

ONSIP

1.

O2PTZ22D5W

O2PTZ34D5W



speco technologies®

Revision History

Date	Rev No.	Description
Sept,1 st , 2012	1.0	First manual revision creation.
Nov,5 th , 2012	1.3	Updated Specification
Mar.3 rd ,2013	1.4	Updated picture
May 24 th , 2013	1.5	Text revisions
June, 19 th , 2013	1.6	Updated package contents, drawings

Warning & Cautions

If you fail to read this information and handle the product incorrectly, faulty or malfunction as well as death or serious injury may occur.

This Unit should be installed by trained personnel.

Immediately stop using when the product emits smoke or abnormal heat.

Never install the product in area exposed to oil or gas.

Never install the product on a ceiling that cannot hold its weight.

Never touch the power cord with wet hands.

Clean only with dry cloth.

Never use the product in extremely high or low temperature condition.

Never drop, hit, strongly nor vibrate the product.

Never expose the product to direct sunlight or severe ray.

Never touch the front glass of the product.



This symbol is intended to alert the user to the presence of un-insulated "dangerous voltage" within the product's enclosure that can cause electric shock..



This symbol is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

- . Heater Operational Temp :
 - On at +10°C (±5°C), Off at +15°C (±5°C)
- . Fan Operational Temp :
 - On at +45°C (±5°C), Off at +35°C (±5°C)

Indications:

	Warning: Death or Serious Injury will occur without following Warning.
	Caution : Operational Problem(Faulty & Malfunction) will occur without complying with Caution
	Reference : Technical Information for Users

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1. Introduction

1.1. Overview of O2PTZ22D5W, O2PTZ34D5W

O2PTZ22D5W(Outdoor), O2PTZ34D5W(Indoor), is a state-of-the-art Speed Dome Network Camera based on integrated Embedded Software technologies such as H.264 & MJPEG, G.726 & PCM Video & Audio Compression, Embedded Web Server, Embedded Streaming Server, various Network Protocols, transmits synchronized video and audio data in real time through IP Network as well as supports bi-directional audio communication by allowing transmission of audio from Client PC to the camera

O2PTZ22D5W, O2PTZ34D5W is applicable for various sectors such as Security, Remote Monitoring, Remote Education, Simple Video Conference as well as Internet Broadcasting System etc.

1.2. Specification

1.2.1. Basic Specification

Class		Description	
Video	Compression	H.264 / MJPEG	
	Resolution	**Refer to the datasheet	
Audio (Bi-directional)	Up Stream	32 Kbps G.726	
	Down Stream	64 Kbps PCM	
Network	Interface	RJ-45, 10/100 Mbps	
	Access Network	Static, DHCP, PPP/PPPoE	
	Protocol	IPv4/6, TCP, UDP, IGMP, ICMP, ICMPv6 etc.	
I/O	Sensor	4	NC, NO Selectable
	Relay Output	2	Alarm or Remote ON/OFF Control (24V, 1A)
	RS-232C	Factory Default	
	Mic/Line In	Selectable on Admin Page	
	Line Out	1 V p-p Audio Output for Amp embedded Speaker	
	CVBS Output	Supported	
Power	PoE	Supported	
	DC In	12VDC Adapter (higher than 2 Amp)	
Housing	Water-Proof	IP66	
	Heater	Refer to Installation Configuration	
Installation Type	Bracket	Wall, Ceiling, Ceiling Embedded Type	
Motion Detection	3 Regions	Optional Shape & Sensitivity for 3 Regions	
Upgrade		Remote F/W Upgrade via IP Network	
Management & Configuration		Remote Management & Configuration using IP Network and Admin Tool Page	
Client/Viewer	Web Viewer	Simple Access via Internet explorer	
	Speco-NVR	VMS Software	
Dynamic IP	DDNS support	Free DDNS support through Speco Technologies	
Security Management		802.1x authentication, User ID & Password Protection, IP Filtering, Audio per user and Bi-directional audio communication configuration control	
Time Configuration Management	Sync to PC	Sync to PC Time	
	Manual	Manual Configuration	
	Internet Time Server	Sync to Time Server	
	DLS	Daylight Savings Configuration	

1.3. Application of O2PTZ22D5W, O2PTZ34D5W

- Security Surveillance (Building, Stores, Manufacturing Device, Parking Lot, Bank, Public Office & Military etc)
- Remote Monitoring (Hospital, Kindergarten, Traffic Status, Public Area)
- Video Conference, Remote Lecture, Internet Broadcasting
- Climate & Environment Surveillance

2. Production Description

2.1. Package Contents

Open the package and check if the followings are included;

2.1.1. O2PTZ22D5W(OUTDOOR)

Contents	Description	Remark
Bracket & Housing	Outdoor Housing, Wall Mount Bracket	
Manual	Housing Installation Manual	
IP Camera	Camera body	
Tools & Accessories	L-Wrench 1EA, Cable Tie 5EA, Terminal Block (2Pin, 5Pin, 6Pin : 1EA), Screw(Ø 3x6 2EA, Ø4x22 2EA)	
CD	Software & Product User Manual	
Quick Reference	Quick Installation Guide	

2.1.2. O2PTZ34D5W(INDOOR)

Content	Description	Remark
Bracket	Ceiling Mount Bracket	
IP Camera	Camera body	
Tools & Accessories	L-Wrench 1EA, Safety Wire 1EA, Cable Tie 5EA, Terminal Block (2Pin, 5Pin, 6Pin : 1EA), Screw(Ø 3x6 2EA, Ø4x16 5EA)	
CD	Software & Product User Manual	
Quick Reference	Quick Installation Guide	

2.2. Preview

O2PTZ22D5W(Outdoor) O2PTZ34D5W(Indoor)	IP-Installer	VMS Software (Speco-NVR)
		
Speed Dome Network Camera	IP Assignment Program	PC based Client for monitoring/storing Video/Audio transmitted form Product (Max. 64CH supported@D1)

2.3. Physical Description

2.3.1. External View



Fig 2-1. External View of O2PTZ22D5W, O2PTZ34D5W

2.3.2. Bottom View & Connection Diagram

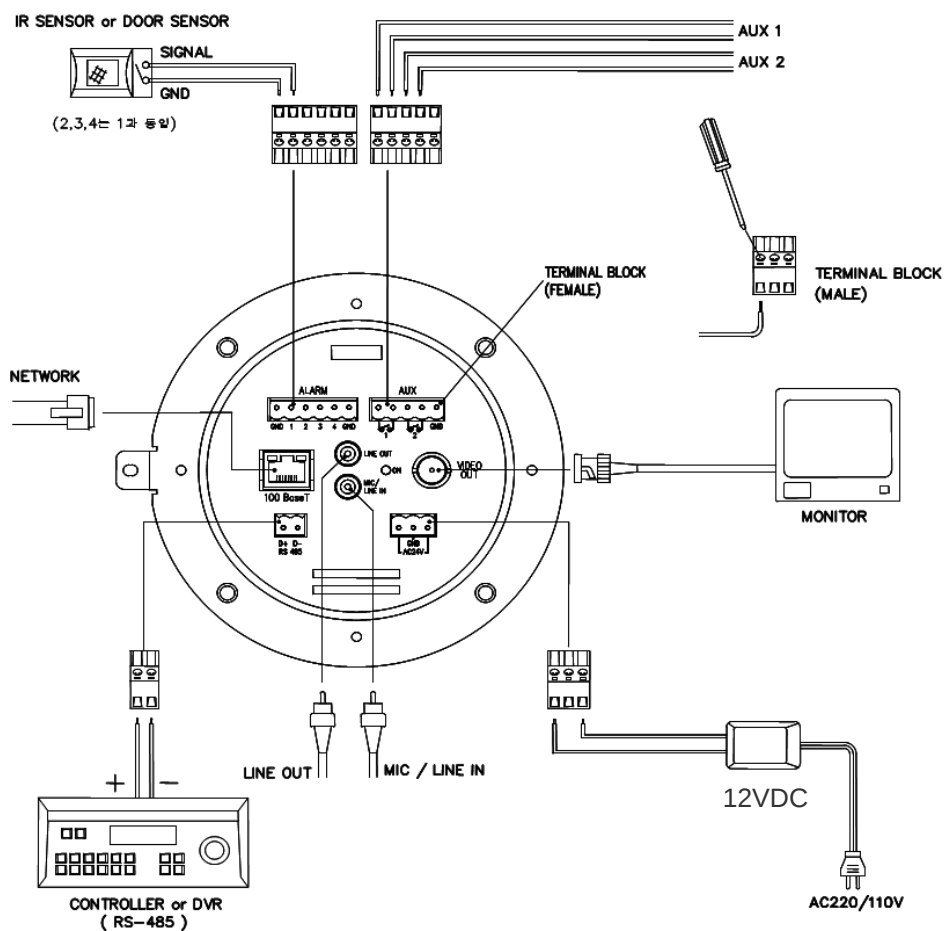


Fig 2-2-1. Terminal Block, LAN & Power Connector

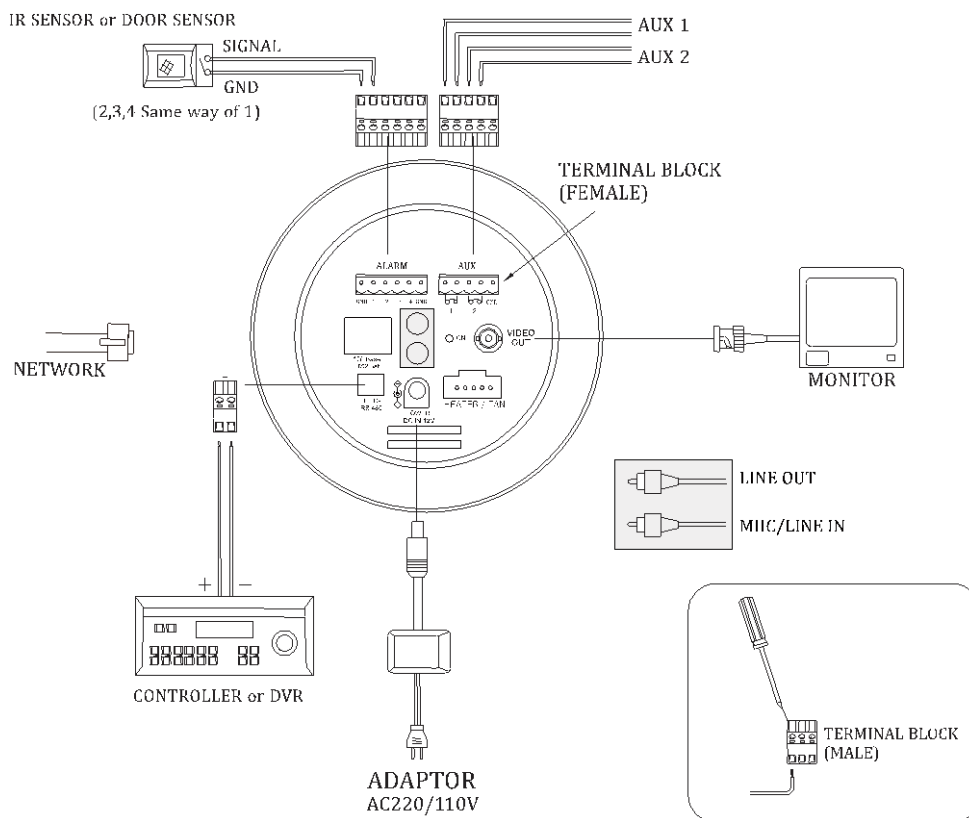


Fig 2-2-2. Terminal Block, LAN & Power Connector

2.3.3. External & Internal View

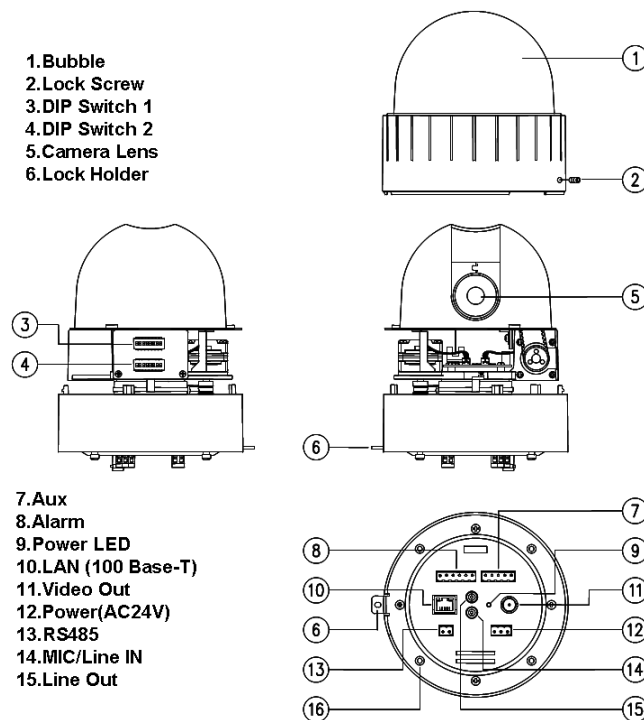


Fig 2-3-1. Connector Part

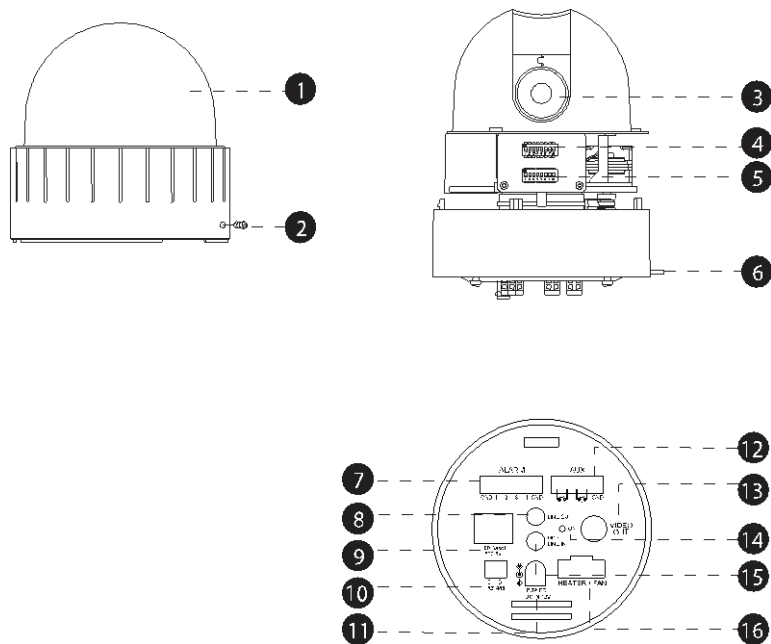


Fig 2-3-2. Connector Part

1. Bubble	9. LAN (100 Base-T)
2. Lock Screw	10. RS-485 (D+, D-)
3. Camera	11. Power Input (DC12V)
4. Dip Switch1	12. Aux
5. Dip Switch2	13. Video out (Analog CVBS)
6. Lock Holder	14. Power LED
7. Alarm	15. Mic / Line In
8. Line Out	16. Fan / Heater

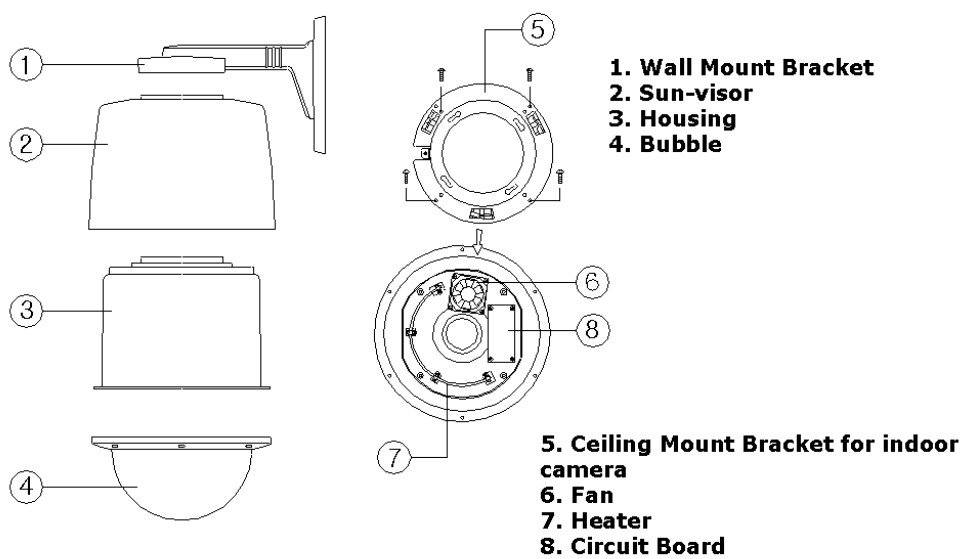


Fig 2-4. Outdoor Housing

2.4. Functional Description

- **DC Power**

Connect 12 Volt DC adapter to this terminal for supplying power to the network camera.



AC adapter which is compliant to the specification for the camera should be used. Misuse of power supply can cause damage to the unit. Speco assumes no responsibility for misuse of the power supply.

- **MIC/LINE IN**

Connect external audio source or microphone.

- **Line Out**

Connect speakers with built in amplifier. Audio from remote site is output through Line out in bi-directional audio mode.

- **100Base-T**

100Mbps Ethernet connector (RJ-45). 2 LEDs on the Ethernet connector show the status of the camera as the following:

- **Status LED (Dual Color - Red/Green):** It will be lit in green or red depending on the status.
 - ① Green: Green color indicates that the camera is in normal operation mode. Continuous green indicates that data transmission is possible. Blinking green means that someone is connected to the camera
 - ② Red: Continuous or blinking red indicates that hardware is in abnormal condition.



Red/Green LED will be lit with red momentarily and it will be lit with green after a while when power is applied to the camera.

LINK/LAN LED (Orange): It will be lit with orange color when the network cable is connected properly. Blinking orange color indicates that normal data transmission is under way. Off state indicates that there is trouble with the network connection.

- **HEATER/FAN**

Used for connecting power cable of heater and fan. Power cable of heater and fan is in the bracket.

- **Alarm In/Out (ALARM/AUX)**

Used for connecting alarm sensor, alarm annunciation device.

Class	Description
Alarm IN	Sensor In (+). NC/NO Selectable in Admin Mode
Alarm IN GND	Ground for Sensor In
Aux OUT	Alarm Output Terminal
Aux OUT(GND)	Ground for Sensor Output

- **Aux**

Relay output is provided for connecting alarm devices or for remote on/off control of devices such as light.

Relay is normal open and it will be closed upon alarm annunciation or remote on.

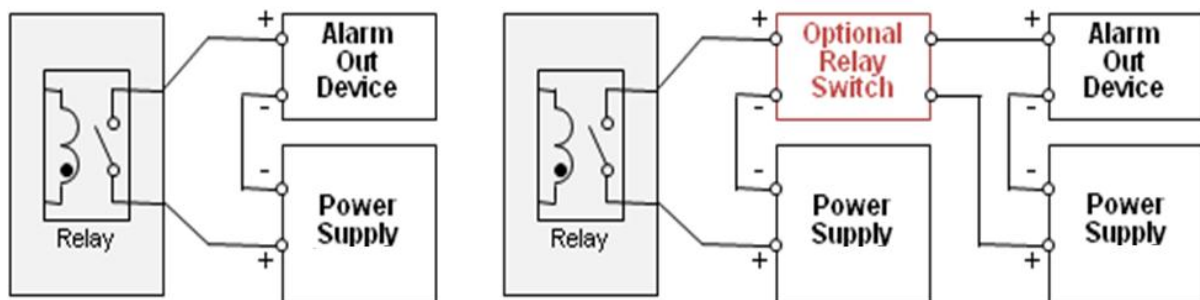


Fig 2-5. Relay Connection Diagram (Left: lower than 24V, 1A, Right: Higher than 24V 1A)

- **Alarm**

Connect external alarm sensor. Examples of sensing devices are infrared sensor, motion sensor, heat/smoke sensor, magnetic sensor, etc. Connect the two wires of the sensors to "SNS In". The sensor type (NC/NO) can be set in admin page. Multiple sensor devices can be connected in parallel.

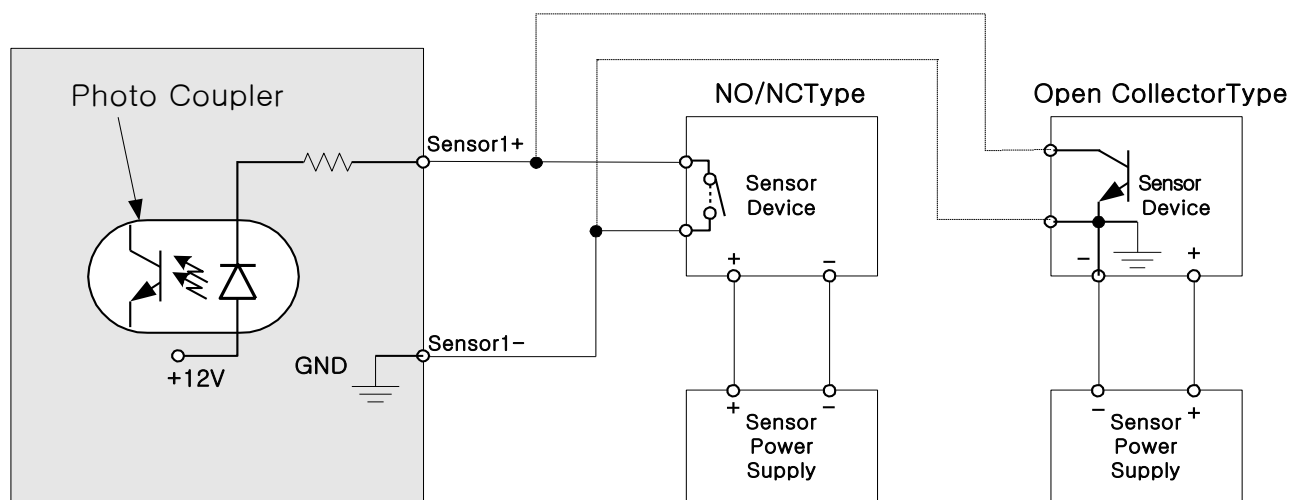
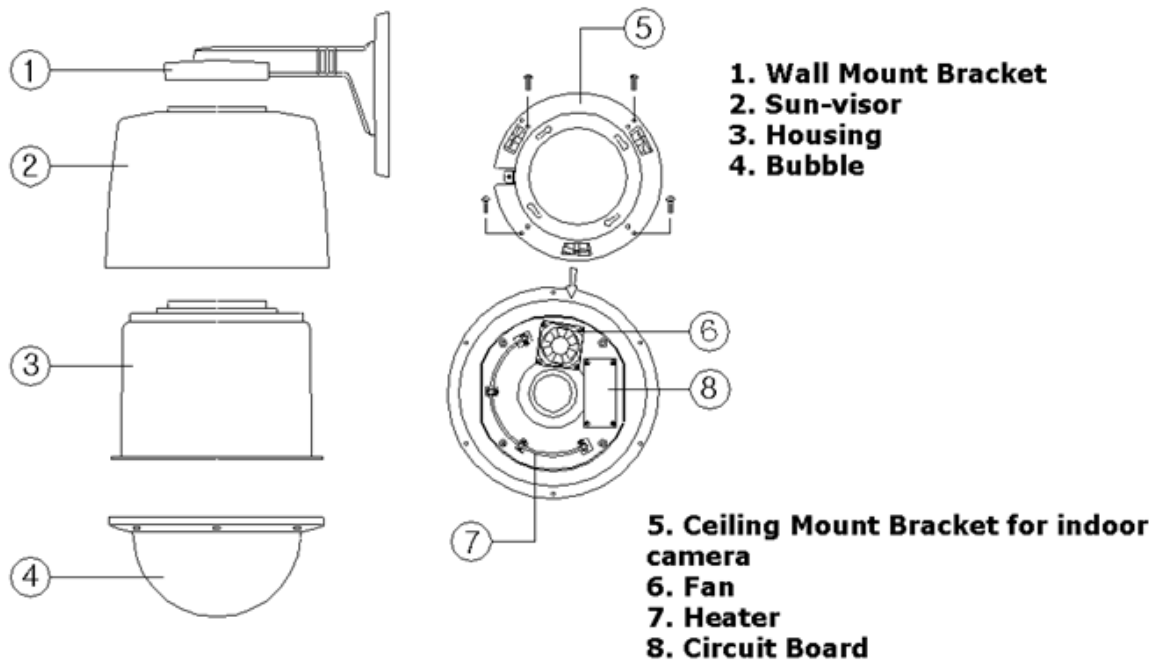


Fig 2-6. Sensor Input Connection Diagram

3. Bracket Installation

3.1. O2PTZ22D5W(OUTDOOR)

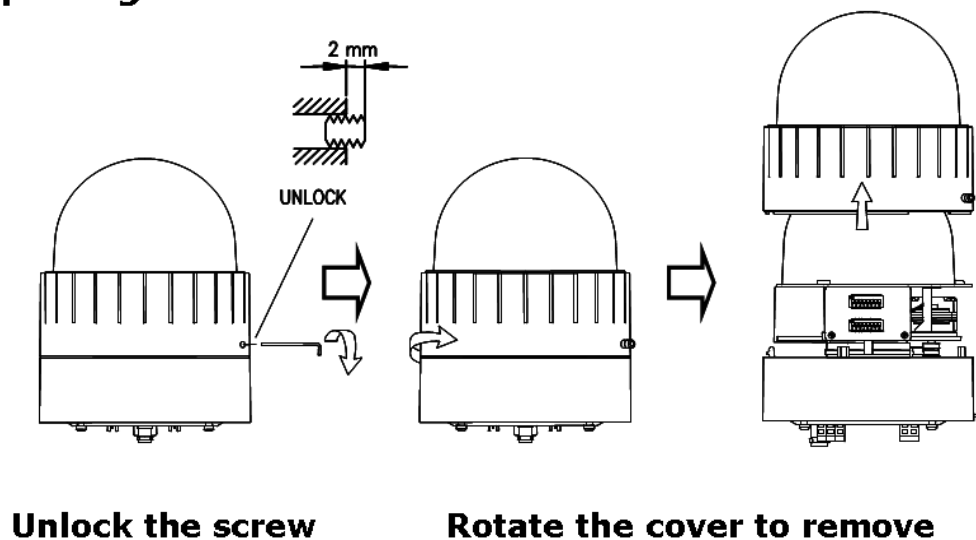
3.1.1. Basic Components & Mounting Accessories



3.1.2. Preparation

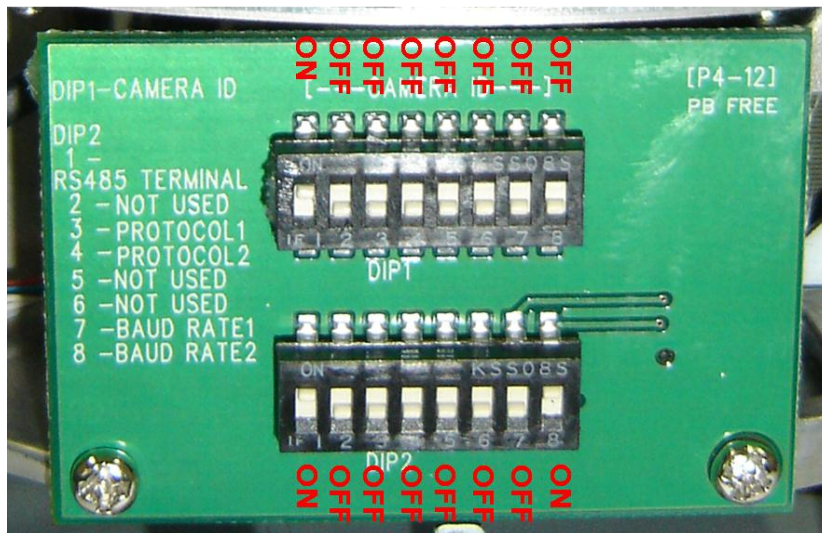
1. Open the Dome Cover by unscrewing with wrench.

Opening Dome Cover



2. Configure the DIP Switch by referring Appendix.

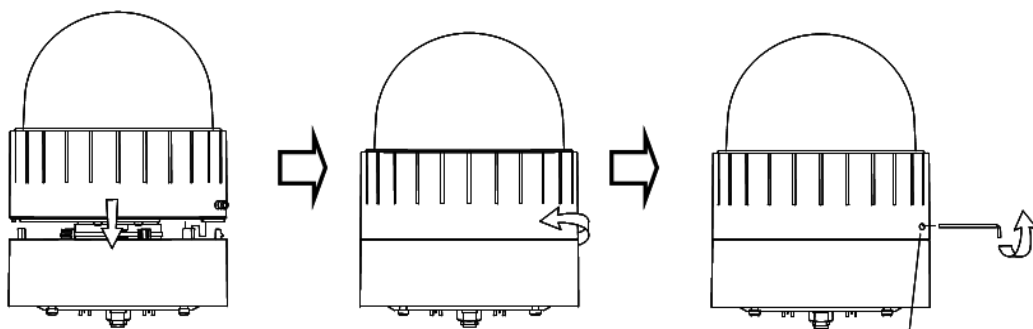
DIP Switches : Make sure to set the switch positions as illustrated below.



- When using system controller for the control of the dome, always set the RS-485 communication channel to be: 2400 bps, 8 bit, 1 stop bit, no parity.

3. Place the Dome Cover and screw.

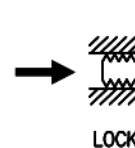
Placing Dome Cover



Place the cover & rotate to tighten

Lock the screw

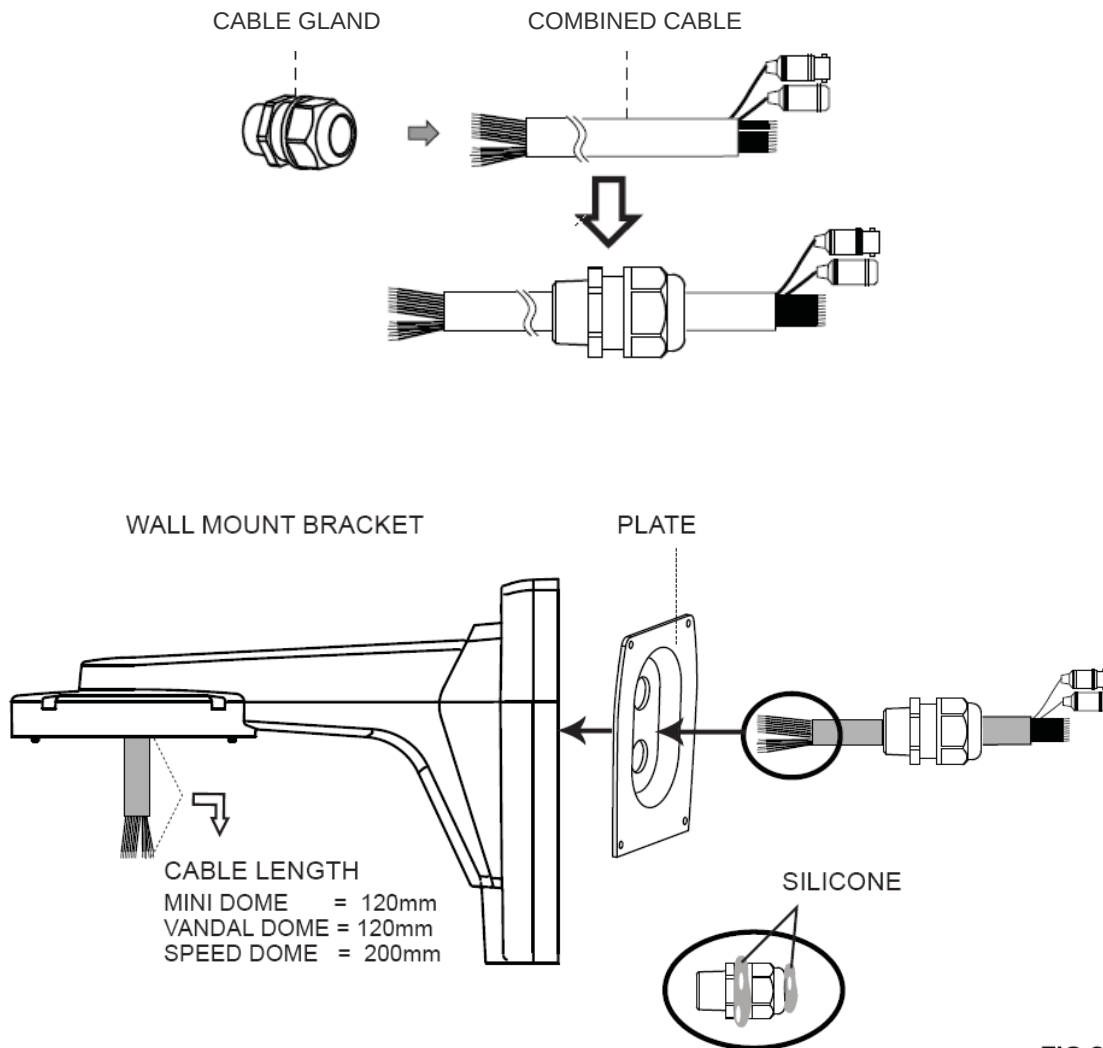
Screw head should be even with the surface when locked.



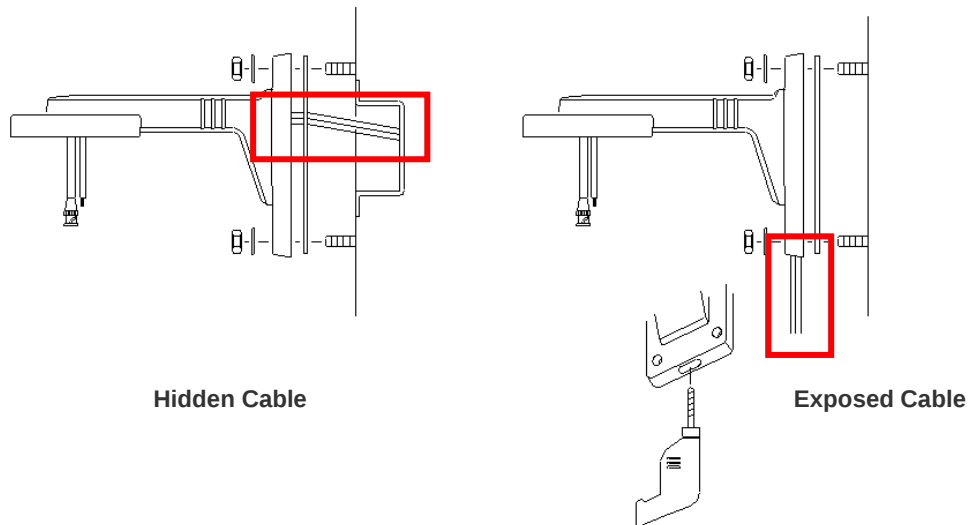
3.1.3. Installation using Walling Mount Type

The wall should be strong enough to hold 4 times of the weight of the camera (5.3 KG). This means that the wall should withstand weight of 21.2 KGs in the minimum.

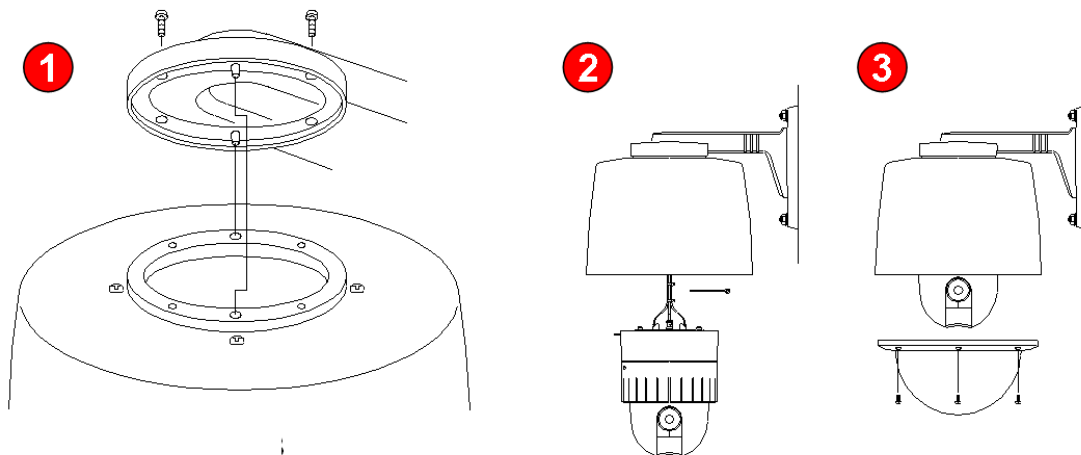
1. Pass the combined cable through the inside Cable Gland.



2. Fix the end of Cable Gland on the bottom case and coat the attached line between top & bottom of Cable Gland bottom case with silicone. For the installation at Bottom of Bracket, Gland Cable Installation is not required (refer to the below Fig).



3. Connect Sun-Visor with Wall Mounting Bracket. (1)
4. After connecting Product and Cable, install the product by inserting Product into internal fixing hole of housing and turning in clockwise. (2)
5. Assemble the Bubble. (3)

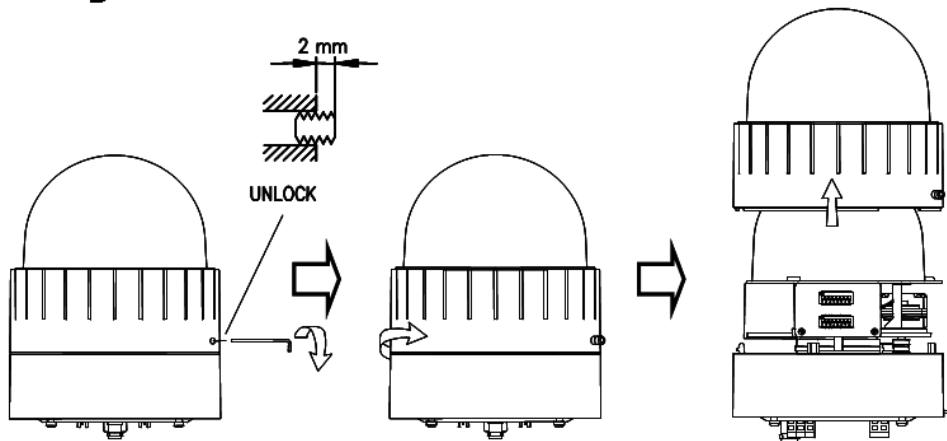


3.2 O2PTZ34D5W(INDOOR)

3.2.1. Preparation

1. Open the Dome Cover by unscrewing with wrench.

Opening Dome Cover

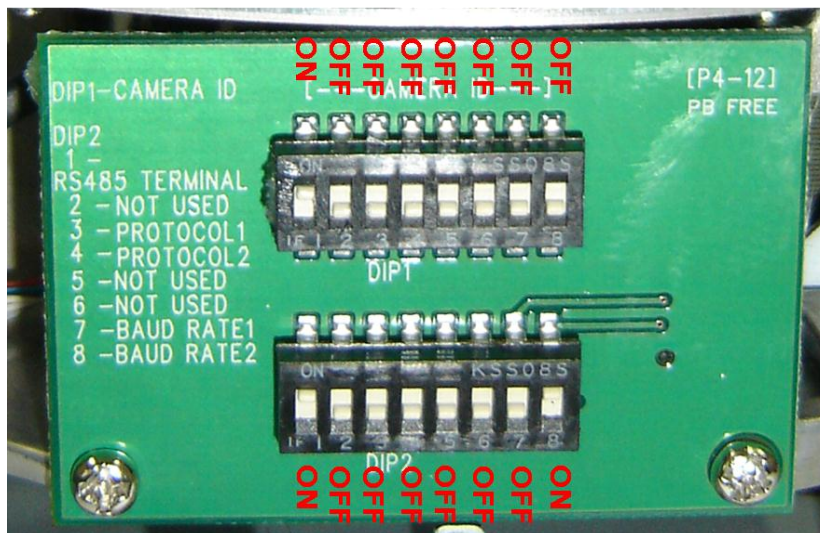


Unlock the screw

Rotate the cover to remove

2. Configure the DIP Switch by referring Appendix.

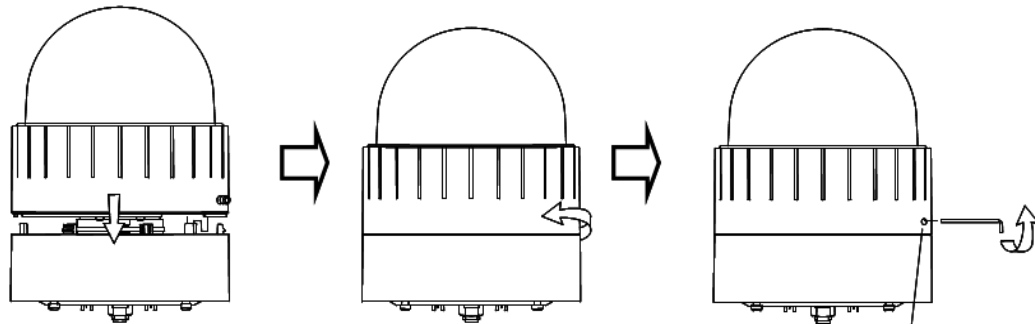
DIP Switches : Make sure to set the switch positions as illustrated below.



- When using system controller for the control of the dome, always set the RS-485 communication channel to be: 2400 bps, 8 bit, 1 stop bit, no parity.

3. Place the Dome Cover and screw.

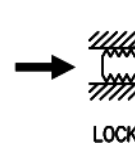
Placing Dome Cover



Place the cover & rotate to tighten

Lock the screw

Screw head should be even with the surface when locked.

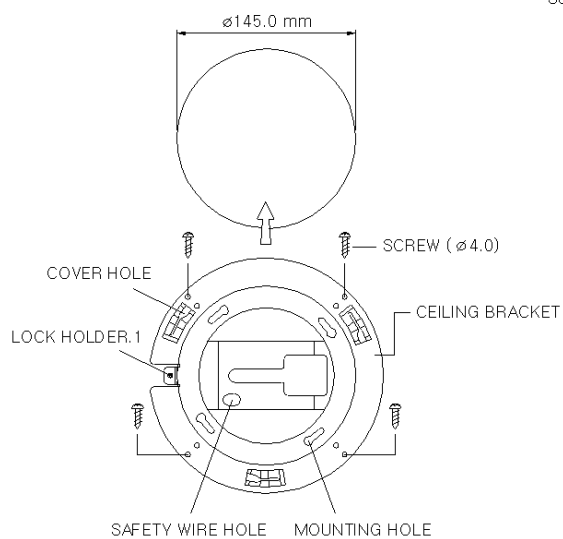


3.2.2. Installation using Ceiling Mount Type

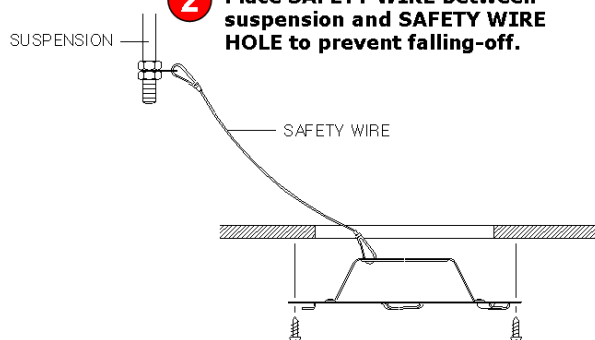


Ceiling board should be strong enough to hold the weight of approx.. 2Kg.

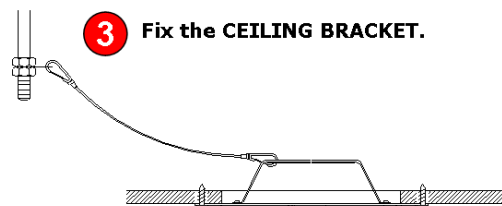
1 Prepare 145mm Diameter Hole on the Ceiling



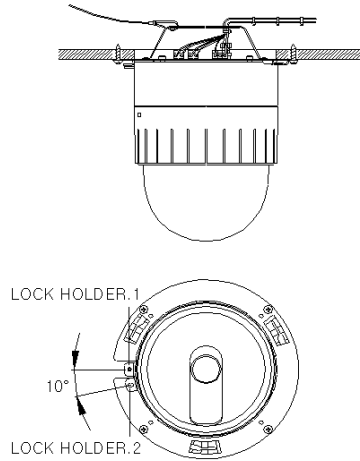
2 Place SAFETY WIRE between suspension and SAFETY WIRE HOLE to prevent falling-off.



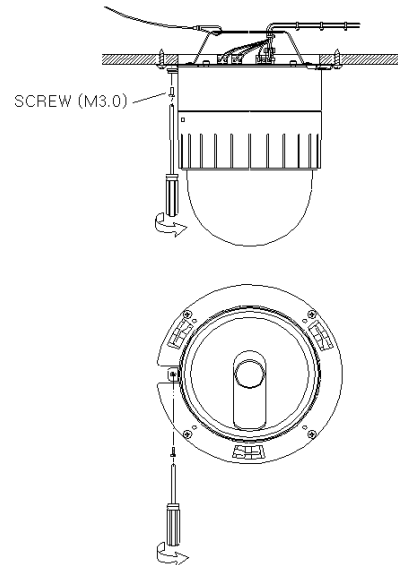
3 Fix the CEILING BRACKET.



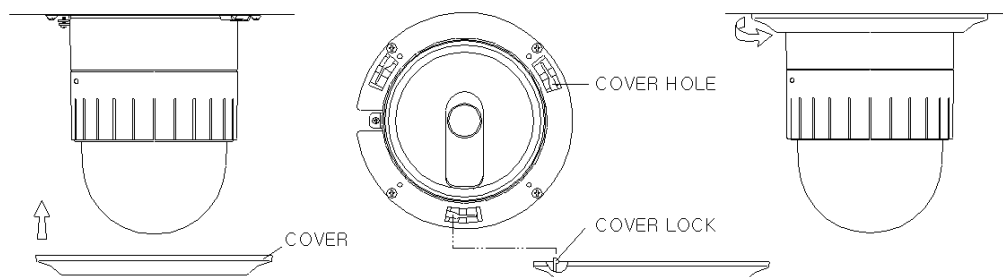
- 5 Attach the CAMERA to the CEILING MOUNT.**
TO attach the CAMERA to the CEILING MOUNT, insert the CAMERA MOUNT HOLES into the BRACKET MOUNT HOLES and twist the camera by 10° toward locked position.



- 6 Place M3 screw to fix the CAMERA.**



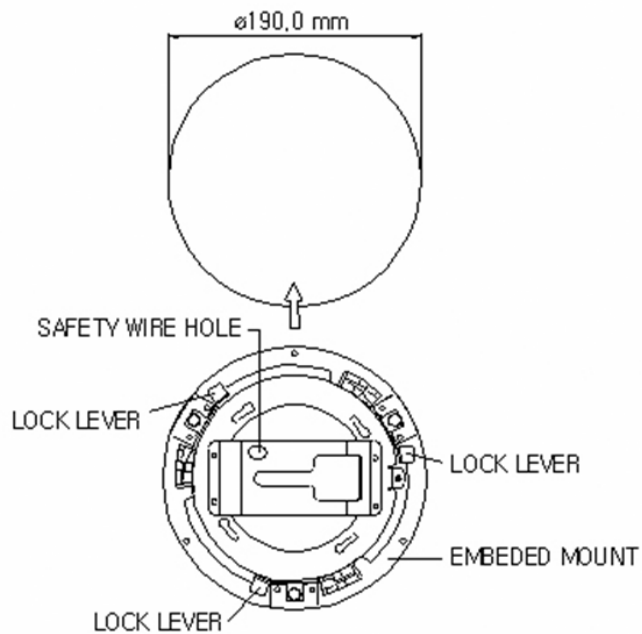
- 7 Place the cover**



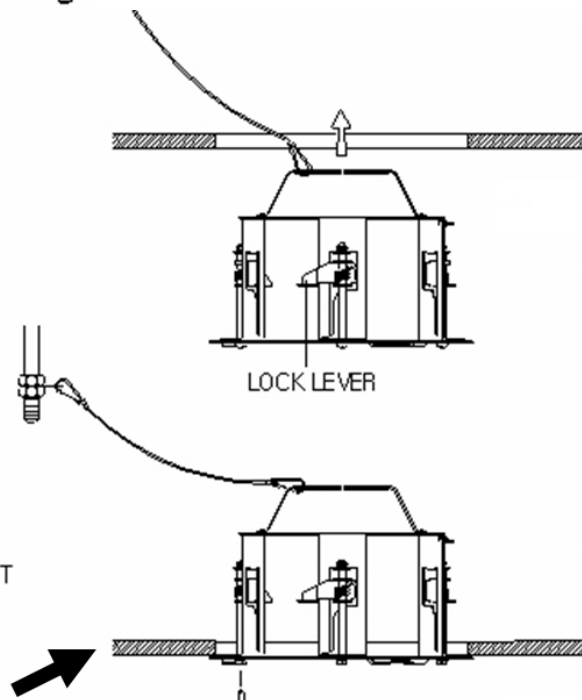
3.2.3. Installation using Embedded Mount Type

1. Prepare 190mm Diameter Hole on the ceiling.
2. Place Safety Wire between suspension and Safety Ire Hole to prevent falling-off.
3. Fold the Lock Lever and insert the bracket into the ceiling hole.
4. Fix the bracket to the ceiling with screws.

- 1 Prepare 190mm Diameter Hole on the Ceiling.



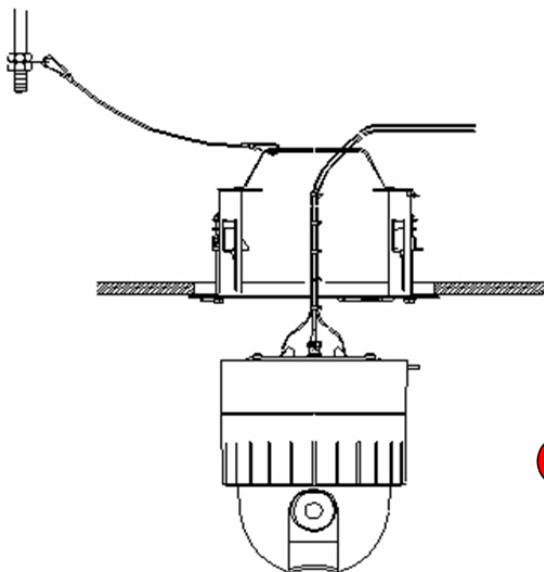
- 2 Place Safety Wire between suspension and Safety Wire Hole to prevent falling-off.



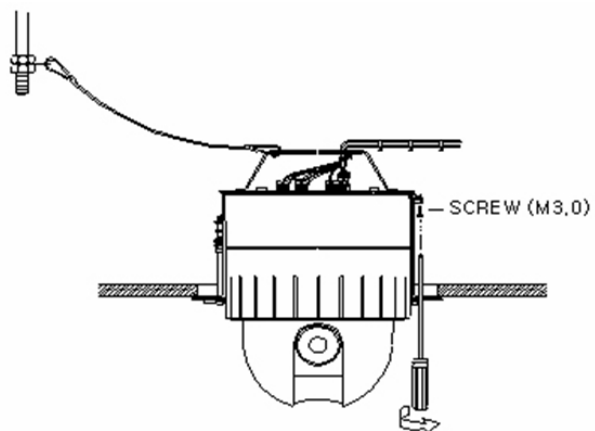
- 3 Fold the Lock Lever and insert the Bracket into the Ceiling Hole.
- 4 Fix the Bracket to the Ceiling with Screws.

5. Insert the Camera into the Mount.
6. Apply screw to fix the Camera.
7. Place the cover to finish the installation.

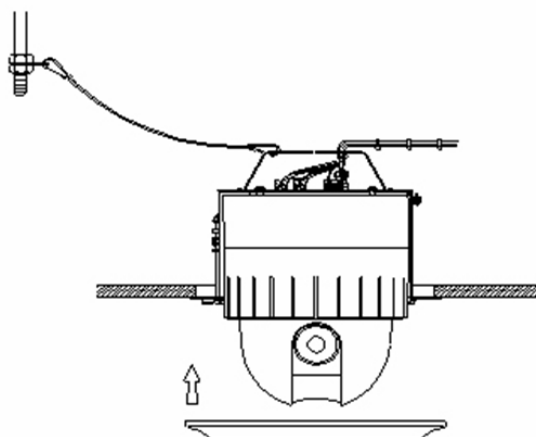
- 5** Insert the CAMERA into the MOUNT.



- 6** APPLY screw to fix the CAMERA.



- 7** Place the COVER to finish the installation



4. Installation

4.1. Required System Specification

Required Specification of PC for Camera Configuration & Control.

Class	Recommendation	Remark
CPU	Pentium-4 3Ghz	
RAM	1GB	
Graphic Card	Higher than ATI Chip-Set based 64MB	1920x1080 resolution
LAN Card	Higher than 100Mbps	
OS	Windows XP	
Web Browser	Higher than Internet Explorer 6.0	

* * Operating Systems supported: Windows 2000 Professional, Windows XP / Vista / 7

4.2. Quick Installation Guide

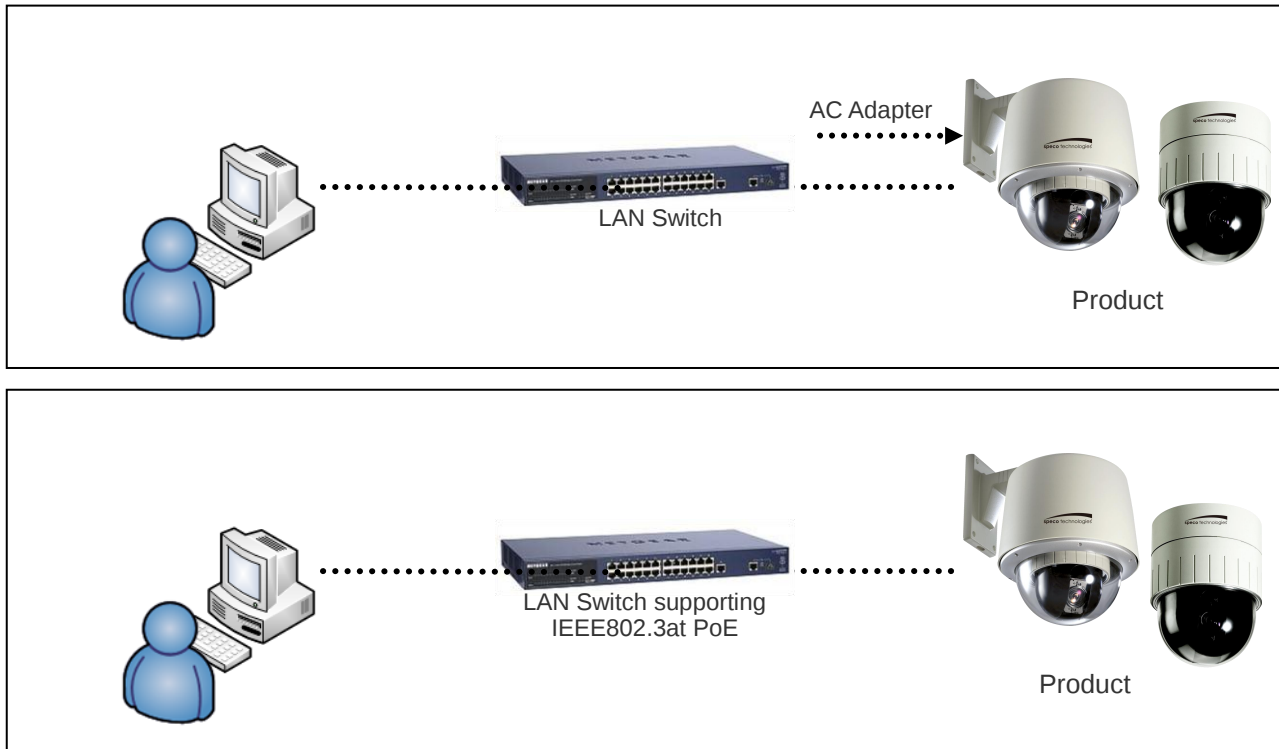


Fig 4-1. LAN Cable Connection Diagram

2. Connect PC and O2PTZ22D5W, O2PTZ34D5W to Network Device (HUB)

- I. Prepare a PC which needs to be connected to Network.
- II. Connect PC with Product as in Fig 4-1.

3. Install Speco-NVR

Speco-NVR is a multi-channel VMS program for to IP camera or Video server. Install Speco-NVR on remote PC to connect to these products. It is needed to assign connection information to Speco-NVR program before connection.

Insert the CD provided with product into the PC and install the Speco-NVR.

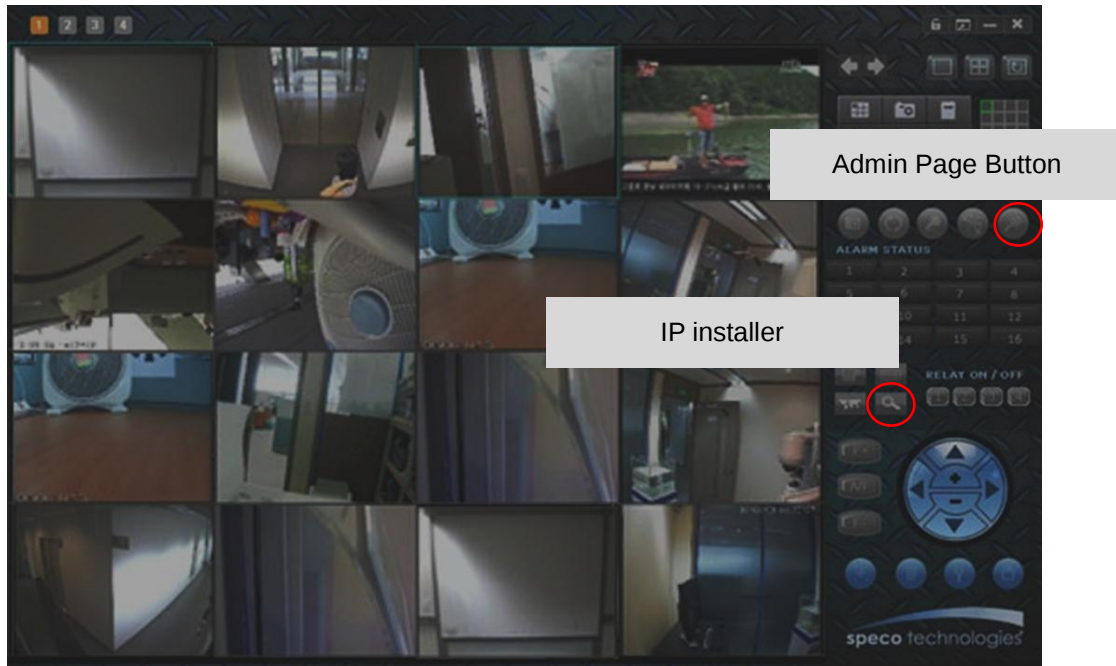
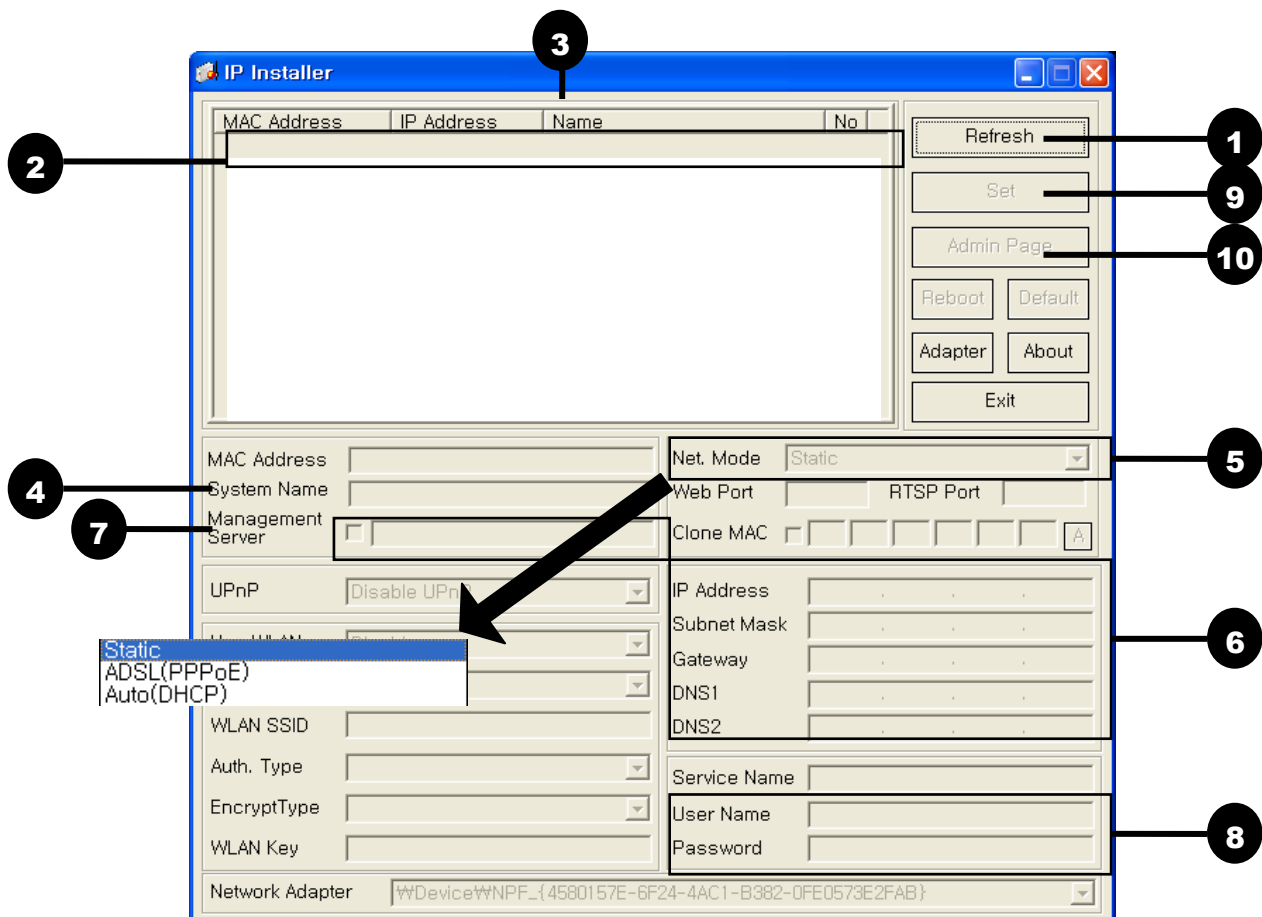


Figure 4-2. Speco-NVR

Follow the sequence below for setting the IP parameter

- i) Run IP installer
- ii) Click (1) in ONSIP installer window.> Double click on (2) > Fill in (4) > make a selection in (5) > Fill the parameters in (6)
- iii) Click on (9) to apply the settings.
- iv) You can connect to admin page by clicking on (10).



Click on the field in **(3)** for sorting and rearranging the list.

Select network mode that best suits from the drop down list in **(5)**. You can choose either Static or ADSL and Auto (DHCP), respectively. If ADSL and Auto are selected, the fields in **(6)** **are** deactivated.

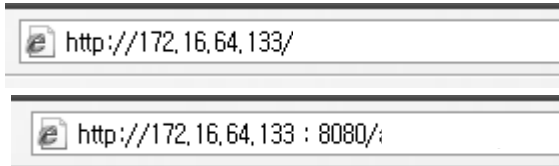
In case of ADSL, fill the User Name and Password in **(8)** with the values provided by your ISP.

If DDNS service is needed, Check at the box and fill the empty field with hostname you want in **(7)**.

4. Remote Connection to Camera

I. Connection via Web Viewer

Web View is the simplest method to connect to the product via internet explorer. Once you insert "**http://IP_address:HTTP_port_number**" into Internet Explorer, you can access the page.



For the use of Web Viewer, Active-X module should be installed.

If internet access is available, you can download it by accessing Camera or if you install Speco-NVR, Active-X module will be installed together.

Connection to Admin Page

Basic Control Buttons

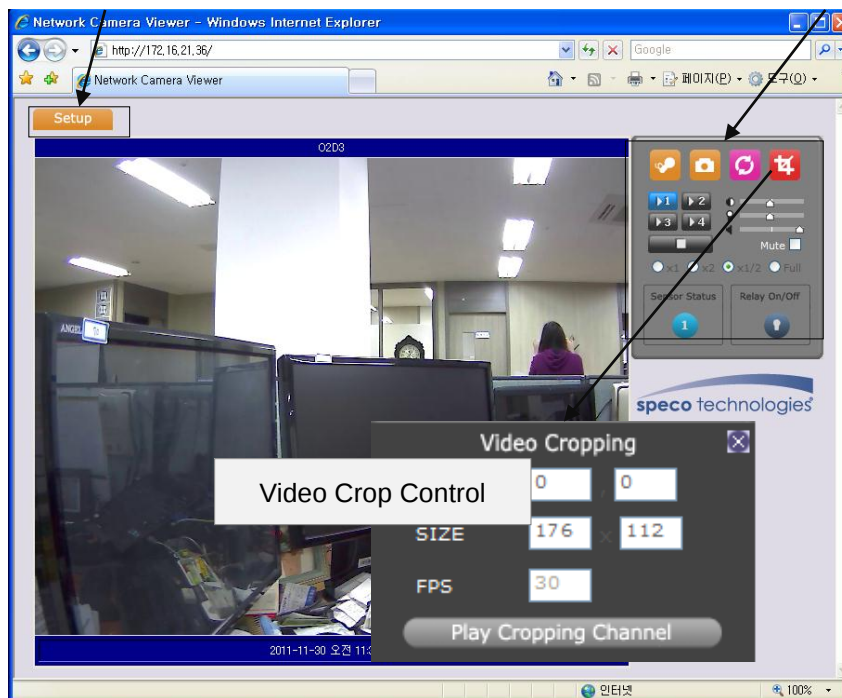


Fig 4-3. Web Viewer Connection

Basic ID / Password of Admin Tool: **admin /1234**

For the detail, please refer to [[Configuration_Guide](#)].

1) Connection through Speco-NVR

Click the camera assignment button for setting camera address. Input the description, address, Ch#, User ID, Password and port and then click the save button. After assignment procedure, you must click the SAVE button. You can see the live video when you click the live view button as below. When you exit Speco-NVR, you have to input the ID/PW, admin/1234. Details for the Speco-NVR can be found in [Speco-NVR User's Guide].

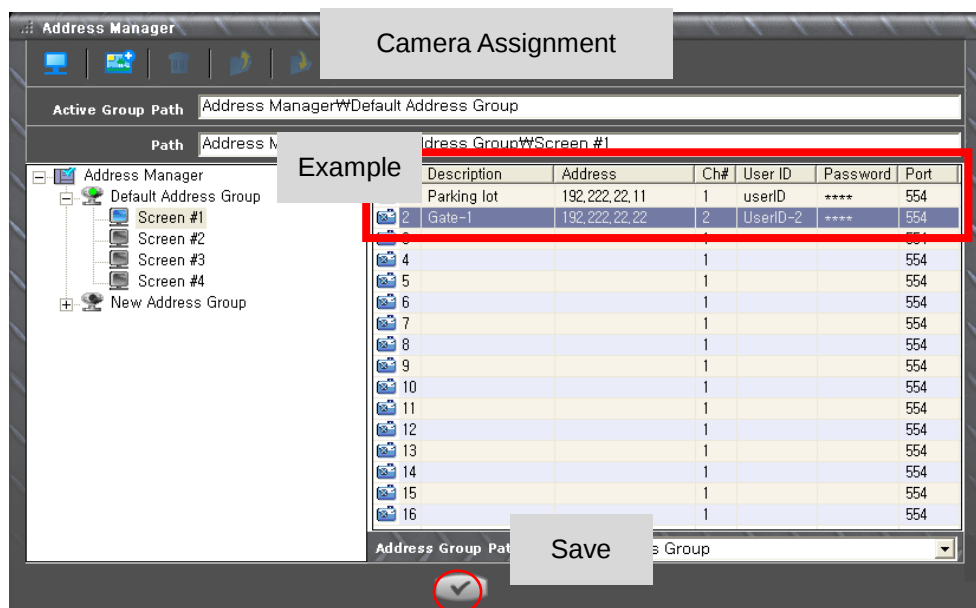
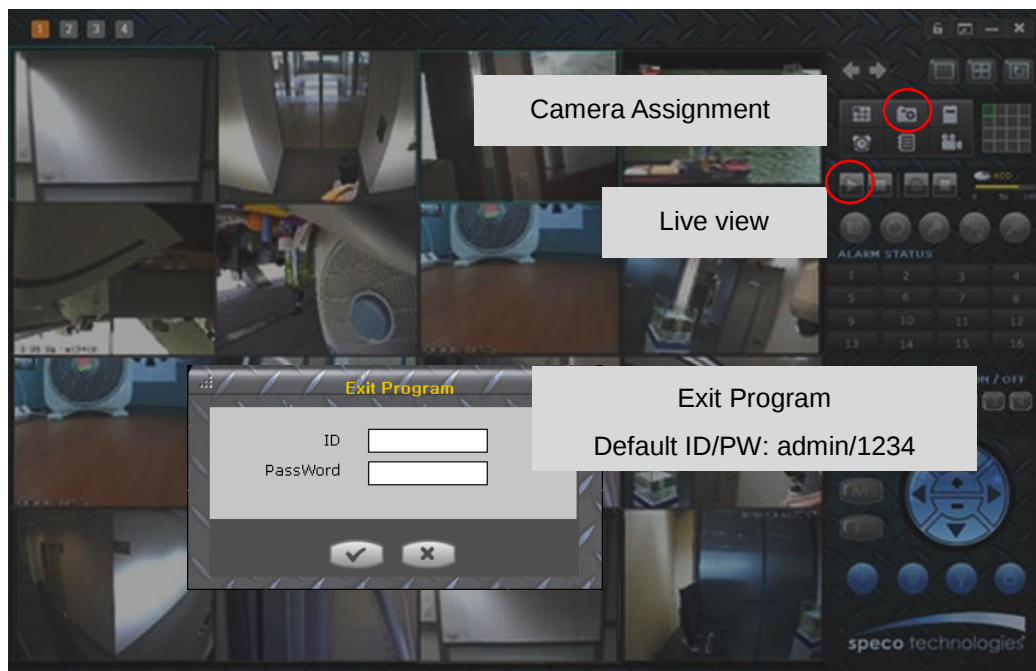


Figure 4-4. Speco-NVR

4. Initial Configuration by connecting Admin Mode

All Parameters of O2PTZ22D5W are initially set as factory default. So you must change them with appropriate value to your network configuration by accessing via Admin Tool. Admin Tool Access Method is as below.

Http://[IP Address]:[HTTP Port No.]/ admin.htm

Admin Tool Access ID / Password: **admin / 1234**. As it is Default Value, please change them. For the detailed Configuration, please refer to [\[Configuration_Guide\]](#).

5. Troubleshooting

5.1. No Video on Viewer

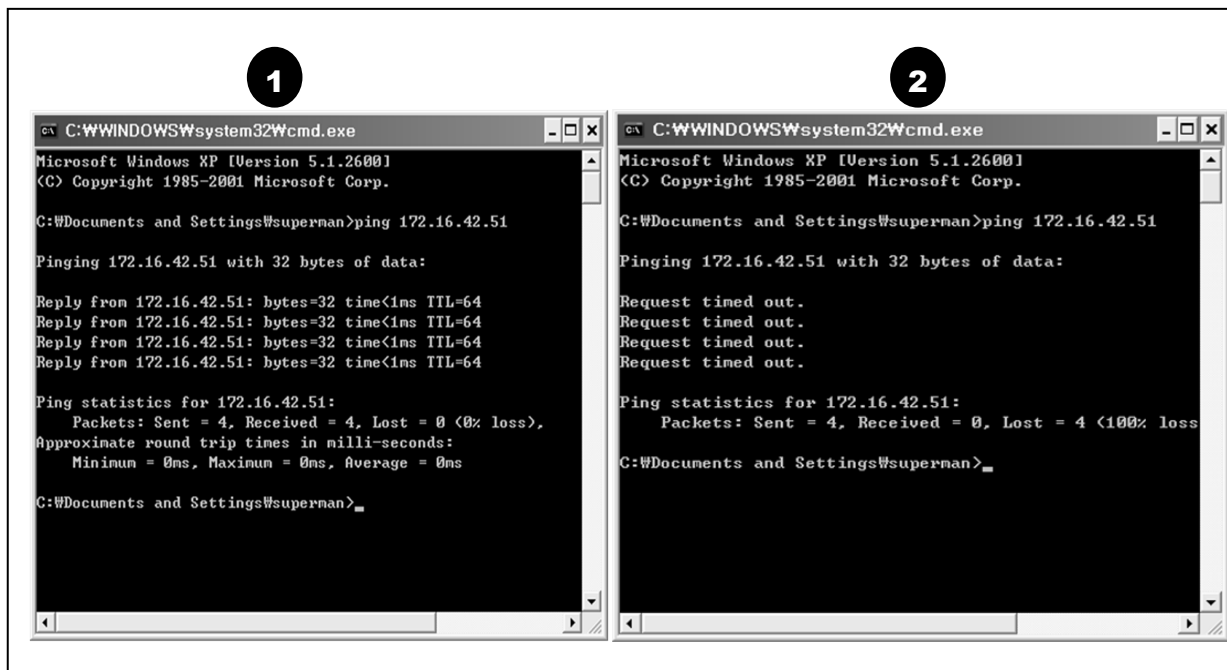
⇒ Network Connection Status Check(Ping Test)

You can check the Network Connection Status by doing Ping Test.

- Start > Run > cmd > Ping IP Address (EX>ping 172.16.42.51).
- If you get the response such as "Reply from~", Network Configuration & Connection Status is good.

Please re-try to access or refer to other trouble shooting category. (①).

- If you get the response such as "Request timed out", Network Configuration & Connection Status is in problem. Please check the Network Cable and Configuration. (②)



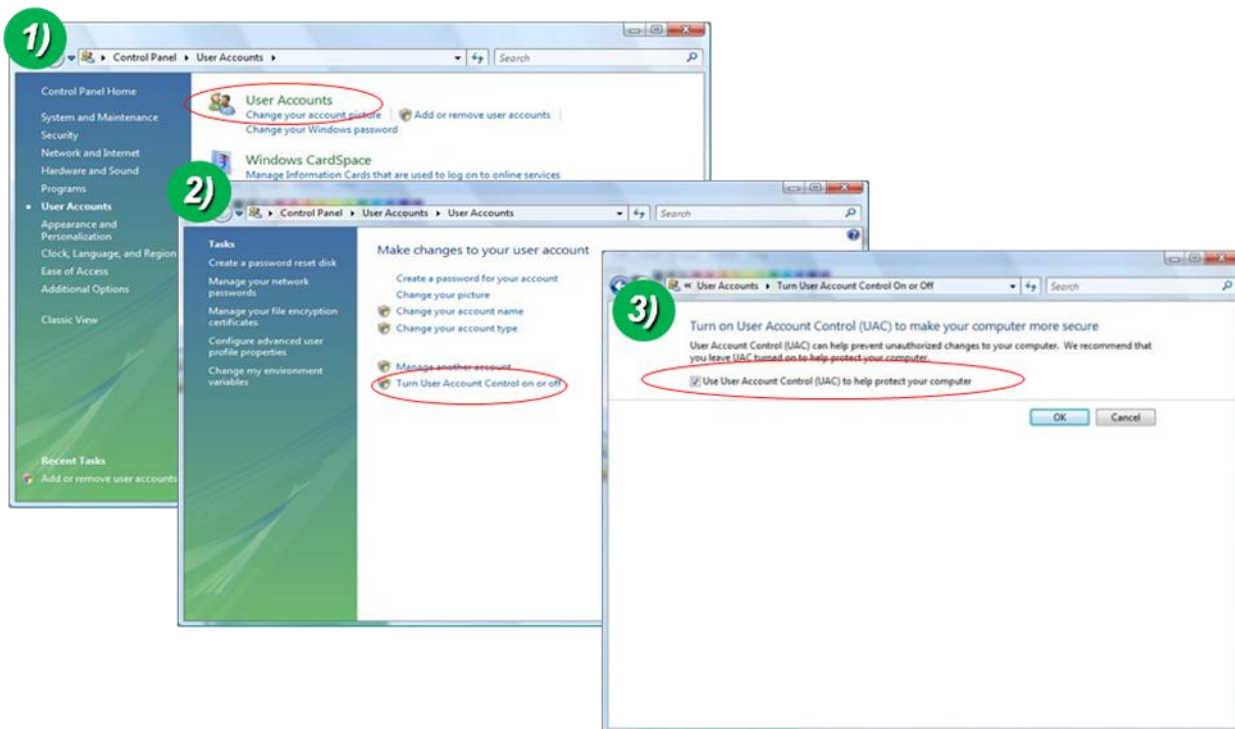
5.2. Windows vista and Windows 7 User for Record & Capture Problem

For the use of Video Recording & Capture function on Speco-NVR and Web Viewer, Windows Vista and Windows 7 Users are required to configure “User Account Configuration” and “Program Execution Entitlement Configuration”. If not configure, Recorded File won't be generated or Captured Image on Web Viewer won't be saved.

Windows Vista Configuration

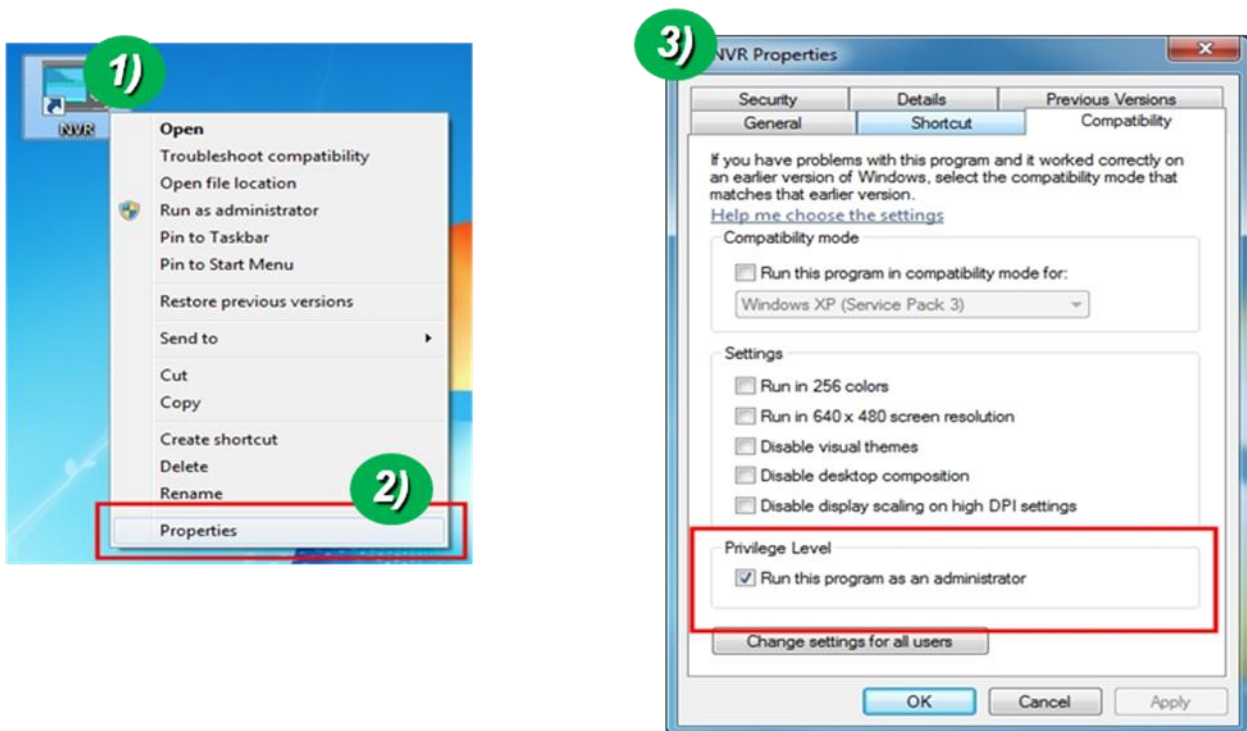
1. User Account Configuration

- 1) Select “User Account” on Control Panel
- 2) Select “Turn User Account Control on or off”
- 3) Uncheck “Use User Account Control to help protect your computer”.



2. Program Execution Entitlement Configuration

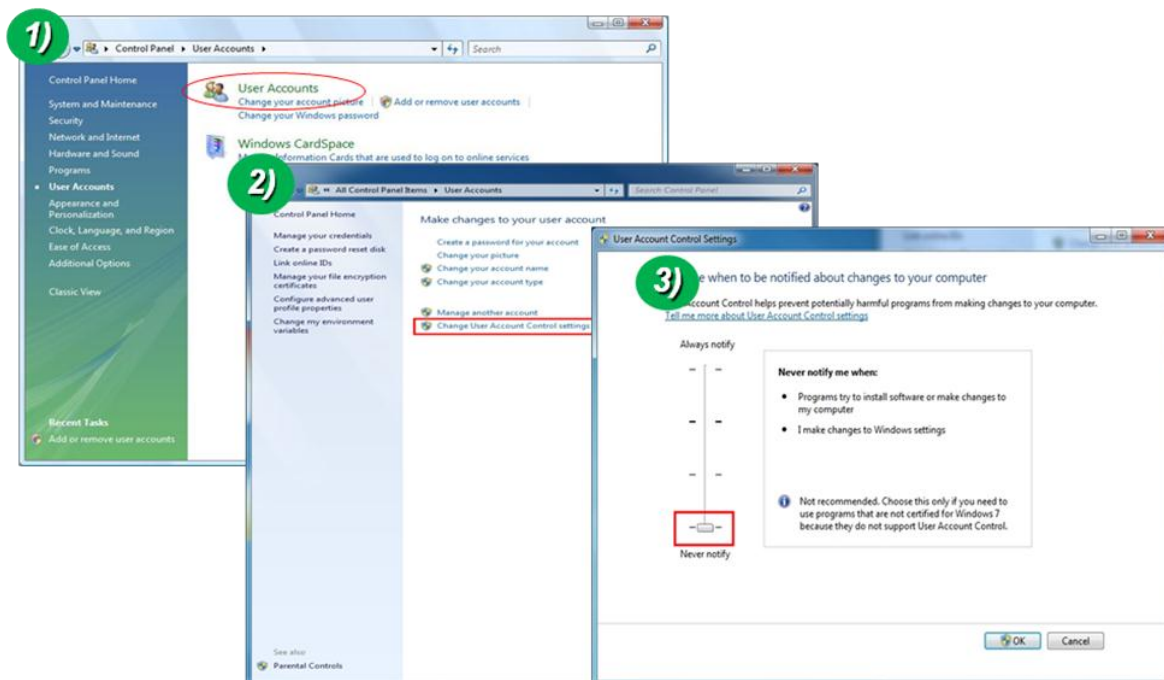
- 1) Select “NVR” icon on the wallpaper.
- 2) Select “Properties” menu popped up by clicking right button on Mouse.
- 3) Select Check Box of “Run this program as an administrator” from the compatibility Tap.



Windows 7 Configuration

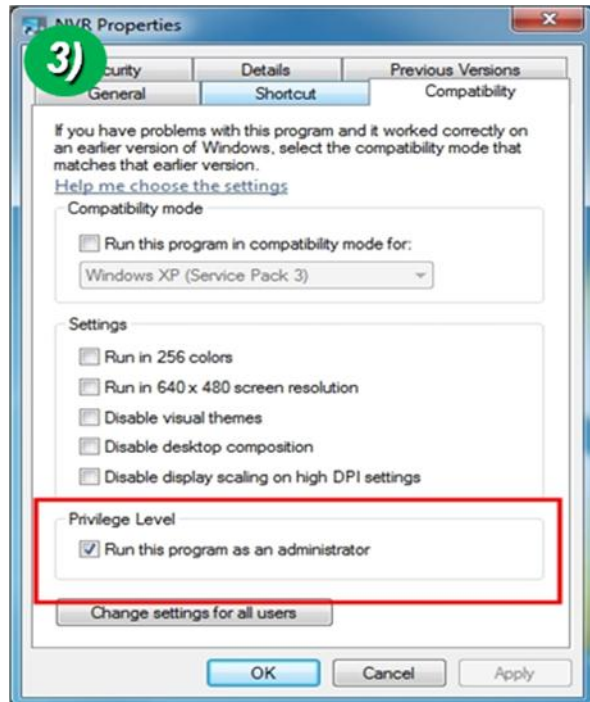
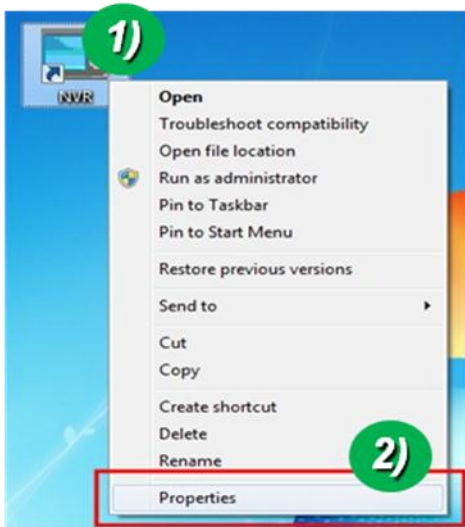
1. User Account Configuration

- 1) Select "User Account" on Control Panel
- 2) Select "Change User Account Control Setting"
- 3) Set the Alarm Level at the lowest "Never Notify"



2. Program Execution Entitlement Configuration

- 1) Select "NVR" icon on the wallpaper
- 2) Select "Properties" menu popped up by clicking right button on Mouse
- 3) Select Check Box of "Run this program as an administrator" from the compatibility Tap.



5.3 Technical Inquiry

Please contact to your supplier if you still have problem even taking all trouble shootings.

For the quickest solution, please prepare all information below;

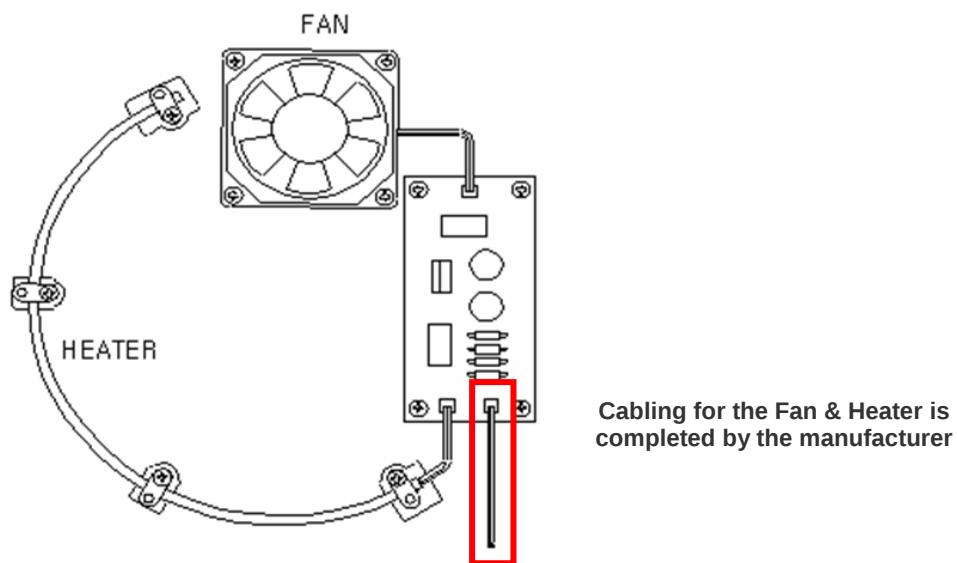
1. **Product Model Name**
2. **Serial No. & Mac Address**
3. **Date of Purchase**
4. **Summary of Problem**
5. **Error Message**



6. Appendix

6.1. FAN & Heater

FAN & Heater are inside the housing of the Outdoor Speed Dome (O2PTZ22D5W).



FAN & Heater operate by connecting power cable of FAN & Heater to HEATER/FAN connector at bottom of product.

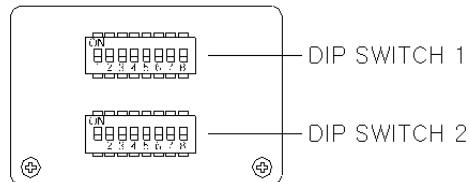
. Detailed Specification

Category	Description
Heater Control Temp.	On: below 10℃ , Off: over 15℃
FAN Control Temp.	On: over 45℃ , Off: below 35℃
Operational Temp.	-40℃ ~ +60℃
Operational Humidity	Below 90%
Water-Proof	IP 66
Materials	Poly Carbonate (Bubble), Aluminum (Body)
Appearance	253Ø(diameter) x 307mm(Height) x 190Ø(Bubble)
Power Consumption	18W Max (With Camera: 43W Max)
Weight	3.4kg (including Camera : 5.3kg)

6.2. DIP Switch Setting

A. ID Configuration

* Factory Default: Camera ID = 1



(1-ON, 0-OFF)

DIP SW	ID VALUE	DIP SW	ID VALUE	DIP SW	ID VALUE
10000000	1	00010100	40	11110010	79
01000000	2	10010100	41	00001010	80
11000000	3	01010100	42	10001010	81
00100000	4	11010100	43	01001010	82
10100000	5	00110100	44	11001010	83
01100000	6	10110100	45	00101010	84
11100000	7	01110100	46	10101010	85
00010000	8	11110100	47	01101010	86
10010000	9	00001100	48	11101010	87
01010000	10	10001100	49	00011010	88
11010000	11	01001100	50	10011010	89
00110000	12	11001100	51	01011010	90
10110000	13	00101100	52	11011010	91
01110000	14	10101100	53	00111010	92
11110000	15	01101100	54	10111010	93
00001000	16	11101100	55	01111010	94
10001000	17	00011100	56	11111010	95
01001000	18	10011100	57	00000110	96
11001000	19	01011100	58	10000110	97
00101000	20	11011100	59	01000110	98
10101000	21	00111100	60	11000110	99

01101000	22	10111100	61	00100110	100
11101000	23	01111100	62	10100110	101
00011000	24	11111100	63	01100110	102
10011000	25	00000010	64	11100110	103
01011000	26	10000010	65	00010110	104
11011000	27	01000010	66	10010110	105
00111000	28	11000010	67	01010110	106
10111000	29	00100010	68	11010110	107
01111000	30	10100010	69	00110110	108
11111000	31	01100010	70	10110110	109
00000100	32	11100010	71	01110110	110
10000100	33	00010010	72	11110110	111
01000100	34	10010010	73	00001110	112
11000100	35	01010010	74	10001110	113
00100100	36	11010010	75	01001110	114
10100100	37	00110010	76	11001110	115
01100100	38	10110010	77	00101110	116
11100100	39	01110010	78	10101110	117
01101110	118	00100101	164	01001011	210
11101110	119	10100101	165	11001011	211
00011110	120	01100101	166	00101011	212
10011110	121	11100101	167	10101011	213
01011110	122	00010101	168	01101011	214
11011110	123	10010101	169	11101011	215
00111110	124	01010101	170	00011011	216
10111110	125	11010101	171	10011011	217
01111110	126	00110101	172	01011011	218
11111110	127	10110101	173	11011011	219
00000001	128	01110101	174	00111011	220
10000001	129	11110101	175	10111011	221
01000001	130	00001101	176	01111011	222
11000001	131	10001101	177	11111011	223
00100001	132	01001101	178	00000111	224
10100001	133	11001101	179	10000111	225
01100001	134	00101101	180	01000111	226

11100001	135	10101101	181	11000111	227
00010001	136	01101101	182	00100111	228
10010001	137	11101101	183	10100111	229
01010001	138	00011101	184	01100111	230
11010001	139	10011101	185	11100111	231
00110001	140	01011101	186	00010111	232
10110001	141	11011101	187	10010111	233
01110001	142	00111101	188	01010111	234
11110001	143	10111101	189	11010111	235
00001001	144	01111101	190	00110111	236
10001001	145	11111101	191	10110111	237
01001001	146	00000011	192	01110111	238
11001001	147	10000011	193	11110111	239
00101001	148	01000011	194	00001111	240
10101001	149	11000011	195	10001111	241
01101001	150	00100011	196	01001111	242
11101001	151	10100011	197	11001111	243
00011001	152	01100011	198	00101111	244
10011001	153	11100011	199	10101111	245
01011001	154	00010011	200	01101111	246
11011001	155	10010011	201	11101111	247
00111001	156	01010011	202	00011111	248
10111001	157	11010011	203	10011111	249
01111001	158	00110011	204	01011111	250
11111001	159	10110011	205	11011111	251
00000101	160	01110011	206	00111111	252
10000101	161	11110011	207	10111111	253
01000101	162	00001011	208	01111111	254
11000101	163	10001011	209	11111111	255

B. PROTOCOL

Set by 3rd, 4th Switch of DIP Switch 2.

Factory Default: Pelco-D & Pelco-P (Auto)

DIP SW2 - 3 rd 4 th	
OFF / OFF	Pelco-D or Pelco-P
ON / ON	Maxpro protocol

C. BAUD RATE SETTING

Set by 7th, 8th Switch of DIP Switch 2.

Changeable Speed: 4800bps, 9600bps

Factory Default: 2400bps.

DIP SW2-7 th	DIP SW2-8 th	BAUD RATE
OFF	OFF	Not Used
OFF	ON	2400bps
ON	OFF	4800bps
ON	ON	9600bps

* 5th, 6th Switch of DIP Switch 2 is not used.