



lens for illustration purposes only

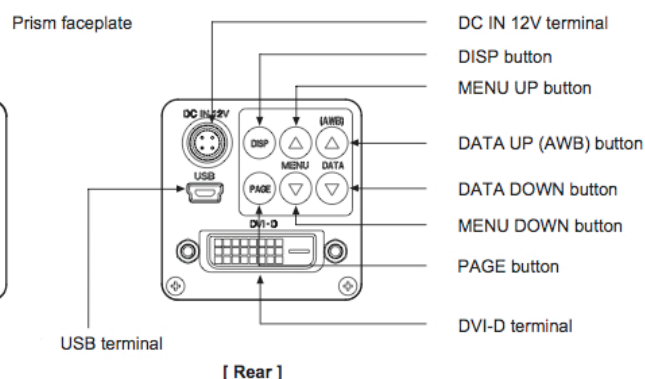
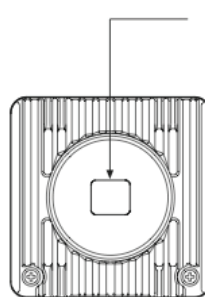
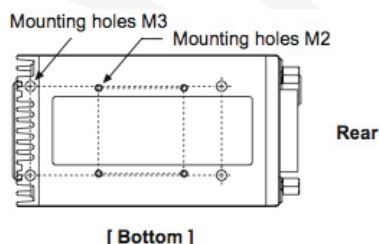
# TOSHIBA

The SeeSense IK-HR2Q is a specially modified Toshiba IK-HR2D camera fitted with a **CS-mount**. It is a lightweight 1/3" 1-CMOS High Definition (HD) compact camera having 1920 x 1080 output pixels (16:9 ratio) with DVI-I and USB output.

This compact camera delivers true progressive or interlace scan real-time video from a DVI output. **It has the added ability to send video frames direct to your computer via USB removing the need for a framegrabber.** This one piece camera provides sharp, high-definition imagery with the reliability and quality you can expect from a Toshiba camera.

The special CS-mount gives access to a greater range of suitable megapixel lenses including Wide Angle and Wide Aperture lenses. This can increase the camera's low light operational capability.

Contact SeeSense for lens options for the Toshiba IK-HR2D camera.



### Specifications:

- Ultra compact (approx 44 x 44 x 78mm) one-piece system
- Outputs full 1920 x 1080 pixels at 50/60 fps
- Output selectable between 1080i, 1080p and 720p
- Utilises 1/3" CMOS 2.1 megapixel HD sensor
- On-screen menu
- Weight 150 g. (without lens)
- Digital DVI output
- **USB 2.0 port outputs video clips and eliminates need for frame grabber**
- Auto and manual white balance
- Auto and manual electronic shutter
- Special CS-mount version of the Toshiba IK-HR2D. C-CS adapter included.
- 2 years warranty

This camera has many suitable applications in the following industries:

Broadcast  
Medical especially microscopy  
Scientific imaging / diagnostics  
Homeland security  
Industrial including video / inspection

SeeSense are able to provide technical assistance and back up for this camera as well as offering additional special modifications such as IR Sensitive, low light, etc.

Please contact SeeSense for details and advice.

Rev: 3.017.0214 E&OE

### Specification Performance

Power Requirements	12 V DC $\pm$ 10% DCIN connector (4pin)
Power Consumption	Approx. 4.1 watts
Image Sensor	1/3" progressive scan CMOS
Output Pixels	Horizontal: 1920, Vertical: 1080
Scanning System	Progressive (720p)/Interlaced (1080i) Switchable
Sync / Freq	DVI output Digital output (DVI-D connector)
	Progressive / Interlace
	1080p/59.94Hz, H:67.43KHz, V:59.94Hz
	1080p/50Hz, H:56.25kHz, V:50Hz
	1080i/59.94Hz, H:33.72KHz, V:59.94Hz
Sync / Freq	1080i/50Hz, H:28.13kHz, V:50Hz
	720p/59.94Hz, H:44.96kHz, V:59.94Hz,
	720p/50Hz, H:37.50kHz, V:50Hz
	USB output (UVC1.1 compliant YUV 4:2:2)
	Non-compressed
Sensitivity	1920 x 1080 (approx. 5fps)
	1280 x 720 (approx. 10fps)
Sensitivity	F/4 standard (2000 lux, 3000K)
Min. Illumination	8 lux standard (50 IRE, f1.4, gain + 18 dB)
Frame Rate	DVI: 30 fps (1080i), 60 fps (1080p / 720p)
	USB: 5 fps (1080 mode), 10 fps (720 mode)
Video Signal Output	Digital output (DVI-I connector output) 8bit X RGB
Sync. System	Internal
Camera Lens Mount	CS-mount 12.5mm (in Air)
Dimensions	44 x 44 x 78mm
Weight	150 grammes
Operating Temperature	0°C to + 40°C
Storage Temperature	-20°C to + 60°C
Humidity	90% or less (non-condensing)

### Specification Features

Shutter Modes	Manual – Off (1/60s / 1/50s), 1/100s, 1/250s, 1/500s, 1/1000s, 1/2000s, 1/4000s, 1/8000s, 1/16000s, 1/32000s
	Auto Level – range of -100 to 100
	Synchronized Scan – Set by horizontal scanning time
Gain	MANUAL (manual), OFF (0dB)
White Balance	AWB (Automatic White Balance)
	ATW (Automatic Tracking White Balance)
	Manual (Manually Adjustable)
Gamma	OFF / MANUAL : 0 to 12dB (1dB/step)
Scene File Setting	5 Files A/B/C/D/E

### Lenses

The following lenses (a small selection only) have been tested by SeeSense and are known to be compatible with this camera. (angles of view quoted are in the horizontal plane).

Fujinon	2.2 - 6mm	129 - 50 degrees (F1.3)
	2.2 - 8mm	111 - 51 degrees (F1.2)
Kowa	1.6 - 3.4mm	147 degrees (horizontal @2mm)
Senko	1.87mm	180 degrees with C-CS adapter ring
	3 - 8.5mm	90 - 33 degrees (F1.0)
Senko	1.87mm	180 degrees with camera modification
Theia	1.67mm	110 Degree rectilinear lens*
	1.28mm	125 degree rectilinear lens*
	1.8 - 3mm	105 - 77 degrees rectilinear lens*
	9 - 40mm	30 - 7 degrees

\*N.B. Image will be inverted

If you have a specific requirement please contact SeeSense for advice.

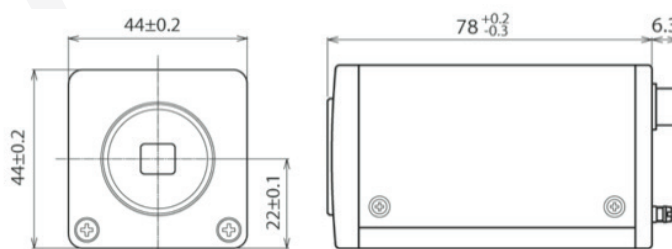
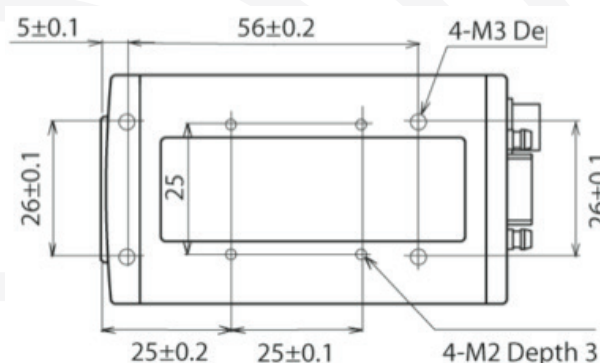
### Accessories

For simple and free USB image capture software we can recommend **Debut Video Capture Software** from NCH Software.

### Power Supply

Toshiba	ACM-601E	Medical grade power supply.
SeeSense	SS-PSU-xx	Own brand power supply

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