USB 2.0 3648-Pixel 16bit CCD Line Camera with External Trigger

(Part Numbers: TCE-1304-U, TCE-1304-UW)

FEATURES

- USB2.0 interface
- No external power supply required
- Optical integration time adjustable from 100μs to 6.5s
- 3648 pixel silicon linear CCD array
- 8μm x 200μm pixel size
- 16-Bit A/D converter for high intensity resolution
- Scan rate up to 138 scans/second
- External trigger capability
- 4 GPIOs
- SDK for user applications
- Demo software with GUI

APPLICATIONS

- Industrial Process Control
- Optical Spectroscopy

PRODUCT DESCRIPTION

Mightex's TCE-1304-U line camera is a cost-effective high-performance B/W enclosed line camera, based on a single-line, 3648-pixel CCD chip with USB2.0 (480 Mb/s) interface. CCD line cameras have several advantages over their area-array counterparts, including high optical linear resolution that allows systems developers to use the cameras to capture two-dimensional (2-D) images by moving the object or the CCD perpendicularly to the scan line. TCE-1304-U is a compact line-scan camera ideal for a variety of OEM applications such as industry process control, optical spectroscopy and bio-medical imaging etc. Setting up the TCE-1304-U line camera is very easy: one simply needs to install the camera's application software into any PC, and then connect the line camera to the PC using a USB cable. There is no need to install a DAC card or to use an external power supply.

TCE-1304-UW camera is the window-less version of TCE-1304-U, with the glass window removed from the image sensor. Therefore, the former is more sensitive to UV and is more suitable for applications that involve coherent light sources.

PERFORMANCE SPECIFICATIONS

Parameters	TCE-1304-U and TCE-1304-UW	Unit
CCD	Toshiba TCD1304DG	
Number of pixels	3648	pixels
Pixel size	8 x 200	μm
Spectral range	TCE-1304-U: 350 to 1000 TCE-1304-UW: 200 to 1000	nm
Pixel output clock	0.5	MHz
Data storage on camera	4	frames
ADC resolution	16	bits
External trigger	Yes	
Exposure time range	0.1 ~ 6,500	ms
Number of GPIOs	4 programmable I/O's	
Frame rate	138	scans/second*
Host interface	USB2.0	

* Frame Rate is dependent on exposure time. When exposure time is set to 0.1 ms, the camera can achieve 138 scans/second.

SDK Features

Operation Systems	Windows 2000, XP, Vista and Windows 7
Minimum Requirement	RAM > 64M, hard disk space used > 10M
USB Port	2.0
Multiple Cameras	Supported
Device Driver	Yes
Demo Application	Yes
Library Files	Yes (DLL files and static library file)
Example Codes	Yes (VC++ and Delphi)
Frame Attributes*	Exposure Time, Time Stamp, Trigger Event Count, Over-Exposure Detection.

* SDK will provide call back, which will send user frame data and the related attributes of the frame. The attributes include: Exposure Time, Time Stamp, Trigger Event Count and Over-Exposure Flag.

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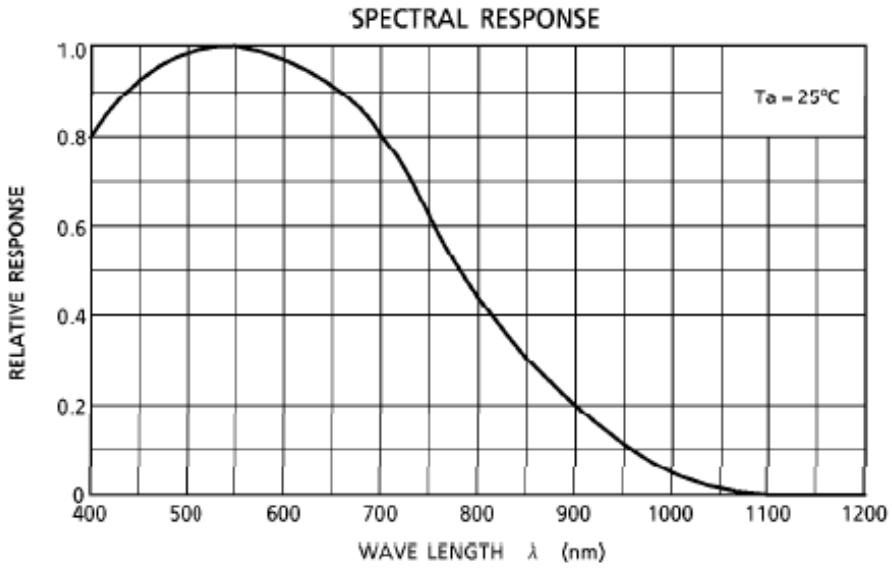
www.mightex.com or www.mightexsystems.com

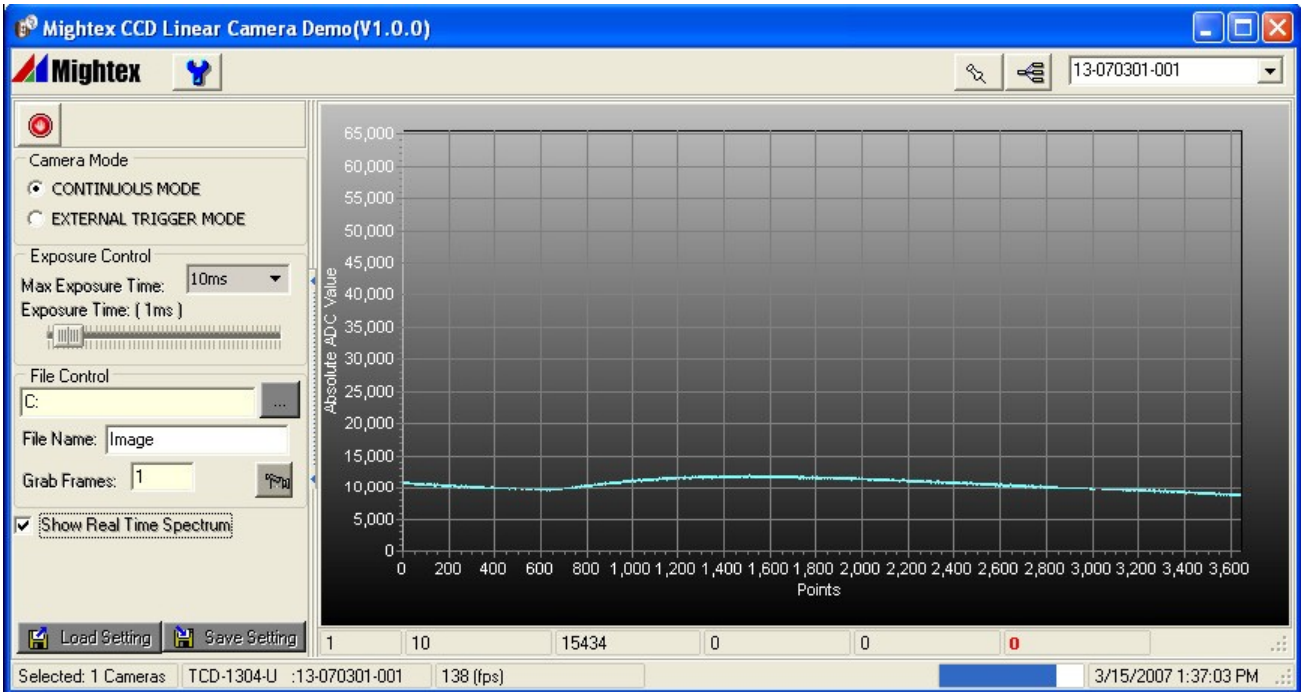
SPECTRAL RESPONSE (for TCE-1304-U Only)



OPERATION CONDITION

Operating Temperature Range	-10°C ~ 50°C
Relative Humidity, Non-condensing	5% ~ 95%

EXAMPLE OF GRAPHICAL USER INTERFACE



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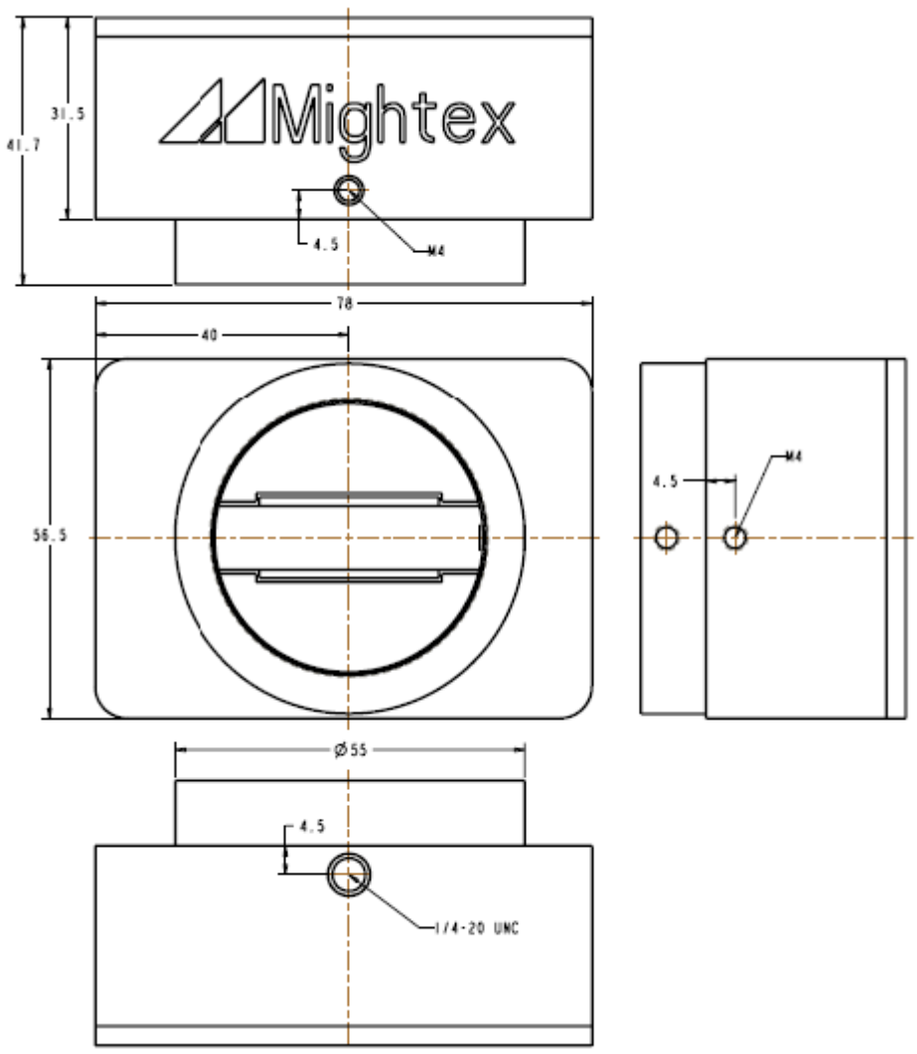
MECHANICAL DIMENSIONS



Length x Width x Height: 78(mm) x 42(mm) x 57(mm)
Weight: 200g

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.