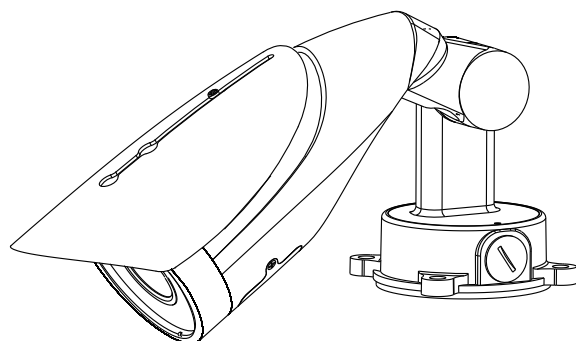


# USER MANUAL

## IV-HDCM-500U

### Weatherproof Vendal Day / Night HD-SDI Camera With Thermal Heater

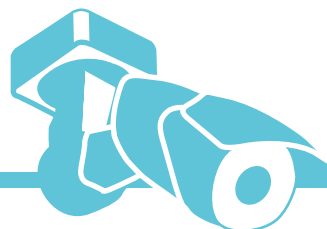


#### NOTE

OUTDOOR : SHUTTER ---> Auto  
INDOOR : SHUTTER ---> 1/30

Introduction.....	P1
Warnings.....	P2
Packing List .....	P3
Installation .....	P4
Specifications.....	P7

## Introduction

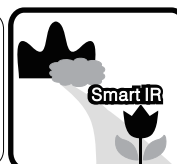


## Product Introduction



#### Real 500 Pound

Can resist external impacts of over 500 lbs.



#### Auto Low Lux Mode

Enable IR light automatically according to distance and brightness.



#### Anti-Tamper Protection

Installed using screws that require special tools to install/remove.



#### IR Projection Distance

Long distance IR light.



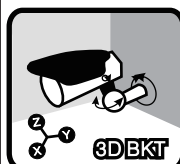
#### Waterproofing

Unit is waterproofed to level IP 66 with anti-fogging double glass design.



#### Auto Exposure Compensation

Removes over-exposure for close up shots.



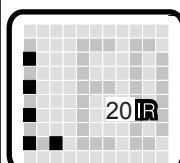
#### 3-Axis & Vandal-proofing

•Support can rotate separately in the XYZ axes  
•Vandal-proof design



#### Auto ICR

For low light conditions automatically switches IR Cut Filter on/off.



#### 20 IR

Can be equipped with 20 high intensity infra-red LED lights.



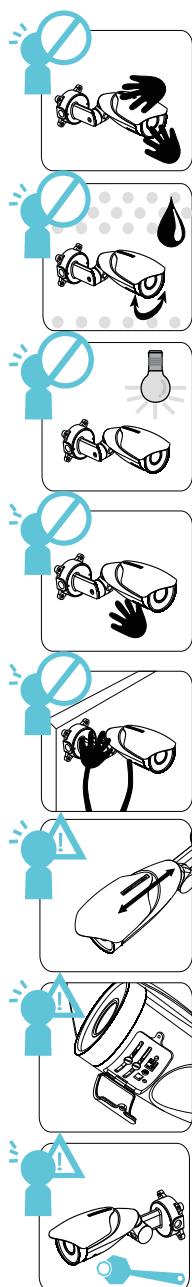
#### Dual Power Supply Design

Dual power supply board provides DC 12V/AC 24V inputs( optional ).

1

## Warnings

## Warnings



1. Do not touch the lens or view port glass directly.

2. Do not adjust lens in a wet environment to avoid damage to the circuitry.

3. Do not install next to another light source as this may cause light reflection.

4. Do not play hand between camera unit and upper sort as this it may be caught in the mechanism.

5. Do not hang from the camera unit.

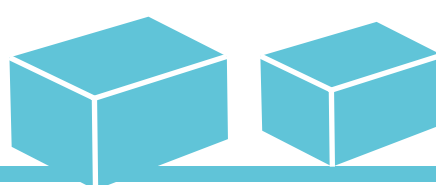
6. After loosening the screw the sunshade can be adjusted backwards and forwards.  
After adjustment is made make sure anti-tamper screw is securely screwed back into the slot.

7. After opening the front cover to adjust the focus re-attach and secure firmly in place to ensure that the unit remains watertight.

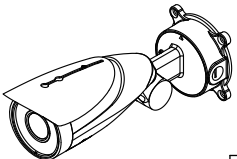
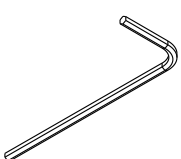
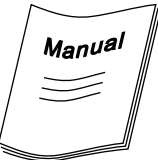
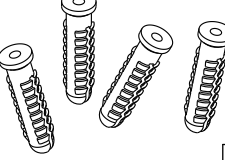
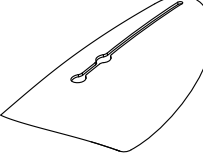

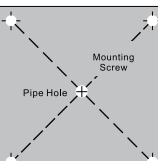
8. When assembly is complete, check that all screws in the unit are properly secured.

2

## Packing list

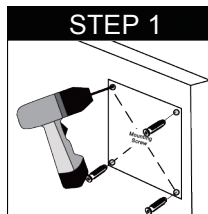


## Packing List

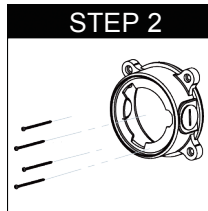
Camera Unit	H2.5 Allen Key
 1	 5
User Manual	Wall Anchor Plastic Sheath x4
 2	 6
Sunshade	Wall Anchor x4
 3	 7
Positioning Sticker	
 4	

3

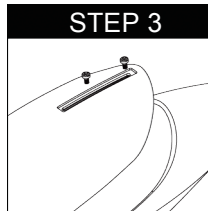
# Installation Instructions



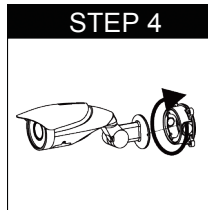
Attach positioning sticker(P3/NO.1) to the wall.  
Drill holes and attach wall anchor(P3/NO.5).



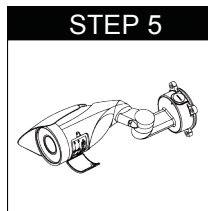
Use wall anchor(P3/NO.6) to affix support base to wall.



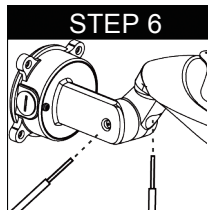
Install sunshield.(P3/NO.3)



Align the red dots on the bottom and base.  
Rotate the bottom to combine the base.  
Tighten the screws on the bottom with the H2.5 Allen Key (P3/NO.5)



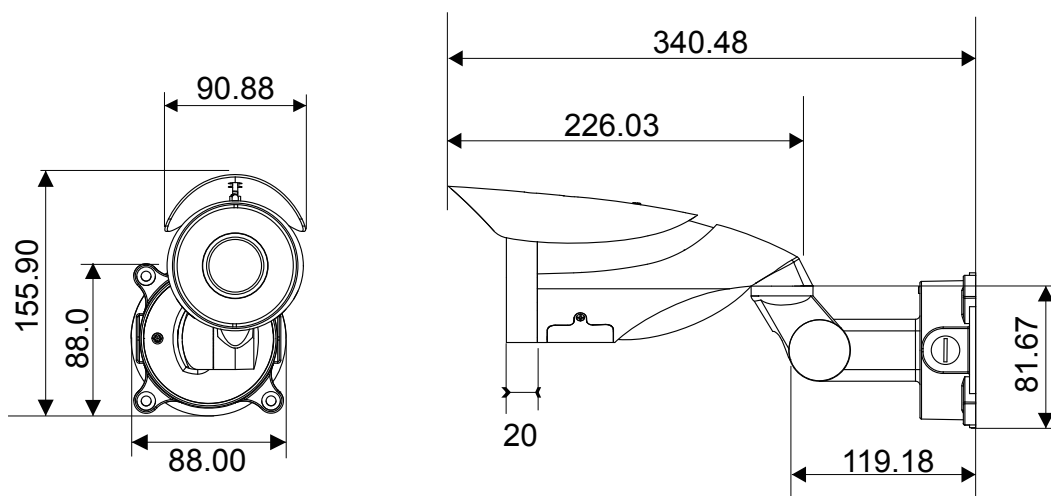
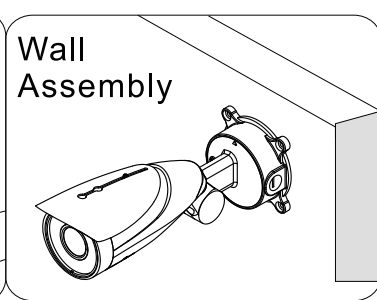
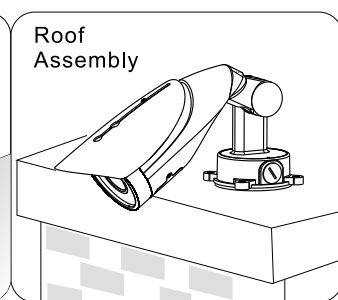
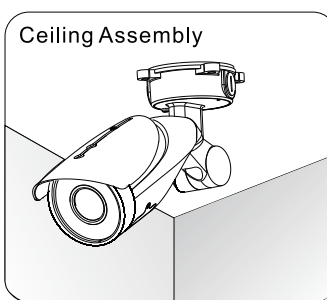
Loosen the screw on the panel cover and open the cover.  
Adjusting the zoom lens; Loosen or tighten the lens screws with a flat screwdriver for zooming and focusing.



Use the H2.5 Allen key(P3/NO.5) to loose the screws for your angle adjustment..

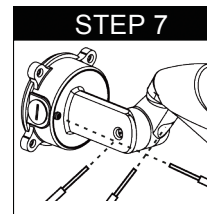
4

## Installation Type

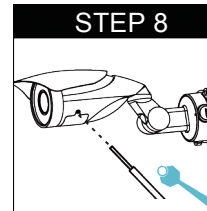


6

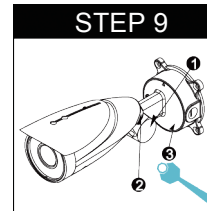
(With wall mount as an example)



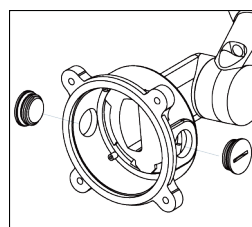
Tighten the screws after setup.



Close the panel cover and tighten the panel screw.

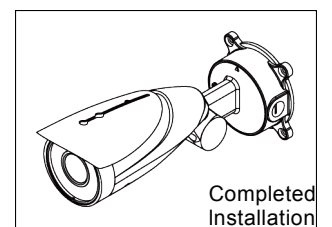


Tighten the screws after adjustment  
Vertical range is 85° up and 90° down. Total range is 175°  
Horizontal range is 260°  
Bottom rotation range is 350°



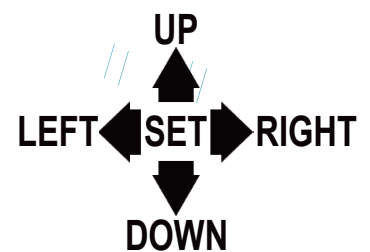
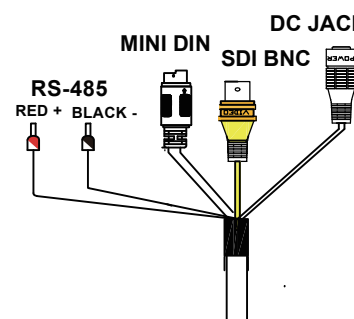
### Coin Slot Installation

Remove coin slot.



Completed Installation

PS : If you do not wish to run the wires through the wall, remove the coin slot and run the wires through the side.



5

## Product Specifications

MODEL NO.	IV-HDCM-500U
IMAGE SENSOR	1/2.7" 2.1MP CMOS Sensor
SCANNING SYSTEM	Proressive Scan
RESOLUTION	2.1Megapixel 1080P, 1920x1080 (30FPS)
SENSITIVITY(F1.2)	1.0 Lux (0 Lux with IR ON)
LENS	2.8 - 12mm
EFFECTIVE PIXELS (HxV)	1944(H) x 1092(V)
S/N RATIO	More than 50dB
SYNCHRONIZATION	Internal
VEDIO OUTPUT (BNC TYPE)	HD-SDI : 1.485G/s (SMPTE292M,)1.0Vpp-75 Ohm
GAMMA CORRECTION	0.45
DAY / NIGHT	AUTO Only
O.S.D.	YES, Built-in
DEFOG	ON/OFF ( FOG OR RAIN)
GAIN CONTROL	OFF / LOW / MID / HIGH
WHITE BALANCE	ATW / AWC-->SET / INDOOR / OUTDOOR / MANUAL
BACK LIGHT COMPENSATION	OFF / BLC / HSBLCL
SHUTTER	1/30 / 1/60(1/50) / FLK / 1/250....1/50000 / x2 / x3 / AUTO
IR LEDs & Illumination Distance	20 IR LEDs, Approximately 50 Metres in ideal Conditions(850nm)
PRIVACY FUNCTION	8
IP RATING	IP66
OPERATING CONDITIONS	Temperature : -10° ~ +45° C, Humidity : 95%RH
POWER SUPPLY	DC 12V / AC 24V
POWER CONSUMPTION	IR OFF : 500 mA (MAX) / IR ON : 1000m A (MAX)
DIMENSION	340.5mm * 100mm * 156mm
NET WEIGHT	1175g
Heater Power	Heater will be turned on at 15°C or under

\*The above specification is subject to change without prior notice

7

SET UP MENU	
LENS	• DC • MANUAL
EXPOSURE	• SHUTTER • AGC • SENS-UP • BRIGHTNESS • ACCE • DEFOG • BACKLIGHT • RETURN
WHITE BAL	• ATW • AWC→SET • INDOOR • OUTDOOR • MANUAL
DAY&NIGHT	• AUTO OR • B/W
NR	• 2NR • 3NR • LEVEL • SMART NR • RETURN
SPECIAL	• CAM TITLE • FREEZE • MOTION • PRIVACY • LANGUAGE • DEFECT • RS485 • VERSION • RETURN
ADJUST	• SHARPNESS • MONITOR • OSD • LSC • NTSC/PAL • RETURN
RESET	• FACTORY • RETURN
EXIT	

Note

► RETURN :  
RET(RETURN) : Select this to save the setting for this menu and return to the upper menu.  
END : Select this to save the setting for this menu and exit the SET UP menu.

LENS

- **DC** : Select Auto Iris Lens  
When DC is select, you can control screen brightness. The range of bright control is between 0 and 100 (45 in case of WDR mode). Adust the brightness appropriately for optimal screen brightness.
- **Manual** : Select Manual Lens

WHITE BAL.< WHITE BALANCE >

- ATW : 1800°K ~ 10500°K.
- AWC→SET : Shoot a white paper push SET button..
- INDOOR : 4500°K ~ 8500°K.
- OUTDOOR : 1800°K ~ 10500°K.
- MANUAL : Select this to fine-tune White Balance manually.  
Set White Balance first by using the ATW or AWC mode.  
After that switch to MANUAL mode, fine-tune the White Balance and then press SET button.

DAY NIGHT

- AUTO : If use IR LED with Light Sensor, it is no function.
  - DELAY : 0 ~ 60 seconds.
  - D→N (AGC) : 0 ~ 100.
  - N→D (AGC) : 0 ~ 100.
- COLOR : This picture is always displayed in color.
- B/W : This picture is always displayed in black and white.
  - BURST : (ON / OFF)
  - IR SMART : OFF / ON
    - >LEVEL : 0 ~ 15
    - >AREA: You can use ↑, ↓, ←, → to adjust POSITION and SIDE.
    - >IR LED : ON / OFF
    - >IR PWM : 0 ~ 15
    - >RETURN : RET / END

NR :

- 2 DNR : OFF/ON
- 3 DNR : OFF/ON
  - OFF : Deactivates the DNR Function. Noise in not reduced.
  - ON : Activates the DNR so that noise is not reduced.  
Press the SET button then you can adjust the noise reduction level.
    - > S-LEVEL : 0 ~ 100.
    - > E -LEVEL : 0 ~ 100.

Note

► Some lenses may not work properly, depending on the setting of the BRIGHTNESS LEVEL.  
► It may not work properly depending on the installed lens. Set the Level of the lens to the optimal value.

EXPOSURE

- SHUTTER : 1/30,FLK, 1/250, 1/500, 1/1000, 1/2000, 1/5000, 1/10000, 1/50000, x2, X3, AUTO.
- AGC : LOW, MIDDLE, HIGH.
- SENSE-UP : x2 , x3. (In Auto mode)
- BRIGHTNESS : 1 ~ 100.
- ACCE (D-WDR) : OFF / LOW / MIDDLE /HIGH
- DEFOG : DEFOG or Rain
- BACKLIGHT : OFF, BLC,HBLC
  - BLC : Enables a user to directly select a desired area from a picture, and to video the area more clearly.
    - > GAIN : MIDDLE, HIGH, LOW.
    - > AREA: Select POSITION, SIZE, RET, AGAIN.
    - > DEFAULT : Reset the BLC setting to the factory defaults.
    - > RETURN : (RET / END)
  - HSBLC : If there is a high light installed in a limited environment such as an apartment parking garage or gas station entrance, removing the high light makes it possible to view car license plates efficiently.
    - > SELECT : AREA 1 ~ AREA 4.
    - > DISPLAY : (ON / OFF) You can use ↑, ↓, ←, → to adjust POSITION and SIZE.
    - > LEVEL : 0 ~ 100.
    - > MODE : ALL DAY / NIGHT.
    - > BLACK MASK : ON / OFF
    - > DEFAULT : Reset the HSBLC setting to the factory defaults.
    - > RETURN : (RET / END)
- RETURN : (RET /END)

- LEVEL : 0 ~ 100.
- SMART NR : OFF/ON (SMART NR working when 3DNR level >40)
- RETURN : (RET/END)

SPECIAL

- CAM TITLE : If you enter a title, the title will appear on the monitor.
    - OFF : No title will be displayed on the monitor even if you enter one.
    - ON : Press the SET button to the menu.
- Use the 4 direction button to move to a desired letter and select the letter by pressing the SET button. Repeat this to enter multiple letters. You can enter up to 15 letters.

Enter a title, move the cursor to “POS” and press SET button. The entered title appears on the screen. Select the positon to displayed the title on the screen by using the 4 direction button and press the SET button. When the position is determined, select “END” and press the SET button to return to the SPECIAL menu.

ABCDEFGHIJK  
LMNOPQRSTUV  
WXYZ►()  
-■ / = &: ~ , .  
1 2 3 4 5 6 7 8 9  
→ ← CLR POS END

Note

►If you move the cursor to CLR and press the SET button, all the letters are deleted. To edit a letter, change the cursor to the bottom left arrow and press the SET button. Move the cursor over the letter to be edited, move the cursor to the letter to be inserted and then press the SET button.



- D-EFFECT : Select this to adjust the image.
  - FREEZE : OFF/ON
  - MIRROR : OFF/MIRROR/V-FLIP/ROTATE
  - D-ZOOM : x 2.0~64.0. (Analog video no picture when D-Zoom ON)
    - > PIP : ON/OFF
    - > D-ZOOM : x 2.0~64.0
    - > PAN&TILT : PIP / D-ZOOM
    - > DEFAULT : Reset the D-ZOOM setting to the factory default.
  - NEG. IMAGE : You can make the negative image effect.
  - RETURN : (RET/END)
- MOTION : If you connect an alarm device to this camera, you can monitor activity more efficiently, because a signal is generated by the camera whenever motion detection signal is output through the MD OUT port.
  - SELECT : You can select up to 3 area.
  - DISPLAY : (OFF/ON) You can use ↑, ↓, ←, → to adjust POSITION and SIZE.
  - SENSITIVITY : 0 ~ 60.
  - MOTION VIEW : ON/OFF
  - DEFAULT : Reset the motion setting to the factory defaults.
  - RETURN : (RET/END)
- PRIVACY : Hide an area you want to hide on the screen.
  - SELECT : You can select up to 8 area
  - DISPLAY : Determines whether to use the area selected. You can use ↑, ↓, ←, → to adjust POSITION and SIZE.
  - COLOR : Determines area color. You can select 16 kinds of color.
  - DEFAULT : Reset the privacy setting to the factory defaults.
  - RETURN : (RET/END)
- LANGUAGE : You can select the menu language according to your requirement.(ENG / JPN / CH1)

- DEFECT :
  - LIVE DPC : Dead pixel compensation on live.
  - LEVEL : 0 ~ 60.
  - STATIC DPC : Dead pixel compensation on static.
  - START : Close the lens then press the enter key.
  - LEVEL : 0 ~ 60.
  - SENS-UP : When it is night or dark, the camera automatically detects the light level and maintains a clear picture if this mode is activated.

#### Note

- ▶ If you press the SET button in “x3” or “x2” mode, you can adjust brightness by increasing or decreasing the shutter speed.(x2~x3)
- ▶ Note that the higher the zoom level, the brighter the screen, but the more likely it is that an after-image will appear.
- ▶ Although Noise, Spots, and Whitish symptoms may occur in SENSE-UP operation when the zoom level is increased, this is normal.

- RETURN : (RET/END)
- RS485 : (Communication adjust menu )

This function sets up the camera communication status when controlling the camera through an external control device.

- CAM ID : 0 ~ 255
- ID DISPLAY : Display camera title on the screen.
- BAUD RATE : 2400 / 4800 / 9600 / 19200 / 38400 bps.
- RETURN : (RET/END)

• VERTION : 000000

• RETURN : (RET/END)

12

## ADJUST

- SHARPNESS : As you increase this value, the picture outline becomes stronger and clearer. Adjust this appropriately depending on the sharpness of the picture.
- MONITOR : LCD / CRT monitor.
  - LCD MONITOR :
    - > GAMMA : USER / 0.45 / 0.50 / 0.55 / 0.60 / 0.65 / 0.70 / 0.75 / 0.80 / 0.85 / 0.90 / 0.95 / 1.00 value.
    - > BLUE GAIN : 0 ~ 100.
    - > RED GAIN : 0 ~ 100.
    - > RETURN : (RET/END)
  - CRT MONITOR :
    - > BLACK LEVEL : -30 ~ +30.
    - > BLUE GAIN : 0 ~ 100.
    - > RED GAIN : 0 ~ 100.
    - > RETURN : (RET/END)
- OSD :
  - TEXT COLOR : You can select 0 to 8 text color.
  - OUTLINE : ON/OFF
  - RETURN : (RET/END)
- LSC : (Lens Shielding Compensation)
- NTSC/PAL : You can select NTSC / PAL system.
- RETURN : (RET/END)

## RESET

- FACTORY : Reset the camera setting to the factory defaults.
- RETURN : (RET/END)

## EXIT

Press the SET button in the EXIT menu to save the current setting and exit the SET menu.

14

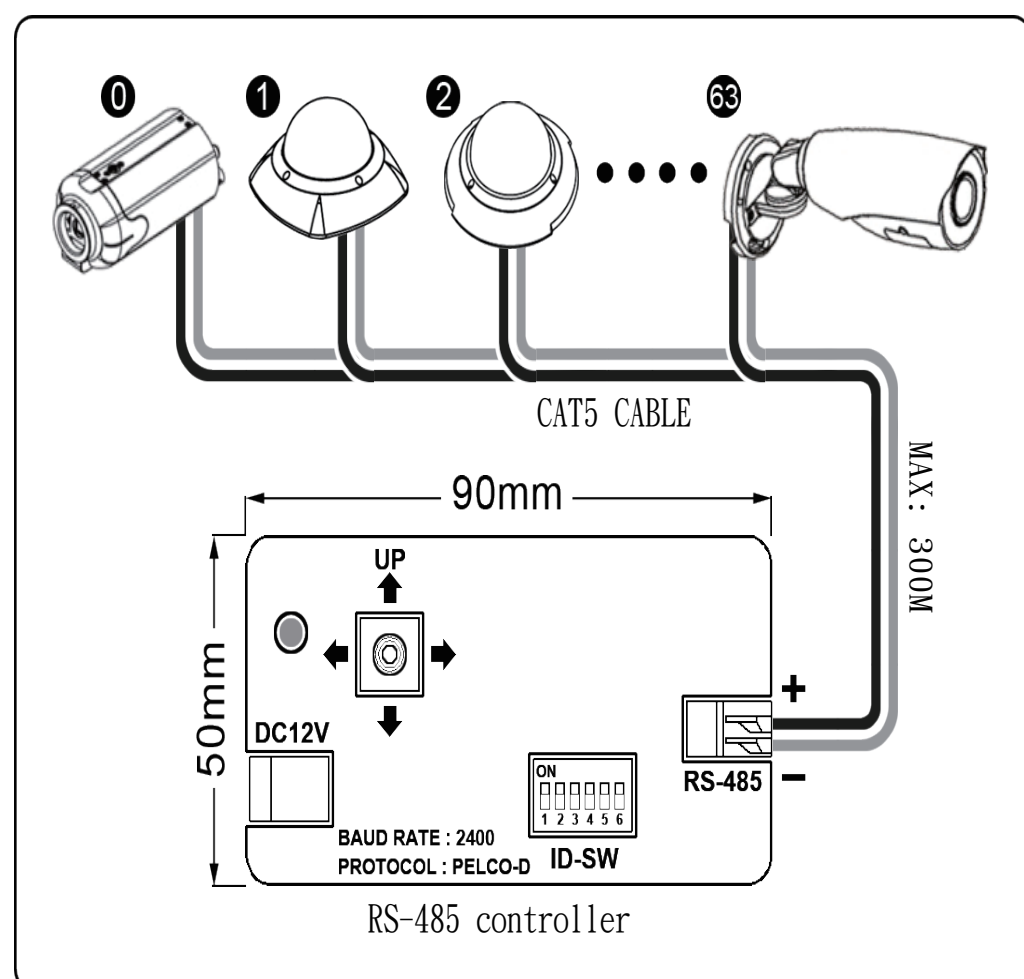
13

## CAMERA SETTING

**CAMERA ID** : Depending on ID S.W

**BAUD RATE** : 2400

**PROTOCOL** : PELCO-D



**\* Please do not use RS-485 controller to change camera ID**

15