

## Digital Video Camera

XCD-V50

XCD-V50CR



Sony introduces two new additions to its machine vision camera line-up – the XCD-V50 B/W Digital Video Camera – one of the industry's first IEEE-1394.b cameras, and the XCD-V50CR Colour Digital Video Camera.

The XCD-V50 and XCD-V50CR are ultra-compact, lightweight digital video cameras designed specifically for a wide range of machine vision applications. These cameras incorporate a 1/3-type progressive scan CCD with square pixels that produce high-quality, clear VGA images, which are most commonly used when transferring image data via an IEEE-1394 interface.

The XCD-V50 and XCD-V50CR adopt the IEEE-1394.b interface standard which can support cables up to 100 meters long and enable the cameras to transfer images at a high frame rate of up to 60 fps. Plus they are equipped with two IEEE-1394.b interfaces so multiple cameras can be daisy-chained. Users can control the cameras from a single PC with a simple system configuration. The XCD-V50 and XCD-V50CR also feature two screw cable connectors ensuring a more robust performance compared to standard cables. And best of all, the XCD-V50 and XCD-V50CR are backward compatible with conventional IEEE-1394 cameras via IIDC 1.31 support.

With a variety of other convenient features, such as an external trigger input and selectable video modes, the XCD-V50 and XCD-V50CR are ideal for various machine vision applications such as printed circuit board barcode inspection, bottle inspection, and image processing and analysis.



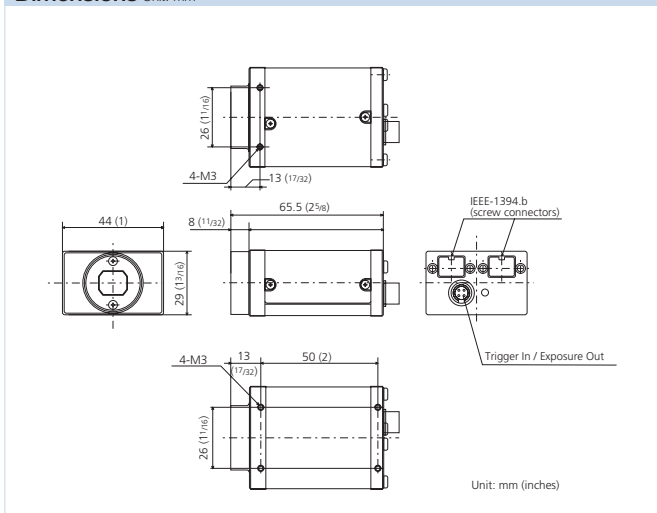
## Features

- 1/3-type progressive scan CCD with square pixels, VGA (640 x 480)-sized images
- IEEE-1394.b Digital Interface compliant
- IIDC Ver. 1.31 compliant
- High frame rate of up to 60 fps in continuous mode
- High Frame rate of up to 30 fps in trigger mode at 8 bit (mono 8) and to 20 fps at mono 16
- Bayer color filter (only XCD-V50CR)
- 8-bit (Mono 8) or 14-bit (Mono 16) output
- External trigger input enables the capture of fast-moving objects or still images clearly, even in low-light environments (Trigger mode 0/Trigger mode 1)
- Fast hardware or software asynchronous trigger
- Selectable gain control: Auto/Manual gain (+0 to +18 dB, 0.035 dB steps)
- C mount
- Ultra-compact and lightweight design, equal to the Sony XC-ST series
- High shock and vibration tolerance
- Lead-free solder PWB (Printed Wiring Boards)
- A Software Development Kit (SDK\*) is available for any purchase of this IEEE1394 digital camera.

\* subject to licence terms

SPECIFICATIONS	XCD-V50	XCD-V50CR
Image device	1/3-type progressive scan IT CCD	
Effective picture elements (H x V)	659 x 494	
Output image size (H x V)	640 x 480 (VGA)	
Cell size (H x V)	7.4 x 7.4 μm	
Lens mount	C mount	
Minimum illumination	4 lx (F1.4, +18 dB gain)	
Digital interface	IEEE-1394.b-2002	
Transfer rate	800/400 Mbps	
Frame rate	60/30/15 fps	
Gain control	Manual (0 to 18 dB, 0.035 dB steps)	
External shutter	1/100 000 to ∞	
External trigger shutter	Trigger start (mode0), trigger start and exposure duration (mode1)	
Power requirements	DC 8 to 30 V	
Dimensions	44 (W) x 29 (H) x 57.5 (D) mm (1 3/4 x 1 3/16 x 2 3/8 inches)	
Mass	120 g (4 oz)	
Operating temperature	-5 to +45 °C (23 to 113 °F)	
Storage temperature	-20 to +60 °C (-4 to +140 °F)	
Operating humidity	20 to 80% (non condensing)	
Storage humidity	20 to 95% (non condensing)	
Vibration	10 G (20 to 200 Hz)	
Shock resistance	70 G	
Regulations	UL60950 listed, FCC Class B Digital Device, CE (EN61326)	
Supplied accessories	Lens mount cap, Operating instructions, IEEE-1394.b 9-pin - 9-pin cable (4.5 m)	

## Dimensions Unit: mm



## Supported Video Modes

### XCD-V50/CR

#### Fixed format

Format	0	0
Mode	5	6
Image size (H x V)	640 x 480	640 x 480
Colour coding	Mono 8	Mono 16
Frame rate (fps)	15/30/60	15/30
Continuous Mode		
Frame rate (fps)	30	20
Trigger Mode		

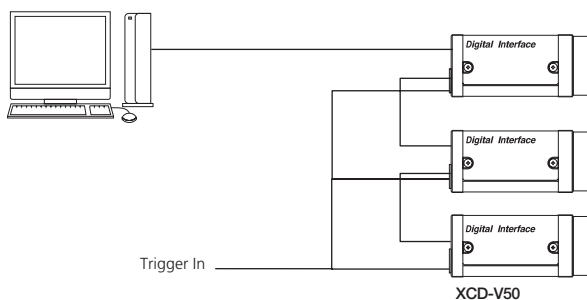
## Optional Accessory



### Tripod Adaptor VCT-ST70I

Isolated type  
Approx. 14 g (0.5 oz)  
Dimensions: 40 (W) x 6 (H) x 59 (D) mm  
(1 5/8 x 1/4 x 2 3/8 inches)

## System Configuration



## Sony Contacts

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