

# HARDWARE INSTALLATION GUIDE

**VPD370i-O 37x All in one Outdoor PTZ IP Camera**

**VPD330i-O 33x All in one Outdoor PTZ IP Camera**

**VPD270i-O 27x All in one Outdoor PTZ IP Camera**

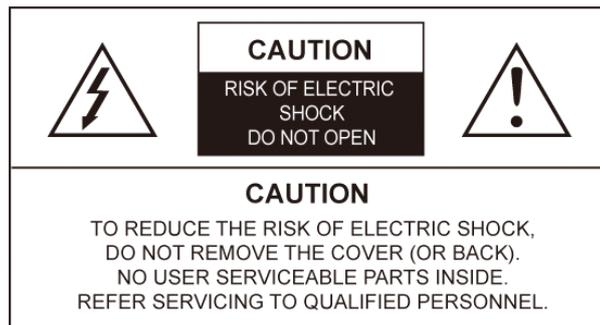


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**VISION** Vision Hitech Co., Ltd.

## PRECAUTIONS

By selecting this product, you have decided to use a professional device that guarantees highest quality and reliability. We would like to thank you very much for your confidence and kindly ask you to read the following instructions carefully before installation and operation in order to take full advantage of all quality features regarding this product.



The lightning flash with an arrowhead symbol, within an equilateral triangle is intended to alert the user to the presence of non-insulated 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.

## INFORMATION

This equipment has been tested and found to comply with 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 its 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 the fire hazards**

- Do NOT use power source other than that specified.
- Do NOT expose this appliance to rain or moisture.

## **Trademarks**

All names used in this manual for hardware and software are probably registered trademarks of respective companies.

**This installation should be made by a qualified service person and should conform to all local codes.**

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### 1. Precautions

- Please read the manual carefully before the installation in order to set up the camera correctly and to obtain the best picture quality.
- Please keep the manual in good condition for your future reference and service application.
- Installation and services should be only carried out by an authorized personnel according to local safety regulations.
- If any liquid or solid matter gets into the housing, immediately disconnect the camera from power supply and have it checked by your authorized dealer before reusing.
- Avoid installing the camera at extremely hot or cold places.
- If you are not a certified person, never try to dismantle the camera. To avoid electric shock, never remove the screws or covers. There are no parts inside that need maintenance by the user. All maintenance should be carried out by qualified personnel.
- Avoid installing the camera at a place of high humidity.
- Avoid installing the camera at the place exposed to gas or oil.
- Keep the top glass of the lens always clean in order to obtain the best picture quality all the time. Be careful not to be stained by fingerprint.
- Don't face the camera directly toward sunlight or sunlight reflecting area. CCD may go defective at this condition.
- Please give a special attention to keep the unit from dangerous drop or external shock during the process of transportation or handling.
- Never try to touch the camera in wet hand. It may cause an electric shock.
- Do not expose the camera to radioactivity. It causes a serious damage on the CCD.

## **2. Limitation of liability**

This publication is provided "AS IS" without warranty of any kind, either express or implied, including but not limited to, the implied warranties of merchantability, fitness for any particular purpose, or non-infringement of the third party's right. This publication could include technical inaccuracies or typographical errors. Changes are added to the information herein, at any time, for the improvements of this publication and/or the corresponding product(s).

## **3. Disclaimer of warranty**

In no event shall seller be liable to any party or any person, except for replacement or reasonable maintenance of the product, for the cases, including but not limited to below:

- (1) Any damage and loss, including without limitation, direct or indirect, special, consequential or exemplary, arising out of or relating to the product;
- (2) Personal injury or any damage caused by inappropriate use or negligent operation of the user;
- (3) Unauthorized disassemble, repair or modification of the product by the user;
- (4) Inconvenience or any loss arising when images are not displayed, due to any reason or cause including any failure or problem of the product;
- (5) Any problem, consequential inconvenience, or loss or damage, arising out of the system combined by the devices of third party.
- (6) Any claim or action for damages, brought by any person or organization being photogenic subject, due to violation of privacy with the result of that surveillance-camera's picture, including saved data, for some reason, becomes public or is used for the purpose other than surveillance.

## 4. Package Contents



IP Camera



Hardware Installation Guide



Crossover LAN Cable



Tapping screws x 4



Plastic anchor x 4



Lench x1 and

CD

Rubber x1



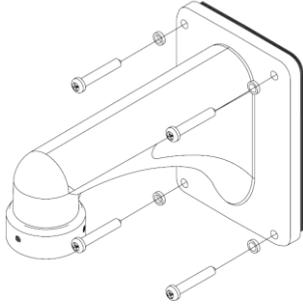
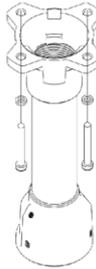
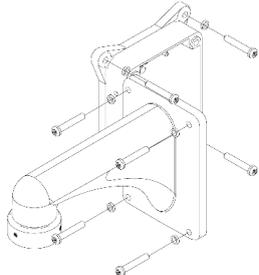
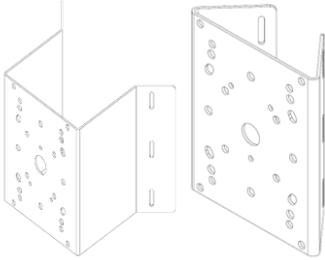
Power Adaptor (Option)



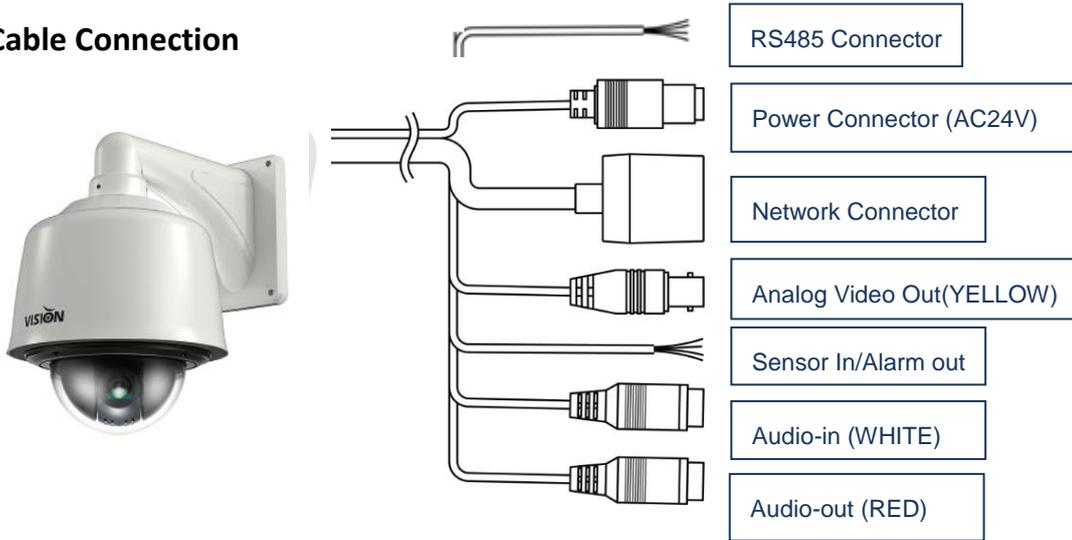
- Hardware Installation Guide (PDF)
- IP Camera Manual (PDF)
- NVR Pro Manual
- NVR Lite (16Ch) Program
- IPScan Utility Program (IP Installer)

Indoor : DC12V/3A, Outdoor : AC24V/2A

Note : Mount Brackets are optional

● Wall Mount Bracket	● Ceiling Mount Bracket
	
● Wall Mount with Junction Box	● Corner and Pole Mount Bracket
	

## 5. Cable Connection



This IP camera uses 24VAC for power source. Please make sure to use a UL/CE approved and 24VAC regulated power supply for input power.

**NOTE :** PoE is not available for VPD370i-OUTDOOR

*Do not connect PoE device into this product.*

### ●Power Cable

COLOR	DESCRIPTION
YELLOW	EARTH
BROWN	RS485A
WHITE	RS485B
BLUE	AC24V+(Temperature Control Power)
Green	AC24V-(Temperature Control Power)
RED	AC24V+(Mechanism Power)
BLACK	AC24V-(Mechanism Power)

### ●Alarm In/out Cable

COLOR	DESCRIPTION
BLACK	GND
WHITE	ALARM INPUT 1
YELLOW	ALARM OUT
RED	COM

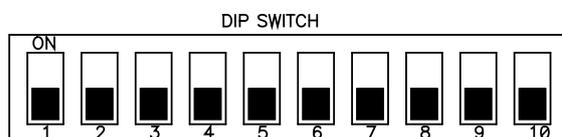
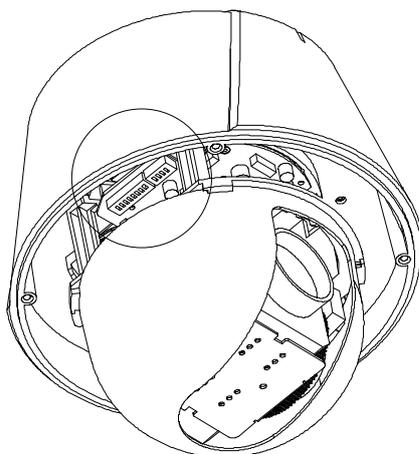
## 6. Installation

### ◆ DIP SWITCH SETTINGS

In a configuration where the camera's RS485 data port is used for Camera control(pan, tilt, etc.) by the system controller, the camera's DIP switches must be configured to specify the camera ID and communication parameters.

The camera mounting base needs to be removed to access the DIP switches.

See step 1 & 2 on page 11 for the information about how to remove the camera mounting base.



### ◆ Setting up the Camera ID

The factory default settings of these DIP switches are ID 1

(1-ON,0-OFF) SW1~SW8

DIP SW	ID	DIP SW	ID	DIP SW	ID
10000000	1	10101000	21	10010100	41
01000000	2	01101000	22	01010100	42
11000000	3	11101000	23	11010100	43
00100000	4	00011000	24	00110100	44
10100000	5	10011000	25	10110100	45
01100000	6	01011000	26	01110100	46
11100000	7	11011000	27	11110100	47
00010000	8	00111000	28	00001100	48
10010000	9	10111000	29	10001100	49
01010000	10	01111000	30	01001100	50
11010000	11	11111000	31	11001100	51
00110000	12	00001000	32	00101100	52

10110000	13	10000100	33	10101100	53
01110000	14	01000100	34	01101100	54
11110000	15	11000100	35	11101100	55
00001000	16	00100100	36	00011100	56
10001000	17	10100100	37	10011100	57
01001000	18	01100100	38	01011100	58
11001000	19	11100100	39	11011100	59
00101000	20	00010100	40	00111100	60
DIP SW	ID	DIP SW	ID	DIP SW	ID
10111100	61	11000110	99	10010001	137
01111100	62	00100110	100	01010001	138
11111100	63	10100110	101	11010001	139
00000010	64	01100110	102	00110001	140
10000010	65	11100110	103	10110001	141
01000010	66	00010110	104	01110001	142
11000010	67	10010110	105	11110001	143
00100010	68	01010110	106	00001001	144
10100010	69	11010110	107	10001001	145
01100010	70	00110110	108	01001001	146
11100010	71	10110110	109	11001001	147
00010010	72	01110110	110	00101001	148
10010010	73	11110110	111	10101001	149
01010010	74	00001110	112	01101001	150
11010010	75	10001110	113	11101001	151
00110010	76	01001110	114	00011001	152
10110010	77	11001110	115	10011001	153
01110010	78	00101110	116	01011001	154
11110010	79	10101110	117	11011001	155
00001010	80	01101110	118	00111001	156
10001010	81	11101110	119	10111001	157
01001010	82	00011110	120	01111001	158
11001010	83	10011110	121	11111001	159
00101010	84	01011110	122	00000101	160
10101010	85	11011110	123	10000101	161
01101010	86	00111110	124	01000101	162
11101010	87	10111110	125	11000101	163
00011010	88	01111110	126	00100101	164
10011010	89	11111110	127	10100101	165
01011010	90	00000001	128	01100101	166
11011010	91	10000001	129	11100101	167
00111010	92	01000001	130	00010101	168
10111010	93	11000001	131	10010101	169
01111010	94	00100001	132	01010101	170

11111010	95	10100001	133	11010101	171
00000110	96	01100001	134	00110101	172
10000110	97	11100001	135	10110101	173
01000110	98	00010001	136	01110101	174
DIP SW	ID	DIP SW	ID	DIP SW	ID
11110101	175	01010011	202	10100111	229
00001101	176	11010011	203	01100111	230
10001101	177	00110011	204	11100111	231
01001101	178	10110011	205	00010111	232
11001101	179	01110011	206	10010111	233
00101101	180	11110011	207	01010111	234
10101101	181	00001011	208	11010111	235
01101101	182	10001011	209	00110111	236
11101101	183	01001011	210	10110111	237
00011101	184	11001011	211	01110111	238
10011101	185	00101011	212	11110111	239
01011101	186	10101011	213	00001111	240
11011101	187	01101011	214	10001111	241
00111101	188	11101011	215	01001111	242
10111101	189	00011011	216	11001111	243
01111101	190	10011011	217	00101111	244
11111101	191	01011011	218	10101111	245
00000011	192	11011011	219	01101111	246
10000011	193	00111011	220	11101111	247
01000011	194	10111011	221	00011111	248
11000011	195	01111011	222	10011111	249
00100011	196	11111011	223	01011111	250
10100011	197	00000111	224	11011111	251
01100011	198	10000111	225	00111111	252
11100011	199	01000111	226	10111111	253
00010011	200	11000111	227	01111111	254
10010011	201	00100111	228	11111111	255

## ■ RS485 Communication setting

Configuring DIP Switch as shown below resets communication parameters from the factory default setting by using SW9 and SW10

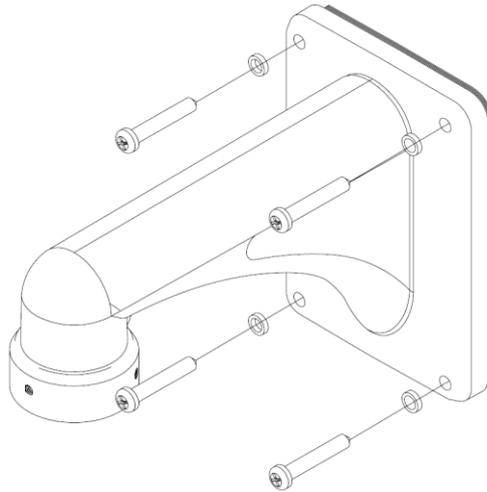
SW10	SW9	BUAD RATE	PROTOCOL
0	0	9600BPS	PELCO-D
0	1	4800BPS	PELCO-D
1	0	9600BPS	PELCO-P
1	1	4800BPS	PELCO-P

1) Factory Default : 9600bps, PELCO-D

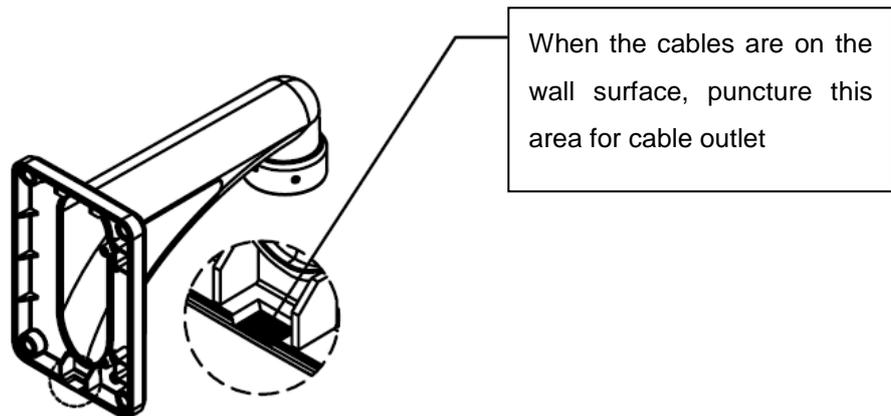
## ■. Installation of PTZ Camera with Bracket

### Installation using Wall Mount Bracket

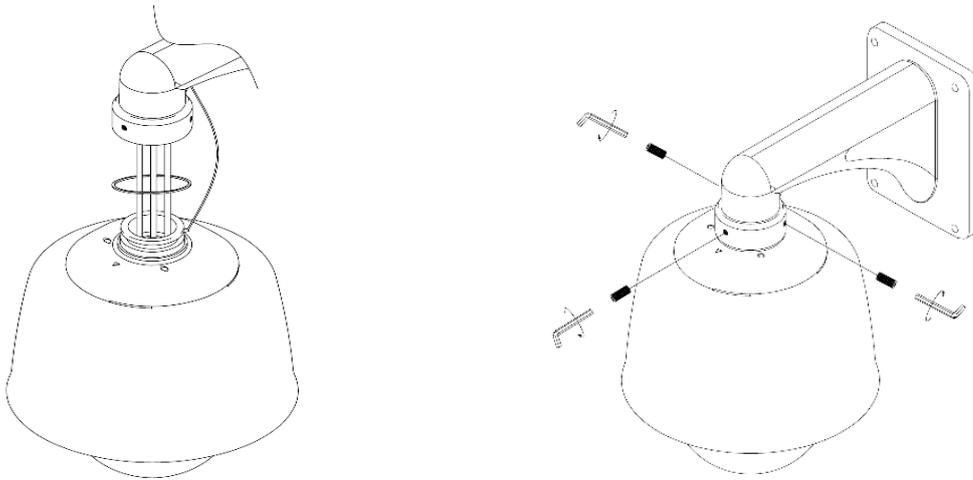
- ① Make a hole whose diameter is 30~40mm on the mounting surface to pass the wire(s) and cable(s) through the mounting surface. (In case of the wiring and cabling through the mounting surface only) Then prepare the wall mount bracket. Pull the wire(s) and cable(s) for the system as below. Attach the wall mount bracket to the mounting surface. (Tapping Screw 6×50)



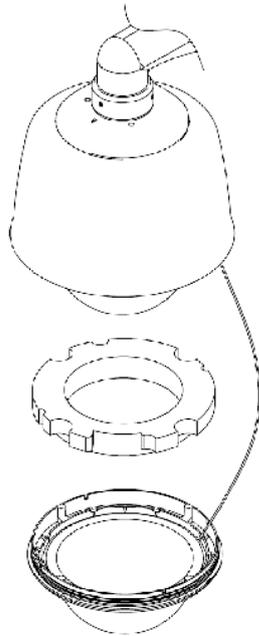
- ② When the reservation line for the wall outside connection, have to puncture The bracket line hole first, then reserve line traversing the line hole and The bracket hole, then fix with 4 hexagonal screws in the install position



- ③ High speed dome safety rope lock catch with the bracket reservation hole, Then keeps the high speed dome a line and the corresponding electric cable Group a line connection, picks up the high speed dome, screw tight three Clamping screws



- ④ **Screw the dome cover to the main body and remove the protection vinyl from the dome cover.**

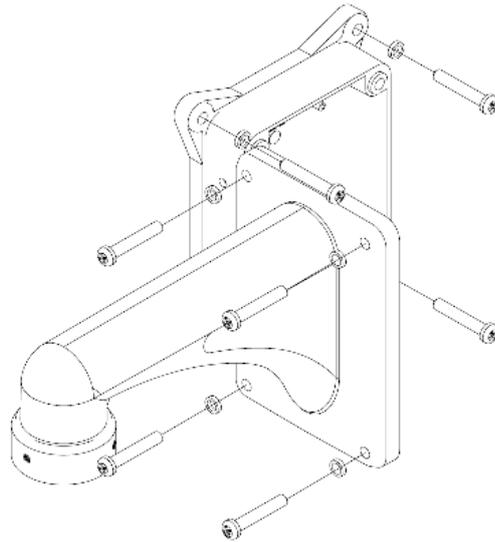


**Notice**

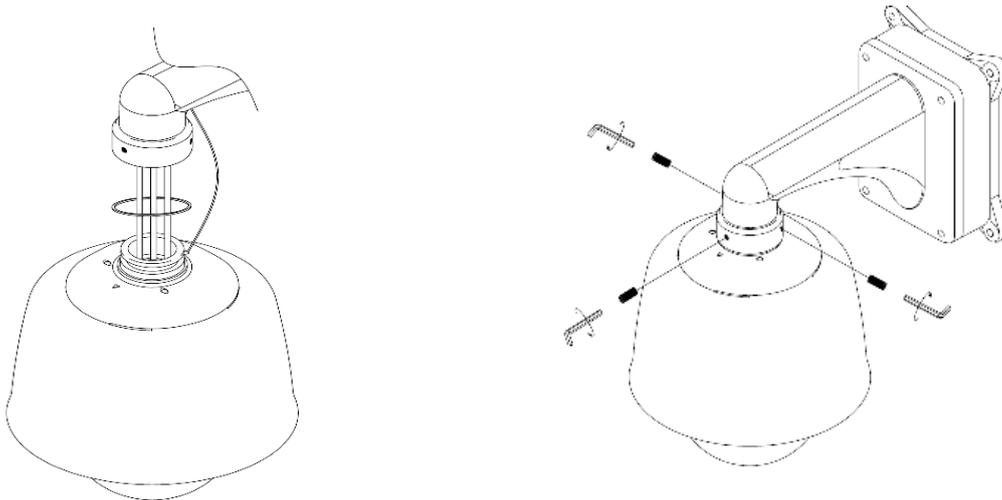
**Before starting the installation, make sure that the Camera ID and Protocol are set up properly**

**Installation using Wall Mount Junction Box Bracket**

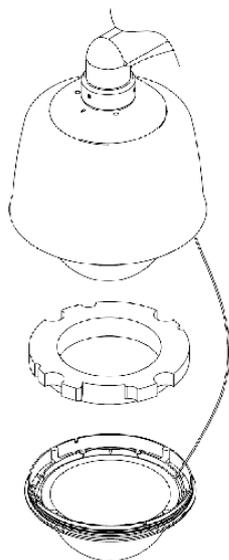
- ① Install the 4 install holes to aim at 4 expansion of metal bolt,twist the upper nut Fixedly, loosen the water joint, reserve the electric cable group to going beyond a Line traversing water joint then secREW tight again, installation finished



- ② High speed dome safety rope lock catch with the bracket reservation hole, Then keeps the high speed dome a line and the corresponding electric cable Group a line connection, picks up the high speed dome, screw tight three Clamping screws



- ③ **Screw the dome cover to the main body and remove the protection vinyl from the dome cover.**

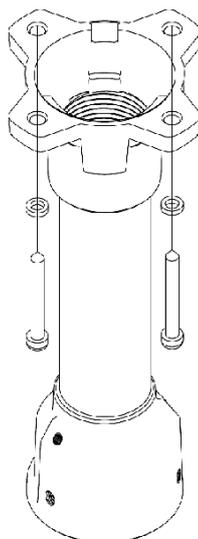


**Notice**

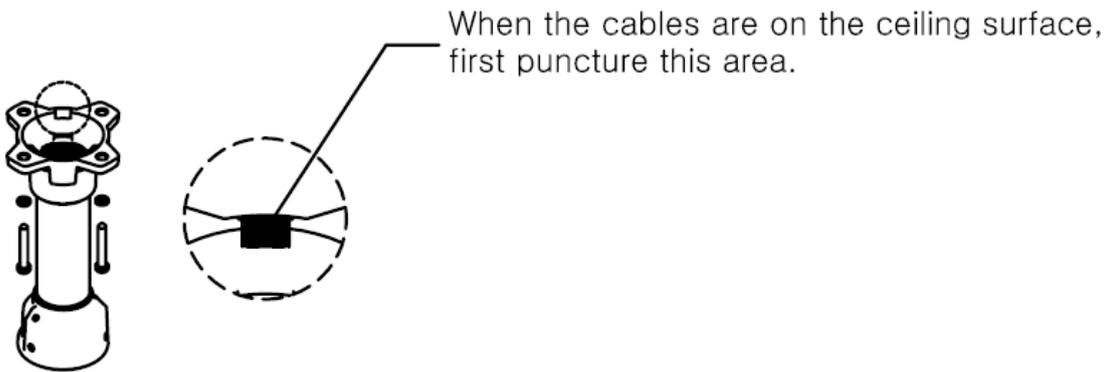
Before starting the installation, make sure that the Camera ID and Protocol are set up properly

**Installation using Ceiling Mount Bracket**

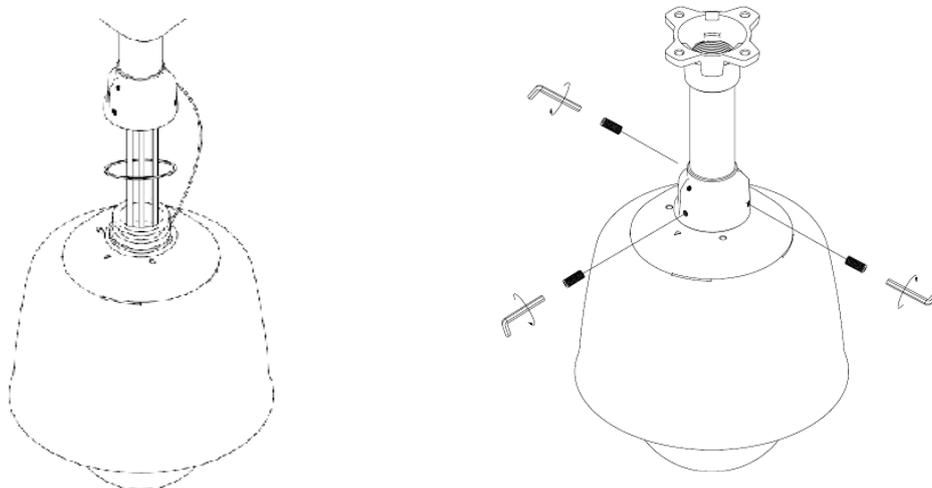
- ① **When wires go through wall, cable assembly backup wires directly cross bracket hole.**  
**Four installation holes aligns four inflation bolt and then twist nut to fasten (Tapping Screw 6x50)**



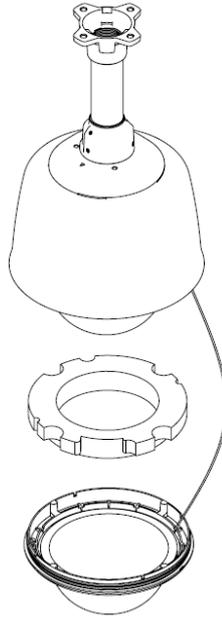
- ② When wires pass outside wall, firstly drill the terminal hole, and then cables Assembly backup wires cross it and the bracket hole by turns. Finally four installation holes aligns four installation holes aligns four inflation bolt and then twist nut to fasten



- ③ High speed dome safety rope lock catch with the bracket reservation hole, Then keeps the high speed dome a line and the corresponding electric cable Group a line connection, picks up the high speed dome, screw tight three Clamping screws



- ④ **Screw the dome cover to the main body and remove the protection vinyl from the dome cover.**



### **Notice**

**Before starting the installation, make sure that the Camera ID and Protocol are set up properly**

### **OPTIONAL ACCESSORIES FOR INSTALLATION**

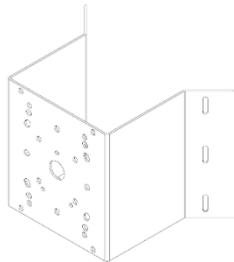
- ① **If installing the wall mount on an at least 80mm-long cylinder**

- **Pole Mount**

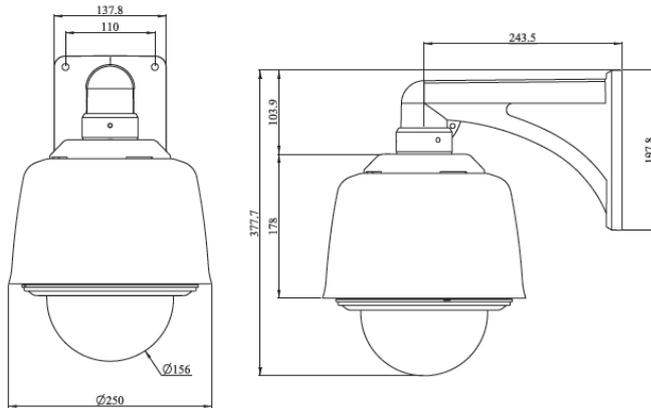


- ② **If installing the wall mount on a corner of the wall**

- **Corner Mount**



## 7. Dimension (mm)



## 8. Specification

### 8.1. VPD370i-O

Model		
Image sensor		1/4" Sony Color vertical Double Density CCD
Day & Night		Auto/Color/BW
Environment		OUTDOOR(IP66)
Optical Zoom		37X
Digital Zoom		12X
Lens		37x AF zoom ( f3.5~129.5mm (F1.6))
Min. illumination / Light sensitivity (Lux)		0.7Lux at F1.6 (Color), 0.002Lux(Sens-up, 256x) 0.06Lux at F1.6 (B/W)
Pan Tilt Operation	Pan	360 Endless (400 deg/sec)
	Tilt	-3~180 deg (400 deg/sec)
WDR/BLC		On/Off (User selectable on OSD)
Noise Reduction		2D+3DNR
Video	Compression	H.264 baseline profile, Motion JPEG
	Resolutions	Up to D1(NTSC:720X480, PAL:720X576)
	Frame rate	H.264 Up to 30fps at D1
		MJPEG Up to 30fps at D1
	Video streaming	Support multi stream with H.264, MJPEG
		Adjustable frame rate
		VBR/CBR in H.264
	Image setting	Day & Night
		Auto White Balance
		Auto Exposure
Effect - Color, Sharpness, Mirror/V-Flip, etc.		
BNC x1, 1.0Vp-p, 75 ohm Composite Video, NTSC/PAL		
Privacy Mask		
Output	Effect - Color, Sharpness, Mirror/V-Flip, etc. BNC x1, 1.0Vp-p, 75 ohm Composite Video, NTSC/PAL	
Audio	Audio streaming	Two-way, full duplex
	Compression	G.711
	Sample Rate	8KHZ
	Data Rate	64Kbps
	Audio input	1 x Line-In (Mono)
	Audio output	1x LINE OUT
Network	Security	Password protection
		User access log
		HTTPS encryption

	Supported protocol	HTTP, HTTPS, FTP, SMTP, UPnP, DNS, DynDNS, NTP RTSP, RTP, TCP, UDP, ICMP, DHCP
System integration	Intelligent video	Motion detection up to 1280x720 with 32x24 blocks
	Alarm trigger	Motion detection
		1x Sensor in/1x Alarm out
	Alarm events	File upload via ftp, e-mail
		Notification via email, FTP and TCP
	Video buffer	16MB pre-alarm and post-alarm
	Recording	SD CARD
Firmware upgrade API	Remote upgrade via network	
	CGI Interface document ActiveX Interface(ocx(dll) + document)	
Physical	RESET Button	1 x Factory Reset Button
	Power Source	AC24V
	Power Consumption	Normal : 12W , Max : Heater on: 36W
	Weight (Appr.)	4,500 g (Outdoor)
	Dimension(mm)	250(Ø) x 377(H)
Environment	Operating Temperature	-40 degree~50 degree
	Storage Temperature	-40 degree~60 degree
Software	Included Software	NVR Lite (16 Channel), IP Installer (Windows Only)
Package Contents		Network Camera, Use Manual, External Power Adaptor, Software CD

## 8.2. VPD330i-O

Model		
Image sensor		1/4" Sony Color vertical Double Density CCD
Day & Night		Auto/Color/BW
Environment		OUTDOOR(IP66)
Optical Zoom		33X
Digital Zoom		12X
Lens		33x AF zoom (f3.5mm~115.5mm(f1.6))
Min. illumination / Light sensitivity (Lux)		0.7Lux at F1.6 (Color), 0.002Lux(Sens-up, 256x) 0.06Lux at F1.6 (B/W)
Pan Tilt Operation	Pan	360 Endless (400 deg/sec)
	Tilt	-3~180 deg (400 deg/sec)
WDR/BLC		On/Off (User selectable on OSD)
Noise Reduction		2D+3DNR
Video	Compression	H.264 baseline profile, Motion JPEG
	Resolutions	Up to D1(NTSC:720X480, PAL:720X576)
	Frame rate	H.264 Up to 30fps at D1
		MJPEG Up to 30fps at D1
	Video streaming	Support multi stream with H.264, MJPEG
		Adjustable frame rate
		VBR/CBR in H.264
Image setting	Day & Night	
	Auto White Balance	
	Auto Exposure	
	Effect - Color, Sharpness, Mirror/V-Flip, etc.	
	BNC x1, 1.0Vp-p, 75 ohm Composite Video, NTSC/PAL	

		Privacy Mask
		Effect - Color, Sharpness, Mirror/V-Flip, etc.
	Output	BNC x1, 1.0Vp-p, 75 ohm Composite Video, NTSC/PAL
Audio	Audio streaming	Two-way, full duplex
	Compression	G.711
	Sample Rate	8KHZ
	Data Rate	64Kbps
	Audio input	1 x Line-In (Mono)
	Audio output	1x LINE OUT
Network	Security	Password protection
		User access log
		HTTPS encryption
Supported protocol	HTTP, HTTPS, FTP, SMTP, UPnP, DNS, DynDNS, NTP	
	RTSP, RTP, TCP, UDP, ICMP, DHCP	
System integration	Intelligent video	Motion detection up to 1280x720 with 32x24 blocks
	Alarm trigger	Motion detection
		1x Sensor in/1x Alarm out
	Alarm events	File upload via ftp, e-mail
		Notification via email, FTP and TCP
	Video buffer	16MB pre-alarm and post-alarm
	Recording	SD CARD
	Firmware upgrade	Remote upgrade via network
API	CGI Interface document	
	ActiveX Interface(ocx(dll) + document)	
Physical	RESET Button	1 x Factory Reset Button
	Power Source	AC24V
	Power Consumption	Normal : 12W , Max : Heater on: 36W
	Weight (Appr.)	4,500 g (Outdoor)
	Dimension(mm)	250(Ø) x 377(H)
Environment	Operating Temperature	-40 degree~50 degree
	Storage Temperature	-40 degree~60 degree
Software	Included Software	NVR Lite (16 Channel), IP Installer (Windows Only)
Package Contents		Network Camera, Use Manual, External Power Adaptor, Software CD

## 8.2. VPD270i-O

Model		
Image sensor		1/4" Sony Color vertical Double Density CCD
Day & Night		Auto/Color/BW
Environment		OUTDOOR(IP66)
Optical Zoom		27X
Digital Zoom		12X
Lens		27x AF zoom (f3.5mm~94.5mm (f1.6))
Min. illumination / Light sensitivity (Lux)		0.7Lux at F1.6 (Color), 0.002Lux(Sens-up, 256x) 0.06Lux at F1.6 (B/W)
Pan Tilt Operation	Pan	360 Endless (400 deg/sec)
	Tilt	-3~180 deg (400 deg/sec)
WDR/BLC		On/Off (User selectable on OSD)

Noise Reduction		2D+3DNR
Video	Compression	H.264 baseline profile, Motion JPEG
	Resolutions	Up to D1(NTSC:720X480, PAL:720X576)
	Frame rate	H.264 Up to 30fps at D1
		MJPEG Up to 30fps at D1
	Video streaming	Support multi stream with H.264, MJPEG
		Adjustable frame rate
		VBR/CBR in H.264
	Image setting	Day & Night
		Auto White Balance
		Auto Exposure
Effect - Color, Sharpness, Mirror/V-Flip, etc.		
BNC x1, 1.0Vp-p, 75 ohm Composite Video, NTSC/PAL		
Privacy Mask		
Output	BNC x1, 1.0Vp-p, 75 ohm Composite Video, NTSC/PAL	
Audio	Audio streaming	Two-way, full duplex
	Compression	G.711
	Sample Rate	8KHZ
	Data Rate	64Kbps
	Audio input	1 x Line-In (Mono)
	Audio output	1x LINE OUT
Network	Security	Password protection
		User access log
		HTTPS encryption
Supported protocol	HTTP, HTTPS, FTP, SMTP, UPnP, DNS, DynDNS, NTP	
	RTSP, RTP, TCP, UDP, ICMP, DHCP	
System integration	Intelligent video	Motion detection up to 1280x720 with 32x24 blocks
	Alarm trigger	Motion detection
		1x Sensor in/1x Alarm out
	Alarm events	File upload via ftp, e-mail
		Notification via email, FTP and TCP
	Video buffer	16MB pre-alarm and post-alarm
	Recording	SD CARD
	Firmware upgrade	Remote upgrade via network
API	CGI Interface document	
	ActiveX Interface(ocx(dll) + document)	
Physical	RESET Button	1 x Factory Reset Button
	Power Source	AC24V
	Power Consumption	Normal : 12W , Max : Heater on: 36W
	Weight (Appr.)	4,500 g (Outdoor)
	Dimension(mm)	250(Ø) x 377(H)
Environment	Operating Temperature	-40 degree~50 degree
	Storage Temperature	-40 degree~60 degree
Software	Included Software	NVR Lite (16 Channel), IP Installer (Windows Only)
Package Contents		Network Camera, Use Manual, External Power Adaptor, Software CD