INSTRUCTION MANUAL

**Full HD
Bullet Camera**

Weatherproof IR Bullet Camera

*Please read this manual thoroughly before use, and keep it handy for future reference.
Design and specifications are subject to change without notice.*

148+/-5mm

105(+/-5)mm

rev.B - 5p 30EA LED
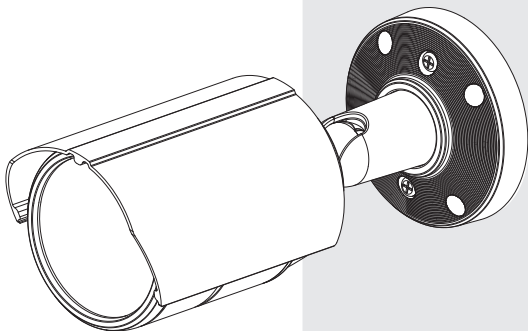8p Video out check 삭제
19p 30EA LED , OSD (Joystick Switch삭제)

NOTES
1.MODEL: HDUI-N31NPV2U2D/NoBrand
2.MATERIAL: 모조지100g/㎡ WHITE
3.COLOR: BLACK
4.SIZE:105(+/-5)mm x 148(+/-5)mm
5.LABEL: -------------

협의 전자 강영구
15-07-29

ITEM	DESCRIPTION/MATERIAL	QTY

50303897

PARTS LIST

UNLESS OTHERWISE SPECIFIED
ALL DIMENSIONS ARE IN MM.
- TOLERANCE
LABEL   +/- 3
MANUAL   +/- 5
GUIDE   +/- 5

	APPROVALS	DATE
	K.H.JUNG	15-07-29
MATERIAL 2	CHKED M.J.KWON	15-07-29
COLOR 3	DRAWN J.Y.LIU	15-07-29

HITRON

TITLE Manual Instruction

SIZE A4   REV. B

SCALE DO NOT SCALE

Full HD
Bullet Camera

Weatherproof IR Bullet Camera

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FCC COMPLIANCE STATEMENT

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.

FCC INFORMATION : 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.

CAUTION : Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

CE COMPLIANCE STATEMENT

WARNING : This is a Class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

IMPORTANT SAFETY INSTRUCTIONS

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not block any ventilat ion openings. Install in accord ance with the manufacturer`s instructions.
6. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
7. Only use attachments/accessories specified by the manufacturer.
8. Use only with the ca rt, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/ apparatus combination to avoid injury from tip-over.
9. *CAUTION - THESE SERVICING IN STRUCTIONS ARE FOR USE BY QUALIFIED SERVICE PERSONNEL ONLY. TO REDUCE THE RISK OF ELECTRIC SHOCK DO NOT PERFORM ANY SERVICING OTHER THAN THAT CONTAINED IN THE OPERATING INSTRUCTIONS UNLESS YOU ARE QUALIFIED TO DO SO.*
10. *Use satisfy clause 2.5 of IEC60950-1/UL 60950-1 or Certified/Listed Class 2 power source only.*
11. Indoor use only.

EXPLANATION OF GRAPHICAL SYMBOLS

The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the product.

CONTENTS

INTRODUCTION

The 1/2.8" 2.4M HD CMOS camera, especially for closed circuit television CCTV and
security surveillance application.

Features:

- High performance SONY 1/2.8" Exmor CMOS™
- 1.0 lux(COLOR), 0 lux(BW, IR LED ON)
- Auto electronic shutter [1/60(1/50) ~ 1/50,000] and manual electronic shutter modes
- 25/30 fps @ 1080p
- BLC (Back-light compensation)
- Auto and manual white balance modes (ATW/AWC/Manual/AWB)
- Day & Night (ICR) : Auto / Color / BW
- OSD (on screen display)
- 3DNR (Digital Slow Shutter)
- DWDR
- Smart IR
- 30 EA, 850nm IR LED
- IR Range distance up to 30M
- Privacy mask Function (4 zone)
- Motion Detection
- Defog
- HSBLC
- Operates in DC12V ± 10%
- Use Certified / Listed Class 2 power source only

⚠ **IMPORTANT :** The user of this camera is responsible for checking
and complying with local, state, and federal laws and statutes concerning
the recording and monitoring of audio signals.

CAMERA CONNECTIONS
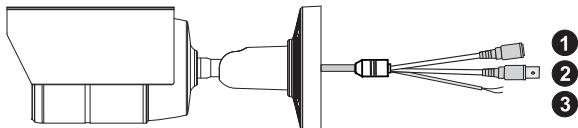
1. **Power :** 12V DC input
   power source from a DC 12V +/-10%
   Use Certified/Listed Class 2 power source only.

   *If using DC 12V power adaptor, use a power supply capable of
    supplying 5 Watts. (IR Model 5 Watts)

2. **Video :** BNC connector used to connect the camera to a DVR, etc.

3. **Switch Cable :** -Green & Black : open -> AHD signal BNC output
   -Green & Black : short -> CVBS signal BNC output

CONTENTS of PACKAGE

The package contains the following.

Camera in Housing _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ 1
Instruction Manual (This Document) _ _ _ _ _ _ _ _ _ _ _ 1
Accessory Kit for Installing _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ 1

REMINDER:
Never aim the camera directly into the sun.

BASE INSTALLATION

3X20mm Tapping Screws   Tension adjustment screw
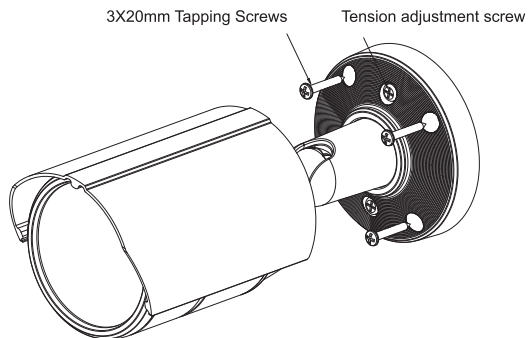
Position camera for best field of view then tighten camera/mount
tension adjustment screws (x2)

Caution

"Adjusting the position of the camera after
installation could potentially damage the cable"

LENS ADJUSTMENT

Field of view: Adjust setting from Tele (T) to Wide (W) field of View.

Focus: Adjust lens focus from near (N) to infinity (∞).

Adjust Focus

Adjust Angular Field View
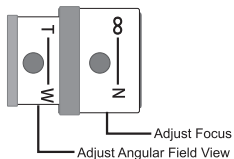
DC AUTO IRIS LENS

Image Size	1/2.8" CMOS
Focal Length	2.8 - 12mm
Aperture Ratio	1 : 1.2
Angular Field of View	DIAGONAL 2.8mm : 109˚ 12mm : 37.8˚

STRUCTURE OF THE SETUP MENU

\<SETUP\>

LENS
EXPOSURE
BACKLIGHT
WHITE BAL
DAY&NIGHT
IMAGE
FUNCTION
SYSTEM
EXIT

\<LENS\>

DC
MANUAL

\<EXPOSURE\>

SHUTTER
AGC
SENS-UP
BRIGHTNESS
D-WDR
DEFOG
RETURN

\<BACKLIGHT\>

OFF
BLC
HSBLC

\<WHITE BAL\>

ATW
AWC->SET
INDOOR
OUTDOOR
MANUAL
AWB

\<DAY&NIGHT\>

AUTO
COLOR
B&W

\<IMAGE\>

SHARPNESS
LSC
D-EFFECT
RETURN

\<FUNCTION\>

DNR
MOTION
PRIVACY
DEFECT DET
RETURN

\<SYSTEM\>

CAM TITLE
MONITOR
VIDEO OUT
LANGUAGE
COMET
RETURN

\<EXIT\>

SAVE& END
RESET
NOT SAVE
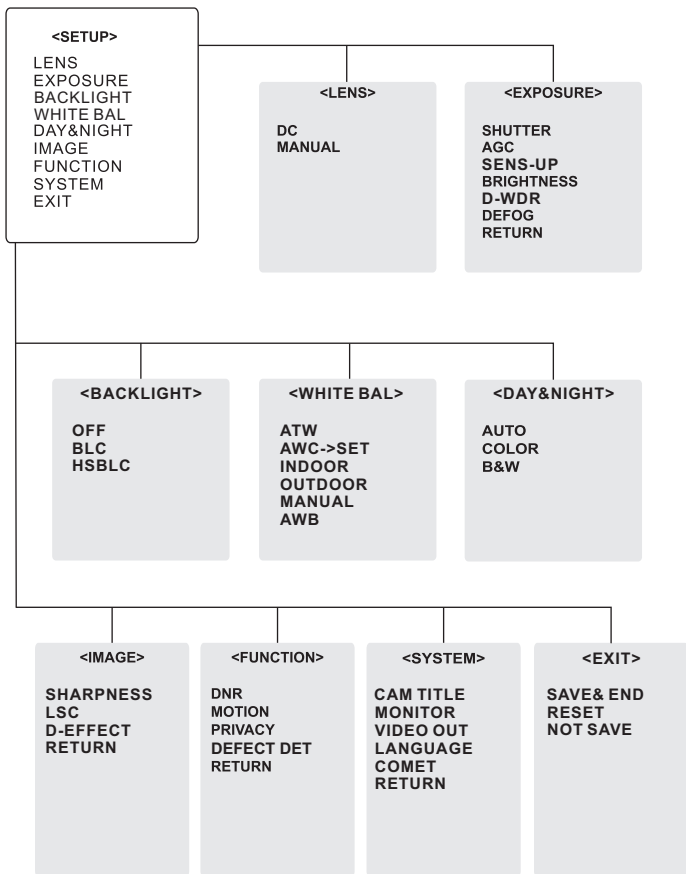
LENS

The LENS menu is used to set the DC or Manual mode.

1) DC   Select the DC mode ▶ INDOOR, OUTDOOR

Select the DC iris speed ▶ 0~15

2) MANUAL   Select the MANUAL mode

MAIN MANU		
▶ LENS	DC⏎	
EXPOSURE	⏎	
BACK LIGHT	OFF	
WHITE BAL	ATW	
DAY&NIGHT	AUTO⏎	
IMAGE	⏎	
FUNCTION	⏎	
SYSTEM	⏎	
EXIT	SAVE&END	

MAIN MANU	
▶ LENS	MANUAL⏎
EXPOSURE	⏎
BACK LIGHT	OFF
WHITE BAL	ATW
DAY&NIGHT	AUTO⏎
IMAGE	⏎
FUNCTION	⏎
SYSTEM	⏎
EXIT	SAVE&END
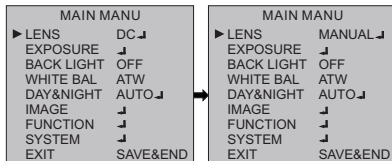
Note *Choose when installed in an external dc mode of outdoor.*

EXPOSURE

The EXPOSURE menu is used to set the automatic light control method for the camera.
It provides the ability to adjust the SHUTTER speed, AGC, SENS-UP, BRIGHTNESS, D-WDR, and DEFOG functions of the camera.

1) SHUTTER   Select the SHUTTER speed level.
                     ▶ Auto, 1/60(50), FLK~ 1/240 - 1/50000, x2 ~ x30

2) AGC   Adjust the Auto Gain Control level. ▶ 0 - 15

3) SENS-UP   Select the Digital Slow Shutter level. ▶ OFF, AUTO (x2 ~ x30)

4) BRIGHTNESS   Adjust the BRIGHTNESS level. ▶ 0 - 100

5) D-WDR   Select the Digital WDR. ▶ AUTO, ON(level 0~8), OFF

6) DEFOG   Select the DEFOG mode. ▶ AUTO, OFF

POS/SIZE   Adjust the window position & size
GRADATION   ▶ 0~2
DEFAULT   Initialize the setting values

< EXPOSURE > MODE

MAIN MANU		
LENS	DC⏎	
▶ EXPOSURE	⏎	
BACK LIGHT	OFF	
WHITE BAL	ATW	
DAY&NIGHT	AUTO⏎	
IMAGE	⏎	
FUNCTION	⏎	
SYSTEM	⏎	
EXIT	SAVE&END	

EXPOSURE	
SHUTTER	AUTO
AGC	|•••|•| 11
SENS-UP	AUTO
BRIGHTNESS	|••|••| 48
D-WDR	OFF
DEFOG	OFF
RETURN	RET
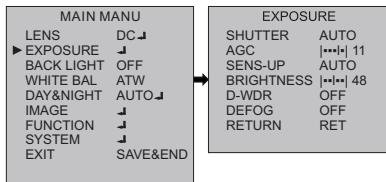
BACKLIGHT

The BACKLIGHT menu is used to the ability to prevent back lighting from the image.

1)BLC   Prevents such a back light effect to secure a clear image under All illumination environments.
Adjust the size of Back Light Compensation area.

LEVEL	Select the BLC gain ▶ Low, Middle, High
AREA	Adjust the window position & size
DEFAULT	Initialize the setting values

2)HSBLC   Mask the high light zone with specific color & level.

SELECT	Select the HSBLC area ▶ AREA1 - AREA4
DISPLAY	Adjust the HSBLC area window position & size
BLACK MASK	Select the BLACK MASK ▶ ON, OFF
LEVEL	Select the HSBLC level ▶ 0 ~ 100
MODE	All Day, Night
DEFAULT	Initialize the setting values.

< BACKLIGHT >

```
        MAIN MANU                  BLC
 LENS         DC ┘        LEVEL       MIDDLE
 EXPOSURE     ┘           AREA        ┘
►BACK LIGHT   OFF        ►DEFAULT     ┘
 WHITE BAL    ATW         RETURN      RET
 DAY&NIGHT    AUTO ┘
 IMAGE        ┘                 HLBLC
 FUNCTION     ┘           SELECT      AREA
 SYSTEM       ┘           DISPLAY     ON ┘
 EXIT         SAVE&END   ►BLACK MASK  ON
                          LEVEL       |••|••| 30
                          MODE        ALL DAY
                          DEFAULT     ┘
                          RETURN      RET
```
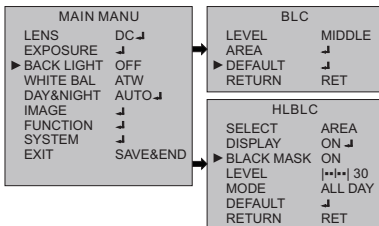
WHITE BALANCE

The screen color can be adjusted by using the Auto White Balance function.
It compensates for deviations in the white color caused by changes in the color temperature of the light source so that the colors are reproduced correctly.

1)ATW   Automatically adjust color temperature.

2)AWC->SET   Automatically readjust only by pressing AWC→SET.

3)INDOOR   Set the color temperature to 3200°K

4)OUTDOOR   Set the color temperature to 6300°K

5)MANUAL   Manual mode.
                   User can change Red and Blue gain value manually.

         BLUE   0 ~ 100
         RED   0 ~ 100

6)AWB   Automatically extended range of color temperature adjustment.

< WHITE BALANCE > MODE

```
        MAIN MANU                    MANUAL
  LENS         DC⏎            BLUE      |••|••| 50
  EXPOSURE     ⏎              RED       |••|••| 50
  BACK LIGHT   OFF            RETURN    RET
▶ WHITE BAL    ATW
  DAY&NIGHT    AUTO⏎
  IMAGE        ⏎
  FUNCTION     ⏎
  SYSTEM       ⏎
  EXIT         SAVE&END
```
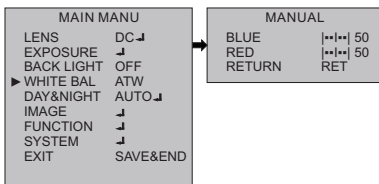
DAY&NIGHT

The DAY&NIGHT menu is used to configue the day and night related setting for the camera.

1) D&N AUTO

- Input Method   CDS

DAY&NIGHT mode are changed according to the sensor inputs

D&N LEVEL Adjust levels of transition ▶ 0 - 255
N&D LEVEL Adjust levels of transition ▶ 0 - 255
DELAY   1 - 60 SEC

- Input Method   AGC

DAY&NIGHT mode are changed according to the brightness of the image.
Use only when the camera is installed in a dark place but the camera is viewing a bright place.
When used in a normal installation, hunting may occur.

D&N LEVEL Adjust levels of transition ▶ 0 - 255
N&D LEVEL Adjust levels of transition ▶ 0 - 255
DELAY   1 - 60 SEC

2) D&N B&W

IR SMART   **LEVEL** 1~15
                    AREA   Adjust the window position & size.

< DAY&NIGHT > MODE

MAIN MANU	
LENS	DC⏎
EXPOSURE	⏎
BACK LIGHT	OFF
WHITE BAL	ATW
▶DAY&NIGHT	AUTO⏎
IMAGE	⏎
FUNCTION	⏎
SYSTEM	⏎
EXIT	SAVE&END

D&N AUTO	
D▶N (CDS)	｜•••｜•｜ 206
D▶N (DELAY)	｜•｜•••｜ 3
N▶D (CDS)	｜•••｜•｜ 180
N▶D (DELAY)	｜•｜•••｜ 3
RETURN	RET

B&W	
IR SMART	ON ⏎
RETURN	RET
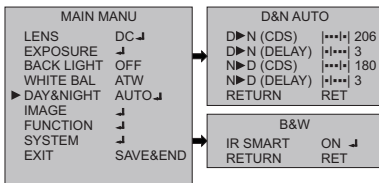
IMAGE

The IMAGE menu provides the ability to adjust the SHARPNESS, LSC and D-EFFECT functions of the camera.

1) SHARPNESS Adjust the SHARPNESS level. ▶ OFF, AUTO (0 - 10)
2) LSC Select the lens Lens Shading Compensation. ▶ ON, OFF
3) D-EFFECT **FREEZE** Select real or still mode ▶ ON, OFF
  MIRROR Select OFF, MIRROR, V-FLIP, ROTATE
  NEG. IMAGE Select Negative image mode ▶ ON, OFF

<IMAGE>

MAIN MANU	
LENS	DC ⏎
EXPOSURE	⏎
BACK LIGHT	OFF
WHITE BAL	ATW
DAY&NIGHT	AUTO ⏎
▶ IMAGE	⏎
FUNCTION	⏎
SYSTEM	⏎
EXIT	SAVE&END

IMAGE	
SHARPNESS	AUTO ⏎
LSC	OFF
D-EFFECT	⏎
RETURN	RET

< SHARPNESS >

IMAGE	
▶ SHARPNESS	AUTO ⏎
LSC	OFF
D-EFFECT	⏎
RETURN	RET

SHARPNESS	
LEVEL	|••|••| 5
SMART AGC	|•••|•| 128
END AGC	|•••|•| 160
RETURN	RET

< D-EFFECT >

IMAGE	
SHARPNESS	AUTO ⏎
LSC	OFF
▶ D-EFFECT	⏎
RETURN	RET
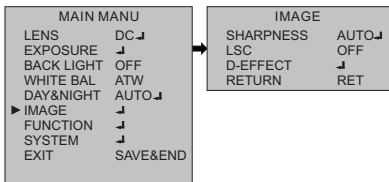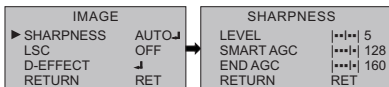
D-EFFECT	
FREEZE	OFF
MIRROR	OFF
NEG. IMAGE	OFF
RETURN	RET

FUNCTION

The IMAGE menu provides the ability to adjust the DNR, MOTION, PRIVACY and
DEFECT DET functions of the camera.

1) DNR   Select Digital Noise Reduction.
      2D   ▶ OFF, LOW, MIDDLE, HIGH
      3D   ▶ OFF, LOW, MIDDLE, HIGH
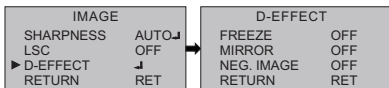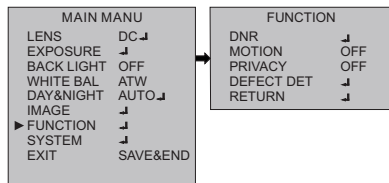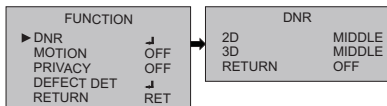
2) MOTION   Detects the Motioned Object in the image. ▶ ON, OFF
    SELECT   Select the Motion area ▶ AREA1 - AREA4
    DISPLAY   Adjust the Motion area window position & size
    SENSITIVITY Adjust the Motion sensitivity level ▶ 0 - 100
    COLOR   Select the motion area color ▶ WHITE - Red, Green, Blue
    TRANS   Select the motion area transparency. ▶ 1.0, 0.75, 0.5, 0.25
    ALARM   Select the Motion alarm
      VIEW TYPE Select view type of the Motion area ▶ OFF, BLOCK, OUTLINE, ALL
      OSD VIEW Select the Motion OSD view ▶ OFF, ON
      TIME   Select the Motion Alarm time ▶ 1 - 15
    DEFAULT   Initialize the setting values

3) PRIVACY   Hide an area you want to hide on the screen.
    SELECT   Select the privacy zone ▶ AREA1 - AREA4
    DISPLAY   Adjust the Privacy window type, position & size
                     ▶ OFF, INV., MOSAIC, COLOR
    COLOR   Select the privacy zone color ▶ WHITE - USER
    TRANS   Select the privacy zone transparency ▶ 1.0, 0.75, 0.5, 0.25
    DEFAULT   Initialize the setting values

4) DEFECT DET Compensates for bad pixels.
    LIVE DPC   Select the Live DPC mode ▶ OFF, ON
      AGC LEVEL Select the AGC level ▶ 0 - 255
      LEVEL   Select the Live DPC level ▶ 0 - 100
    WHITE DPC Select the White DPC mode ▶ OFF, ON
      POS/SIZE   Adjust the White DPC area window position & size
      START   Start the white pixels correction
      DPC VIEW ▶ OFF, ON
      LEVEL   Select the White DPC level ▶ 0 - 60
      AGC   Select the AGC Level ▶ 0 - 14
      SENS-UP   Select the Sens-up level ▶ x2 - x30
    BLACK DPC Select the Black DPC mode ▶ OFF, ON
      POS/SIZE   Adjust the Black DPC area window position & size
      START   Start the Black pixels correction
      DPC VIEW ▶ OFF, ON
      LEVEL   Select the Black DPC level ▶ 0 - 100

<FUNCTION>

MAIN MANU	
LENS	DC⏎
EXPOSURE	⏎
BACK LIGHT	OFF
WHITE BAL	ATW
DAY&NIGHT	AUTO⏎
IMAGE	⏎
►FUNCTION	⏎
SYSTEM	⏎
EXIT	SAVE&END

FUNCTION	
DNR	⏎
MOTION	OFF
PRIVACY	OFF
DEFECT DET	⏎
RETURN	⏎

<DNR>

```
      FUNCTION                           DNR
►DNR              ⏎            2D              MIDDLE
 MOTION           OFF          3D              MIDDLE
 PRIVACY          OFF          RETURN          OFF
 DEFECT DET       ⏎
 RETURN           RET
```

<MOTION>

```
      FUNCTION                          MOTION
 DNR              ⏎            SELECT          AREA1
►MOTION           OFF          DISPLAY         ON
 PRIVACY          OFF          SENSITIVITY     |•|••••| 10
 DEFECT DET       ⏎            COLOR           WHITE
 RETURN           RET          TRANS           1.0
                              ALARM           ⏎
                              DEFAULT         ⏎
                              RETURN          RET
```

<PRIVACY>

```
      FUNCTION                         PRIVACY
 DNR              ⏎            SELECT          AREA1
 MOTION           OFF          DISPLAY         COLOR
►PRIVACY          OFF          COLOR           WHITE
 DEFECT DET       ⏎            TRANS           1.0
 RETURN           RET          DEFAULT         ⏎
                              RETURN          RET
```

<DEFECT DET>

```
      FUNCTION                        DEFECT DET                      LIVE DPC
 DNR              ⏎           ►LIVE DPC        ON ⏎         AGC LEVEL      |•|••••| 4
 MOTION           OFF          WHITE DPC       ON ⏎        ►LEVEL          |•|••••| 2
 PRIVACY          OFF          BLACK DPC       OFF⏎         RETURN         RET
►DEFECT DET       ⏎            RETURN          RET
 RETURN           RET
```

```
                             DEFECT DET                      WHITE DPC
                              LIVE DPC        ON ⏎          POS/SIZE       ⏎
                             ►WHITE DPC       ON ⏎          START          ⏎
                              BLACK DPC       OFF⏎          DPC VIEW       OFF
                              RETURN          RET           LEVEL          |••••| 4
                                                            AGC            |••••| 14
                                                            SENS-UP        X2
                                                            RETURN         RET
```

```
      CLOSE THE IRIS
          THEN                              WAITING...
       PRESS ENTER
```

```
                             DEFECT DET                      BLACK DPC
                              LIVE DPC        ON ⏎          POS/SIZE       ⏎
                              WHITE DPC       ON ⏎          START          ⏎
                             ►BLACK DPC       ON ⏎           DPC VIEW       OFF
                              RETURN          RET           LEVEL          |••••| 100
                                                            RETURN         RET
```
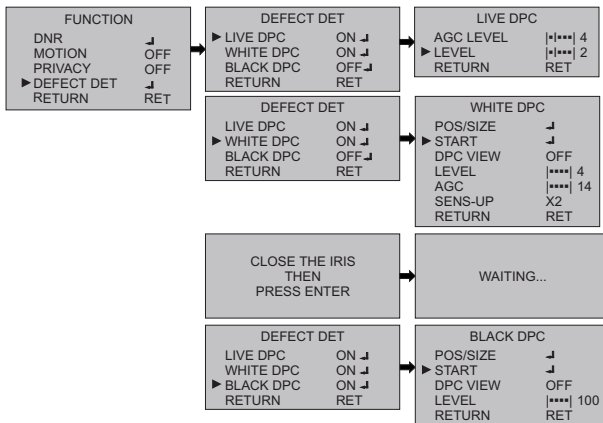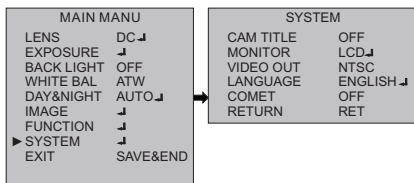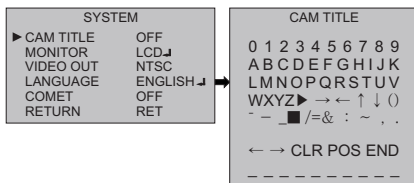
SYSTEM

The IMAGE menu provides the ability to adjust the CAM TITLE, RS485, MONITOR, CVBS CROP, VIDEO OUT, LANGUAGE and VERSION functions of the camera.

1) CAM TITLE	Maximum of 15 characters are allowed.	
2) MONITOR	Select the Monitor type ▶ LCD, CRT	
LCD		
BLUE GAIN	Adjust the Blue gain level ▶ 0 - 100	
RED GAIN	Adjust the Red gain level ▶ 0 - 100	
GAMMA	Select the gamma level ▶ USER, 0.45 - 1.0	
CRT		
BLUE GAIN	Adjust the Blue gain level ▶ 0 - 100	
RED GAIN	Adjust the Red gain level ▶ 0 - 100	
GAMMA	Select the gamma level ▶ USER, 0.45 - 1.0	
4) VIDEO OUT	Select the video out type ▶ NTSC, PAL	
5) LANGUAGE	OSD menu LANGUAGE (16ea) ▶ ENGLISH etc.	
6) COMET	Select the COMET function ▶ OFF, ON	

<SYSTEM>

```
        MAIN MANU                      SYSTEM
   LENS        DC⏎            CAM TITLE      OFF
   EXPOSURE    ⏎              MONITOR        LCD⏎
   BACK LIGHT  OFF            VIDEO OUT      NTSC
   WHITE BAL   ATW            LANGUAGE       ENGLISH⏎
   DAY&NIGHT   AUTO⏎          COMET          OFF
   IMAGE       ⏎              RETURN         RET
   FUNCTION    ⏎
 ▶ SYSTEM      ⏎
   EXIT        SAVE&END
```

<CAM TITLE>

```
        SYSTEM                       CAM TITLE
 ▶ CAM TITLE   OFF             0 1 2 3 4 5 6 7 8 9
   MONITOR     LCD⏎            A B C D E F G H I J K
   VIDEO OUT   NTSC            L M N O P Q R S T U V
   LANGUAGE    ENGLISH⏎        W X Y Z ▶ → ← ↑ ↓ ( )
   COMET       OFF             ˉ − _ ■ / = & ：～ , .
   RETURN      RET
                               ← → CLR POS END
                               _ _ _ _ _ _ _ _ _ _
```

<MONITER>

```
        SYSTEM                          LCD
CAM TITLE      OFF           GAMMA          USER
►MONITOR       LCD⌐          RED GAIN       |••|••| 69
VIDEO OUT      NTSC     ➜    BLUE GAIN      |••|••| 60
LANGUAGE       ENGLISH⌐      RETURN         RET
COMET          OFF
RETURN         RET
```
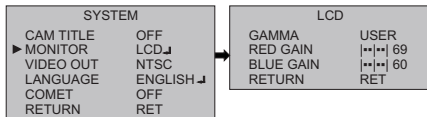
EXIT

The EXIT menu provides the ability to adjust the RESET, SAVE & END and NOT SAVE functions of the camera.

1) EXIT

RESET	Factory initialization of camera settings
SAVE & END	Save and exit menu
NOT SAVE	Exiting the menu without saving

SPECIFICATIONS

MODEL			Full HD CAMERA
Power	Power Source		DC 12V ± 10%
	Power Consumption		MAX 4.8 Watts (400mA)
General	Image sensor		1/2.8" 2.4M Sony CMOS
	Total Pixels		2000(H) x 1121(V)
	Active Pixels		1920(H) x 1080(V)
	Scanning system		Progressive
	Sync. System		Internal
	Video Frame Rate		1920x1080@25fps ; 1920x1080@30fps
	CVBS Resolution		1000 TVL
	Min. illumination		1.0 lux(COLOR), 0 lux(BW, IR LED ON)
	Video Output		BNC(AHD high definition video output / CVBS(srarted definition video output)
	IR	IR LED	30 IR LED(850nm)
		Distance	30M
	Camera Control		OSD (coaxial communication)
	S/N Ratio		More than 50dB (AGC off)
Function	Lens		DC / MANUAL
	Exposure	Shutter	AUTO, 1/60, FLK ~ 1/50,000 sec
		AGC	1 ~ 15
		SENS-UP	OFF / AUTO (x2, x4, x6, x8, x10, x15, x20, x25, x30)
		Brightness	1 ~ 100
		D-WDR	OFF / ON / AUTO
		Defog	OFF / AUTO
	Backlight		OFF / BLC / HSBLC
	White Balance		ATW / AWC / INDOOR / OUTDOOR / AWB
	Day & Night		AUTO / COLOR / B&W
	DNR	2DNR	OFF / LOW / MIDDLE / HIGH
		3DNR	OFF / LOW / MIDDLE / HIGH
	S P E C I A L	Camera Title	OFF / ON
		D-Effect	OFF / FREEZE / MIRROR / NEG.IMAGE
		Motion Detection	OFF / ON (4 zone)
		Privacy Masking	OFF / ON (4 zone)
		Language	ENG / CHN1 / CHN2 / GER / FRA / ITA / SPA / POL / RUS / POR / NED / TUR / KOR / JPN / HEB / ARB
		Defect Detection	LIVE DPC / WHITE DPC / BLACK DPC
		Sharpness	OFF / AUTO (0 ~ 10)
		Monitor	CRT / LCD
		LSC (Shading)	OFF / ON
		Video mode	NTSC / PAL
		COMET	OFF / ON
	Save & Exit		SAVE & EXIT / NO SAVE / RESET
Connector & etc.	Power input		DC Jack
	Video out		BNC Connector - AHD, CVBS
	Transmission Distance		Over 500m via 75-3 coaxial cable
	Lens mount		Fixed mount
	Lens		f=2.8 ~ 12mm F1.2 ~ 360 Varifocal Lens, ICR (D&N)
	Operating temperature		14°F ~ 122°F (-10°C ~ +50°C)
	Operating humidity		0 ~ 96% (non-condensing)
	External dimension		Ø 66x 173mm(H)
	Weight		450g
	Ingress Protection		IP66

EXTERNAL DIMENSION

Dimensions
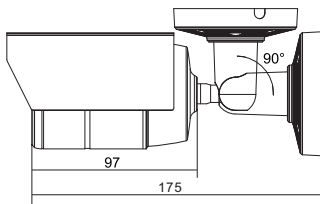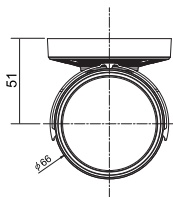
Weight - Unit: 0.99 lb. (0.45 kg)
Shipping: 1.32 lb. (0.6   kg)

Unit: mm