



# TOSHIBA

The SeeSense IK-HR1P is a specially modified TOSHIBA IK-HR1S 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 HD-SDi output. This compact camera is switchable between 1080i and 720p outputs as well as 50 or 60Hz video.

The special CS-mount gives access to a greater range of suitable megapixel lenses including Wide Angle and Wide Aperture lenses. This can also increase the camera's low light operational capability. Our camera front includes a 16:9 sensor window reducing the risk of lighting flare and achromatically black interior for easy differentiation from the Toshiba original

SeeSense are able to provide full technical assistance and back up for this camera as well as offering additional special modifications such as an IR Sensitive version.

Please contact SeeSense for further details and our recommended lens options.

## Specifications:

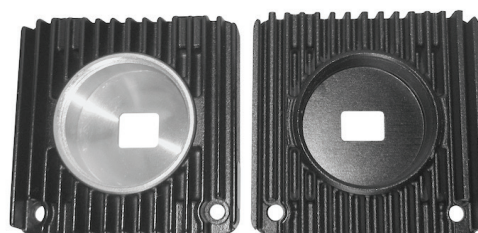
- Special CS-mount version of the Toshiba IK-HR1S
- Ultra compact (approx 44 x 44 x 78mm) one-piece system,
- Output selectable between 1080i and 720p at 50 or 60 Hz Video
- Utilises 1/3" CMOS 2.1 megapixel sensor
- On-screen menu
- Weight 148 g. (without lens)
- HD-SDI Video Output
- Auto and manual white balance
- Auto and manual electronic shutter
- Comprehensive suitable lens range available
- C-CS adapter included
- 2 years warranty

This camera has many suitable applications in the following industries:

- Broadcast
  - Natural History
  - In Car
  - Sports
  - Goal Camera
  - POV Camera
- Medical
  - Endoscopy
  - Microscopy
- Scientific imaging / diagnostics
- Live gaming cameras (eg. Casino)
- Homeland security
- Industrial video / inspection
  - Underwater (compact housing or ROV)
  - Aerial including UAV

**Before**

**After**



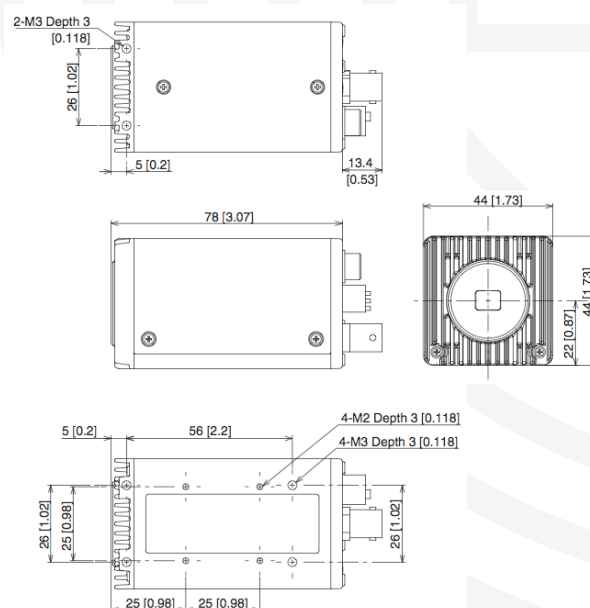
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### Specification Performance

Power Requirements	12 V DC $\pm$ 10% DCIN connector (4pin)
Power Consumption	Approx. 4 watts
Image Sensor	1/3" progressive scan CMOS
Output Pixels	Horizontal: 1920, Vertical: 1080
Scanning System	Progressive (720p)/Interlaced (1080i) Switchable
Sync / Freq	720p @ 60 fps; 1080i @ 30 fps H: 33.716 kHz, V: 59.94 Hz (1080/59.94i setting) H: 28.125 kHz, V: 50 Hz (1080/50i setting) H: 44.955 kHz, V: 59.94 Hz (720/59.94p setting) H: 37.500 kHz, V: 50 Hz (720/50p setting)
Sensitivity	F/4 standard (2000 lux, 3000K)
Min. Illumination	8 lux standard (50 IRE, f1.4, gain + 18 dB)
Frame Rate	30 fps (1080i), 60 fps (720p)
Video Signal Output	HD-SDI (SMPTE 292 M), 0.8 V (p-p) standard 75 ohms unbalanced BNC connector
Sync. System	Internal
Camera Mount	CS-mount 12.5mm (in Air)
Dimensions	44 x 44 x 78mm
Weight	148 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), 1/100s, 1/125s, 1/250s, 1/500s, 1/1000s, 1/2000s, 1/4000s 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 18dB (1dB/step)
Scene File Setting	5 Files A/B/C/D/E
Remote Control	RS-232C: Baud rate 9600bps/19200bps



### Recommended Accessories

#### 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).

SeeSense	1.6 – 3.4mm	147 degrees (horizontal @2mm)
Fujinon	2.2 – 6mm	129 – 50 degrees (F1.3)
	2.8 – 6mm	111 – 51 degrees (F1.2)
	2.8 – 8mm	111 – 38 degrees (F1.3)
	2.8 – 12mm	109 – 25 degrees (F1.4)
Senko	1.87mm	180 degrees with C-CS adapter ring
	3 – 8.5mm	90 – 33 degrees (F1.0)
Tamron	2.4 – 6mm	111 – 47 degrees (F1.2)
	2.8 – 8mm	100 – 35 degrees (F1.2)
	3 – 8mm	92 – 35 degrees (F1.0)
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

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

#### Accessories

The SeeSense C-CS adapter also allows C-mount lenses to be fitted.

#### Power Supply

Toshiba ACM-601E Medical grade power supply

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