



Toshiba CleverDragon CSCV90BC3 Operation Manual

B/w

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Enlarged version

B/W CCD Camera
CleverDragon series
CSCV90BC3

Operation Manual

Thank you for purchasing our B/W CCD camera. This operation manual contains many important information such as how to use this product correctly and safely. Please read through this manual carefully. After reading, keep this manual by the side of the set for your reference.

BEFORE USE - GENERAL SAFETY INSTRUCTIONS

Read the following safety precautions carefully before using this product. These instructions contain valuable information for your safety. Please read them carefully. Do not proceed to the remaining sections in this manual.



OWNER'S RECORD

Please fill in the blank below the model name and product serial number, which is found on bottom chassis of your device. Keep this number for your record.

Model Name _____
Serial No. _____

Indication definitions

Indication _____
Meaning _____
(This indicates the existence of a hazard that death or catastrophic bodily injury(*1))

WARNING _____
may result from improper use.
(This indicates the existence of a hazard that bodily injury (*2) or property damage(*3))

CAUTION _____
may result from improper use.

- Notes
- *1 Catastrophic bodily injury means loss of eyesight, burns (high and low temperature), shock, fracture, poisoning, etc. which leaves a sequela and require hospitalization or prolonged treatment.
 - *2 Bodily injury means injuries, burns and electric shock which does not require hospitalization or prolonged treatment.
 - *3 Property damage means extended harm to home, household effects, domesticated animals, and pets.

Graphic symbol definitions

Indication _____
Meaning _____
(This mark indicates a prohibited action that must not be carried out. The actual prohibited action is indicated in the symbol or nearby graphically or described in text.
This mark indicates a mandatory action that must not be carried out. The actual instruction is indicated in the symbol or nearby graphically or described in text.)
(Handling Precautions)

WARNING

Stop operation immediately when any abnormality or defect occurs.
Use the product in an abnormal condition, such as emitting smoke, burning odors, damage from lightning, or abnormal noise, may cause fire and/or electric shock. Be always sure to disconnect the power cable from the camera connector at once and contact your dealer.
Do not operate in places with possibility of becoming wet.

This may cause fire and/or electric shock. Be always sure to contact your dealer for internal repair, check and cleaning of the product.

Do not repair, disassemble and/or modify by yourself.

This may cause fire and/or electric shock. Be always sure to contact your dealer for internal repair, check and cleaning of the product.

Do not put things or materials on the unit.

Do not put flammable materials such as metallic things and liquid into the unit may cause a fire or an electric shock.

Do not put the product in an unstable, slanting and/or vibrated place.

Drop and/or fall of the product may cause injury.

Do not touch the connection cables during a thunderstorm.

This may cause electric shock.

Use the specified power supply.

Use of the specified power supply may result in fire or electric shock.

Do not connect rough/weighty objects to the connection cable. Do not pull, twist, bundle, place heavy objects or heated connection cable.

Other cause of electric shock may result.

CAUTION

Note the following instructions when installing.

Do not place the product in an inflammable material, such as air con.

Do not place the product in a narrow space, since the heat generated from the product may be difficult to dissipate.

Do not place the product in a humid, smoky, vaporized or dusty places. A fire or an electric shock may occur in such places.

This may cause fire and/or electric shock.

Do not place the product in direct sunshine and/or high temperature.

The temperature inside the product may cause fire.

Use the specified connection cable.

Connect a fire or electric shock may occur.

Turn OFF the power in the case of connection.

Turn OFF the power in the case of connection of cable.

Otherwise, an electric shock or malfunction may occur.

Do not place the camera head to any intensive light (such as direct sunlight).

Otherwise, the image pickup device might get damaged.

Avoid short-circuiting signal output.

Otherwise, a malfunction may occur.

Avoid giving a strong shock against the camera body.

Do not touch the connector or the camera connector is subjected to strong repetitive impact. The connector is possible to break down if you intend to use your camera in places where it is possible to be hit by a camera cable in the place near the camera, and so on.

Do not touch the camera connector.

Ask your dealer to perform a periodical check and internal cleaning (approx. once every five years).

Do not touch the product may cause fire and/or trouble. For check and cleaning cost, please contact your dealer.

DISCLAIMER (LIMITED WARRANTY)

Toshiba TeLi Corporation shall be held harmless for any damages or losses incurred by the user in any of the following cases.

1. Fire, earthquake or any other act of God, acts by third parties, misuse by the user, whether intentional or accidental, under extreme operating conditions.

2. Malfunction or non-function resulting in indirect, additional or consequential damages, including but not limited to loss of expected income and suspension of business activities.

3. Incident use not in compliance with instructions in this instruction specifications and manual.

4. Malfunction resulting from disconnection to other equipment.

5. Repair or modifications made by the user or caused to be made by the user and carried out by an unauthorized third party.

6. Notwithstanding the foregoing, TeLi's liabilities shall not, in any circumstances, exceed the purchase price of the product.

7. About the item which does not have a publication in the specifications and manual of this product, it shall be subject to the terms and conditions of the purchase order.

RESTRICTION FOR USE

1. Should the equipment be used in the following conditions or environments, give consideration to safety measures and efforts of such usage.

1. Use of the equipment in the conditions or environment contrary to those specified, or use outdoors.

2. Use of the equipment in applications expected to cause potential hazard to people or property, which require special safety measures to be adopted.

3. This product can be used under diverse operating conditions. Determination of applicability of equipment or devices concerned shall be determined after analysis or testing as necessary by the designer of such equipment or devices, or personnel related to the specifications. Such designer or personnel shall assess the performance and safety of the equipment or devices.

4. This product is not designed or manufactured to be used for control of equipment directly concerned with human life (*1) or equipment relating to maintenance of public services/functions involving factors of safety (*2). Therefore, the product shall not be used for such applications.

(*1) Equipment directly concerned with human life refers to:
- Medical equipment such as life-support systems, equipment for prearing theaters.
- Exhaust control equipment for exhaust gases such as toxic fumes or ammonia.

(*2) Equipment relating to maintenance of public services/functions involving factors of safety refers to:
- Traffic control systems for air transportations, railways, roads, or marine transportation
- Equipment for nuclear power generation

CAUTIONS ON USE

1. Carefully handle the units.

2. Do not drop, or give a strong shock or vibration to the camera. This may cause problems. Treat the camera cables carefully to prevent cable problems, such as cable breakdown and loosened connections.

3. Operating ambient temperature and humidity.

4. Do not use the camera in places where temperature and humidity exceed the specifications. Picture quality will lower and internal parts may be damaged.

5. Be particularly careful when using in places exposed to direct sunlight. When shooting in hot places, depending on the conditions of the object and the camera (for example when the gain is increased), noise in the form of vertical strips or white dots may occur. This is not a malfunction.

6. Restriction for the lens combination.

7. This camera might form a ghost to image area depending on the combination of a lens and an illumination with this camera. But this is not a failure of this camera. Therefore, please check the combination of the lens and the illumination with this camera when use.

8. When mounting a lens, take extra caution so that the lens is not tilted, nor does flaw exist at the lens mount-screw part. Also check to confirm that no dirt nor other foreign object is put inside the lens mount.

9. Improper mounting might cause the parts to become locked.

10. Do not shoot under intense light.

11. Avoid intense light such as spot light on part of the screen because it may cause blooming or smears. If intense light falls on the screen, vertical stripes may appear on the screen, but this is not a malfunction.

12. Do not expose the camera's image-pickup-plane to sunlight or other intense light directly. Its inner CCD (charge-coupled device) might be damaged.

13. Moisture

When thin stripe patterns are shot, stripe patterns that are not actually there (moire) may appear as interference stripes. This is not a malfunction.

14. Undesirable noise

15. If the camera or the cables are located near something which emit strong magnetic wave, undesirable noise may appear on the screen. In such a case, try to change the location of the camera or the cables.

16. Handle the protection cap

When the camera is not in use, put a lens-cap onto the camera head for protection of the image-pickup-plane.

17. Do not use the camera for a long time.

18. Stop supplying power for safety.

19. When cleaning the camera

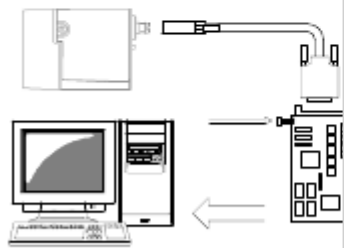
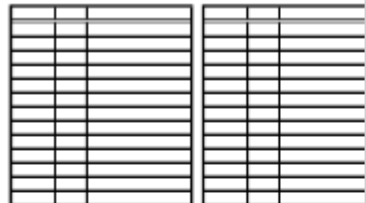
Always turn off the power and clean with a piece of soft dry cloth. Do not use acid-free detergent. Do not use alcohol.

20. Remove the image-pickup-plane

Do not touch the image-pickup-plane with your fingers. If you touch it, the image-pickup-plane may be discolored. In case of image-pickup-plane should be settled with fine dust, dirt, or scratched, ask your dealer for technical advice.

21. Wastes of this product should be separated and discarded in compliance with the various national and local laws.

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local ordinances.

This device complies with Part 15 of the FCC rules. Operation is subject to the following two conditions:
(1) This device may not cause harmful interference, and (2) This device accept any interference received, including interference that may cause undesired operation.
This equipment has been tested and found to comply with the limits for a class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

1. PRODUCT DESCRIPTION

CleverDragon series CSCV9083C is an integrated type B/W CCD camera with a VGA format all-pixel data readout system. It achieves high-resolution, high-speed image processing, and achieves fast-speed data transfer. Its compact, light-weight body is ideal for system integration.

2. FEATURES

- (1) Triple-speed reading
CSCV9083C reads image data 3 times faster than the conventional CCD camera.
- (2) All-pixel reading
The all-pixel reading system allows the CSCV9083C to read all pixels in just 1/90 second. CSCV9083C is equipped with a full-frame shutter that allows all-pixel reading even during shutter operations.
- (3) Full-frame shutter
Since all pixels are output even by a random trigger/shutter operation, high resolution can be achieved, without deteriorating the vertical resolution.
- (4) Tetragonal lattice layout
The tetragonal lattice layout of CCD pixels facilitates computation for image processing.
- (5) Camera Link interface (power supply type)
By using a Camera Link-capable frame grabber board to which power can be supplied, high-speed image processing is possible. **Application software is not supplied as a standard item.**
Power can also be supplied to the camera with only one cable.
- (6) Random trigger/shutter function
CSCV9083C is equipped with a random trigger shutter, which starts exposure synchronized with external trigger signals. **Fast-moving objects can thus be captured in place, which ensures accurate image processing.**
- (7) Partial scan
Images can be shot and fetched at arbitrary timing based on external VD signal input.
- (8) Partial scan speed is further increased because areas other than the image output range specified by the user are not read.
- (9) Ultra-compact and lightweight main unit
The space-saving ultra-compact and lightweight camera has excellent resistance against vibration and impact.
- (10) Conformity to RoHS directive
CSCV9083C is **RoHS-compliant** with the European RoHS directive, which prohibits the use of hazardous substances.

3. CONFIGURATION

- (1) Camera
- (2) Accessory

4. OPTION PARTS

① Model Name: CP1650
*Contact your dealer / distributor for details of option units.
*Application software is not supplied as a standard item.

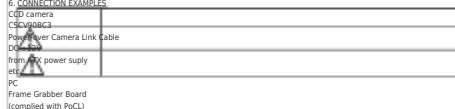
5. INTERFACE

Video: Video controlling/power supply connector: (Camera Link Base Configuration) CAMERA LINK
Output: Video signals and VALID, based on the camera link standard LVDS.
The connector is conformal to the frame grabber board, image processing device and others.
It is necessary to supply the power to the camera by using an exclusive Camera Link cable and frame grabber board complied with Power over Camera Link standard.
Connector model: HCR-EC26FD1G2+ (Manufactured by Honda Connectors)

Pin 1	VD	Signal valid
Pin 2	VD	Signal valid
Pin 3	1	
Pin 4	+12V	
Pin 5	1C	
Pin 6	GND	
Pin 7	0	
Pin 8	Tx.OUTPUT	
Pin 9	0	
Pin 10	0	
Pin 11	Tx.OUTPUT	
Pin 12	0	
Pin 13	0	
Pin 14	Tx.OUTPUT	
Pin 15	0	
Pin 16	0	
Pin 17	Tx.OUTPUT	
Pin 18	0	
Pin 19	Tx.OUTPUT	
Pin 20	0	
Pin 21	Tx.OUTPUT	
Pin 22	0	
Pin 23	0	
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Pin 98	0	
Pin 99	0	
Pin 100	0	

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6. CONNECTION EXAMPLES



7. FUNCTIONS

By accessing the camera register published on the camera link (F, you can control/set each function. Since access to the camera register is performed via the frame grabber board, the controlling and setting methods differ depending on the frame grabber board you use. For details, refer to the instruction manual of the relevant frame grabber board or contact our sales representative.

This instruction manual describes the specifications in the case where the camera register is directly connected by serial transmission over the camera link interface.

For details on the control and setting of functions, refer to "Interface Specification". Please ask your representative or a sales representative about "Interface Specification".

7.1. Explanation of Each Function

(1) Beep mode

Address: 0x00, Bit 0, Value: 0 to 1

Video is output from the camera link connector. The output video can be grabbed by the frame grabber board. The frame rate and resolution of output images that this function supports are as follows.

(2) Partial scan mode

Address: 0x00, Bit 1, Value: 0 to 1

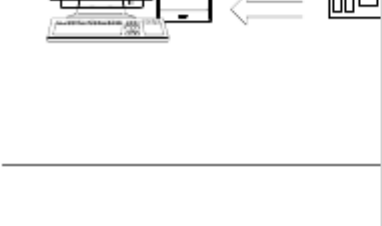
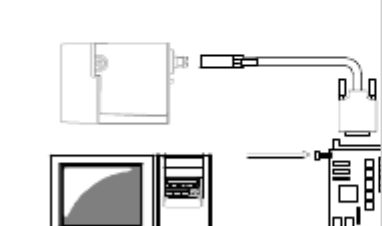
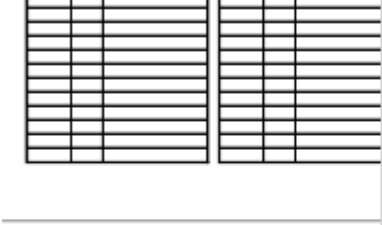
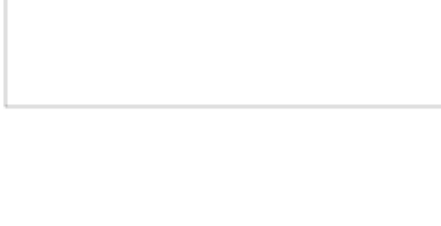
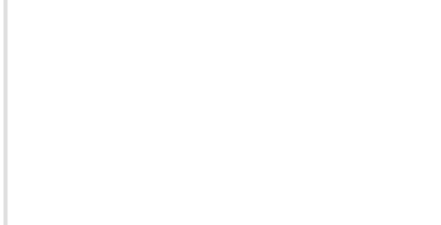
Partial scan

92.4 fps (MAX) (648H/349V)

Partial scan

92.4 fps (92.3 fps (depend on Partial scan width))

Vertical resolution: 648 (lines)



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Ccd color camera (18 pages)

[Security Camera Toshiba Teli CSGV90BC3 Instruction Manual](#)

Giantdragon b/w series (28 pages)

[Security Camera Toshiba CS3330Bi Specifications](#)

Cs3330bi series ccd monochrome video camera (14 pages)

[Security Camera Toshiba CS8310Bi Specifications](#)

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Day/night ptz dome camera (2 pages)

[Security Camera Toshiba IK-WB11A Basic User's Manual](#)

Toshiba network camera user's guide (64 pages)

[Security Camera Toshiba IK-WB21A Advanced User's Manual](#)

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[Security Camera Toshiba CCD Color Camera IK-645A Product Manual](#)

Toshiba ccd color camera product manual (12 pages)

[Security Camera Toshiba IK-WB15A User Manual](#)

Toshiba ik-wb15a: user guide (64 pages)

[Security Camera Toshiba 27a43 Service Manual](#)

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Toshiba ccd color camera instruction manual (2 pages)

[Security Camera Toshiba IK - TF7H Instruction Manual](#)

3ccd camera head (1 page)

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[Page 1](#) B/W CCD Camera 1. PRODUCT DESCRIPTION 7. FUNCTIONS DISCLAIMER (LIMITED WARRANTY) CleverDragon series CSCV90BC3 is an integrated type B/W CCD camera with a VGA format By accessing the camera register published on the camera link I/F, you can control/set each function. CleverDragon series all-pixel-data readout CCD.

[Page 2](#) 648(H) □ 480(V) [94.8fps] Video output : +81-42-589-8774 minimum video output lines: 120, minimum step: 1 line URL : <http://www.toshiba-teli.co.jp> more than 72.2usec (6) Sensitivity 600 lx, F5.6 FVAL (7) Minimum subject illuminance 6lx F1.4 (GAIN:10dB, video level 50 %)

This manual is also suitable for:

Cscx30bc3