DORGEAN
Beijing Dorgean Electronic Technology Co.,Ltd

Instrument Expert
Original factory packaging
www.dorgean.com

USB3.0 Monochrome or Color 5MP CMOS Camera (8 or 12 bit)
(Models: SMN-B050-U, SME-B050-U, SMN-C050-U, SME-C050-U)

FEATURES

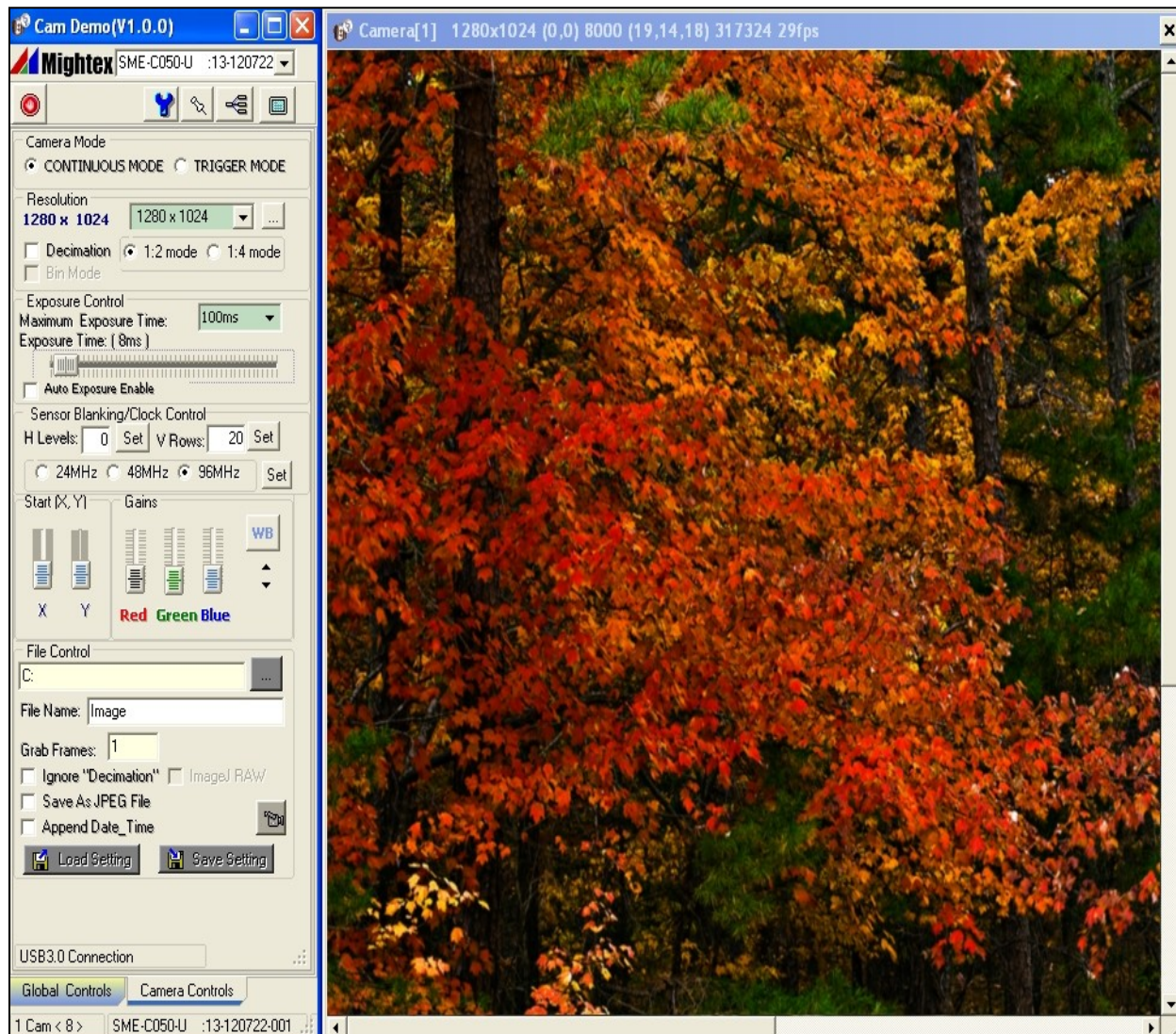- Super-speed USB3.0 interface (5Gb/s)
- Support simultaneous image capturing from multiple cameras
- 2,560 x 1,920 active imaging pixels
- Ultra compact
- 4-pin GPIOs
- Digital output, no need for frame grabber
- Custom programmable with SDK provided
- DirectShow / TWAIN driver
- External and software trigger
- Strobe output for external flash
- ROI & pixel skipping/binning
- No need for external power supply
- OEM versions available

APPLICATIONS

- Machine vision systems
- Medical imaging and engineering
- Semiconductor equipment
- 3D imaging in process automation
- Document scanners
- Digital microscopy
- Web camera and security video
- Robotics

PRODUCT DESCRIPTION

Mightex's ultrafast USB 3.0 cameras are designed for applications that require high-speed and/or multiple cameras. These cameras are equipped with a super-speed USB3.0 interface that can deliver a transfer rate of up to 400 Mbytes per second, which is 10 times the USB2.0 speed, 3.5 times GigE speed and 6 times Firewire-800 speed. With a fast and high-definition Aptina 5 Megapixel CMOS image sensor that can offer up to 14fps in full resolution and up to 350fps using ROI mode, Mightex USB3.0 cameras are suited for industrial applications that demands a great amount of data to be processed and transferred from the camera to the PC. These ultra-compact cameras have external trigger-in, strobe-out, and a powerful engine that supports multiple camera operations. In addition to all these outstanding features, a user-friendly GUI based application software and an SDK are provided for custom software development.

PERFORMANCE SPECIFICATIONS

Parameters	SMN-C050-U (color) SMN-B050-U (B/W)	SME-C050-U (color) SME-B050-U (B/W)	Unit
Board-level/enclosed	Board-level	Enclosed	
Number of GPIOs	4	4	
Resolution	2,560 x 1,920		
CMOS Chip	Aptina Micron MT9P031, rolling shutter (ERS or GRR)		
Pixel Size	2.2 x 2.2		µm
Scanning System	Progressive		
Dynamic Range	70		dB
Sensor SNR	38		dB
Bit Depth	Color: 24 (R/G/B) B/W: 8 or 12		bit
Responsivity	1.4		V/lux-sec
Frame Rates* (@96MHz Clock)	14@2,560 x 1,920 20@2,048 x 1,536 31@1,536 x 1,216 41@1,280 x 1,024 60@1,024 x 768 105@768 x 480 114@640 x 480 240@320 x 240 350@192 x 128		fps
Sub Resolutions	Support arbitrary ROI (Nx, Ny), with Nx and Ny multiples of 64 and16		
Shutter Speed (Exposure time)	0.05 ~ 750		ms
Hardware Gains	1x ~ 16x		
Trigger Mode	With external trigger （Trigger delay < 200us）		
Trigger Cable	ACC-CAM-DIN8		
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) or custom		
Power consumption	< 2.0		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 the host PC system.

Mightex
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

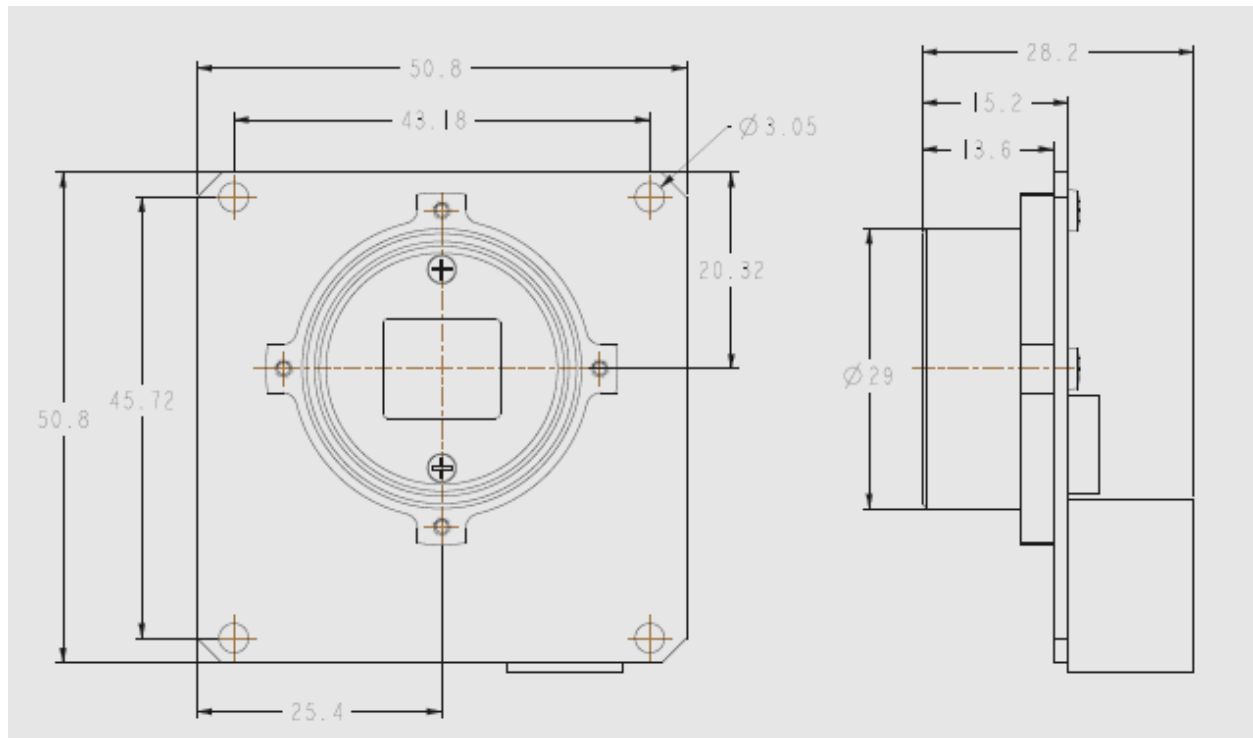|	
Processor	Dual-core Intel CPU 1.8GHz or better, or a compatible processor
Operating System	Windows XP, Vista, 7 and 8
RAM	1GB or greater
Hard Disk Space	40MB for software installation, plus additional space for storing captured images
Display	24bit True Color
USB3.0 Host Controller	Intel Integrated USB3.0 Host Controller is recommended

EXAMPLE OF GRAPHICAL USER INTERFACE

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

Mightex
Simply Brighter

INSTALLATION DRAWINGS

1) Board-level Camera with CS-mount

2) Enclosed camera with CS-mount
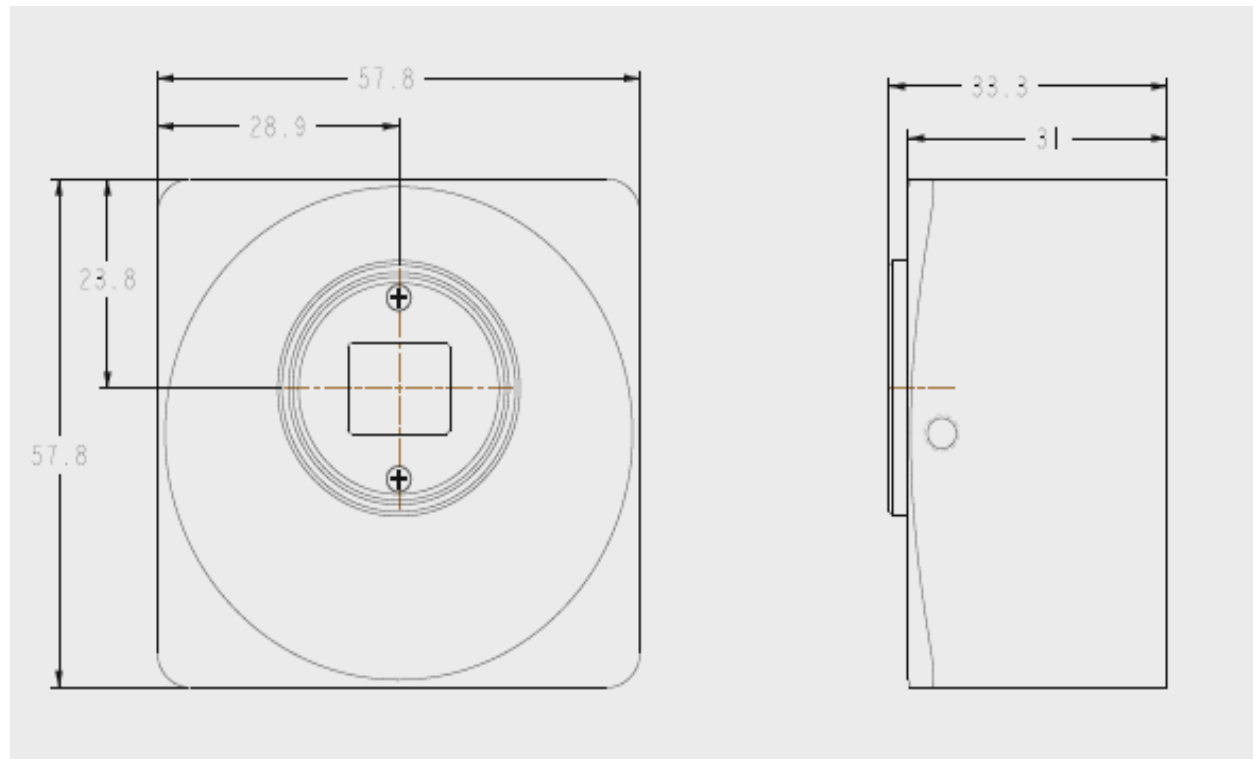
Mightex
Simply Brighter

![DORGEAN - Beijing Dorgean Electronic Technology Co.,Ltd]

Instrument Expert
Original factory packaging
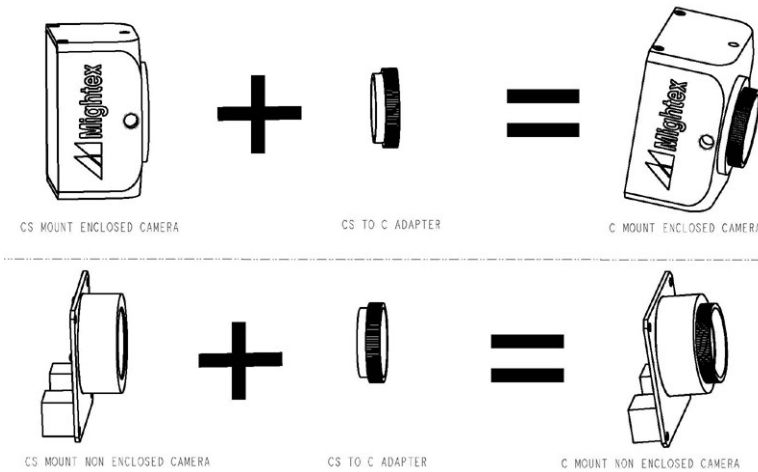www.dorgean.com

USB3.0 Monochrome or Color 5MP CMOS Camera (8 or 12 bit)
(Models: SMN-B050-U, SME-B050-U, SMN-C050-U, SME-C050-U)

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 for details.

Mightex
Simply Brighter