DORGEAN
Beijing Dorgean Electronic Technology Co.,Ltd

Instrument Expert
Original factory packaging
www.dorgean.com

Buffered USB2.0 Color 5MP CMOS Cameras
(Part Numbers: BCN-C050-U, BCE-C050-U)

FEATURES

- Built-in frame buffer (3 frames at full resolution)
- Support simultaneous image capturing from multiple cameras
- 4-pin GPIOs
- 2,592 x 1,944 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 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-C050-U	BCE-C050-U	Unit
Board-level / enclosed	Board-level	Enclosed	
Number of GPIOs	4	4	
Resolution	2,592 x 1,944 color		
CMOS Chip	Micron MT9P031, rolling shutter		
Pixel Size	2.2 x 2.2		µm
Scanning System	Progressive		
Dynamic Range	70		dB
Sensor SNR	38		dB
Gray Level	8		bit
Responsivity	1.4		V/lux-sec
Frame Rates* (@48MHz Clock)	6 @2,592 x 1,944 9@2,048 x 1,536 13 @1,600 x 1,200 18 @1,280 x 1,024 28 @1,024 x 768 40 @800 x 600 50 @752 x 480 56 @640 x 480 100 @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	1x ~ 16x		
Trigger Mode	With external trigger**		
Strobe Out	Yes		
Lens Mount	C– mount or CS-mount		
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

Mightex Systems, 2343 Brimley Road, Suite 868, Toronto, Ontario M1S 3L6, Canada
Tel: 1-416-840-4991 or 1-925-218-1885, Fax: 1-416-840-6541, Email: sales@mightex.com
www.mightex.com or www.mightexsystems.com

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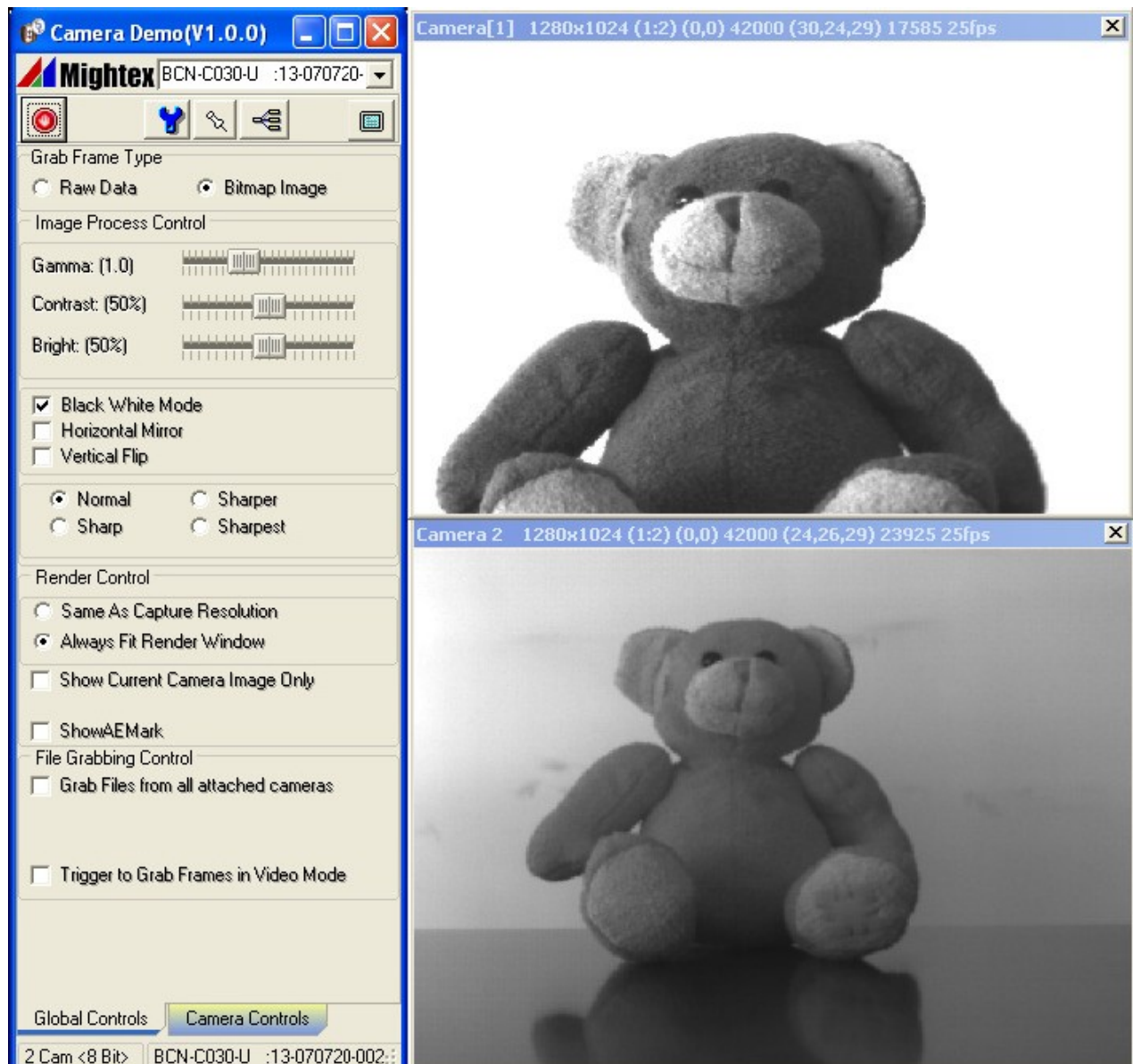Simply Brighter

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)

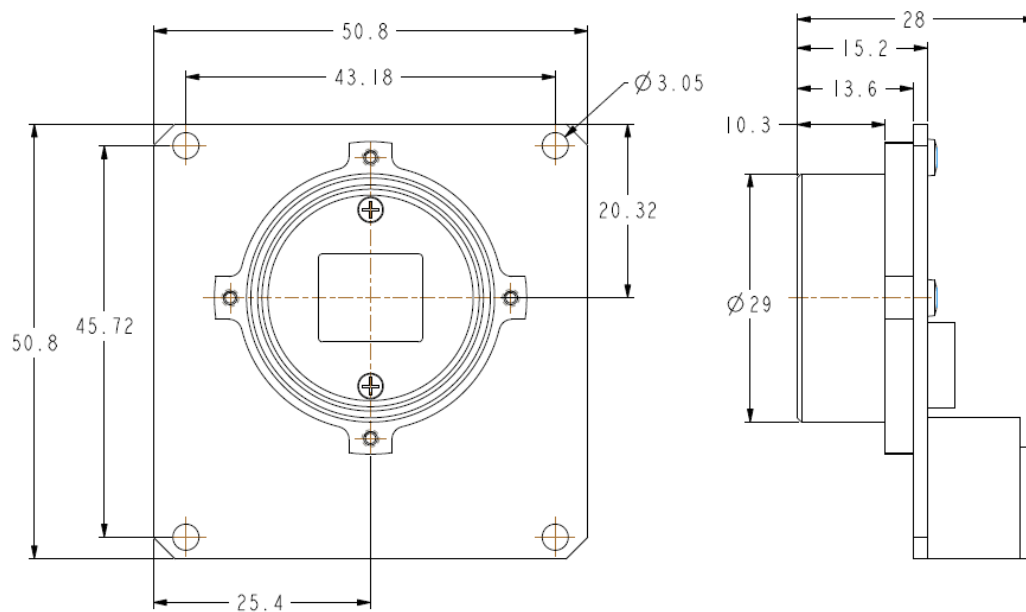## EXAMPLE OF GRAPHICAL USER INTERFACE

Mightex Systems, 2343 Brimley Road, Suite 868, Toronto, Ontario M1S 3L6, Canada
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INSTALLATION DRAWINGS

1) Board-level Camera with CS-mount

2) Enclosed camera with CS-mount

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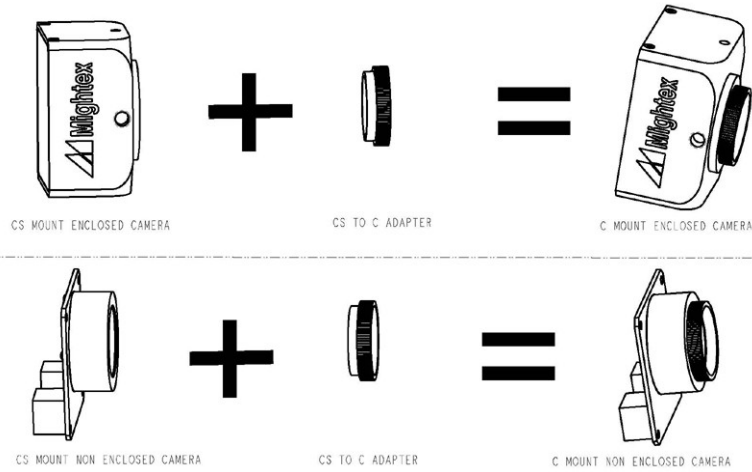**Original factory packaging**
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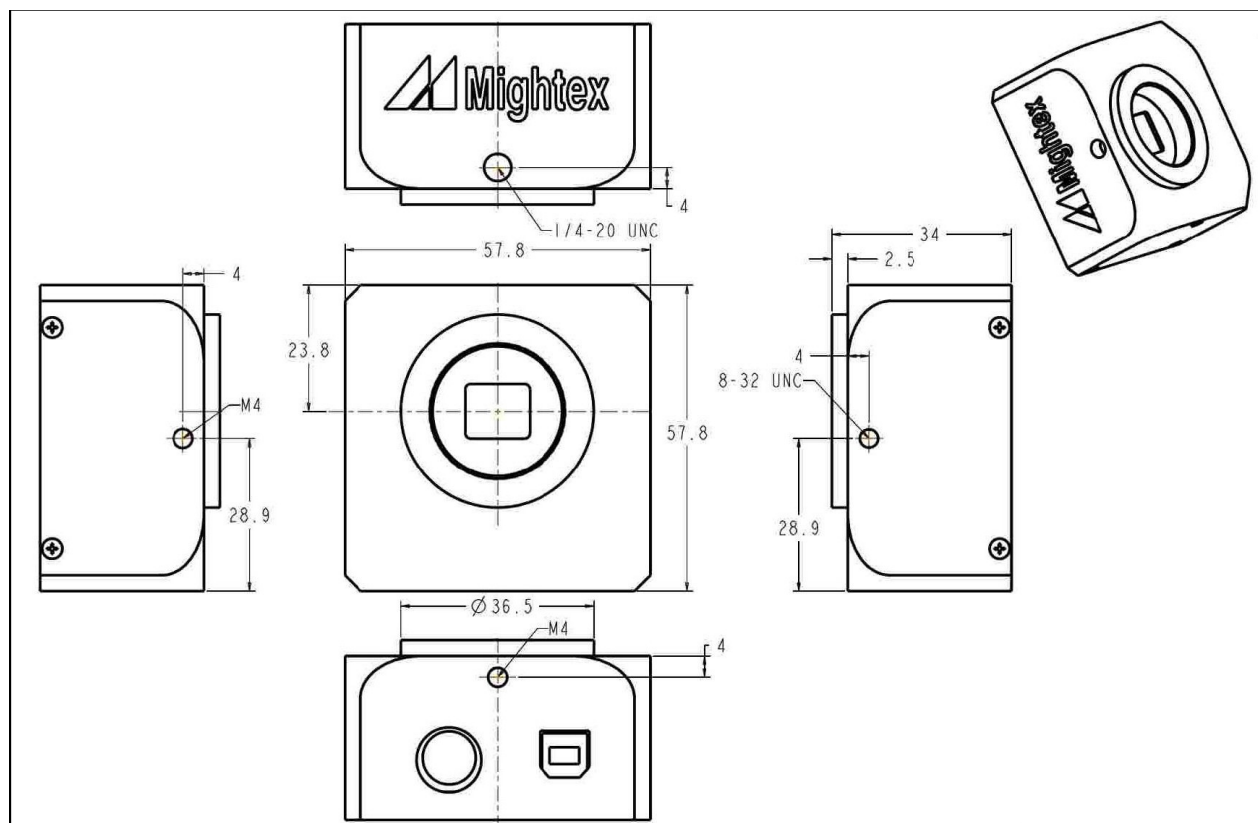
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WHAT'S IN A C-MOUNT CAMERA?

CS MOUNT ENCLOSED CAMERA   CS TO C ADAPTER   C MOUNT ENCLOSED CAMERA

CS MOUNT NON ENCLOSED CAMERA   CS TO C ADAPTER   C MOUNT NON ENCLOSED 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 for details.

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