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High-Resolution CMOS Cameras with External Trigger



DCC1240C

Thorlabs' DCC1240 series of CMOS cameras feature an external trigger and a maximum full frame rate of 25 fps. The cameras feature either a 1/2" B&W or a color sensor, both of which offer SXGA (1280 x 1024 px) resolution. For capturing objects in motion, these cameras provide the option of a global shutter mode.

For both models, higher frame rates can be achieved by using the Region of Interest (ROI) or binning functions. ROI increases the frame rate by only reading a selected portion of the sensor, while binning combines pixel readings before transferring data to a PC. Note that both of these functions reduce the size of the image captured.

Both cameras feature C-Mount threading for compatibility with our complete line of MVL camera lenses. Additionally, two SM1-threaded adapters (both internally and externally threaded) are included that allow customers to integrate these cameras with our line of optomechanics, including Ø1" lens tubes and 30 mm cage systems. The camera is post mountable via a bottom-located 8-32 (M4) tap.

Standard drivers such as Direct Show (WDM), ActiveX®, TWAIN, and interfaces for popular machine vision software are provided. Over 20 demonstration programs (including source code) are supplied with these cameras. Windows and Linux drivers in addition to an SDK (C++, C#, VB, and LabVIEW support) are available.

Features

- 1280 x 1024 Pixel Resolution
- Color and B&W Versions Available
- 25 fps (Full Frame Mode)
- Electronic Global and Rolling Shutter
- C-Mount Threaded
- Universal Trigger Input via a 9-Pin, D-Sub Connector
- 1/4"-20 UNC Camera Mount
- USB 2.0 High-Speed Connection

ITEM #	DCC1240M	DCC1240C
Pixel Resolution	1280 x 1024	1280 x 1024
Sensor Type	1/2", B&W	1/2", Color
Sensor Model	e2v EV76C560BB	e2v EV76C560BC
Pixel Size	5.3 µm x 5.3 µm	
Exposure Mode	Electronic Global and Rolling Shutter	
Read Out Mode	Progressive Scan	
Frame Rate (Free Run) <sup>a</sup>	25.8 fps	
Frame Rate (Trigger Mode) 1 ms Exposure Time <sup>a</sup>	25.1 fps	
Binning	H + V Combined, Mono-/Color Binning	
ROI (Partial Scan)	Horizontal and Vertical <sup>b</sup>	
Pixel Clock Frequency Range <sup>c</sup>	7 – 35 MHz	
Exposure Time (Free Run and Trigger Mode)	9 µs <sup>d</sup> – 2 s <sup>d</sup>	
Gain	4X	4X/3.96X
Hardware Trigger	Asynchronous	
Objective Connector	C-Mount (SM1 Adapters Included)	
Window	Uncoated Glass (D263)	IR Filter D263 with HQ Coating
Interface	USB 2.0	
Power Supply	0.3 – 0.6 W via USB	
Operating Temperature	0 to 50 °C (32 to 122 °F)	
Security Labels	CE, FCC, Class A	
Dimensions (W x H x D)	32.0 mm x 40.5 mm x 42.0 mm (1.26" x 1.59" x 1.65")	
Weight	80 g (0.18 lbs)	

a) Values are only achieved with maximum pixel clock  
b) Function increases the frame rate  
c) The max possible pixel clock depends on the used computer  
d) Values are only achieved with minimum pixel clock

Have you seen our...

Camera Lenses

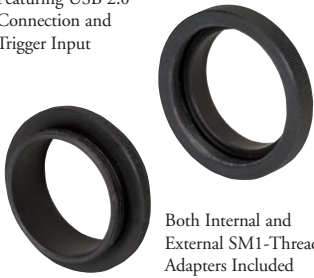
- ◆ C-Mount Threaded
- ◆ Manually Adjustable Focus and Aperture
- ◆ Compatible with DCC and DCU Series Cameras



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DCC1240C  
Featuring USB 2.0  
Connection and  
Trigger Input



Both Internal and  
External SM1-Threaded  
Adapters Included

ITEM #	\$	£	€	RMB	DESCRIPTION
DCC1240M	\$ 1,125.00	£ 810.00	€ 978,75	¥ 8,966.25	USB 2.0 CMOS Camera, Black & White
DCC1240C	\$ 1,125.00	£ 810.00	€ 978,75	¥ 8,966.25	USB 2.0 CMOS Camera, Color