

# **CCTV42 1080P HD-TVI Camera**

## **USER MANUAL**

**Thank you for purchasing from CCTV42. Please read this manual carefully before installing the camera. If you have any questions please don't hesitate to contact us via email or telephone Mon – Fri 9.00am to 6.00pm**

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## **SAFETY PRECAUTION**

**Do not open or dismantle the camera. There are no user serviceable parts inside and there is a risk of serious injury due to electrical shock.**

**Warranty will be invalidated if the camera is opened or cable modified in any way. In particular do not cut off connectors from the end of the fly lead.**

### **WARNING**

In order to prevent damage please do not put internal cameras in a moist environment. External cameras are not designed to be submerged under water.

Please make sure the power adapter is compatible with camera specifications. Ideally use a CCTV42 power supply.

Pay attention to the polarity of the power adapter.

Please do not overload the power adaptor. Only fit the number of cameras specified for that particular unit.

Power supply must be firmly plugged in.

If the device gives off an abnormal smell or smoke', please disconnect immediately and contact CCTV42.

Please do not splash water onto the products components when cleaning.

## NOTES

Do not drop the camera and stay away from strong electromagnetic interference or vibration.

There are some sophisticated parts inside the camera, therefore, during transportation and installation, please avoid stress or severe vibration. Do not switch on power before installation is complete.

Please comply with all electrical safety standards during installation. The camera and associated cables should not be placed near high-voltage equipment or cables. Where appropriate lightning protective measures must be taken.

Please install the camera in well-ventilated environment.

Please do not position the camera to face directly into sunshine or other strong light to avoid any possible damage to the lens or image sensor.

The cameras are designed to operate in a temperature range of minus 20° C to plus 60° C and humidity range of up to 90%.

To avoid shocks, please make sure the installation of the power supply ground line is in good condition.

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# 1

## FEATURES

This camera uses a SONY progressive CMOS image sensor, with EYENIX EN773E DSP to provide a 1080P High definition image.

HD-TVI 1080P video output (yellow) and standard definition analog video output (white).

12 volt power input socket (red).

Mechanical IR cut filter for improved colour rendition

On screen menu which allows camera performance to be modified to suit specific installations.

A good quality versatile high definition CCTV camera suitable for a wide variety of retail, commercial, domestic and public applications.

New generation TVI 1080P using SONY progressive Exmor CMOS image sensor.

High-Definition resolution Maximum colour resolution output: 1920 (Horizontal) x 1080 (Vertical) pixels.

Suitable for day and night time applications. Colour video during the day automatically switching to black and white mode as light levels fall. Built in IR when fitted automatically illuminates.

Wide Dynamic Range. WDR provides a more even exposure in applications where there are high variances of dark and light across the image.

3D Digital Noise Reduction technology improves images under low-light conditions.

Back Light Compensation can improve facial recognition in applications where the area behind the subject is brighter and the subject is dark.

Smart IR can be used to reduce the glare at night caused by a subject being close to the camera and built in infra red illumination.

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# INTERFACE FUNCTIONS

To access the on screen menu on B6, B7 & B8 cameras unscrew the large disc under the camera body. This will reveal a toggle button that can be moved up, down, left and right. It can also be pushed in for an “enter” function.

On dome style cameras there is an in-line toggle switch built into the camera flylead which can be moved up, down, left & right or pushed in for the “enter” function.

Where fitted infra red brightness can be adjusted by carefully rotating the brightness potentiometer with a small cross head screwdriver. Clockwise to reduce IR, anticlockwise to increase IR. Do not force past the end stops as this will damage the camera.

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## OSD

(On Screen Display)

**We strongly recommend leaving the camera in the default settings. It is very easy to ruin the image, much harder to improve it. The one exception to this might be enabling WDR or wide dynamic range.**

Press the 'ENTER' button either on the body of the camera or the connector cable to access the OSD menu.

### **FOCUS ADJ**

Not used

### **LENS**

Leave on "ELC"

### **EXPOSURE**

Press "enter" to access sub menu

### **Brightness**

Toggle left / right to set the camera brightness

### **Shutter**

Toggle left / right to access:

**AUTO** (Default)

### **FLICKER**

**MANUAL** – Press "Enter" to select manual shutter speed between 1/25 – 1/60000 of a second

### **SENS-UP**

SENS-UP can enhance the brightness of night vision. Toggle left / right to select. OFF, x2, x4, x8, x16, x32. Increasing Sens-up too much will cause image degradation. Default is "off"

### **AGC Control**

AGC: Toggle left / right to adjust between 1-20. This function can enhance the camera image brightness at night, but will also increase image noise.

**BACKLIGHT**

Toggle left / right to select:

**WDR.** Wide Dynamic Range. This improves the image when you have bright and dark areas on the screen giving a more even exposure.

**HLC.** Highlight Cut. This cuts bright areas on the screen. Press “enter” to adjust the threshold as which bright areas are cut and also to select All Day or night time only operation.

**BLC.** Backlight compensation. This allows you to prioritise the exposure area when the general background is brighter than the subject such as a person walking into a shop doorway from the outside. Press “Enter” to select the exposure priority area.

Use up & down to choose Horizontal position of exposure priority area, Vertical position of area, Horizontal size of area and Vertical size of the area. Use left and right to change the parameter of each selection.

**DAY & NIGHT**

Press “Enter” to access sub menu

**DAY&NIGHT**

Toggle left / right to select how the camera films at night:  
Extern (default). Black & White, Colour, Auto

Within some options pressing “Enter” reveals a sub menu:

**IR LED** – not used

**ANTI-SAT**

This is designed to solve the problem of IR saturation when a subject is close to the camera. Toggle left / right to alter adjustable between 0-20.

**External**

Changes the switching point from day to night. Toggle left / right to switch between High & Low.

**D ->N Level**

Alters the threshold at which the camera changes from day to night mode. Toggle left / right to alter between 0-20. The greater the number the later it converts.

**N ->D Level**

Alters the threshold at which the camera changes from night to day mode. Toggle left / right to alter between 0-20. The greater the number the later it converts.

**Delay**

Toggle left / right to alter the delay time for day – night change. Low, Middle, High options.

**WHITE BALANCE**

Used to improve the colour rendition in different settings. We suggest leaving in Auto. Toggle left & right to select between:

**AUTO** – default

**Manual** – Press “enter” to alter (using left / right toggle)

Kelvin – Temperature of image

R-Gain – Red gain

B-Gain – Blue gain

**Preset** – Not used

**Autoext** – Not used



**DNR**

3D Digital Noise Reduction. Toggle left / right to select between High, Middle, Low, Off. Default Middle.

**IMAGE**

Allows the user to change settings related to overall image. Press enter to access:

**Sharpness**

Adjustable 0-10 Default 5. Allows softening or sharpening of image.

**GAMMA**

Adjust between 0.45, 0.50, 0.55, 0.60, 0.65. Default is 0.55

**Colour Gain**

Adjust colour intensity on a scale of 0-20

**Mirror**

On/Off. Mirrors image left to right

**Flip**

On/Off. Flips image upside down

### **Digital Zoom**

Digitally zoom in. Largely useless as image deteriorates as you zoom in. Far better to record the whole image.

### **ACE**

Adaptive contrast enhancer. Off/Low/Middle/High optional

### **Defog**

Toggle left / right to enable. Designed to improve the image in fog conditions. Press "Enter" to set level low, medium, high.

### **Shading**

Reduces lens shading. Toggle left / right to enable. Press "Enter" On/Off: When the shading function is on, users can adjust the mode and level in the sub menu.

### **Privacy**

It is much easier and more convenient to set privacy masks on the DVR recorder

### **MOTION**

This function is not used. Motion detected recording is handled by the DVR recorder.

### **SYSTEM**

Overall camera settings. Press "Enter" to access:

#### **Communication**

Not used

#### **Image Range**

Leave on "User". Default setting, default offset 8

#### **Video Size**

Leave on 1080P. If this is altered you will lose the camera image. It may be possible to restore by unplugging the 12 volt power supply and re-connecting.

#### **Colour Space**

Leave on default setting of HD-CbCr

#### **Frame Rate**

Leave on 25 FPS default. If this is altered you will lose the camera image. It may be possible to restore by unplugging the 12 volt power supply and re-connecting.

### **CVBS**

This controls the protocol of the analog video output. For UK Leave on default PAL

### **Language**

On screen display language. Toggle left / right to select English, Chinese, Korean, Japanese, German, French, Spanish or Italian.

### **Colorbar**

Toggle left / right to turn colour test bars on or off.

### **Reset – This is the most important setting on the camera.**

Press “Enter” to return camera to default settings. If you’ve made changes to the camera and are unhappy with the results return the camera to factory default.

### **Return**

Press “Enter” to return to previous menu

### **EXIT**

Press “Enter” to Exit the OSD menu and save any changes you have made. Changes will not be saved if you power the camera down prior to exiting the OSD menu.

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## SPECIFICATIONS

Image sensor	1/2.8 inch Sony CMOS Sensor IMX322
Effective pixel	1920(H) * 1080(V)
Resolution	1080P
Minimum Illumination	0.05LUX (F1.2 AGC ON) / 0LUX IR ON
S/N Ratio	More than 60 DB (AGC Off)
Video Out	HD-TVI 1080P & separate Standard definition 960H Analog output
FPS	25Fps/30Fps
OSD Adjustable	YES
White Balance	AWB/Auto track white balance/AWC-SET/indoor/outdoor/manual adjustable
BLC	BLC/HLC/OFF adjustable
Shutter	1/25 of a second to 1/60000 of a second
WDR	On/Off adjustable
Day/Night Switch	Day/B&W/Colour/Auto selectable
Function	Flip/Mirror
Privacy	16 areas
OSD Language	English, Chinese, Korean, Japanese, German, French, Spanish, Italian
Transmission Distance	500M by 75ohm coax, 200M by twisted pair / Video balun
Working Temperature	-20° C – 60° C humidity less than 90%
Power	DC12V +-10%
Consumption	1.2W(100MA)
Dimension	38mm * 38mm

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## FAQ

1. No image after installation
  - a. Check DC power connection and correct 12 volt supply. Cover the light sensor on the front of the camera to see if the LEDs illuminate (if fitted). If LEDs illuminate power is likely to be ok.
  - b. Check the video connections at camera and DVR. Check wiring particularly if using CAT5/6 to make sure colours and polarity are correct.
2. Image interference after installation
  - a. Check to make sure camera to DVR cable doesn't run close to a source of electromagnetic interference. This may include power cables or satellite cable.
  - b. Ensure power supply is of suitable quality.
  - c. Consider ground loop problems and possibly fit a ground loop isolator.
3. RS485 won't control OSD menu
  - a. Check the controller protocol is correct.
  - b. Check if the control circuit is free from interference
  - c. Check the communication address & baud rate are correct.
  - d. Check all connections are tight.
4. Camera image won't switch into Black & White at night
  - a. Open the camera menu to see if "Day/Night Switch" is set as EXT. Return camera to default settings via the "System" OSD menu.
5. Night time image is noisy with interference or has white fogging
  - a. Please make sure camera settings are reset to factory Default via "System" menu.
  - b. Make sure camera power supply is correct and connecting cables are not too long.
  - c. Make sure there is nothing in front of the camera which reflects IR back into the lens. In particular make sure the shade cover is not too far forward. The back of the shade should be in line with the back of the camera body.
6. The image colour is abnormal.
  - a. Restore factory settings via the "System" OSD menu.
7. Image appears to be whiter than usual after installation?
  - a. Please make sure camera settings are reset to factory Default via "System" menu.
  - b. If this is particularly noticeable at night make sure there is nothing in front of the camera which reflects IR back into the lens. In particular make sure the shade cover is not too far forward. The back of the shade should be in line with the back of the camera body.