

S-Series Ultra-Compact USB2.0 Monochrome 1.3MP CMOS Camera

(Part Numbers: SCN-B013-U, SCE-B013-U)

FEATURES

- Ultra-Compact
- 4-pin GPIOs
- Higher sensitivity than color cameras, especially in IR
- 1,280 x 1,024 active imaging pixels
- High-speed USB2.0 (480Mb/s)
- Digital output, no need for frame grabber
- Custom programmable with SDK provided
- DirectShow and TWAIN drivers
- USB command set for non-Windows based applications
- Linux Driver
- External and Software trigger
- Strobe output for external flash
- ROI & pixel skipping
- 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



PRODUCT DESCRIPTION

Mightex S-Series compact USB 2.0 cameras 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 external trigger-in, strobe-out, and GPIOs. Monochrome cameras often exhibit 20% higher spatial resolution than their color counterparts because no pixel interpolation is necessary. Without a Bayer color filter on the sensor, monochrome cameras are also more sensitive than color sensors especially in near IR and UV regions. Frame rate can be as high as 20 fps in full resolution and up to 150 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-B013-U	SCE-B013-U	Unit
Board-level/enclosed	Board-level	Enclosed	
Number of GPIOs	4	4	
Resolution	1,280 x 1,024 monochrome		
CMOS Chip	½" (5:4) Micron MT9M001, rolling shutter		
Pixel Size	5.2 x 5.2		µm
Active Imager Size	6.66 x 5.32		mm
Scanning System	Progressive		
Dynamic Range	68		dB
Sensor SNR	45		dB
Gray Level	8		bit
Responsivity	2.1		V/lux-sec
Frame Rates* (@48MHz Clock)	20 @1,280 x 1,024 31 @1,024 x 768 45 @800 x 600 52 @752 x 480 52 @640 x 480 120 @320 x 240		fps
Sub Resolutions	Support arbitrary ROI (Nx, Ny), with Nx and Ny multiples of 4		
Shutter Speed (Exposure time)	1 ~ 750		ms
Hardware Gains	0.125x ~ 8x		
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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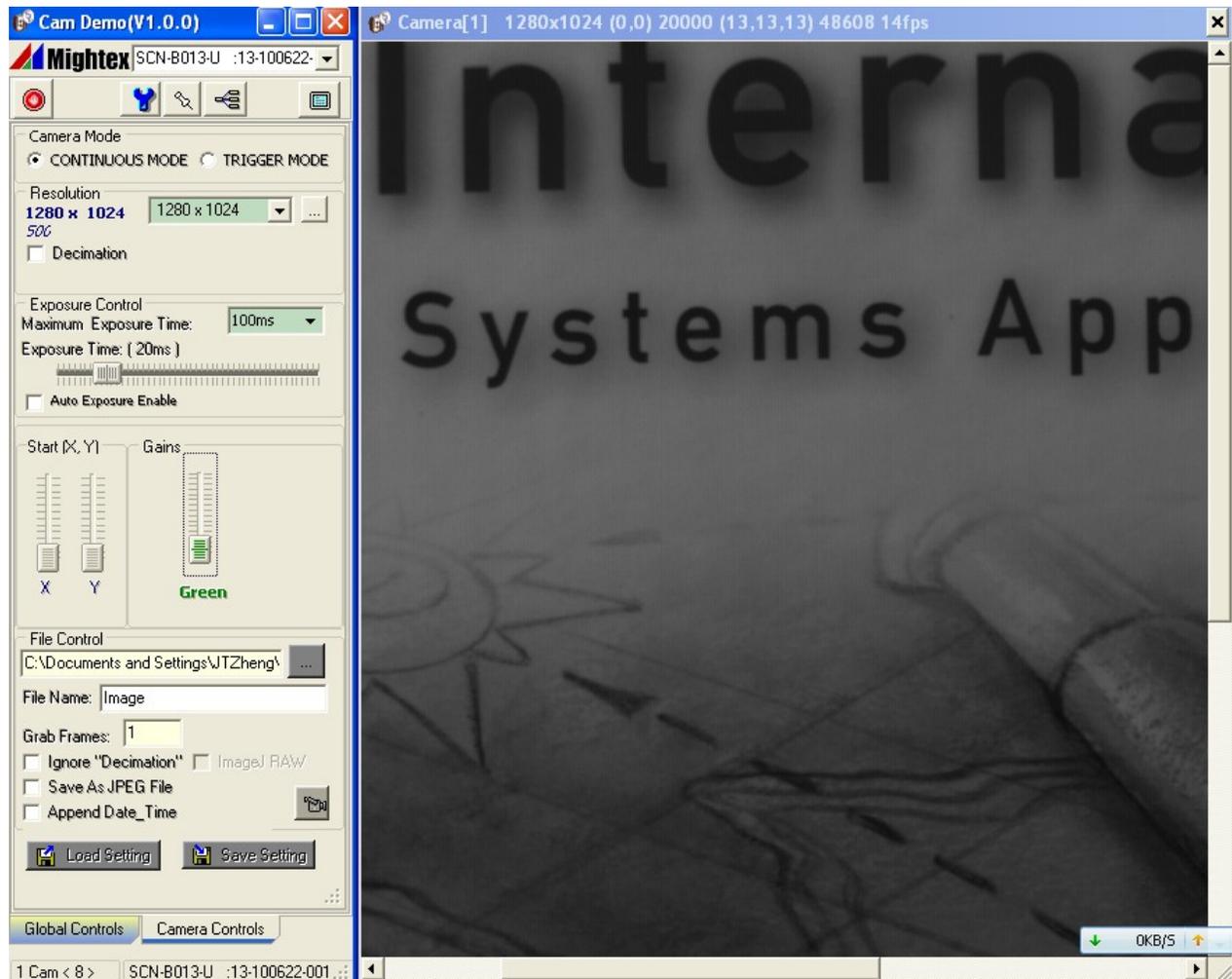
OPERATION CONDITION

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)

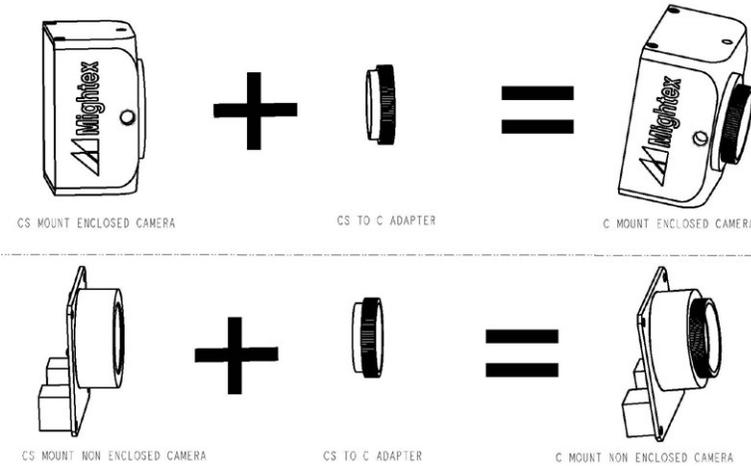
EXAMPLE OF GRAPHICAL USER INTERFACE



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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.