STAR-LIGHT Universal HD over Coax™ Indoor / Outdoor Mini Dome Cameras

DWC-V7253
DWC-V7253TIR

C UL US
LISTED

User's Manual Ver. 02/22

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

★ STAR-LIGHT™
Universal HD Super Low Light Cameras

Index

Safety Information

	CAUTION	
⚡	RISK OF ELECTRIC SHOCK. DO NOT OPEN	⚠

CAUTION:
TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK) NO USER SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

⚡ This symbol indicates that dangerous voltage consisting a risk of electric shock is present within this unit.

⚠ This exclamation point symbol is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance

WARNING

1. In the use of the product, you must be strict compliance with the electrical safety regulations of the nation and region. When the product is mounted on a wall or ceiling, the device shall be firmly fixed.
2. Be sure to use only the standard adapter specified in the specification sheet. Using any other adapter could cause fire, electrical shock, or damage to the product.
3. Make sure the power supply voltage is correct before using the camera.
4. Incorrectly connecting the power supply or replacing the battery may cause an explosion, fire, electric shock, or damage to the product.
5. Do not connect multiple cameras to a single adapter. Exceeding the capacity may cause excessive heat generation or fire.
6. Securely plug the power cord into the power source. An insecure connection may cause a fire.
7. When installing the camera, fasten it securely and firmly. A falling camera may cause personal injury.
8. Do not install in a location subject to elevated temperature, low temperature, or high humidity. Doing so may cause fire or electric shock.
9. Do not place conductive objects (e.g. screwdrivers, coins, metal items, etc.) or containers filled with water on top of the camera. Doing so may cause personal injury due to fire, electric shock, or falling objects.
10. Do not install the unit in humid, dusty, or sooty locations. Doing so may cause fire or electric shock.

3

Safety Information

11. Do not install near any heat sources such as radiators, heat registers, or other products (including amplifiers) that produce heat.

12. Keep out of direct sunlight and heat radiation sources. It may cause a fire.

13. If any unusual smells or smoke come from the unit, stop using the product at once. Immediately disconnect the power source and contact the service center. Continued use in such a condition may cause fire or electric shock.

14. If this product does not operate normally, contact the nearest service center. Never disassemble or change this product in any way.

15. When cleaning the product, do not spray water directly onto parts of the product. Doing so may cause fire or electric shock.

CAUTION

1. Use proper safety gear when installing and wiring the product.

2. Do not drop objects on the product or apply strong shock to it. Keep away from a location subject to excessive vibration or magnetic interference.

3. Do not use this product near water.

4. The product shall not be exposed to dripping or splashing and no objects filled with liquids, such as vases, shall be placed on the product.

5. Avoid aiming the camera directly towards extremely bright objects such as the sun, as this may damage the image sensor.

6. The Main plug is used as a disconnect device and shall stay readily operable at any time.

7. Remove the power adapter from the outlet when then there is lightning. Neglecting to do so may cause fire or damage to the product.

8. Do not block any ventilation openings. Install following the manufacturer's instructions.

9. A polarized or grounding-type plug is recommended for this product. A polarized plug has two blades with one wider than the other. A grounding-type plug has two blades and a third grounding prong. If the provided plug does not fit into your outlet, consult an electrician for replacement.

Important Safety Instructions

10. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the product.

11. If any laser equipment is used near the product, make sure the surface of the sensor is not exposed to the laser beam as that may damage the sensor module.

12. If you want to move the already installed product, be sure to turn off the power and then move or reinstall it.

13. Proper configuration of all passwords and other security settings is the responsibility of the installer and/or end-user.

14. If cleaning is necessary, please use a clean cloth to wipe it gently. If the device will not be used for a long time, please cover the lens cap to protect the device from dirt.

15. Do not touch the camera's lens or sensor module with fingers. If cleaning is necessary, please use a clean cloth to wipe it gently. If the device will not be used for a long time, please cover the lens cap to protect the device from dirt.

16. Use only attachments/accessories specified by the manufacturer.

17. Always use hardware (e.g. screws, anchors, bolts, locking nuts, etc.) compatible with the mounting surface and of sufficient length and construction to ensure a secure mount.

18. Use only with cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the product.

19. Unplug this product when a cart is used. Use caution when moving the cart/product combination to avoid injury from tip-over.

20. Refer all servicing to qualified service personnel. Servicing is needed when the product has been damaged in any way, such as power supply cord or plug is damaged, liquid has been spilled or objects have fallen into the product, the product has been exposed to rain or moisture, does not operate normally, or has been dropped.

Legal considerations

Video surveillance can be regulated by laws that vary from country to country. Check the laws in your local region before using this product for surveillance purposes.

Important Safety Instructions

Liability

Every care has been taken in the preparation of this document. Digital Watchdog cannot be held responsible for any technical or typographical errors and reserves the right to make changes to the product and manuals without notice.

Digital Watchdog makes no warranty of any kind regarding the material contained within this document. Digital Watchdog shall not be liable nor responsible for incidental or consequential damages in connection with the furnishing, performance, or use of this material. This product is only to be used for its intended purpose.

Equipment modifications

This equipment must be installed and used in strict accordance with the instructions given in the user documentation. Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to use the equipment.

Trademark acknowledgments

Digital Watchdog, DW, DW Spectrum, MEGApix and Star-Light are registered trademarks or trademark applications of Digital Watchdog in various jurisdictions.

Apple, Apache, Bonjour, Chrome, Ethernet, Internet Explorer, Linux, Microsoft, Mozilla, Real, SMPTE, QuickTime, UNIX, Windows, and WWW are registered trademarks of the respective holders. Java and all Java-based trademarks and logos are trademarks or registered trademarks of Oracle and/or its affiliates. The UPnP Word Mark and UPnP Logo are trademarks of Open Connectivity Foundation, Inc. in the United States, or other countries.

microSD, microSDHC, and microSDXC Logos are trademarks of SD-3C LLC. microSD, microSDHC, microSDXC are trademarks or registered trademarks of SD-3C, LLC in the United States, other countries, or both.

Safety

This product is intended to be supplied UL Listed Power Supply Unit marked "Class 2" or "LPS" or "PS2" and rated 12 Vdc, 0.16A min (DWC-V7253) or 0.26A min (DWC-V7253TIR).

Important Safety Instructions

Regulatory Information

USA

This device complies with part 15 of the FCC Rules, 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.

This equipment has been tested and found to comply with the limits for a Class B digital device, according to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used following the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

• Reorient or relocate the receiving antenna.
• Increase the separation between the equipment and receiver.
• Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
• Consult the dealer or an experienced radio/TV technician for help

Canada

This digital apparatus complies with CAN ICES-3 (Class B). The product shall be connected using a shielded network cable (STP) that is properly grounded. Cet appareil numérique est conforme à la norme CAN NMB-3 (classe B). Le produit doit être connecté à l'aide d'un câble réseau blindé (STP) qui est correctement mis à la terre.
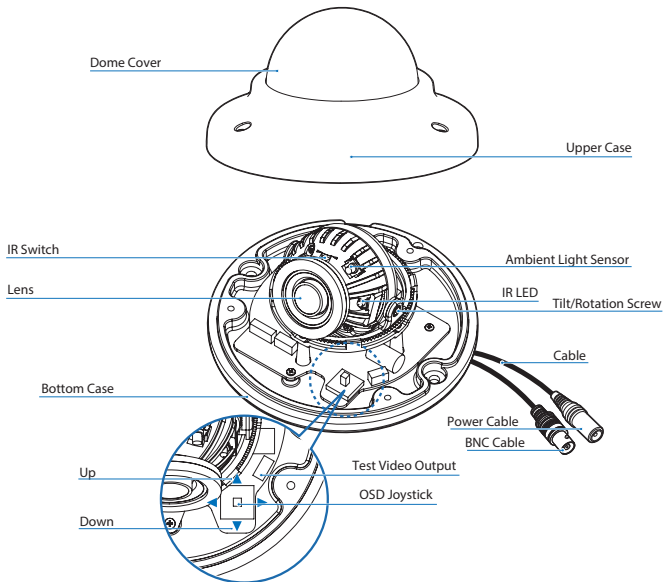
Disposal and recycling

Digital Watchdog cares for the environment at all product manufacturing stages and is taking measures to provide customers with more environmentally friendly products. When this product has reached the end of its useful life, dispose of it according to local laws and regulations. For information about your nearest designated collection point, contact your local authority responsible for waste disposal. Following local legislation, penalties may be applicable for incorrect disposal of this waste.
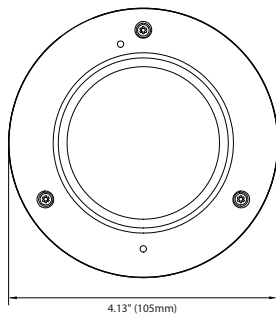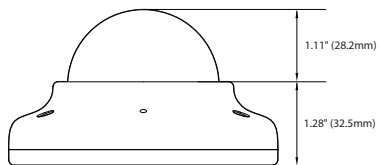
Features

- Universal HD over Coax™ Technology with HD-Analog, HD-TVI, HD-CVI and all Analog to 960H Signal Support
- STAR-LIGHT™ Super Low Light Technology
- 1/2.7" Image Sensor
- 2.1MP, 1080p Resolution at 30fps
- Fixed Lens 3.6mm
- Digital Wide Dynamic Range (D-WDR)
- OSD Control Via Coaxial (UTC)
- Smart IR™ with Intelligent Camera Sync. 50ft Range (DWC-V7253TIR only)
- Smart DNR™ 3D Digital Noise Reduction
- True Day/Night with Mechanical IR Cut Filter
- De-Fog™ Extreme Weather Image Compensation
- Highlight Masking Exposure (HME)
- Programmable Privacy Zones
- Auto Gain Control (AGC)
- Backlight Compensation (BLC)
- Auto White Balance (AWB)
- IP66 Certified Weather and Tampering Resistant
- IK-10 Impact Rated
- 5 Year Warranty

Part name

Dome Cover

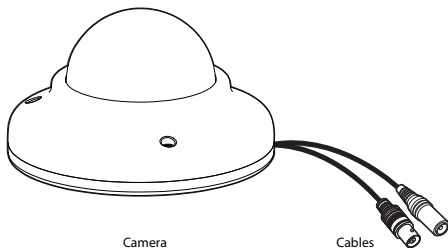Upper Case

IR Switch

Ambient Light Sensor

Lens

IR LED

Tilt/Rotation Screw

Cable

Bottom Case

Power Cable

BNC Cable

Test Video Output

Up

OSD Joystick

Down

Dimension

Unit : Inches (mm)

1.11" (28.2mm)

1.28" (32.5mm)

4.13" (105mm)

Product & Accessories

Camera

Cables

Mount Bolt & Nut

Star Wrench
(T-20)

Test Video Cable

Template Sheet
for installing by Bolt & Nut

Manual

Screw &
Plastic Anchor-2pcs

※ **NOTE:** The 'Test Video Cable' is used to test the camera by connecting to a portable display.

Installation- Instructions

Template Sheet

1 Detach the camera's cover dome from the camera's module by unscrewing the three cover dome screws using the Torx Wrench.

2 Use the camera or mounting template to mark and drill the necessary holes in the wall or ceiling.

3 Pull wires through and make connections.

4 Using three included screws, mount and secure the camera to the wall or ceiling.

5 To adjust the camera's pan and tilt position, the pan/tilt stopper screw must be loosened. Locate the screw at the base of the camera's lens. Loosen the screw slightly to allow the camera module to move as needed. Using force to rotate the camera's module without loosening the screw may damage the camera. To loosen the screw, use a Philips head screwdriver and twist the screw counterclockwise. To tighten the screw back after adjusting the camera module's pan and tilt, twist the screw clockwise.
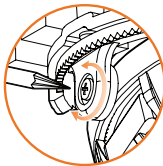
6 When assembling the dome back on the camera, align the screw holes in the dome and the camera's base.

7 When the installation is complete, remove the dome's protective film. Softly wipe the dome/lens cover with lens tissue or a microfiber cloth with ethanol to remove any dust or smudges left from the installation process.
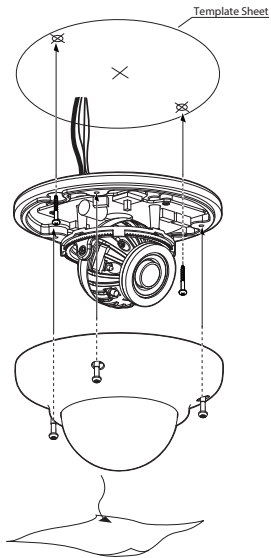
Installation-
Using Mount Bolt & Nut

1 Detach the camera's cover dome from the camera's module by unscrewing the three cover dome screws.

2 Using the camera or mounting template, mark and drill the necessary holes in the wall or ceiling.

3 Secure the two long mounting screws to the camera's base.

4 Pull wires through and make connections.

5 Mount the camera to the mounting surface using the 2 mounting nuts.

6 Secure the camera's cover dome onto the camera base to complete the installation.

Template Sheet
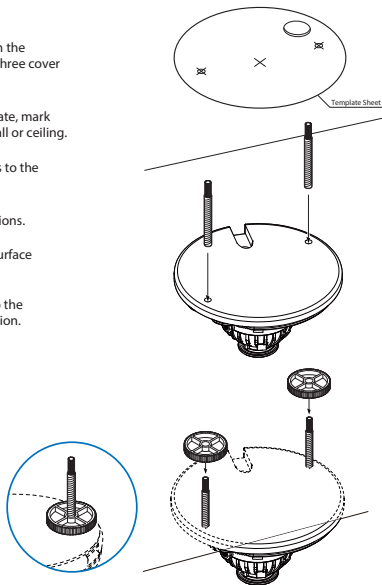
Connecting to DVR/Encoder

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

12VDC

COAX

UNIVERSAL DVR

Test Video Output

Monitor
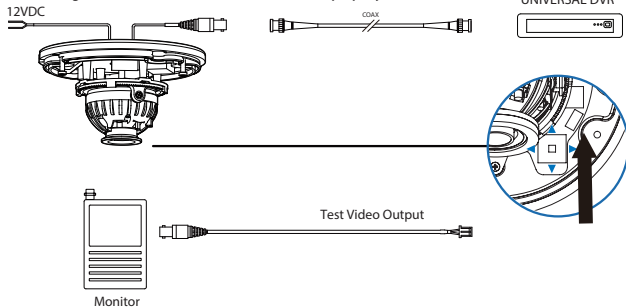
- Power Connection - 12vdc Voltage
- All cameras are equipped with a test video output for on-site configuration.

Control Board

UP

DOWN
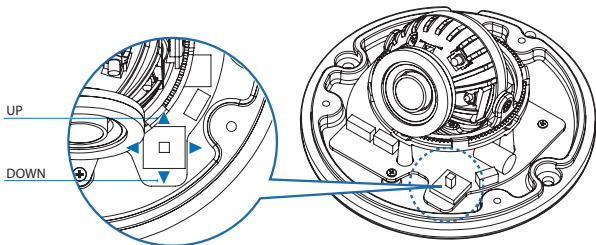
- OSD Joystick : The function setting and video output can be adjusted with OSD joystick. (default : HD-A)

Image Mode
Switches to HD-TVI mode when press OSD Joystick to left 5sec or longer.
Switches to HD-A mode when press OSD Joystick to right 5sec or longer.
Switches to CVBS mode when press OSD Joystick to up 5sec or longer.
Switches to HD-CVI mode when press OSD Joystick to down 5sec or longer.

CVBS(960H)

HD-TVI — L — Hold 5sec — R — HD-A

HD-CVI
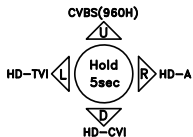
- IR LED Switch : The camera has a manual IR switch, located under the camera's lens. You can use this switch to manually turn the IR LED board on or off according to the installation needs.

ON/OFF

Adjusting the Camera angle

Panning 360°

Rotation 360°
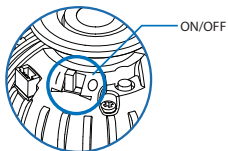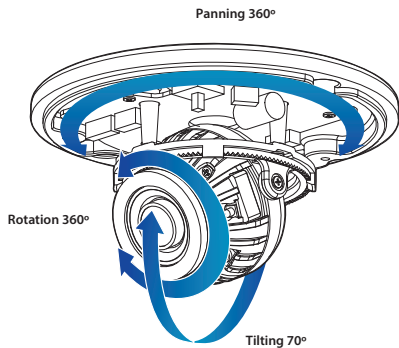
Tilting 70°

NOTE: to adjust the camera's tilt, loosen the two screws connecting the camera's lens to the base of the camera. Once the camera module has been adjusted to the desired tilting angle, secure the screws back in place.

OSD Menu Tree

LENS

P-IRIS	MODE / LIMIT / RETURN
DC	MODE / IRIS SPEED / RETURN
MANUAL	

EXPOSURE

SHUTTER	AUTO / 1/30 ~ 1/50000 / / X2 ~ X30
AGC	0 ~ 15
STARLIGHT	OFF / AUTO (X2 ~ X30)
BRIGHTNESS	1 ~ 100
DRC	OFF / ON(0~8) / AUTO
DEFOG	OFF / AUTO
RETURN	

BACKLIGHT

OFF	
BLC	LEVEL / AREA / DEFAULT / RETURN
HME	SELECT / DISPLAY / BLACK MASK / LEVEL / MODE / DEFAULT / RETURN

WHITE BALANCE

ATW	
PUSH	
MANUAL	BLUE(0~100) / RED(0~100) / RETURN
AWB	

DAY&NIGHT

AUTO	AGC / CDS / EXT LED / RETURN
COLOR	
B/W	BURST / IR SMART / RETURN
EXT	DELAY / EXT LED / NIGHT SW / RETURN

NR(Noise Reduction)

2DNR	OFF / LOW / MIDDLE / HIGH
3DNR	OFF/ LOW / MIDDLE / HIGH
RETURN	

SPECIAL

CAM TITLE	OFF / ON
D-EFFECT	FREEZE / MIRROR / NEG. IMAGE / RETURN
MOTION	OFF / ON (SELECT 1~4)
PRIVACY	OFF / ON (SELECT 1~4)
LANGUAGE	ENGLISH/CHINESE 1/CHINESE2/ GERMAN/FRENCH/ITALIAN/ ARABIC/SPANISH/POLISH/ RUSSIAN/PORTUGUESE/DUTCH /TURKISH/KOREAN/JAPANESE/ HEBREW
DEFECT	LIVE DPC / WHITE DPC / BLACK DPC / RETURN
RS485	CAM ID / ID DISPLAY / BAUDRATE / RETURN
RETURN	

ADJUST

SHARPNESS	AUTO / OFF
MONITOR	LCD / CRT
LSC	OFF / ON
VIDEO OUT	NTSC / PAL
RETURN	

EXIT

SAVE & END	
RESET	
NOT SAVE	

OSD Menu_Lens

❶ MANUAL

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

❷ P-IRIS

If the camera includes a P-Iris lens, you can select this option to adjust the lens and iris settings.
If P-Iris is selected, adjust the following :
MODE : Select from AUTO or MANUAL. If AUTO is selected, the camera's iris and lens will be adjusted automatically.
LIMIT : If MANUAL is selected, the camera's iris can be adjusted manually using the LIMIT value.

```
        MAIN MENU                      P-IRIS MODE

  ▷LENS        P-IRIS           ▷MODE         AUTO
   EXPOSURE    ↵                 LIMIT         - - -
   BACKLIGHT   OFF               RETURN        RET↵
   WHITE BAL   ATW
   DAY&NIGHT   AUTO
   NR          ↵
   SPECIAL     ↵
   ADJUST      ↵
   EXIT        SAVE&END
```

❸ DC

DC lens mode allows you to setup the camera for indoor or outdoor modes.
If DC is selected adjust the following options :
MODE : Select from INDOOR or OUTDOOR.
IRIS SPEED : Set the reaction speed of the camera's Lens iris.
If OUTDOOR mode is selected, you can adjust the minimum and maximum shutter speed. By default, the MIN SHU is set to 1/30. The MAX SHU can be adjusted as needed. The lower the number, the darker the image will appear in bright areas.

```
        MAIN MENU              DC LENS MODE              OUTDOOR MODE

  ▷LENS        DC          ▷MODE       INDOOR       ▷MIN SHU    1/30
   EXPOSURE    ↵            IRIS SPEED  - - -8       MAX SHUT    1/60
   BACKLIGHT   OFF          RETURN      RET↵         RETURN      RET↵
   WHITE BAL   ATW
   DAY&NIGHT   AUTO
   NR          ↵
   SPECIAL     ↵
   ADJUST      ↵
   EXIT        SAVE&END
```

OSD Menu_Exposure

❶ SHUTTER

Set the camera's shutter speed from available options
(AUTO / 1/30~1/50000 / X2~X30 / FLK)
If Iris is set to AUTO in the lens menu, the camera's shutter will be
set automatically and the values in this menu will not be adjustable.
If Iris is set to AUTO in the lens menu, the camera's shutter speed
will be deactivated.

❷ AGC (Auto Gain Control)

0 ~ 15
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.

❸ STARLIGHT

OFF / AUTO (X2~X30)
Automatically activates slow shutter function when the image is too
dark. High values are not recommended as they may causes the image
to lag. To adjust the STARLIGHT values, select AUTO and enter the sub-
menu. Starlight menu cannot be controlled if the SHUTTER setting is
above 1/60. If AGC is set to 0, the STARLIGHT menu will be inactive.

❹ BRIGHTNESS

1 ~ 100
Adjust the camera's brightness from 1~100.
The higher the number, the brighter the image will appear.

```
            EXPOSURE

 ▷SHUTTER          1/30
  AGC           ----12
  STARLIGHT      AUTO⏎
  BRIGHTNESS    ----45
  DRC             OFF
  DEFOG           OFF
  RETURN         RET⏎
```
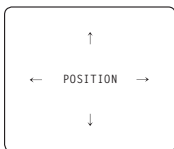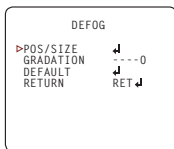
OSD Menu_Exposure(CONT.)

5 DRC (Dynamic Range Compressor)
  DRC enables dark areas in images to become more visible without overexposing the bright areas to create one perfect image. Select from : OFF / ON / AUTO. If ON is selected, adjust the DRC value from 0~8.

6 DEFOG
  Allows the camera to process a scene that is obscured by fog or weather conditions and provides a visibly improved image.
  - POS/SIZE : Set the location and size of the defog mask. Use the joystick controller on the camea's board to adjust the De-Fog zone's position. Press the enter key and use the joystick controller to adjust the zone's size.
  - GRADATION : Set the DEFOG level from 0~2. The higher the number, the stronger the Defog mask will be.
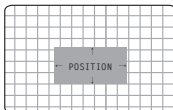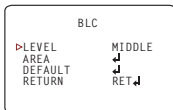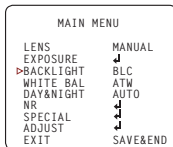 - DEFAULT : Return the Defog settings to their default values.

```
          DEFOG

 ▷POS/SIZE      ↵
   GRADATION    ----O
   DEFAULT      ↵
   RETURN       RET↵
```

```
               ↑



      ←    POSITION    →



               ↓
```

OSD Menu_Backlight

❶ BLC (Back Light Compensation)

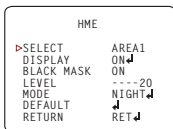If BLC is selected, adjust the size and position of the mask :
- Level : Set the BLC levels LOW/MIDDLE/HIGH
- AREA : Use the joystick controller on the camera's board to adjust the zone's position.
 Press the enter key and use the joystick controller to adjust the zone's size.
- DEFAULT : Return the BLC settings to their original default values.

```
       MAIN MENU

 LENS          MANUAL
 EXPOSURE        ↵
▷BACKLIGHT       BLC
 WHITE BAL       ATW
 DAY&NIGHT       AUTO
 NR              ↵
 SPECIAL         ↵
 ADJUST          ↵
 EXIT          SAVE&END
```

```
         BLC

▷LEVEL        MIDDLE
 AREA           ↵
 DEFAULT        ↵
 RETURN        RET↵
```


❷ HME (Highlight Masking Exposure)

HME allows objects to appear clearly on the screen by masking extremely bright areas.
- SELECT : The camera supports up to four different HME zones.
 Select which zone to setup.
- DISPLAY : For the selected zone, select ON to adjust its position and size. Use the joystick controller
 on the camera's board to adjust the zone's position. Press the enter key and use the joystick controller to adjust the zone's size.
- BLACK MASK : Select whether the HME mask will display in black on the camera's view.
- LEVEL : Set the working range of the HME. The higher the value, the HME mask will appear only around bright sources. Set the value from 0~100. Default value is 20.
- MODE : Select whether the HME mask will appear during night mode only or all day. If the zone is set to night mode, the zone will appear based on the AGC setting value.
- DEFAULT : Return the settings to their original default values.

```
         HME

▷SELECT       AREA1
 DISPLAY      ON↵
 BLACK MASK   ON
 LEVEL        ----20
 MODE         NIGHT↵
 DEFAULT       ↵
 RETURN       RET↵
```

OSD Menu_White Balance

❶ ATW

Auto Tracking White Balance Control mode compensates for color temperature changes between 2400K° and 11000K°.

❷ PUSH

Push fixes the white balace based on the current lighting automatically. To use this function, press the ENTER key for five sec.

❸ MANUAL

Control the white balance manually by changing RED and BLUE.
RED : Adjusts the low color temperature in the image between 0~100. The default value is 44.
BLUE : Adjusts the low color temperature in the image between 0~100. The default value is 44.

❹ AWB

Auto White Balance Control mode compensates for color temperature changes lower than 2500K° and higher than 12000K°.

```
        MAIN MENU

LENS           MANUAL
EXPOSURE       ↵
BACKLIGHT      OFF
▷WHITE BAL     ATW
DAY&NIGHT      AUTO
NR             ↵
SPECIAL        ↵
ADJUST         ↵
EXIT           SAVE&END
```

```
        MAIN MENU

LENS           P-IRIS
EXPOSURE       ↵
BACKLIGHT      OFF
▷WHITE BAL     MANUAL
DAY&NIGHT      AUTO
NR             ↵
SPECIAL        ↵
ADJUST         ↵
EXIT           SAVE&END
```

```
        MANUAL WB

▷BLUE          ----42
 RED           ----40
 RETURN        RET↵
```
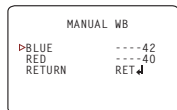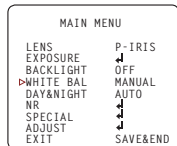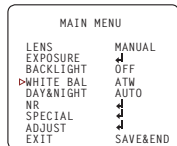
OSD Menu_Day & Night

- AUTO : Day/Night switch is based on the CDS levels (IR models) or AGC levels (non-IR models).
- COLOR : The camera always stays in day/color mode.
- B&W : The camera always stays in night/B&W mode.
- EXT : The camera's Day & Night settings are set according to an external IR LED board.

❶ AUTO

For cameras with no IR LED Built-in :
- D→N Threshold (AGC) : Set when the camera switches from day to night mode by the AGC value.
  When the camera detects AGC levels beyond the set threshold, it will switch from color to B/W.
- D→N Delay (AGC) : Set a delay for the camera when switching from day to night mode.
- N→D Threshold (AGC) : Set when the camera switches from night to day mode by the AGC value.
  When the camera detects AGC levels beyond the set threshold, it will switch from B/W to color.
- N→D Delay (AGC) : Set a delay for the camera when switching from night to day mode.

For cameras with IR LED Built-in :
- D→N Threshold (CDS) : Set when the camera switches from day to night mode.
  The lower the value, the camera will require less light (more darkness) to switch to Night Mode.
- D→N Delay (CDS) : Set a delay for the camera when switching from day to night mode.
- N→D Threshold (CDS) : Set when the camera switches from night to day mode.
  The lower the value, the camera will require less light (more darkness) to switch to Night Mode.
- N→D Delay (CDS) : Set a delay for the camera when switching from night to day mode.
- EXT LED : AUTO : The LEDs are enabled/disabled by the CDS Sensor on the LED Board.
            OFF : The camera's LEDs are disabled manually.

OSD Menu_Day & Night (CONT.)

❷ COLOR
If COLOR mode is selected, the camera's display will always appear in color, regardless of the lighting condition.

❸ B/W
- BURST : Select to enable or disable color burst when the camera switches from color to B/W.
- IR SMART (0~15) : Enable Smart IR and set the level. Higher values will make SMART IR stronger.

❹ EXT
The Day & Night settings are set according to a CDS sensor in an external IR LED board.
- D→N Delay : Set a delay for the camera when switching from day to night mode.
- N→D Delay : Set a delay for the camera when switching from day to night mode.
- EXT LED : Auto : The LEDs are enabled/disabled by the CDS Sensor on the LED Board.
            OFF : The camera's LEDs are disabled manually.
- NIGHT S/W : Based on the CDS settings in the external LED board, set the value for LOW/HIGH.

OSD Menu_NR

❶ NR (Noise Reduction)
NR reduces the noise on the screen in low light conditions and allows for clearer images,
even at night.

2DNR : Set the Digital Noise Reduction values for general illumination. Select from LOW/MIDDLE/
HIGH. If the 2DNR settings are set to HIGH, image sharpness may be affected.

3DNR : Set the Digital Noise Reduction values for very low light situations. Select from LOW/MIDDLE/
HIGH. If the 3DNR settings are set to HIGH, lagging issues may appear when motion occurs.

```
        MAIN MENU                        NR

  LENS         MANUAL          ▷2DNR        MIDDLE
  EXPOSURE       ↵              3DNR        MIDDLE
  BACKLIGHT     OFF             RETURN      RET↵
  WHITE BAL     ATW
  DAY&NIGHT     AUTO
  ▷NR
  SPECIAL        ↵
  ADJUST         ↵
  EXIT         SAVE&END
```
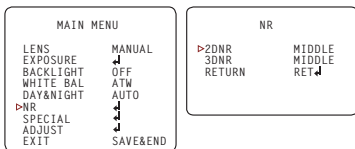
OSD Menu_Special

1 **CAM. TITLE**
Add a name to the camera. Set the title by using the OSD joystick.

2 **D-EFFECT**
FREEZE   Freeze image from the camera at the selected moment.
MIRROR   Reflects the caemra : OFF / MIRROR / V-FLIP / ROTATE
NEG. IMAGE   Display the camera's view in negative colors.

Mirror OFF   Mirror   Flip   Rotate

3 **MOTION**
- SELECT : The camera supports up to 4 seperate motion detection areas. Select which one to adjust.
- DISPLAY : For the selected zone, select ON to adjust its position and size. Use the joystick cotroller on the camera's board to adjust the zone's position. Press the enter key and use the joystick controller to adjust the zone's size.
- SENSITIVITY : Set the camera's sensitivity to motion. The higher the value, the more sensitive the camera is to motion.
- COLOR : Set the color for the motion zone. Select from green, blue, white, or red.
- TRANS : Set the zone's transparency. The lower the number, the more transparent the zone will appear on the camera's display.

OSD Menu_Special (CONT.)

❹ MOTION
- ALARM :
    - VIEW TYPE : When motion is detected, select from the following disply options :
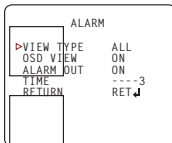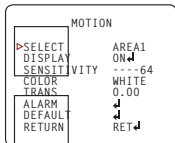   1. OFF - Do not display motion alarm
        2. ALL - Show all motion zones when motion alarm is detected.
        3. BLOCK - Show the area where motion is detected as a solid block.
        4. OUTLINE - Show the area where motion is detected as an outline only.
    - OSD VIEW : If enabled, ALARM will appear on the screen when motion is detected.
    - ALARM OUT : The camera supports 3.3V alarm output. When motion is detected, an alarm output can be triggered if enabled.
    - TIME : Set the dwell time after motion is detected. Values are in seconds.
- DEFAULT : Reset the motion detection settings to their default values.

```
            MOTION
 ▷SELECT         AREA1
  DISPLAY        ON↵
  SENSITIVITY    ----64
  COLOR          WHITE
  TRANS          0.00
  ALARM          ↵
  DEFAULT        ↵
  RETURN         RET↵
```

```
            ALARM
 ▷VIEW TYPE      ALL
  OSD VIEW       ON
  ALARM OUT      ON
  TIME           ----3
  RETURN         RET↵
```
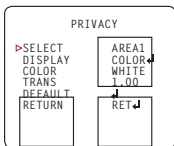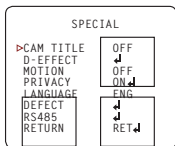
OSD Menu_Special (CONT.)

⑤ PRIVACY
- SELECT : The camera supports up to 4 separate privacy zones. Select which one to adjust.
- DISPLAY : There are three types of privacy masks you can apply. Select from OFF MOSAIC, INV., or COLOR
  1. MOSAIC - The privacy mask will appear as a mosaic over the camera's image.
  2. INV. - The privacy mask will appear as a negative of the image behind it, reversing the colors and brightness.
  3. COLOR - The privacy mask will appear as a block of color according to the settings in the COLOR menu.

To adjust the zone's position and size, once the type of mask is selected, use the joystick controller on the camera's board to adjust the zone's position. Press the enter key and use the joystick controller to adjust the zone's size.

- COLOR : If COLOR is selected under the display options, set the color for the motion zone. Select from white, black, red, blue, yellow, green, cyan, or user. If user is selected, the mask's color will default to dark green.
- TRANS : Set the zone's transparency. The lower the number, the more transparent the zone will be.
- DEFAULT : Reset the motion detection settings to their default values.

```
        SPECIAL                      PRIVACY
 ┌──────────────────┐        ┌──────────────────┐
 │▷CAM TITLE  OFF   │        │▷SELECT    AREA1  │
 │ D-EFFECT   ↵     │        │ DISPLAY   COLOR↵ │
 │ MOTION     OFF   │        │ COLOR     WHITE  │
 │ PRIVACY    ON↵   │        │ TRANS     1.00   │
 │ LANGUAGE   ENG   │        │ DEFAULT   ↵      │
 │ DEFECT     ↵     │        │ RETURN    RET↵   │
 │ RS485      ↵     │        │                  │
 │ RETURN     RET↵  │        │                  │
 └──────────────────┘        └──────────────────┘
```

6 LANGUAGE

Select from the available options : English, Chines 1, Chinese 2, German, French, Italian, Spanish, Polish, Russian, Portuguese, Dutch, Turkish, Korean, Japanese, Arabic, or Hebrew.
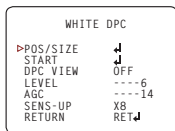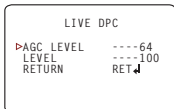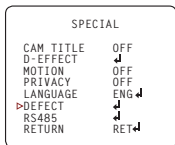
7 DEFECT

- LIVE DPC :
 1. AGC LEVEL - Set the AGC levels for the Live DPC.
 2. LEVEL - Set the level of Live DPC based on the AGC levels.
- WHITE DPC :
 1. POS/SIZE - Set the DPC Zone. Use the joystick's controller on the camera's board to adjust the zone's position. Press the enter key and use the joystick controller to adjust the zone's size.
 2. START - Press START to begin the DPC test. The screen will get bright and compensate for the black defect.
 3. DPC VIEW - Show the Defect pixels which have been compensated.
 4. LEVEL - Set the range of DPC application.
 5. AGC - Set the value level for AGC while DPC is on.
 6. SENS-UP - Sent the value level of Sens-Up while DPC is on.

```
        SPECIAL

   CAM TITLE    OFF
   D-EFFECT     ↵
   MOTION       OFF
   PRIVACY      OFF
   LANGUAGE     ENG↵
  ▷DEFECT       ↵
   RS485        ↵
   RETURN       RET↵
```

```
        LIVE DPC

  ▷AGC LEVEL    ----64
   LEVEL        ----100
   RETURN       RET↵
```

```
        WHITE DPC

  ▷POS/SIZE     ↵
   START        ↵
   DPC VIEW     OFF
   LEVEL        ----6
   AGC          ----14
   SENS-UP      X8
   RETURN       RET↵
```
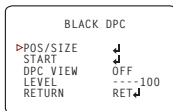
OSD Menu_Special (CONT.)

8 DEFECT (CONT.)

- BLACK DPC :
  1. POS/SIZE : Set the size and position for the DPC Zone.
     Use the joystick controller on the camera's board to adjust
     the zone's position. Press the enter key and use the joystick
     controller to adjust the zone's size.
  2. START : Press START to begin the DPC test. The screen will
     get bright and compensate for the black defect.
  3. DPC VIEW : Show the Defect pixels whichhave been compensated.
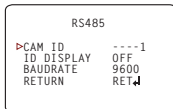 4. LEVEL : Set the range of DPC application.

```
          BLACK DPC

▷POS/SIZE        ↵
 START           ↵
 DPC VIEW        OFF
 LEVEL           ----100
 RETURN          RET↵
```

9 RS485

- CAM ID : Set the camera's ID from 0~255.
- ID DISPLAY : Select to show or hide the camera ID on the screen.
- BAUDRATE : Set the camera's baudrate.
  Select from : 2400/4800/9600/19200/38400. Default is 9600.

```
            RS485

▷CAM ID          ----1
 ID DISPLAY      OFF
 BAUDRATE        9600
 RETURN          RET↵
```

OSD Menu_Adjust

❶ SHARPNESS

Set the sharpness of the image. The Sharpness values can be increased or lowered according to the AGC levels in the camera's view. If AUTO is selected, adjust the following values :
- LEVEL : Set the sharpness level. The higher the number, the sharper the image will appear.
- START AGC : Select the AGC value where the image's shart lines may start to appear smeared in low light.
- END AGC : Select end AGC value for sharpness smearing in low light. Once the AGC values pass the set END AGC, the image's sharp lines will no longer appear smeared if the environment gets darker.

❷ MONITOR

Adjust the camera's signal according to the monitor you are using.
- LCD Mode : If using and LCD monitor, adjust the following settings:
  1. GAMMA - Set the gamma level from 0.45~1.00 / USER
            0.55 is default setting.
  2. BLUE GAIN - Set the blue levels from 0~100.
  3. RED GAIN - Set the red levels from 0~100.
- CRT ode : If using an CRT monitor, adjust the following settings :
  1. BLUE GAIN - Set the blue levels from 0~100.
  2. RED GAIN - Set the red levels from 0~100.

```
              LCD

▷GAMMA          0.55
 BLUE GAIN     ----64
 RED GAIN      ----64
 RETURN        RET↵
```

```
              CRT

▷BLUE GAIN     ----64
 RED GAIN      ----64
 RETURN        RET↵
```

❸ LSC (Lens Side Compansation)

The LSC function improves the brightness around the lens.

❹ VIDEO OUT

If you need to change the camera's video output, select from NTSC or PAL.
Reboot the camera after making any changes to the video signal settings.
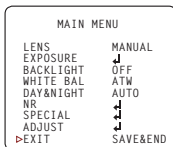
OSD Menu_EXIT

❶ SAVE & END
Save all changes made to the camera's settings and exit the OSD menu.

❷ RESET
The camera's settings will be reset to their factory default values once you exit the OSD menu.

❸ NOT SAVE
Exit the OSD menu without saving any changes made to the camera's settings.

```
        MAIN MENU
  LENS          MANUAL
  EXPOSURE      ↵
  BACKLIGHT     OFF
  WHITE BAL     ATW
  DAY&NIGHT     AUTO
  NR            ↵
  SPECIAL       ↵
  ADJUST        ↵
 ▷EXIT          SAVE&END
```

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 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.
The use of a field test monitor is recommended.

Specifications

VIDEO	
Image Sensor	1/2.7" CMOS Sensors
Active Pixels	1920(H) x 1080(V)
Scanning System	Progressive scan
Frequency	60Hz / 50Hz
Signal Technology	2.0 Megapixel Universal
Synchronization	Internal
Resolution	1920x1080 (1080p30fps)
Minimum Scene Illumination	F2.0 (30IRE): 0.41 Lux (Color)
	F1.4 (30IRE): 0 Lux (B&W)
S/N Ratio	55dB
Video Output	BNC (Universal : HD-A/HD-TVI/HD-CVI/CVBS)
LENS	
Focal Length & Lens Type	3.6mm (F2.0)fixed
IR Distance	50ft
OPERATIONAL	
Shutter Speed	AUTO / 1/30~1/50,000 / X2~X30 / FLK
Backlight	OFF/BLC/HME
Starlight	OFF, x2 - x30

Specifications

OPERATIONAL (CONT.)	
Digital Noise Reduction	OFF / LOW / MIDDLE / HIGH
White Balance	ATW / PUSH / MANUAL / AWB
Day and Night	AUTO / COLOR / BW / EXT
Auto Gain Control	0 ~ 15
Motion Detection	ON/OFF (4 Zones)
Privacy Zones	ON/OFF (4 Zones)
Sharpness	0 ~ 10
Gamma	0.45 ~ 1.00 / USER
Remote Control	Coaxial(UTC)
ENVIRONMENTAL	
Operating Temperature	-4°F ~ 122°F (-20°C ~ 50°C)
Operating Humidity	No more than 90% (Non-Condensing)
IP Rating	IP66
Other Certifications	FCC, CE, ROHS
ELECTRICAL	
Power Requirements	DC12V
Power Consumption	LED OFF : 1.92W, 160mA
	LED ON : 3.12W, 260mA
MECHANICAL	
Housing Material and Dimensions	Aluminum, 4.13 x 2.38 in (105 x 60.7mm)
Weight	0.77 lbs

Limits & Exclusions

There are no express warranties except as listed. The warranter 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 Warranter, in its sole discretion, are not covered. Costs of such service calls are the responsibility of the purchaser.
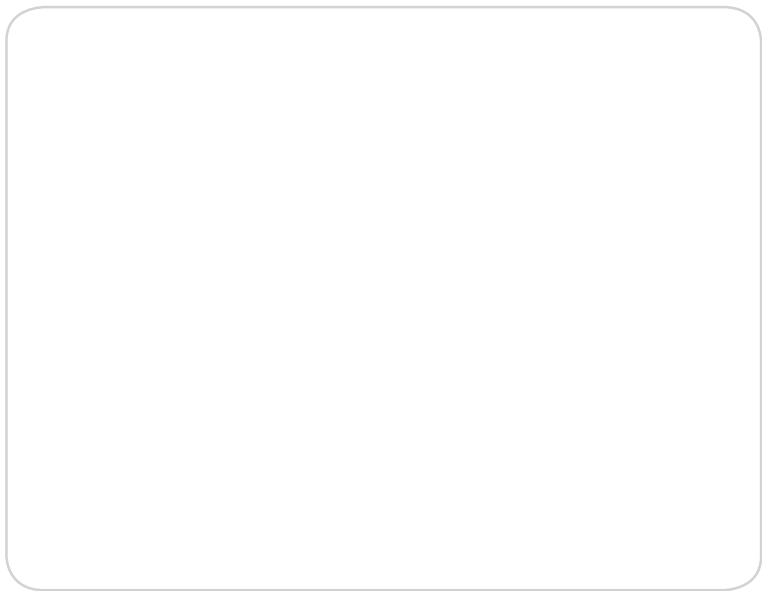
Warranty Information

Go to https://digital-watchdog.com/page/rma-landing-page/ to learn more about Digital Watchdog's warranty and RMA.
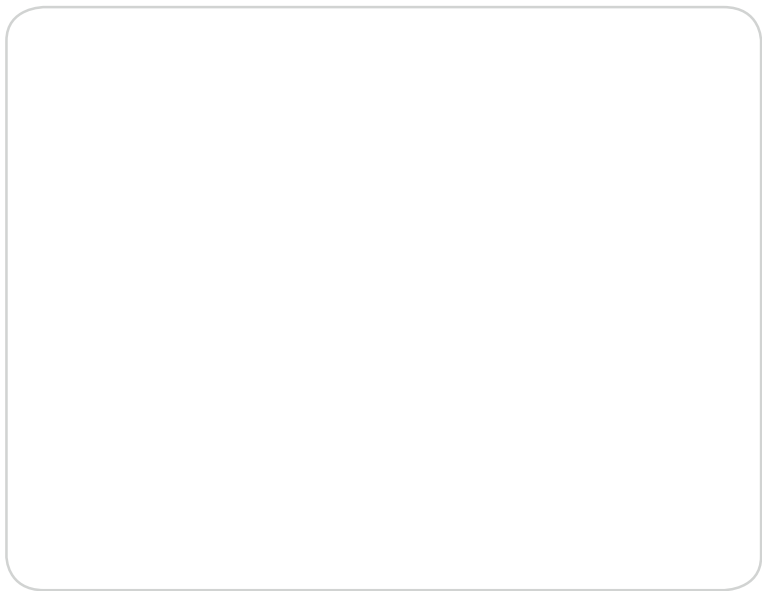
To obtain warranty or out of warranty service, please contact a technical support representative at: 1+ (866) 446-3595, Monday through Friday from 9:00 AM to 8:00 PM EST.

A purchase receipt or other proof of the date of the original purchase 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 damages that 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, setup adjustments, improper antenna, inadequate signal pickup, maladjustments 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.
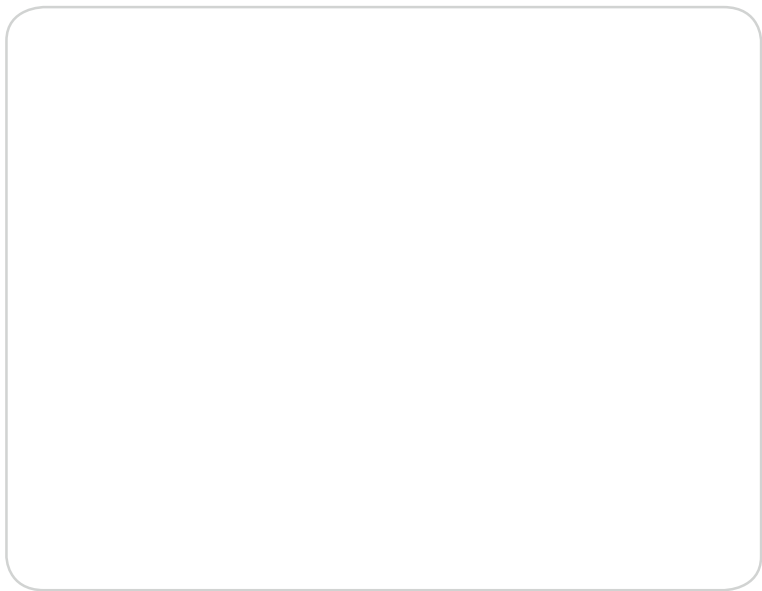
Notes

Notes

Notes

DW DIGITAL WATCHDOG™

Complete Surveillance Solutions

DW® East Coast Office and warehouse:
5436 W Crenshaw St, Tampa, FL 33634

DW® West Coast Office and warehouse:
16220 Bloomfield Ave., Cerritos, California, USA 90703

PH: 866-446-3595 | FAX: 813-888-9262
www.Digital-Watchdog.com
technicalsupport@dwcc.tv

Technical Support PH:
USA & Canada 1+ (866) 446-3595
International 1+ (813) 888-9555
French Canadian 1+ (514) 360-1309

Technical Support hours:
Monday-Friday 9:00am to 8:00pm Eastern Standard Time