5M HD IP
MFZ Bubble Free Dome Camera

Quick Manual
Ver. 1.1 / 2020.05
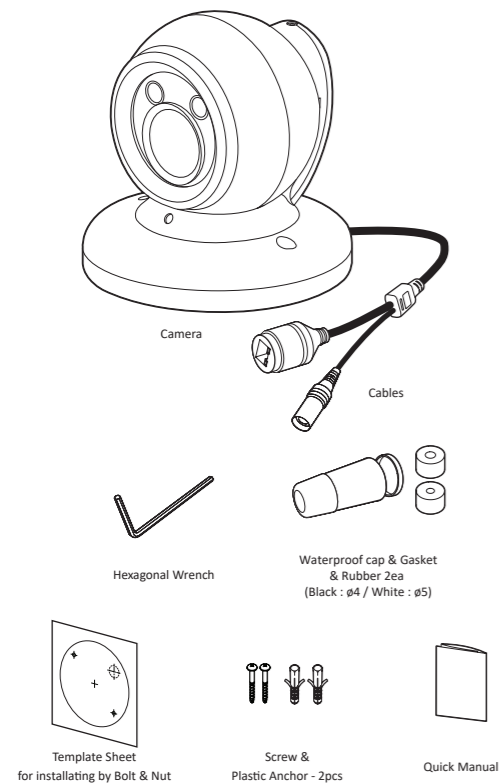
Before installing and using the camera, please read this manual carefully.
Be sure to keep it handy for future reference.

Safety Information

These instructions are intended to ensure that the user can use the product correctly to avoid danger or property loss.

If the product is not functioning properly or damaged, contact the service center or purchasing office.

⚡ **WARNINGS :** Serious injury or death may be caused if any of these warnings are neglected.

POWER
1. Use only standardized adapters written in the manual. Incorrect connection of the power source can cause fire, electric shock, or failure.
2. If there is smoke or a strange smell from the power source, disconnect the power immediately and contact the service center or purchasing office. If you continue to use it as it is, it can cause fire and electric shock.
3. Disconnect the power plug from the outlet before connecting to the power terminal block.

INSTALLATION
1. Install it according to the temperature and humidity environment suitable for the product specifications. Otherwise, it can cause fire and electric shock.
2. Thunder and lightning can cause problems with the camera. When installing, be careful to minimize damage caused by lightning such as grounding.
3. Do not place conductive materials (drivers, coins, metal sticks, etc.) and water-filled containers on the camera. It causes injuries caused by fire, electric shock, and falling.
4. If you want to move the installed product, turn off the power and move it or reinstall it. Otherwise, it can cause fire and electric shock.
5. Do not install it in places where there is a lot of moisture, dust, soot, etc. It causes fire and electric shock.
6. Avoid places where direct sunlight comes in or where heat comes out, such as heating appliances. It causes fire and electric shock.

CLEANING
1. Do not spray water directly on each part of the product when cleaning. It causes fire and electric shock.

⚠ **CAUTIONS :** Injury or equipment damage may be caused if any of these cautions are eglected.

POWER
1. Use the power line after fixing it firmly to the power connection terminal. Incomplete connection can cause a fire.
2. Do not extend the adapter output cable. If you need to install the power cable extension, please contact the service center.
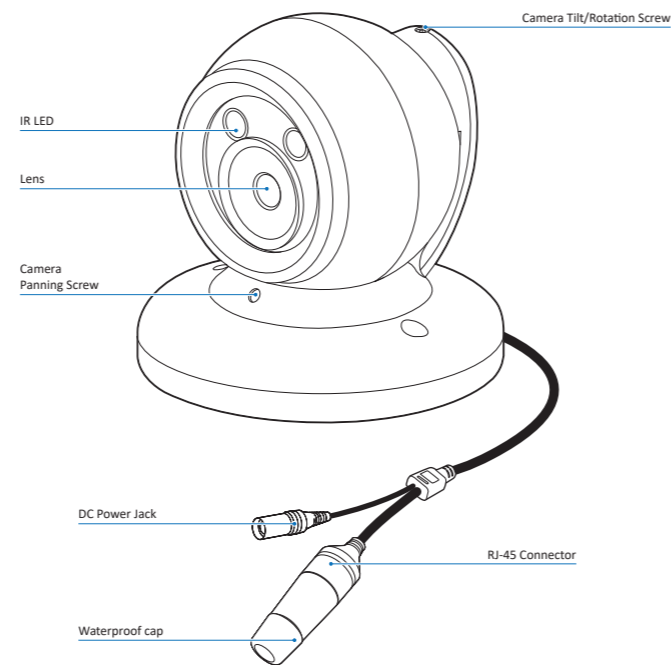3. Use insulated power for PoE connected external power.

INSTALLATION
1. It is recommended not to touch the lens when installing the product as the factory ships with a focus adjustment completed during the manufacturing completion inspection phase.
2. Avoid installing cameras facing bright lights like sunlight. Causes damage to the image sensor.
3. Make sure it safe and securely when installing camera on the wall or ceiling. This can cause injury by the fall.
4. Do not connect multiple cameras to one adapter. Excess capacity causes abnormal heat and fire.
5. Wear protective gloves when installing/uninstalling the camera. This causes burns caused by high temperature on the surface of the product.
6. Don't drop or shock the product. Please stay away from places where vibration is severe or magnet types are present.
7. Install it in a well-ventilated place. This can cause fire and failure.

CLEANING
1. Wipe the contaminated surface with a clean, soft, dry cloth or wet the soft, dry cloth to prevent water from flowing, then wipe the contaminated area.
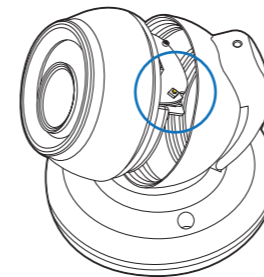
Installation and Use Precautions

1. The battery (battery pack or equipped battery) must not be exposed to excessive heat such as sunlight, fire, etc.
2. Do not disassemble the camera at your discretion.
3. If you forcefully install the product with excessive force, malfunction can damage the camera.
4. Do not punch or shake the camera and be careful not to damage the camera with careless storage or malfunction.
5. Be careful not to install the camera in a rainy or humid place, and do not leave it in a wet place.
6. Installing or using the product in water can cause serious product failure.
7. Do not install the product if there is chemical or vapor in the place where the product is installed, or if it can be generated.
8. Be careful not to get chemicals on the surface of the product when installing the product. Chemical solvents such as cleaning agents and adhesive components can cause fatal damage to the surface of the product.
9. Do not install it near the kitchen or cooking table as edible oil such as soybean oil can also cause product damage and deformation. It can cause product damage.
10. Be careful not to get foreign substances on the Micro SD card terminal. If there is any foreign substance, wipe it with a soft cloth.
11. Data will not be saved at the end of the life of the Micro SD card. In this case, purchase a new Micro SD card.
12. Moisture may occur in the glass of the camera when the new product box is opened (or when the product is initially running). The generated moisture is removed by a Gore vent attached to the camera within hours of the power connection.
13. For products enclosed with a desiccant or card-type absorbent, please install it according to the manual.
14. Use only with cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus.
15. Unplug this apparatus when a cart is used. Use caution when moving the cart/apparatus combination to avoid injury from tip-over.

1. Product & Accessories

- Camera
- Cables
- Hexagonal Wrench
- Waterproof cap & Gasket & Rubber 2ea (Black : ø4 / White : ø5)
- Template Sheet for installing by Bolt & Nut
- Screw & Plastic Anchor - 2pcs
- Quick Manual

※ **Note :** Cable thickness 4.5ø to 5.5ø uses a black rubber, and over 5.5ø uses a white rubber.

2. Part Name

- Camera Tilt/Rotation Screw
- IR LED
- Lens
- Camera Panning Screw
- DC Power Jack
- RJ-45 Connector
- Waterproof cap

3. Disassemble the Camera

Before installing your camera, you have to read the following cautions.
1. You have to check whether the location can bear five times of the weight of your camera.
2. Don't let the cable to be caught in improper place or the electric line cover to be damaged. Otherwise it may cause a breakdown or fire.
3. When installing your camera, don't allow any person to approach the installation site. If you have any valuable things under the place, move them away.

❶ Remove the front case from the rear case by turning it counter-clockwise.

❷ Please take care of following cautions when disassembling to use reset button:
- ⊗ Cable damage during the assembling and disassembling.
- ⊗ Do not touch other parts.
- ⊗ Do not open the case for a long time to prevent moisture problem.

❇ **Reset to the Factory Default**
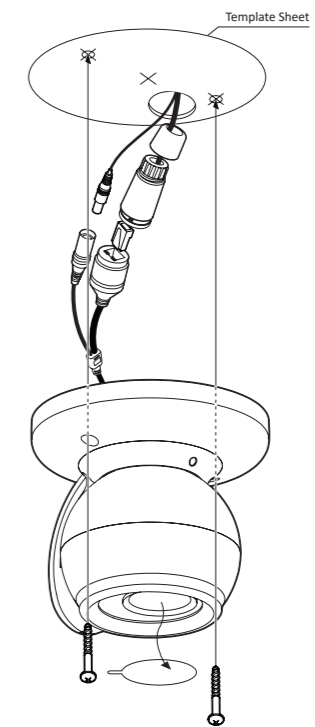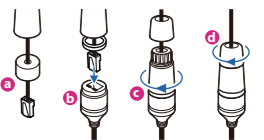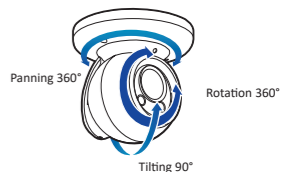Press the reset button for 5 seconds to return the setup to the factory default.

❇ **Warning :**
If you press the 'Reset' button, you will lose all setting data. If needed, please, make a note for further installation.

4. Installation

Template Sheet

❶ Using the template sheet, make the cabling hole on the wall/ceiling.

❷ Connect the network cable and power cable respectively. See the section 'Cabling' for details.
- ⊗ Insert the Lan cable into the rubber first as (a) below. Put the Lan cable into (b), then (c) will be assembled to (b) tightly. As a final step, (d) need to be assembled to (c) without making any space.

❸ Use the two mounting screws to install the camera on the wall or ceiling.
- ⊗ Loosen the Pan/Tilt/Rotate screw a little before fixing the camera.

❹ After adjusting the view angle, tighten the Pan/Tilt/Rotate screw.

Panning 360°   Rotation 360°   Tilting 90°

❺ Remove the protective film from the camera's lens to complete the installation.
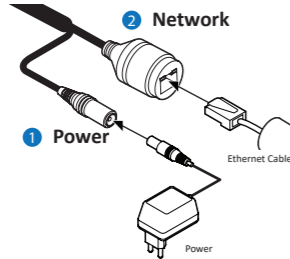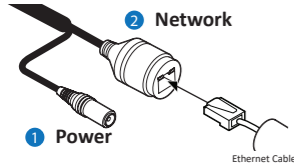
5. Cabling

Two Options
Use a PoE-enabled swtich to connect data and power through a single cable and begin viewing and recording images instantly. A non-PoE switch will require an adaptor for power transmission.

1. Using a PoE-Enabled Switch
The Camera is PoE-compliant, allowing transmission of power and data via a single Ethernet cable.
PoE eliminates the need for the different cables used to power, record, or control the camera.
Follow the illustration below to connect the camera to a PoE-enabled switch using an Ethernet cable.
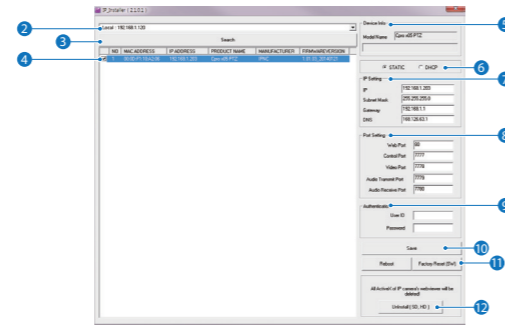
2. Using a Non-PoE Switch
If a PoE-enabled switch is not used, use a power adaptor for power transmission and non-PoE switch for data transmission.
Follow the illustrations below to connect the camera without a PoE-enabled Switch.

❶ Power ❷ Network — Ethernet Cable

❶ Power ❷ Network — Ethernet Cable — Power

❶ **Power Connection**
Please, check the voltage and current capacity of rated power carefully.

Rate Power	Power Consumption	PoE
DC 12V	7.1W	IEEE 802.3af class3

❷ **Network Connection**
Connect the crossover cable into the RJ-45.

Disposal of Old Appliance

1. When this crossed-out wheel bin symbol is attached to a product it means the product is covered by the European Directive 2002/96/EC.

2. All electrical and electronic products should be disposed of separately form the municipal waste stream in accordance to laws designated by the government or the local authorities.

3. The correct disposal of your old appliance will help prevent potential negative consequences for the environment and human health.

4. For more detailed information about disposal of your old appliance, please contact your city office, waste disposal service or the shop where you purchased the product.

6. IP Installer

1. Run IP Installer
❶ Run the IP installer in S/W folder.

❷ Click on Network Adaptor selection Menu (NIC) after run this program.

❸ Select a network which a camera is connected then click on a 'Search' button. (Takes about 5 sec.)

❹ Select a camera to set.

❺ The information of the selected camera will be shown at Device Info.

❻ Select the network type.
- ❗ The default network type of the camera is DHCP mode.
- ❗ If you have a DHCP server, it will automatically set the Camera IP.
- ❗ If you do not have a DHCP server, Camera IP is set to 192.168.1.80 after one minute.

❼ Input IP setting information when the network type is set to STATIC.
- ❗ Default TCP/IP information
  - IP: 192.168.1.80
  - Subnet Mask: 255.255.255.0
  - Gateway: 192.168.1.1
  - DNS : 168.126.63.1

❽ Change the port as necessary when the network type is set to STATIC.
- ❗ A 'Port Forwarding' has to be set for external access to the camera.
- ❗ Refer to the manual of the network hub for 'Port Forwarding' settings.
- ❗ An additional change of HTTPS, RTSP port can be done at Web Viewer > Admin page.

❾ Input ID and PW of the camera for authentication.
- ✽ Make sure to change the ID and PW for security reason.
- ✽ Go to "Web viewer>Setup>System> Users Management" for ID and PW change.
- ✽ The ID and PW will be set to default value when 'factory reset' the camera.
- ❗ Default ID / PW : admin / admin

❿ Make sure to click on 'Save' button to save changed values.
- ✽ An "Apply" message will be popped-up when the settings are applied normally, or an error message will be popped-up when failed.
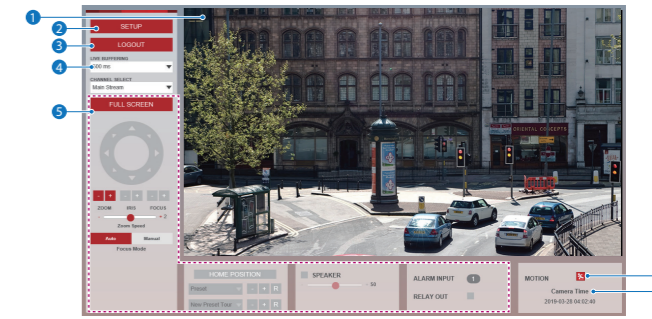
⓫ To reboot or reset (except network setting) the camera.
- ✽ Select a camera (multiple camera can be selected) > Input ID and PW > Click on Reboot or Factory Reset button.

⓬ Able to delete an Active-X which is installed when accessing to Web Viewer.
- ✽ You don't need the function because this camera use the VLC plugin instead of the Active-X.

7. Web Viewer Screen

✽ Web viewer is optimized with explorer 10 or above version and Chrome.
- ✽ If VLC is not installed or VLC plugin is not supported (Chrome), Live buffering and Channel select menu on 3, 4 will be changed to Live Viewer menu, and then if HTML5(MJPEG) is selected on Live Viewer menu, then you can check the video.

❶ Live video display. This is the region for live video stream from the camera.

❷ Setup popup button. Click it to open the Setup page to setup details of IP camera like Video, Network, Events, System and etc.

❸ When the image goes unsmoothly because of bad network connection, it stored image during setup time and shows the image on the live view screen.
- ✽ User will see the delayed images as much as setup time.

❹ Channel Select button. Select a stream produced from the camera between Stream 1 ~ 3 to display it in the live view screen.
- ✽ Refer the 'Setup > Video & Audio > Video' to setup the Video Stream.

❺ Below "Menu" is supported in accordance with models.
- **PTZ Control**
  This camera model supports the zoom and focus.
- **Preset / Speaker Control / Mic Input / Alarm Input / Relay Out**
  Does not support.

❻ Motion. It shows the Motion event status.
- ✽ Event Alert Icon ( ) appears if 'Motion Detection' is activated.

❼ Camera Time. Display the camera time.