



## Buffered USB2.0 Color 752x480 CMOS Cameras

(Part Numbers: BCN-CG04-U, BCE-CG04-U)

### FEATURES

- Built-in 32M frame buffer (23 frames at full resolution)
- True global shutter
- Support simultaneous image capturing from multiple cameras
- 4-pin GPIOs
- 752 x 480 active imaging pixels
- Arbitrary ROI supported
- 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
- Precise frame rate setting
- 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

### 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 60 fps in full resolution and up to 600 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-CG04-U	BCE-CG04-U	Unit
Board-level / enclosed	Board-level	Enclosed	
Number of GPIOs	4	4	
Resolution	752 x 480 color		
CMOS Chip	1/3" Micron MT9V032, Global Shutter (Micron TrueSNAP)		
Pixel Size	6.0 x 6.0		μm
Scanning System	Progressive		
Dynamic Range	>55		dB
Gray Level	8		bit
Responsivity	4.8		V/lux-sec
On-board Memory ("Frame Buffers")	32		MB
Frame Rates* (@26MHz Clock)	60@752 x 480 65 @640 x 480 130 @320 x 240 220@160 x 120 310@64 x 64		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	1x ~ 4x		
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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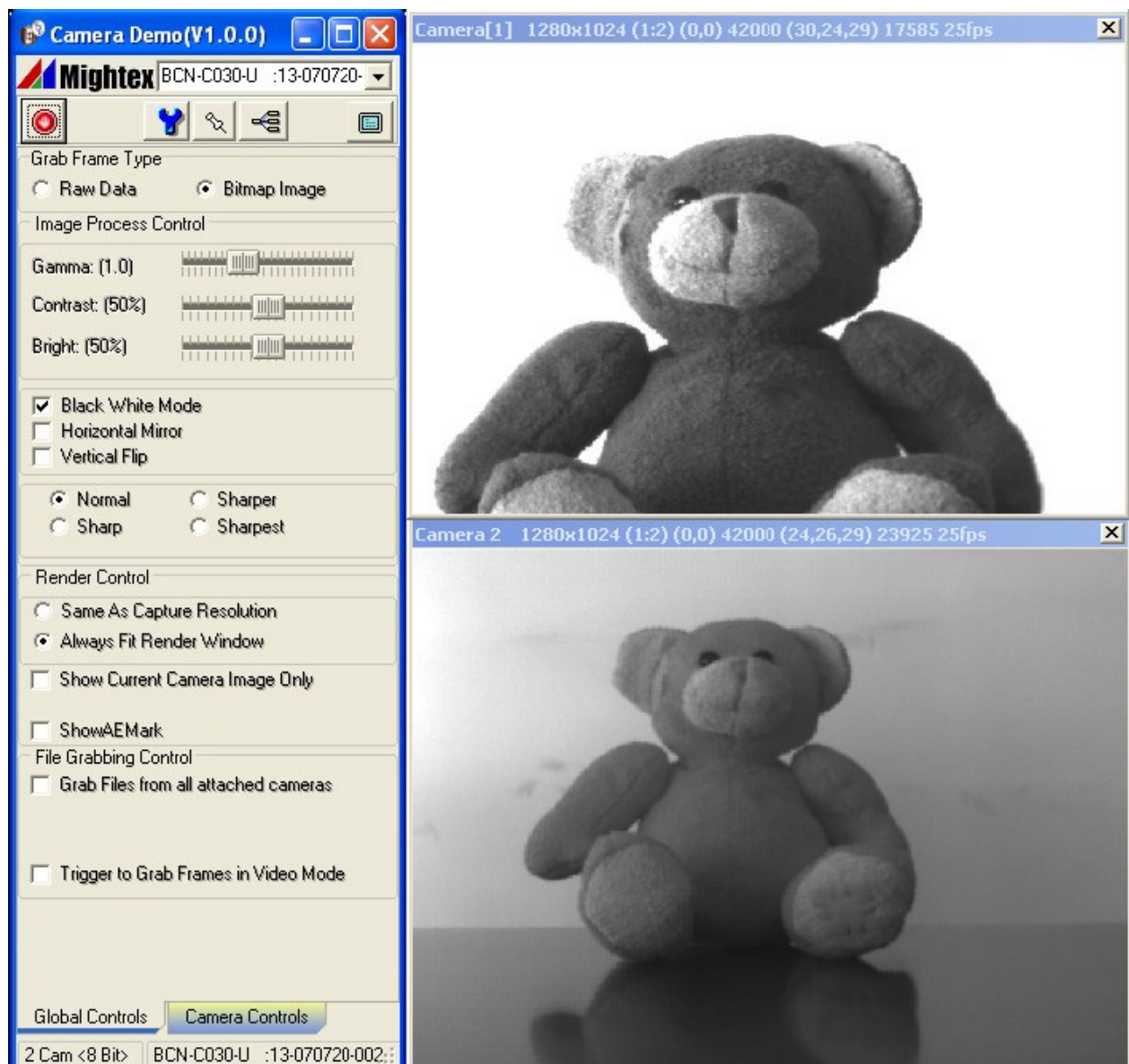
## OPERATION CONDITION

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

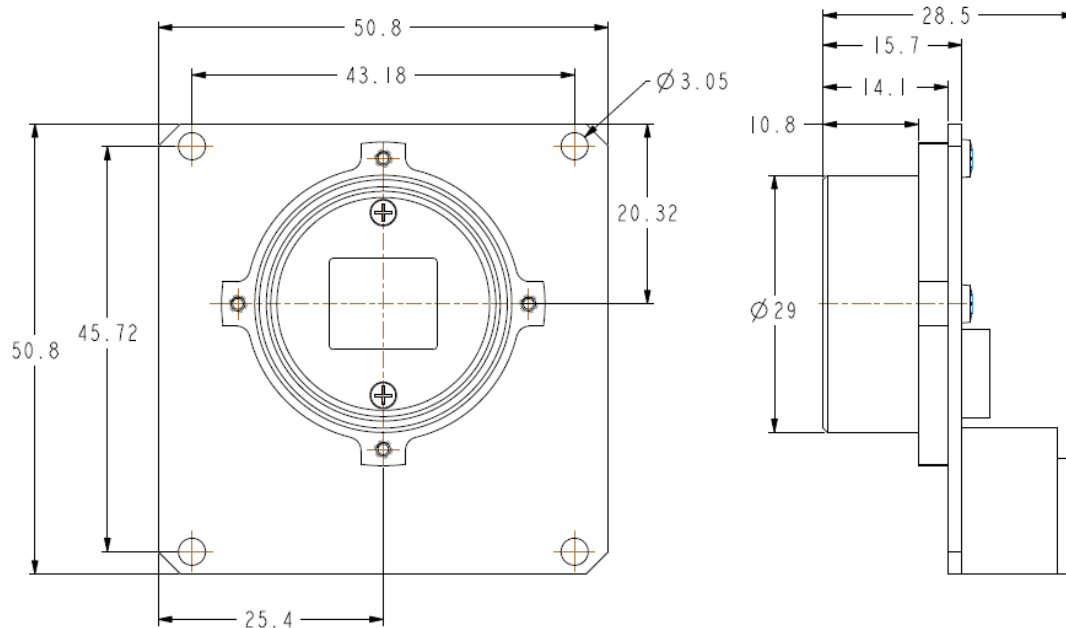


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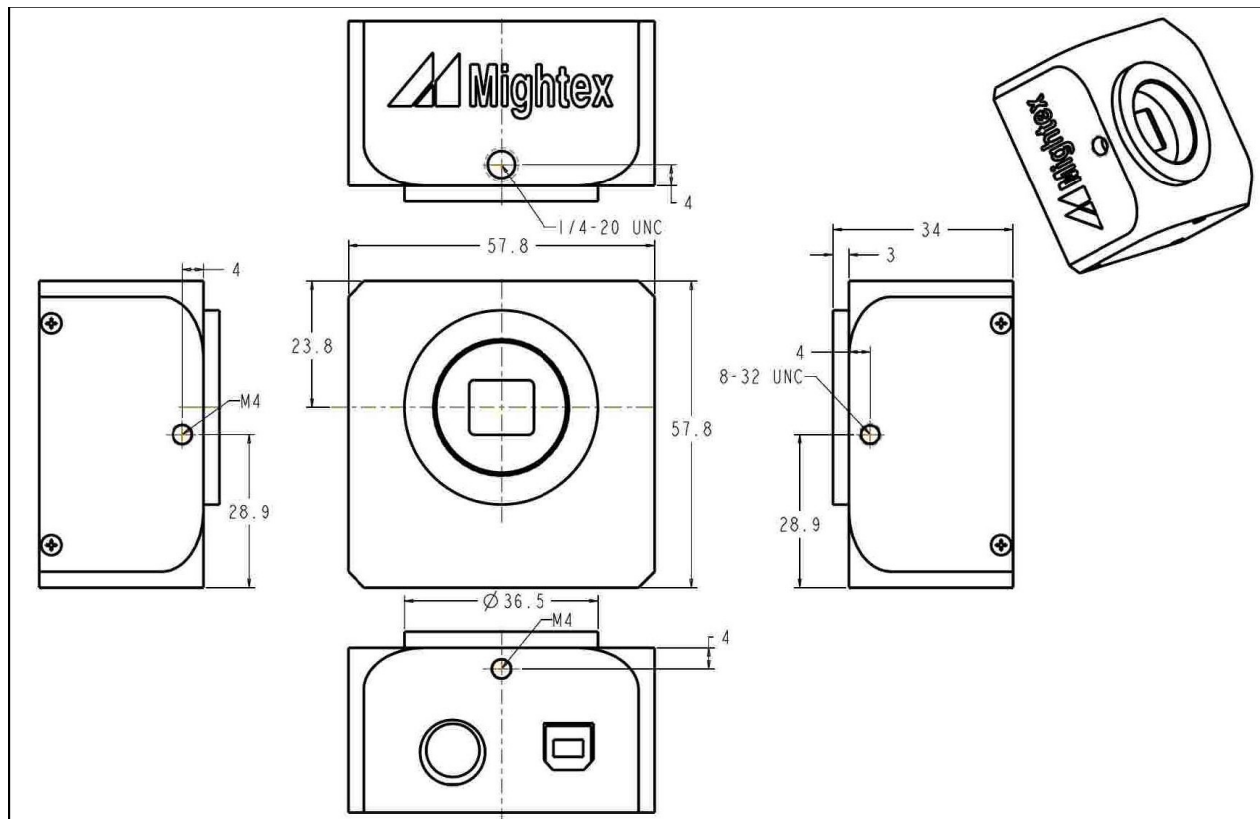
(Part Numbers: BCN-CG04-U, BCE-CG04-U)

## INSTALLATION DRAWINGS

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



### 2) Enclosed camera with CS-mount

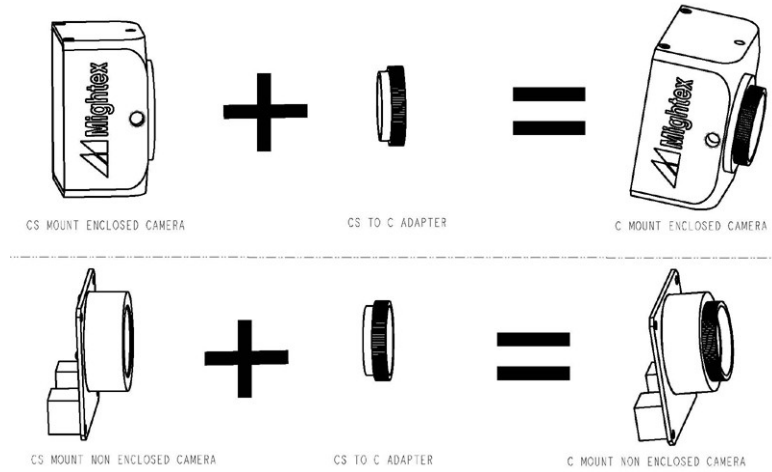




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### WHAT'S IN A C-MOUNT CAMERA?



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.