

Bullet Camera

DWC-B6563DIR

DWC-B6563TIR550



 **STAR-LIGHT™ 960H**

ABOUT MANUAL

Before installing and using the camera, please read this manual carefully.
Be sure to keep it handy for future reference.

PRECAUTIONS

- Do not open or modify.
- Do not open the case except during maintenance and installation, for it may be dangerous and can cause damages.
- Do not put objects into the unit.
- Keep metal objects and flammable substances from entering the camera.
It can cause fire, short-circuits, or other damages.
- Be careful when handling the unit.
- To prevent damages, do not drop the camera or subject it to shock or vibration.
- Do not install near electric or magnetic fields.
- Protect from humidity and dust.
- Protect from high temperature.
- Be careful when installing near the ceiling of a kitchen or a boiler room, as the temperature may rise to high levels.
- Cleaning:
To remove dirt from the case, moisten a soft cloth with a soft detergent solution and wipe.
- Mounting Surface:
The material of the mounting surface must be strong enough to support the camera.

FCC COMPLIANCE

This equipment has been tested and found to comply with the limits for a Class B 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 residential environment. This equipment generates, uses, and radiates radio frequency energy; and if it is not installed and used in accordance with the instruction manual, it may cause harmful interference to radio communications.

WARNING: Changes or modifications are not expressly approved by the manufacturer.

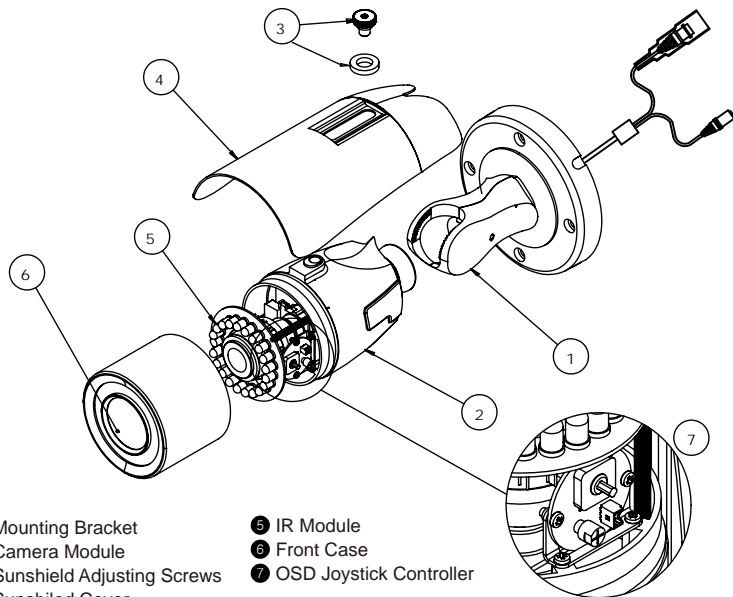
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FEATURES*

- 960H CCD Image Sensor (960 Horizontal Pixels)
- 720 TV Lines [B/W], 700 TV Lines [Color]
- 2.8~12mm Varifocal Auto Iris Lens [DWC-B6563DIR]
- 5~50mm Long Range Varifocal Auto Iris Lens [DWC-B6563TIR550]
- 100ft Range IR with Intelligent Camera Sync, Smart IR [DWC-B6563DIR]
- 150ft Range IR with Intelligent Camera Sync, Smart IR [DWC-B6563TIR550]
- Electronic Day & Night [DWC-B6563DIR]
- TDN (True Day & Night) [DWC-B6563TIR550]
- 3D DNR (3D Digital Noise Reduction)
- Star-Light (Super Low Light Technology)
- HME (Highlight Masking Exposure)
- SLC (Side-Light Compensation)
- Programmable Privacy Zones (8) & Motion Detection
- AGC / BLC / AWB
- Easy Icon Driven OSD Menu with Built-in Joystick
- IP66 Certified (Weatherproof)
- Auto Sensing 24VAC/12VDC with Line Lock
- Secondary Video-BNC Output

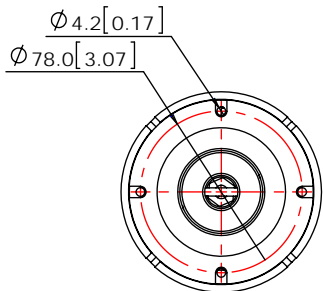
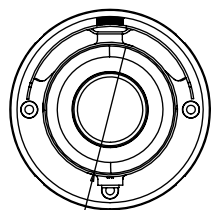
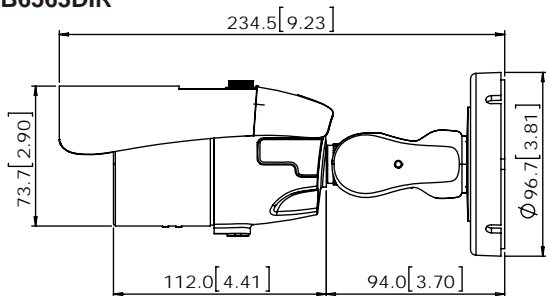
PARTS & DESCRIPTION*



- | | | | |
|---|----------------------------|---|-------------------------|
| ① | Mounting Bracket | ⑤ | IR Module |
| ② | Camera Module | ⑥ | Front Case |
| ③ | Sunshield Adjusting Screws | ⑦ | OSD Joystick Controller |
| ④ | Sunshiled Cover | | |

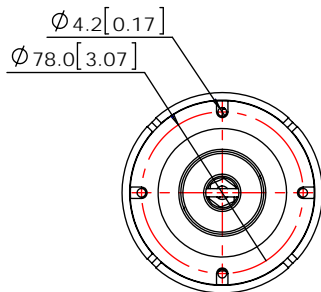
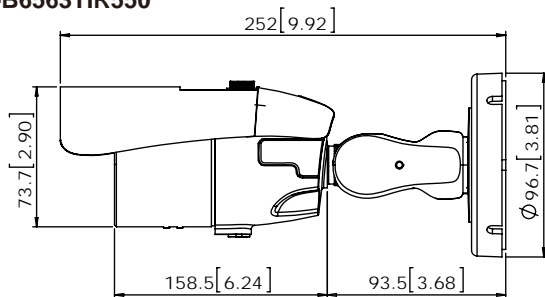
DIMENSIONS IN MILLIMETERS (IN)*

DWC-B6563DIR



DIMENSIONS IN MILLIMETERS (IN)*

DWC-B6563TIR550



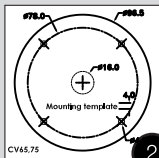
INSIDE THE BOX*

Included with Bullet Camera:

- 1 User Manual
- 2 Mounting Template
- 3 4 Machine Screws and 4 Dry Wall Anchors
- 4 Secondary Video-BNC Cable
- 5 L-Key



1



2



3



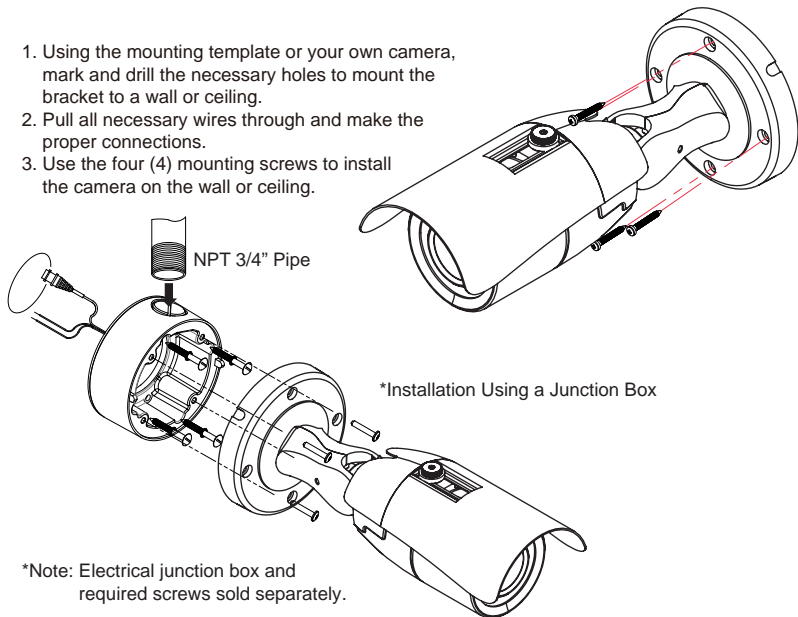
4



5

INSTALLATION INSTRUCTIONS*

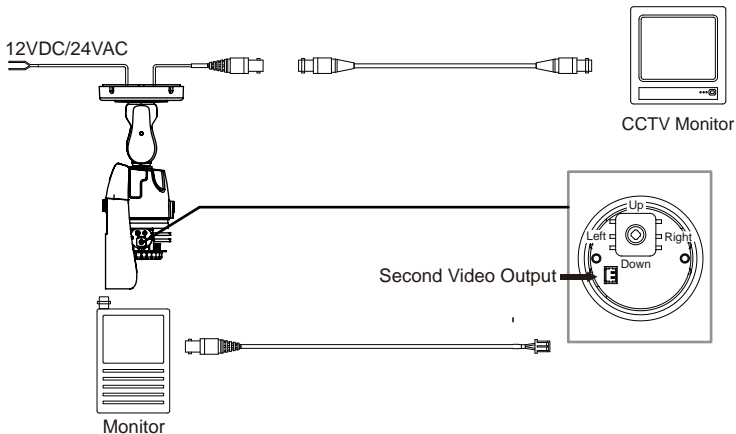
1. Using the mounting template or your own camera, mark and drill the necessary holes to mount the bracket to a wall or ceiling.
2. Pull all necessary wires through and make the proper connections.
3. Use the four (4) mounting screws to install the camera on the wall or ceiling.



*Note: Electrical junction box and required screws sold separately.

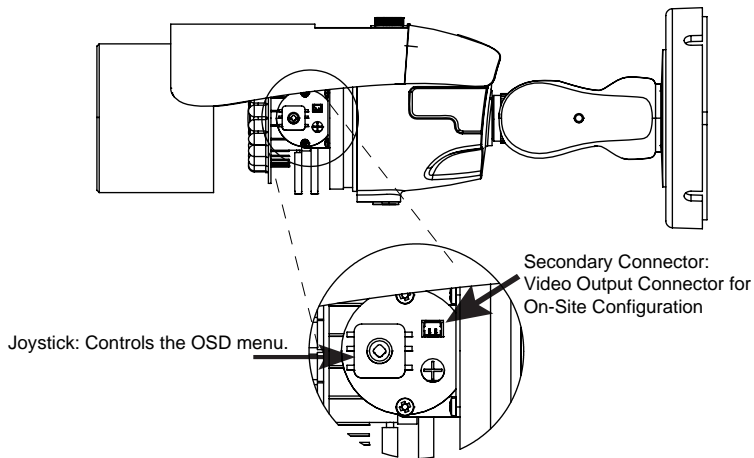
CONNECTING TO MONITORS*

Use the diagram below to connect to a Monitor or CRT Monitor properly.



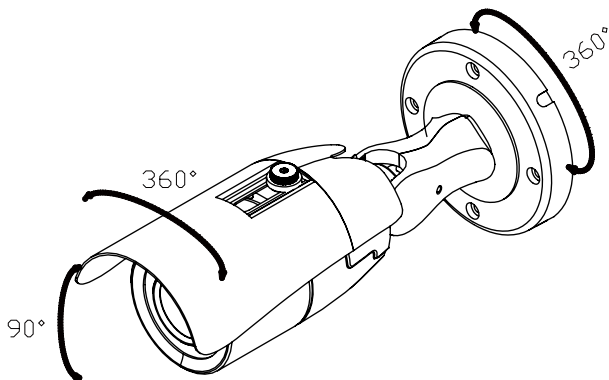
- Power Connection - 12VDC/24VAC Dual Voltage (Auto Polarity Detection and Protection)
- All cameras are equipped with a second video output for on-site configuration.

CONTROL BOARD*



- 1 Remove the camera's lens cover by rotating it counter-clockwise.
- 2 Use the Joystick to control the camera's OSD options.

ADJUSTING THE CAMERA ANGLE*



CAUTION :

- 1 Do not rotate more than 360°.
- 2 Do not unnecessarily twist too many times.

MODULE OSD MENU*

EXPOSURE	COLOR	DAY & NIGHT	FUNCTION
<ul style="list-style-type: none"> — LENS MANUAL / DC — BACKLIGHT OFF / BLC / HIDE — DRC / DEFOG OFF / DRC / DEFOG — AGC 0-20 — STARLIGHT OFF / x2 - x512 — 3D DNR OFF / LOW / MID / HIGH — EXIT JUMP SAVE & EXIT / EXIT 	<ul style="list-style-type: none"> — WB BAL. ATW / MANUAL / PUSHLOCK — COLOR GAIN 0-20 — EXIT JUMP SAVE & EXIT / EXIT 	<ul style="list-style-type: none"> — D&N MODE AUTO / COLOR / B&W — CONTROL AUTO / EXTERN — DELAY 0 - 15 — B/W BURST OFF / ON — SMART IR ANTI-SAT / SAT. AREA — EXIT JUMP SAVE & EXIT / EXIT 	<ul style="list-style-type: none"> — MIRROR OFF / ON — SHARPNESS 0-20 — GAMMA 0.35 - 0.70 — POSI/NEGA POSI / NEGA — SLC 0-20 — EXIT JUMP SAVE & EXIT / EXIT
MOTION	PRIVACY	SETUP	EXIT
<ul style="list-style-type: none"> — MOTION OFF / ON — SENSITIV. 0 - 30 — MOTION SET AREA NO. / AREA USE / TOP / BOTTOM / LEFT / RIGHT — EXIT JUMP SAVE & EXIT / EXIT 	<ul style="list-style-type: none"> — COLOR BLACK / GRAY-1/ GRAY-2/ GRAY-3/ GRAY-4/ WHITE / YELLOW / GREEN / BLUE / RED / CYAN / MAGNETA — PRIVACY SET AREA SET / DISPLAY / TOP / BOTTOM / LEFT / RIGHT / RET/INI — EXIT JUMP SAVE & EXIT / EXIT 	<ul style="list-style-type: none"> — CAMERA TITLE OFF / ON — SYNC — COMMUNICA. CAM ID / ID DISP. / BAUDRATE / PROTOCOL / UTC — LANGUAGE ENGLISH — FONT COLOR BLUE / GREEN / CYAN / RED / MAGENTA / YELLOW / BLACK / GRAY — SPECIAL O.L.P.F / DPC — EXIT JUMP SAVE & EXIT / EXIT 	<ul style="list-style-type: none"> — SAVE — RESTORE — EXIT



EXPOSURE



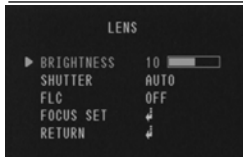
LENS

Manual Manual mode supports the fixed board lens or the manual iris lens.

DC DC mode supports the auto-iris varifocal lens.

NOTE: Both MANUAL and DC mode have FOCUS SET. You can adjust the focus by finding the highest number on the FOCUS SET. See page 15 for focus information.

MANUAL Lens Submenu



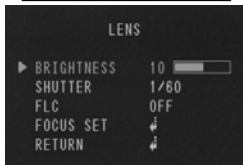
Brightness: Adjust the camera's brightness from 0–20. The higher the number, the brighter the image will appear.

Shutter: Sets the shutter speed levels from 1/60 to 1/120000.

*For LENS-MANUAL Mode, the default SHUTTER is AUTO.

*For LENS-DC Mode, the default SHUTTER is 1/60. Select DC-AUTO for outdoor use.

DC Lens Submenu



FLC: Enable or disable to adjust the camera's view and prevent the image from flickering.



EXPOSURE

BACKLIGHT

OFF

BLC BACK LIGHT COMPENSATION

If BLC is selected, adjust the following options in the submenu:

- LEVEL: Set the BLC level from the available options: LOW/ MIDDLE/ HIGH)
- DISPLAY: Selet to show or hide the BLC mask.
- POSITION: Set the BLC masks' size and position.

TOP: Set level from 0~54. The higher the number, the higher the top border of the BLC mask will be in the camera's view.

BOTTOM: Set level from 1~55. The higher the number, the lower the bottom border of the BLC mask will be in the camera's view.

LEFT: Set level from 0~217. The lower the number, the closer the BLC mask will be to the camera's left border.

RIGHT: Set level from 1~218. The lower the number, the closer the BLC mask will be to the camera's right border.

- RET/INI.: Select whether to return to the main menu, or reset the BLC settings to factory default.

HME HIGHLIGHT MASKING EXPOSURE

HME masks highlights to allow objects to appear clearly on the screen. If ON is selected, HME levels are adjustable. The lower the setting, the darker the masking areas. Select from: LOW / MIDDLE / HIGH.





EXPOSURE

DRC

DYNAMIC RANGE COMPRESSOR

DRC enables dark spots in images to become more visible without overexposing the bright spots to create one perfect image.

- DEFOG: AUTO / Manual: If AUTO is selected, the WDR and DRC levels will be set automatically based on the environment. If MANUAL is selected, set the WDR and DRC level from LOW / MIDDLE / HIGH.

- MODE: * ONLY DAY: DRC and WDR will work in day time.

* ALL DAY: DRC and WDR will work in day and night time.

AGC

AUTO GAIN CONTROL

1-20

AGC enhances the picture brightness in low light conditions. A higher level AGC setting makes the images brighter; however, it could increase the amount of noise.

STARLIGHT

OFF / x2 ~ x512

Automatically activates slow shutter function when the image is too dark. High values are not recommended as they may cause the image to lag. Starlight menu cannot be controlled if the SHUTTER setting is above 1/60.

3D DNR

OFF/ LOW/ MID/ HIGH

3D DIGITAL NOISE REDUCTION- 3D-DNR reduces the noise on the screen in low light conditions and allows for clearer images, even at night.



COLOR

WB MODE

ATW Auto Tracking White Balance Control mode compensates for color temperature changes between 2500K and 9500K.

PUSHLOCK Pushlock is to fix the white balance based on the lighting.

MANUAL Users can control the white balance manually by changing RED GAIN and BLUE GAIN (see below).



RED GAIN

0 ~ 40 Adjusts the amount of red in the image.

BLUE GAIN

0 ~ 40 Adjusts the amount of blue in the image.

COLOR GAIN

Set the color gain from 0~20.





DAY & NIGHT

D&N MODE

AUTO / In AUTO mode, the camera switches between day and night automatically depending
COLOR / on light level. If COLOR is selected, the camera always stays in day/color mode.
B&W If B&W is selected, camera always stays in night/B&W mode. If AUTO is selected,
please define the following settings:

CONTROL: AUTO/EXT. If using IR LEDs built into the camera, select
AUTO. If using external IR LEDs separately, select EXT.

Adjust the following submenu options:

* **EXT SIGNAL:** Select from CDS or LOW/HIGH.

If CDS is selected: Day & Night will work by CDS signal level.

If LOW/ HIGH is set for EXT SIGNAL: Day & Night will work by
CDS's Low/High signal.

- **CDS D>N :** Set D>N level from 0 ~ 40. Adjusts the light level at
which the camera switches from day to night. Higher values, the lower the light level.
- **CDS N>D :** Set N>D level from 0 ~ 20. Adjusts the light level at which the camera
switches from night to day. This should be lower than the value of D>N above.
- **NIGHT S/W :** Decide the Low/High signal of CDS.

***EXT LED:** If you want to turn off the external LED by force, you can change the value
from AUTO to OFF.

DELAY

0 ~ 15 Sec. Time interval delay before switching from day mode to night mode.

B/W BURST

OFF / ON If ON is selected, the camera provides a color burst signal in night mode.

SMART IR - ANTI-SAT: Select level value from 1 ~ 20.

- **SAT. AREA :** Set SMART IR area from 0 ~ 20.





FUNCTION

MIRROR

OFF

MIRROR Reflects the camera horizontally.



Mirror OFF



Mirror ON

SHARPNESS

0 - 30 Sets the image sharpness. The higher the number, the sharper the image.

GAMMA

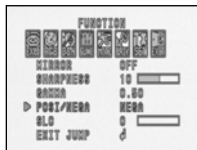
0.35 - 0.7 Select the desired gamma level. 0.45 is default setting.

POSI / NEGATIVE

OFF / ON If NEGATIVE is enabled, the camera's image will appear in negative colors.

SLC (SIDE LIGHT COMPENSATION)

0-20 Increase the brightness on sides of the image.





MOTION

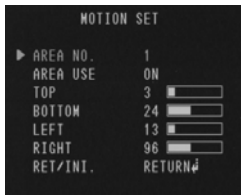
The camera can detect the movement and display an alarm on the screen when movement is detected.

MOTION

OFF / ON Select to enable or disable the camera's motion detection. If ON is selected:

SENSITIV.

0 - 30 Sensitivity level of the motion detection is adjustable. Motion Detection will be more sensitive at a higher number.



MOTION SET

- Area Number: The camera supports up to 4 different motion detection masks. Select which ones to display.
- Area Use: Select which one of the motion areas to enable.
- TOP: The higher the number, the higher the top border of the mask will be in the camera's view.
- BOTTOM: The higher the number, the lower the bottom border of the mask will be in the camera's view.
- LEFT: The lower the number, the closer the mask will be to the camera's left border.
- RIGHT: The lower the number, the closer the mask will be to the camera's right border.
- RET/INI.: Select whether to return to the main menu, or reset the motion settings to factory default.



PRIVACY



You can hide some parts of the screen for privacy masking. A total of 8 different privacy masking zones are available.

MASK COLOR

Privacy zones can be set with eight different colors—Gray-1, Gray-2, Gray-3, Gray-4, White, Yellow, Green, Blue, Red, Cyan, and Magenta.

PRIVACY SET

- Area Number: The camera supports up to 8 different privacy masks. select 1–8 which masks to display.
- Area Use: Select which one of the motion areas to enable.
- TOP: The higher the number, the higher the top border of the mask will be in the camera's view.
- BOTTOM: The higher the number, the lower the bottom border of the mask will be in the camera's view.
- LEFT: The lower the number, the closer the mask will be to the camera's left border.
- RIGHT: The lower the number, the closer the mask will be to the camera's right border.
- RET/INI.: Select whether to return to the main menu, or reset the motion settings to factory default.





SETUP

TITLE

OFF / ON If ON is selected, you can display the camera title on the screen. If enabled, manually enter the camera's display name using the joystick controller.



INTERNAL SYNC.

INT/ Select whether the camera synchronizes internally or using Line Lock.

COMMUNICATION

The Communications settings allow you to setup the camera's ID, Baudrate, Protocol, and UTC.

- CAM ID: Provide an ID number for the camera (0 ~ 255).
- ID DISP.: Decide to show the ID on screen or not. Select ON & OFF.
- BAUDRATE: 9600bps is default. Select the baudrate from the following options: 2400/4800/9600/57600 and 115200bps.
- PROTOCOL: Set as PELCO-D/ PELCO-P.
- UTC: Automatically set UTC as 15/32 BIT.





SETUP

LANGUAGE

The camera supports the following languages: ENGLISH.

FONT COLOR

The following colors are available for the OSD menu: BLUE, GREEN, CYAN, RED, MAGENTA, YELLOW, BLACK, and GRAY.

SPECIAL

OLPF: Select the filter that you use from BLUE/RED and PASS, then reboot the camera to use.

DPC: Set as START and compensate the white dot by changing the THRESHOLD value.





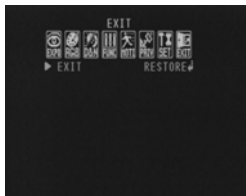
EXIT

EXIT

SAVE Exit the OSD menu after saving the recent changes.

RESTORE Exit the OSD menu without saving recent changes.

INITIAL Exit the OSD menu after resetting the camera to factory default.



TROUBLESHOOTING

Before sending your camera for repair, check the following or contact our technical specialist.

FOR NO VIDEO

Check the coaxial cable and make sure it is connected securely.

Check the lens' iris adjustment at the camera's OSD menu.

Check the power supply and make sure the camera has the proper voltage and current.

FOR OUT-OF-FOCUS VIDEO

Check the clear dome cover and the lens for dirt or fingerprints. Use a soft cloth and gently clean. Check the lens' manual focal and zoom adjustment. The use of a field test monitor is recommended.

WARRANTY INFORMATION*

Digital Watchdog (referred to as “the Warrantor”) warrants the Digital Watchdog Camera against defects in materials or workmanship as follows:

LABOR: For the initial five (5) years and one (1) year on IR LED from the original purchase date, if the camera is determined to be defective, the Warrantor will repair or replace the unit with a new or refurbished product at its option at no charge.

PARTS: In addition, the Warrantor will supply replacement parts for the initial five (5) years and one (1) year on IR LED.

To obtain warranty or out of warranty service, please contact a Technical Support Representative at **1-866-446-3595** Monday through Friday from 9:00AM to 8:00PM Eastern Standard Time.

A purchase receipt or other proof of the original purchase date is required before warranty service is rendered. This warranty only covers failures due to defects in materials and workmanship which arise during normal use. This warranty does not cover damage which occurs in shipment or failures which are caused by products not supplied by the Warrantor or failures which result from accident, misuse, abuse, neglect, mishandling, misapplication, alteration, modification, faulty installation, set-up adjustments, improper antenna, inadequate signal pickup, maladjustment of consumer controls, improper operation, power line surge, improper voltage supply, lightning damage, rental use of the product or service by anyone other than an authorized repair facility or damage that is attributable to acts of God.

LIMITS & EXCLUSIONS*

There are no express warranties except as listed. The warrantor will not be liable for incidental or consequential damages (including damage to recording media without limitation) resulting from the use of these products or arising out of any breach of the warranty. All express and implied warranties, including the warranties of merchantability and fitness for particular purpose, are limited to the applicable warranty period set forth above.

Some states do not allow the exclusion or limitation of incidental or consequential damages, or limitations on how long an implied warranty lasts, so the exclusions or limitations listed above may not apply to you. This warranty gives you specific legal rights, and you may also have other rights that vary from state-to-state.

If the problem is not handled to your satisfaction, then write to the following address:

Digital Watchdog, Inc.
ATTN: RMA Department
5436 W. Crenshaw Street
Tampa, FL 33634

Service calls which do not involve defective materials or workmanship as determined by the Warrantor, in its sole discretion, are not covered. Costs of such service calls are the responsibility of the purchaser.

SPECIFICATIONS*

VIDEO	
Image Sensor	960H CCD
Total Pixels	960 (H) x 478 (V)
Scanning System	2 : 1 Interlace
Frequency	15.734KHz (H), 59.95Hz (V)
Synchronization	Internal or Line Lock
Horizontal Resolution	720 TV Lines [B/W], 700 TV Lines [Color]
Minimum Illumination	F1.2 (30IRE): 0.0 Lux
S/N Ratio	52dB (AGC off)
Video Output	CVBS: 1.0Vp-p / 75 Ω
LENS	
Focal Length	2.8~12mm [DWC-B6563DIR]
	5~50mm [DWC-B6563TIR550]
Lens Type	Varifocal Auto Iris Lens
IR Distance	100ft Range IR [DWC-B6563DIR]
	150ft Range IR [DWC-B6563TIR550]
OPERATIONAL	
Shutter Speed	1/60s~1/120000s
Backlight	OFF / ON
Star-Light	X2 ~ X512
3D-DNR	OFF / Low / Middle / High
White Balance	ATW/ PUSH/ MANUAL

OPERATIONAL

Day and Night	Auto / Day / Night
Mirror	OFF / V. Flip / Rotate
Auto Gain Control	1 ~ 20
Gamma	0.35 ~ 0.7
Motion Detection	4 Motion Regions
Privacy Zones	8 Programmable Privacy Masks
Dynamic Range Compressor	OFF / Low / Middle / High
Sharpness	0 ~ 20
Highlight Masking Exposure	OFF / Low / Middle / High
DPC (Dead Pixel Cancellation)	OFF / ON

ENVIRONMENTAL

Operating Temperature	-10°C ~ 50°C (14°F ~ 122°F)
Operating Humidity	Less than 90% (Non-Condensing)
IP Rating	IP66 (Protects against dust and high pressure water.)

ELECTRICAL

Power Requirement	Dual (DC12V & 24VAC)
Power Consumption	B6563DIR: DC12V: 1.8W, 150mA, LED On: 3.2W, 266mA
	AC24V: 1.8W, 75 mA, LED On: 3.2W, 133mA
	B6563TIR550: DC12V: 1.8W, 150mA, LED On: 4.2W, 350mA
	AC24V: 1.8W, 785mA, LED On: 3.9W, 162.5mA

MECHANICAL

Housing Material	Aluminum
Dimensions	234.5 x 82.2 mm (9.23 X 3.23 in)
Weight	1.7 lbs (DWC-B6563DIR)
	2.05 lbs (DWC-B6563TIR550)

*Specification is subject to change without prior notice.

MEMO*

MEMO*

A large, empty rounded rectangle with a thin grey border, occupying most of the page below the 'MEMO*' label. It is intended for handwritten notes.



Everything's Digital

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9:00am to 8:00pm EST