

# TOSHIBA INSTRUCTION MANUAL

## Leading Innovation >>> 3CMOS CAMERA HEAD

# IK-HD5H

### U.S.A INFORMATION

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 must accept any interference received, including interference that may cause undesired operation.

NOTE: 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, and 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.

USER-INSTALLER CAUTION: Your authority to operate this FCC verified equipment could be voided if you make changes or modifications not expressly approved by the party responsible for compliance to Part 15 of the FCC Rules.

### CANADA INFORMATION

CAN ICES-3 A/NMB-3 A

### Following information is only for EU-member states:

In residential areas this product may cause radio interference, therefore this product must not be used in residential areas.

The use of the symbol indicates that this product may not be treated as household waste. By ensuring this product is disposed of correctly, you will help prevent potential negative consequences for the environment and human health, which could otherwise be caused by inappropriate waste handling of this product. For more detailed information about the take-back and recycling of this product, please contact your supplier where you purchased the product or consult.



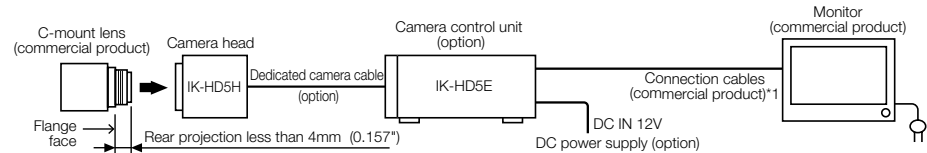
### CAUTIONS ON USE

- This apparatus does not operate on its own. Be sure to use it by connecting with the dedicated camera control unit (option). Please do not connect it to other equipment.
- Read the "CAUTIONS ON USE AND INSTALLATION" in the instruction manual of IK-HD5E and follow them.
- This camera is for indoor use only.

### COMPONENTS

- Camera head (with protection cap, but without lens)...1
- Accessories  
Instruction manual...1, Tripod mount...1, Screws M3 x 6...4, Cover glass...1

### CONNECTION



\*1 To connect via DVI, please use a DVI-D cable (commercially available), to connect via 3G/HD-SDI cable, please use a 3G/HD-SDI coaxial cable, 75Ω (commercially available).

- When connecting the camera cables, be sure to turn off the camera control unit and the other equipment connected.
- When connecting the camera head and the camera control unit, please use the dedicated camera cable (option).
- We suggest that a 2-million pixel C-mount lens is used.
- When using other lenses, the best camera performance of this camera may not be obtained. (For example, low resolution may occur, focus may be lost through the range of a zoom lens, and flare, ghosting or shading may occur)
- Furthermore, to avoid damaging the camera, use a lens which has a rear projection from the flange face of less than 4mm (0.157").
- DC power is supplied by a camera cable model # EXC-3HD\*\* (option) through the camera control unit model # IK-HD5E (option).
- \*\* shows a camera cable type name. Refer to the "Type name" of a camera cable in "OPTIONAL PARTS".
- For connection, please refer to the section "5. CONNECTION" in the camera control unit IK-HD5E instruction manual.
- Contact the dealer where you purchased the camera if you would like to order a cover glass accessory.

### Limited Warranty - TOSHIBA Camera

The Imaging Systems Division of Toshiba America Information Systems, Inc. ("ISD") makes the following limited warranties with regard to this Camera ("Product"). These limited warranties extend to the Original End-User ("You/rl").

#### One (1) Year Limited Warranty of Labor and Parts

ISD warrants that this Product will perform in accordance with specifications for a period of one (1) year from the date of purchase by the Original End-User. During this one (1) year period, ISD will repair or replace the Product, if it does not perform as warranted. In order to take advantage of this Limited Warranty, You must: (a) deliver the Product to an ISD Authorized Service Provider ("ASP"); and (b) pay all transportation and insurance charges for shipment of the Product to the ASP. ISD reserves the right to substitute factory refurbished parts in place of those in need of repair.

#### Instruction Manual (Owner's Manual):

You should read the Instruction Manual (Owner's Manual) thoroughly before operating this Product. Before seeking warranty service, you should check the troubleshooting guide in the Instruction Manual (Owner's Manual) and follow the instructions to correct the problem.

#### Warranty service under this Limited Warranty is subject to the following conditions and procedures:

- All warranty servicing of the Product must be made by an ASP (Authorized Service Provider).
- You must notify an ASP within thirty (30) days after you discover that the Product does not perform in accordance with specifications during the Limited Warranty period.
- You must securely pack the Product in its original carton using the original packing material.
- You must insert the original carton containing the Product, a letter explaining the problem AND a copy of the bill of sale or proof of purchase into another carton with additional packing material before shipping the Product to an ASP.
- You must prepay all transportation and insurance costs.

#### DISCLAIMERS:

ALL OTHER EXPRESS OR IMPLIED WARRANTIES ON THIS PRODUCT, INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, ARE HEREBY DISCLAIMED. SOME STATES DO NOT ALLOW THE EXCLUSION OF IMPLIED WARRANTIES OR LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS, SO THE ABOVE LIMITATIONS MAY NOT APPLY TO YOU.

IF THIS PRODUCT IS NOT IN GOOD WORKING ORDER AS WARRANTED ABOVE, YOUR SOLE AND EXCLUSIVE REMEDY SHALL BE THE REPAIR OR REPLACEMENT OF THE PRODUCT. IN NO EVENT WILL ISD OR ITS PARENT COMPANY OR ANY ASP BE LIABLE TO YOU OR ANY THIRD PARTY FOR ANY DAMAGES IN EXCESS OF THE PURCHASE PRICE OF THE PRODUCT. THIS LIMITATION APPLIES TO DAMAGES OF ANY KIND, INCLUDING ANY DIRECT OR INDIRECT DAMAGES, LOST PROFITS, LOST SAVINGS OR OTHER SPECIAL, INCIDENTAL, EXEMPLARY OR CONSEQUENTIAL DAMAGES, WHETHER FOR BREACH OF CONTRACT, TORT OR OTHERWISE, OR WHETHER ARISING OUT OF THE USE OF OR INABILITY TO USE SUCH PRODUCT, EVEN IF ISD, ITS PARENT COMPANY, OR AN ASP HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES OR OF ANY CLAIM BY ANY OTHER PARTY. SOME STATES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES FOR SOME PRODUCTS, SO THE ABOVE LIMITATIONS OR EXCLUSIONS MAY NOT APPLY TO YOU.

THIS LIMITED WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS, AND YOU MAY ALSO HAVE OTHER RIGHTS WHICH MAY VARY FROM STATE TO STATE.

THIS LIMITED WARRANTY SHALL BE VOID IF THE PRODUCT OR PARTS HAVE BEEN SUBJECT TO MISUSE, ABUSE, ACCIDENT, IMPROPER INSTALLATION, IMPROPER MAINTENANCE, OR USE IN VIOLATION OF ISD'S WRITTEN INSTRUCTIONS, OR WHERE THE PRODUCT HAS BEEN ALTERED OR MODIFIED WITHOUT ISD'S PRIOR AUTHORIZATION, OR UPON THE REMOVAL OR ALTERATION OF ISD'S FACTORY SERIAL NUMBER. LABOR SERVICE CHARGES FOR PRODUCT INSTALLATION, SET UP AND ADJUSTMENT OF CONTROLS ARE NOT COVERED BY THIS LIMITED WARRANTY.

Questions? If you have any questions, please check ISD's Web Site for a current e-mail contact for support:

Web Site: <http://www.toshibacameras.com/>

No person, agent, distributor, dealer, authorized service provider, or company is authorized to change, modify, or extend the terms of this Limited Warranty in any manner whatsoever. The time within which an action must be commenced to enforce any obligation of ISD arising under this Limited Warranty or under any statute, or law of the United States or any state thereof, is hereby limited to one (1) year from the end of the Limited Warranty period. This limitation does not apply to implied warranties arising under state law. Some states do not permit limitation of the time within which you may bring an action beyond the limits provided by state law, so the above provision may not apply to you. This Limited Warranty gives you specific legal rights and you may also have other rights which vary from state to state.

#### TOSHIBA AMERICA INFORMATION SYSTEMS, INC.

Imaging Systems Division  
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### SPECIFICATIONS

Image sensor	(3) 1/2.9 inch CMOS sensors (rolling shutter/progressive scan)
Effective pixels	Horizontal : 1944, Vertical : 1104
Output pixels	Horizontal : 1920, Vertical : 1080
Pick-up system	RGB, 3CMOS, Micro prism system
Lens mount	C mount (flange back : 17.526 mm in-air)
Operating ambient temperature	0°C to 40°C (32°F to 104°F)
Operating ambient humidity	Less than 90 %
Weight	Approx. 70 g (0.154 lbs) (tripod mount and screws not included)

- Design and specifications are subject to change without notice.
- For more information, please refer to the section "9. SPECIFICATIONS" in the camera control unit IK-HD5E instruction manual.

### OPTIONAL PARTS

For further details, contact your camera dealer.

#### Camera control unit

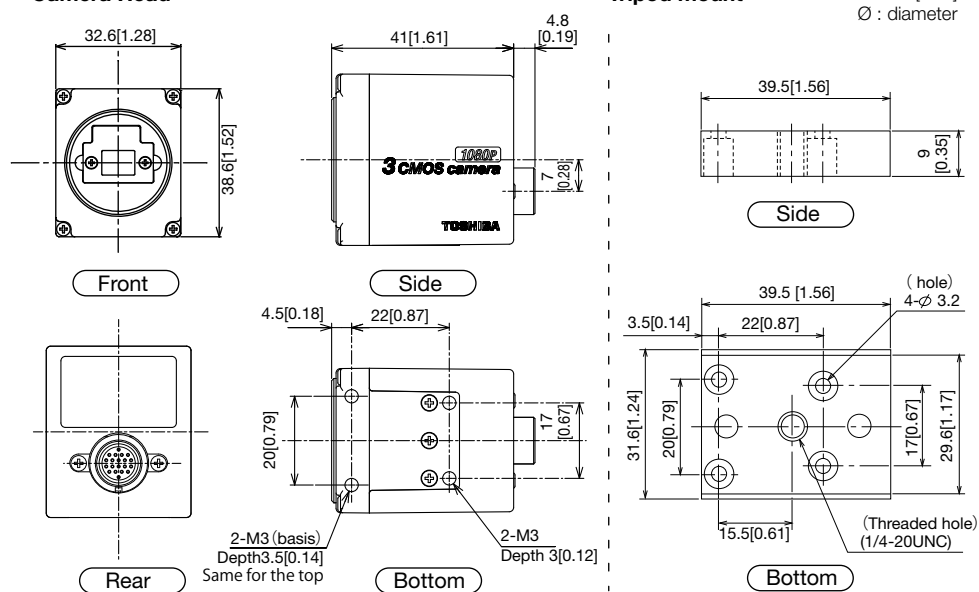
Type name
IK-HD5E

#### Camera cable

Type name	Length m	Length inch
EXC-3HD03	Approx.3	Approx.118
EXC-3HD06	Approx.6	Approx.236
EXC-3HD10	Approx.10	Approx.394
EXC-3HD15	Approx.15	Approx.591

### EXTERIOR DIMENSIONS

#### Camera Head



### DISCLAIMER

We disclaim any responsibility and shall not be responsible for any damages or losses incurred by the user in any of the following cases:

- Fire, earthquake or any other act of God; acts by third parties; misuse by the user, whether intentional or accidental; use under extreme operating conditions.
- 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.
- Incorrect use not in compliance with instructions in this instruction manual.
- Malfunctions resulting from misconnection to other equipment.
- Repairs or modifications made by the user or caused to be made by the user and carried out by an unauthorized third party.

Notwithstanding the foregoing, Toshiba America Information Systems, Inc.'s (Toshiba's) liabilities shall not, in any circumstances, exceed the purchase price of the product.

### COPYRIGHT AND RIGHT OF PORTRAIT

There may be a conflict with the Copyright Law and other laws when you, the customer, uses, displays, distributes, or exhibits an image picked up by the camera without permission from the copyright holder. Please also note that transfer of an image or file covered by copyright is restricted to use within the scope permitted by the Copyright Law. You are solely responsible for complying with all applicable copyright laws.

### PROTECTION OF PERSONAL INFORMATION

Images taken by the camera that reveal the likeness of an individual person may be considered personal information. To disclose, exhibit or transmit those images over the internet or otherwise, consent from such individual person may be required. You are solely responsible to obtain such consent.

### LIMITATION OF USAGE

The product is not designed for any "critical applications." "Critical applications" means life support systems, exhaust or smoke extraction applications, medical applications, commercial aviation, mass transit applications, military applications, homeland security applications, nuclear facilities or systems or any other applications where product failure could lead to injury to persons or loss of life or catastrophic property damages. Accordingly, Toshiba disclaims any and all liability arising out of the use of the product in any critical applications.

### CAUTIONS ON USE AND INSTALLATION

- Handling the unit.**  
Do not drop, jolt, or vibrate, as this may result in damage to the unit and this may cause problems. Treat the camera cables carefully to prevent cable problems, such as breaks in the cable and loose connections.
- Install the camera in a location free from noise.**  
If the camera or the cables are located near power utility lines or a TV, etc. undesirable noise may appear on the screen. In such a case, try to change the location of the camera or the cable wiring.
- Operating ambient temperature and humidity.**  
Do not use the camera in places where temperature and humidity exceed the specifications. Picture quality will deteriorate and internal parts may be damaged.  
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.
- When not using the camera for extended periods of time.**  
Switch the control unit off and disconnect the power supply.
- Avoid using or storing the camera in the following places:**  
Places filled with highly flammable gas.  
Places near gasoline, benzene, or paint thinner.  
Places subject to strong vibration.  
Places containing chemicals (such as pesticides), rubber or vinyl products for extended periods of time.

The following descriptions are for when a camera control unit "IK-HD5E" is connected to this camera head.

- Do not shoot intense light.**  
If there is an intense light at a location on the screen such as a spot light, a blooming and smearing may occur. When intense light enters, vertical stripes may appear on the screen. This is not a malfunction. Ghosts may occur when there is an intense light near the object. In this case, change the shooting angle.
- Moire**  
A moire pattern is an interference pattern generated when two repetitive line patterns overlap. This is not a malfunction. Eliminating the repetitive line patterns, or aligning the two patterns, will eliminate the moire.
- Handling of the camera head and protection cap.**  
Keep the camera head and protection cap away from children, as they may pose a choking hazard. Because the protection cap protects the image sensing plane when the lens is removed from the camera head, do not discard the protection cap.
- When cleaning the camera.**  
Unplug the power source before cleaning. Clean with a soft dry cloth only. Do not use chemicals or chemically treated cloths. Chemicals may damage coatings and printed letters. When cleaning the lens, use lens cleaning paper.
- Installation of camera head.**  
When installing the camera head, secure it with the mounting holes at the bottom (M3 thread, depth 3.5 mm) or on a rigid tripod connected to the tripod mount attached to the base of the camera head. Ensure that the camera head is not pulled by the camera cable connected to the rear of the camera. Also do not apply any force or strain on the cable connector. When mounting a heavy lens to the camera, support the lens so that it is not applying any force or strain on the camera head.