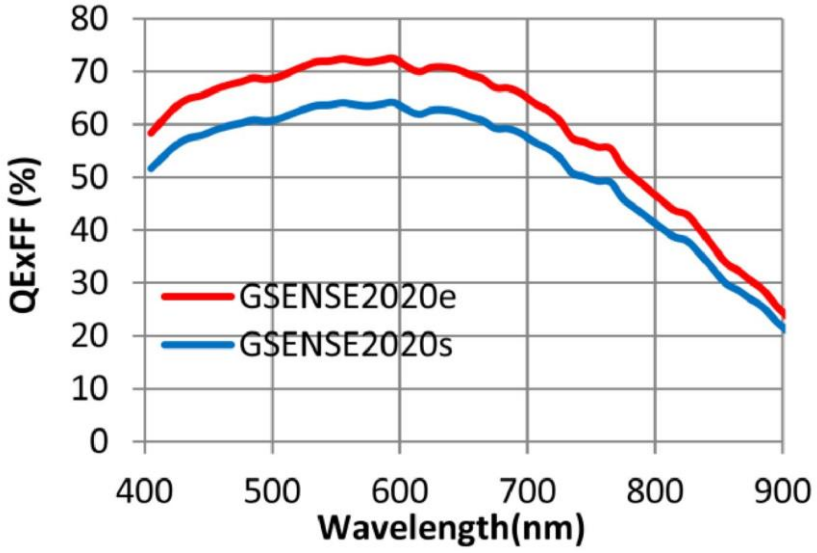
Features

1. Large scientific CMOS sensor (SONY or GSENSE Back-illuminated CMOS sensor);
2. Wide spectrum range, some models even have high response in the ultra-violet to infrared wavelength;
3. Real-time 8/12bit depth switch(depending on sensor);
4. Ultra-fine™ HISP VP and USB3.0 5 Gbps interface ensuring high frame rates(Up to 30 frames for 10M resolution);
5. Ultra low noise and low power dissipation by using column-parallel A/D conversion;
6. With hardware resolution from 4.2M to 10.3M;
7. Rolling Shutter or Global Shutter;
8. Standard M42 mount and M42 to C-mount or F-mount;
9. CNC aluminum alloy housing;
10. With advanced video & image processing application ToupView;
11. Providing Windows/Linux/Mac OS multiple platforms SDK;
12. Native C/C++, C#/VB.Net, DirectShow, Twain.

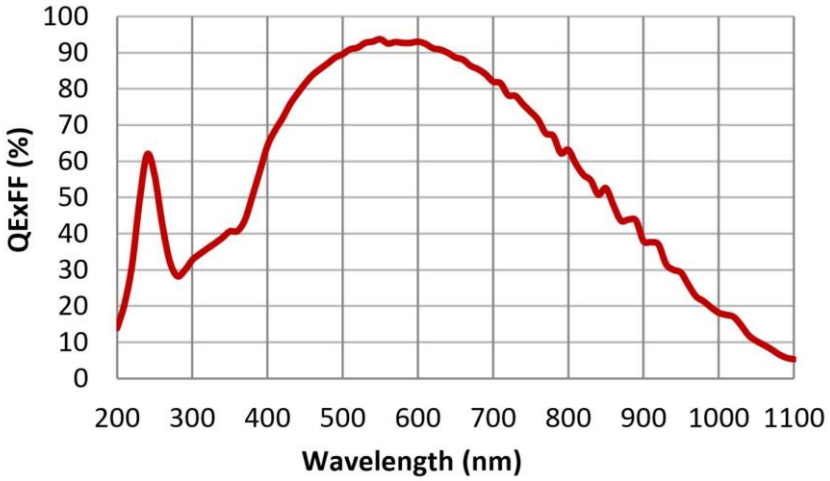
BU3M42 Datasheet

Order Code	Sensor & Size(mm)	Pixel(μm)	G Sensitivity Dark Signal	FPS/Resolution	Binning	Exposure
BU3M42-1000C	10.3M/IMX294(C) 4/3 "(17.47x12.86)	4.63 x4.63	419mv with 1/30s 0.12mv with 1/30s	30@3704x2778 34.5@4096x2160 39.5@2760x2072 62@2048x1080 86@1360x720	1x1, 1x1, 1x1, 2x2, 3x3	0.1ms~15 s
BU3M42-420MA	4.2M/GSENSE2020S (M, RS) 1.2"(13.31x13.31)	6.5x 6.5	$8.1x10^7$ (e-/((W/m2).s)) Peak QE 64.2% @595nm DS	45@2048x2046 45@1024 x 1023	1x1 2x2	0.01ms~1 000s
BU3M42-420MB	4.2M/GSENSE2020BSI (M, UV, RS) 1.2"(13.31x13.31)	6.5 x 6.5	$1.1x10^8$ (e-/((W/m2).s)) Peak QE 93.7% @595nm	43@2048 x2046 42@1024 x1023	1x1 2x2	0.01ms~1 000s

C: Color; M: Monochrome; RS: Rolling Shutter, GS: Global Shutter, UV: Good UV response



Spectral response of GSENSE2020e and GSENSE2020s

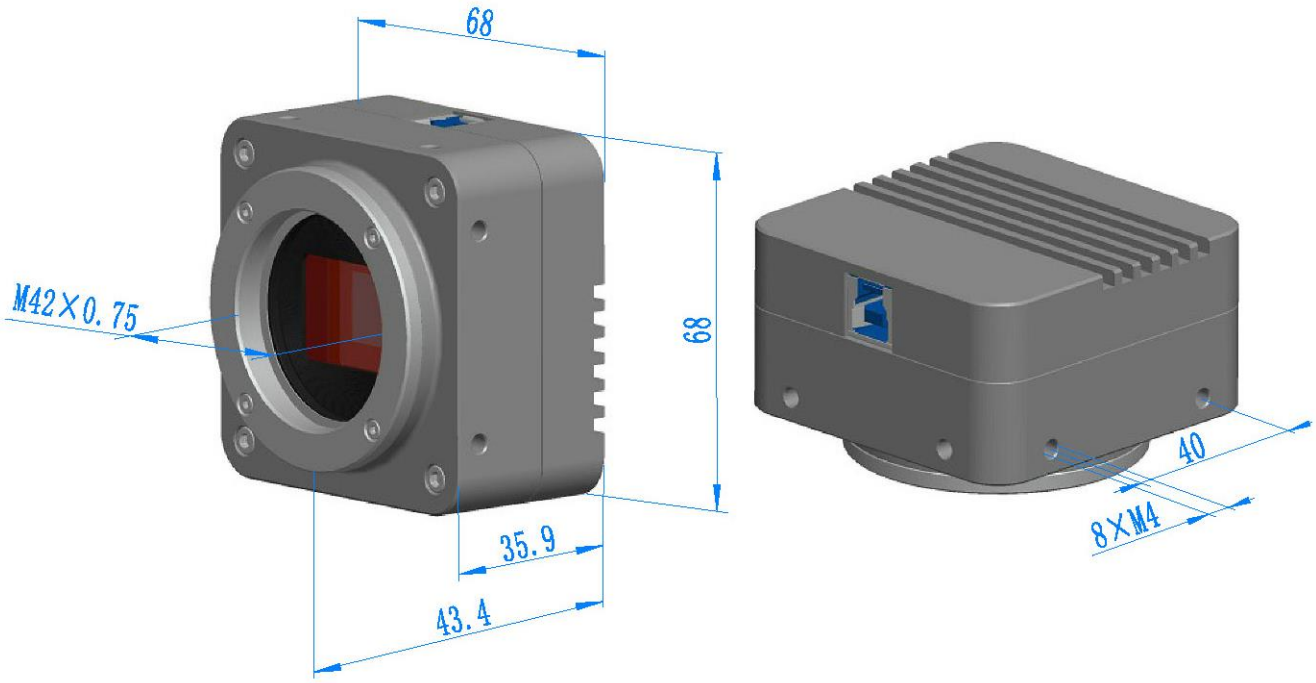


Spectral Response of GSENSE2020BSI

Other Specification for BU3M42 Camera	
Spectral Range	200-1100nm (UV without IR-cut Filter) or 400-900nm
White Balance	ROI White Balance/ Manual Temp Tint Adjustment/NA for Monochromatic Sensor
Color Technique	Ultra-fine™ HISPVP /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 BU3M42

The BU3M42 body, made from tough, CNC aluminum alloy, ensures a heavy duty, workhorse solution. The camera is designed with a high quality IR-CUT or AR glass 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.



Dimension of BU3M42 with M42x0.75 or F-mount Interface

Packing Information for BU3M42

Packing Information of BU3M42 Series camera

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	BU3M42 series USB3.0 M42-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	M42x0.75mm-mount to C-mount converter (If C-mount adapter is used)	
G	M42x0.75mm-mount to F-mount converter (If F-mount lens is used)	
H	Phototube to M42x0.75 mount adapter (U-TV1.2XT2) for Olympus microscope	
I	Phototube to M42x0.75 mount adapter (MQD42120 MBB42120) for Nikon microscope	
J	Phototube to M42x0.75 mount adapter (P95-T2 4/ P95-C 1" 1.0 x 3” 1.2x) for Zeiss Primo Star series, Zeiss Primo vert series microscope	
K	Phototube to M42x0.75 mount adapter (11541510-120 HT2-1.2X) for Leica microscope	
L	Phototube to M42x0.75 mount adapter (60N-T2 4/3" 1.2x) for Zeiss Axio series microscope	
	Note: For 4/3” sensor, 1.2X adapter with M42x0.75 mount should be chosen, for the 1.2” sensor, 1.0X adapter with C-mount could be used to get the better FOV;	
M	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.)

(8) BUC5IA Series Cooled C-mount USB3.0 CMOS Camera

BUC5IA series cameras have adopted SONY IMX183 CMOS sensor(20.0MP resolution) and USB3.0 interface to increase the frame rate.

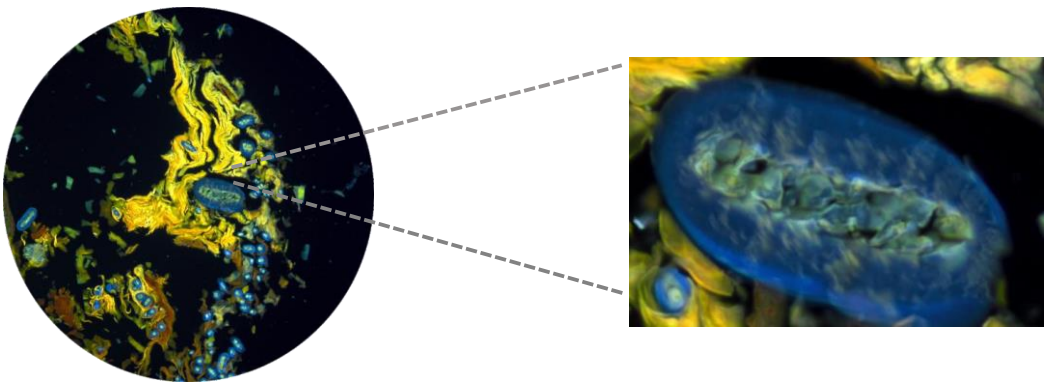
With the two-stage peltier cooling sensor chip to -40 degree below ambient temperature. This will greatly increase the signal to noise ratio and decrease the image noise. Smart structure is designed to assure the heat radiation efficiency and avoid the moisture problem. Electric fan is used to increase the heat radiation speed.

The BUC5IA series cameras can be widely used in low light environment and microscope fluorescence image capture and analysis.

Feature

1. 20 megapixels, capturing high-definition detailed images in one shot.

The BUC5IA-2000C/M's 1-inch sensor image can cover the most uniform central area of the image plane, with a resolution of up to 20 megapixels, you can capture the high-definition details of your samples in one shot.



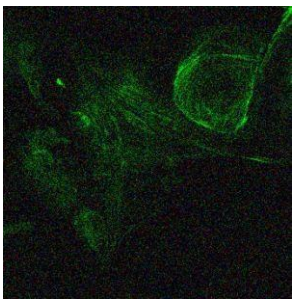
2. **Thermoelectric cooling noise reduction technology to meet more professional fluorescence imaging needs.**

With the top-level cooled camera technology, the BUC5IA-2000C/M cooled camera operates at -15 °C and can ensure long-term reliable operation, significantly reducing the hot pixels caused by the accumulation of dark current, and obtaining a purer fluorescent background image. More than twice the sensitivity of a CCD, to meet the needs of professional fluorescence imaging.

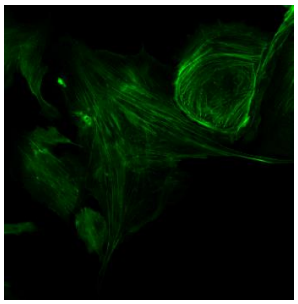
3. Real-time intelligent image processing, focused on improving image quality.

Without sacrificing speed and image information, the BUC5IA-2000C/M offers a variety of real-time intelligent image processing capabilities that allow you to view and capture flawless sample images in real time with the click of a button.

- Real-time 3D noise reduction, effectively eliminating random background noise

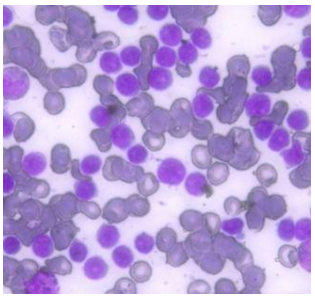


Before

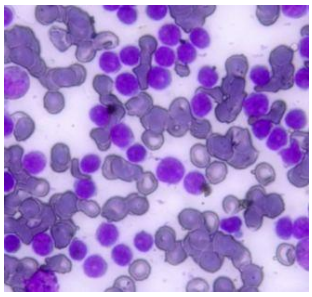


After

- Real-time sharpening, enhanced detail, and more transparent



Before



After

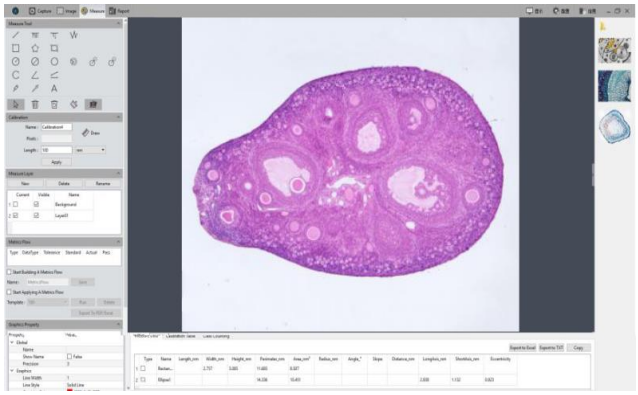
4. >50fps high speed video at 5.0MP resolution.

With a guaranteed field of view, the FL 20 offers a variety of high-speed imaging modes that can be adjusted for fast focus and positioning for an efficient image capture experience.

Resolution	BUC5IA-2000C/M	CCD
20MP	15fps	<1fps
5MP	53fps	4fps

5. Revolutionary PC Computing Imaging Software Capture V2.0

Unique from the cumbersome process of traditional technology to obtain images after processing, the Capture V2.0 provides real-time image stitching and real-time depth of field fusion. This can automatically complete the image while the operator moves the stage -productivity at its best.



6. Advanced Cooling Technology Reduces Dark Current Down to 0.001e-/pixel/s.

BUC5IA-2000C/M can achieve a dark current noise control level as low as 0.001e/sec, which significantly reduces the hot pixel noise during long exposure time.

Specification

Product Model	BUC5IA-2000C	BUC5IA-2000M
Color/Mono	Color	Mono
Sensor Model	Sony	Sony
Quantum Efficiency	84%@535nm	84%@495nm
Resolution	5472(H) x 3648(V)	5472(H) x 3648(V)
Pixel Size	2.40μm x 2.40μm	2.40μm x 2.40μm
Sensor Size	15.86mm; 1inch	15.86mm; 1inch
Shutter Mode	Rolling	Rolling
Read Noise	<1e-	<0.8e-
Dark current	0.001e-/pixel/s	0.001e-/pixel/s
Cooling	Forced air(Ambient at +25℃):-15 ℃	Forced air(Ambient at +25℃):-15 ℃
Frame Rate	14fps@5472x3648, 53fps@2736x1824 67fps@1824x1216	16fps@5472x3648(8bit), 8fps@5472x3648(16bit), 53fps@2736x1824(8bit), 22fps@2736x1824(16bit)
Binning	2x2, 4x4	2x2, 3x3, 4x4, 8x8
Exposure Settings	Auto/Manual	Auto/Manual
Exposure Time	0.244ms - 2mins	0.244ms - 60mins
Picture Format	JPG/PNG/TIFF/DICOM	JPG/PNG/TIFF/DICOM
Data Interface	USB3.0	USB3.0
Bit Depth	16bit/8bit	16bit/8bit
Camera Size	85mm x 85mm x 100mm	85mm x 85mm x 100mm
Power Supply	12V/8A	12V/8A
Camera Weight	1200g	1200g
PC Software	Captrue V2.0	Captrue V2.0
Operating System	Windows(32bit/64bit)	Windows(32bit/64bit)
Operating Environment	Operating: 0-40℃ Humidity: 10%-85%	Operating: 0-40℃ Humidity: 10%-85%

CaptureV2.0 Feature Function

BUC5IA-2000C/M supports our standard, it supports Microsoft Directshow, Twain video interface and supports Capture 2.0 software.

Capture 2.0 software is a large imaging software developed by us to support our new cameras. It has three modules: camera control, image processing and measurement. Its core features include compatibility with Microsoft Windows and Apple Mac OS dual-systems with advanced "real-time stitching" and "real-time EDF" algorithms and so on.

* Real-time Image Stitching\ EDF \ 3D Noise Reduction;
* Real-time fluorescence image synthesis and editing;
* HDR image synthesis;
* Micro-imaging-based intelligent automatic exposure;
* Intelligent flat field correction based on dynamic calculation Smart measurement workflow;
* Supports single shot, delayed camera;
* User parameter group save and load Dynamic\static measurement;
* Customize measuring gauges, layers, precision;
* Customize image naming, style, save location;
* Implements drawing: points, lines, rectangles, polygons, circles, arcs, angles, Data export as TXT or Excel, report generation and printing.

Sample Images

(9) BUC5IB Series Cooled C-mount USB3.0 CMOS Camera

BUC5IB series cameras have adopted SONY Exmor CMOS sensor as the image-picking device and USB3.0 is used as the transfer interface to increase the frame rate.

With the two-stage peltier cooling sensor chip to -42 degree below ambient temperature. This will greatly increase the signal to noise ratio and decrease the image noise. Smart structure is designed to assure the heat radiation efficiency and avoid the moisture problem. Electric fan is used to increase the heat radiation speed.

BUC5IB series cameras come with advanced video & image processing application ImageView; Providing Windows/Linux/OSX multiple platform SDK; Native C/C++, C#/VB.NET, DirectShow, Twain Control API.

The **BUC5IB** series cameras can be widely used in low light environment and microscope fluorescence image capture and analysis, as well as the astronomy deep sky applications.

Feature

The basic characteristic of BUC5IB can be summarized as follows:

1. Standard C-Mount camera with SONY Exmor CMOS sensors from 1.7M to 20M;
2. Two-stage TE-cooling with controllable electric fan;
3. Sensor chip cooling up to 42°C below ambient temperature;
4. Working temperature can be regulated to specified temperature in 5 minutes;
5. Smart structure to assure the heat radiation efficiency and avoid the moisture problem;
6. IR-CUT/AR coated windows;
7. Up to 1 hour long time exposure;
8. USB3.0 5Gbit/second interface ensuring high speed data transmission;
9. Ultra-Fine^{TM} color engine with perfect color reproduction capability;
10. With advanced video & image processing application ImageView;
11. Support both video and trigger modes;
12. Providing Windows/Linux/Mac OS multiple platforms SDK;
13. Native C/C++, C#/VB.NET, DirectShow, Twain control API.

Specification

Model	Sensor & Size(mm)	Pixel(μm)	G Sensitivity Dark Signal	FPS/Resolution	Binning	Exposure
BUC5IB-2100C	21M/IMX269(C) 4/3 "(17.4x13.1)	3.3 x3.3	400mv with 1/30s 0.1mv with 1/30s	5@5280x3956 6@3952x3952 15@2640x1978 50@1760x1318 100@584x440	1x1 1x1 2x2 3x3 9x9	0.1ms~3600s
BUC5IB-2000C	20M/IMX183(C) 1 "(13.056x8.755)	2.4 x2.4	462mv with 1/30s 0.21mv with 1/30s	5@5440x3648 10@4096x2160 15@2736x1824 30@1824x1216	1x1, 1x1, 2x2, 3x3	0.1ms~3600s
BUC5IB-2000M	20M/IMX183(M) 1 "(13.056x8.755)	2.4 x2.4	388mv with 1/30s 0.21mv with 1/30s (F8.0)	17.8@5440x3648 41@4096x2160 51@2736x1824 64@1824x1216	1x1, 1x1, 2x2, 3x3	0.1ms~3600s
BUC5IB-1600C	16M/MN34230PLJ(C) 4/3" (17.6x13.3)	3.8x3.8	2413LSB 89.1LSB (Gain = 0dB)	6@4640x3506 20@2304x1750 48@1536x1160	1x1 2x2 3x3	0.15ms~3600s
BUC5IB-1600M	16M/MN34230ALJ(M) 4/3" (17.6x13.3)	3.8x3.8	2650LSB 89.1LSB (Gain = 0dB)	22.5@4648x3506 43.0@2304x1750 48.0@1536x1168	1x1 2x2 3x3	0.15ms~3600s
BUC5IB-1030C	10.3M/IMX294(C) 4/3 "(17.47x12.86)	4.63 x4.63	419mv with 1/30s 0.12mv with 1/30s	7.5@3704x2778 8.5@4096x2160 30@2048x1080 60@1360x720	1x1, 1x1, 2x2, 3x3	0.15ms~3600s
BUC5IB-700C	7.0M/IMX428(C, G) 1.1 "(14.4x9.9)	4.5 x4.5	2058mv with 1/30s 0.15mv with 1/30s	12@3200x2200 33@1600x1100	1x1 1x1	0.1ms~3600s
BUC5IB-700M	7.0M/IMX428(M, G) 1.1 "(14.4x9.9)	4.5 x4.5	3354mv with 1/30s 0.15mv with 1/30s	51@3200x2200 133@1600x1100	1x1 2x2	0.1ms~3600s
BUC5IB-170C	1.7M/IMX432(C, G) 1.1 "(14.4x9.9)	9.0 x9.0	4910mv with 1/30s 0.3mv with 1/30s	33@1600x1100	1x1	0.1ms~3600s
BUC5IB-170M	1.7M/IMX432(M, G) 1.1 "(14.4x9.9)	9.0 x9.0	8100mv with 1/30s 0.3mv with 1/30s	94@1600x1100	1x1	0.1ms~3600s

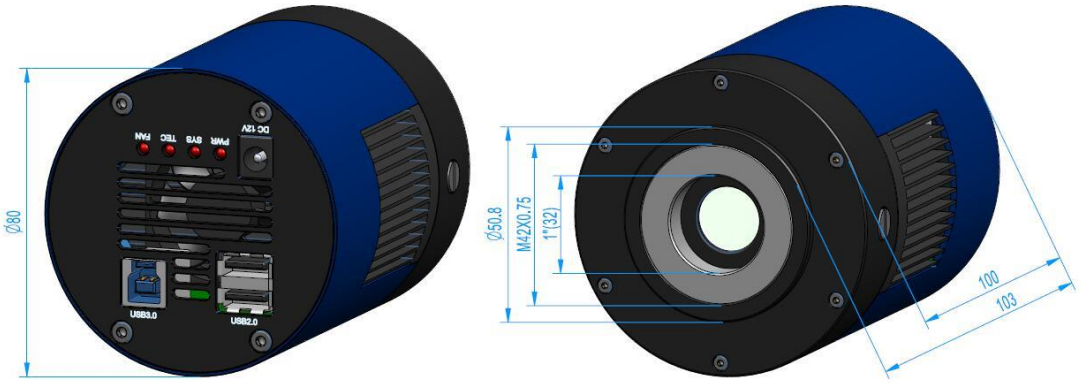
C:Color; M:Monochrome; G: Global shutter

Other Specification for BUC5IB Cameras	
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*	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 External Power Adapter for Cooling System, DC12V, 3A

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

The BUC5IB body, made from tough, alloy with CNC technique, ensures a heavy duty, workhorse solution. The camera is designed with a high quality IR-CUT or AR to block the IR light or protect the camera sensor. The fan‘s vibration is minimized to the low level to eliminate the vibration caused imaging blur. This design ensures a rugged, robust solution with an increased lifespan when compared to the other industrial camera solutions.



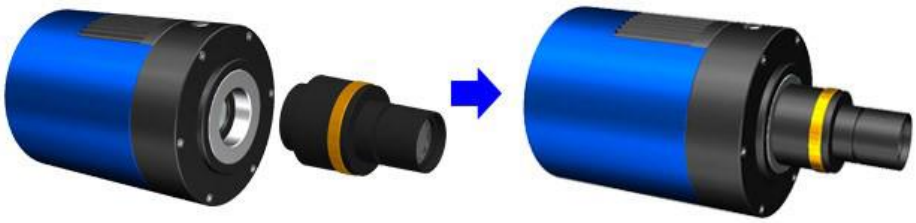
Dimension of BUC5IB

Packing Information for BUC5IB Cameras

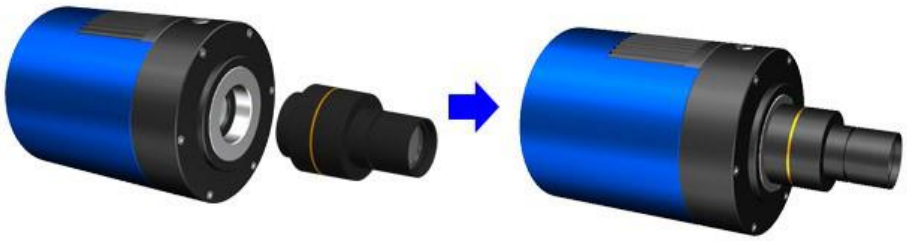
Packing Information of BUC5IB Camera

Standard Package			
A	Carton L:50cm W:30cm H:30cm (20pcs, 12~17Kg/ carton), not shown in the photo (TBD)		
B	3-A safety equipment case: L:28cm W:23cm H:15cm (1pcs, 2.8Kg/ box); Carton size: L:28.2cm W:25.2cm H:16.7cm (TBD)		
C	BUC5IB camera(C-mount)		
D	Drying tube and desiccant		
E	Power adapter: input: AC 100~240V 50Hz/60Hz, output: DC12 V 3A		
F	High-Speed USB3.0 A male to B male gold-plated connectors cable /1.5m		
G	CD (Driver & utilities software, Ø12cm)		
Optional Accessory			
H	Adjustable lens adapter	C-mount to Dia.23.2mm eyepiece tube (Please choose 1 of them for your microscope)	BCN2A-0.37× BCN2A-0.5× BCN2A-0.75× BCN2A-1×
		C-Mount to Dia.31.75mm eyepiece tube (Please choose 1 of them for your telescope)	BCN3A-0.37× BCN3A-0.5× BCN3A-0.75× BCN3A-1×
I	Fixed lens Adapter	C-mount to Dia.23.2mm eyepiece tube (Please choose 1 of them for your microscope)	BCN2F-0.37× BCN2F-0.5× BCN2F-0.75× BCN2F-1×
		C-mount to Dia.31.75mm eyepiece tube (Please choose 1 of them for your telescope)	BCN3F-0.37× BCN3F-0.5× BCN3F-0.75× BCN3F-1×
	Note: For H and I 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.		
J	(Dia.23.2mm to 30.0mm Ring)/Adapter rings for 30mm eyepiece tube		
K	(Dia.23.2mm to 30.5mm Ring)/ Adapter rings for 30.5mm eyepiece tube		
L	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 BUC5IB with Microscope Adapter

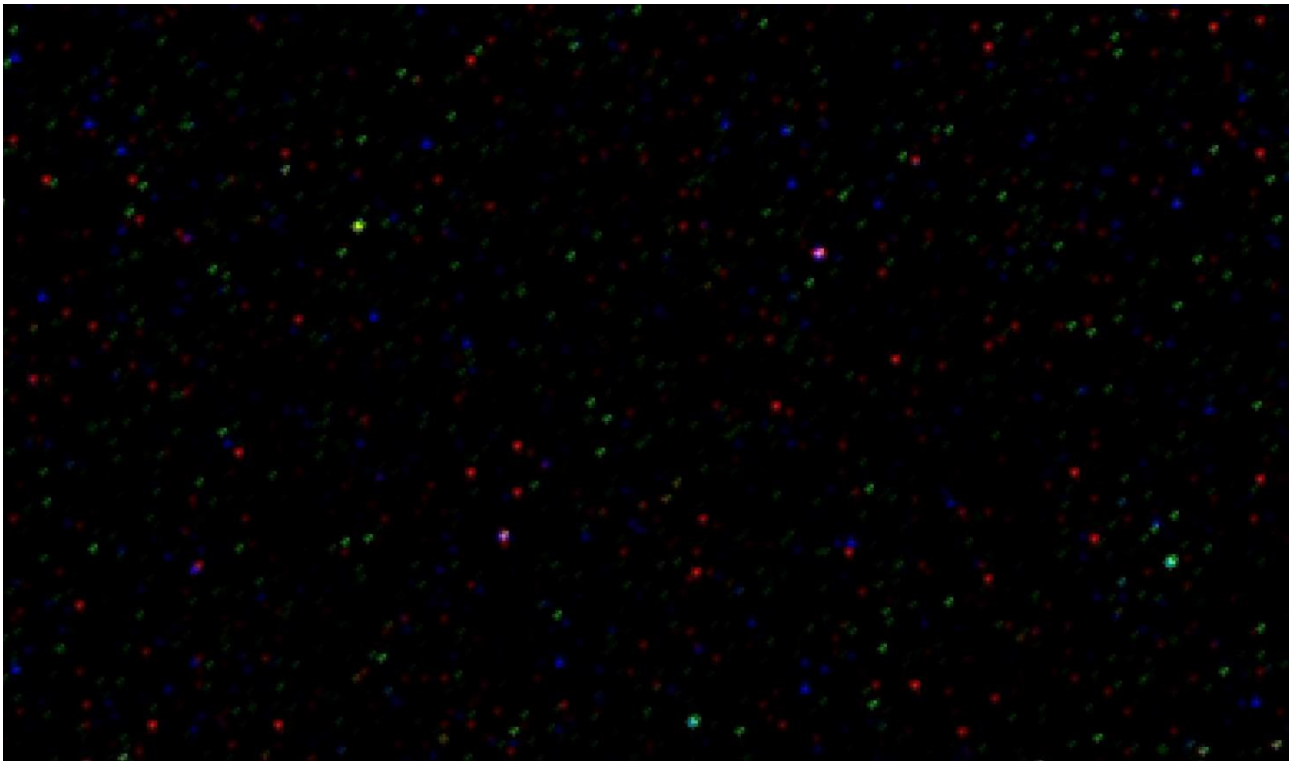


BUC5IB+ BCN2A-XXX(23.2mm Adapter)

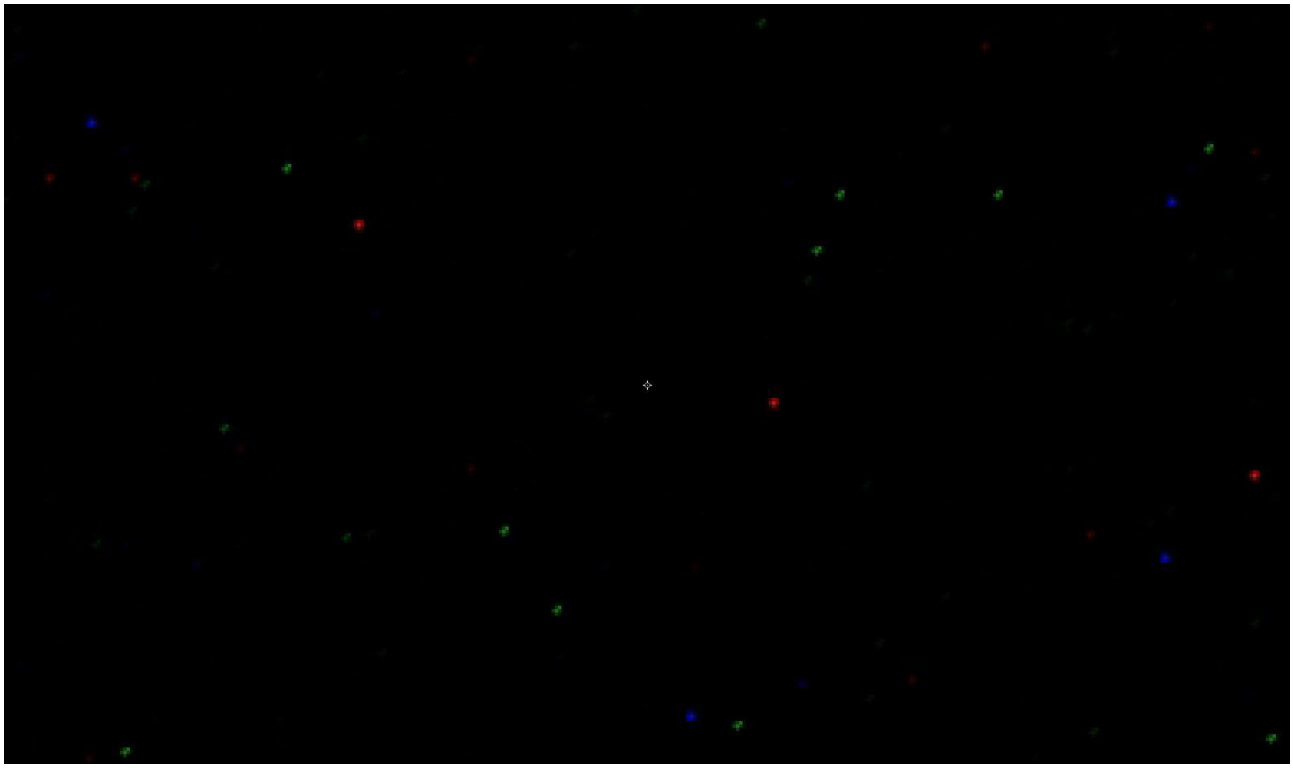


BUC5IB+ BCN2F-XXX(23.2mm Adapter)

Sample Image



Hot noise for the BUC5IB-1600C at Gain 20 , 600 seconds, 15 Centidegree



Hot noise for the BUC5IB-1600C Gain 20 , 600 seconsd, minus 15 Centidegree

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 from 2.8M ~ 6M;
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^{TM} 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

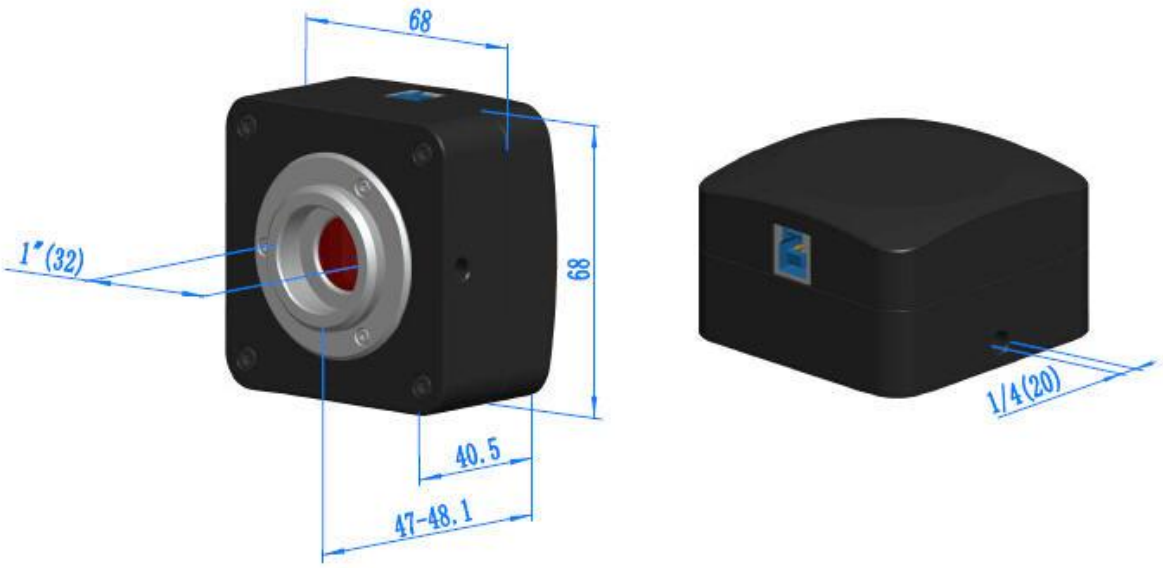
Order Code	Sensor & Size(mm)	Pixel(μm)	G Sensitivity Dark Signal	FPS/Resolution	Binning	Exposure
BUC6A-1200C	12M/ICX834AQG(C) 1“ (13.15x8.77)	3.1x3.1	420mv with 1/30s 15.2mv with 1/30s	3.6@4248x2836 3.6@2124x1418	1x1, 2x2	0.06ms~1000s
BUC6A-1200M	12M/ICX834ALG(M) 1“ (13.15x8.77)	3.1x3.1	420mv with 1/30s 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 (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 Adapter)	 (23.2mm Adapter)
Telescope Camera	 (31.75mm Adapter)	 (31.75mm Adapter)

(2) BUC6B Series TE-Cooling C-mount USB3.0 CCD Camera

Introduction

BUC6B series cameras adopt Sony Exview HAD CCD II sensor as the image capture device with two-stage peltier cooling sensor chip to -40 degree below ambient temperature.

The cooling temperature can be controlled by software to ensure that the photoelectric conversion quantum efficiency is as high as possible. This will greatly increase the signal to noise ratio and decrease the image noise. Smart structure is designed to assure the heat radiation efficiency and avoid the moisture problem. Electric fan is used to increase the heat radiation speed.

USB3.0 is used as the data transfer interface to increase the frame rate.

BUC6B series cameras come with advanced video & image processing application ImageView; Providing Windows/Linux/OSX multiple platform SDK; Native C/C++, C#/VB.NET, DirectShow, Twain Control API.

The BUC6B can be widely used in low light environment and microscope fluorescence image capture and analysis, as well as the astronomy deep sky application.

Features

The basic characteristic of BUC6B can be summarized as follows:

1. Standard C-Mount camera with SONY ExView HAD CCD II sensors from 1.4M to 12M;
2. Two-stage TE-cooling with controllable electric fan;
3. Sensor chip cooling up to 40°C below ambient temperature;
4. Working temperature can be regulated to specified temperature in 5 minutes;
5. Smart structure to assure the heat radiation efficiency and avoid the moisture problem;
6. IR-CUT/AR coated windows;
7. Up to 1 hour long time exposure;
8. USB3.0 5Gbit/second interface ensuring high speed data transmission;
9. Ultra-Fine^{TM} color engine with perfect color reproduction capability;
10. With advanced video & image processing application ImageView;
11. Support both video and trigger modes;
12. Providing Windows/Linux/Mac OS multiple platforms SDK;
13. Native C/C++, C#/VB.NET, DirectShow, Twain control API.

Application

The BUC6B series USB3.0 cooled CCD digital cameras can be widely used in low light environment and microscope fluorescence image capture and analysis, as well as the astronomy applications as following:

1. Bright field microscope;
2. Dark field, differential interference (DIC) microscope;
3. live cell imaging, cell or histopathological examination, cytology;
4. Defect analysis, semiconductor inspection, precision measurement;
5. Weak light fluorescence imaging, GFP or RFP analysis, fluorescence in situ hybridization (FISH);
6. Resonance fluorescence transfer microscope, total internal reflection fluorescence microscope, real - time confocal microscopy, failure analysis, astronomy photography.

Specification

Order Code	Sensor & Size(mm)	Pixel(μm)	G Sensitivity Dark Signal	FPS/Resolution	Binning	Exposure
BUC6B-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~1h
BUC6B-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~1h
BUC6B-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~1h
BUC6B-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~1h
BUC6B-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~1h
BUC6B-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~1h
BUC6B-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~1h
BUC6B-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~1h
BUC6B-140C	1.4M/ICX285AQ(C) 2/3“ (8.88x6.70)	6.45x6.45	1240mv with 1/30s 10mv with 1/30s	15@1360x1024	1x1	0.07ms~1h
BUC6B-140M	1.4M/ICX285AL(M) 2/3“ (8.88x6.70)	6.45x6.45	1300mv with 1/30s 11mv with 1/30s	15@1360x1024	1x1	0.07ms~1h
BUC6B-140BC	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~1h
BUC6B-140BM	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~1h

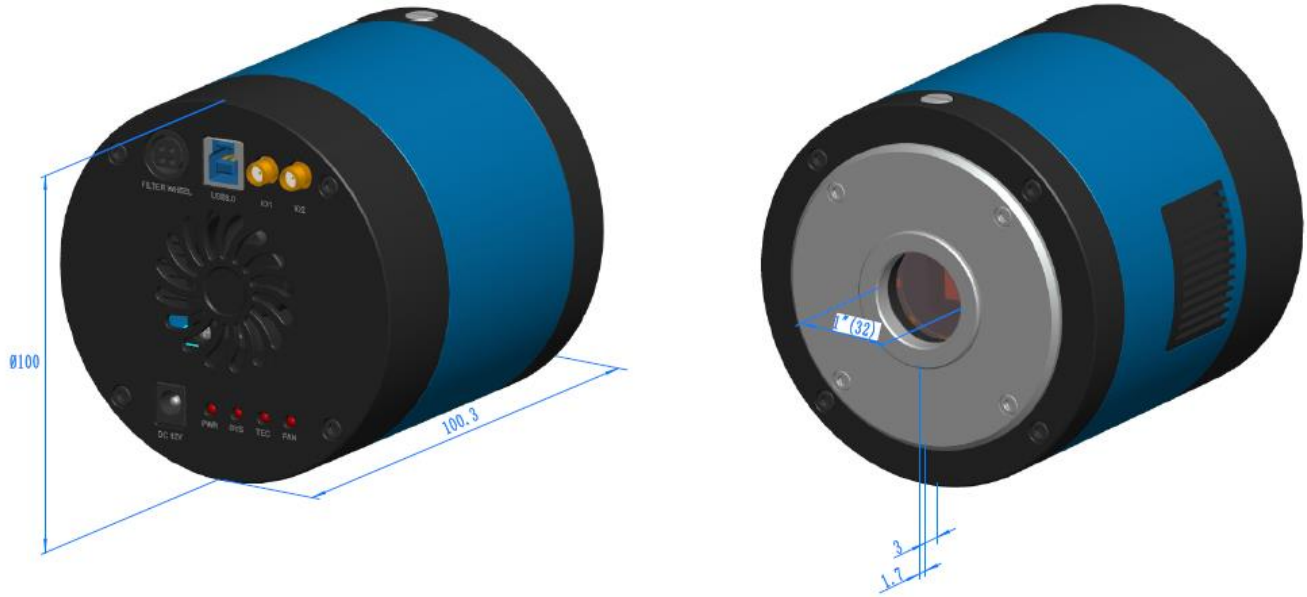
C:Color; M:Monochrome.

Other Specification for BUC6B Cameras	
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	Two-stage TE-cooling System -45 °C below Camera Body Temperature
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 External Power Adapter for Cooling System, DC12V, 3A
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:USB2.0 High-speed Port
	Display:17" or Larger
	CD-ROM

Dimension of BUC6B

The BUC6B body, made from tough, alloy with CNC technique, ensures a heavy duty, workhorse solution. The camera is designed with a high quality IR-CUT or AR to block the IR light or protect the camera sensor. The fan's vibration is minimized to the low level to eliminate the vibration caused imaging blur. These measures ensure a rugged, robust solution with an increased lifespan when compared to other industrial camera solutions.



Dimension of BUC6B

Packing Information for BUC6B

Packing Information of BUC6B

Standard Package		
A	Carton L:50cm W:30cm H:30cm (20pcs, 12~17Kg/ carton), not shown in the photo	
B	3-A safety equipment case: L:28cm W:23cm H:15cm (1pcs, 2.8Kg/ box); Carton size:L:28.2cm W:25.2cm H:16.7cm	
C	BUC6B camera(C-mount)	
D	Power adapter: input: AC 100~240V 50Hz/60Hz, ouut: DC12 V 3A	
E	High-Speed USB3.0 A male to B male gold-plated connectors cable /2.0m	
F	CD (Driver & utilities software, Ø12cm)	
Optional Accessory		
G	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)
H	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), engineer will help you to determine the right microscope or telescope camera adapter for your application.	
I	108015(Dia.23.2mm to 30.0mm Ring)/Adapter rings for 30mm eyepiece tube	
J	108016(Dia.23.2mm to 30.5mm Ring)/ Adapter rings for 30.5mm eyepiece tube	
K	External trigger control line	
L	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.)

6. WIFI CMOS Digital Camera

(1) BWC Series C-mount WiFi CMOS Camera

Introduction

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

When a BWC camera is attached to the eyepiece or trinocular head of a microscope and started, it will generates a WiFi signal for sending high-resolution images from a microscope to WiFi-enabled devices such as smartphones, tablets, and computers with iOS, Android, OS X, Linux and Windows operating systems, streaming images to up to six devices simultaneously.

The camera includes ImageView image software for quantifying, measuring and annotating images and for using with an interactive white board. It also works with the free, downloadable ImageView app for viewing, capturing, and editing images.

Features

The basic characteristic of BWC cameras are as follows:

1. C-Mount camera has 25.4 mm or 1 inch diameter with 32 threads per inch;

2. Scientific research grade camera with Aptina CMOS sensor;

3. Sends H.264 encodec high-resolution images from a microscope to WiFi-enabled smartphones, computers and tablets with iOS, Android and Windows operating systems;

4. Streams images to several devices simultaneously;

5. Integrated zinc aluminum alloy housing;

6. Ultra-Fine^{TM} color engine with perfect color reproduction capability;

7. With advanced video & image processing application ImageView (only support simple video viewing capturing for IOS/ android system);

8. Custom programmable with SDK provided(Windows/Linux/OS).

Specification

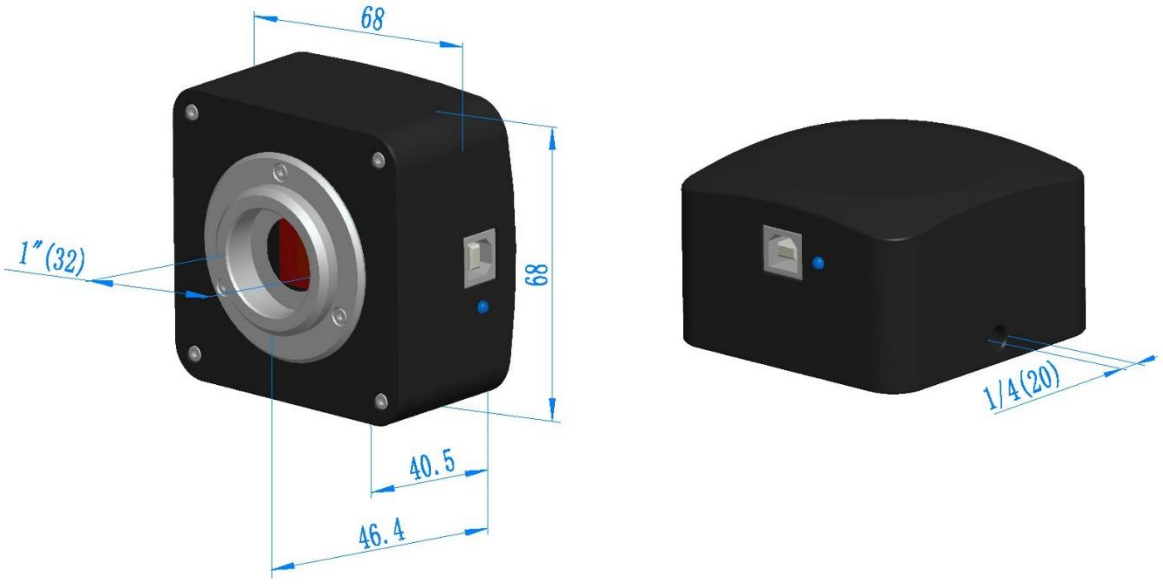
Order Code	Sensor Size(mm)	Pixel(μm)	G Responsivity Dynamic range SNRmax	FPS/Resolution	Binning	Exposure(ms)
BWC-1080	1080P/IMX222 (C) 1/2.8“ (5.38x3.02)	2.8x2.8	510mV with 1/30s 0.15mv with 1/30s	25@1920x1080	1x1	0.059ms~1941ms
BWC-720	720P/MT9P001 (C) 1/2.5“ (5.63x3.17))	2.2x2.2	1.0 V/lux-sec 61dB 43dB	10@1280x720	2x2	Auto Exposure

C: Color; M: Monochrome;

Other Specification for BWC Camera	
Spectral Range	380-650nm (with IR-cut Filter)
White Balance	Whole Area 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
Maximum Connected Devices	<=3
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	USB Charger, Not Recommend PC USB Port
Software Environment	
Operating System	Microsoft® Windows® XP / Vista / 7 / 8 /10 (32 & 64 bit) **IOS IPAD or IPhone, Android PAD and Phone**
PC Requirements	CPU: Equal to Intel Core2 2.8GHz or Higher
	Memory:2GB or More
	WiFi Adapter with DHCP Enabled
	Display:17” or Larger
	CD-ROM
PAD	**IPAD or PAD with Android System**
Mobile Phone	**IPhone or Smart Phone with Android System**

Dimension

The BWC 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. This design ensures a rugged, robust solution with an increased lifespan when compared to other industrial camera solutions.



Dimension of BWC

Packing Information

Packing Information of BWC

Standard Camera Packing List		
A	Carton L:52cm W:32cm H:33cm (20pcs, 11.4~14Kg/ carton), not shown in the photo	
B	Gift box L:15cm W:15cm H:10cm (0.57~0.58Kg/ box)	
C	BWC series USB2.0 C-mount CMOS camera	
D	High-speed USB2.0 A male to B male gold-plated connectors cable /2.0m(for PC power only) or with USB charger	
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 BWC 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 Adapter)  (23.2mm Adapter)	
Telescope Camera	 (31.75mm Adapter)  (31.75mm Adapter)	

(2) BWHC Series C-mount WIFI+HDMI CMOS Camera

Introduction

BWHC series cameras are multiple interfaces (HDMI+WIFI+SD card) CMOS cameras and they adopt ultra-high performance Sony CMOS sensor as the image capture device. HDMI+WIFI are used as the data transfer interface to HDMI display or computer.

For HDMI out, The XCamView software will be loaded and a camera control panel and toolbar are displayed on the HDMI screen, in this case, the USB mouse can be used to control the camera, browse and compare the captured image, play back the video.

For WIFI out, unplug the mouse and plug in the USB WIFI adapter, connect the computer WIFI to the camera, then the video stream can be transferred to computer with the advanced software ImageView. With ImageView, you can control the camera, process the image as other USB series camera.

Features

The BWHC cameras' basic characteristic is as follows:

1. All in 1(HDMI+WIFI) C-mount camera with Sony high sensitivity CMOS sensor;

2. For HDMI application, with built-in multiple-language XCamView software. The camera characteristic can be controlled by XCamView through the USB mouse. The other basic processing and choosing can also be realized by the XCamView.;

3. 1920 × 1080 (1080P) resolutions to match the current high-definition displayer on the market; Support plug and play application;

4. For HDMI application, 5.04M resolution image(2592*1944 ***BWHC-1080B***) or 2.0M resolution image(1920*1080 ***BWHC-1080D/E***) can be captured and saved for browsing; For video, 1080P video stream(asf format) can be captured and saved;

5. With the USB WIFI adapter, the BWHC-1080B/D/E can be used as WIFI camera, the ImageView/ImageLite advanced image processing software is used to view the video and capture image, support plug and play application;

6. Ultra-Fine color engine with perfect color reproduction capability(WIFI);

7. With advanced video & image processing application ImageView, which including professional image processing such as 2D measurement, HDR, image stitching, EDF(Extended Depth of Focus), image segmentation & count, image stacking, color composite and denoising(USB).

Application

BWHC-1080B/D can meet various applications and can be widely used in industrial inspection, education and research, materials analysis, precision measurement, medical analyses etc.

The possible application of BWHC-1080B/D/E is as follows:

1. Scientific research, education (teaching, demonstration and academic exchanges);
2. Digital laboratory, medical research;
3. Industrial visual (PCB examination, IC quality control);
4. Medical treatment (pathological observation);
5. Food (microbial colony observation and counting);
6. Aerospace, military (high sophisticated weapons).

Specification

Order Code	Sensor & Size(mm)	Pixel(μm)	G Sensitivity Dark Signal	FPS/Resolution	Binning	Exposure
BWHC-1080B	1080P/5M/Sony IMX178(C) 1/1.8"(6.22x4.67)	2.4x2.4	425mv with 1/30s 0.15mv with 1/30s	30@1920*1080(HDMI) 25@1920*1080(WiFi)	1x1	0.03ms~918ms
BWHC-1080D	1080P/2M/Sony IMX185(C) 1/1.9"(7.20x4.05)	3.75x3.75	1120mv with 1/30s 0.15mv with 1/30s	30@1920*1080(HDMI) 25@1920*1080(WiFi)	1x1	0.06ms~918ms
BWHC-1080E	Sony IMX249(C,GS) 1/1.2"(11.25x6.33)	5.86*5.86	1016mv with 1/30s 0.15mv with 1/30s	30@1920*1080(HDMI) 25@1920*1080(WiFi)	1x1	0.043ms~1000ms

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

Interface & Button Functions		
	USB	USB Mouse/USB WIFI Adapter
	HDMI	HDMI Out
	DC12V	12V Power in
	SD	SD Card Slot
	ON/OFF	Power On/off Switch
	LED	Power Indicator

Other Specification for HDMI Out	
UI Operation	With USB Mouse to Operate on the embedded XCamView
Image Capture	JPEG Format with 5M Resolution (2592*1944) in SD Card(8G) **(BWHC-1080B)** JPEG Format with 2M Resolution in SD Card(8G) **(BWHC-1080D/E)**
Video Record	ASF Format 1080P 30fps in SD Card(8G)
Camera Control Panel	Including Exposure, Gain, White Balance, Color Adjustment, Sharpness and Denoising Control
Toolbar	Including Zoom, Mirror, Comparison, Freeze, Cross, Browser Function, Muti-language and XCamView Version Information
Other Specification for WIFI Out	
UI Operation	ImageView or ImageLite on Windows/Linux/OSX/Android Platform
WIFI Performance	802.11n 150Mbps; RF Power 20dBm(Maximum)
Maximum Connected Devices	3~6(According to the Environment and Connection Distance)
White Balance	Auto White Balance
Color Technique	Ultra-Fine™ Color Engine (WIFI)
Capture/Control API	Standard SDK for Windows/Linux/Mac(WIFI)
Recording System	Still Picture or Movie (WIFI)

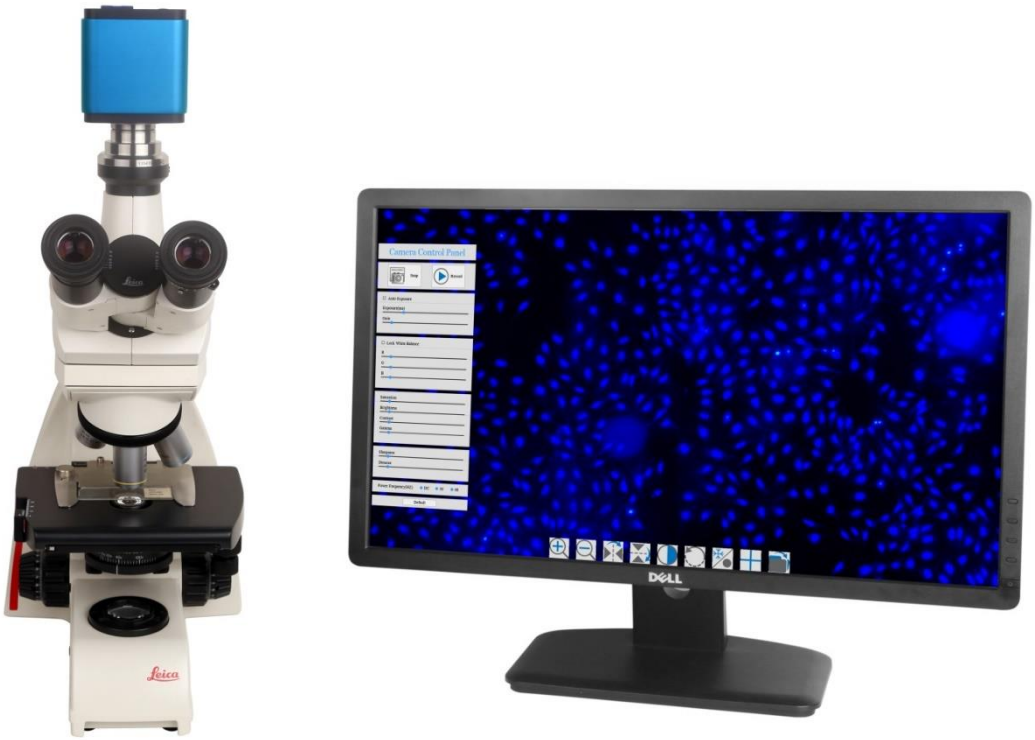
Software Environment (for USB2.0 Connection)	
Operating System	Microsoft® Windows® XP / Vista / 7 / 8 / 8.1/10(32 & 64 bit) OSx(Mac OS X) Linux
PC Requirements	CPU: Equal to Intel Core2 2.8GHz or Higher
	Memory: 4GB or More
	USB Port: USB2.0 High-speed Port(As Power Only, not as the USB Data Transfer)
	Display: 19” or Larger
	CD-ROM
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 12V/1A Adapter

BWHC-1080B/D/E and Microscope

BWHC-1080B/D/E and Its Back Panel

Different Views of BWHC-1080B/D/E

BWHC-1080B/D/E and Microscope



BWHC-1080B/D/E+ Microscope+Display

XCamView UI for Mouse Control

Dimension

Dimension of BWHC-1080B/D/E

Packing Information

Packing information of BWHC-1080B/D/E

Standard Packing List		
A	Gift box : L:25.5cm W:17.0cm H:9.0cm (1pcs, 1.43Kg/ box)	
B	XCAM1080PHB or XCAM1080PHD or XCAM1080PHE camera	
C	Power Adapter: Input: AC 100~240V 50Hz/60Hz, Output: DC 12V 1A American standard: Model: GS12U12-P1I 12W/12V/1A: UL/CUL/BSMI/CB/FCC EMI Standard:EN55022,EN61204-3, EN61000-3-2,-3, FCC Part 152 class B, BSMI CNS14338 EMS Standard:EN61000-4-2,3,4,5,6,8,11,EN61204-3,Class A Light Industry Standard European standard:Model:GS12E12-P1I 12W/12V/1A; TUV(GS)/CB/CE/ROHS EMI Standard:EN55022,EN61204-3, EN61000-3-2,-3, FCC Part 152 class B, BSMI CNS14338 EMS Standard:EN61000-4-2,3,4,5,6,8,11,EN61204-3,Class A Light Industry Standard	
D	HDMI Cable	
E	USB Mouse	
F	Wireless network adapter with USB interface	
G	CD (Driver & utilities software, Ø12cm)	
Optional Accessory		
H	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)
I	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 H and I 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;	
J	108015(Dia.23.2mm to 30.0mm Ring)/Adapter rings for 30mm eyepiece tube	
K	108016(Dia.23.2mm to 30.5mm Ring)/ Adapter rings for 30.5mm eyepiece tube	
L	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.)
M	SD Card(4G or 8G)	

Extension of BWHC-1080B/D/E 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 Adapter)  (23.2mm Adapter)	
Telescope Camera:	 (31.75mm Adapter)  (31.75mm Adapter)	

(3) BWHC-1080BAF/DAF Auto Focus WIFI+HDMI CMOS Camera

Introduction

BWHC-1080BAF/DAF is a multiple interfaces (HDMI+WiFi+SD card) CMOS camera with autofocus function and it adopts ultra-high performance Sony CMOS sensor as the image capture device. HDMI+WiFi are used as the data transfer interface to HDMI display or computer.

For HDMI output, The XCamView will be loaded and a camera control panel and toolbar are overlaid on the HDMI screen, in this case, the USB mouse can be used to set the camera. Measure, browse and compare the captured image, playback the video.

In HDMI output, the camera embedded Auto/Manual focus function can obtain the clear image at ease. No hand rotation of the microscope Coarse/Fine knob is needed.

For WiFi output, unplug the mouse and plug in the USB WiFi adapter, connect the computer WiFi to the camera, then the video stream can be transferred to computer with the advanced software ImageView. With ImageView, you can control the camera, process the image as our other USB series camera.

Features

The BWHC-1080BAF/DAF's basic characteristic is as follows:

1. All in 1(HDMI+WiFi) C-mount camera with Sony high sensitivity CMOS sensor;
2. **Auto/Manual focus with the movement of the sensor;**
3. For HDMI application, with built-in multiple-language XCamView software. The camera characteristic can be controlled by XCamView through the USB mouse. The other basic processing and control can also be realized by the XCamView;
4. 1920 × 1080 (1080P) resolutions to match the current high-definition displayer on the market; Support plug and play application;
5. For HDMI application, 5.0MP or 2.0MP resolution image (BWHC-1080BAF: 2592*1944, BWHC-1080DAF: 1920*1080) can be captured and saved for browsing; For video, 1080P video stream(asf format) can be captured and saved;
6. With the USB WiFi adapter, the BWHC-1080BAF/DAF can be used as WiFi camera, the ImageView advanced

image processing software is used to display the video and capture image. support plug and play application;

7. Ultra-Fine Color Engine with perfect color reproduction capability (WiFi);

8. With advanced video & image processing application ImageView, which including professional image processing such as 2D measurement, HDR, image stitching, EDF(Extended Depth of Focus), image segmentation & count, image stacking, color composite and denoising(USB).

Application

BWHC-1080BAF/DAF can meet various applications and can be widely used in industrial inspection, education and research, materials analysis, precision measurement, medical analyses etc.

The possible applications of BWHC-1080BAF/DAF are as follows:

1. Scientific research, education (teaching, demonstration and academic exchanges);

2. Digital laboratory, medical research;

3. Industrial visual (PCB examination, IC quality control);

4. Medical treatment (pathological observation);

5. Food (microbial colony observation and counting);

6. Aerospace, military (high sophisticated weapons).

Specification

Order Code	Sensor & Size(mm)	Pixel(μm)	G Sensitivity Dark Signal	FPS/Resolution	Binning	Exposure
BWHC-1080BAF	1080P/5M/Sony IMX178(C) 1/1.8"(6.22x4.67)	2.4x2.4	425mv with 1/30s 0.15mv with 1/30s	30/1920*1080(HDMI) 25/1920x1080(WiFi)	1x1	0.03ms~918ms
BWHC-1080DAF	1080P/2M/Sony IMX185(C) 1/1.9"(7.20x4.05)	3.75x3.75	1120mv with 1/30s 0.15mv with 1/30s	60/1920*1080(HDMI) 25/1920x1080(WiFi)	1x1	0.06ms~918ms

C: Color; M: Monochrome;

Interface & Button Functions		
	USB	USB Mouse/USB WiFi Adapter
	HDMI	HDMI Output
	DC12V	12V/1A Power in
	SD	SD Card Slot
	ON/OFF	Power On/off Switch
	LED	Power Indicator

Other Specification for HDMI Output	
UI Operation	With USB Mouse to operate on the embedded XCamView
Image Capture	JPEG Format with 5.0MP(**BWHC-1080BAF**) or 2.0M Resolution in SD Card (**BWHC-1080DAF**)
Video Record	ASF Format 1080P 30fps in SD Card(8G)
Camera Control Panel	Including Exposure, Gain, White Balance, Color Adjustment, Sharpness and Denoising Control
Toolbar	Including Zoom, Mirror, Comparison, Freeze, Cross, Browser Function, Muti-language and XCamView Version Information
Other Specification for WiFi Output	
UI Operation	ImageView Windows OS, or ToupLite on Linux/OSX/Android Platform
WiFi Performance	802.11n 150Mbps; RF Power 20dBm(Maximum)
Maximum Connected Devices	3~6(According to the Environment and Connection Distance)

White Balance	Auto White Balance
Color Technique	Ultra-FineTM Color Engine (WiFi)
Capture/Control API	Standard SDK for Windows/Linux/Mac(WiFi)
Recording System	Still Picture or Movie (WiFi)
Software Environment (for USB2.0 Connection)	
Operating System	Microsoft® Windows® XP / Vista / 7 / 8 / 8.1/10(32 & 64 bit) OSx(Mac OS X) Linux
PC Requirements	CPU: Equal to Intel Core2 2.8GHz or Higher
	Memory: 4GB or More
	USB Port: USB2.0 High-speed Port(As Power Only, not as the USB Data Transfer)
	Display: 19" or Larger
	CD-ROM
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 12V/1A Adapter

BWHC-1080BAF/DAF and Microscope

BWHC-1080BAF/DAF and Its Back Panel

Different Views of BWHC-1080BAF/DAF

BWHC-1080BAF/DAF and Microscope

Dimension of BWHC-1080BAF/DAF

Dimension of BWHC-1080BAF/DAF

Packing Information

Packing Information of BWHC-1080BAF/DAF

Standard Packing List		
A	Gift box : L:25.5cm W:17.0cm H:9.0cm (1pcs, 1.43Kg/ box)	
B	BWHC-1080BAF/DAF	
C	Power Adapter: Input: AC 100~240V 50Hz/60Hz, Output: DC 12V 1A American standard: Model: GS12U12-P1I 12W/12V/1A: UL/CUL/BSMI/CB/FCC EMI Standard: EN55022, EN61204-3, EN61000-3-2,-3, FCC Part 152 class B, BSMI CNS14338 EMS Standard: EN61000-4-2,3,4,5,6,8,11,EN61204-3,Class A Light Industry Standard European standard: Model: GS12E12-P1I 12W/12V/1A; TUV(GS)/CB/CE/ROHS EMI Standard: EN55022, EN61204-3, EN61000-3-2,-3, FCC Part 152 class B, BSMI CNS14338 EMS Standard: EN61000-4-2,3,4,5,6,8,11,EN61204-3,Class A Light Industry Standard	
D	HDMI Cable	
E	USB Mouse	
F	Wireless network adapter with USB interface	
G	CD (Driver & utilities software, Ø12cm)	
Optional Accessory		
H	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)
I	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 H and I 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;	
J	108015(Dia.23.2mm to 30.0mm Ring)/Adapter rings for 30mm eyepiece tube	
K	108016(Dia.23.2mm to 30.5mm Ring)/ Adapter rings for 30.5mm eyepiece tube	
L	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.)
M	SD Card(4G or 8G)	

Extension of BWHC-1080BAF/DAF 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 Adapter)  (23.2mm Adapter)	
Telescope Camera	 (31.75mm Adapter)  (31.75mm Adapter)	

(4) BWHC-4K 4K UHD HDMI/GigE/WiFi Multi-outputs Digital Camera

Introduction

The **BWHC-4K** series is the next-generation live-view imaging-system with 4K resolution at 60/30 FPS.

BWHC-4K series comes with Sony Exmor CMOS sensor with high sensitivity, low dark current and no smear achieved through the adoption of R, G and B primary color mosaic filters.

The cameras use a standard C-mount interface for maximum compatibility with various microscopy-systems. It can be used as a stand-alone recorder when used with an HDMI monitor or television, or live-streamed to a PC via Gigabit Ethernet (GE) for image-capture and video-recording.

Hardware 3D denoising, sharpness and local tone mapping control functions greatly improve the image and video quality.

The included Windows software offers image-development and measurement tools, as well as advanced compositing features such as image-stitching and extended-depth-of-focus. With the ability to calibrate scales at multiple magnifications, the software can be used for multi-level inspection. For Mac and Linux, there is a lite version of the software which can capture video and still images, and includes limited processing features.

The BWHC-4K series cameras are intended to be used for the acquisition of digital images from the stereo microscope, biological microscope or online interactive teaching.

Features

The basic characteristics are listed as below:

1. Sony Exmor CMOS sensor;
2. 4K HDMI/GE/WLAN multiple video outputs;
3. 4K/1080P auto switching according to the display resolution;
4. SD card/USB flash disk for the captured image and video storage;
5. Embedded XCAMView for the control of the camera with mouse, no shaking;
6. With strong ISP and other related processing functions;
7. ImageView software for PC;
8. iOS/Android applications for smart phones or tablets.

Application

1. Scientific research, digital teaching (teaching, demonstration and academic discussing);
2. Digital laboratory, medical research;
3. Machine vision (PCB detection, IC quality control);
4. Medical treatment (pathological observation);
5. Food (microbial colony observation and counting);
6. Aviation and military.

Specification

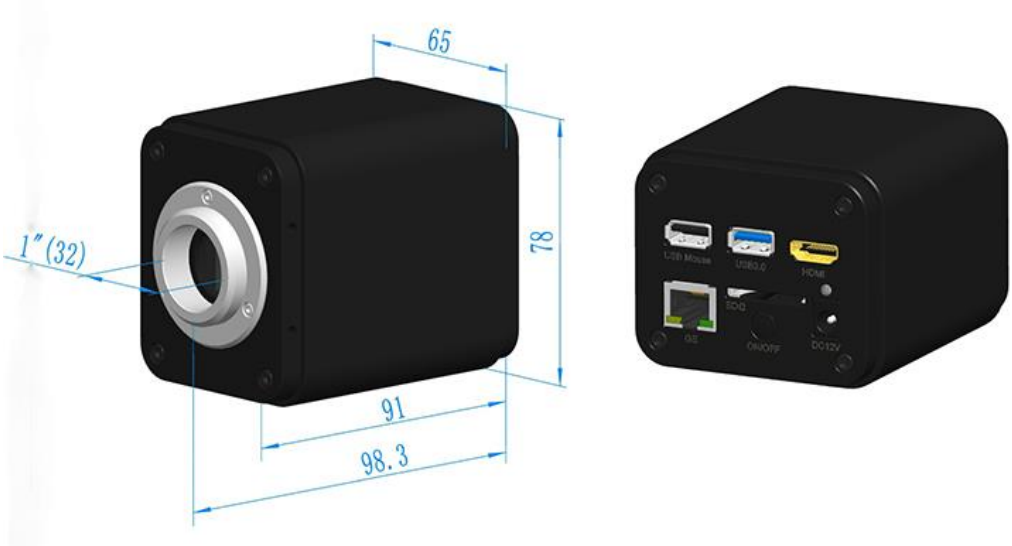
Order Code	Sensor & Size(mm)	Pixel(μm)	G Sensitivity Dark Signal	FPS/Resolution	Binning	Exposure
BWHC-4K8MPA	4K/Sony IMX334(C) 1/1.8"(7.68x4.32)	2.0x2.0	505mv with 1/30s 0.13mv with 1/30s	60@3840*2160(HDMI) 60@1920*1080(HDMI) 30@3840*2160(WiFi, GE)	1x1	0.04ms~1000ms
BWHC-4K16MPA	Sony IMX183(C) 1/1.06"(13.06x7.27)	2.4x2.4	1847mv with 1/30s 0.84mv with 1/30s	30@3840*2160(HDMI) 30@1920*1080(HDMI) 30@3840*2160(WiFi,GE)	1x1	0.04ms~2000ms

C: Color; M: Monochrome;

Interface & Button Functions		
	USB Mouse	Connect USB mouse for easy operation of the embedded XCAMView software
	USB3.0	Connecting USB flash disk for image or video storage; Connecting 5G WLAN adapter as WLAN camera in AP or STA mode;
	HDMI	Comply with HDMI2.0 standard. 4K/1080P format video output and supporting auto switching between 4K and 1080P format according to the connected display resolution
	GE	Gigabit Ethernet port to connect to the PC for the video streaming
	SD	Comply with SDIO3.0 standard and SD card could be inserted for the images or videos storage
	DC12V	Power adapter connection (12V)
	ON/OFF	Power switch
	LED	Camera status indicator
Other Specification for HDMI Output		
UI Operation	With USB Mouse	
Image Capture	8M (3840*2160) JPEG Image in SD Card or USB Flash Disk(BWHC-4K8MPA) 16M (5440*3060) JPEG Image in SD Card or USB Flash Disk(BWHC-4K16MPA)	
Video Record	Video Format: 8M(3840*2160) H264 Encoded MP4 Format (BWHC-4K8MPA, BWHC-4K16MPA) Video Recording Frame Rate: 50~60FPS(BWHC-4K8MPA),26~30FPS(BWHC-4K16MPA) (related with the SD card speed class and video resolution)	
Camera Control Panel	Including Exposure, Gain, White Balance, Color Adjustment, Sharpness and Denoising Control	
Toolbar	Including Zoom, Mirror, Comparison (Video~image, image~image), Freeze, Cross, Browser Function	
Other Specification for GE Output		
White Balance	Auto/Manual/ROI White Balance	
Color Technique	Ultra-Fine™ Color Engine	
Capture/Control API	Standard GE API for Windows/Linux/Mac	
Recording System	Still Picture or Video	
Software Environment		
Operating System	Microsoft® Windows® XP / Vista / 7 / 8 / 8.1 /10(32 & 64 bit) OSx(Mac OS X) Linux	
PC Requirements	CPU: Equal to Intel Core2 2.8GHz or Higher	
	Memory: 4GB or More	
	Ethernet Port: RJ45 Ethernet Port	
	Display:19” or Larger	
	CD-ROM	
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 12V/1A Adapter

Dimension of BWHC-4K Series



Dimension of BWHC-4K Series

Packing Information of BWHC-4K Series

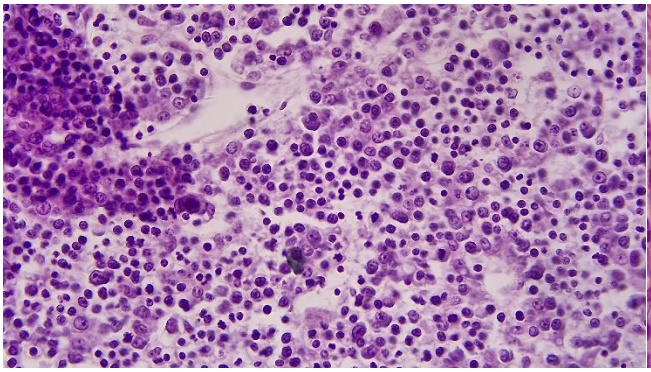
Packing Information of BWHC-4K Series

Standard Packing List		
A	Gift box : L:25.5cm W:17.0cm H:9.0cm (1pcs, 1.43Kg/ box)	
B	BWHC-4K Series Camera	
C	Power Adapter: Input: AC 100~240V 50Hz/60Hz, Output: DC 12V 1A American standard: Model: GS12U12-P1I 12W/12V/1A: UL/CUL/BSMI/CB/FCC EMI Standard: EN55022, EN61204-3, EN61000-3-2,-3, FCC Part 152 class B, BSMI CNS14338 EMS Standard: EN61000-4-2,3,4,5,6,8,11, EN61204-3, Class A Light Industry Standard European standard: Model:GS12E12-P1I 12W/12V/1A; TUV(GS)/CB/CE/ROHS EMI Standard: EN55022, EN61204-3, EN61000-3-2,-3, FCC Part 152 class B, BSMI CNS14338 EMS Standard: EN61000-4-2,3,4,5,6,8,11, EN61204-3, Class A Light Industry Standard	
D	USB Mouse	
E	HDMI 2.0 Cable(Support 3840x2160, 60FPS)	
F	High-speed USB3.0 A male to A male gold-plated connectors cable /2.0m	
G	CD (Driver & utilities software, Ø12cm)	
Optional Accessory		
H	SD Card (16G or above; Speed: Class 10)	
I	USB WLAN adapter	
J	Ethernet cable	
K	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)
L	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 K and L 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;	
M	108015(Dia.23.2mm to 30.0mm Ring)/Adapter rings for 30mm eyepiece tube	
N	108016(Dia.23.2mm to 30.5mm Ring)/ Adapter rings for 30.5mm eyepiece tube	
O	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.)

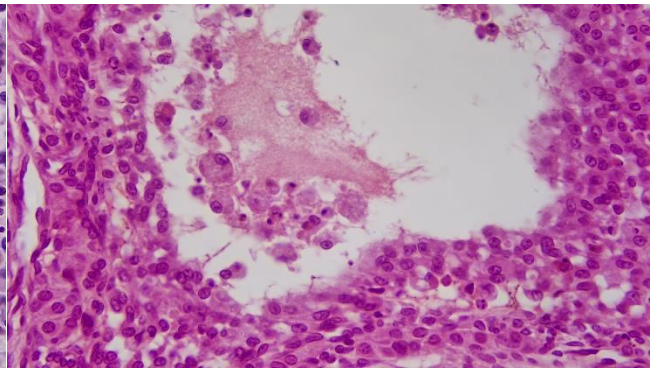
Extension of XCAM4K Series with Microscope or Telescope Adapter

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	 (23.2mm Adapter)  (23.2mm Adapter)	
Telescope Camera	 (31.75mm Adapter)  (31.75mm Adapter)	

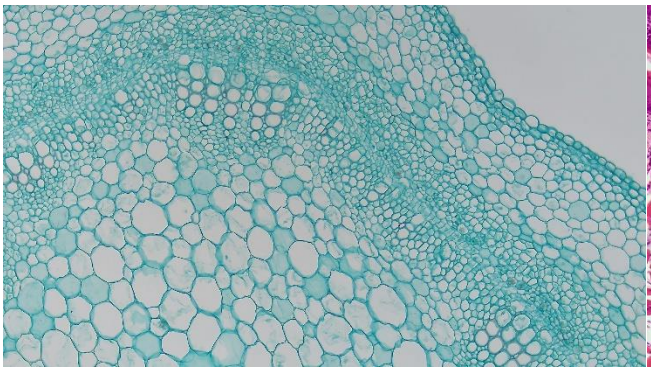
Images Captured by BWHC-4K8MPA



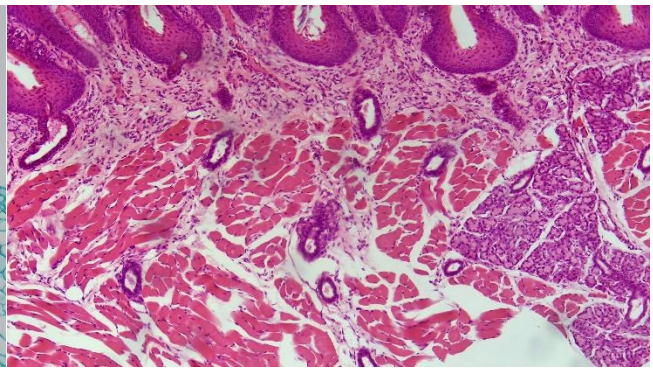
Rabbit Embryo



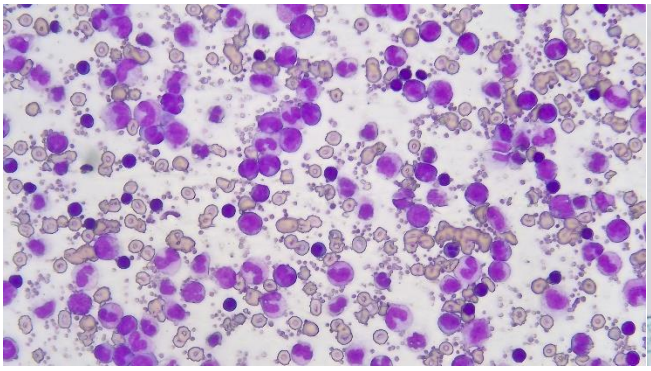
Ovary



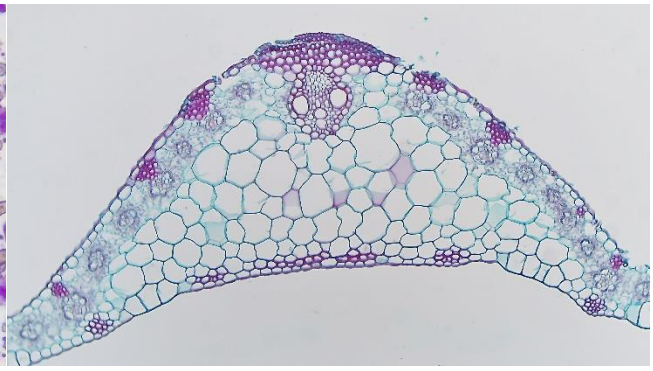
Cotton Stem



Taste Bud



Blood cells



Corn Leaf

BWHC-4K Camera and Microscopes

BWHC-4K Camera and Leica Microscope

BWHC-4K Camera and Zeiss Microscope

7. BHC Series HDMI Digital Camera

(1) BHC3E-1080P HDMI Digital Camera

Introduction

BHC3E-1080P HDMI Microscope Camera is a 1080P economic HDMI digital camera. BHC3E-1080P can be connected to a LCD monitor or HD TV via HDMI cable and operated independently without connecting to PC. The image/video capture and operate can be controlled by mouse, so no shaking when you take images and videos. It also can be connected to a PC via USB2.0 cable and operate with the Capture2.0 software.

Feature

1. Use mouse to control the Camera.
When the camera is connected to LCD monitor or HD TV, you can control the camera by only a mouse, it is easy to operate and no shaking.
2. Record image and video to SD card.
Record high definition images and videos at 15fps@1080P into the inserted SD card directly.
3. High frame rate of 15fps.
BHC3E-1080P can transfer uncompressed data of resolution 1920x1080 to LCD monitor or PC at 15fps speed. The camera support Win XP, Win7/8/10, 32/64bit, MAC OSX , driver free.
4. The functions inside camera (Cloud 1.0)
(1) The less icons the better.
The implanted software is very simple to operate. There are only 2 icons on the software starting screen, one for capture, the other one for setting menu.
(2) Set Exposure Time Capability.
Based on the auto exposure, the first time, HDMI camera also have a full control of the exposure time and gain. It allows to set the exposure time from 1ms to up to 10 seconds and adjusts 20 scales of Gain value.
(3) 3D Noise Reduction.
The extension of the exposure increases the image noise. The integrated 3D noise reduction function keeps the images always clean and sharp. The following comparison images show the amazing 3D noise reduction effect.


Original image

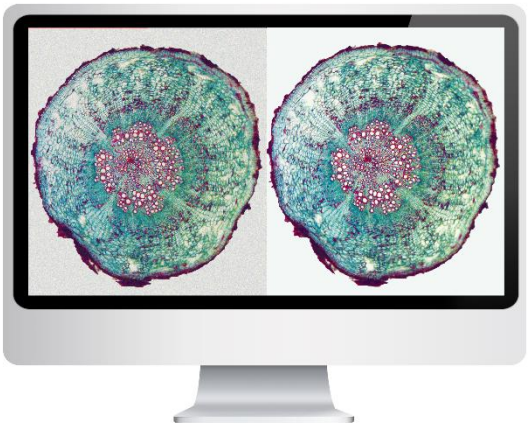

After 3D noise reduction

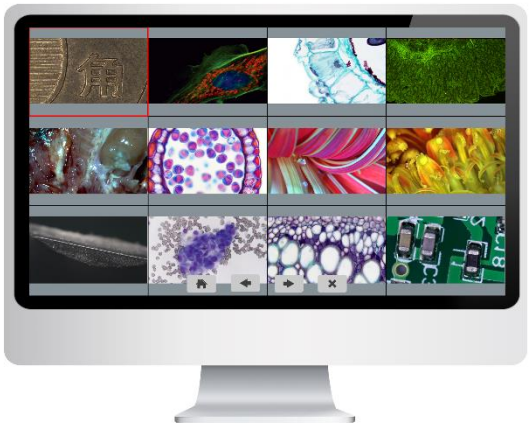
(4) 1080P Video Recording.

Just click “  ” to start recording 1080P videos at 15fps. The recorded video files will be saved to the high speed SD card directly. It is also allowed to play back the videos in the SD card directly.

(5) Get more Details with ROI Magnification Function.
A series image operation buttons on the right side of the screen allow to do the image flip, rotation and ROI. ROI function can help you get more image details with a magnified image.

(6) Image Comparison Function.
The image comparison function is available in the setting menu. You can choose one image, even move the image position or select the ROI area to compare with the live images.





(7) Browse Captured Images and videos.
All the captured images and videos are saved in the SD card. Users can browse all the images in the SD card, zoom in images or delete unnecessary images. You also can review and play back the video files in the SD card directly.

(8) PC software.
Want to have a software with more powerful functions? Connect the BHC3E-1080P to the PC via the USB2.0 port, you can have a USB driver free camera immediately. The application software Capture2.0, which integrate the remarkable functions like live and still image measurement, image stacking and image stitching etc., can fully control the BHC3E-1080P. We keep a copy of Capture2.0 in the SD card come with the BHC3E-1080P.

Application

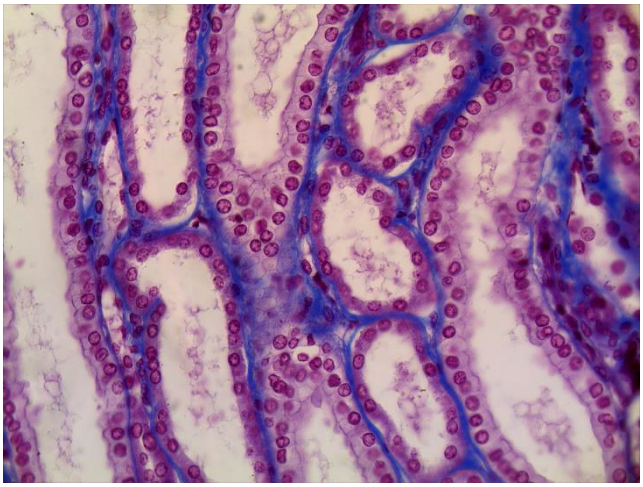
BHC3E-1080P can be used in many areas like microscopy imaging, machine vision and similar image processing fields, such as: Live Cell Imaging, Pathology, Cytology, Defect Analysis, Semiconductor Inspection, Navigation for Processed Imaging, Industrial Optical HD Digital Imaging.

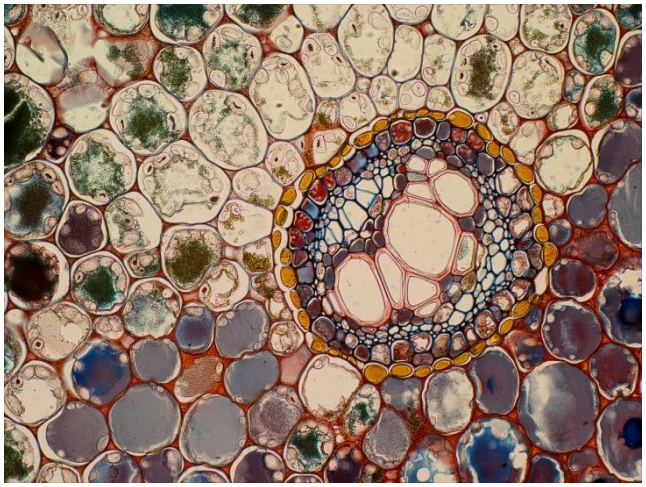
Specification

Image Sensor	CMOS, Aptina MT9P031
Sensor Size	1/2.5"
Pixel Size	2.2um × 2.2um
Video Resolution	1920 × 1080
Capture Resolution	2592 × 1944
Frame Rate	1920 × 1080 15fps via USB2.0 1920 × 1080 15fps via HDMI
Data Record	SD Card (4G)
Video Record	1080p 15fps @ SD Card

	1080p 15fps @ PC
Scan Mode	Progressive
Electronic Shutter	Electronic Rolling Shutter
A/D conversion	8 bit
Color Depth	24bit
Dynamic Range	60dB
S/N ratio	40.5dB
Exposure time	0.001 sec ~ 10.0 sec
Exposure	Automatic & Manual
White balance	Automatic
Settings	Gain, Gamma, Saturation, Contrast
Built- in software	Cloud 1.0 version
PC software	Capture2.0
Output model 1	USB2.0
Output model 2	HDMI
System Compatible	Windows XP/Vista/Win 7/Win 8/Win 10(32 and 64-bit), MAC OSX
Optical port	C- Mount
Power Supply	DC 12V /2A
Operational Temperature	0°C~60°C
Humidity	45%-85%
Storage Temperature	-20°C~70°C
Dimension & Weight	74.4*67.2*90.9mm, 0.8kg

Sample Image





(2) BHC3-1080P/1080P PLUS HDMI Digital Camera

Introduction

BHC3-1080P/1080P PULS HDMI Microscope Camera is a 1080P scientific grade digital camera that has ultra superior color reproduction and super fast frame speed. BHC3-1080P/1080P PLUS can be connected to a LCD monitor or HD TV via HDMI cable and operated independently without connecting to PC. The image/video capture and operate can be controlled by mouse, so no shaking when you take images and videos. It also can be connected to a PC via USB2.0 cable and operate with the software. With fast frame speed and short responding time features, BHC3-1080P/1080P PLUS can be used in many areas like microscopy imaging, machine vision and similar image processing fields.

Features

1. Built- in mouse control Camera.

The significant innovation of BHC3-1080P/1080P PLUS is making the software implant inside the camera. This forward thinking feature liberates users from cumbersome computers and annoying buttons. You can control the camera by only a mouse directly.

2. Record image and video to SD card.

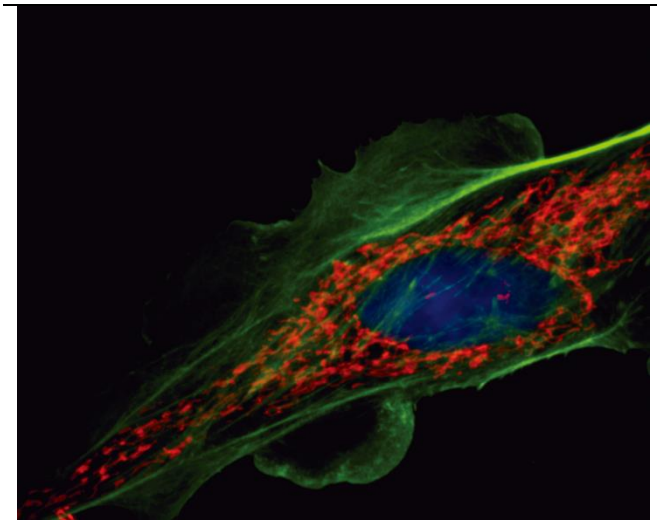
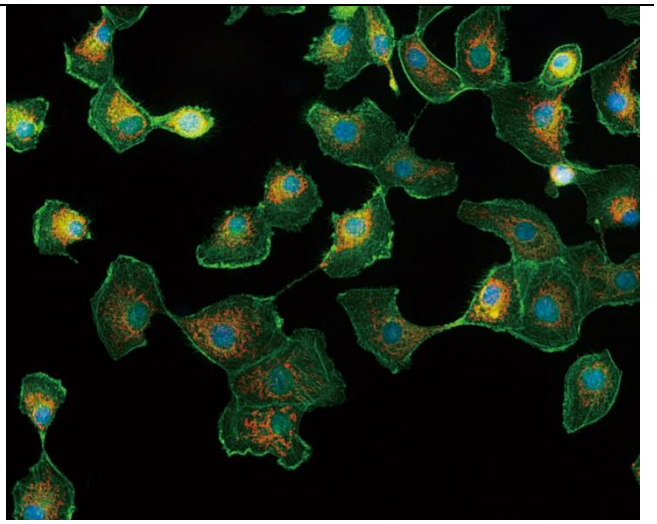
Record high definition images and videos at 30fps/1080P into the inserted SD card directly.

3. High frame rate upto 60fps.

With 60fps preview frame rate at resolution 1920x1080 when it is connected via HDMI interface, BHC3-1080P/1080P PLUS creates a miracle. It is one of the fastest USB2.0 cameras in the world.

4. HDMI Fluorescent imaging Capability.

Taking advantage of the ultra high signal-to-noise ratio sensor, BHC3-1080P/1080P PLUS allows you to set up to 10 seconds exposure time. So it can be used with fluorescent microscopes.

5. The functions inside camera (Cloud 1.0)

(1) Simple to operate.
The implanted software is very simple to operate. There are only the icons on the software starting screen, one for capture, the other one for setting menu.

(2) Set Exposure Time Capability.
Based on the auto exposure, the first time, HDMI camera also have a full control of the exposure time and gain. It allows to set the exposure time from 1ms to up to 10 seconds and adjusts 20 scales of Gain value.

(3) 3D Noise Reduction.
The extension of the exposure increases the image noise. But the integrated 3D noise reduction function keeps the BHC3-1080P/1080P PLUS image always clean and sharp. The following comparison images show the amazing 3D noise reduction effect.

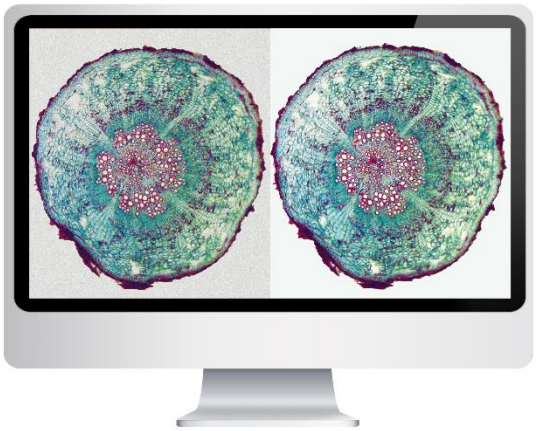

Original image

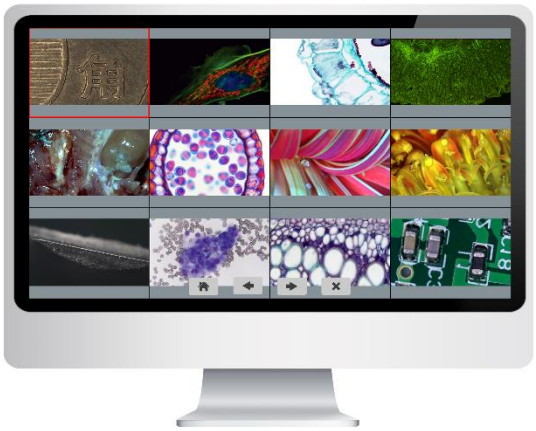

After 3D noise reduction

(4) 1080P Video Recording.
Just click “ ” to start recording 1080P videos at 30fps. The recorded video files will be saved to the high speed SD card directly. It is also allowed to play back the videos in the SD card directly.

(5) Get more Details with ROI Magnification Function.
A series image operation buttons on the right side of the screen allow to do the image flip, rotation and zoom. Zoom function can help you get more image details with a magnified image.

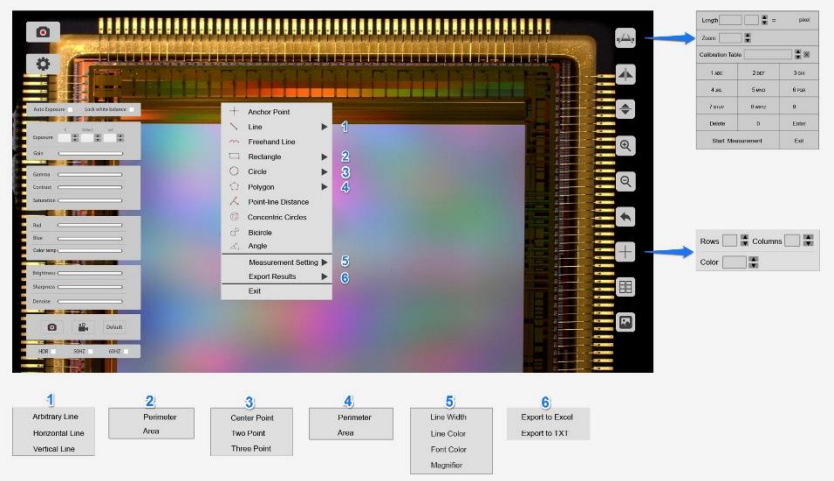
(6) Image Comparison Function.
The image comparison function is available in the setting menu. You can choose one image, even move the image position or select the ROI area to compare with the live images.





(7) Browse Captured Images.
All the captured images are saved in the SD card. The users can browse all the images in the SD card, zoom in images or delete unnecessary images. You also can review and play back the video files in the SD card directly.

(8) Measurement function when it is connected to LCD monitor.
When the camera is connected to PC, it is controlled by the software and has complete measurement and image analysis function. When it is connected to LCD monitor, BHC3-1080P has simple measurement function, only can measure line length. The BHC3-1080P PLUS has complete measurement function when it is connected to LCD monitor. Please see the following picture to know more about the measurement function of BHC3-1080P PLUS.



6. PC software.

Want to have a software with more powerful functions? Connect the camera to the PC via the USB2.0 port, the camera support Win XP, Win7/8/10, 32/64bit, MAC OSX operation system, driver free. The frame rate is 30fps(with 1080P resolution) when it is connected to PC. The application software Capture2.0, which integrate the remarkable functions like live and still image measurement, live EDF, live stitching, captured image stacking and stitching etc., can fully control the camera. We keep a copy of Capture2.0 in the SD card come with the camera.

Application

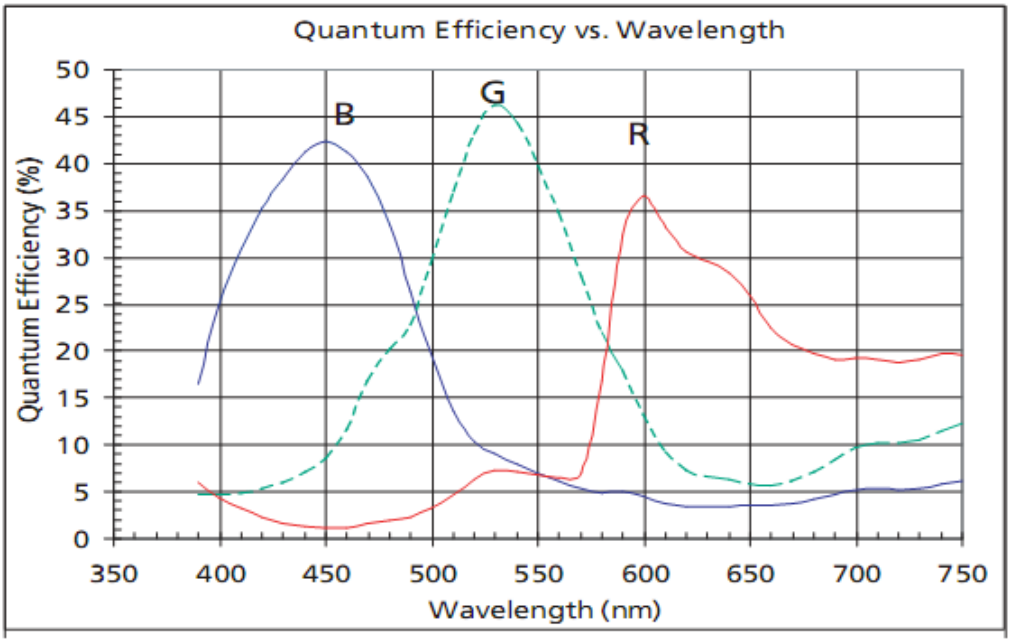
BHC3-1080P/1080P PLUS HDMI digital camera can be widely used in video conferencing, remote medical diagnosis, microscopy images, industrial inspection, video projectors, security monitoring field. With the high image quality and easy to operate features, it will be your best assistant for following applications:
1. Live Cell Imaging
2. Surgical Microscopic Imaging
3. Pathology

4. Cytology
5. Defect Analysis
6. Semiconductor Inspection
7. Metrology
8. Navigation for Processed Imaging
9. Industrial Optical HD Digital Imaging
10. Astronomical Observation

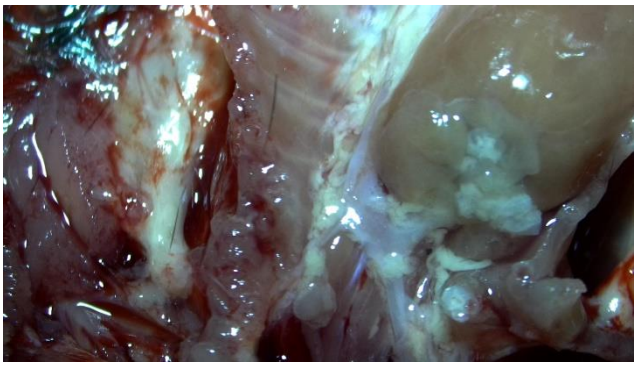
Specification

Model	BHC3-1080P	BHC3-1080P PLUS
Image Sensor	Colorful Sony IMX307 CMOS Sensor	Colorful Sony IMX307 CMOS Sensor
Chip Size	1/2.8"	1/2.8"
Pixel Size	2.8um × 2.8um	2.8um × 2.8um
Video Resolution	1920 × 1080	1920 × 1080
Captured Image Resolution	3264 × 1840 on SD card to LCD monitor, 1920 × 1080 and 3264 × 1840 with software to PC	3264 × 1840 on SD card to LCD monitor, 1920 × 1080 and 3264 × 1840 with software to PC
Preview Frame Rate	1920 × 1080 30fps via USB2.0 1920 × 1080 60fps via HDMI	1920 × 1080 30fps via USB2.0 1920 × 1080 60fps via HDMI
Data Record	High speed SD Card (8G)	High speed SD Card (8G)
Video Record	1080p 30fps @ SD Card 1080p 30fps @ PC	1080p 30fps @ SD Card 1080p 30fps @ PC
Scan Mode	Progressive	Progressive
Electronic Shutter	Electronic Rolling Shutter	Electronic Rolling Shutter
A/D conversion	8 bit	8 bit
Color Depth	24bit	24bit
Sensitivity	510mV	510mV
Dynamic Range	68dB	68dB
S/N ratio	52dB	52dB
Exposure time	0.001 sec ~ 10.0 sec	0.001 sec ~ 10.0 sec
Exposure	Automatic & Manual	Automatic & Manual
White balance	Automatic	Automatic
Settings	Gain, Gamma, Saturation, Contrast, scale bar function	Gain, Gamma, Saturation, Contrast, scale bar function
Measurement Function when connected to LCD Monitor	Simple measurement function, only line	Complete measurement function, including Anchor Point, Line, Freehand Line, Rectangle, Circle, Polygon, Point-line Distance, Concentric Circles, Bicircle, Angle etc.
PC software	Capture2.0	Capture2.0
Output model 1	USB2.0	USB2.0
Output model 2	HDMI	HDMI
System Compatible	Windows XP/Vista/Win 7/8/10(32 and 64-bit), MAC OSX	Windows XP/Vista/Win 7/8/10(32 and 64-bit), MAC OSX
Optical port	C- Mount	C- Mount
Power Supply	DC 12V /2A	DC 12V /2A
Working Temperature	0-60°C	0-60°C
Humidity	45%-85%	45%-85%
Storage Temperature	-20-70°C	-20-70°C
Dimension & Weight	78*70.8*90.7mm, 1kg	78*70.8*90.7mm, 1kg

Characteristic Curve of Photographic Transmission



Sample Images



(3) BHC3-1080AF Autofocus HDMI Digital Camera

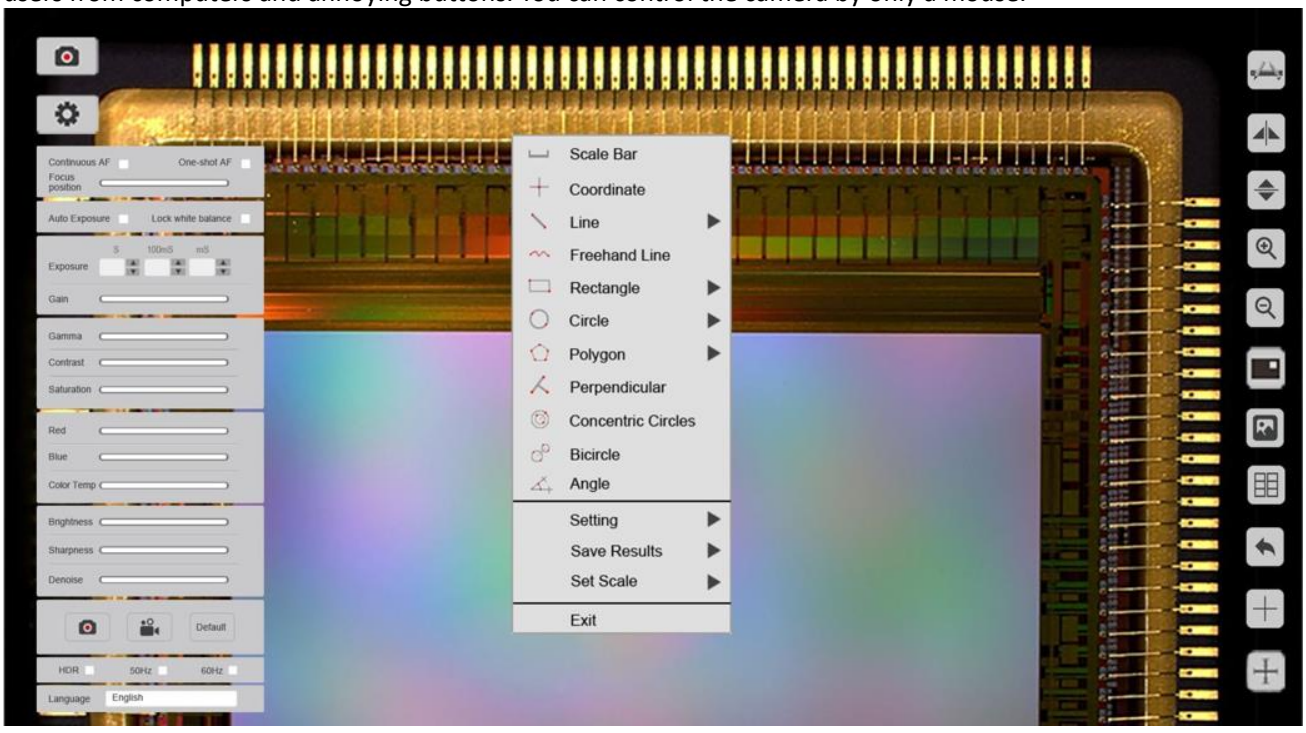
Introduction

BHC3-1080AF Autofocus HDMI Microscope Camera is a 1080P scientific grade digital camera that has ultra superior color reproduction and super fast frame speed. BHC3-1080AF can be connected to a LCD monitor or HD TV via HDMI cable and operated independently without connecting to PC. The image/video capture and operate can be controlled by mouse, so no shaking when you take images and videos. It also can be connected to a PC via USB2.0 cable and operate with the software. With fast frame speed and short responding time features, BHC3-1080AF can be used in many areas like microscopy imaging, machine vision and similar image processing fields.

Features

1. Built-in mouse control for autofocus and image measurement operations.

The significant innovation of BHC3-1080AF is making the software implant inside the camera. This feature liberates users from computers and annoying buttons. You can control the camera by only a mouse.



2. An unprecedented high-speed focusing experience.

BHC3-1080AF offers both continuous and single-shot autofocus modes. It also supports mouse wheel control for fine-tuning. Data transfer up to 60 frames per second enables users to get clear images with ease.

3. Record image and video to SD card.

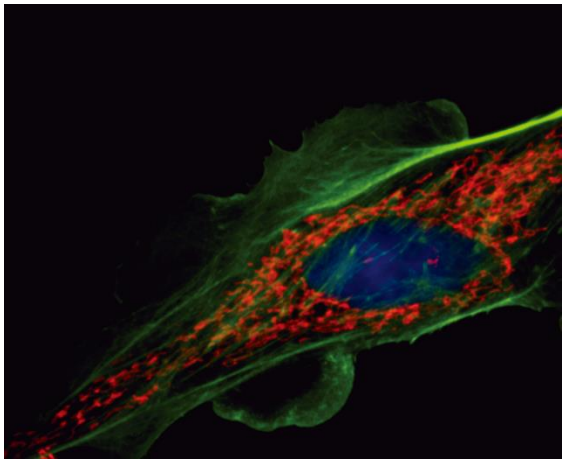
Capture images at 6.0MP resolution (3264 × 1836), record high definition videos at 30fps/1080P into the inserted SD card directly.

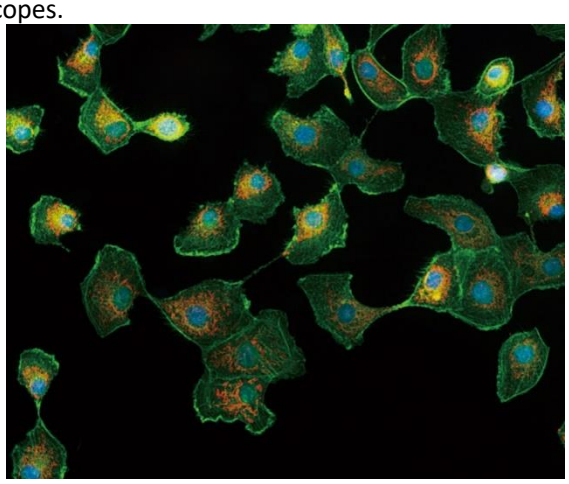
4. High frame rate upto 60fps.

With 60fps preview frame rate at resolution 1920x1080 when it is connected via HDMI interface.

5. HDMI Fluorescent imaging Capability.

Taking advantage of the ultra high signal-to-noise ratio sensor, BHC3-1080AF allows you to set up to 10 seconds exposure time. So it can be used with fluorescent microscopes.





6. The functions inside camera (Cloud 1.0)

(1) Simple to operate.
The implanted software is very simple to operate. There are only the icons on the software starting screen, one for capture, the other one for setting menu.

(3) Set Exposure Time Capability.
Based on the auto exposure, the first time, HDMI camera also has a full control of the exposure time and gain. It allows to set the exposure time from 1ms to up to 10 seconds and adjusts 20 scales of Gain value.

(3) 3D Noise Reduction.
The extension of the exposure increases the image noise. But the integrated 3D noise reduction function keeps the BHC3-1080AF image always clean and sharp. The following comparison images show the amazing 3D noise reduction effect.

Original image

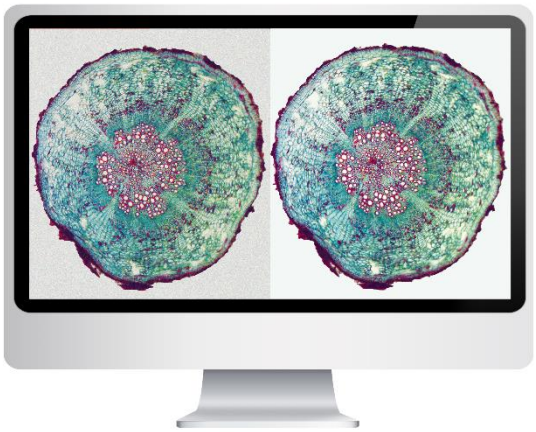
After 3D noise reduction

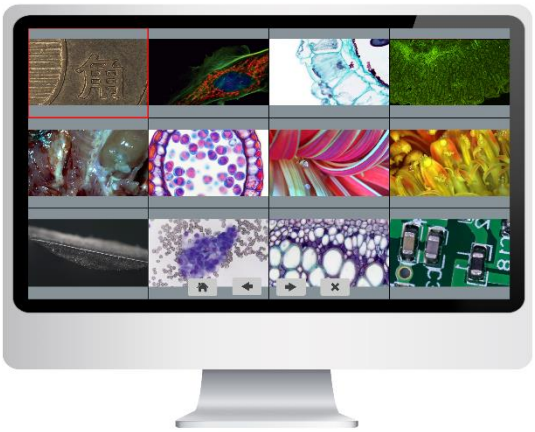
(4) 1080P Video Recording.

Just click “  ” to start recording 1080P videos at 30fps. The recorded video files will be saved to the high speed SD card directly. It is also allowed to play back the videos in the SD card directly.

(5) Get more Details with ROI Magnification Function.
A series image operation buttons on the right side of the screen allow to do the image flip, rotation and zoom. Zoom function can help you get more image details with a magnified image.

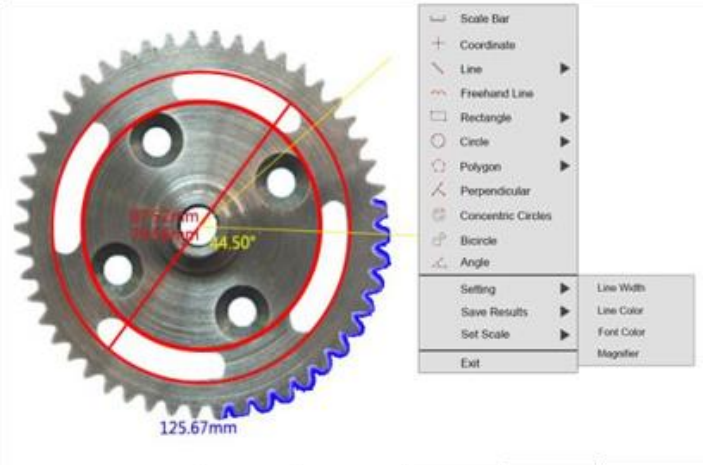
(6) Image Comparison Function.
The image comparison function is available in the setting menu. You can choose one image, even move the image position or select the ROI area to compare with the live images.





(7) Browse Captured Images.
All the captured images are saved in the SD card. The users can browse all the images in the SD card, zoom in images or delete unnecessary images. You also can review and play back the video files in the SD card directly.

(9) Measurement function when it is connected to LCD monitor.
When it is connected to LCD monitor, BHC3-1080AF provides extremely powerful measurement functions including freehand line, rectangle, polygon, circle, bicircle, angle, point-line distance and much more. Three different length units of micrometer, millimeter and centimeter are provided to meet various measurement requirements in different applications.



7. PC software.

Connect the camera to the PC via the USB2.0 port, the camera support Win XP, Win7/8/10, 32/64bit, MAC OSX operation system, driver free. The frame rate is 30fps(with 1080P resolution) when it is connected to PC. The

application software Capture2.0, which integrate the remarkable functions like live and still image measurement, live EDF, live stitching, captured image stacking and stitching etc., can fully control the camera. We keep a copy of Capture2.0 in the SD card come with the camera.

Application

BHC3-1080AF HDMI digital camera can be widely used in video conferencing, remote medical diagnosis, microscopy images, industrial inspection, video projectors, security monitoring field. With the high image quality and easy to operate features, it will be your best assistant for following applications:

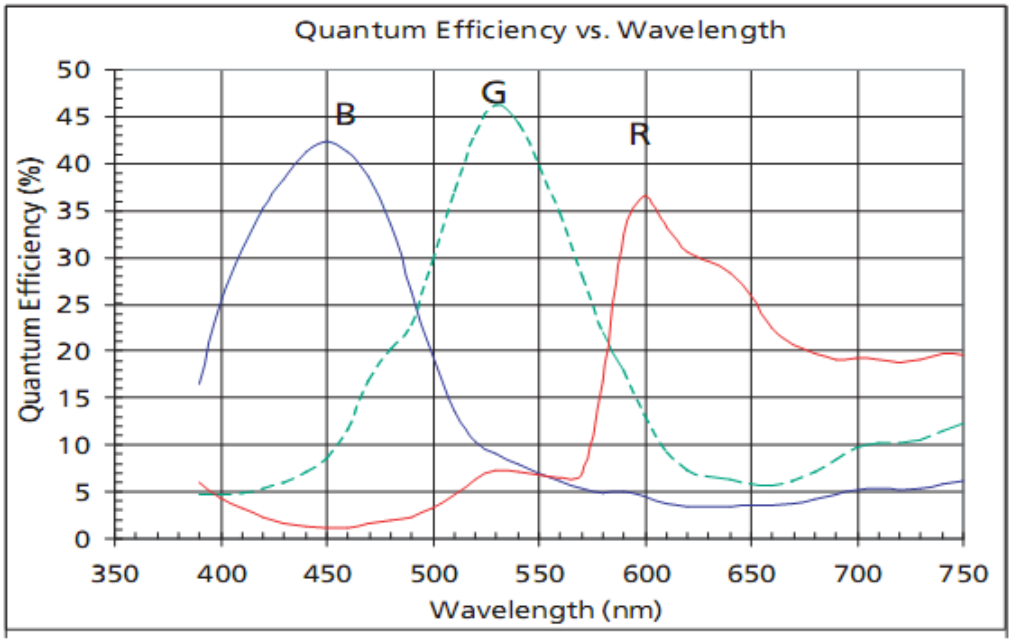
1. Live Cell Imaging
2. Surgical Microscopic Imaging
3. Pathology
4. Cytology
5. Defect Analysis
6. Semiconductor Inspection
7. Metrology
8. Navigation for Processed Imaging
9. Industrial Optical HD Digital Imaging
10. Astronomical Observation

Specification

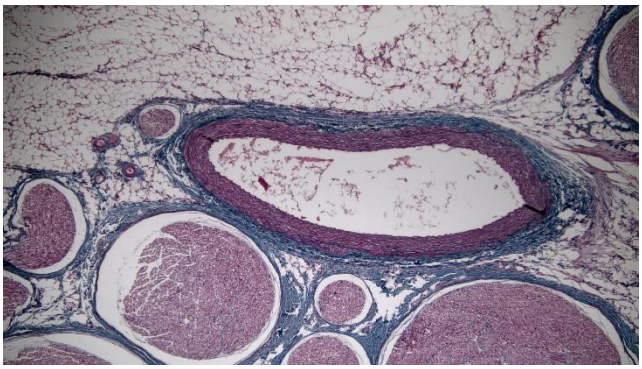
Model	BHC3-1080AF
Image Sensor	Sony IMX307 color CMOS Sensor
Chip Size	1/2.8"
Pixel Size	2.8um × 2.8um
Video Resolution	1920 × 1080
Captured Image Resolution	3264 × 1836 on SD card to LCD monitor, 1920 × 1080 and 3264 × 1836 with software to PC
Preview Frame Rate	1920 × 1080 30fps via USB2.0 1920 × 1080 60fps via HDMI
Data Record	High speed SD Card (8G)
Video Record	1080p 30fps @ SD Card 1080p 30fps @ PC
Scan Mode	Progressive
Electronic Shutter	Electronic Rolling Shutter
A/D conversion	8 bit
Color Depth	24bit
Sensitivity	510mV
Dynamic Range	68dB
S/N ratio	52dB
Exposure time	0.001 sec ~ 10.0 sec
Exposure	Automatic & Manual
White balance	Automatic
Settings	Exposure time, Gain, Gamma, Contrast, Saturation, Color, Color Temperature, Brightness, Sharpness, Noise Reduction, HDR, scale bar function
Measurement Function when connected to LCD Monitor	Complete measurement function, including Anchor Point, Line, Freehand Line, Rectangle, Circle, Polygon, Point-line Distance, Concentric Circles, Bicircle, Angle etc.
PC software	Capture2.0
Output model 1	USB2.0
Output model 2	HDMI
System Compatible	Windows XP/Vista/Win 7/8/10(32 and 64-bit), MAC OSX (Real-time image stitching needs to run on a 64-bit system)

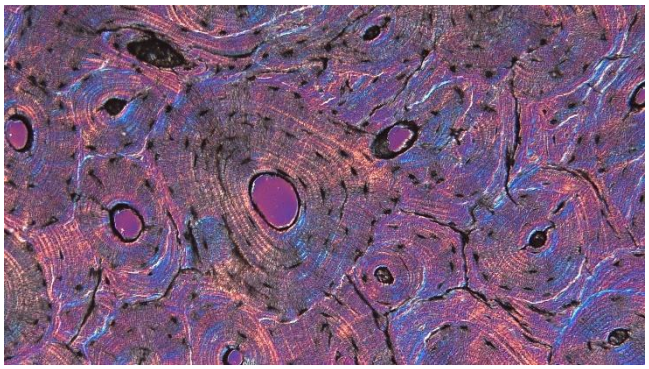
Optical port	C- Mount
Power Supply	DC 12V /2A
Working Temperature	0-60°C
Humidity	45%-85%
Storage Temperature	-20-70°C
Dimension & Weight	78*70.8*90.7mm, 452g

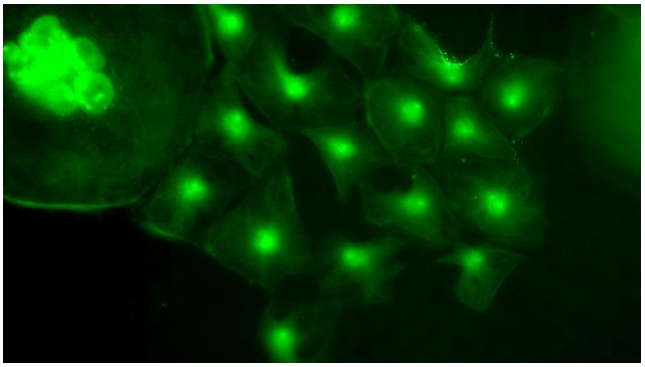
Characteristic Curve of Photographic Transmission

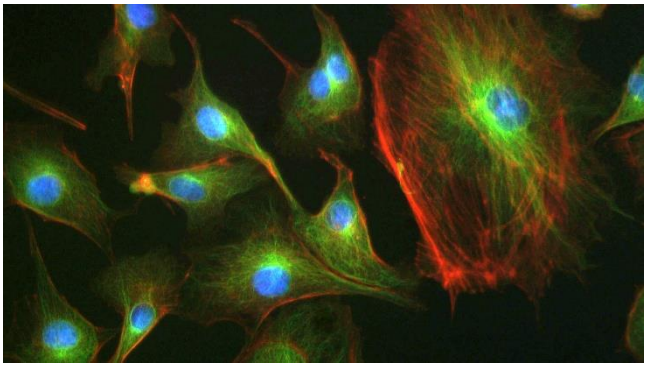


Sample Images









(4) BHC4-1080P HDMI+USB Digital Camera

Introduction

BHC4-1080P is a multiple interfaces (HDMI+USB2.0+SD card) CMOS camera and it adopts ultra-high performance Sony IMX236 CMOS sensor as the image capture device. HDMI+USB2.0 are used as the data transfer interface to HDMI display or computer.

For HDMI output, The XCamView will be loaded and a camera control panel and toolbar are overlaid on the HDMI screen, in this case, the USB mouse can be used to set the camera, browse and compare the captured image, play the video ital.

For USB2.0 output, unplug the mouse and plug in the USB2.0 cable to the camera and computer, then the video stream can be transfer to computer with the advanced software ImageView. With ImageView, you can control the camera, process the image as other USB series camera.

Features

The BHC4-1080P's basic characteristic is as follows:

1. All in 1(HDMI+USB+SD card) C-mount camera with Sony high sensitivity CMOS sensor;

2. Simultaneous HDMI & USB output;

3. CNC precision machining shell;

4. Built-in mouse control;

5. Built-in image capture & video record to SD card;

6. Built-in camera control panel, including exposure(manual/auto)/gain, white balance(lockable), color adjustment, sharpness and denoising control;

7. Built-in toolbar including zoom, mirror, comparison, freeze, cross, browser functions;

8. Built-in image & video browsing, display & play;

9. Ultra-Fine color engine with perfect color reproduction capability(USB);

10. With advanced video & image processing application ImageView, which including professional image processing such as 2D measurement, HDR, image stitching, EDF(Extended Depth of Focus), image segmentation & count, image stacking, color composite and denoising(USB);

11. Support standard UVC for Windows/Linux/Mac(USB).

Application

The possible applications of BHC4-1080P are as follows:

1. Scientific research, education (teaching, demonstration and academic exchanges);
2. Digital laboratory, medical research;
3. Industrial visual (PCB examination, IC quality control);
4. Medical treatment (pathological observation);
5. Food (microbial colony observation and counting);
6. Aerospace, military (high sophisticated weapons).

Specification

Order Code	Sensor & Size(mm)	Pixel(μm)	G Sensitivity Dark Signal	FPS/Resolution	Binning	Exposure
BHC4-1080P	1080P/Sony IMX236 1/2.8"(5.38x3.02)	2.8x2.8	510 mv with 1/30s 0.15 mv with 1/30s	30@1920X1080(HDMI) 30@1920X1080(USB)	1x1	0.1ms~999ms

C: Color; M: Monochrome;

Interface & Button Functions		
	USB	USB Camera or USB Mouse
	HDMI	HDMI Output
	DC12V	12V Power in
	SD	SD Card Slot
	ON/OFF	Power On/off Switch

Other Specification for HDMI Output	
UI Operation	With USB Mouse
Image Capture	High Speed in SD Card(8G)
Video Record	1080P 30fps in SD Card(8G)
Camera Control Panel	Including Exposure, Gain, White Balance, Color Adjustment, Sharpness and Denoising Control
Toolbar	Including Zoom, Mirror, Comparison, Freeze, Cross, Browser Function

Other Specification for USB Output	
White Balance	Auto White Balance
Color Technique	Ultra-Fine™ Color Engine (USB)
Capture/Control API	Standard UVC for Windows/Linux/Mac(USB)
Recording System	Still Picture or Movie (USB)

Software Environment (for USB2.0 Connection)	
Operating System	Microsoft® Windows® XP / Vista / 7 / 8 / 8.1 /10(32 & 64 bit) OSx(Mac OS X) Linux
PC Requirements	CPU: Equal to Intel Core2 2.8GHz or Higher
	Memory:4GB or More
	USB Port:USB2.0 High-speed Port
	Display:19" or Larger
	CD-ROM

Operating Environment

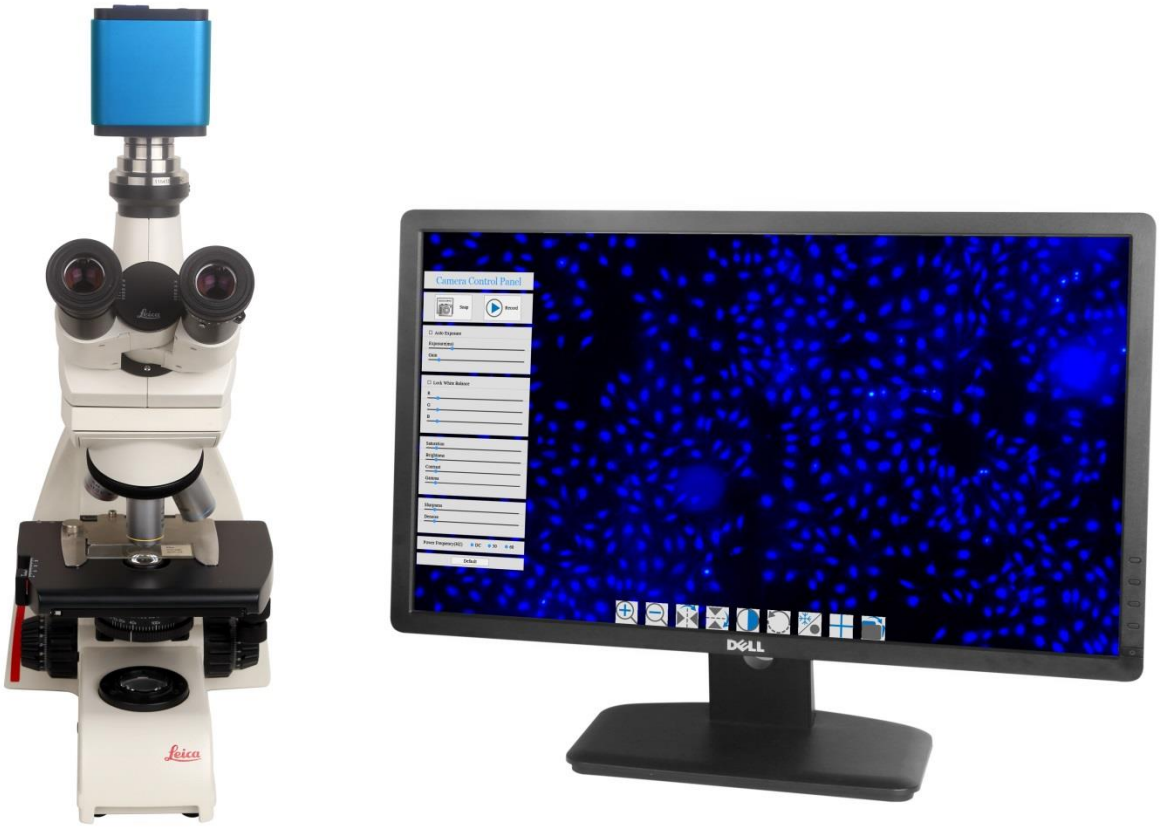
Operating Temperature(in Centigrade)	-10~ 50
Storage Temperature(in Centigrade)	-20~ 60
Operating Humidity	30~80%RH
Storage Humidity	10~60%RH
Power Supply	DC 12V/1A Adapter

BHC4-1080P and Microscope

BHC4-1080P and Its Back Panel

Different Views of BHC4-1080P

BHC4-1080P and Microscope



BHC4-1080P+ Microscope+Display

XCamView UI for Mouse Control

Dimension of BHC4-1080P

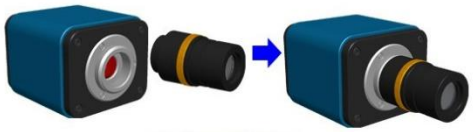
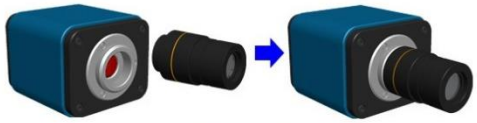
Dimension of BHC4-1080P

Packing Information for BHC4-1080P

Packing Information of BHC4-1080P

Standard Packing List		
A	Gift box : L:25.5cm W:17.0cm H:19.0cm (1pcs, 1.55kg/ box)	
B	BHC4-1080P camera	
C	Power Adapter: Input: AC 100~240V 50Hz/60Hz, Output: DC 12V 1A American standard: Model: GS12U12-P1I 12W/12V/1A: UL/CUL/BSMI/CB/FCC EMI Standard:EN55022,EN61204-3, EN61000-3-2,-3, FCC Part 152 class B, BSMI CNS14338 EMS Standard:EN61000-4-2,3,4,5,6,8,11,EN61204-3,Class A Light Industry Standard European standard:Model:GS12E12-P1I 12W/12V/1A; TUV(GS)/CB/CE/ROHS EMI Standard:EN55022,EN61204-3, EN61000-3-2,-3, FCC Part 152 class B, BSMI CNS14338 EMS Standard:EN61000-4-2,3,4,5,6,8,11,EN61204-3,Class A Light Industry Standard	
D	HDMI Cable	
E	USB Mouse	
F	High-speed USB2.0 A male to A male gold-plated connectors cable /2.0m	
G	CD (Driver & utilities software, Ø12cm)	
Optional Accessory		
H	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)
I	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 H and I 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.	
J	108015(Dia.23.2mm to 30.0mm Ring)/Adapter rings for 30mm eyepiece tube	
K	108016(Dia.23.2mm to 30.5mm Ring)/ Adapter rings for 30.5mm eyepiece tube	
L	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.)
M	SD Card(4G or 8G)	

Extension of BHC4-1080P 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 Adapter)  (23.2mm Adapter)	
Telescope Camera	 (31.75mm Adapter)  (31.75mm Adapter)	

(5) HDS800C 4K UHD HDMI Camera

Introduction

As the 4k resolution UHD Screen is more and more popular,1080p HDMI cameras seems can not be effectively use the screen to show the image details. Based on the latest HD high speed CMOS image sensor, the FPGA hardware image processor and HDMI V1.4 standard, our company released the HDS800C 4k UHD HDMI industry camera.

The camera adopts high sensitive 1/1.9 inch(pixel size 1.85um) 8.0 Mega pixel color CMOS image sensor, the sensor has high dynamic range, high sensitivity and excellent thermal noise suppression features. The camera can be connected to 4K UHD Screen to preview and real-time capture the BMP&RAW image to TF card(mini SD card), it support Max. 64GB TF card. The camera is plug and play. The 4k UHD camera can ensure every detail is not to be missed. The camera can not take videos, if you want to take videos, the cameras should be connected with HDMI image acquisition card, The cameras can take both images and videos when they are connected to image acquisition card. The cameras comes with IR remote controller, no shaking when take pictures.

Features

1. High resolution. The 4K UHD cameras output 4k resolution(3840 x 2160), the resolution is four times as large as 1080p cameras.
2. High speed frame rate(Max. 30fps), no compression, no interpolation, Max. Transmission bandwidth is 5.97 Gb/s.
3. Equipped with IR remote control, which can realize fast parameter adjustment, support hardware auto white balance, auto exposure, 2800k\5000k\6500k color correction, two groups of cross line adjustment, Image flip, mirror, freeze, capture, preview, parameter saving and other functions.
4. Support the firmware updated by TF card.
5. CNC processed aluminum alloy casing, industrial standard circuit board, precise and reliable. Provide 3 years warranty.

Application

HDS800C 4K UHD HDMI digital camera can be widely used in video conferencing, remote medical diagnosis, microscopy images, industrial inspection, video projectors, security monitoring field. With the high image quality and easy to operate features, it will be your best assistant for following applications:

1. Live Cell Imaging
2. Surgical Microscopic Imaging
3. Pathology
4. Cytology

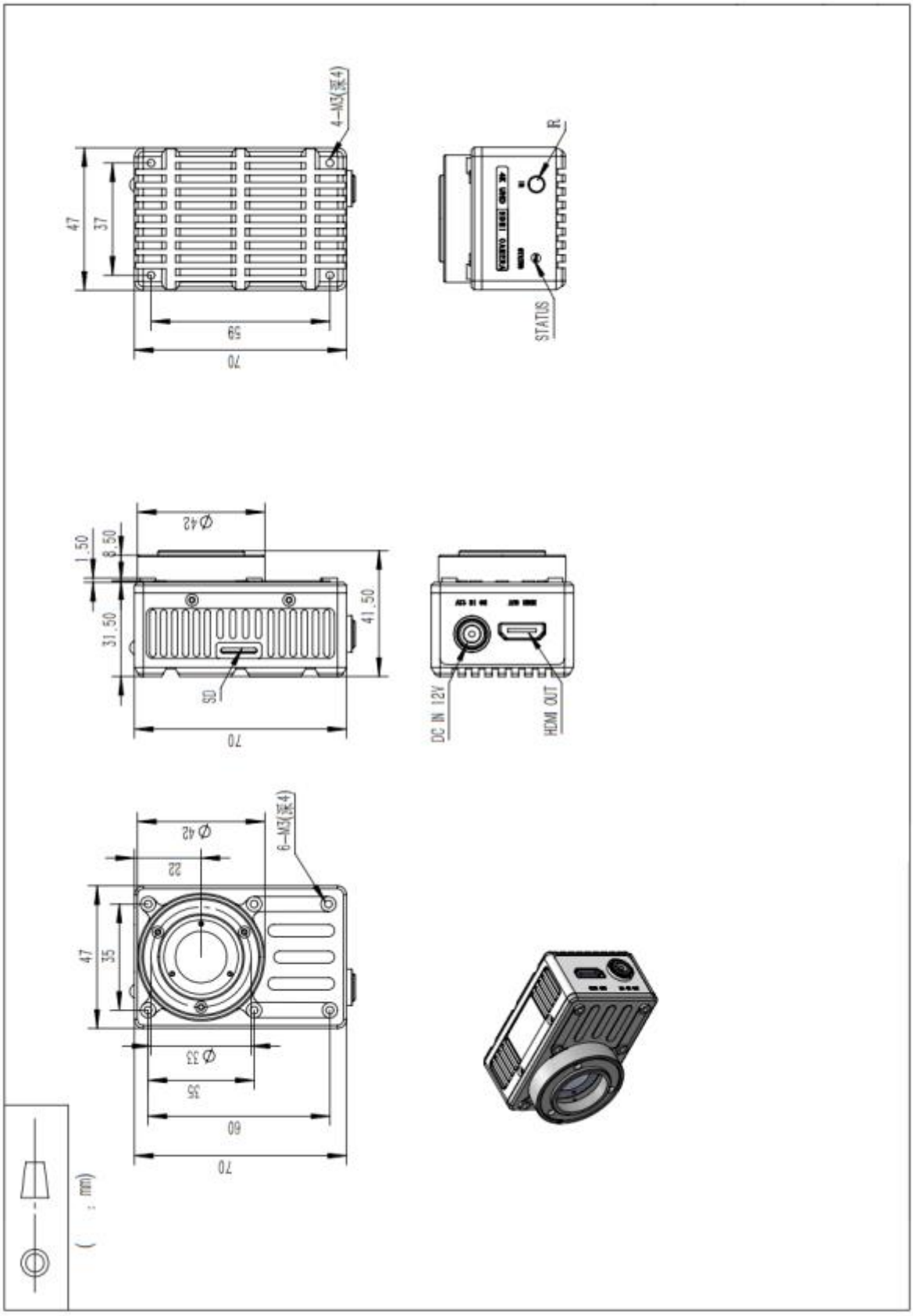
5. Defect Analysis
6. Semiconductor Inspection
7. Metrology
8. Navigation for Processed Imaging
9. Industrial Optical HD Digital Imaging
10. Astronomical Observation

Specification

Model	HDS800C
Resolution	8.0MP
Max FPS	4K@30FPS / 1080P@60FPS
Sensor Type	1/1.9" CMOS
Shutter	Rolling
Color	Color
Pixel Size	1.85μm
Max Resolution	4K(3840X2160)
Image Format	BMP / RAW
Function	BMP image Capture, Preview, Freeze, Mirror, Flip, Cross line, AWB, AE, Gain, Color temperature preset, Parameter save, Resolution switching, Restore Setting and other functions.
Interface	HDMI v1.4
Memory	TF Card Max. 64Gb
Input Power	DC 12V 2A
Lens	C-mount
Dimension	47x70x31 mm
Weight	168 g
Accessories	IR Remote Controller *1, 12V 2A Power Supply*1, HDMI Cable*1

IR Remote Controller

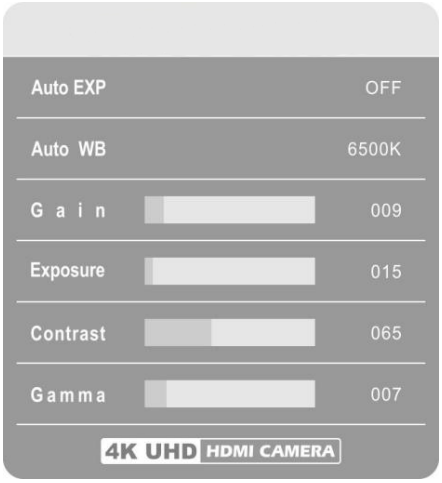
Dimension


4-M3(深4)
47
37
59
70
IR
STATUS
Ø42
1.50
8.50
31.50
41.50
SD
70
DC IN 12V
HDMI OUT
6-M3(深4)
Ø42
22
47
35
Ø33
35
60
70
(: mm)

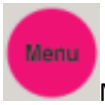
Operation Instruction

Connect the display with 4K Camera through HDMI interface. Plug the power supply and boot the camera, the screen will show objective's image when lens aims at it. User can control 4K Camera and carry on following operations by using remote controller. (Be aware to pull out the separator paper while using the remote controller for the first time).

User can press the Menu button to add a OSD on the screen, and show the current parameters and status.



1. The meaning of the IR Remote Controller Parameters



Menu, The menu shown at the lower right corner of the screen.

Image Capture, Screen prompts the icon 

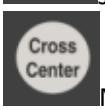
Browse the image from TF card/preview, Screen prompts the icon 

Flip, Screen prompts the icon 

Mirror, Screen prompts the icon 

first group Cross line

second group Cross line



Make the selected cross line in the center

Auto exposure, Screen prompts the icon 

Auto White balance, Screen prompts the icon 

Preview Freeze, Screen prompts the icon 

Do the color correction under the 2800k color temperature, Screen prompts the icon 

Do the color correction under the 5000k color temperature, Screen prompts the icon 

Do the color correction under the 6500k color temperature, Screen prompts the icon 

Parameter saving, Screen prompts the icon 

4k or 1080P mode switching

Restore setting, Screen prompts the icon 


Move up

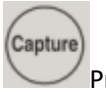

Move down


Move left


Move right

2. The operation of the IR Remote Controller

Capture



Press capture button to capture one image to the TF card as the BMP & RAW format.

Freeze

Press freeze button to freeze the current image, press once again can back to normal.

Mirror

Mirroring the image, press again can back to normal.

Flip

Flip the image, press again can back to normal

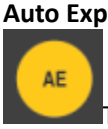
Preview

Press the preview button 

, the Image will be displayed on the screen from TF card. Press“move left 
” and “move right 
” button to select the correct image. Press the preview 

button again can back to normal preview.

Auto Exposure

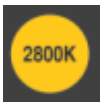


The camera automatically adjusts the brightness as the ambient light changes to achieve the best possible visual effect.

Auto White Balance

The camera performs a white balance operation based on the current color temperature of the light source.

Color correction



Do the color correction under the 2800k color temperature.

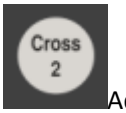
Do the color correction under the 5000k color temperature.

Do the color correction under the 6500k color temperature.

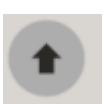
Cross Line adjustment

4K Camera can display 2 groups of cross lines and adjust their position.

Add the first group cross line, press again to hide it.



Add the second group cross line, press again to hide it.


cross line move left; 
cross line move right; 
cross line move up;

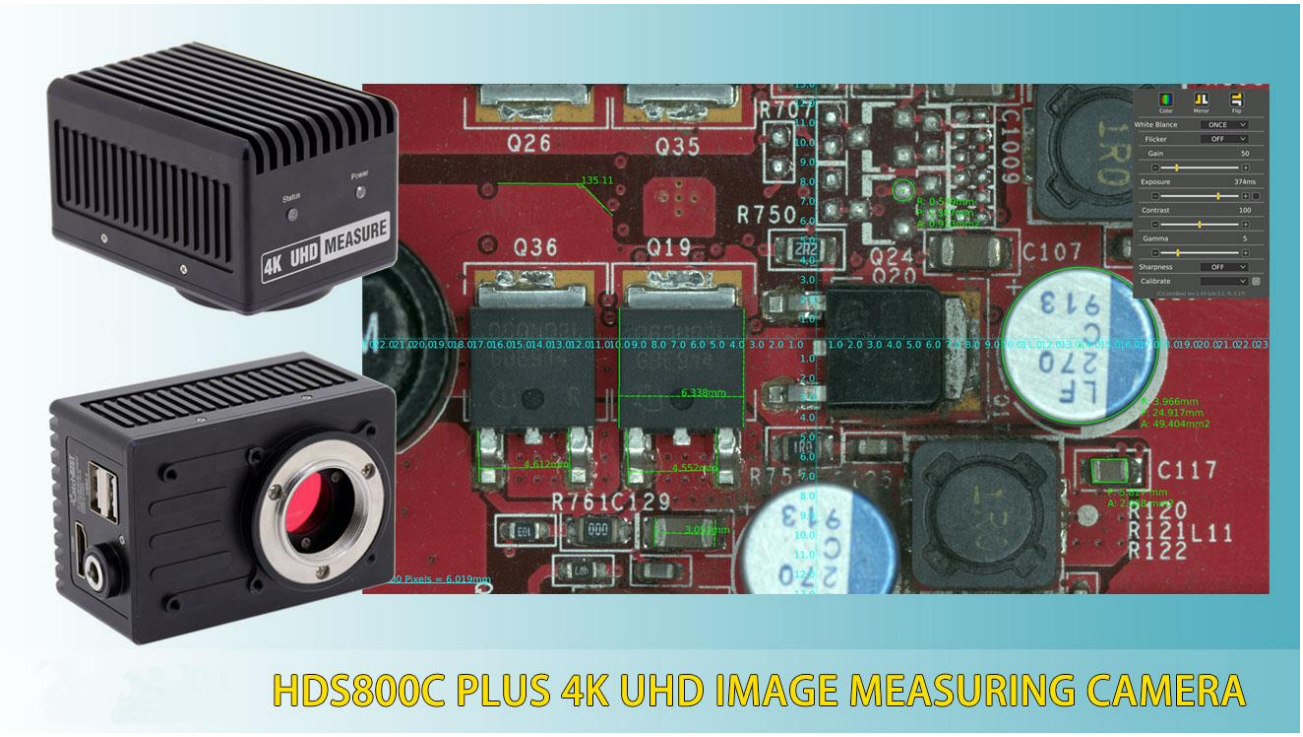

cross line move down.

Make the selected cross line in the center.

Mode switching

4k or 1080P mode switching.

(6) HDS800C PLUS 4K UHD Image Measuring Camera



Introduction

As the 4K resolution UHD Screen become more and more popular, HDMI camera with 1080P resolution cannot effectively take advantage of 4K HD displays to show the fineness of images. Based on the latest HD high speed CMOS image sensor, the FPGA hardware image processing and HDMI V1.4 version interface regulation, we have released the HDS800C PLUS 4K UHD HDMI image Measuring camera.

HDS800C PLUS 4K UHD image Measuring camera has adopted high sensitivity 1/1.9 inch 8.3MP Sony CMOS image sensor, pixel size 1.85um, the camera has high dynamic range, high sensitivity and excellent thermal noise suppression features. The camera outputs 4K resolution of 3840 x2160 pixels, the resolution is 4 times as 1080P cameras, maximum frame rate is 30fps, no compression, no interpolation, transmission bandwidth is 5.97 Gb/s. The Camera can be connected to 4K UHD Screen via HDMI interface, it also can be connected to HDMI image acquisition card, support plug and play. The captured images will be saved to USB flash drive with BMP format, the camera supports USB flash drive up to 32 GB. 4K UHD Measure camera can ensure every detail is not to be missed.

HDS800C PLUS has been upgraded on the basis of HDS800C and can be controlled by a wireless mouse, the operation is simple and quick, a variety of parameters can be quickly adjusted, like cross hair overlay, image flip, freezing, captured images playback. This camera has been updated with many measurement functions, like point, line, circle, rectangle, annulus, polygon, polyline, angle, double circle, distance from point to line, concentric circles and so on. It can realize precise measurement of line, distance from point to line, angle, length, circumference, area at micron levels.

In addition to the basic millimeter, HDS800C PLUS also supports measurement of micrometers, centimeters, inches and other units of length, which can fully meet the diversified measurement demands of users from different countries and regions in diverse applications, providing intuitive and reliable data for users' quantitative analysis. HDS800C PLUS can save the measurement data in EXCEL and TXT format, which can realize the convenience and efficiency of data management.

This camera has the new function of importing CAD format image files. Customers can use CAD images as templates to compare and analyze with real-time images.

Application

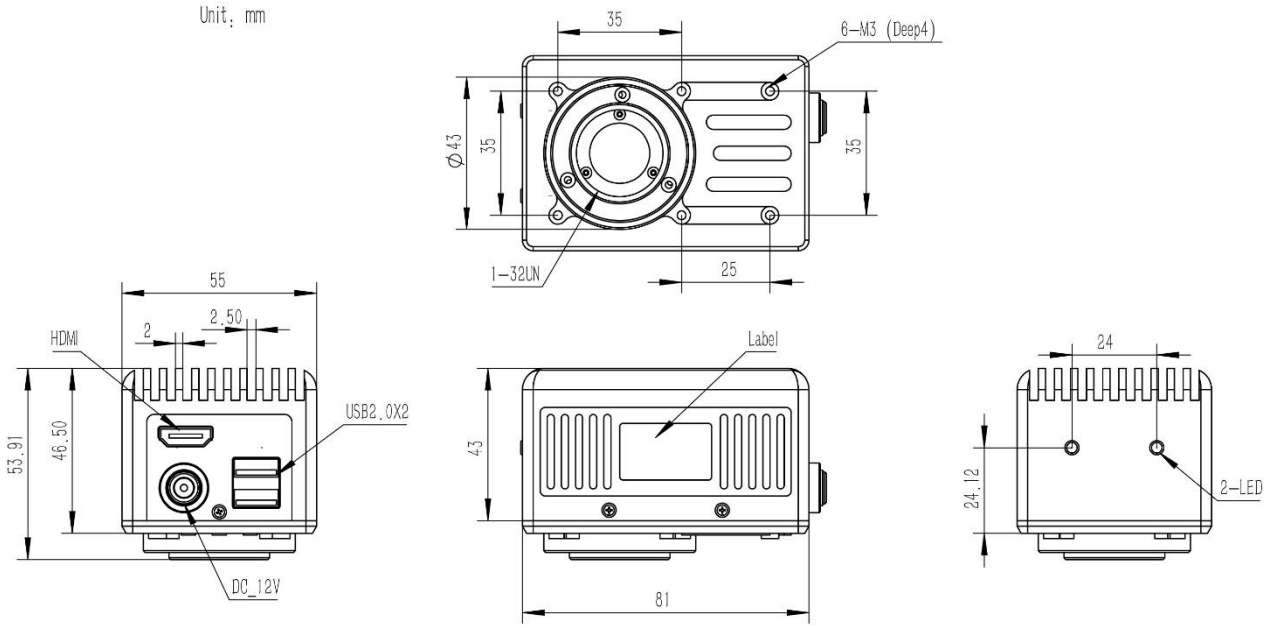
HDS800C Plus 4K UHD HDMI digital camera can be widely used in video conferencing, remote medical diagnosis, microscopy images, industrial inspection, video projectors, security monitoring field. With the high image quality and easy to operate features, it will be your best assistant for following applications:

1. Live Cell Imaging
2. Surgical Microscopic Imaging
3. Pathology
4. Cytology
5. Defect Analysis
6. Semiconductor Inspection
7. Electronics and circuit board inspection
8. Metrology
9. Navigation for Processed Imaging
10. Industrial Optical HD Digital Imaging
11. Astronomical Observation

Parameters

Model	HDS800C PLUS
Resolution	8.3MP
Max FPS	30FPS @4K（3840 × 2160）
Sensor Type	1/1.9" CMOS sensor (Sony IMX226)
Shutter	Rolling
Color	Color
Pixel Size	1.85μm
Max Resolution	4K(3840 × 2160)
Function	measurement, edit measurement, system setting, calibration, image freeze/display, BMP image capture, image playback, measurement results export, choose language, image gray/color mode switch, mirror, flip, automatic white balance, automatic/manual exposure, gain, contrast, Gamma value, sharpness, choice of scale, undo/redo, restore to the default values, etc
Measure Function	Point, arbitrary line, circle, rectangle, annulus, polygon, polyline, angle, double circle, distance from point to line, concentric circle, Import DXF files and other extended functions etc.
Interface	HDMI v1.4 × 1, USB2.0 × 2, 12V DC In × 1
Memory	USB Flash Drive, support up to 32GB（FAT32 format）
Input Power Supply	DC 12V/2A
Lens Mount	C-mount
Camera Dimension	81×55×43mm
Weight	168 g
Accessories	12V 2A Power Supply Adapter × 1，HDMI Cable × 1

Dimensions


Unit: mm
35
6-M3 (Deep4)
Φ43
35
35
1-32UN
25
55
2.50
2
HDMI
USB2.0X2
53.91
46.50
DC_12V
Label
43
81
24
24.12
2-LED

8. BLC Series LCD Digital Camera

(1) BLC-350 PLUS Tablet Digital Camera

BLC-350 PLUS is a new generation tablet camera with latest technology. Equipped with international standard C-type interface, it can be conveniently thread on C-mount coupler and eyepiece adapter. It is compatible with the monocular, binocular, trinocular and any kind of microscopes, such as biological, stereo, video, polarizing, metallurgical microscopes or telescopes.

Features

1. Complete Application Functions, Not Only Camera, Also Tablet PC!
2. High Resolution Image Sensor, Good Color Rendition and Definition, 1/2.5 " CMOS Sensor, 2592*1936.
3. Captured Image Resolution is 4032*3024 (Max, by interpolation).
4. 9.7inch 2048*1536 HD Color Retinal LCD, Can be Operated by USB Keyboard and Mouse.
5. Android 5.1Operating System.
6. RK3288 Quad Core 1.8Hz CPU.
7. External 32G C10 High-speed TF Memory Card.
8. Wi-Fi and Bluetooth Ready.
9. Build-in Microscopy Software for Capture/Record Images and Measurement.
10. Standard C-mount Interface.

Parameters

Tablet Specification

Hardware	CPU	RK3288 Quad Core 1.8Hz
	Display	9.7inches 2048*1536 Color LCD, 5points Capacitance Touch Screen
	Storage	RAM 2GB DDR3
		ROM 8GB
		Support External TF Memory Card, Maximum Capacity Up to 32GB
	Camera	Frame Rate: 30pfs(Max)
Housing	Housing	Abs+ Metal Housing, Metal Stand

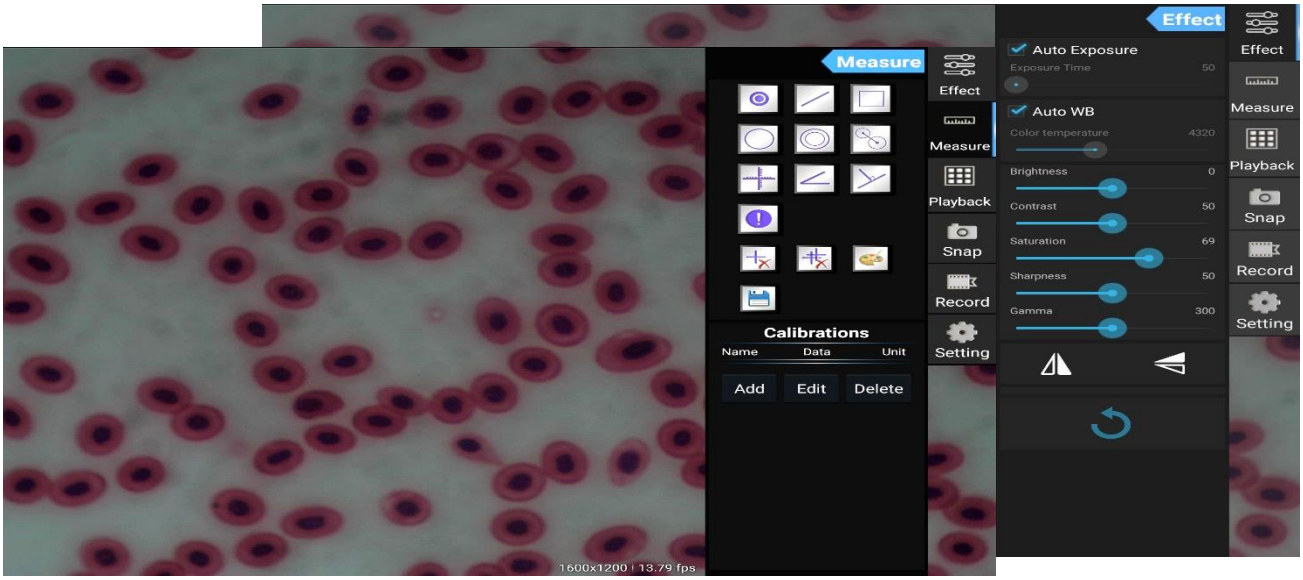
Abs+ PC Plastic Housing+ Aluminum Back Case, Metal Stand	Network	WI-FI
		Bluetooth
	I/O	USB/Mini-USB(OTG), Support USB Keyboard and Mouse
		TF Memory Card Slot
		DC12V 2A Power
		Built-in Microphone
		On/Off Button
		HDMI Output
Software	Operating System	Android 5.1
	Banding Software	Build-in Microscopy Software

Build-in Camera Specification

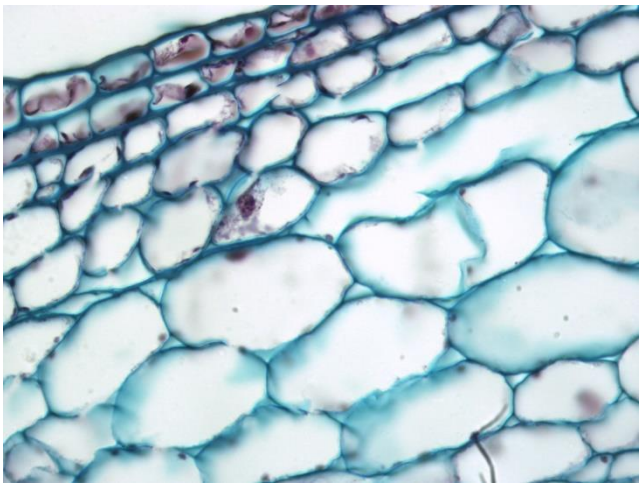
Sensor Size	1/2.5-inch (4:3),
	5.70mm(H) *4.28mm(V)
	7.13mm(diagonal)
Active Pixels	2592H*1944
Pixel Size	2.2um *2.2um
Captured Image Resolution	4032*3024 (Max, by interpolation)
Preview Frame Rate	30fps @1024*768; 15fps@2048*1536/1600*1200
Video Resolution	1024*768
Dynamic Range	66.5dB
SNR	40.5dB
A/D Converter	12-bit, On-chip
Sensitivity	0.53V/lux-sec (550nm)
Shutter	Electronic Rolling Shutter (ERS)
White Balance	Auto/Manual
Exposure Model	Auto/Manual
Parameter Adjustment	Brightness/ Contrast/ Saturation/ Sharpness /Gamma Adjustment
Flip and Mirror Functions	Rotate the Image Horizontally or Vertically

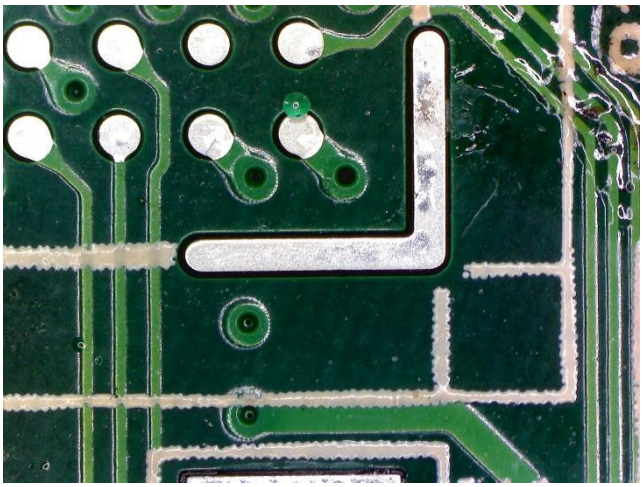
Build-in Microscopy Software

Real-Time Measurement Software for Android



Sample Images





(2) BLC-450 HD LCD Digital Camera

Introduction

BLC-450 HD LCD Digital Camera is a brand new high performance and highly cost-effective, super reliable HD LCD camera which combines an full HD camera and a retina HD LCD screen. With the built-in software, the BLC-450 can be controlled by a mouse to take pictures, take videos and save to SD card.

Feature

1. Control camera with mouse from USB port, no shaking.
2. 11.6” retina HD LCD Screen, high definition and high quality color reproduction.
3. 5.0MP still image capture and 1080P Video Recording.
4. Save image and video to SD card.
5. Also can be connected to PC and take picture, take video, do measurement and analyze images.
6. Standard C-mount Interface for different microscopes.

Application

BLC-450 HDMI LCD digital camera is specifically developed for different microscopy applications. It can be widely used in medical diagnosis, industrial production and inspection, laboratory research and related microscopy field for image, video capture and analysis. It is mainly used for following areas:

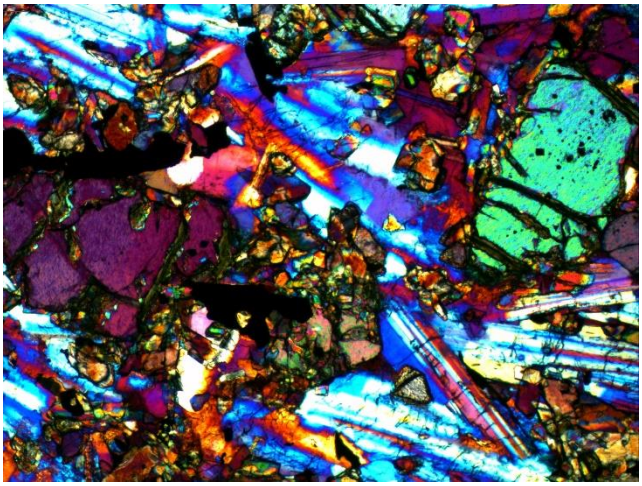
1. Biological Teaching Digital Imaging
2. Live Cell Imaging
3. Surgical Microscopic Imaging
4. Pathology
5. Cytology
6. Defect Analysis
7. Semiconductor Inspection
8. Navigation for Processed Imaging
9. Industrial Optical HD Digital Imaging
10. Astronomical Observation

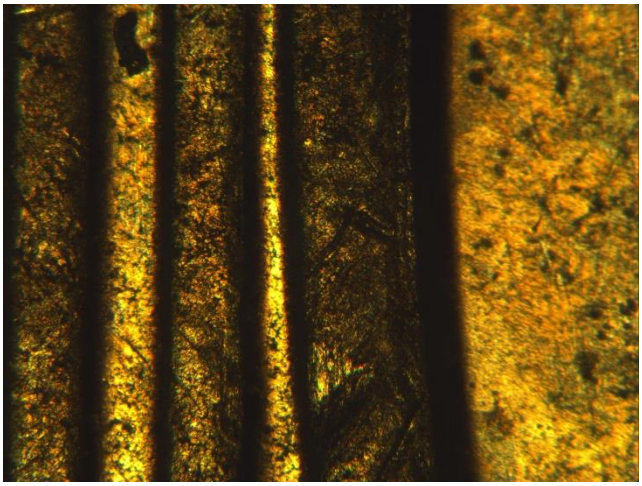
Specification

HDMI Camera	Image Sensor	CMOS, Aptina MT9P031
	Sensor Size	1/2.5"
	Video Resolution	1920 × 1080
	Image Resolution	2592 × 1944

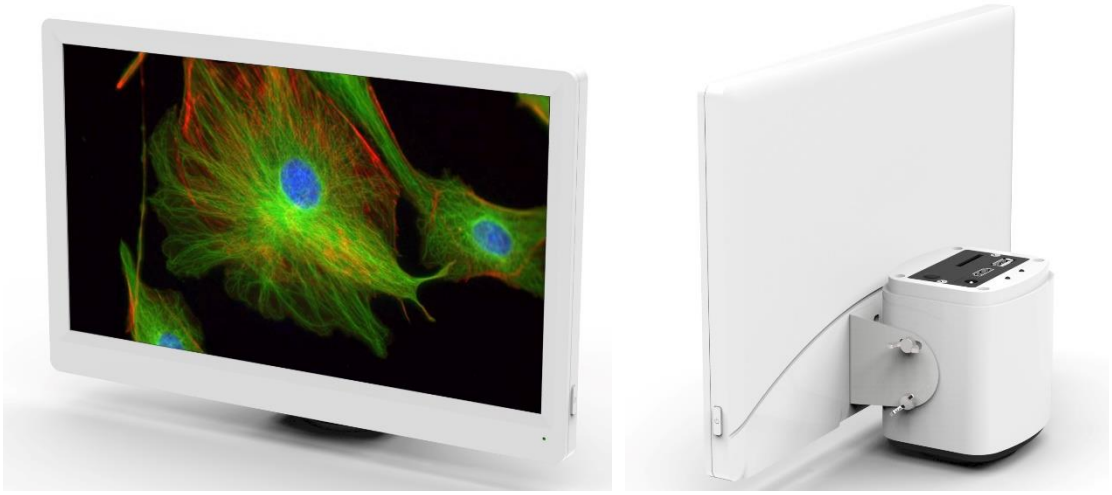
	Frame Rate	1920 × 1080 15fps via USB2.0 1920 × 1080 15fps via HDMI
	Data Record	SD Card (4G)
	Video Record	1080p 15fps @ SD Card 1080p 15fps @ PC
	Scan Mode	Progressive
	Electronic Shutter	Electronic Rolling Shutter
	A/D conversion	8 bit
	Color Depth	24bit
	Sensitivity	510mV
	Dynamic Range	60dB
	S/N ratio	40.5dB
	Exposure time	0.001 sec ~ 10.0 sec
	Exposure	Auto/Manual
	White balance	Auto
	Settings	Gain,Gamma,Saturation,Contrast
	Built- in software	Cloud 1.0 version
	PC software	Capture2.0
	Output model 1	USB2.0
	Output model 2	HDMI
	System Compatible	Windows XP/Vista/Win 7/Win 8/10(32 and 64-bit), MAC OSX
	Optical port	C- Mount
	Power Supply	DC 12V /2A
	Operational Temperature	0-60°C
	Humidity	45%-85%
	Storage Temperature	-20-70°C
Retina Screen	Screen Size	11.6 inch
	Aspect Ratio	16:9
	Display Resolution	1920 × 1080
	Display Type	IPS-PRO
	Brightness	320cd/m2
	Static Contrast Ratio	1000:1
	Input	1*HDMI PORT
	Power Supply	DC 12V /2A External Adapter
	Dimension	282mm×180.5mm×15.3mm
	Net Weight	600g

Sample Image





(3) BLC-600/BLC-600 PLUS/BLC-600AF HD LCD Digital Camera



Introduction

BLC-600/BLC-600 PLUS/BLC-600AF HDMI LCD Digital Camera is a brand new high performance and highly cost-effective, super reliable HD LCD camera which combines a full HD camera and a retina HD LCD screen.

With the built-in software, the BLC-600/BLC-600 PLUS/BLC-600AF can be controlled by a mouse to take pictures, take videos and do measurement. Equipped with Sony COMS sensor and 11.6" retina HD LCD screen, it is developed specifically for different microscopy applications. BLC-600AF has auto focus and one click focus function.

Feature

1. Control camera with mouse from USB port, no shaking.
2. 11.6" retina HD LCD Screen, high definition and high quality color reproduction.
3. 6.0MP still image capture and 1080P Video Recording.
4. Save image and video to SD card.
5. HDMI Output from the camera to the LCD screen, frame rate up to 60fps.
6. Also can be connected to PC and take picture, take video, do measurement and analyze images.
7. Standard C-mount Interface for different microscopes.
8. Measurement function. When it is connected to LCD monitor, BLC-600 has simple measurement function, only can measure line length. BLC-600 PLUS/BLC-600AF has complete measurement function when it is connected to LCD monitor.

Application

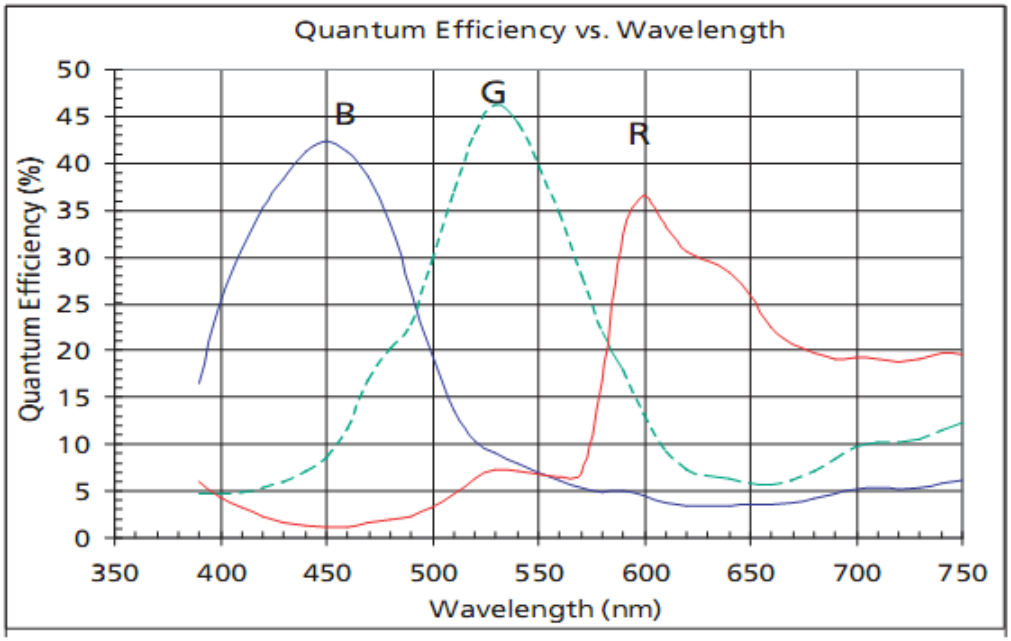
BLC-600/BLC-600+/BLC-600AF HDMI LCD digital camera can be widely used in medical diagnosis, industrial production and inspection, laboratory research and related microscopy field for image, video capture and analysis. With the high image quality and easy to operate, it will be your best assistant.

1. Live Cell Imaging
2. Surgical Microscopic Imaging
3. Pathology
4. Cytology
5. Defect Analysis
6. Semiconductor Inspection
7. Navigation for Processed Imaging
8. Industrial Optical HD Digital Imaging
9. Astronomical Observation

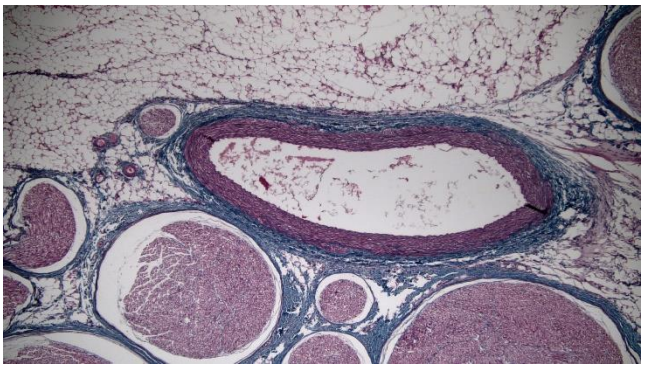
Specification

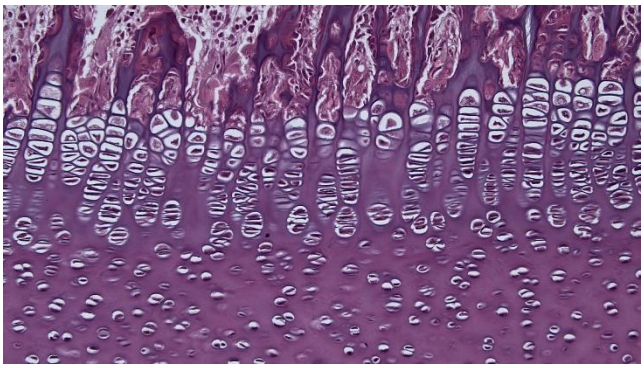
Model		BLC-600	BLC-600 PLUS	BLC-600AF
HDMI Camera	Image Sensor	CMOS, Sony IMX307		
	Chip Size	1/2.8"		
	Video Resolution	1920 × 1080		
	Captured Image Resolution	3264 × 1836 on SD card to LCD monitor, 1920 × 1080 and 3264 × 1836 with software to PC		
	Frame Rate	1920 × 1080 30fps via USB2.0 1920 × 1080 60fps via HDMI		
	Data Record	High speed SD Card (8G)		
	Video Record	1080p 30fps in SD Card 1080p 30fps in PC		
	Scan Mode	Progressive		
	Electronic Shutter	Electronic Rolling Shutter		
	A/D conversion	8 bit		
	Color Depth	24bit		
	Sensitivity	510mV		
	Dynamic Range	68dB		
	S/N ratio	52dB		
	Exposure time	0.001 sec ~ 10.0 sec		
	Exposure	Auto/Manual		
	White balance	Auto		
	Settings	Gain,Gamma,Saturation,Contrast, scale bar function		
	Measurement Function when connected to LCD Monitor	Simple measurement function, only line	Complete measurement function, including Anchor Point, Line, Freehand Line, Rectangle, Circle, Polygon, Point-line Distance, Concentric Circles, Bicircle, Angle etc.	
	PC software	Capture2.0		
	Output model 1	USB2.0		
	Output model 2	HDMI		
	System Compatible	Windows XP/Vista/Win 7/10(32 and 64-bit), MAC OSX		
	Optical port	C- Mount		
	Power Supply	DC 12V /2A		
	Operational Temperature	0-60°C		
	Humidity	45%-85%		
	Storage Temperature	-20-70°C		
Retina Screen	Screen Size	11.6 inch		
	Aspect Ratio	16:9		
	Display Resolution	1920 × 1080		
	Display Type	IPS-PRO		
	Brightness	320cd/m2		
	Static Contrast Ratio	1000:1		
	Input	1*HDMI PORT		
	Power Supply	DC 12V /2A External Adapter		
	Dimension	282mm×180.5mm×15.3mm		
	Net Weight	600g		

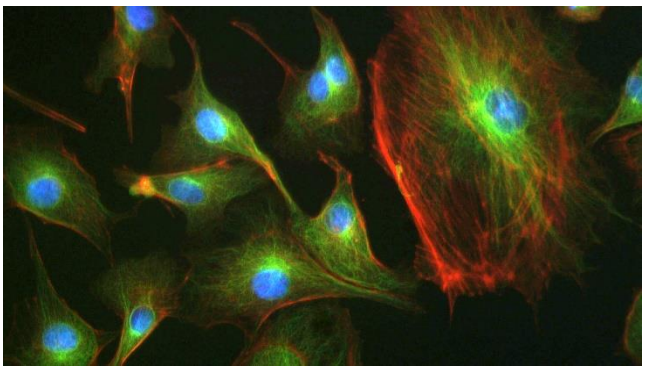
Characteristic Curve of Photographic Transmission

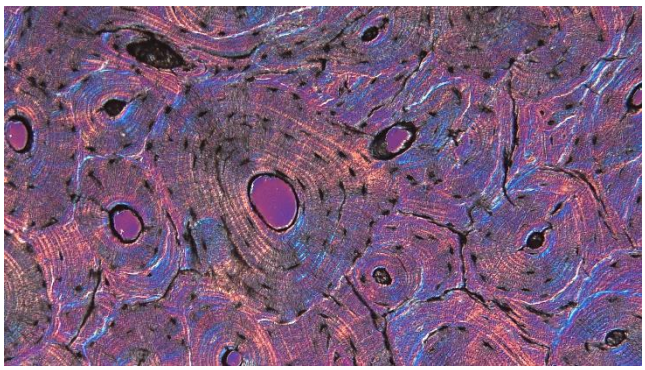


Sample Images









9. Accessories

(1) HD1080LCD HDMI LCD Displayer

Introduction

HD1080LCD is designed for BWHC and BHC4 series HDMI cameras and can be used for high definition display. It adopts Panasonic IPS LCD panel(Super TFT) to guarantee the wide view angle and high contrast. Together with BWHC and BHC4 series cameras, it could make the imaging & display solution simple, flexible and intuitive. Outstanding performance of HD1080LCD helps BWHC and BHC4 series HDMI cameras reach fast frame rate and excellent color.

Features

The HD1080LCD's basic characteristic is as follows

1. HDMI monitor;
2. Panasonic IPS LCD panel;
3. True 1080P;
4. High contrast ratio up to 1000:1;
5. LED backlight with 50000 hours long life time;
6. 11.6 inch active area.

Specification

Order Code	Active Area(Inch)	Video Fomat	Resolution	Contrast	Color(Million)	View Angle
HD1080LCD	11.6	HDMI	1080P	1000:1	16.7	IPS Full View

Basic Performance	
LCD Panel	Panasonic IPS LCD Screen(Super TFT)
Input Video Format	HDMI

Native Resolution	1920 x 1080
Display Type	16:9 Ratio 11.6 Inch Active Matrix Super TFT LCD
Typical Contrast Ratio	1000:1
Colors	16.7 Million
Viewing Angle(L/R/U/D)	IPS Full Vew
Active Display Area	258mm(W) × 145mm(H)
Pixel Pitch	0.134(W) X 0.134(H) mm
Brightness	350 cd/ sq.m ;400cd sq.m / Optional
Backlight	LED Backlight, 50000 hours
Outline Parameter	
Color	Black
Dimension	281(L)*179(H)*15.6(W) mm
Weight	400g
Operating Environment	
Operating Temperature	-15 Degree~55 Degree
Humidity Non Condensing	Operating:10%-90%, Storage: 5%-90%
Synchronization Range	30-80 KHz Horizontal, 55-75 Hz Vertical
Power Supply	AC110V-220V /DC12V(1A)
Power Consumption	Max 12W

HD1080LCD and BWHC Camera

Front View of HD1080LCD

Back View of HD1080LCD+BWHC Series Camera

Side view of HD1080LCD+BWHC Series Camera

Front View of Leica Microscope+BWHC Series Camera and HD1080LCD

Side View of Leica Microscope+BWHC Series Camera and HD1080LCD

Front View of Nikon Microscope+BWHC Series Camera and HD1080LCD

Side View of Nikon Microscope+BWHC Series Camera and HD1080LCD

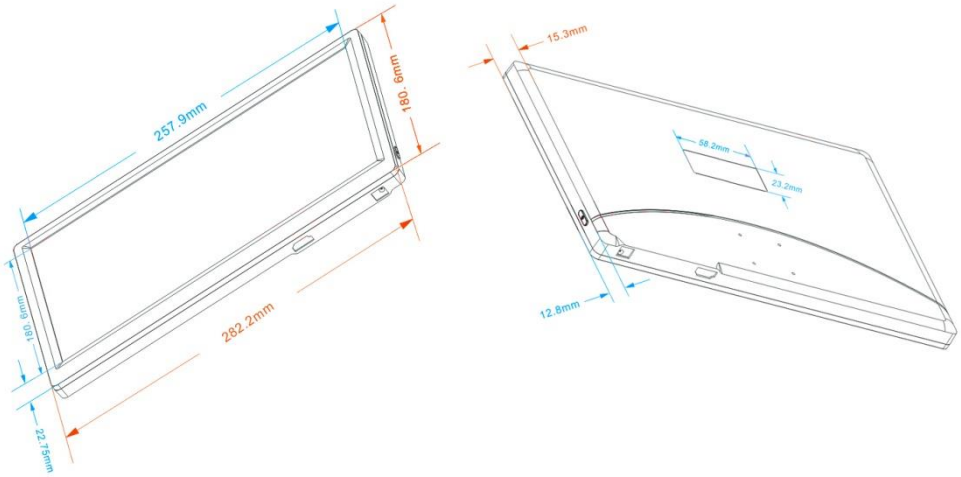
Front View of Olympus Microscope+BWHC Series Camera and HD1080LCD

Side View of Olympus Microscope+BWHC Series Camera and HD1080LCD

Front View of Zeiss Microscope+BWHC Series Camera and HD1080LCD

Side View of Zeiss Microscope+BWHC Series Camera and HD1080LCD

Dimension of HD1080LCD



Dimension of HD1080LCD

(2) Eyepiece Adapter (Reduction lens)

These adapters are used to connect the C-mount cameras to the microscope eyepiece tube or trinocular tube of 23.2mm. If the eyepiece tube diameter is 30mm or 30.5mm, you can plug the 23.2 adapter into the 30mm or 30.5mm connecting ring and then plug into the eyepiece tube.


BCN0.45×-1

BCN0.45×-2

BCN0.5×


BCN30

BCN30.5

	C-mount	Magnification	Connecting Dia.	Application
BCN0.45×-1 adapter	Yes	0.45×	23.2mm	Used to connect camera to eyepiece / trinocular tube
BCN0.45×-2 adapter	Yes	0.45×	23.2mm	Used to connect camera to eyepiece / trinocular tube
BCN0.5× adapter	Yes	0.5×	23.2mm	Used to connect camera to eyepiece / trinocular tube
BCN30 Connecting Ring	No	No	30mm	Used with adapters to plug into 30mm eyepiece tube
BCN30.5 Connecting Ring	No	No	30.5mm	Used with adapters to plug into 30.5mm eyepiece tube

We have also developed other new eyepiece adapters for more applications:

A. 23.2mm Eyepiece to C-mount Microscope Eyepiece Adapter(Adjustable)

Model	Picture	Description
BCN2A-0.37×		1.Available Size for 18 mm Field 18X0.37mm 2.Fit to 1/4”~1/3” Size Sensor 3.0.37X Magnification 4.Manually Focusable 5.Parfocal with the Eyepiece 6.Dia.23.2mm Eyepiece Tube to C-Mount
BCN2A-0.5×		1.Available Size for 18 mm Field 18X0.50mm 2.Fit to 1/2”~2/3” Size Sensor 3.0.50X Magnification 4.Manually Focusable 5.Parfocal with the Eyepiece 6.Dia.23.2mm Eyepiece Tube to C-Mount
BCN2A-0.75×		1.Available Size for 18 mm Field 18X0.75mm 2.Fit to 1/1.8”~1” Size Sensor 3.0.75X Magnification 4.Manually Focusable 5.Parfocal with the Eyepiece 6.Dia.23.2mm Eyepiece Tube to C-Mount
BCN2A-1×		1.Available Size for 18 mm Field 18X1mm 2.Fit to 1/1.2”~1.1” Size Sensor 3.1X Magnification 4.Manually Focusable 5.Parfocal with the Eyepiece 6.Dia.23.2mm Eyepiece Tube to C-Mount

*To cover the field, the sensor size should be smaller than the available size. Our experts will help you to select the correct Adapter for your ordered microscope camera. What you need to do is to select the right camera model.

B. 23.2mm Eyepiece to C-mount Microscope Eyepiece Adapter(Fixed)

Model	Picture	Description
BCN2F-0.37×		1.Available Size for 18 mm Field 18X0.37mm 2.Fit to 1/4”~1/3” Size Sensor 3.0.37X Magnification 4.Dia.23.2mm Eyepiece Tube to C-Mount
BCN2F-0.5×		1.Available Size for 18 mm Field 18X0.50mm 2.Fit to 1/2”~2/3” Size Sensor 3.0.50X Magnification 4.Dia.23.2mm Eyepiece Tube to C-Mount
BCN2F-0.75×		1.Available Size for 18 mm Field 18X0.75mm 2.Fit to 1/1.8”~1” Size Sensor 3.0.75X Magnification 4.Dia.23.2mm Eyepiece Tube to C-Mount
BCN2F-1×		1.Available Size for 18 mm Field 18X1mm 2.Fit to 1/1.2”~1.1” Size Sensor 3.1X Magnification 4.Dia.23.2mm Eyepiece Tube to C-Mount

*To cover the field, the sensor size should be smaller than the available size. Our experts will help you to select the correct Adapter for your ordered microscope camera. What you need to do is to select the right camera model.

C. 31.75mm Eyepiece to C-mount Telescope Eyepiece Adapter (Adjustable)

Model	Picture	Description
BCN3A-0.37×		1.Fit to 1/4" ~ 1/3" Size Sensor 2.0.37X Magnification 3.Manually Focusable 4.Parfocal with the Eyepiece 5.C-Mount to Dia.31.75mm Eyepiece Tube
BCN3A-0.5×		1.Fit to 1/2" ~ 2/3" Size Sensor 2.0.50X Magnification 3.Manually Focusable 4.Parfocal with the Eyepiece 5.C-Mount to Dia.31.75mm Eyepiece Tube
BCN3A-0.75×		1.Fit to 1/1.8" ~ 1" Size Sensor 2.0.75X Magnification 3.Manually Focusable 4.Parfocal with the Eyepiece 5.C-Mount to Dia.31.75mm Eyepiece Tube
BCN3A-1×		1.Fit to 1/1.2" ~ 1.1" Size Sensor 2.1X Magnification 3.Manually Focusable 4.Parfocal with the Eyepiece 5.C-Mount to Dia.31.75mm Eyepiece Tube

*To cover the field, the sensor size should be smaller than the available size. Our experts will help you to select the correct Adapter for your ordered microscope camera. What you need to do is to select the right camera model.

D. 31.75mm Eyepiece to C-mount Telescope Eyepiece Adapter(Fixed)

Article Code	Picture	Description
BCN3F-0.37×		1.Fit to 1/4" ~ 1/3" Size Sensor 2.0.37X Magnification 3.C-Mount to Dia.31.75mm Eyepiece Tube
BCN3F-0.5×		1.Fit to 1/2" ~ 2/3" Size Sensor 2.0.50X Magnification 3.C-Mount to Dia.31.75mm Eyepiece Tube
BCN3F-0.75×		1.Fit to 1/1.8" ~ 1" Size Sensor 2.0.75X Magnification 3.C-Mount to Dia.31.75mm Eyepiece Tube
BCN3F-1×		1.Fit to 1/1.2" ~ 1.1" Size Sensor 2.1X Magnification 3.C-Mount to Dia.31.75mm Eyepiece Tube

*To cover the field, the sensor size should be smaller than the available size. Our experts will help you to select the correct Adapter for your ordered telescope camera. What you need to do is to select the right camera model.

E. Microscope 23.2 to 30, 30.5, 31.75 Eyepiece Adapting ring

Features

1. The Eyepiece adapting ring can make the 23.2 mm camera Adapter to different size microscope and telescope eyepiece tube. Our BCN2 series adapters' end size is 23.2mm and can be directly inserted into the 23.2mm microscope eyepiece tube;

2. For 23.2 eyepiece tube, no extra adapting ring is needed for the microscope;

3. The 23.2mm to 30.0mm adapting ring is needed to connect the 23.2mm camera Adapter to the 30 mm microscope eyepiece tube;

4. The 23.2mm to 30.5mm adapting ring is needed to connect the 23.2mm camera Adapter to the 30.5 mm microscope eyepiece tube;

5. The 23.2mm to 31.75mm adapting ring is needed to connect the 23.2mm camera Adapter to the 31.75 mm telescope eyepiece tube;

6. For 31.75 mm eyepiece tube, user can directly use Our 31.75mm BCN3 series adapters for their C-mount Camera.

Specification

Model	Picture	Description
BCN2-30		Dia.23.2mm to 30.0mm adapting ring (used for microscope)
BCN2-30.5		Dia.23.2mm to 30.5mm adapting ring (used for microscope)
BCN3-31.75		Dia.23.2mm to 31.75mm adapting ring (used for telescope)

(3) DSLR Camera Eyepiece Adapter

These 2 adapters are used to connect DSLR camera to the microscope eyepiece tube or trinocular tube of 23.2mm. If the eyepiece tube diameter is 30mm or 30.5mm, you can plug the 23.2 adapter into the 30mm or 30.5mm connecting ring and then plug into the eyepiece tube.

BDPL-1(NIKON)

BDPL-2(CANON)

	Camera Mount	Magnification	Connecting Dia.	Application
BDPL-1(NIKON) adapter	Nikon	2×	23.2mm	Used to connect Nikon DSLR camera to eyepiece / trinocular tube
BDPL-2(CANON) adapter	Canon	2×	23.2mm	Used to connect Canon DSLR camera to eyepiece / trinocular tube

(4) BCN series C-mount Adapters for Trinocular Tube of Olympus, Zeiss, Leica, Nikon Microscope

A. BCN-Olympus TV Adapter

Feature

1. Convert the Olympus trinocular microscope phototube/head/port (have standard 35 mm outer diameter for the insertion end to phototube) to traditional C-Mount type(25.4 mm or 1 inch diameter with 32 threads per inch);

2. With different built-in reduction lens (1.2X, 1X, 0.8X, 0.63X, 0.5X, 0.35X) for achieving better field of view from microscope trinocular head(suitable for 4/3” 1”, 2/3”, 1/1.8”, 1/2”, 1/2.5”, 1/3” or 1/4” inch CCD or CMOS sensor chips);

3. Can be installed in UIS trinocular tube such as : BX series, BX2 series, CX series, CX2 series, MX series;

4. Build of material: anodized aluminum;

5. Telecentric optics with low light deficiency;

6. Parfocal with different microscope objective lenses;

7. Diffraction limited MTF;

8. Aperture totally coupled with UIS microscope objective's exit pupil.

Specifications

Model	Photo	Magnification	Sensor Size	Mount Type
BCN-Olympus 1.2X		1.2X	4/3",1"	T2-Mount
BCN-Olympus 1.0X		1.0X	1", 2/3"	C-Mount
BCN-Olympus 0.8X		0.80X	1",2/3"	C-Mount
BCN-Olympus 0.63X		0.63X	2/3",1/1.8",1/2"	C-Mount
BCN-Olympus 0.5X		0.50X	1/1.8",1/2",1/2.5"	C-Mount
BCN-Olympus 0.4X		0.40X	1/2.5",1/3",1/4"	C-Mount
BCN-Olympus 0.35X		0.35X	1/3",1/4",1/5"	C-Mount
Supported Microscope	Specially designed for Olympus CX, BX, MX, STM, SZX, IX, GX(GX41) series microscopes			

B. BCN-Zeiss TV Adapter

Feature

1. Convert the Zeiss trinocular microscope phototube/head/port (have standard ISO 30 mm(1.18 inch) outer diameter for the insertion end to phototube) to traditional C-Mount type(25.4 mm or 1 inch diameter with 32 threads per inch);

2. With different built-in reduction lens (1.2X, 1X, 0.8X, 0.65X, 0.5X, 0.35X) for achieving better field of view from microscope trinocular head(suitable for 4/3" 1", 2/3", 1/1.8", 1/2", 1/2.5", 1/3" or 1/4" inch CCD or CMOS sensor chips);

3. Can be installed in Zeiss UIS trinocular tube such as: Zeiss PrimoStar series and Zeiss Primo vert series;

4. Build of material: anodized aluminum;

5. Telecentric optics with low light deficiency;

6. Parfocal with different microscope objective lenses;

7. Diffraction limited MTF;

8. Aperture totally coupled with UIS microscope objective's exit pupil.

Specification

Model	Photo	Magnification	Sensor Size	Mount Type
BCN-Zeiss 1.2X		1.2X	1", 4/3"	T2-Mount
BCN-Zeiss 1.0X		1.0X	1", 2/3"	C-Mount

BCN-Zeiss 0.8X		0.8X	1”, 2/3”	C-Mount
BCN-Zeiss 0.65X		0.65X	2/3”, 1/1.8”, 1/2”	C-Mount
BCN-Zeiss 0.5X		0.5X	1/1.8”, 1/2”, 1/2.5”	C-Mount
BCN-Zeiss 0.35X		0.35X	1/3”, 1/4”, 1/5”	C-Mount
Supported Microscope	Specially designed for Zeiss Primo Star series, Zeiss Primo vert series			

C. BCN2-Zeiss TV Adapter

Feature

1. Convert the Zeiss trinocular microscope phototube/head/port (have standard ISO 30 mm(1.18 inch) outer diameter for the insertion end to phototube) to traditional C-Mount type(25.4 mm or 1 inch diameter with 32 threads per inch);

2. With different built-in reduction lens (1.2X,1X, 0.8X, 0.65X, 0.5X) for achieving better field of view from microscope trinocular head(suitable for 4/3" 1", 2/3", 1/1.8", 1/2", 1/2.5" inch CCD or CMOS sensor chips);

3. Can be installed in Zeiss UIS trinocular tube such as Axio series microscope;

4. Build of material: anodized aluminum;

5. Telecentric optics with low light deficiency;

6. Parfocal with different microscope objective lenses;

7. Diffraction limited MTF;

8. Aperture totally coupled with UIS microscope objective's exit pupil.

Specifications

Model	Photo	Magnification	Sensor Size	Mount Type
BCN2-Zeiss 1.2X		1.20X	1", 4/3"	T2-Mount
BCN2-Zeiss 1.0X		1.0X	1", 2/3"	C-Mount
BCN2-Zeiss 0.8X		0.80X	1",2/3"	C-Mount

BCN2-Zeiss 0.63X		0.63X	2/3",1/1.8",1/2"	C-Mount
BCN2-Zeiss 0.5X		0.50X	1/1.8",1/2",1/2.5"	C-Mount
Supported Microscope	Axio Examiner.A1; Axio Examiner.D1; Axio Examiner.Z1; Axio Imager Vario; Axio Imager.A1; Axio Imager.A1m; Axio Imager.A2; Axio Imager.A2m; Axio Imager.D1; Axio Imager.D1 for epi-fluorescence with ApoTome equipment; Axio Imager.D1m; Axio Imager.D2; Axio Imager.D2m; Axio Imager.M1 (Axio Imager.M1 for KS ELISPOT); Axio Imager.M1m; Axio **Imager**.M2; Axio Imager.M2m; Axio Imager.Z1; Axio Imager.Z1 + ApoTome; Axio Imager.Z1m; Axio Imager.Z2; Axio Imager.Z2m; Axio Lab.A1; Axio Lab.A1 FL-LED; Axio Lab.A1 MAT; Axio Lab.A1 Pol; Axio Observer.A1; Axio Observer.A1 Entry; Axio Observer.D1; Axio Observer.D1 Entry; Axio Observer.D1 Mid Range; Axio Observer.Z1; Axio Observer.Z1 High End; Axio Scope.A1; Axio Scope.A1 Pol; Axio Scope.A1 Vario; Axio Vert.A1; Axio Vert.A1 FL; Axio Vert.A1 FL-LED; Axio Vert.A1 MAT; Axio Zoom.V16; PALM CombiSystem Rel. 4.2; PALM MicroBeam; PALM MicroBeam Rel.4.2; PALM MicroTweezers Rel.4.2; Stemi 508 doc; Stemi 508 trino; SteREO Discovery.V12; SteREO Discovery.V8; SteREO Lumar.V12;			

The Primo Star and BestScope Camera

D. BCN-Leica TV Adapter

Feature

1. Convert the LEICA trinocular microscope phototube/head/port (have standard 35 mm outer diameter for the insertion end to phototube) to C-Mount type(25.4 mm or 1 inch diameter with 32 threads per inch);

2. With different built-in reduction lens (1.2X, 1X, 0.8X, 0.7X, 0.55X, 0.35X) for achieving better field of view from microscope trinocular head(suitable for 4/3" 1", 2/3", 1/1.8", 1/2", 1/2.5", 1/3" or 1/4" inch CCD or CMOS sensor chips);

3. Can be installed in UIS trinocular tube such as: specially designed for LEICA DM series biology microscopes and industrial microscopes;

4. Build of material: stainless steel material;

5. Telecentric optics with low light deficiency;

6. Parfocal with different microscope objective lenses;

7. Diffraction limited MTF;

8. Aperture totally coupled with LEICA UIS microscope objective's exit pupil.

Specification

Model	Photo	Magnification	Sensor Size	Mount Type
BCN-Leica 1.2X		1.2X	4/3", 1"	T2 Mount
BCN-Leica 1.0X		1.0X	1", 2/3"	C-Mount
BCN-Leica 0.8X		0.8X	1", 2/3"	C-Mount
BCN-Leica 0.7X		0.7X	2/3",1/1.8",1/2"	C-Mount

BCN-Leica 0.55X		0.55X	1/1.8”,1/2”,1/2.5”	C-Mount
BCN-Leica 0.35X		0.35X	1/2.5”,1/3”,1/4”	C-Mount
Supported Microscope	Specially designed for LEICA DM series biology microscopes and industrial microscopes			

E. BCN-Nikon TV Adapter

Characteristic

1. Convert the NIKON trinocular microscope phototube/head/port (have standard 38 mm(1.50 inch) outer diameter for the insertion end to phototube) to traditional C-Mount type(25.4 mm or 1 inch diameter with 32 threads per inch);

2. With different built-in reduction lens (1.2X,1X, 0.8X, 0.70X, 0.55X, 0.35X) for achieving better field of view from microscope trinocular head(suitable for 4/3” 1”, 2/3”, 1/1.8”, 1/2”, 1/2.5”, 1/3” or 1/4” inch CCD or CMOS sensor chips);

3. Can be installed in UIS trinocular tube such as : NIKON E100, E200, 50i, 55i, 80i, 90i, Ni series, Ti Series, SMZ800, SMZ1000, SMZ15000 biology microscopes and industrial microscopes;

4. Build of material: stainless steel material for the C-Mount end and spray-painted aluminum for the phototube end ;

5. Telecentric optics with low light deficiency;

6. Parfocal with different microscope objective lenses;

7. Diffraction limited MTF;

8. Aperture totally coupled with UIS microscope objective’s exit pupil;

The adapters work for the following microscope series: NIKON microscopes UPRIGHT: Alphaphot-2, Eclipse series (requires YT-tube 92306), Labophot-2, Optiphot-2 Optiphot 100S, 150, 200, 300 Stereo: SMZ-10A, SMZ-U, SMZ-1000, SMZ-1500 METALLURGICAL: EPIPHOT 300/200 MEASURING: MM-40, MM-60 INVERTED: Diaphot 300/200 TS100-F TE2000.

Specification

Model	Photo	Magnification	Sensor Size	Mount Type
BCN-Nikon 1.2X		1.2X	4/3”,1”	T2-Mount
BCN-Nikon 1.0X		1.0X	1”, 2/3”	C-Mount
BCN-Nikon 0.8X		0.8X	1”,2/3”	C-Mount
BCN-Nikon 0.7X		0.7X	2/3”,1/1.8”,1/2”	C-Mount
BCN-Nikon 0.55X		0.55X	1/1.8”,1/2”,1/2.5”	C-Mount
BCN-Nikon 0.35X		0.35X	1/2.5”,1/3”,1/4”	C-Mount
Supported Microscope	Specially designed for NIKON E100,E200,50i,55i,80i,90i, Ni series, Ti Series, SMZ800,SMZ1000, SMZ15000 biology microscopes and industrial microscopes			

(5) BCF Series Adapters for Leica, Zeiss, Nikon, Olympus Microscopes

BCF series adapters are used to connect C-mount cameras to Leica, Zeiss, Nikon, Olympus Microscopes. The main feature of these adapters is the focus is adjustable, so the images from digital camera and the eyepieces can be synchronous.

BCF series adapters include 0.5× and 0.66× built-in reducing lens respectively. 0.5× adapters are fit for 1/3”, 1/2.5”, 1/2.3” image sensors. 0.66× adapters are fit for 1/2”, 1/1.8” and 2/3” image sensors. Bring you the best field of view for your digital imaging.

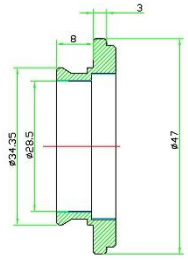
Features

1. With the inner focus function, you can synchronize digital images with the eyepiece by just rotating the adapter body slightly.
2. The adapters’ head are suit for four major Brands microscope families: Leica, Zeiss, Nikon and Olympus.

BCF-Leica

BCF-Leica0.5×

BCF-Leica0.66×

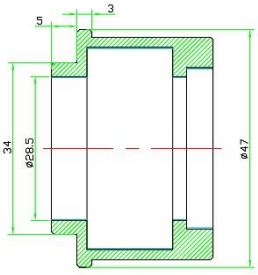


BCF-Leica dimension

BCF-Zeiss

BCF-Zeiss0.5×

BCF-Zeiss0.66×

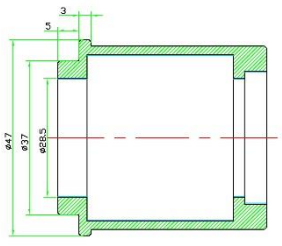


BCF-Zeiss dimension

BCF-Nikon

BCF-Nikon0.5×

BCF-Nikon0.66×

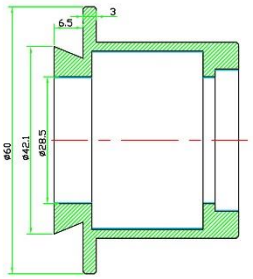


BCF-Nikon dimension

BCF-Olympus

BCF-Olympus0.5×

BCF-Olympus0.66×

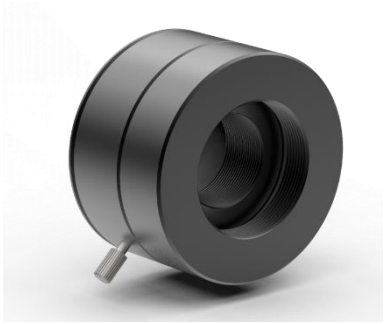


BCF-Olympus dimension

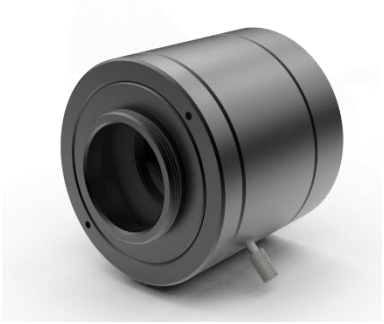
(6) BCF0.5X-C and BCF0.66X-C C-mount Adapters

BCF0.5×-C and BCF0.66×-C C-mount adapters are used to connect C-mount cameras to microscope's 1× C-mount and make the digital camera's FOV match the eyepiece's FOV very well. The main feature of these adapters is the focus is adjustable, so the images from digital camera and the eyepieces can be synchronous.

BCF0.5×-C and BCF0.66×-C adapters include 0.5× and 0.66× built-in reducing lens respectively. 0.5× adapters are fit for 1/3", 1/2.5", 1/2.3" image sensors. 0.66× adapters are fit for 1/2", 1/1.8" and 2/3" image sensors.



BCF-C0.5×



BCF-C0.66×

Model	C-mount	Magnification	Adaptive	Application
BCF0.5×-C adapter	Yes	0.5×	C-mount(25.4mm)	Used to connect C-mount camera to microscope's 1× C-mount
BCF0.66×-C adapter	Yes	0.66×	C-mount(25.4mm)	Used to connect C-mount camera to microscope's 1× C-mount