



G-Cam/EHC-4781/4888

Panorama 360° IP-Kamera

Preface

The information given in this manual was current when published. The company reserves the right to revise and improve its products. All specifications are subject to change without notice.

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Notice



Mounting instructions for Cameras especially for Pole Mount.

Please note that the place of mounting should be stiff enough to counter strong wind or other vibrations!

Otherwise all VCA functions like Motion Detection, Privacy Masking, etc. either in cameras or with DVRs could be disturbed heavily and can cause unliked and often alarms.

In some cases, mechanical problems or defects can be the result of such vibrations, like overheating of focus motors caused by persistent mast shaking!

This manual provides the installation information for the Camera. To work with the Cameras, any installer or technician must have the following minimum qualifications:

- A basic knowledge of CCTV systems and components
- A basic knowledge of electrical wiring and low-voltage electrical hookups
- A basic knowledge of network system setting
- Have read this manual completely

Important Information

Before proceeding, please read and observe all instructions and warnings in this manual. Retain this manual with the original bill of sale for future reference and, if necessary, warranty service. When unpacking the unit, check for missing or damaged items. If any item is missing, or if damage is evident, **DO NOT INSTALL OR OPERATE THIS PRODUCT**. Contact the dealer for assistance.

Regulation



This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.



This symbol on the product or on its packaging indicates that this product shall not be treated as household waste in accordance with Directive 2002 / 96 / EC. Instead it shall be handed over to the applicable collection point for the recycling of electrical and electronic equipment. By proper waste handling of this product, please ensure that it has no negative consequences for the environment and human health, which could otherwise be caused if this product is thrown into the garbage bin. The recycling of materials will help to conserve natural resources.

For more details information about recycling of this product, please contact the local city office, household waste disposal service or the shop which purchased the product.



Compliance is evidenced by written declaration from our suppliers, assuring that any potential trace contamination levels of restricted substances are below the maximum level set by EU Directive 2002 / 95 / EC, or are exempted due to their application.

Warnings and Cautions

Handle the camera carefully

Do not abuse the camera. Avoid striking, shaking, etc. The camera could be damaged by improper handling or storage.

- **Installing electricity wiring carefully**

Ask qualified personnel of electrical wiring for the installation.

The camera is capable of surge protection; ensure AC power model units grounded appropriately against damage of heavy current or electric shock.

- **Do not disassemble the camera**

To prevent electric shock, do not remove screws or covers. There are no user serviceable parts inside. Ask a qualified service person for servicing.

- **Do not operate the camera beyond the specified temperature, humidity or power source ratings**

- **Do not use strong or abrasive detergents when cleaning the camera body**

Use a dry cloth to clean the camera when it is dirty. In case the dirt is hard to remove, use a mild detergent and wipe the camera gently.

- **Never face the camera towards the sun**

Do not aim the camera at bright objects. Whether the camera is in use or not, never aim it at the sun or other extremely bright objects. Otherwise, the camera may be smeared or damaged.



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1. Overview

The DNN Network Fisheye IP Camera is a high performance surveillance solution features 360° wide coverage without blind spots. The fisheye camera supports up to 12 Megapixels resolution streaming and maintains at 20fps that allows the video stream can be viewed smoothly. Moreover, the fisheye camera supports various view mode (digital PTZ, panoramic view, etc.) which allows users to choose based on their own preference. The DNN Fisheye IP Camera is suitable to apply in wide open space environments like office rooms, hotel lobby, apartment front door, etc.

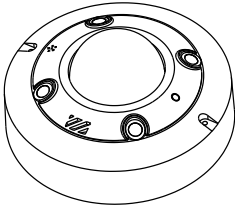



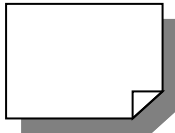
In addition, the embedded edge dewarping engine enables the fisheye camera to dewarp images by camera itself rather than consuming resources from the backend devices. The camera also includes IR LED module and Smart Picture/Quality/Noise Reduction features that improves the image quality in low light environment.

1.1. Features

- Progressive Scan CMOS Image Sensor Support Up to 12M Resolution
- Edge Dewarping/ Backend Dewarping
- Multi Codec Support (H.265 / H.264 / MJPEG)
- Multiple Dewarp Display Modes Digital PTZ / Panorama View / Quad View
- True Day/Night Function (ICR)
- IR LED (Working Distance Up to 5m)
- 3D Motion Compensated Noise Reduction
- Smart Event Function: External Input/ Motion Detection/ Network Failure Detection/ Tampering Alarm/ Periodical Event/ Manual Trigger/ Audio Detection
- Micro SD/ SDHC/ SDXC Card Support
- ONVIF Profile S/ G/ Q/ T Support
- Weatherproof (IP66) -Outdoor only
- IK10

1.2. Package Contents

Please check the package containing the following items listed below.

 <p>DNN IR Fisheye IP Camera</p>	 <p>Self-Tapping Screw (x3)</p>	
 <p>Plastic Anchor (x3)</p>	 <p>Security Torx</p>	 <p>Quick Guide</p>



NOTE: The supplied self-tapping screws are for soft substances / materials such as wood. For other installation environments such as cement wall, users **MUST** pre-drill and use plastic anchors before fastening the supplied self-tapping screws on the wall.



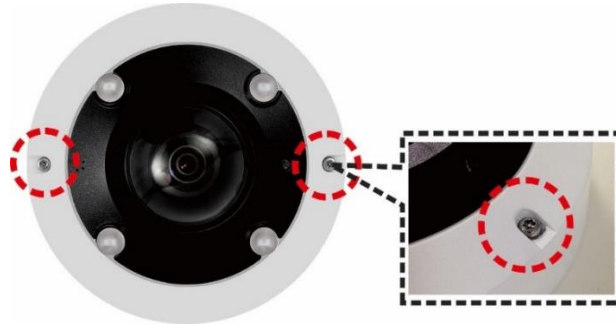
NOTE: To use an external power supply, please contact your supplier to confirm that the power supply complies with the LPS requirements and shares the same power specifications with the camera.



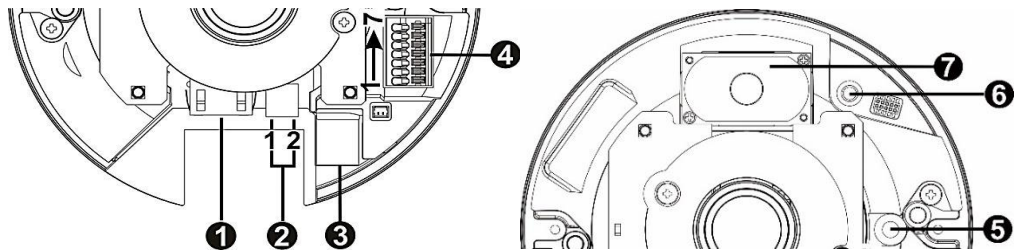
NOTE: Do not replace batteries of the camera. Risk of explosion may occur if the battery is replaced by an incorrect type.

1.3. Connectors (Indoor only)

Please loosen the security screws and open the cover to reach the connectors.



The diagram below shows the connectors of the camera. Definition for each connector is given as follows.



No.	Connector	Pin	Definition	Remarks
1	RJ-45	-	For network and PoE connections	
2	Power (DC 12V)	1	DC 12V –	Power connection
		2	DC 12V +	
3	microSD Card Slot	-	Insert the microSD card into the card slot to store videos and snapshots. Do not remove the microSD card when the camera is powered on.	
4	Alarm & Audio I/O*	1	Alarm Out +	Alarm connection
		2	Alarm Out -	* Do NOT connect external power supply to the alarm I/O connector of the camera.
		3	Alarm In +	
		4	Alarm In -	
		5	GND	Ground connection
		6	Audio Out (Line out)	Two-way audio transmission
		7	Audio In (Line in)	
5	Built-in Microphone	-	Audio In	
6	Default Button	-	Press the button with a proper tool for at least 20 seconds to restore the system.	
7	Built-in Speaker	-	Audio Out	

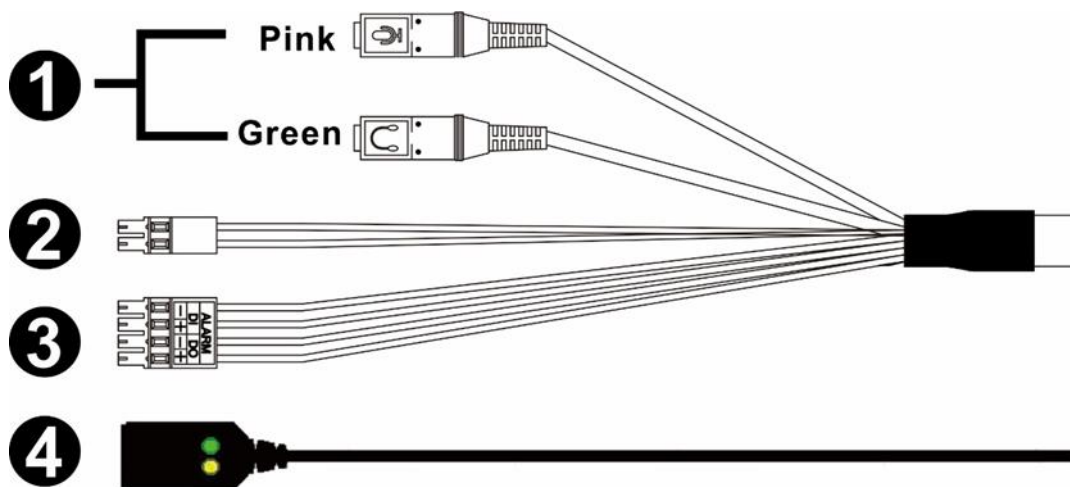


NOTE: To avoid audio quality degradation, do NOT connect built-in microphone and external audio-input device (via Line-in) at the same time. So does the audio-output connection.



NOTE: It is not recommended to record with the microSD card for 24/7 continuously, as it may not be able to support long term continuous data read/write. Please contact the manufacturer of the microSD card for information regarding the reliability and the life expectancy.

1.4. Function Cables (Outdoor only)



No.	Connector	Pin	Definition	Remarks
1	Audio I/O	Pink	Audio In (Line in)	Two-way audio transmission
		Green	Audio Out (Line out)	
2	Power (DC 12V) (2-Pin Terminal Block)	Black	DC 12V –	Power connection
		Red	DC 12V +	
3	Alarm I/O (4-Pin Terminal Block)	1	Alarm In –	Alarm connection * Do NOT connect external power supply to the alarm I/O connector of the camera.
		2	Alarm In +	
		3	Alarm Out –	
		4	Alarm Out +	
4	RJ-45	-	For network and PoE connections	
-	Default Button	-	Refer to the Default Button in the table under Connectors (Indoor Only) .	
-	microSD Card Slot	-	Refer to the microSD Card Slot in the table under Connectors (Indoor Only) .	

2. Camera Cabling

Please follow the instructions below to complete the cable connections.



NOTE: This camera must be installed by qualified personnel and the installation should conform to all local codes.

2.1. Power Connection

For power connection, please refer to section Connectors for the Indoor models, and see section All in One Cable for the Outdoor models. Alternatively, users can power the camera by PoE if a Power Sourcing Equipment (PSE) switch is available. Refer to the section below for Ethernet cable connection.



NOTE: If the device is powered over Ethernet, make sure the PSE is connected to the network.

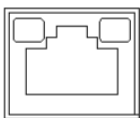
2.2. Ethernet Cable Connection

To have best transmission quality, cable length shall not exceed 100 meters. Connect one end of the Ethernet cable to the RJ-45 connector of the camera and plug the other end of the cable to the network switch or PC.



NOTE: In some cases, Ethernet crossover cable might be needed when connecting the camera directly to the PC.

Check the status of the link indicator and the activity indicator LEDs. If the LEDs are unlit, please check the LAN connection.



Green Link Light indicates good network connection.

Orange Activity Light flashes for network activity indication.

2.3. Connect Alarm I/O

The camera supports one alarm input and one relay output for alarm application. Refer to section Connectors for pin definitions.



NOTE: Do **NOT** connect external power supply to the alarm I/O connector of the IP camera.

2.4. Camera Installation

The following description demonstrates how to directly install the camera to the ceiling or to the wall.

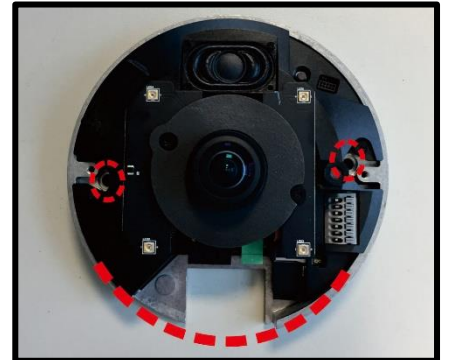
Step 1:

Loosen the two security screws on the camera with the supplied security torx and open the dome cover.



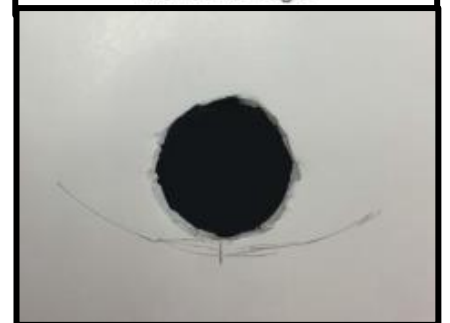
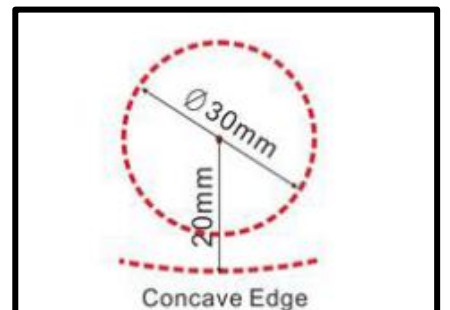
Step 2:

Place the camera at the installation location. Mark the position of the two screw holes indicated in the right figure on the ceiling/wall. Then draw a line along the concave edge of the camera to indicate the cable position.



Step 3:

On the ceiling/wall, draw a dot 20mm above the center of the marked concave edge. Set the marked dot as the center, draw a cable entry hole with 30mm diameter (radius as 15mm) and drill the cable entry hole.



Step 4:

Drill a hole slightly smaller than the supplied plastic screw anchor on each marked screw hole. Then insert the plastic screw anchors into the drilled holes.

Step 5:

Thread the cables through the cable entry hole. Match the two screw holes on the camera with the plastic screw anchors at the installation location. Fasten the camera with the supplied self-tapping screws.

Step 6:

Attach the dome cover to the camera and fasten the two security screws.

3. System Requirements

To perform the IP camera via web browser, please ensure the PC is in good network connection, and meet system requirements as described below.

Items	System Requirement
Personal Computer	Minimum : 1. Intel® Core™ i5-2430M @ 2.4 GHz 2. 4 GB RAM
	Recommended: 1. Intel® Core™ i7-3770 CPU@3.4GHz 2. 8 GB RAM
Operating System	Windows 7 or later operating system
Web Browser	Microsoft Internet Explorer 11.0 (recommended) Chrome Firefox Safari
Network Card	10Base-T (10 Mbps), 100Base-TX (100 Mbps) or 1000Base-T operation
Viewer	ActiveX control plug-in for Microsoft IE



NOTE: The ITE is to be connected only to PoE networks without routing to the “outside plant” or equivalent description. More information of “outside plant” see Wikipedia.

4. Access Camera

For initial access to the IP camera, users can search the camera through the installer program: DeviceSearch.exe.

Accessing the Camera by Device Search Software

- **Step 1:** Double click on the program Device Search.exe.
- **Step 2:** After its window appears, click on the <Device Search> button on the top. All the finding IP devices will be listed in the page.
- **Step 3:** Find the camera in the list by its IP address and click on it. The default IP address of the camera is: 192.168.0.250.
- **Step 4:** The default IP address of the camera may not be in the same LAN as the IP address of the PC. If so, the IP address of the camera needs to be changed. Right click on the camera and click <Network Setup>. Meanwhile, record the MAC address of the camera, for future identification.
- **Step 5:** The <Network Setup> page will come out. Select <DHCP> and click <Apply> down the page. The camera will be assigned with a new IP address.
- **Step 6:** Click <OK> on the Note of setting change. Wait for one minute to re-search the camera.
- **Step 7:** Click on the <Device Search> button to re-search all the devices. Find the camera in the list by its MAC address. Then double click or right click and select <Browse> to access the camera directly via a web browser.
- **Step 8:** A prompt window requesting for default username and password will appear. Enter the default username and password shown below to login to the camera.

Login ID	Password
root	admin



NOTE: ID and password are case sensitive.



NOTE: It is strongly advised that administrator's password be altered for the security concerns.

Installing DCViewer Software Online

For initial access to the camera, a client program, DCViewer, will be automatically installed to the PC when connecting to the camera.

If the web browser doesn't allow DCViewer installation, please check the Internet security settings or ActiveX controls and plug-ins settings (refer to section Setup Internet Security) to continue the process.

The Information Bar (just below the URL bar) may come out and ask for permission to install the ActiveX Control for displaying video in browser. Right click on the Information Bar and select <Install ActiveX Control...> to allow the installation.

The download procedure of DCViewer software is specified as follows.

- **Step 1:** In the DCViewer installation window, click on <Next> to start installation.
- **Step 2:** The status bar will show the installation progress. After the installation is completed, click on <Finish> to exit the installation process.
- **Step 3:** Click on <Finish> to close the DCViewer installation page.


Once the Viewer is successfully installed, the Home page of the IP camera will be shown as the figure below.

Ceiling Mount Installed Camera

Viewer Window Main Tabs Language Selection

GEUTEBRÜCK Home System Streaming Camera Logout EHC-4888 English ▾

H.264 Stream 1 ▾ Video Format Selection Live Video Pane Time Display 2010/04/24 21:40



Video Compression Info

Stream1 H264 bitrate : 409 kbps
Stream2 H264 bitrate : 409 kbps

Video Quality Info Button
Full Screen Button
Talk Button
Listen Button
Snapshot Button
Live View Pause Button
Video Record Button
Manual Trigger Button
Fisheye Source Image
Single ePTZ
Quad View



NOTE: For more details about the function buttons on the Home page, please refer to the Webbrowser Menu.

Wall Mount Installed Camera

Viewer Window Main Tabs Language Selection

GEUTEBRÜCK Startseite System Streaming Kamera Ausloggen EHC-4888 Deutsch ▼

H.264 Stream 1 ▼ → Video Format Selection Live Video Pane Time Display ← 2010/04/24 22:39



Video Compression Info

Stream1 H264 bitrate: 4096 kbps
Stream2 H264 bitrate: 4096 kbps

Video Quality Info Button
Full Screen Button
Talk Button
Listen Button
Snapshot Button
Live View Pause Button
Video Record Button
Manual Trigger Button
Fisheye Source Image
180° Panoramic
Dual ePTZ



NOTE: For more details about the function buttons on the Home page, please refer to the Webbrowser Menu.

5. Setup Video Resolution

Users can setup video resolution on Video Configuration page of the user-friendly browser-based configuration interface.

Video Configuration can be found under this path: **Streaming> Video Configuration**.

GEUTEBRUCK | Home | System | **Streaming** | Camera | Logout | EHC-4888 | English ▼

Video Configuration

stream 1

Encoding: Yes ▼ Source: overview ▼

Encode Type: H.264 ▼ Profile: Main profile ▼

Resolution: 2048 x 1536 ▼ Framerate: 25 ▲▼

Rate Control: VBR ▼ Bitrate: 4096 ▲▼

GOV Structure: Simple ▼ GOV Length: 15 ▲▼

Quality: 16 ▲▼

stream 2

Encoding: Yes ▼ Source: ptz ▼

Encode Type: H.264 ▼ Profile: Main profile ▼

Resolution: 960 x 960 ▼ Framerate: 25 ▲▼

Rate Control: VBR ▼ Bitrate: 4096 ▲▼

GOV Structure: Simple ▼ GOV Length: 15 ▲▼

Quality: 4 ▲▼

Save Reset

The default video resolution of 6M and 12M models are shown as below. The default resolution varies with different Fisheye Dewarping types, Front End Camera Dewarping and Back End Software Dewarping.

Users can setup the Fisheye Dewarping types on Camera setting page. Click on <Fisheye Setting> on Camera setting page and choose a fisheye dewarping type for correcting the fisheye source images. Then, select the camera's installation method to view the dewarped images with the correct viewing modes.

4M Front End	H.264- 2048 x 2048 (25 fps)
12M Back End	H.264- 4000 x 3000 (20 fps)

6. Configuration Files Export / Import

To export / import configuration files, users can access the Maintenance page on the user-friendly browser-based configuration interface.

The Maintenance setting can be found under this path: **System> File Import/Export**.

Users can export configuration files to a specified location and retrieve data by uploading an existing configuration file to the camera.

Export Files

Users can save the system settings by exporting the configuration file (.bin) to a specified location for future use. Click on the <Export> button, and the popup File Download window will come out. Click on <Save> and specify a desired location for saving the configuration file.

Upload Files

To upload a configuration file to the camera, click on <Browse> to select the configuration file, and then click on the <Upload> button for uploading.

7. Tech Support Information

This chapter will introduce how to delete previously-installed Viewer in the PC and how to setup the Internet security.

7.1. Delete the Existing DCViewer

For users who have installed the DCViewer in the PC previously, please remove the existing DCViewer from the PC before accessing to the IP camera.

Deleting the DCViewer

In the Windows <Start Menu>, activate <Control Panel>, and then double click on <Add or Remove Programs>. In the <Currently installed programs> list, select <DCViewer> and click on the button <Remove> to uninstall the existing DCViewer.

Deleting Temporary Internet Files

To improve browser performance, it is suggested to clean up all the files in the <Temporary Internet Files>. The procedure is as follows.

- **Step 1:** In the web browser, clicks on the <Tools> tab on the menu bar and select <Internet Options>.

- **Step 2:** Click on the <Delete> button under <Browsing History> section. In the appeared window, tick the box beside the <Temporary Internet files>.
- **Step 3:** Click on <Delete> to start deleting the files.

7.2. Setup Internet Security

If ActiveX control installation is blocked, please either set Internet security level to default or change ActiveX controls and plug-ins settings.

Internet Security Level: Default

- **Step 1:** Start the Internet Explorer (IE).
- **Step 2:** Click on the <Tools> tab on the menu bar and select <Internet Options>.
- **Step 3:** Click on the <Security> tab, and select <Internet> zone.
- **Step 4:** Down the page, click on the <Default Level> button and click on <OK> to confirm the setting. Close the browser window, and restart a new one later to access the camera.

ActiveX Controls and Plug-ins Settings

- **Step 1:** Repeat Step 1 to Step 3 of the previous section above.
- **Step 2:** Down the page, click on the <Custom Level> button to change ActiveX controls and plug-ins settings. The Security Settings window will pop up.
- **Step 3:** Under <ActiveX controls and plug-ins>, set ALL items (as listed below) to <Enable> or <Prompt>. Please note that the items vary by IE version.

ActiveX controls and plug-ins settings:

1. Binary and script behaviors.
2. Download signed ActiveX controls.
3. Download unsigned ActiveX controls.
4. Allow previously unused ActiveX controls to run without prompt.
5. Allow Scriptlets.
6. Automatic prompting for ActiveX controls.
7. Initialize and script ActiveX controls not marked as safe for scripting.
8. Run ActiveX controls and plug-ins.
9. Only allow approved domains to use ActiveX without prompt.
10. Script ActiveX controls marked safe for scripting*.
11. Display video and animation on a webpage that does not use external media player.

- **Step 4:** Click on <OK> to accept the settings. A prompt window will appear for confirming the setting changes, click <Yes(Y)> to close the Security Setting window.
- **Step 5:** Click on <OK> to close the Internet Options screen.
- **Step 6:** Close the browser window and restart a new one later to access the camera.

Technical alterations reserved.

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