

# S-Series Ultra-Compact Global Shutter 752x480 Color CMOS Cameras

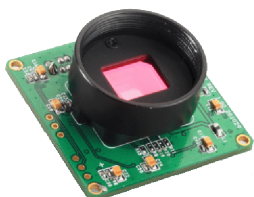
(Part Numbers: SCN-CG04-U, SCE-CG04-U)

## FEATURES

- Ultra-Compact
- True Global Shutter
- 4-pin GPIOs
- 752 x 480 active imaging pixels
- High-speed USB2.0 (480Mb/s)
- Digital output, no need for frame grabber
- Custom programmable with SDK provided
- DirectShow and TWAIN driver
- USB command set for non-Windows based applications
- Linux Driver
- 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
- High-quality ID photo capture
- Document scanners
- 2D barcode readers
- Web camera & video



## PRODUCT DESCRIPTION

Mightex S-series compact USB 2.0 cameras with global shutter are optimized for machine-vision applications, and they can also be used for a wide variety of other applications such as digital microscopy and medical imaging, where quality, ease of use, and cost-effectiveness are crucial. These cameras have global shutter, external trigger-in, strobe-out, and a powerful camera engine that supports multiple cameras. Frame rate can be as high as 38 fps in full resolution and up to 210 fps using ROI mode. In addition, a user-friendly GUI based application software and an SDK are provided for custom software development. A USB command set protocol is also provided for non-Windows based applications.

## PERFORMANCE SPECIFICATIONS

Parameters	SCN-CG04-U	SCE-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
Frame Rates* (@26MHz Clock)	38 @752 x 480 40 @640 x 480 82 @320 x 240 130 @160 x 120 170 @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		
Trigger Cable	ACC-CAM-CON8		
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	< 1.0		W
Dimension	40 x 40 x 25 (CS-mount) 40 x 40 x 30 (C-mount)	45 x 45 x 23 (CS-mount) 45 x 45 x 28 (C-mount)	mm
Weight (excluding lens)	60	120	g

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

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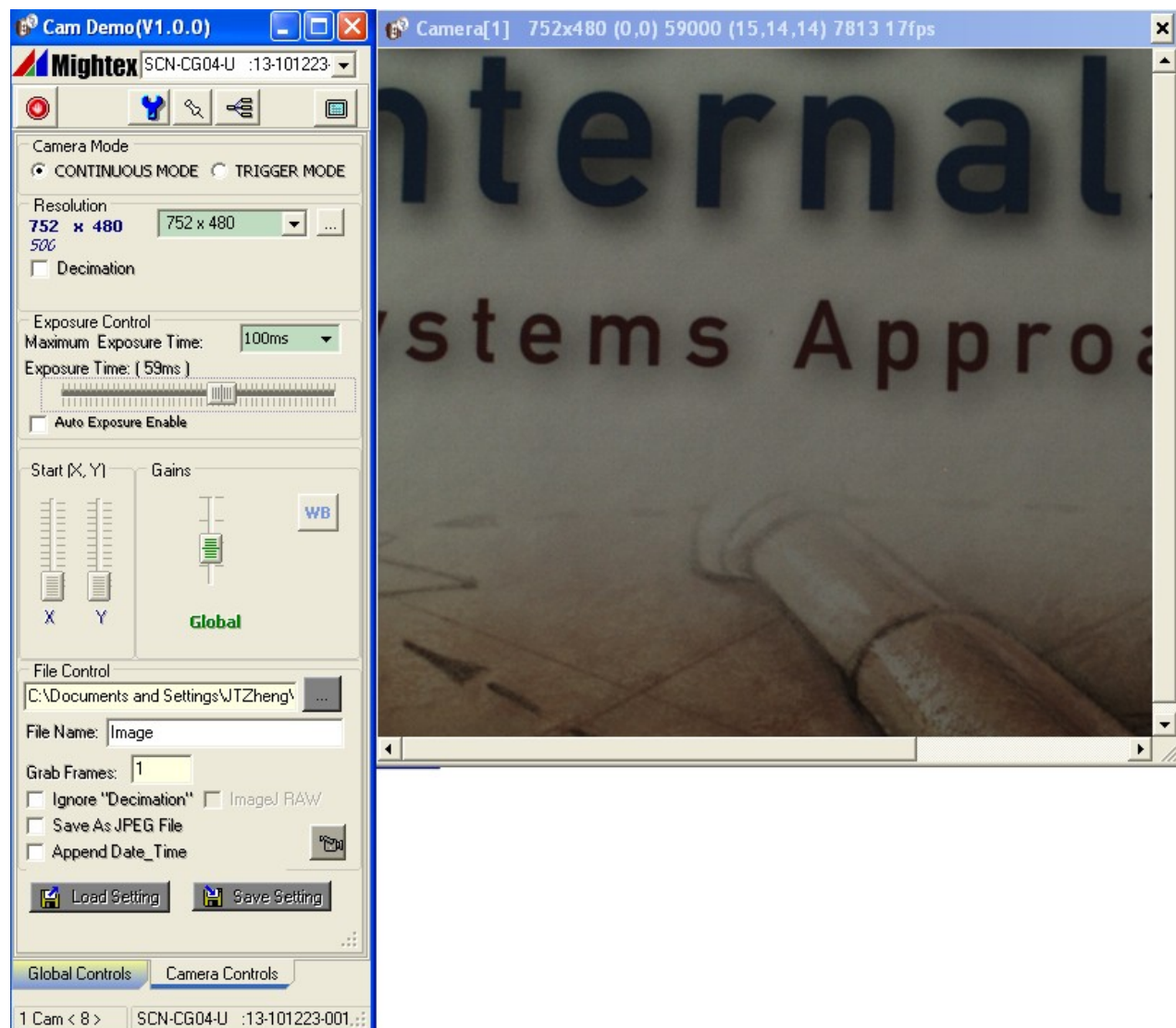
## OPERATION CONDITION

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

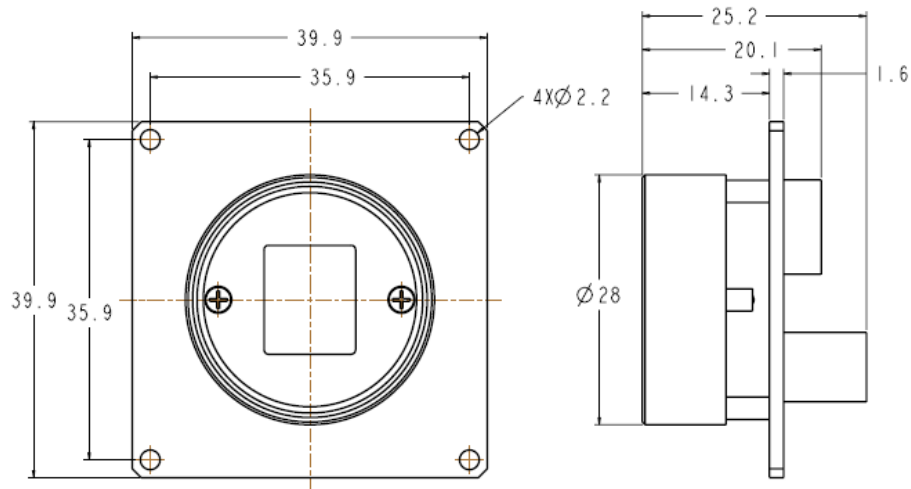


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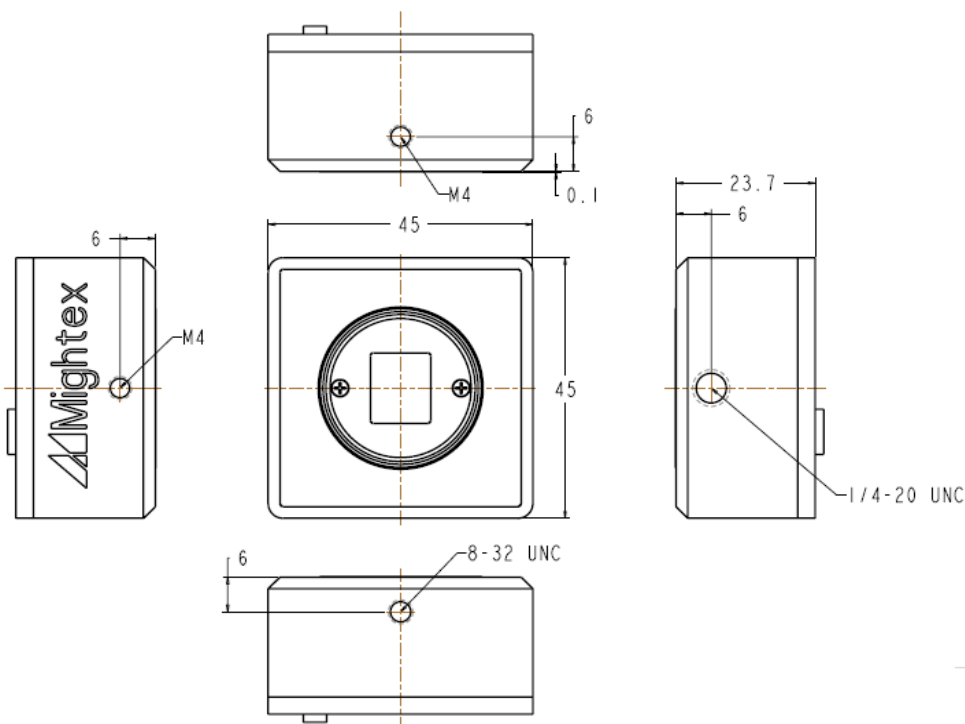
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## INSTALLATION DRAWINGS

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



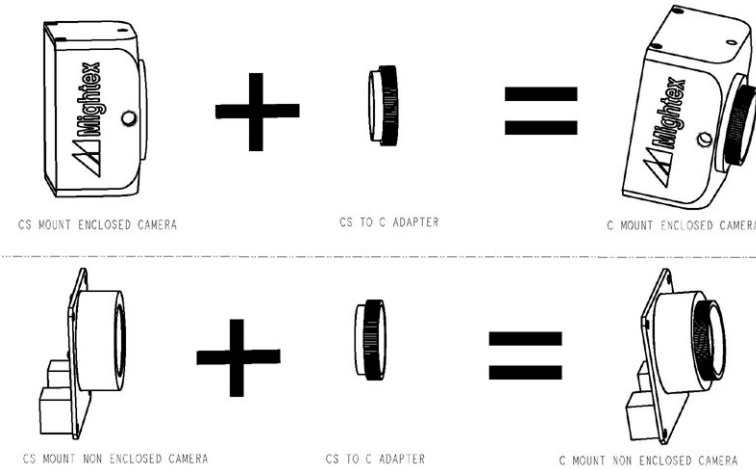
### 2) Enclosed camera with CS-mount



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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.