High Definition HD-VI
CMOS Technology High Resolution Sensor

Camera setup and installation guide.

Introduction

New megapixel CMOS solution,HDVI has state-of-the art technology to give the best image quality ever. Especially it is designed to meetthe demands of new trend in CCTV market, both Analog HD Camera and cost-effective HD-SDI applications.The main concept of NVP2431H is supporting 1.3M CMOS sensorand output I/F as analog 1280H(CVBS/ COMET),HDVI 1.0(960p)

- •1Megapixel/2Megapixel HDVI camera
- • 500 Meter Coaxial cable distance
- • Programmale AE/AWB/AF detection
- • 3D-NR(Noise Reduction)for HDVI 1.0
- • Defog DWDR
- • Dead pixel compensation(live/static)
- • User defined OSD

■ **WARNING !**
To avoid electrical shock, do not open the cabinet. Refer servicing to qualified personnel only.

■ **NOTE !**
Before Use
1. Do not lift the camera by only holding the cables.
2. If you find condensation before use ,remove the front cover and leave the camera open until the condensation has gone .

Operating or storage location
Avoid operating orstoring the camera in thefollowing locations:
1. Extremely hot or cold places(operating temperature : -10°C to +55°C).
2. Close to heating equipment (e.g., near heaters)
3. Close to sources of strong magnetism.
4. Close to sources of powerful electromagnetic radiation, such as radios or TV transmitters.
5. Locations subjectto strong vibration or shock.
6. Locations subjectto steam or high humidity.
7. Locations subjectto strong wind ,such as high places.
8. Locations where corrosive gas or flammable gas is emitted, or where salt damage may occur.
9. Location subjectto condensation and high humidity.
10. Location subjectto soot or oil stains.

■ **Camera setting**
Don't touch the PCB Board by hand directly .

■ **Ventilation**
To prevent heat buildup, do not block air circulation around the camera

Guide

Model Features:

- • HD-VI Technology
- • 1MP/2.0MP CMOS
- • Up To 500 Meters
- • 3D DNR

- • BNC Video Output
- • Standard 12VDC Operation
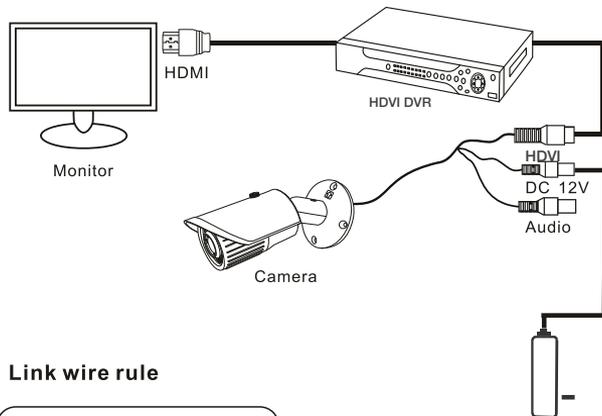- • IR LED for Night Vision
- • True Day/Night ICR

Solution General Specifications

| General	
IR LED	24/ 30 / 36pcs IR LED (Model Dependant)
Resolution	1280(H) x 960(V) @ 25fps 1920(H) x 1080(V) @ 25fps
Min. Illumination	0.01lux@F1.2(AGC ON), 0 Lux IR LED On
Lens	Varifocal 2.8-12 mm or Fixed Lens models 2.8/3.6/4mm
Lens mount	Fixed mount
ACG / BLC	Auto
WB	AWB
Sync System	Internal
E-Shutter	1/25s~1/500,000s
Video output	1 channel HDVI high definition video output
S/N Ratio	More than 48dB (AGC OFF)
Video output	BNC Connector
Ingress	IP66
Power Consumption	DC12V ,Max 2W
Operating temperature	-10°C ~ +55°C / -40°F ~ 122°F
Operating humidity	0-90% (non-condensing)

*Specifications subjected to change without prior notice.
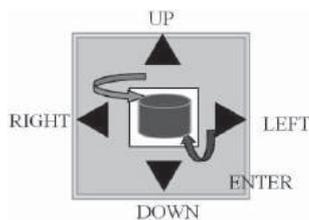
Connection
Schematic of the system

HDMI

HDVI DVR

Monitor

HDVI
DC 12V
Audio

Camera

Link wire rule

| HDVI | GND ——●—— Video |
| Power | ⊖ —— ⊙ —— ⊕ |
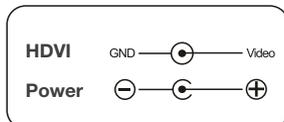
Schematic of the system

OSD Menu Button
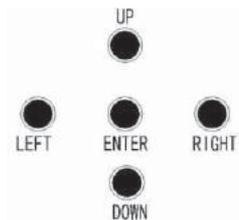
ENTER	Enter or Exit the menu, Press ENTER into Main Menu.
UP/DOWN	UP and DOWN for move up and down
LEFT/RIGHT	LEFT, RIGHT for modifying the menu parameters，press RIGHT to exit the next menu and modify the parameter.

Attention ⚠

Turn Left for 5seconds to CVBS,turn Right for 5 seconds to HDVI. Turn Down for 5seconds, will change TV system between PAL/NSTC.

3

4

OSD(OPTIONAL)

Press the "ENTER" to enter main menu, if there is no any press for 30 seconds, the main menu will disappear automatically from screen.

```
              MAIN MENU

  1. LENS              MANUAL
  2. EXPOSURE          ↵
  3. BACKLIGHT         OFF
  4. WHITE BAL         MANUAL↵
  5. DAY&NIGHT         EXT ↵
  6. NR                ↵
  7. SPECIAL           ↵
  8. ADJUST            ↵
  9.EXIT               SAVE&END↵
```

Lens

DC/Manual，depending on the specific type of lens the device is equipped.

Exposure

```
            EXPOSURE

  1.SHUTTER          1/25
  2.AGC              .....I.....15
  3.SENS-UP          OFF
  4.BRIGHTNESS       .....I......40
  5.D-WDR            OFF
  6.DEFOG            OFF
  7.RETURN           RET  ↵
```

（1）Electronic Shutter:User can set both slow and high-speed shutter.(The speed can be set as auto, from 1 / 25 ~ 1 / 500000, FLK，X2~X30. The user can set the specific speed according to the specific surroundings. The default value is auto.)
（2）AGC:This function not only increase the brightness of camera images, but also increase the image noise, users can adjust it according to actual situation,0~15 adjustable.
（3）Sens-Up
（4）Brightness: 0~100 adjustable.
（5）D-WDR:Digital Wide Dynamic Range:Off/On,if turn on,level:0-8 adjustable
（6）Defog:In foggy weather,you can setup this function to see the object behind fog clearly.choose Auto to adjust position/size.
（7）Return

Back Light Compensation

(1)BLC

```
                BLC

  1.LEVEL              MIDDLE
  2.AREA               ↵
  3.DEFAULT            ↵
  4.RETURN             RET ↵
```

(a) Level:Middle/High/Low   (b) Area:enter in to adjust position/size   (c) Default   (d) Return

(2) HSBLC

(2)HSBLC

```
              HSBLC

  1.SELECT            AREA1
  2.DISPLAY           ON ↵
  3.BLACK MASK        ON
  4.LEVEL             ......I....20
  5.MODE              ALL DAY
  6.DEFAULT           ↵
  7.RETURN            RET ↵
```

(a) Select:4areas optional   (b) Display:On/Off,choose
On,enter in to adjust position/size   (c) Black mask:On/Off
(d) Level:0~100 adjustable   (e) Mode:All day/Night,night
mode:AGC level:0~100 adjustable (f) Default (g) Return

White Balance

It is used to restore the authenticity of the color, affected by the change of color
temperature. Users can choose white balance mode according to the actual
situation: Manual/AWB/ATW/AWC/Indoor/Outdoor.

Day&Night

Day & Night Switch is specially designed for different occasions. There are 3 kinds of
modes as follows: EXT Mode,Auto mode, Color mode, B/W mode. The user can set
different mode according to the surroundings.The default mode is EXT mode.

(1)D&N EXT

```
            D&N  EXT

1.D->N (DELAY)        .....I.....1
2.N->D(DELAY)         .....I.....1
3.RETURN                 RET ←┘
```

(2) D&N Auto

```
           D&N  AUTO

1.D->N (AGC)           ......I......48
2.D->N (DELAY)         ......I......3
3.N->D (AGC)           ......I......32
4.N->D (DELAY          ......I......3
5.RETUR                    RET ←┘
```

(3) Color Mode:Always Color
(4) B/W Mode:Always Black and White

NR

Switch to Hight/Middle/Low and OFF to enable or disable noise reduction on
dynamic recordings.

```
                NR

1.2DNR                MIDDLE
2.3DNR                MIDDLE
3.RETURN              RET ←┘
```

Special

```
            SPECIAL

1.CAM TITLE          OFF
2.D-EFFECT           ←┘
3.MOTION             OFF
4.PRIVACY            OFF
5.LANGUAGE           ENG ←┘
6.DEFECT             ←┘
7.RS485              ←┘
8.RETURN             RET ←┘
```

(1)Cam Title
(2)D-Effect

```
            D-EFFECT

1.FREEZE             OFF
2.MIRROR             OFF
3.NEG IMAGE          OFF
4.RETURN             RET ←┘
```

(a)Freeze:On/Off.
(b)Mirror:Mirror/V-Flip/Rotate/Off.
(c)Neg_Image:On/Off.
(d)Return

(3)Motion:Select motion areas,Display,Sensitivity,Color,Trans,Alarm.

```
                MOTION
1.SELECT              AREA1
2.DISPLAY             ON    ←┘
3.SENSITIVITY         ……I……64
4.COLOR               GREEN
5.TRANS               1.00
6.ALARM                     ←┘
7.DEFAULT                   ←┘
8.RETURN              RET  ←┘
```

（4）Privacy:Select privacy areas,Display,Color,Trans.

```
                PRIVACY
1.SELECT              AREA1
2.DISPLAY             COLOR ←┘
3.COLOR               WHITE
4.TRANS               1.00
5.DEFAULT                   ←┘
6.RETURN              RET  ←┘
```

(5) Language
    Simplified Chinese,traditional Chinese,Germany,French,Italian,Spanish,Polish,Russian,
    Portuguese,Turkish.
(6) Defect:Press to select the DPC(Defective Pixel Correction)level of defect.please do not
    use this function without cover the lens.
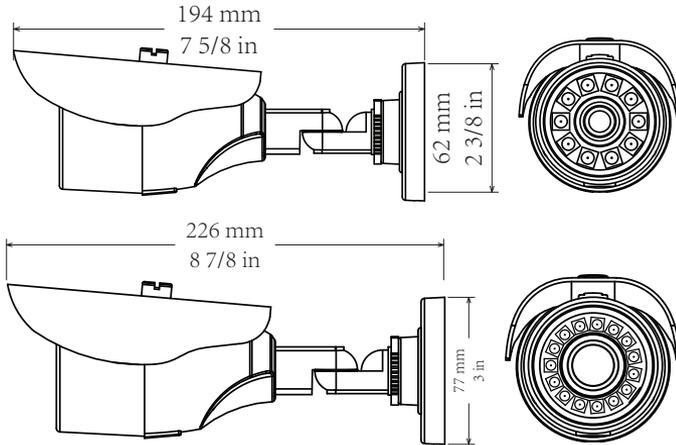(7)RS485:press button to select ID,ID DISPLAY and BAUDRATE.
(8)Return

Adjust

```
                ADJUST
1.SHARPNESS           AUTO ←┘
2.MONITOR             LCD  ←┘
3.LSC                 OFF
4.VIDEO.OUT           PAL
5.RETURN              RET  ←┘
```

1.Sharpness:Auto/Off.
2.Monitor:LCD/CRT.
3.LSC:Off/On.
4.Video.Out:PAL/NTSC
5.Return

Exit

When all settings are complete, press "Up", "Down" to move the cursor to "Exit", select "Save&End "(save the changes of parameters and then exit the menu) or "Reset" (it means to recover factory settings) or "Not Saved"(Not save the settings and Exit the menu).

Identification
Mechanical Drawing

194 mm
7 5/8 in

62 mm
2 3/8 in

226 mm
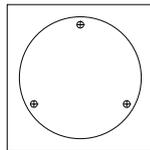8 7/8 in

77 mm
3 in

Accessories

(*A*) Wall Plugs
S7 x 26mm 3pcs

(*B*) Fitting Screws
PA4 x 24mm 3pcs

(*C*) L-Hex tool
54x18mm

(*D*) Drill template

NOTE: Make sure you don't have any missing parts before you make the installation. Incorrect installation could void the warranty if instructions are not followed correctly. Please call technical for assistance if you are unsure about any procedures.

Installation
Installation information (General overview)

❶

❷
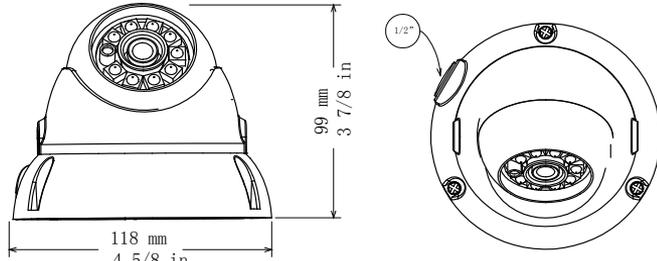
❸

❹

Locking Screw

Rotation lock

❺

❻
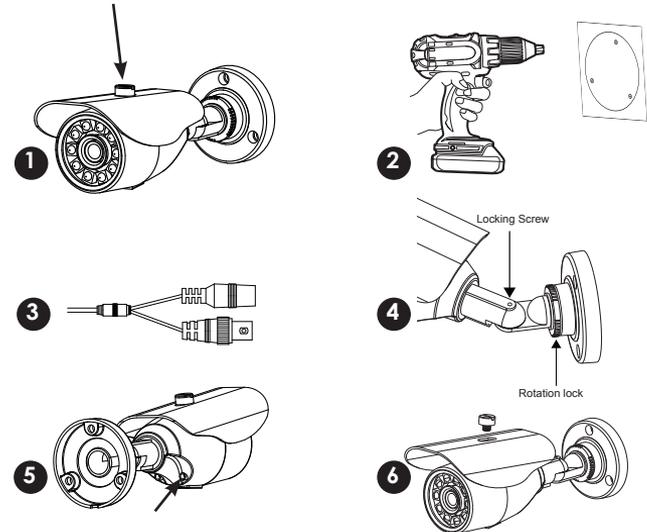
1   Remove visor from camera to aid simpler installation. (Optional requirement)

2   Use drill template (**D**) as to guide to drill and attach camera to surface as required. Holes on bracket are 120 degree apart, so three holes are required.

3   With camera attached you can now connect power, check device working.

4   Using the (**C**) L-Hex tool you position left-right up/down and lock into place. The rear position rotation allows turning of angle turn anti-clockwise to loosen.

5   Adjust zoom & focus using small flat blade. (Vari-focal model only)

6   Replace the sun visor if removed from step 1. Check IR LEDs are working by covering the photocell of camera, the IR LEDs will give a faint red glow.
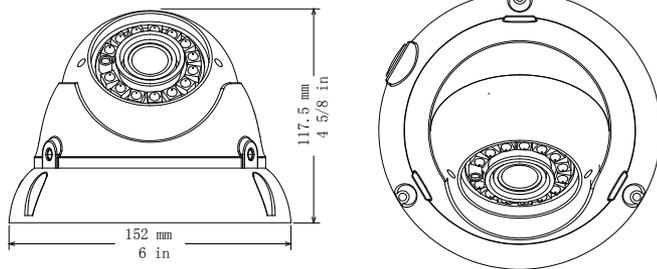
(Don't look at IR LEDs for long periods of time, as you could damage your eyes)
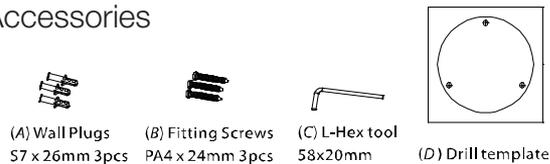
Identification

Mechanical Drawing

99 mm
3 7/8 in

118 mm
4 5/8 in

1/2"

Vari-Focal Lens Model

117.5 mm
4 5/8 in

152 mm
6 in

Accessories

(A) Wall Plugs
S7 x 26mm 3pcs

(B) Fitting Screws
PA4 x 24mm 3pcs

(C) L-Hex tool
58x20mm

(D) Drill template

NOTE: Make sure you don't have any missing parts before you make the installation. Incorrect installation could void the warranty if instructions are not followed correctly. Please call technical for assistance if you are unsure about any procedures.

Installation

Installation information (General overview)

1   2

3   4

5   6
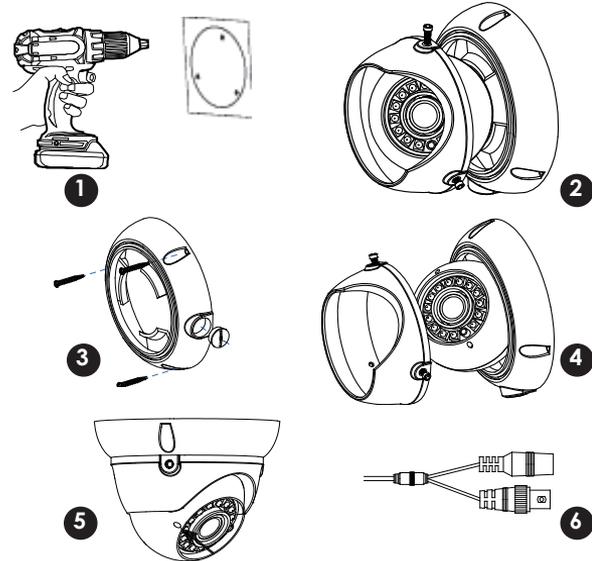
1   Use supplied template to drill holes for (**A**) plugs.

2   Remove locking cover using supplied (**C**) L-key. Optional requirement

3   Attach base part to surface with (**B**) screws. Use conduit if required.

4   Re-attach Cover and position camera then lock cover screws with L-Key.

5   Adjust the zoom & focus using flat blade tool. (Vari-Focal models only)

6   Connect power, feeding through conduit may require this stage to be completed before adjustment is made. Check IR LEDs are working by covering the photocell of camera, the IR LEDs will give a faint red glow.

(Don't look at IR LEDs for long periods of time, as you could damage your eyes)

Trouble And Solution

1. Image change to Black and White

please connectto the HDVI DVR.

2. No Picture after providing power

May be the power supply voltage abnormity, please check he powersupply voltage and pole whether exactitude. Please check allthe connecting cable and monitors whether be connected correctly or not.

3. The picture level direction have flowing interference ripples

It need filterthe wave of the power supply.Checkthe monitor and peripheral equipments used.

4. The picture background colorchanges continuously

The fluorescent lamp's electromagnetic filed cause color roll. This is proper phenomenon of the cameras. Reduce the fluorescent lamp numbers or increase the distance between the camera and the fluorescent lamps can improve it.Use power supply external sync. camera can solve it.

5.The picture smeartoo mass

The power supply's voltage unstable.Connecting cables not connect correctly or have high impedance.

NOTES