

# Buffered USB2.0 Color 3MP CMOS Cameras

(Part Numbers: BCN-C030-U, BCE-C030-U)

## FEATURES

- Built-in 32Mb frame buffer (7 frames at full resolution)
- Support simultaneous image capturing from multiple cameras
- 4-pin GPIOs
- 2,048 x 1,536 active imaging pixels
- High-speed USB2.0 (480Mb/s)
- Digital output, no need for frame grabber
- Full-featured SDK
- DirectShow and TWAIN driver
- Linux driver available
- USB command set for non-Windows-based applications
- External and Software trigger
- Strobe output for external flash
- ROI & pixel skipping/binning
- No need for external power supply
- OEM versions available

## APPLICATIONS

- Digital microscopy
- Machine vision
- Medical imaging
- Semiconductor equipment
- Test instruments
- Document scanners
- 2D barcode readers
- Web camera and security video
- High-quality ID photos



## PRODUCT DESCRIPTION

Mightex USB 2.0 cameras are designed for a wide variety of applications (such as industrial inspections, digital microscopy and medical imaging) which require good quality cameras that are easy to use and cost-effective. With a USB2.0 interface and powerful PC software, the camera delivers excellent quality images, and the frame rate can be as high as 8 fps in full resolution and up to 300 fps using ROI mode. In addition, a user-friendly GUI based application software and a SDK are provided for custom software development. A DirectShow driver and a TWAIN driver are available to easily link the cameras with users' applications. For non-Windows based applications, a USB command set protocol and a Linux driver are also provided.

## PERFORMANCE SPECIFICATIONS

Parameters	BCN-C030-U	BCE-C030-U	Unit
Board-level / enclosed	Board-level	Enclosed	
Number of GPIOs	4	4	
Resolution	2,048 x 1,536 color		
CMOS Chip	½" (5:4) Micron MT9T001, rolling shutter		
Pixel Size	3.2 x 3.2		µm
Scanning System	Progressive		
Dynamic Range	61		dB
Sensor SNR	43		dB
Gray Level	8		bit
Responsivity	2.1		V/lux-sec
On-board Memory ("Frame Buffers")	32		MB
Frame Rates* (@48MHz Clock)	8 @2,048 x 1,536 14 @1,600 x 1,200 25 @1,280 x 1,024 35 @1,024 x 768 50 @800 x 600 55 @752 x 480 65 @640 x 480 140 @320 x 240		fps
Sub Resolutions	Support arbitrary ROI (Nx, Ny), with Nx and Ny multiples of 4		
Shutter Speed (Exposure time)	0.05 ~ 750		ms
Hardware Gains	0.125x ~ 8x		
Trigger Mode	With external trigger**		
Strobe Out	Yes		
Lens Mount	C- mount or CS-mount (M12.5-mount or custom-defined lens mount supported)		
Built-in Filters	IR-cut (factory standard), no filter, or IR-pass		
Power Consumption	< 1.8		W
Dimension	51 x 51 x 29 (CS-mount) 51 x 51 x 34 (C-mount)	58 x 58 x 34 (CS-mount) 58 x 58 x 39 (C-mount)	mm
Weight (excluding lens)	80	150	g

\* The actual achievable frame rate depends on exposure time, as well as available resources of PC system.

\*\* Part number of the trigger cable for external trigger : ACC-CAM-DIN8

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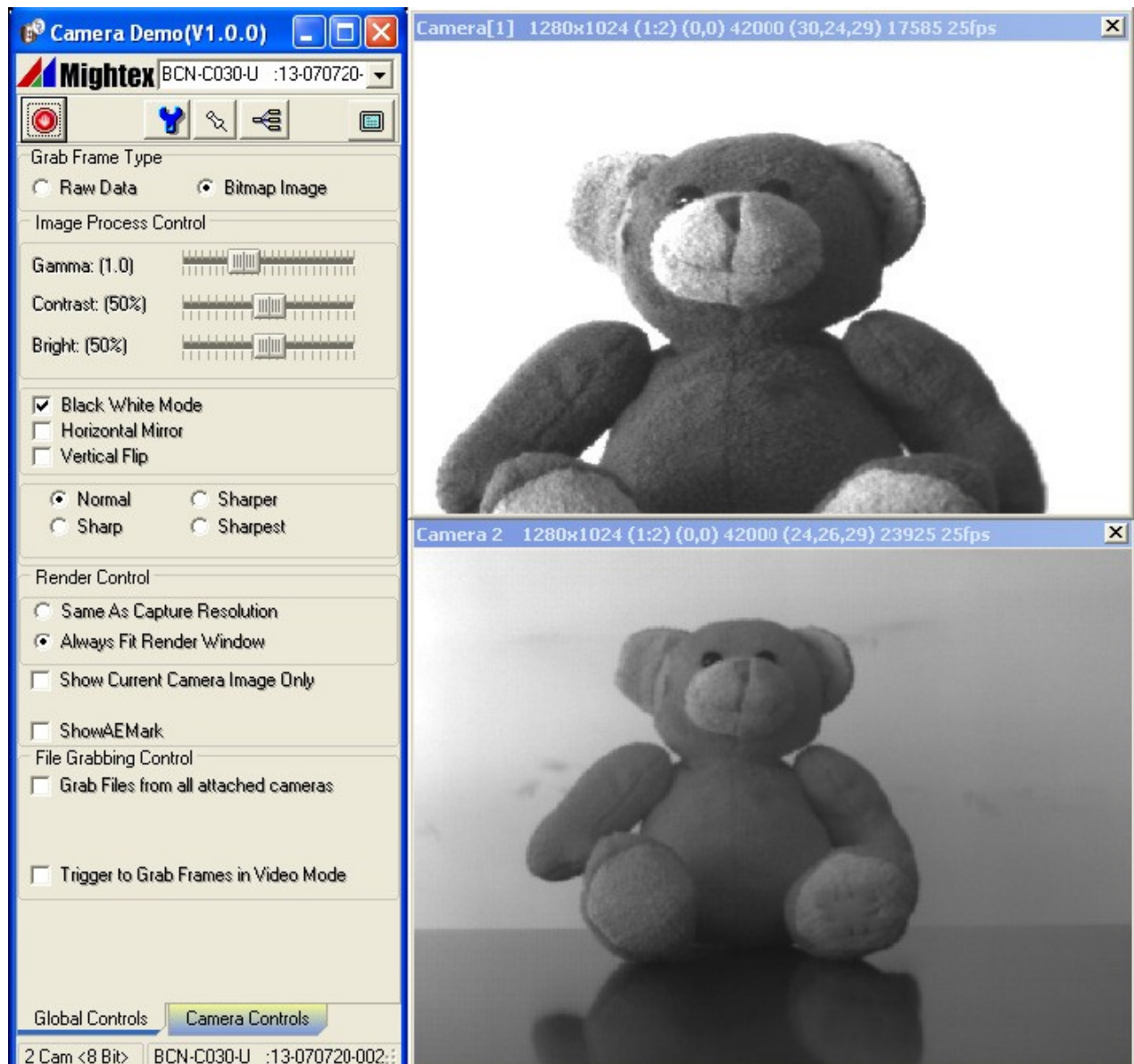
## OPERATION CONDITION

Operating Temperature Range: 0°C ~ 45°C  
Storage Temperature Range: -25°C ~ 85°C  
Relative Humidity, Non-condensing: 5% ~ 95%

## RECOMMENDED SYSTEM CONFIGURATION

Processor: Pentium III 900 MHz or better, or a compatible processor  
Operating System: Windows 2000, XP, Vista, Windows 7 and 8  
RAM: 256MB or greater  
Hard Disk Space: 30MB for software installation, plus additional space for storing captured images  
USB2.0 Host Controller: Intel integrated host controller (recommended)

## EXAMPLE OF GRAPHICAL USER INTERFACE

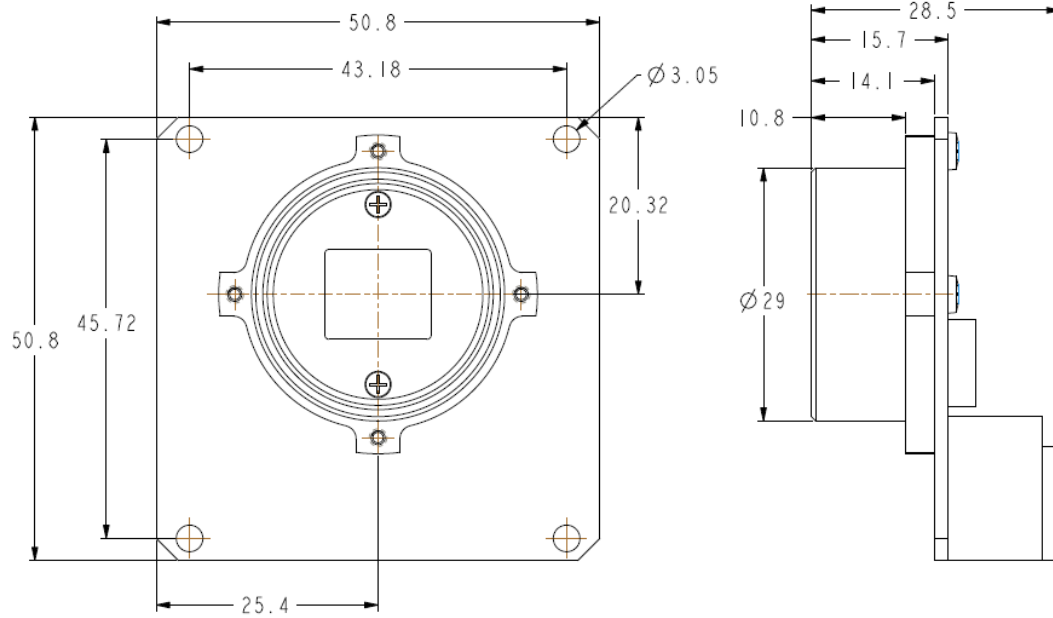


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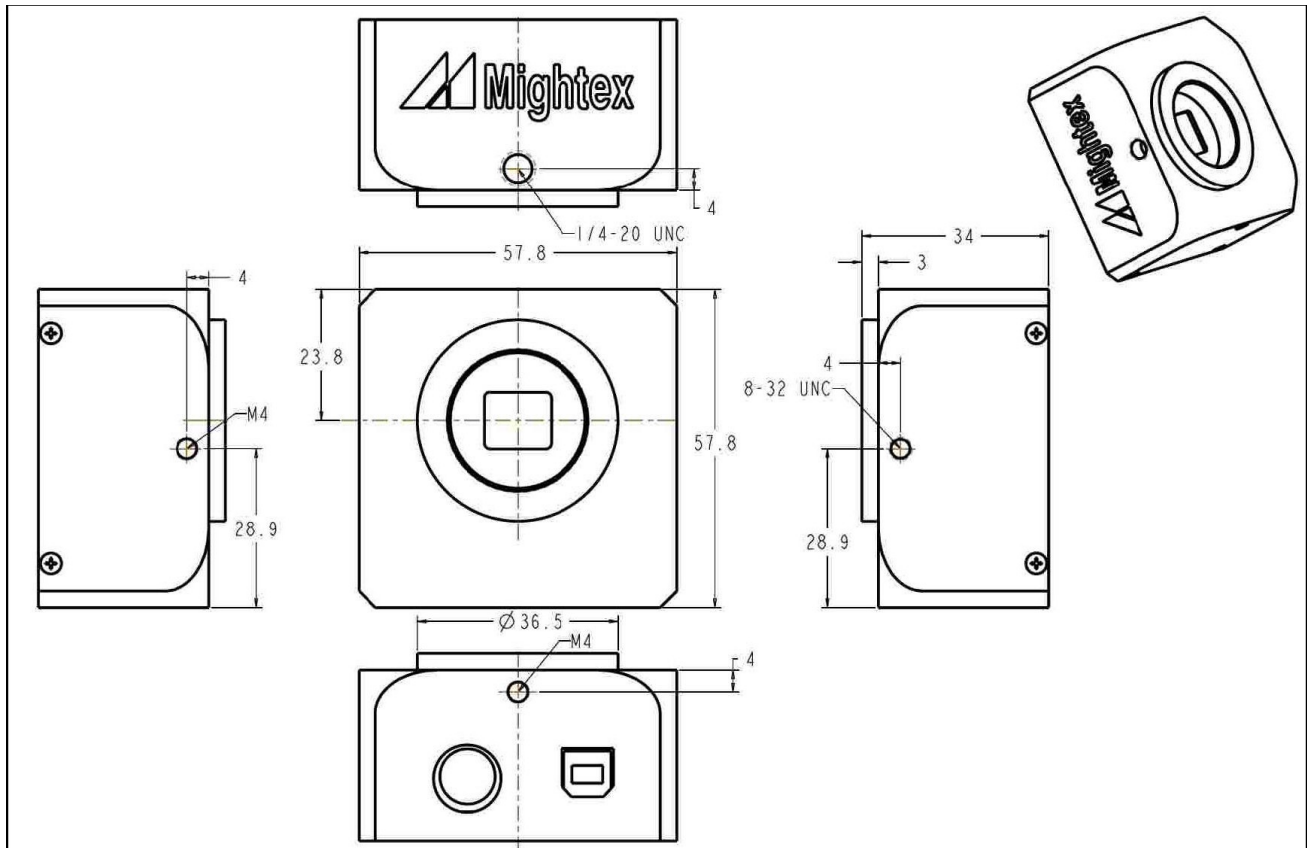
(Part Numbers: BCN-C030-U, BCE-C030-U)

## INSTALLATION DRAWINGS

### 1) Board-level Camera with CS-mount



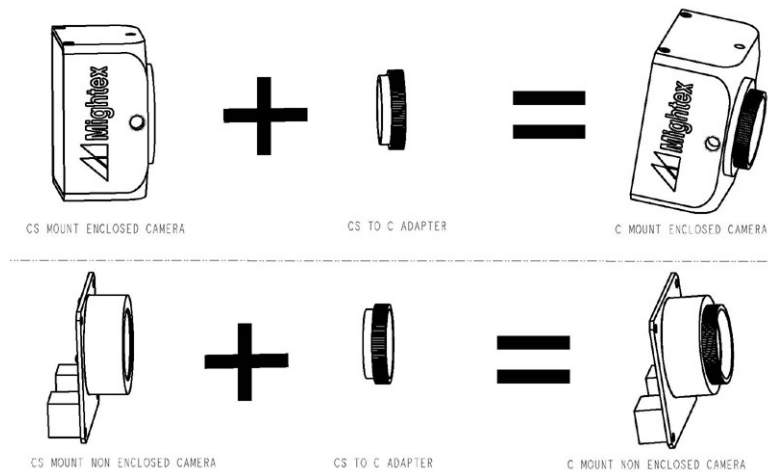
### 2) Enclosed camera with CS-mount



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## WHAT'S IN A C-MOUNT CAMERA?



A C-mount camera is composed of a CS-mount camera and a CS-to-C-mount adapter. The latter is essentially a 5mm thick threaded ring.

With a world-class OEM design team, Mightex offers a broad range of customized solutions in order to meet individual customer's unique requirements. Please call 1-416-840 4991 or email [sales@mightex.com](mailto:sales@mightex.com) for details.