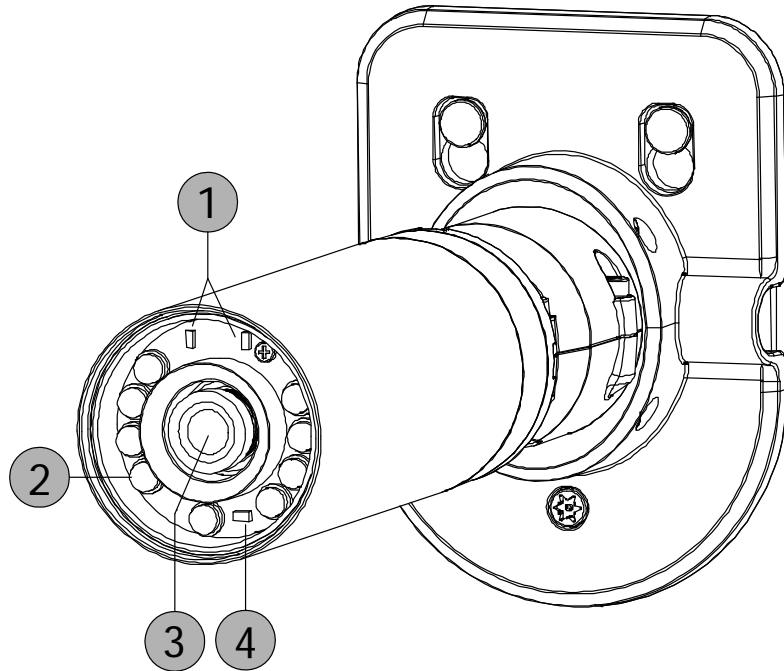


Mini Bullet IP Camera

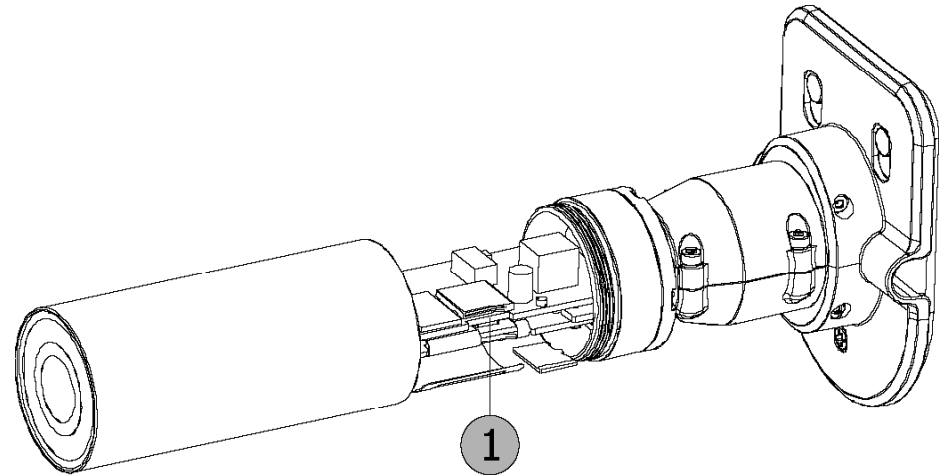
Description of The Device

Camera with bracket (the external view).



1. **Power/Status LED:** Indicates the camera's current status.
2. **IR LEDs:** Infrared LEDs illuminate the camera's field of view at night.
3. **Camera Lens:** Records video of the surrounding area.
4. **ICR Sensor:** The IR-Cut Removable sensor measures the lighting conditions and switches between color and infrared accordingly.

The component parts (the internal view).



1. **Micro SD CARD slot:** Insert a Micro SD card for Local storage for storing recorded image and video. This is used for updating system software and archiving / accessing critical images.

How to install an SD card?

Step 1: Place the camera face down on a non-slip flat surface.

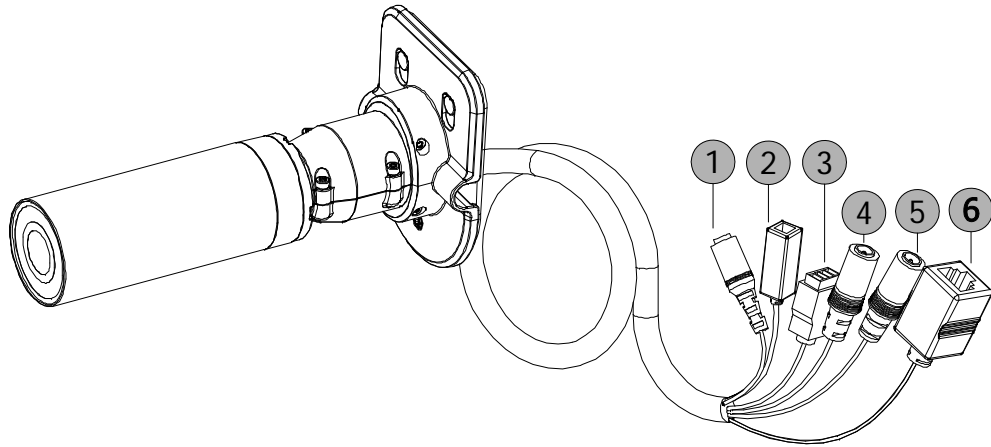
Step 2: Unscrew the weatherproof sheath by holding the base of the camera firmly and rotating the barrel counter-clockwise. Exercise caution when removing the weatherproof sheath to avoid damaging the internal components.

Step 3: Insert your Micro SD card into the slot with the notch oriented to the rear of the camera.

Step 4: Replace the weatherproof sheath ensuring a tight fit.

NOTE: To ensure that the camera stays weatherproof, users are advised to ensure that the weatherproof sheath is secured firmly in place.

The Cable Harness:



1. **Power Connector:** A DC 12V inlet that connects to an external power supply.
2. **Reset Button:** Recover to factory default. (Refer to section 2.2 The Reset Button.)
3. **DI/DO Connector:** This is a 4-PIN connector including the **Digital output/input**, **DC output** and **GROUND** items for connecting with external devices.
4. **Audio Out (Green):** Provides the camera's audio signal to a speaker or stereo.
5. **Audio In (Red):** The connector is used to connect the audio output from other devices to the camera.
6. **Ethernet Port:** This is a standard RJ-45 connector for 10/100 Mbps Ethernet networks. PoE (Power over Ethernet) function: Provides power to the device via the same cable as used for the network connection.

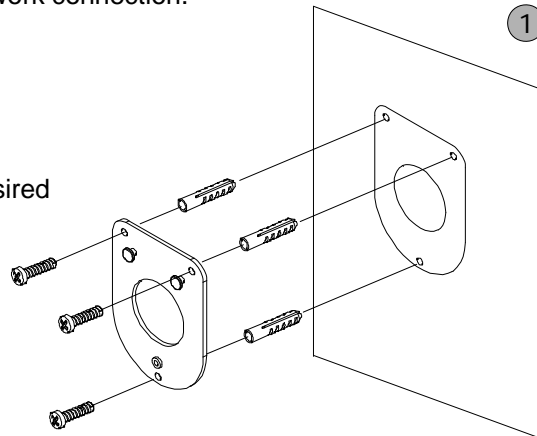
Camera Mounting:

Step 1

Position the mounting bracket in the desired location.

Step 2

Mark the surface behind the mounting bracket with a pencil.



Step 3

Use a 6mm drill bit to make required holes approximately 25mm deep.

Step 4

Insert wall anchors and affix the bracket using the screws provided.

Step 5

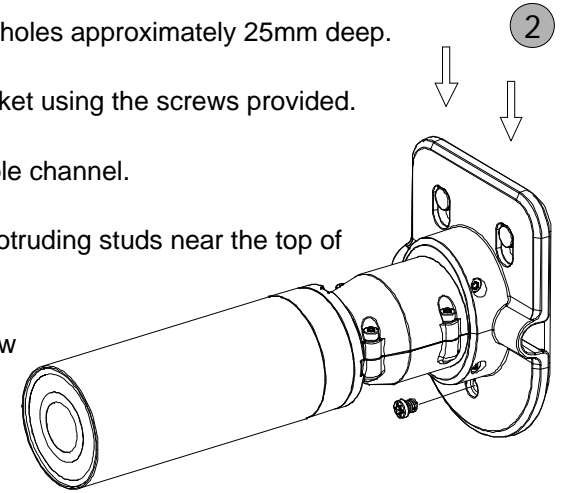
Ensure the cable is seated in the cable channel.

Step 6

Suspend the camera from the two protruding studs near the top of the mounting bracket.

Step 7

Insert and tighten the remaining screw into the hole on the camera base.



Camera Positioning

Step 1

Using a Torx Security screwdriver, loosen the screw on the top of the camera housing.

Step 2

Swivel the camera along its horizontal axis until you achieve the desired angle.

Step 3

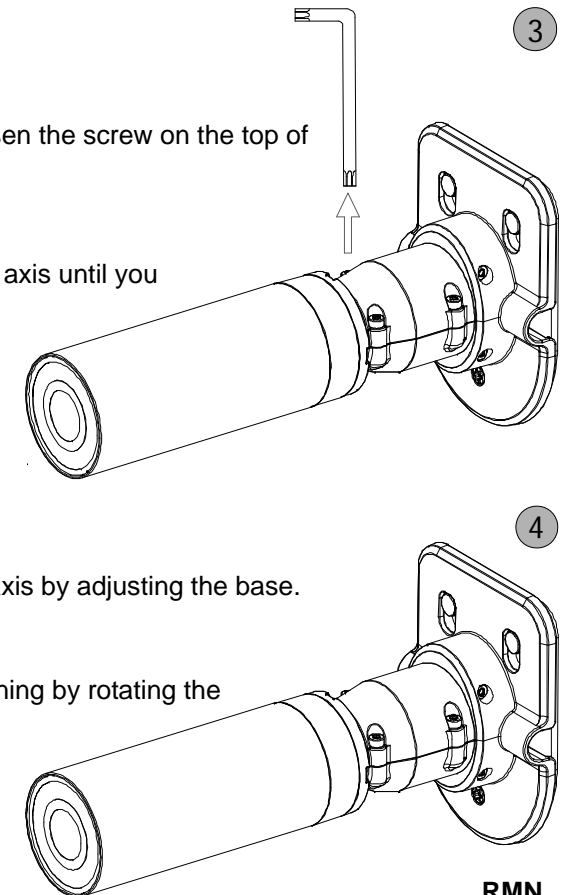
Using a Torx Security screwdriver, tighten the screw on the top of the camera housing firmly.

Step 4

Rotate the camera around its vertical axis by adjusting the base.

Step 5

Rotate the camera to adjust for positioning by rotating the barrel.



Please follow the steps given below to install, configure and set the IP Camera.

1. Check the IP class of your PC

Step 1: From the **Start** menu, point to **Settings**, and then click **Control Panel**.

Step 2: When **Control Panel** appears, double-click the **Network Connections** icon. The **Network Connections** dialog box appears.

Step 3: Click the **Protocols** tab in the **Network Connections** dialog box.

Step 4: When the **Local Area Connection Properties** dialog box shows up, choose **Internet Protocol (TCP/IP)** and click **Properties**.

Step 5: In the **Internet Protocol (TCP/IP) Properties** dialog box, choose **Use the following IP Address** to indicate that you do not wish to use DHCP, and assign IP Address 192.168.1.200 with Subnet mask 255.255.255.0. Click **OK** when you finish it.

Step 6: Choose Close to finish the modification.

2. Install UPnP Packets of your PC

As described before, Microsoft Windows XP[®] doesn't start the UPnP service by default; however, we have to install some packets before we initialize it. The following steps will help you to install them.

Step 1: From the **Start** menu, point to **Set Program Access and Default**, and then click it.

Step 2: When the **Add or Remove Programs** dialog box appears, click the **Add/Remove Windows Components** button.

Step 3: Check the **Network Services** in the **Windows Component Wizard** dialog box, and then click **Details....**

Step 4: Check **UPnP User Interface**, and choose **OK**.

Step 5: When the original **Network Component Wizard** dialog box returns, click **Next**.

Step 6: After about one minute the UPnP installation will be done, and choose **Finish** to close it.

3. Turn on Services of your PC

After installation, we should turn on the relative services to start the UPnP protocol. The following procedures will teach you how to do it.

Step 1: From the **Start** menu, point to **Settings**, and then click **Control Panel**.

Step 2: When **Control Panel** appears, double-click the **Administrative Tools** icon. The **Administrative Tools** dialog box appears.

Step 3: Click the **Services** icon in the **Administrative Tools** dialog box.

Step 4: When the **Services** dialog box shows up, double click the **SSDP Discovery Service** icon.

Step 5: Choose **Automatic** in the **Startup type**, and click **OK** to start it.

Step 6: When the **Services** dialog box appears again, double click the **Universal Plug and Play Device Host** icon.

Step 7: Choose **Automatic** in the Startup type, press the **Start** button, and click **OK** to start it.

Step 8: Restart your system.

4. Set the static IP address in the IP Camera.

Step 1: Plug in its power connection.

Step 2: Plug the USB connector in your PC and in the USB socket in the rear of the lens.

Step 3: A window pops up asking if you want to "Run the program", "Open folder to view files", or "Take no action". Choose "Run the program" and click "OK", and the "USB configuration" window will pop up.

Step 4: Set the Network setting and type in the IP address you desire. Before you change the IP address, you should note the factory default Static IP address (192.168.1.168).

Step 5: After changing the IP address, click the "**Apply**" button in the "**USB Configuration**" window.

Step 6: A message pops up asking you to affirm the action as "**OK**".

Step 7: Click "**OK**", and remove the USB connection from your PC.

Step 8: Click "**Exit**" at the bottom of the "**USB Configuration**" window to close the window. Or, choose the "**Launch**" button to see the local camera images directly.

Step 9: Before clicking "**Launch**", check your PC's IP address and use the Network connector (RJ-45) to link up with your camera.

Step 10: If you can see the images, it means the IP setting is complete.

5. Scan IP Camera through "My Network Place"

Step 1: After your installation and starting services, the UPnP protocol will take effect. You can scan all **IP Cameras** in My Network Place.

Step 2: Just double click the **IP Camera** icon, and the video live stream will pop up automatically without assigning any IP address in Microsoft Internet Explorer.

6. Change the IP Camera's control and operational settings.

Step 1: Type in the IP address in the IE Browser. You will now see the IP camera' images.

Step 2: Use the buttons below the images to enter any other operational settings pages.

Step 3: When you change any setting, please don't forget to click the "**Submit**" button in each page.

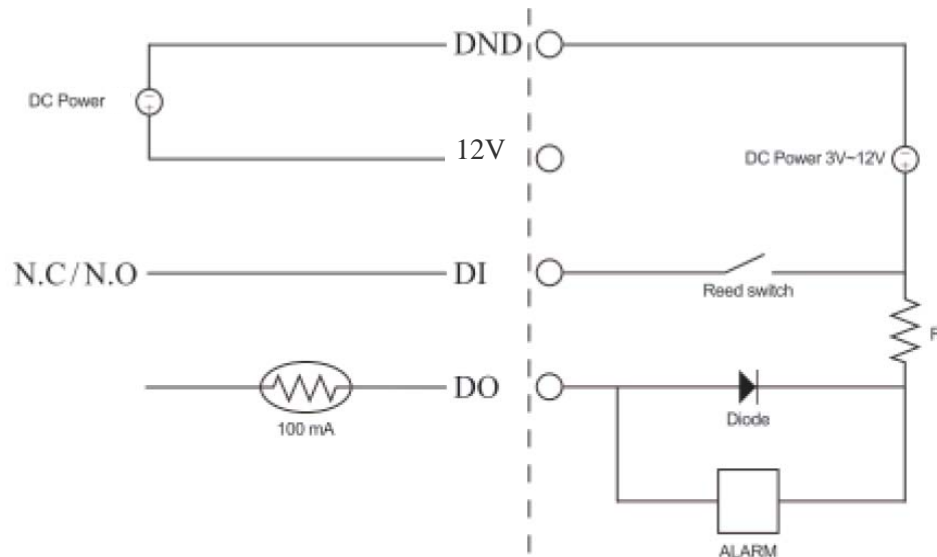
NOTE: Enable DHCP Function: This function can only work if the LAN, which the unit is connected to, has a DHCP server. If the DHCP server is working, the IP Camera will obtain an IP address automatically from the DHCP server.

NOTE: When only one unit of the IP Camera is connected to a computer or LAN, you can freely assign an IP address for the IP Camera. For example, there is a range of IP Camera IP addresses from 192.168.1.1 to 192.168.1.255. You can pick one for use from the range of the IP. It's not necessary to set MASK and GATEWAY; leave the settings as default.

When an IP Camera is connected to a WAN, you must acquire a unique, permanent IP address and correctly configure the MASK and GATEWAY settings according to your network architecture. If you have any questions regarding those settings, please consult a qualified MIS professional or your ISP.

The Alarm Wiring Diagram

This is a 4-PIN connector including the Digital output/input, DC output and GROUND items for connecting with external devices.



WARNING

- To prevent fire or shock hazard, avoid exposing this unit to rain or moisture.
- Do not block ventilation openings.
- Do not place anything on top of the unit that might spill or fall into it.
- Do not attempt to service this unit yourself, as opening or removing covers may expose you to dangerous voltage or other hazards. Please refer all servicing to your distributor / retailer.
- Do not use liquid cleaners or aerosols for cleaning.
- To prevent fire or electric shock, do not overload wall outlets or extension cords.
- PoE warning : If the PoE injector is used instead of the supplied power adaptor, all of the wiring to and from the injector must be routed/ installed inside a building/ plant and never routed/ installed outside of the building/ plant.
- Please only select a power adaptor or power certified by UL and marked at 24Vac / 60 Hz, minimum 1A, class 2 or LPS.
- The interconnecting cables should be placed inside the UL certified Outdoor Use Conduits.
- If the power supply is installed outdoors, it should be a listed rainproof / watertight class 2 / LPS power supply or a listed power supply complying with UL60950 -1, part 1 and part 22.
- The wiring method should comply with article 725 and article 300 in the national electrical code for the class 2 circuit and wiring in duct.
- The entire installation should be performed by qualified personnel.
- Please do not look directly at the shining, reflecting surface of the camera housing. Looking directly could result in eye uncomfortable.
- This product should not be used for the same purposes as consumer electronic devices.

CAUTION

RISK OF EXPLOSION IF BATTERY IS REPLACED BY AN INCORRECT TYPE. DISPOSE OF USED BATTERIES ACCORDING TO THE INSTRUCTIONS.

Specifications

| Model | Mini Bullet IP Camera | |
|------------|------------------------------|---|
| Camera | Image sensor | 1/4" OmniVision 720P CMOS sensor |
| | Lens | Fixed Focal Board Lens f:3.6mm F1.8. |
| | Minimum illumination | Color: 1.0 lux, B/W: 0.5 lux. |
| | IR cut filter | Yes |
| | Day & Night | Auto / Day / Night / Schedule. |
| | WDR | Yes |
| Image | Video Compression | H.264 / MJPEG. |
| | Resolution | "4:3": 960x720, 800x592, 640x480, 480x360, 320x240. "16:9": 1280x720, 800x448, 640x360, 480x272, 320x176. |
| | Video streaming | NTSC: Maximum 30FPS (1280x720). PAL: Maximum 25FPS (1280x720) |
| | Profiles | 2 (selectable) |
| | Image settings | <ul style="list-style-type: none"> - Adjustable image size, quality, and bit rate. - Day / Night mode. - Flip & Mirror. - AGC, AWB, AES. - Time stamp and text caption overlay. - Privacy masks. - Exposure Mode |
| | Video management software | SDK, including HTTP-API / ActiveX / ONVIF. |
| Audio | Audio streaming | Two-way. |
| | Compression | G.711 |
| | Audio bit rate | G.711 64kbps |
| | Inputs / outputs: | 1 x input / 1 x output |
| Network | Security | Multi-level password protections, IP address filtering, HTTPS encryption, User access log. |
| | Protocols | IPv4, HTTPS, HTTP, TCP, UDP, RTP/RTCP/RTSP, DHCP, NTP, FTP, SMTP, UPnP, ICMP, ARP, DDNS, PPPoE, SAMBA |
| | Users | Access by 10 simultaneous users. |
| | Firmware update | SD card / HTTP. |
| Alarm | Recording | SD card, SAMBA, FTP |
| | Pre-alarm recording | Yes. |
| | Advanced motion | 512 zones. Sensitivity: 0 - 100 %. |
| | Trigger | <ul style="list-style-type: none"> Motion Detection Schedule Alarm input Ethernet loss |
| | Notification | SD card recording, SMTP, FTP, HTTP, alarm output. |
| Connectors | RJ-45 | 10 BASE - T / 100 BASE -TX. |
| | Digital I / O | 4 pin-contact terminal block (DO, DI, 12v, GND) |
| | Earphone jack | 1 x Audio in [mic. in / line in] 1 x Audio out [line output] |
| | Reset | Reset for factory default. |
| | Local storage device | Micro SD card slot |
| General | LED indicators | Network / SD card. |
| | Power | - 12V DC (DC power jack). Approx. 8.5 W. - PoE: IEEE802.3af compliant 802.3af. Class 2 |
| | OS | Linux 2.6 kernel. |
| | Operating conditions | -20°C to 50°C (-4°F to 122°F) |
| | Approval | CE, FCC, RoHS, IP-66, IK-10 |
| | Dimensions / Package Weights | 54 x 184 mm./ 960g. |
| | Accessories included | <ul style="list-style-type: none"> - Quick Installation Guide. - CD x 1 (includes User's Manual). - Power adapter: (Input: 100-240 VAC, 50 / 60 Hz, Output: 12VDC, 1.5A). - RJ-45 cable x 1 |

*Specifications are subject to change without notice.