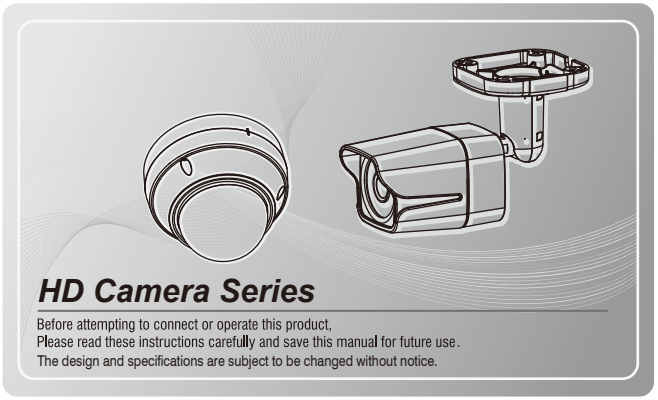


HD Camera Series

Before attempting to connect or operate this product,
Please read these instructions carefully and save this manual for future use.
The design and specifications are subject to be changed without notice.

P/N : 38801K815

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.

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 appliance.

Regulatory Notice

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.
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 in a residential installation.
This equipment generates, uses, and can radiate radio frequency energy and, if not installed and use in accordance with the instructions, may cause harmful interference to radio communications.
Operation of this equipment in a residential area is likely to cause interference, in which case the user will be required to correct the interference at his own expense.

WARNING - Changes or modifications not expressly approved by the manufacturer could void the user's authority to operate the equipment.

CAUTION : To prevent electric shock and risk of fire hazards:

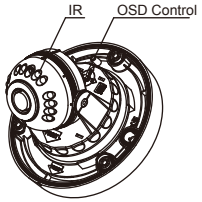
- Power Supply : This camera must always be operated a DC 12V, AC 24V
- Handling of the unit : Be careful not to spill water or other liquids on the unit.
- Operating and storage location : Avoid viewing a very bright object (such as light fittings) during an extended period.
  Avoid operating or storing the unit in the following locations.
  - Extremely hot or cold places (operating temperature -20 °C ~ 50 °C, however, we recommend that the unit be used within a temperature range of 0 °C ~ 45 °C)
  - Damp or dust place , places exposed to rain and places subject to strong vibration
- Close to generators of powerful electromagnetic radiation such as radio or TV transmitters.
- Handing of the Unit
  - Remove dust or dirt on the surface of the CMOS sensor with a blower.
  - Avoid the use of volatile solvents such as thinners, alcohol, benzene and insecticides.
    They may damage the surface finish and/or impair the operation of the camera.

Feature

- 1/3" Panasonic CMOS sensor
- Full HD Resolution
  1920x1080p / 30fps(25fps), 1280x720p / 30fps(25fps), 1280x720p / 60fps(50fps)
- 12pcs IR LED(Dome), 24pcs IR LED (Bullet)
- 3MP 3.6mm Fixed Lens
- Real-time True WDR(Wide Dynamic Range)
- DNR(Digital Noise Reduction : 2D + 3D)
- Privacy Mask Function
- Intelligent Motion Detection
- Heater Function(Dome, Option)
- Dome size : 75Ø(Dome)
- IP66 / IK10 for outdoor application

- Dome Camera

Part Names

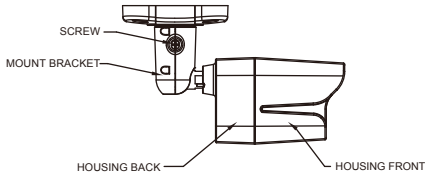


IR TYPE

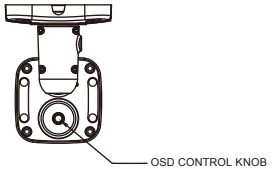
12 IR LED Board

- Bullet Camera

Part Names

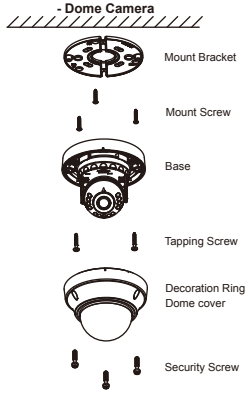


OSD Control Knob



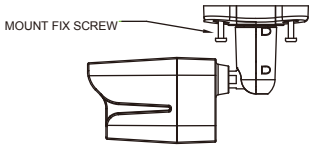
Installation

- Dome Camera



- Fix the base housing with the supplied 3pcs of screws on the ceiling or wall.
- Adjust the camera direction by turning the gimbal bracket.
- Firmly fix the decoration ring into the base.

- Bullet Camera

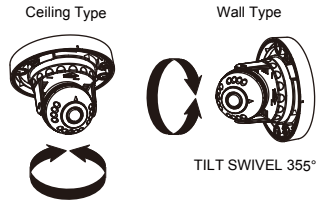


- Fix the mount bracket with supplied 4pcs of mount fix screws on the ceiling or wall.
- Adjust the camera direction.
- Firmly fix the screw in the bracket after set the camera direction.

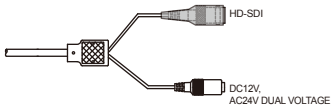
3-AXIS

- Dome Camera

Set Camera DIRECTION (3-axis movement)

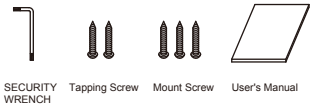


Cable Connection



Accessories And Others

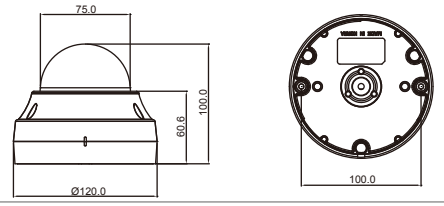
- Dome Camera



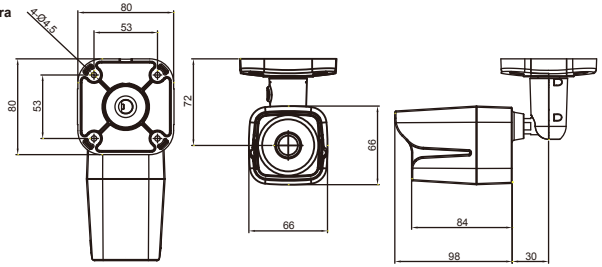
- Bullet Camera

Dimensions(mm)

- Dome Camera



- Bullet Camera



Specification

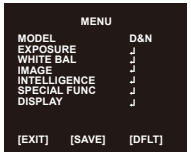
Specifications are subject to be changed without notice.

Image Sensor	1/3" Panasonic CMOS Sensor
Total Pixels	1956(H) x 1266(V) ≒ 2.48M pixels
Active pixels	1944(H) x 1092(V) ≒ 2.12M pixels
Scanning system	Progressive Sacn
Resolution	Digital : 1080p/30(25)fps, 720p/60(50)fps, 720p/30(25)fps
	Analog : 700TVL
Min. illumination	Color : 0.5 lux , BW : 0.1lux, Color DSS : 0.002 lux , BW DSS : 0.001 lux
Video Output	HD : HD-SDI, EX-SDI, Analog SD : VBS(without WDR)
Model	D&N / IR-CDS
Brigntness	0 ~ 20 steps
Shutter speed	Auto / Manual (1/30(1/25) ~ 1/30000)
DSS	Off / x2 / x4
AGC	Off / On
Flickerless	Off / On
WDR/BLC	Off / WDR / BLC
DAY&NIGHT	Auto / Day / Night / Ext
WHITE BAL	Auto / One Push / Manual / Indoor / Outdoor
HLC	Off / On / Night only
DNR	Off / Low / Middle / High / Auto
Mirror	Off / H / V / H&V
Sharpness	0 ~ 10 steps

ACE	Off / Low / Middle / High
Defog	Off / On (Auto / Manual)
Freeze	Off / On
Gamma	0.45 / 0.55 / 0.65 / 0.75
E.Zoom	x2 ~ x32
Privacy Mask	Off / On (24 points)
Motion Detection	Off / On (3 points)
Digital Image Stabilizer	Off / On
Defect DET	Off / On
Image Range	Full / Comp. / User
System	NTSC / PAL
HD Format	1080p/30(25)fps / 720p/30(25)fps / 720p/60(50)fps
EX-SDI	Off / On
Comm	ID : 1 ~ 255
	Baud Rate : 2400 / 4800 / 9600 / 19200 / 38400 / 57600 / 115200
	Protocol : Pelco-P / Pelco-D / VISCA / Update
Power Source	DC10~14V, AC19~28V (50Hz~60Hz)
Power Consumption	Dome Camera : 170mA(IR ON : 270mA, HEATER ON : 370mA, IR+HEATER ON : 480mA)
	- Bullet Camera : 170mA , IR ON : 400mA
Power Input	Connector
Video Output(HD-SDI)	MMCX Connector
Operating Temperature	-10℃ ~ +50℃ (Humidity : 0%RH ~ 80%RH)
Storage Temperature	-20℃ ~ +60℃ (Humidity : 0%RH ~ 90%RH)

Camera menu is subject to be changed without prior notice to upgrade and quality increase and we may use slip sheet for the change.
Please check the camera version and the slip sheet if the camera menu and this manual menu is not matched.

1 MAIN MENU

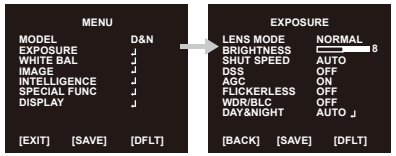


Functions can be setup using “Menu Key Command” of Visca protocol.
The menu consists of the “Main Menu” and “Sub Menu”.
The main menu is displayed where 7 camera functions can be selected.
To the push of each main menu selection, the sub-menu is displayed

If you want save the menu, select [SAVE].
If you want not save the menu, select [EXIT] (After select , Power off -> on)
If you want default the menu, select [DFLT]

◆ MODEL
◈ MODEL : Select model
► D&N / IR-CDS

2 EXPOSURE



◈ LENS MODE : Select Lens mode
► NORMAL / DEBLUR
◈ BRIGHTNESS : Adjust brightness level
► 0(dark) ~ 20(bright) steps
◈ SHUT SPEED : Can be set in AUTO or MANUAL
► AUTO / MANUAL
▷ Manual Shutter Speed
* 30 / 25 fps mode : x4, x2, 1/30(25), 1/60(50), 1/120(100), 1/250, 1/700, 1/1000, 1/1600, 1/2500, 1/5000, 1/7000, 1/10000, 1/30000 sec
◈ DSS : Select maximum DSS(Digital Slow Shutter)
* 30 / 25 fps mode
► OFF / x2, x4
◈ FLICKERLESS : Select Flickerless mode
► OFF / ON (remove screen flicker)
◈ AGC : Select Auto Gain Control
► OFF / ON

3 EXPOSURE

◈ WDR/BLC : Select WDR(Wide Dynamic Range) or BLC(Back Light compensation)
► WDR
▷ LEVEL : Adjust WDR level. ► LOW, MID-LOW, MIDDLE, MID-HIGH, HIGH
※ WDR doesn’t work in Shutter Manual Mode. ※ When WDR on, CVBS output is disabled.
► BLC
▷ POSITION : Adjust the window position ▷ SIZE : Adjust the window size
※ Can’t use WDR and BLC at the same time.
(When WDR On, BLC is Off. And when BLC is On, WDR is Off)
◈ DAY&NIGHT : Select Day&Night
► MODE : AUTO / EXT-IN / DAY / NIGHT
▷ AUTO ※ When using AUTO mode of D&N model
► DELAY : 0 ~ 255 sec
► THRS : 0 ~ 28
Day↔Night switching level in Auto Mode. Switching in lower lux with higher threshold level.
► GAP : LOW, MIDDLE, HIGH
Margin between Day→Night switching level and Night→Day switching level.
► IR DETECTION : Setting IR-Detection mode. (ON / OFF)
► IR DET LEVEL : Setting IR-Detection level. (LOW, MID-LOW, MIDDLE, MID-HIGH, HIGH)
► ANTI-SAT : LED saturation improves. (0~20)
► BURST : OFF / ON
▷ EXT-IN / AUTO
※ When using AUTO mode of IR-CDS model
※ When using EXT-IN mode of D&N model
► DELAY : 0 ~ 255 sec ► ANTI-SAT : LED saturation improves. (0~20)
► BURST : OFF / ON ► POLARITY : External Input polarity (ACTIVE LOW / ACTIVE HIGH)
▷ NIGHT
► ANTI-SAT : LED saturation improves. (0~20) ► BURST : OFF / ON

4 WHITE BALANCE

◈ AWB : Select WHITE BALANCE mode
► AUTO / ONE PUSH / MANUAL / INDOOR / OUTDOOR
▷ AUTO : Automatically adjusts color according to the available lighting.
▷ ONE PUSH : It is a fixed white balance mode that may be automatically readjusted only by pressing ONE PUSH
▷ MANUAL : Color can be corrected when the user increases or decreases “RED GAIN” or “BLUE GAIN”.
▷ INDOOR : Set color temperature to be Indoor light (3700°K)
▷ OUTDOOR : Set color temperature to be Outdoor light (5100°K)
◈RED GAIN : Adjust R gain value
► 0 ~ 20 steps
◈BLUE GAIN : Adjust B gain value
► 0 ~ 20 steps
◈ CHROMA : Adjust CHROMA gain value
► 0 ~ 20 steps

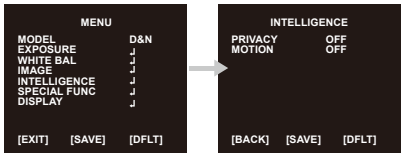
5 IMAGE

◈ HLC : Select High Light Compensation.
When extremely bright light is projected to the camera masking is used on the portion to prevent partial saturation on the monitor.
▷ MODE : OFF / ON / NIGHT
▷ LEVEL : 0 ~ 20 steps
▷ COLOR : 0 ~ 13 steps
◈ DNR : Select Digital Noise Reduction
► OFF / LOW / MIDDLE / HIGH / AUTO
◈ MIRROR : Select a flip mode
► OFF / H / V / H&V
▷ H : You can flip the picture horizontally on the screen
▷ V : You can flip the picture vertically on the screen
▷ H&V : You can flip the picture horizontally & vertically on the screen
◈ SHARPNESS : Adjust sharpness level
► 0 ~ 10 steps
◈ ACE : Select Digital WDR (Wide Dynamic Range)
► OFF / LOW / MIDDLE / HIGH

5 IMAGE

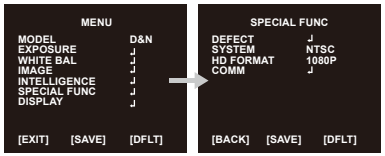
◈ DEFOG : Carry out defog function
► OFF / ON
▷ MODE : AUTO / MANUAL
▷ LEVEL : LOW / MIDDLE / HIGH
※ Can’t use DEFOG and ACE at the same time
(When ACE On, DEFOG is Off. And when DEFOG is On, ACE is Off)
◈ Freeze : Select real or still mode
► OFF / ON
◈ GAMMA : Select GAMMA
► 0.45 / 0.55 / 0.65 / 0.75
◈ E.ZOOM
► OFF / ON
▷ LIMIT : Max x2 ~ x19, x21, x23, x25, x28, x32
▷ POSITION : Select maximum digital zoom magnification.

7 INTELLIGENCE



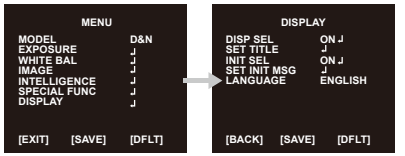
◈ PRIVACY : Hide an area you want to hide on the screen
► OFF / ON
▷ MASK# : Select mask area number (1 ~ 24) ▷ MODE : Mask enable or disable (OFF / ON)
▷ POSITION : Adjust the mask position ▷ SIZE : Adjust the mask size
▷ COLOR : Select mask color (0 ~ 13) ▷ TRANS : Select mask transparency level (0 ~ 3)
◈ MOTION : When there is movement of the subject in the screen, there will be an motion detection
► OFF / ON
▷ AREA# : Setting 3 areas(1~3) of motion detection
▷ MODE : OFF / ON (Limit and define areas of motion detection)
▷ SENSITIVITY : Adjust sensitivity of MD (0 ~ 20 steps)
More sensitive to setting to low step with sensitivity
▷ POSITION : Adjust the Area position ▷ SIZE : Adjust the Area size
▷ INTERVAL TIME :Select the alarm interval time (0 ~ 255sec)
▷ DWELL TIME : Select the duration time about changing MD mode (0 ~ 255sec)
◈ DIS : Select Digital Image Stabilizer mode
► OFF / ON
▷ RANGE : Setting D-Zoom range (10%, 20%, 30%)
▷ FILTER : Setting the sensitivity to hold DIS function in worst case.(LOW, MIDDLE, HIGH)
▷ AUTO C : Setting Auto Centering mode (OFF, HALF, FULL)

8 SPECIAL FUNC



◈ DEFECT : Compensates for bad pixels that may occur.
Occurs when the whole screen is in full black or if there is bad pixelation and it changes the THRS values until the screen is fixed.
※ When you use this function, you have to block the lens for blocking lights into the lens.
◈ IMAGE RANGE : Select image bit range. (Full : 100%, Compressed : 75%)
► FULL, COMP, USER
▷ LEVEL : Select user mode level (0 ~ 32)
◈ SYSTEM : Select NTSC(30/60fps) or PAL(25/50fps).
◈ HD FORMAT : Select Digital output (1080p/30(25)fps, 720p/30(25)fps, 720p/60(50)fps)
◈ EX-SDI : Select EX-SDI mode (OFF / ON)
◈ COMM : Set up the camera ID, baud rate, protocol
▷ ID : Select the camera ID
► 1 ~ 255
▷ BAUD RATE : Select serial communication speed
► 2400 / 4800 / 9600 / 19200 / 38400 / 57600 / 115200bps
▷ PROTOCOL : Select operating protocol
► VISCA / PELCO-D / PELCO-P / UPDATE

9 DISPLAY



◈ DISP SEL : Select display item.
► OFF / ON
▷ ID : OFF / ON ▷ TITLE : OFF / ON
▷ ZOOM RATIO : OFF / ON ▷ SYSTEM MSG : OFF / ON (MD Alarm and Wait message)
◈ SET TITLE : Select camera title menu (Text edit– max 40 characters)
◈ INIT SEL : Select display initial message.
► OFF / ON
▷ ID : OFF / ON ▷ BAUDRATE : OFF / ON
▷ PROTOCOL : OFF / ON ▷ VERSION : OFF / ON
▷ INIT MSG : OFF / ON
◈ SET INIT MSG : modify initial message. (Text edit – max 40 characters)
◈ LANGUAGE : Select language.
► English / Simplified Chinese / Traditional Chinese / Japanese
※ Character Table of Text edit Mode

A B C D E F G H I J K L M N O P Q R S T
U V W X Y Z a b c d e f g h i j k l m n
o p q r s t u v w x y z , . ( ) { } [ ]
0 1 2 3 4 5 6 7 8 9 * + - / = ~ ! ? ” ’