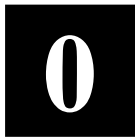


**TIP-787VPC**

**IP Vandalproof Dome Camera**

**Hardware User's Manual**





# PRECAUTIONS

## 1. Read these instructions

All the safety and operating instructions should be read before the product is operated.

## 2. Heed all warnings

All warnings on the product and in the instruction manual should be adhered to.



The symbol indicates the following items, please carefully read the description next to each symbol.

- a. Failure to follow the safety instruction given may directly endanger people, cause damage to the system or to other equipment.
- b. The requirements to make this device work, including hardware, computer settings, network settings, and operation procedures.
- c. The tips to make using this device easier, more convenient and more efficient.

## 3. Servicing

Do not attempt to service this video product yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.

## Trademarks

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

## Liability

Every care has been taken during writing this manual. Please inform your local office if you find any inaccuracies or omissions. We cannot be held responsible for any typographical or technical errors and reserve the right to make changes to the product and manuals without prior notice.

## FCC/CE Regulation

NOTE: 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 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 his own expense.

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# 1

## INTRODUCTION

### 1.1 Package Contents

IP Vandalproof Dome Camera  
(DC12V / PoE / AC24V)



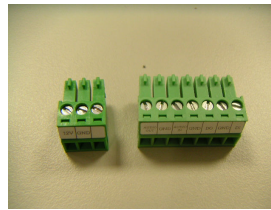
Power Adaptor (Option)



Product CD



Terminal Blocks for Power, DI/O & Audio



Accessory



## 1.2 Features and Benefits

The IP vandalproof dome camera series is a cutting-edge digital video transmission device. It can compress and transmit real time images with outstanding images quality (D1, 720x480) at reasonable bandwidth through a standard TCP/IP network. That is because it is Ethernet (LAN and WAN) ready and has the powerful ARM9 SoC and the MPEG-4 compression ASIC inside. In addition, with these powerful hardware platform, excellent SDK support and powerful respective apparatuses (e.g. the transcoder), this IP vandalproof dome camera is your best choice building up either conventional IP surveillance system or intelligent IP surveillance system.

- **Real-time MPEG-4 Compression**

With hardware MPEG-4 compression chip inside, the composite video inputs can be efficiently compressed into MPEG-4 bit stream without any delay. The ASIC base compression engine can support not only CIF, but also FULL D1 image resolution.

- **QoS Enabled Video Streaming**

For real-time video streaming requirements, the IP vandalproof dome camera series implemented the 802.1pQ features inside the SoC as the streaming engine to make sure the video streaming package is forwarded faster than normal TCP/UDP packet.

- **Automatic Frame Rate Control**

The IP vandalproof dome camera series supports automatic/manual streaming frame rate control, especially for multiple clients' concurrent access the same video stream in different network bandwidth.

- **Digital Time Code Embedded**

The "Digital Time Code Embedded" function is to embed the recording time in the MPEG bit stream. Therefore, each image frame has its respective time when it was recorded. It is very useful when users want to find the video at an exact time or between a certain time intervals.

- **Build-in LAN and WAN (Low Latency PPPoE Supported) Ports**

The IP vandalproof dome camera series provides two RJ-45 connectors. One is WAN and the other is LAN. The WAN port connects to the internet and LAN port connects to the local network. Since the internet's bandwidth is very critical, the WAN port is equipped with a



low latency PPPoE (Point-to-Point over Ethernet) which has excellent transmission speed and enables the IP vandalproof dome camera series to connect to an ADSL or a cable modem.

- **DDNS Supported**

The IP vandalproof dome camera series supports DDNS (Dynamic Domain Name Server), users can set the IP vandalproof dome camera series at a virtual domain name (such as cam1.Taipei.xxx) at dynamic IP. Everyone can use the virtual domain name to view the video anywhere that has the access to the internet.

- **Build-in Hardware Motion Detection**

No more external motion sensors are required. Each IP vandalproof dome camera can be set up to 3 detection areas. By tuning the object size and sensitivity, it is very reliable to fit into your environment. Besides, hardware motion detection delivers better sensitivity and responds faster than software motion detection.

- **Bundle Powerful Surveillance Software**

To extend the capabilities of the IP vandalproof dome camera series, a powerful surveillance program is included in the package and is very free to use. Users can easily utilize the existing PC to be a digital video recorder. Schedule recording and manual recording keep every important image recorded in the local hard disk. Reliable and accurate motion detection with instant warning makes you responsive in every condition. Quick and simple search and playback function lets you easily find the images you want.

- **Software Development Kit Support**

The IP vandalproof dome camera series can be integrated or controlled by user's application program through the Streaming Library or ActiveX control. With its high level programming interface, software developer's time and efforts to is highly reduced.

## 1.3 Safety Instructions

- **Don't use the power supply with other voltages**

This device is likely to be damaged or damage other equipments / personnel, if you use a power supply with different voltage than the one included with this device. All warranty of this product will be voided in the situations above.

- **Don't open the housing of the product**

- **Cleaning**

Disconnect this video product from the power supply before cleaning.

- **Attachments**

Do not use attachments not recommended by the video product manufacturer as they may cause hazards.

- **Water and Moisture**

Do not use this video product near water, for example, near a bathtub, washbowl, kitchen sink, or laundry tub, in a wet basement, or near a swimming pool and the like.

- **Don't use accessories not recommended by the manufacturer**

- **Only install this device and the power supply in a dry place protected from weather**

- **Servicing**

Do not attempt to service this video product yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.

- **Damage Requiring service**

Disconnect this video product from the power supply immediately and refer servicing to qualified service personnel under the following conditions.

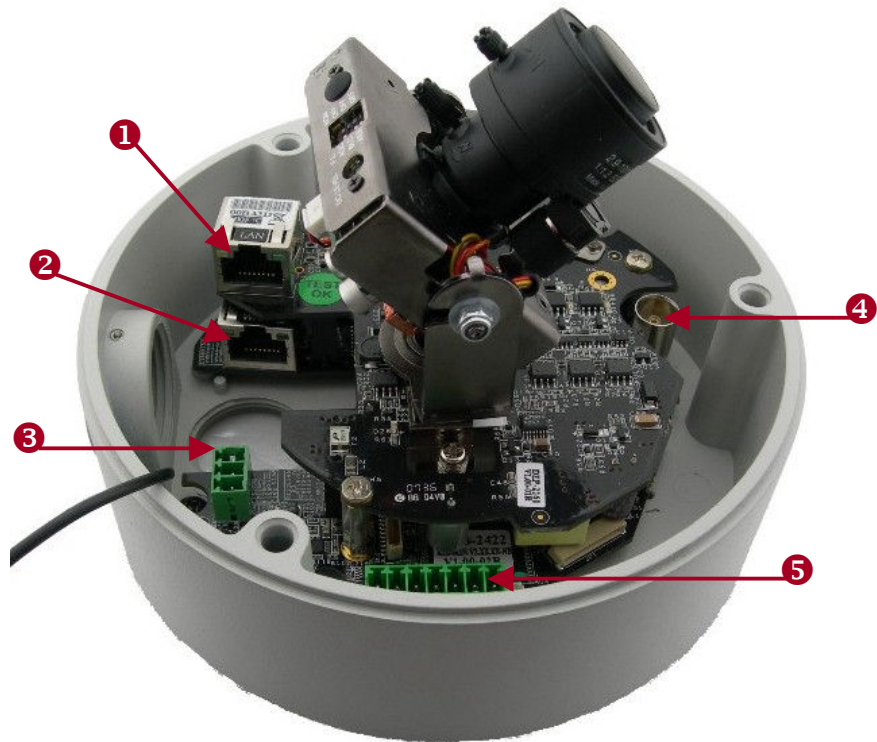
1. When the power-supply cord or plug is damaged.
2. If liquid has been spilled, or objects have fallen into the video product.
3. If the video product has been exposed to rain or water directly.
4. If the video product does not operate normally by following the

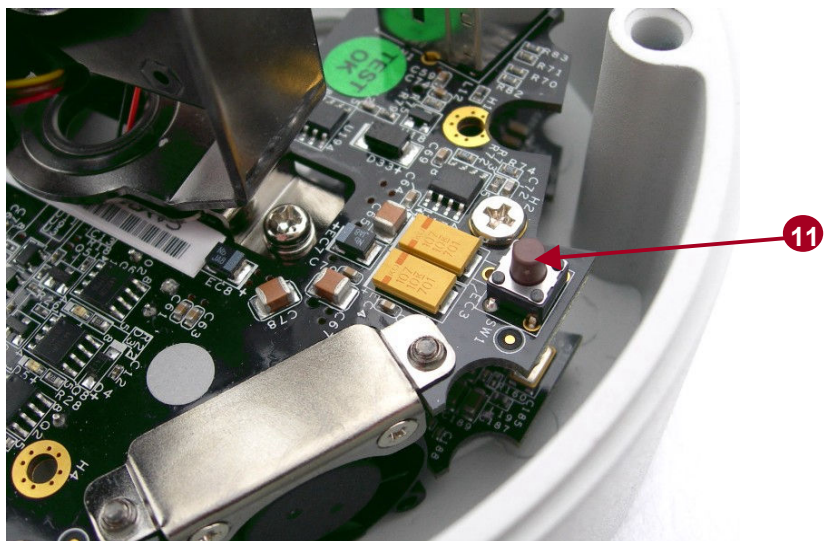
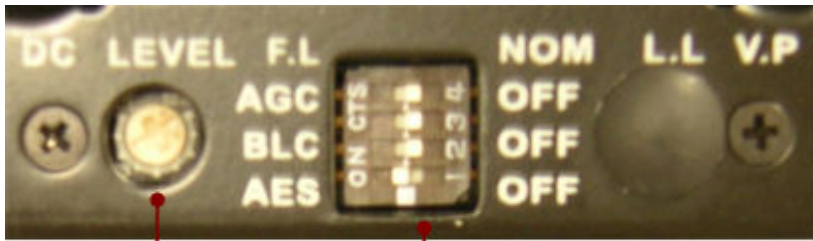
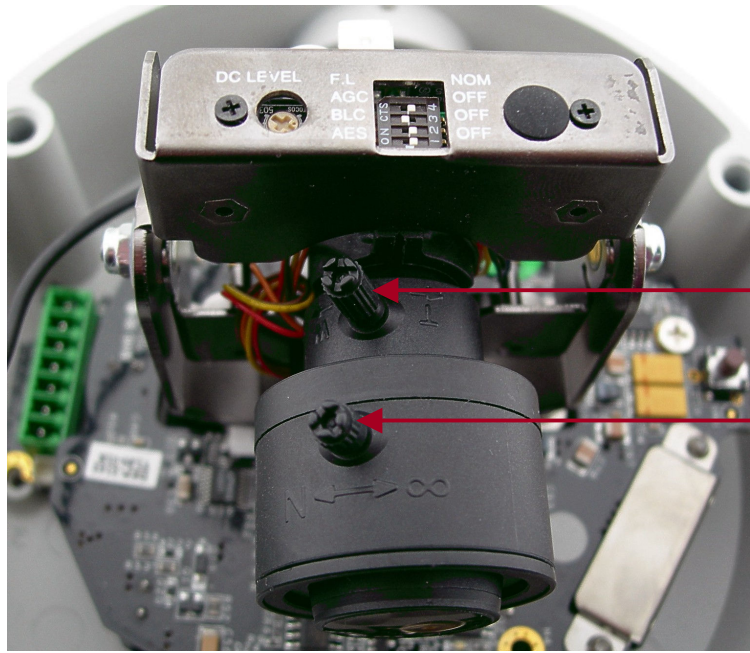
operating Instructions in this manual. Adjust only those controls that are covered by the instruction manual as an improper adjustment . Other controls may result in damage and will often require extensive work by a qualified technician to restore the video product to its normal operation.

- **Safety Check**

Upon completion of any service or repairs to this video product, ask the service technician to perform safety checks to determine that the video product is in proper operating condition.

# 1.4 Physical Description





1. **LAN**

The IP Camera connects to the LAN (local area network) via a standard RJ45 connector. Supporting NWAY, this IP vandalproof dome camera can auto detect the speed of local network segment (10Base-T/100Base-TX Ethernet).

2. **WAN**

The IP Camera connects to the WAN (wide area network) via a standard RJ45 connector. Supporting NWAY, this IP vandalproof dome camera can auto detect the speed of local network segment (10Base-T/100Base-TX Ethernet).

3. **Power Input**

If your power input is DC12V. Please follow the description on the connector to connect to power.



PIN	NAME	DESCRIPTION
1	12V	DC Power Input
2	GND	Ground Pin

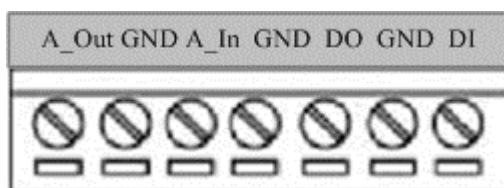
If your power input is AC24V. Please follow the description on the connector to connect to power.

PIN	NAME	DESCRIPTION
1	N	AC Power Input
2	L	
3	GND	E-Ground of power

4. **Analog Video Output**

The IP vandalproof dome camera supports one channel analog video output.

5. **DI/O**



PIN	NAME	DESCRIPTION
1	A_Out	Audio Output
2	GND	Ground Pin
3	A_In	Audio Input
4	GND	Ground Pin
5	DO	Digital Output
6	GND	Ground Pin
7	DI	Digital Input

DI: To Trigger Logic Level 0: 0~0.4V; Normal Logic Level 1: 3.3~30V

DO: To Trigger Logic Level 0: 0.1~0.6V; Normal Logic Level 1: 2.4~5V

**6. Conduit Hole**

These conduit holes are used for cables to go through.

**7. Zoom Lever**

Move this lever to adjust the optical zoom. After adjusting, rotate it clockwise to fix it.

**8. Focus Lever**

Move this lever to adjust the Focus. After adjusting, rotate it clockwise to fix it.

**9. Video DC level Adjustment**

Rotate it adjust the overall lighting for this camera.

**10. CCD Functions DIP-switch**

Item	Description	ON	OFF
AES	Auto Electric Shutter		Default
BLC	Backlight Compensation		Default
AGC	Auto Gain Control	Default	
F.L.	Flickerless		Default

**11. Reset Button**

**Step 1:** Switch off IP device by disconnecting the power cable




**Step 2:** Press and continue to hold the Reset Button. Reconnect the power cable while continuing to hold the reset button.

**Step 3:** Keep holding the reset button depressed around 6 seconds, release the reset button. The unit will start up with factory default settings.

# 2

## Installation Procedure

There are three types of installation of this IP vandalproof dome camera series.

	Standard mount	Wall mount	Ceiling mount
Pictures			
Optional Bracket required		● (MTB-403)	● (MTB-504)

The mounting procedure can be divided into two parts,

1st: Connect the IP vandalproof dome camera series

2<sup>nd</sup>: Mount the IP vandalproof dome camera series

### 2.1 Connect the IP vandalproof dome camera

#### 2.1.1 Remove the cover

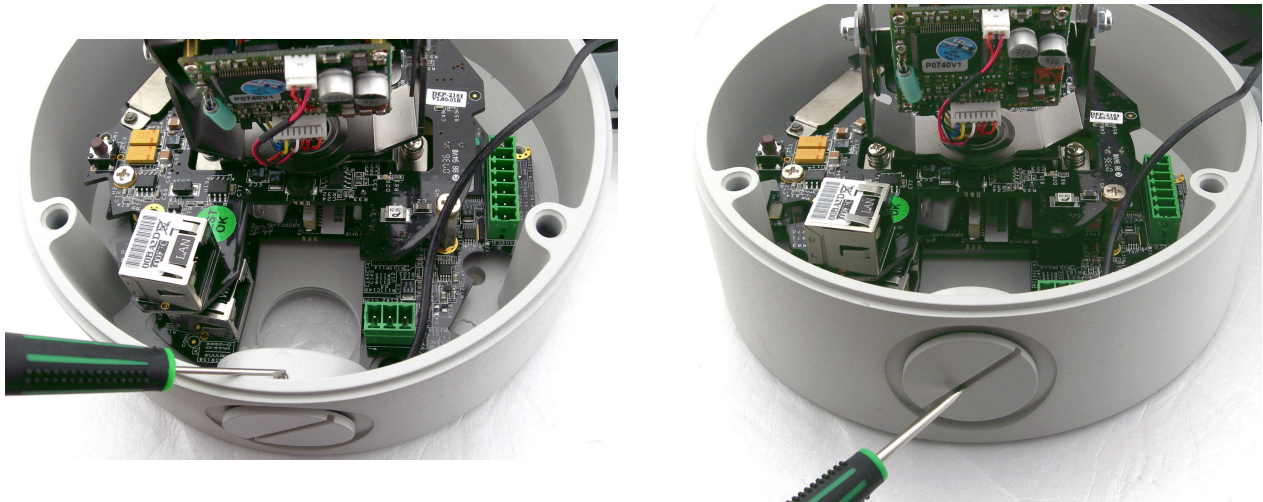
Remove the dome cover with special hex wrench in the accessory bag.





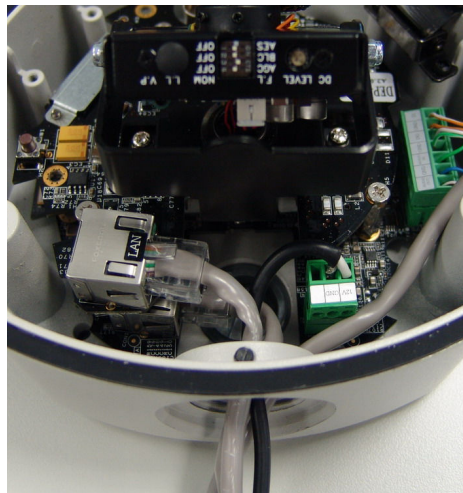
### 2.1.2 Insert the cable

There are two conduit holes, one is at the dome bottom and the other one is at the side of rugged dome with plug. Remove the plug if your cable will go through the one at the side of rugged dome



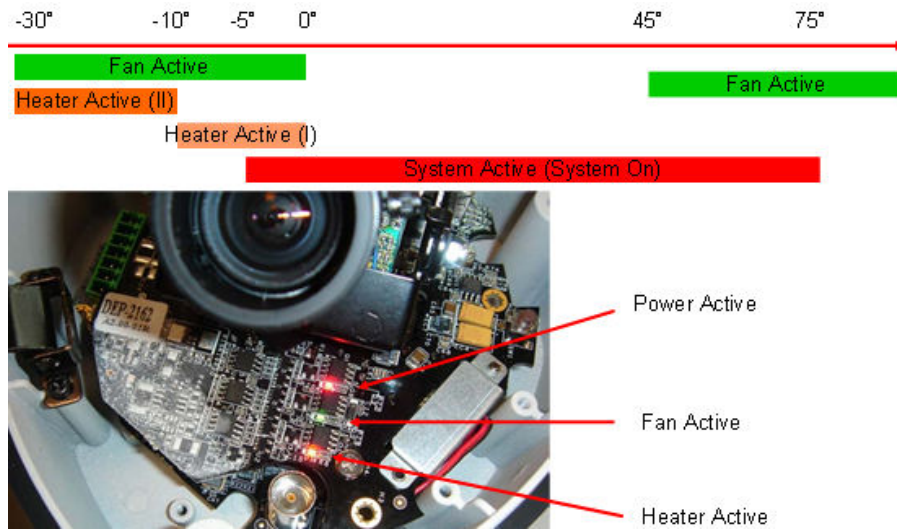
### 2.1.3 Connect cables to connectors

Please follow the instruction at Chapter 2: Physical Description, for how to connect to each connector.



## 2.1.4 LED Description

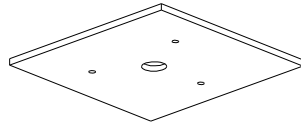
There are three LEDs in the system. They are indicators for power, fan and heater respectively. According to operating temperature, the different LED will be lighted for different situation.



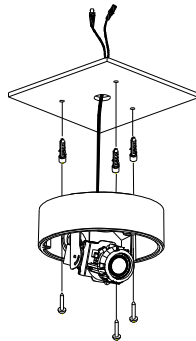
**NOTE:** Temperatures indicate here is spec for internal IC temperature, not for operating temperature.

## 2.2 Mount the IP vandalproof dome camera (Standard)

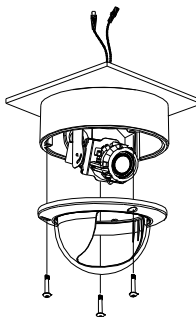
- (1). Drill  $\phi 25\text{mm}$  hole on the ceiling for video and power connector cable to pass through.



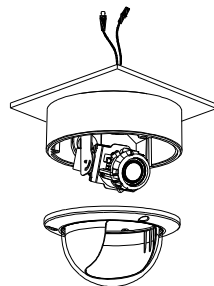
- (2). Take off the dome cover from the camera. Use specified holes inside the camera base for installation.



- (3). Fasten the camera base on the ceiling by using 3 screws provided.

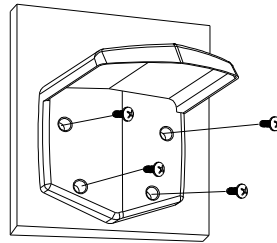


- (4). Adjust pan/tilt/rotation until the image is satisfied. After adjustment of the camera, put the cover on.

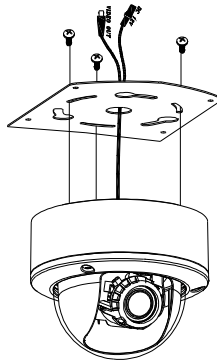


## 2.3 Mount the IP vandalproof dome camera (Wall )

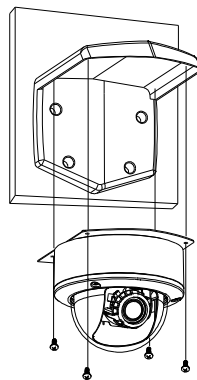
1. Fix the bracket on the wall by using 4 screws provided.



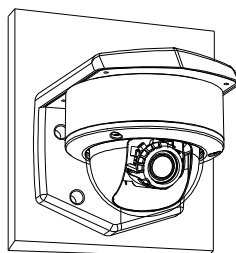
2. Fasten the metal plate on the top of the camera by 3 screws.



3. Use 4 screws to mount the camera to the bracket as the following figure shows.

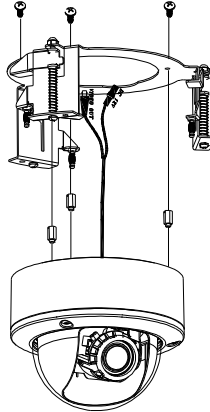


4. Then the wall mount installation as below.

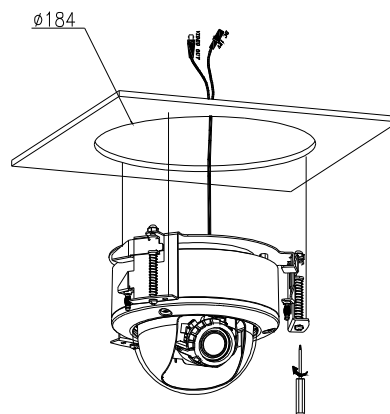


## 2.4 Mount the IP vandalproof dome camera (Ceiling)

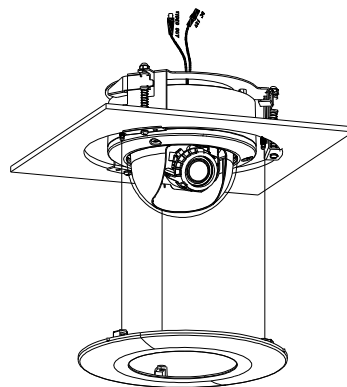
1. Fix the base holder to the camera by 3 screws and 3 spacers.



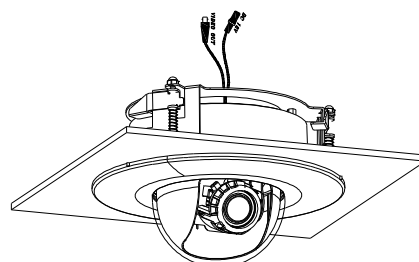
2. Use a screw driver (counter-clockwise) to fasten the base holder on ceiling ( $\phi$  184 mm).



3. Put on the cover to the bracket on ceiling.



4. Then the ceiling mount installation is finished as Fig8.



# 3

## Adjust the camera

### 3.1 Adjust zoom and focus

Please adjust the camera direction first. Then Move the focus and the zoom lever at the Chapter 1 to adjust the zoom and the focus. Fix the zoom and focus after adjusting.

### 3.2 Adjust CCD functions

Refer to Chapter 1 for what can be adjusted and how to adjust.