GEUTEBRÜCK

G-Cam/ESD-4620

2 MP Outdoor Speed Dome IP Camera

Installation Manual

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 dome systems and permanently mounted 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 unwanted 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 speed dome IP Camera. To work with the Dome 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 detailed information about recycling of this product, please contact the local city office, household waste disposal service or the shop where 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 handing or storage.

- **Installing electricity wiring carefully**

Ask qualified personnel of electrical wiring for the installation. Please note the technical specifications for correct power supply at the end of this manual.

- **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**

Use the camera under conditions which are described in the technical specifications.

- **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.

Notes on mechanical wear

The mechanical moving parts of the camera are subject of wear.
This applies in particular to the use in 24/7 mode.
Following values are showing the Life Expectancy of the wear parts:

40x Lens	Life Test for **Focus** Operation	Should work after 2,000,000 cycles
	Life Test for **Zoom**	Should work after 1,000,000 cycles
	Life Test for **Iris**	Should work after 500,000 cycles
Slip Ring	Life Expectancy	≥10,000,000 rounds
Fan	Life Expectancy	65076 MTBF(hours)

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 persistant mast shaking!

Dome Cover Cleaning Guide

Dirt or dust on the surface of a PTZ / Dome Camera can blur the image. The following describes how to correctly clean the dome cover of a PTZ / Dome Camera.

NOTE: If the dome cover is scratched, please contact the distributor for replacement.

Applicable Types:

- General dome cover (speed domes, fixdomes and bullet models)

Cleaning Tools:

- Rubber air blower or air gun with air compressor
- Alcohol prep pad
- Rubber gloves
- Microfiber high performance cloth
- Pre-diluted detergent (10ml of detergent with 1L of water)

NOTE: Do NOT use other fabric or cloth, e.g. paper towels, to wipe the cover; it may cause scratches on the dome surface while cleaning.

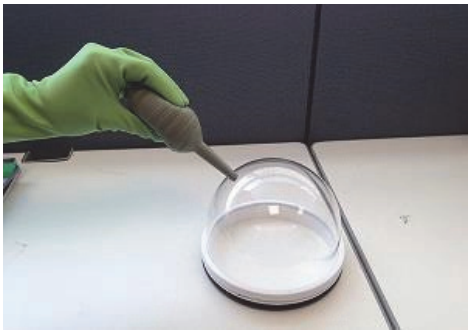
NOTE: It is strongly recommended to clean the dome cover wearing the rubber gloves, for grease and sweat will leave on the dome cover.

According to different scenarios, ways to clean the dome surface will also vary.

Refer to the following to proceed.

Scenario 1:

Only little dirt or dust is attached to the dome surface.



Solution:

Put on the rubber gloves and simply use rubber air blower or air gun with air compressor to blow off dirt or dust.

Scenario 2:

There are fingerprints or light grease on the dome surface.

Solution:

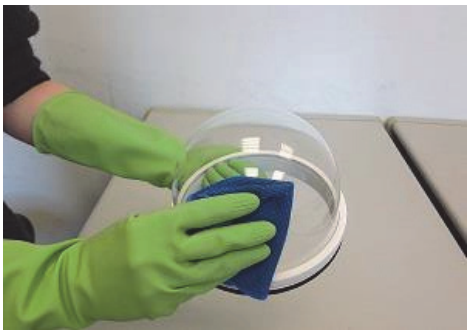
Put on the rubber gloves. Gently wipe off the dirt spot using alcohol prep pad.

Scenario 3:

There is a huge accumulation of dirt or grease on the dome surface.

Solution:

Put on the rubber gloves. Dampen the microfiber cloth with pre-diluted detergent, gently wipe off the grease.



Then rinse the dome surface with cold water and dry it with a dry microfiber cloth.

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1. Introduction

The 1080p HDR 40x zoom Speed Dome IP Camera is designed to deliver superb performance and durability in any security and surveillance installation.

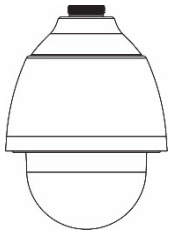
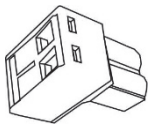
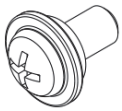
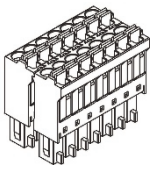
When the camera is operated in dual stream mode, the primary and the secondary stream can be set to 1080p at 30 fps. Utilizing the latest technology, it can stream out video in H.265/H265CCTV, H.264/H264CCTV and MJPEG simultaneously.
The camera owns features like “Servo Feedback” and electronic image stabilization (EIS). Servo Feedback enables an immediately return of the camera module into the position, which the camera had before a strong shake of a pole, etc. EIS delivers stable images also in large focal lengths, when the camera should be disturbed by oscillation of the pole at strong wind.

1.1 Functions

- Sony Progressive Scan CMOS Sensor
- 40x Optical Zoom
- Multi-Codec H.264/H264CCTV, H.265/H265CCTV und MJPEG
- Multi Exposure HDR
- Quad streams support
- Analog video output (stream dependent)
- Digital Noise Reduction
- Removeable IR Cut Filter
- Electrical Image Stabilization (EIS)
- Micro SD card support (up to 128 GB max.)
- IP 66 (Outdoor models only), IK 10
- ONVIF S/G/Q/T compatible
- Zero Downtime function (with 2 independent power supplies only)
- Servo Feedback Function (removes back the PTZ after shaking, etc.)

1.2 Package Contents

Before proceeding, please check the box contains the items listed here. If any item is missing or has defects, DO NOT install or operate the product and contact dealer for assistance.

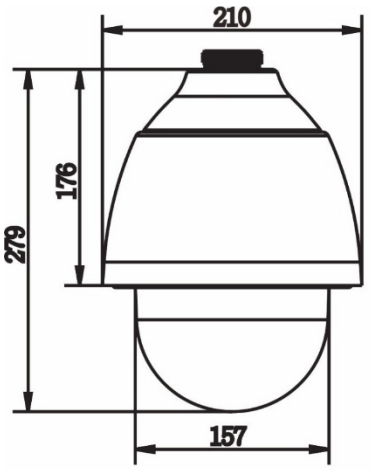
 G-Cam/ESD-4620 H.265 Network PTZ Camera	
 Quick Guide	 Security Torx
 3-Pin Power Terminal Block (AC 24V Use)	 2-Pin Power Terminal Block (DC12V Use)
 M4 Security Screw with Rubber	 14-Pin Alarm/Audio I/O Terminal Block

NOTE: To use an external power supply, please contact the camera manufacturer.

NOTE: This camera contains replaceable batteries. To prevent explosion risks, confirm the battery type before replacement. Dispose of used batteries in accordance with the local regulations.

1.3 Camera Dimensions

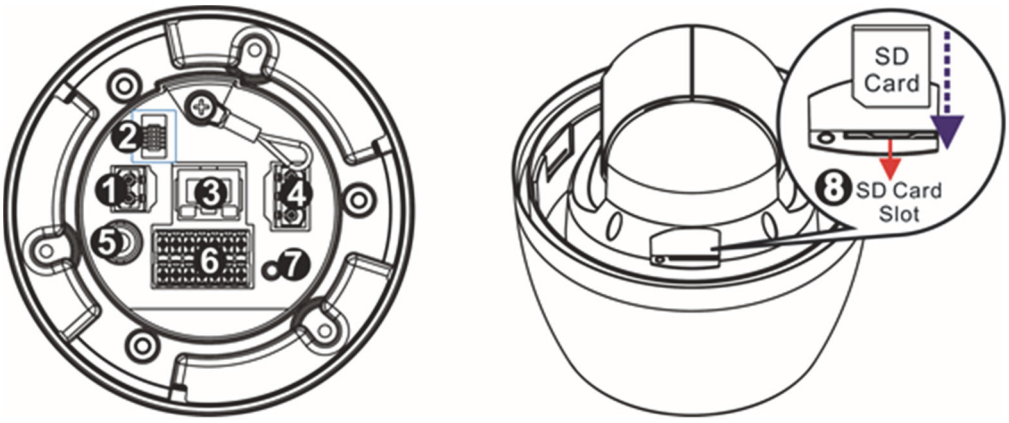
Outdoor



Unit: mm

1.4 Connectors

Refer to the diagrams below for the positions of the reset button and various connectors of the camera. Definition of the reset button and the connectors are given as follow.



No.	Connector	Definition
1	**Power (DC 12V)**	DC 12V power input
2	**Console**	This connector is used for repair/maintenance.
3	**RJ-45 Port**	For network and PoE+ connections
4	**Power (AC 24V)**	AC 24V power input
5	**BNC**	For analog video output
6	**Audio/Alarm I/O***	Audio/Alarm I/O
7	**Reset Button**	Press the button with a proper tool for at least 20 seconds to restore the system.
8	**SD Card Slot**	Open the dome cover to reveal the SD Card Slot. Insert the SD card into the card slot to store videos and snapshots. Do not remove the SD card when the camera is powered on.

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

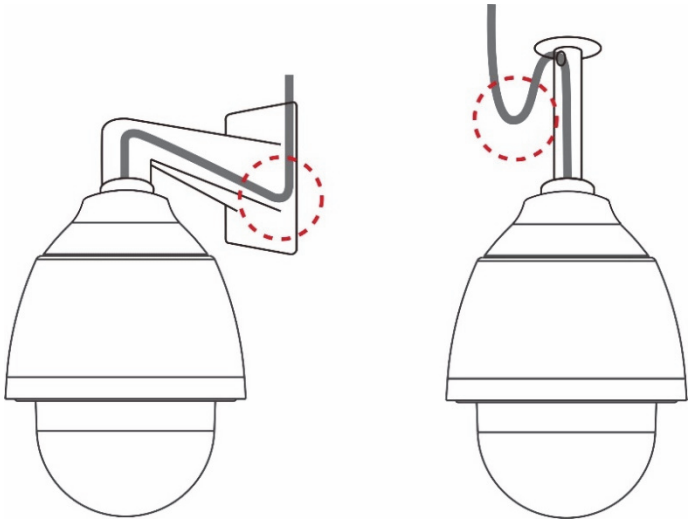
NOTE: It is not recommended to record with the SD card for 24/7 continuously, as it may not be able to support long term continuous data read/write. Please contact the manufacturer of the SD card for information regarding the reliability and the life expectancy.

2. Camera cabling

Notice for Outdoor Models

The outdoor models are being IP66-rated to prevent water from entering the camera. However, water might still enter the camera if it is being improperly installed. Please make sure the warnings below are strictly followed when installing the camera.

- Place all cables and the adaptor in dry and well-waterproofed environments, e.g. waterproof boxes. The purpose is to prevent moisture accumulation inside the camera and moisture penetration into cables.
- While running cables, slightly bend the cables to a U-shaped curve to make a low point (as demonstrated in the figures below). The purpose is to prevent water from entering the camera along the cables from above.

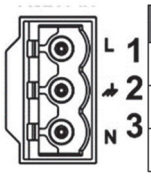


2.1 Power Connection

To power up the camera, connect the DC 12V or AC 24V power adaptor to the power connector of the camera and the power outlet. Alternatively, the camera can be powered with PoE+ (IEEE802.3at, 2-pair 30 W; see technical data).

GND

+ 12 VDC



Pin	Definition
1	AC 24V-1
2	GND
3	AC 24V-2

Zero Downtime Power Switching (ZDT)

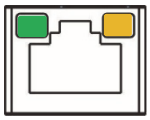
When users connect DC 12V power jack and the RJ-45 port at the same time, the power input comes from the DC 12V connector. If the DC 12V power source fails, the camera will switch power input seamlessly to the RJ-45 port until the DC 12V power source is restored.

2.2 Ethernet Cable Connection

Use of Category 5 Ethernet Cable is recommended for network 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 Network Speed Dome Camera, and the other end of the cable to the network switch or PC.

NOTE: In some cases, users may need an Ethernet crossover cable when connecting the Network Speed Dome Camera directly to the P C.

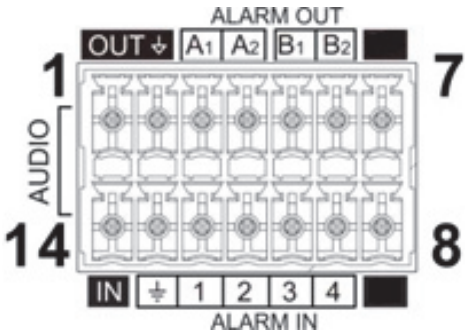
Check the status of the link indicator and activity indicator LEDs; if the LEDs are unlit, please check LAN connection.



Green Link Light indicates good network connection. Orange Activity Light flashes for network activity indication.

2.3 Audio & Alarm I/O Connection

The camera supports 4 digital alarm inputs and 2 digital alarm outputs. Please refer to the diagram and the pin definition tables below for alarm I/O connection.



Pin	Definition	Pin	Definition	Pin	Definition	Pin	Definition
1	Audio Out	**5**	Alarm Out B1	**9**	Alarm In 4	**13**	GND (Alarm)
2	GND (Audio I/O)	**6**	Alarm Out B2	**10**	Alarm In 3	**14**	Audio In
3	Alarm Out A1	**7**	N. C.	**11**	Alarm In 2		
4	Alarm Out A2	**8**	N. C.	**12**	Alarm In 1		

GEUTEBRÜCK DVRs support Audio In only.

3. System Requirements

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

Items	Minimum Requirement
Personal Computer	**Minimum :** 1. Intel® CoreTM i5-2430M @ 2.4 GHz 2. 4 GB RAM or more
	Recommended : 3. Intel® CoreTM i7-3770 @ 3.4 GHz 4. 8 GB RAM
Operating System	Windows VISTA / XP / 7 / 8 / 10
Web Browser	Internet Explorer 11.0 or later, Firefox, Chrome, Safari
Network Card	10Base-T (10 Mbps) or 100Base-TX (100 Mbps)
Viewer	ActiveX control plug-in for Microsoft IE

4. Access Camera

For initial access to the IP camera, users can search the camera through the installer program DeviceSearch.exe, which can be found in “DeviceSearch” folder in the supplied CD.

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: The default IP configuration is **DHCP.** If no DHCP server is in network, the camera sets itself to the address **192.168.0.250**.
This IP address 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>.
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.
Click <OK> on the Note of setting change. Wait for one minute to re-search the camera. Meanwhile, record the MAC address of the camera, for future identification.

Step 4: 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 5: 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. Refer to the Menu Tree in the supplied CD for further details.

Installing DCViewer Software Online

For the initial access to the IP camera the 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.

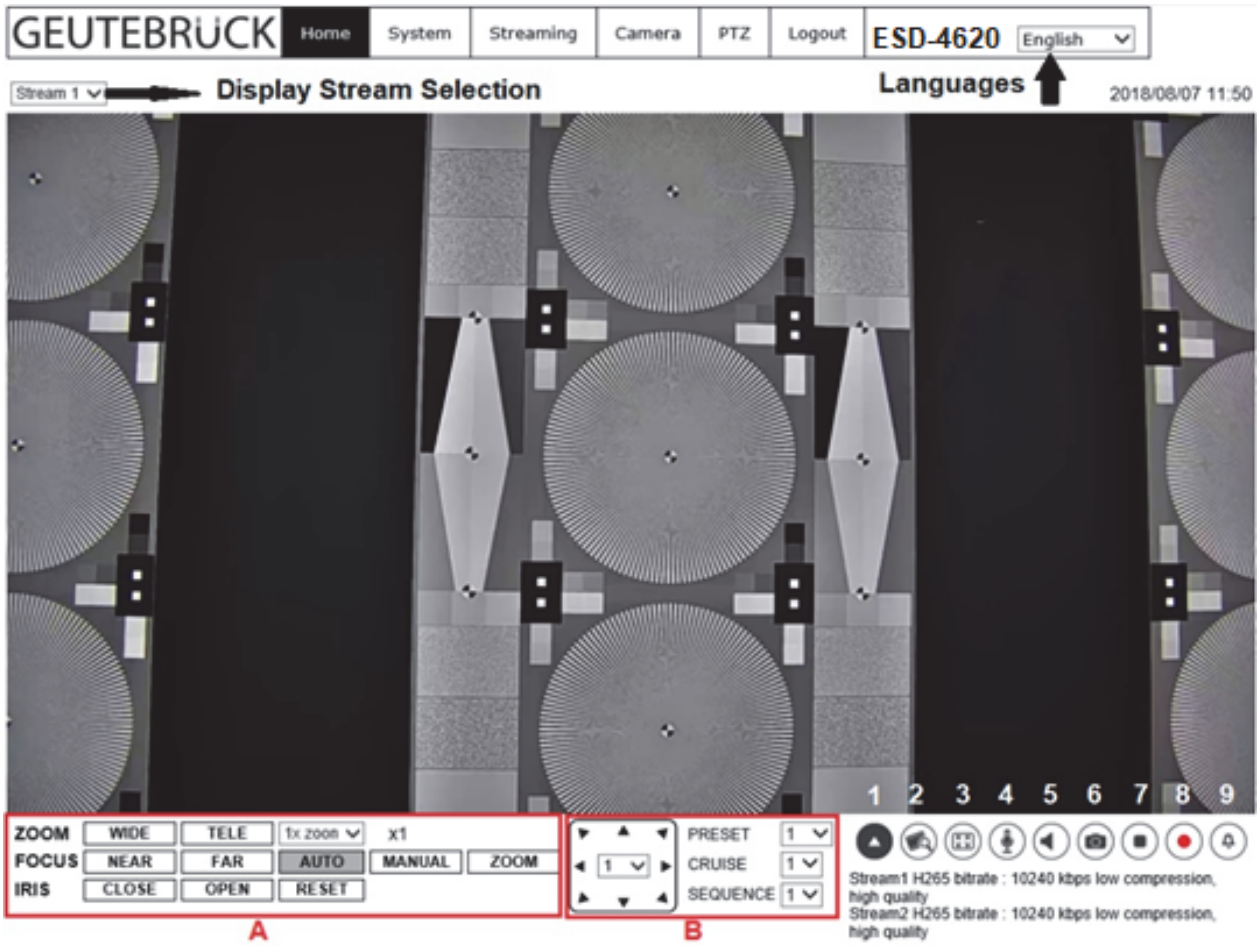
The download procedure of Viewer software is specified as follows.

Step 1: In the Viewer installation window, click on <Next> to start the 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 Viewer installation page.

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



- **(A) Zoom/Focus/Iris adjustment**
- **(B) PTZ functions**
- **(1) Open/Close B**
- **(2) Quality**

Click this button to display the video quality (Bitrate and Compression) or to close it.

- **(3) Screen Size Adjustment**

Standard image display size can be adjusted to full screen. To leave this mode press “Esc” or double click on the full screen.

- **(4) Talk button** (On / Off) (listen only is supported by GEUTEBRUECK DVRs)

Talk function allows the local site to talk to the remote site. Click on the button to enable / disable the talk function.
Please refer to Security > User > Add user > Talk / Listen for further details.

NOTE: This function is only open to “User” who has been granted this privilege by the administrator.

- **(5) Speaker button** (On / Off)

Click on the <Speaker> button to mute / activate the audio.

NOTE: This function is only available for "User" who has granted this privilege by the administrator.

- **(6) Snapshot button**

Click on the button and the JPEG snapshots will automatically be saved in the appointed place. The default place of saving snapshots is: C:\. To change the storage location, please refer to section File Location for further details.

NOTE: With Windows 7 or 8 operating system, to implement the Snapshot function, users must run IE as administrator.

- **(7) Video Streaming Pause / Restart button** (Pause / Restart) Click on the <Stop> button to disable video streaming, the live video will be displayed as black. Click on <Restart> to show the live video again.

- **(8) Web Recording button** (On / Off)

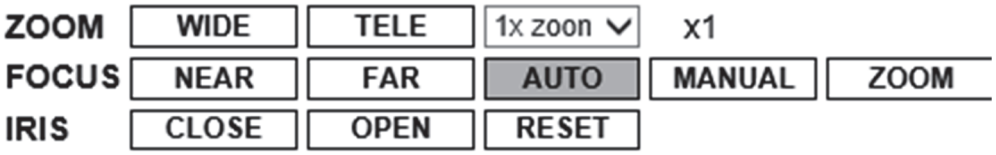
Click on the <Recording> button and the Live View through the web browser will be directly recorded to the specific location on the local hard drive, which could be configured in the <File Location> page. The default storage location for the web recording is: C:\. Please refer to section File Location for further details.

NOTE: With Windows 7 or 8 operating system, to implement the Web Recording function, users must run IE as administrator.

- **(9) Manual Trigger Button** **(On / Off)**

Click on the <Manual Trigger > button to turn on and off the manual trigger. Please refer to section Manual Trigger of the next chapter for further details.

- **Zoom Adjustment**



Wide / Tele buttons (Zoom)

Click on the <Tele / Wide> button to shift the zoom lens according to the defined value.

Near / Far buttons (Focus)

Hold the <Near / Far> button and implement continuous focus adjustment.

Auto Focus Modes

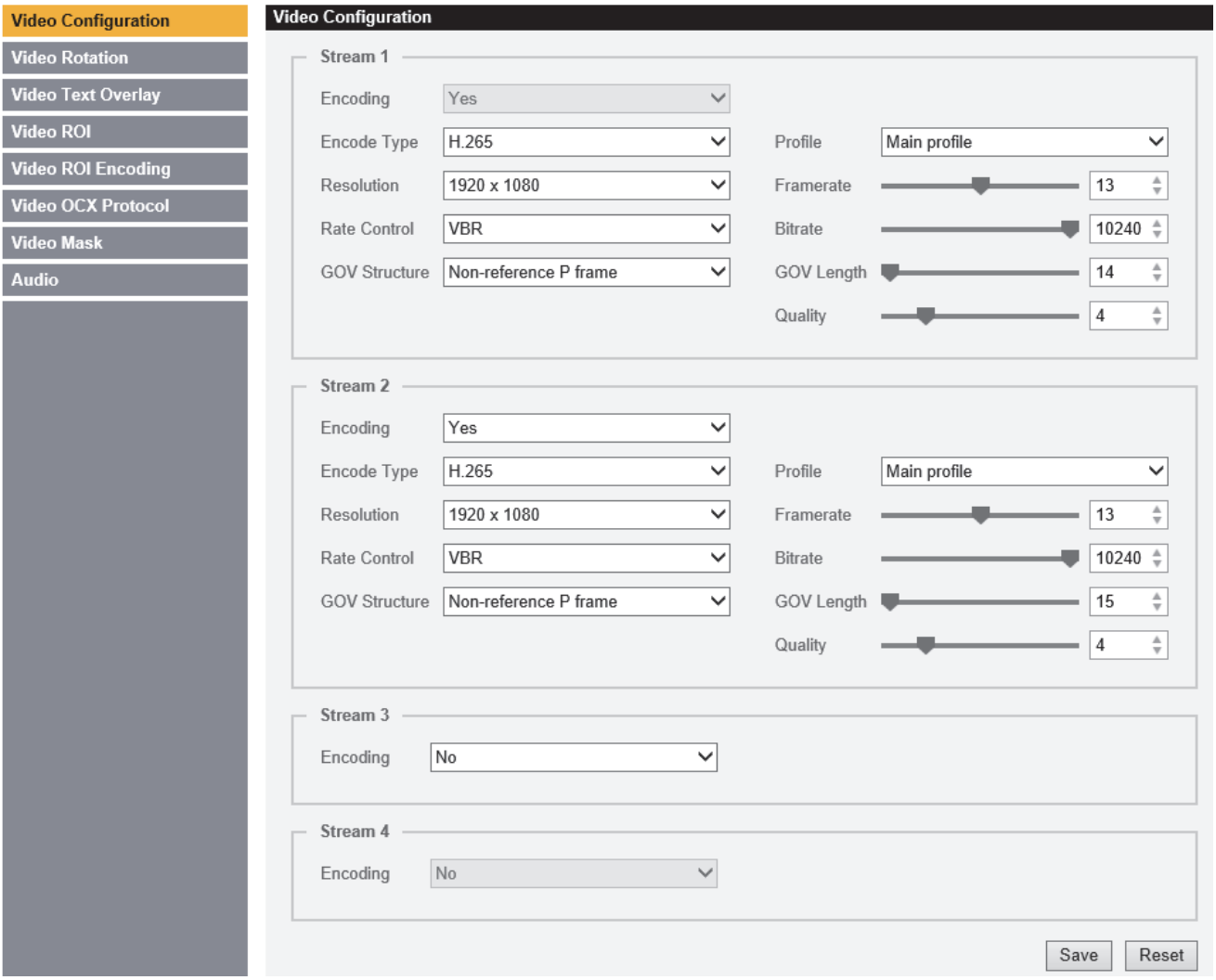
The <Auto> function is for automatic focusing every time.
In <Manual> mode you can adjust focus for your needs.
In <Zoom> mode (Zoom Trigger) the AF will be triggered after pressing zoom.

Iris buttons

Press <Close> or <Open> to close or open the iris. It may take some seconds until a difference will be seen on the screen. To reset the iris to its normal value, press <Reset> once.

5. Setup Video Resolution

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



Details about the combinations of video resolution are visible when you click on the drop-down list under “Video Resolution”.

Click on <Save> to memorize the parameters.

6. Commissioning in GEUTEBRÜCK Software

Attention: To install the IP cameras correctly, the software must be:
- **G-Core Version 3.X.X.X.X** with G-Cam/E4-Plugin.
GeViScope- or re_porter units don´t own a G-Cam/E4 plugin!
Older Software must be updated.
Please download at: www.geutebrueck.com

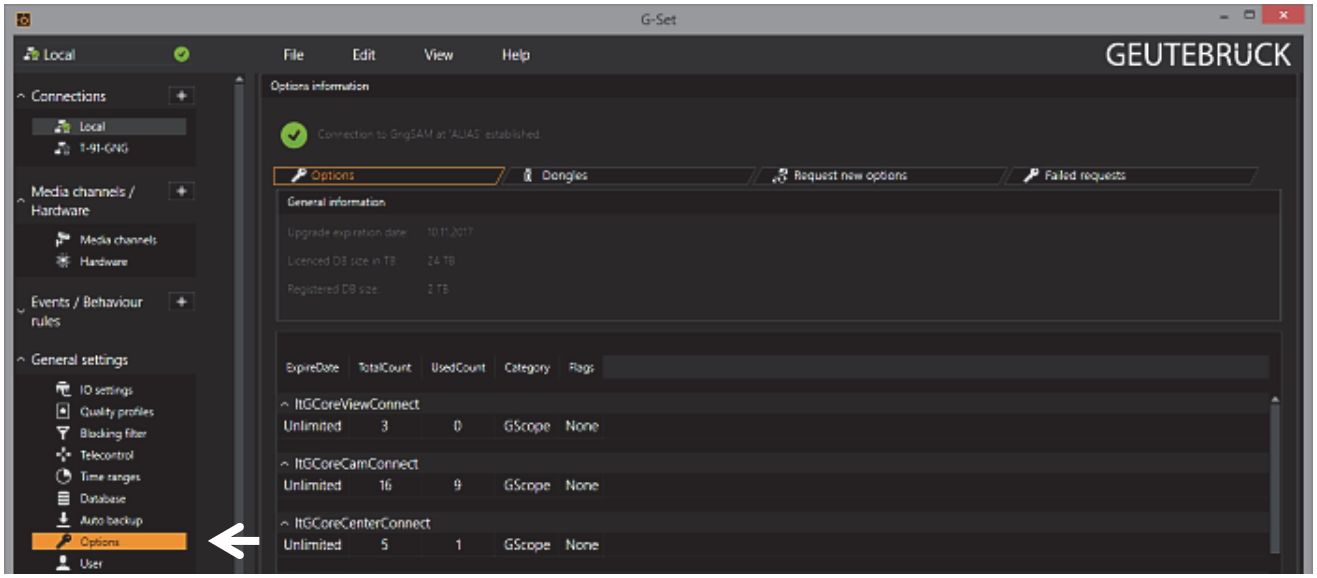
6.1 Commissioning of IP Cameras in G-Set

NOTE: For correct installation of IP cameras one **Option G-Core/CamConnect** must be available for each camera.

Available options are shown in G-Set at *General settings - Options*.

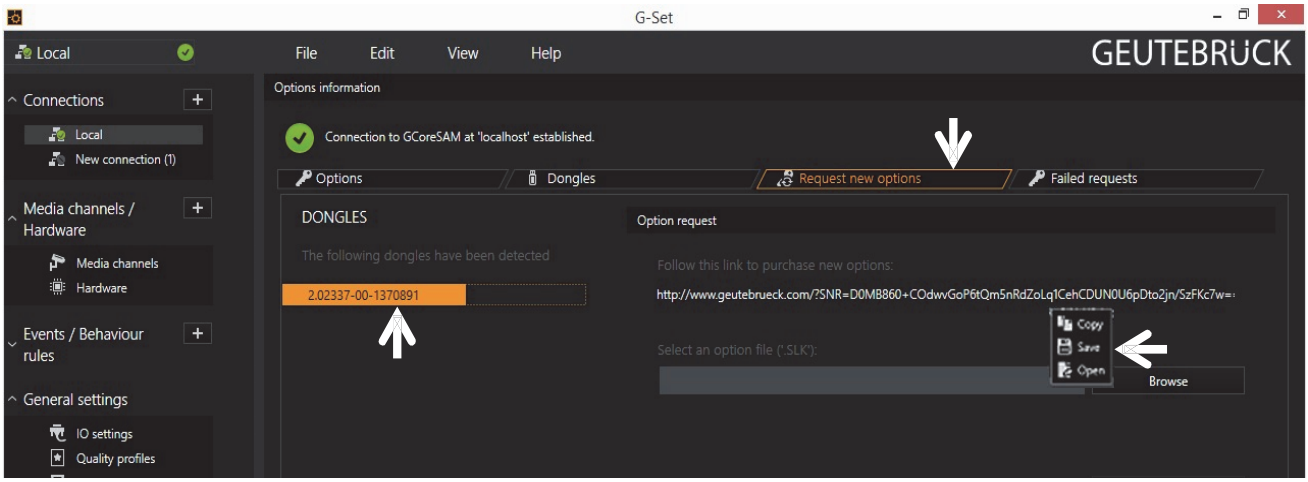
Required options can be ordered using *General settings - Options* in G-Set.

After clicking on *Options*, the options dialog opens with the first tab, which shows an overview of the available options.



The dialog shows the four tabs *Options*, *Dongles*, *Request new options* and *Failed requests*.

Request new options



New options can be requested using this dialog. When you click the dongle that will be assigned the new options, an URL appears in the field *Follow this link to purchase new options*.

Right clicking this URL opens a menu in which the URL can be copied, saved or opened in the default browser.

After passing the URL to a browser, follow the instructions on the GEUTEBRÜCK website.

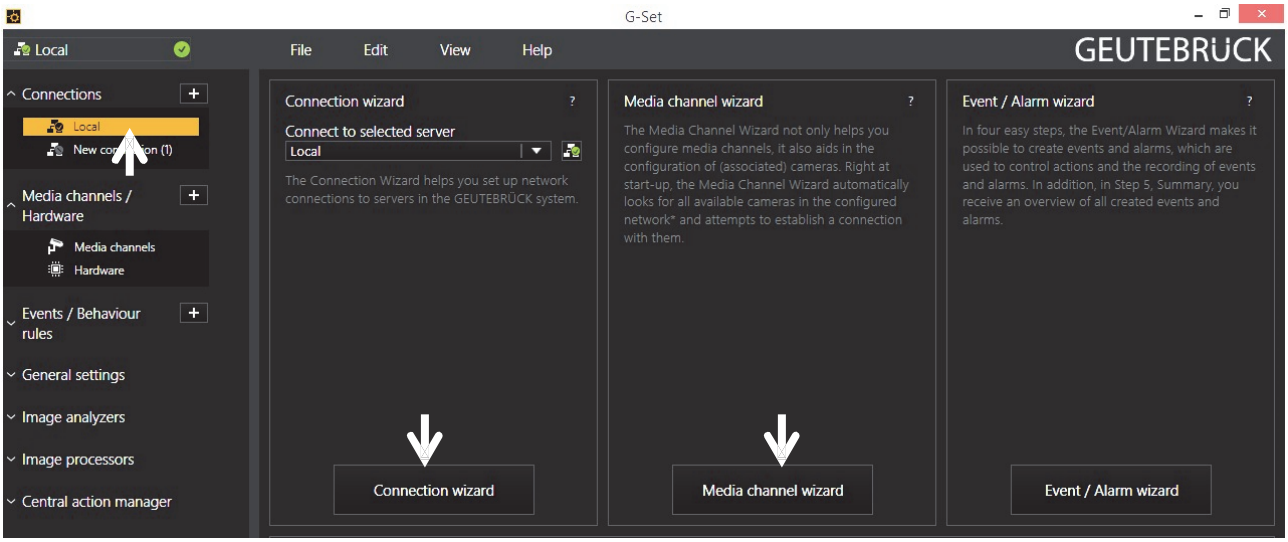
Adding IP Cameras

Please double click at desktop on the G-Set icon to open the G-Set configuration menu.

Step 1: Connection to a server

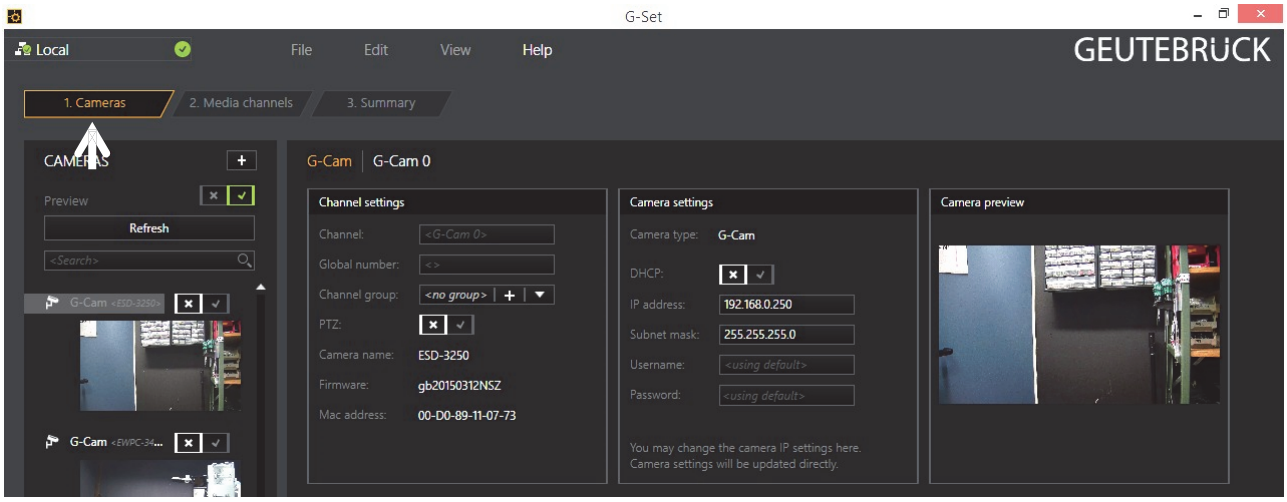
To connect G-Core with a (local or remote) server,

- Double-click on a connection available under *Connections* in the selection menu or
- In the Connection wizard dialog select a server from the list and click on the icon.
- By clicking *Connection wizard*, you can also configure new server connections.



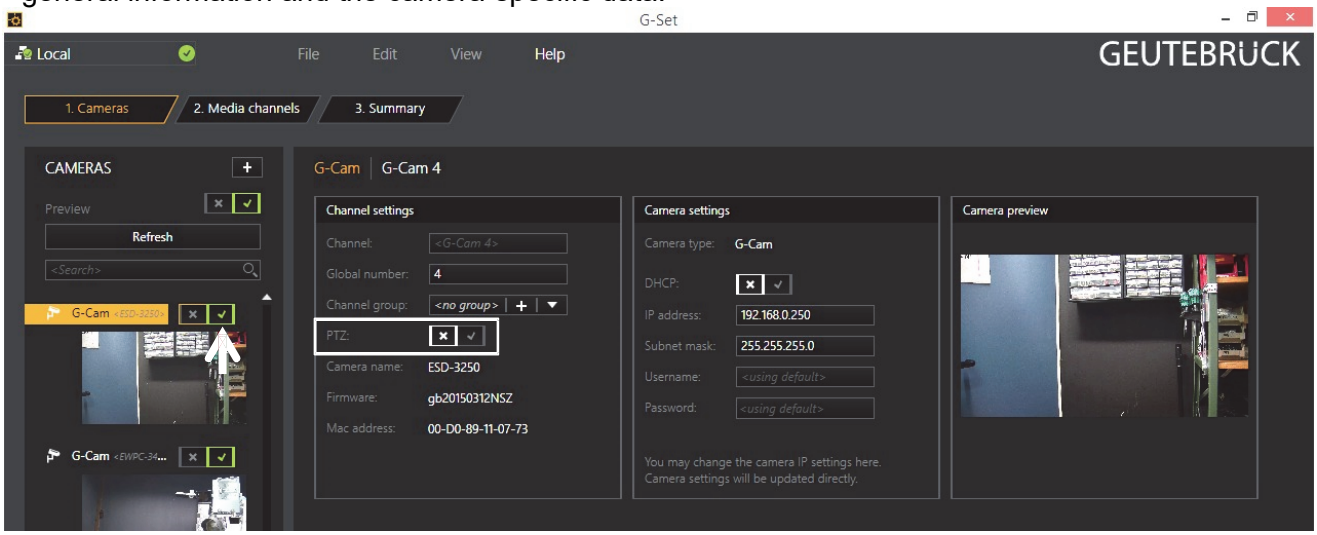
Step 2: Activation and configuration of Media channels.

Left mouse click at *Media channel wizard* and click on tab *Cameras* opens the following window:



The Media Channel Wizard automatically searches for existing network cameras and displays them in the first column.
Cameras for which access rights are available are also displayed with a small camera image.

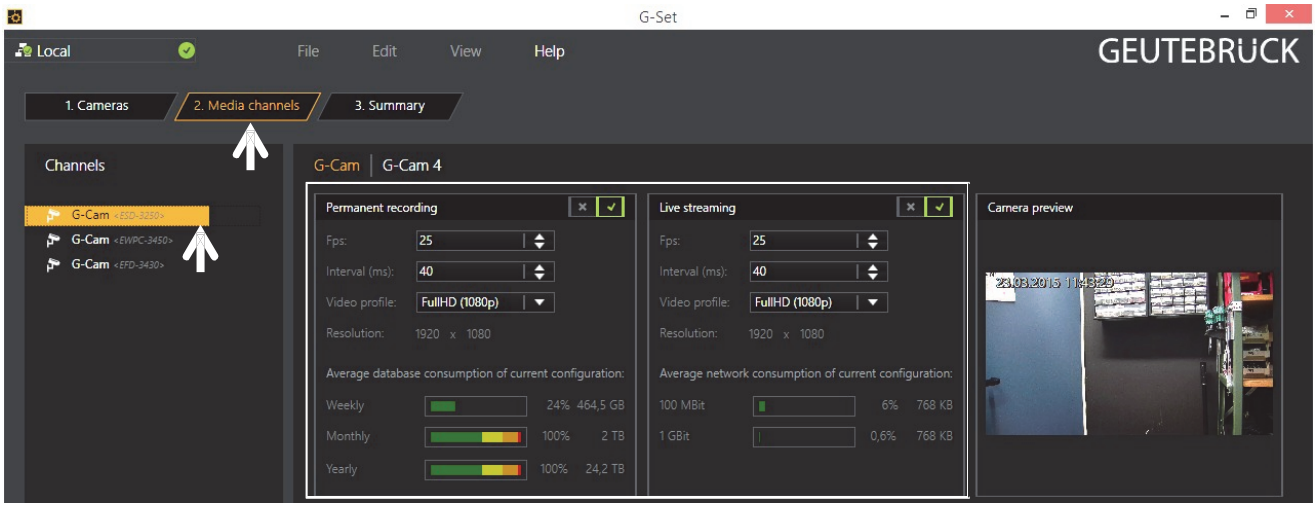
You can now select the desired camera by clicking the tick box (changes to green) and edit the general information and the camera-specific data.



NOTE: If you want to control a PTZ camera, the **tick box PTZ** in the menu *Channel Settings* **must** be activated.

Left click on the tab *Media channels* opens the configuration window.

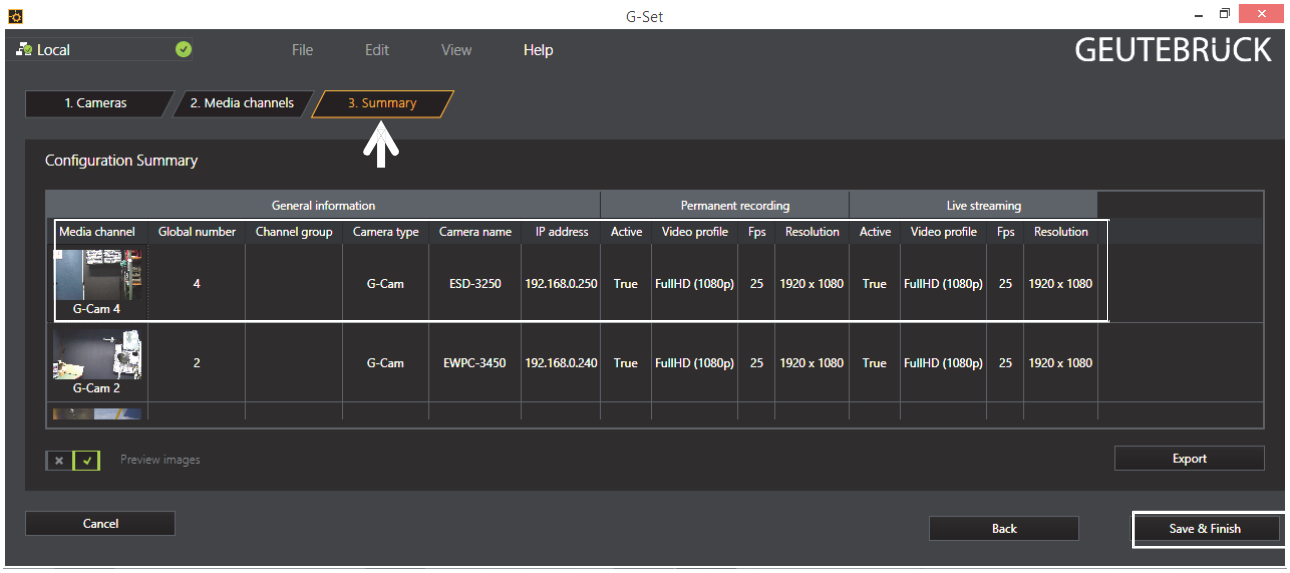
At left column (camera tree) please choose the desired camera.



In the camera menus you can make the desired settings for *Permanent Recording* and *Live Stream.*

Step 3: Summary (check settings, confirm and transfer settings to the server).

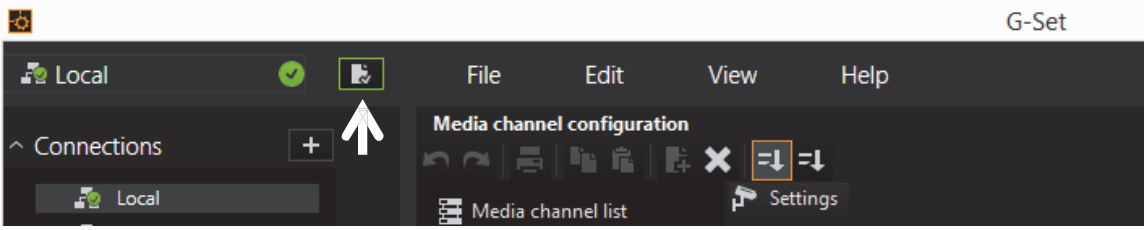
Mouse click on tab *Summary* provides you with an overview of all the settings that have been defined for your cameras.



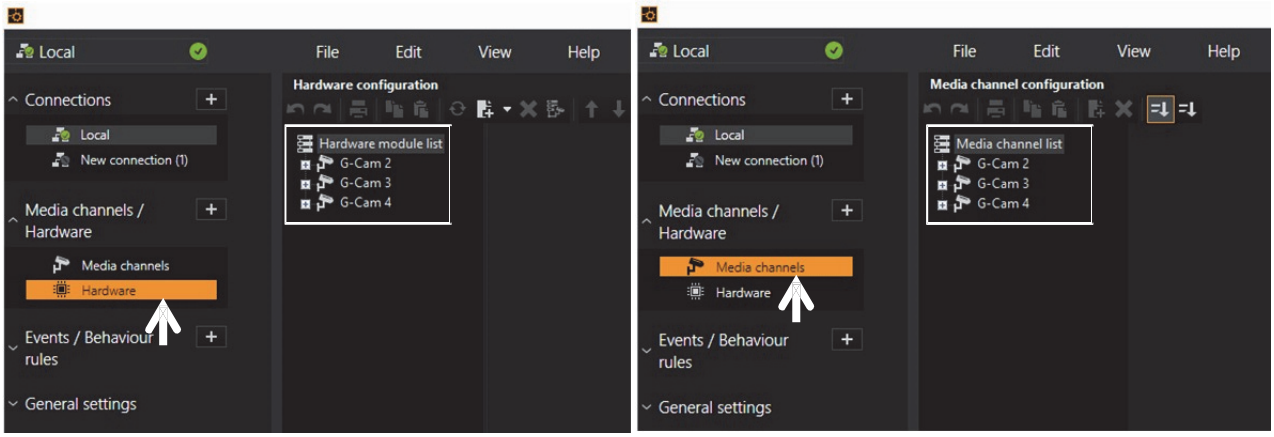
Please confirm your settings by clicking the button *Save & Finish*.

IMPORTANT: For settings to take effect, they **must** be sent to the server by clicking the icon .

You can find the *transfer button* on the *command bar* of G-Set.



Finally, with click at *Hardware* and *Media Channels,* you can check whether the camera is present in the network and the media channels are configured correctly.



Also you can add cameras, when you set the Hardware and Media Channels consecutively:

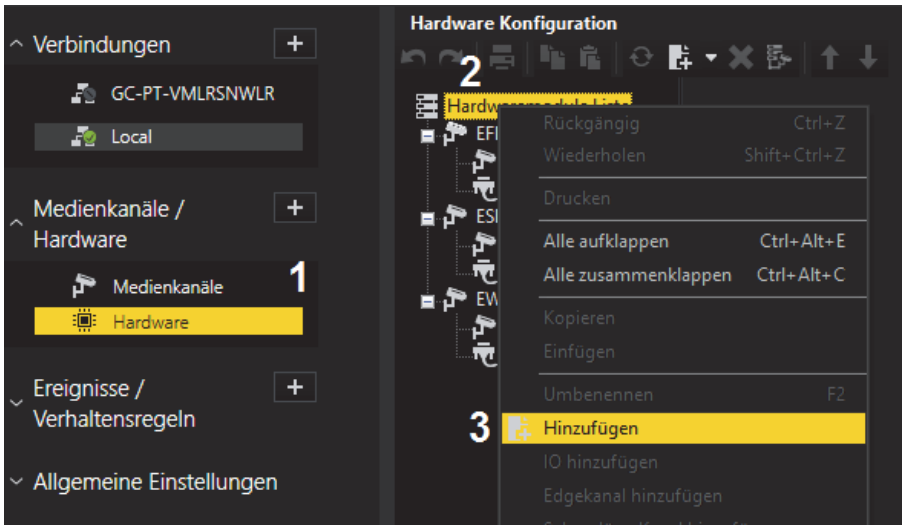
Add IP cameras
To open the G-Set menu, doubleclick onto this icon on the desktop.

Connection to a server

Doubleclick on „**Local**“, to setup the local machine.

This window appears:

1. Leftclick „**Hardware**“,
2. Rightclick „**Hardware module list**“,
3. Leftclick „**Add**“;



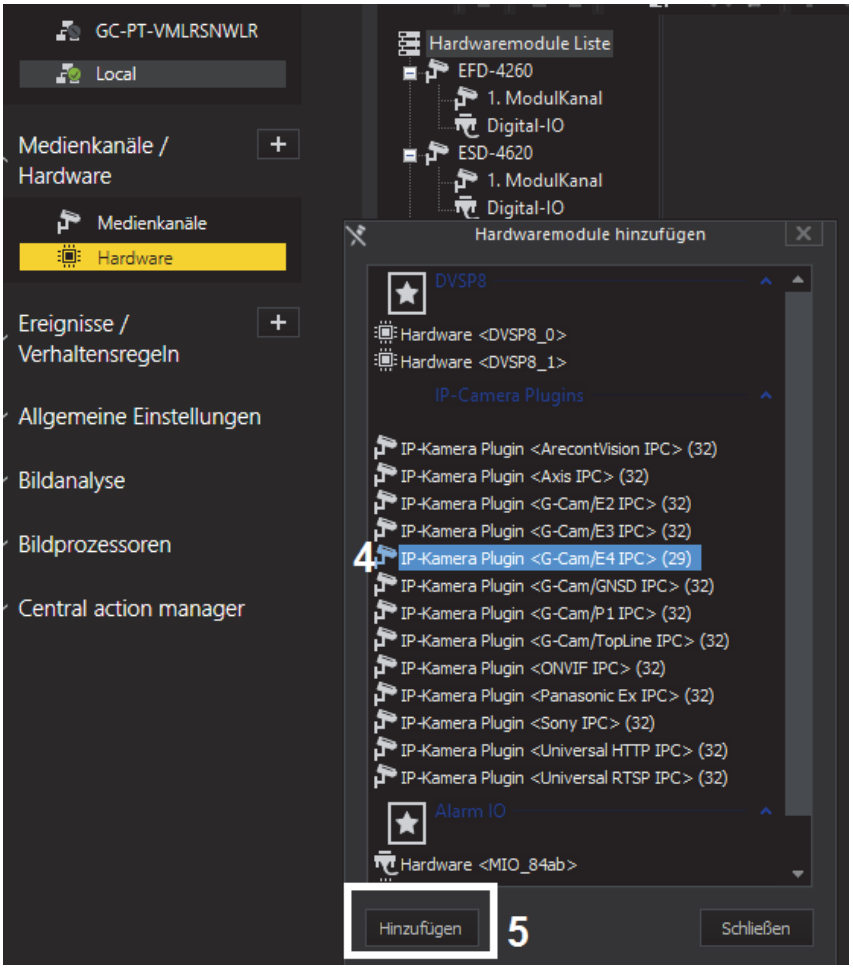
The Plugin list appears:

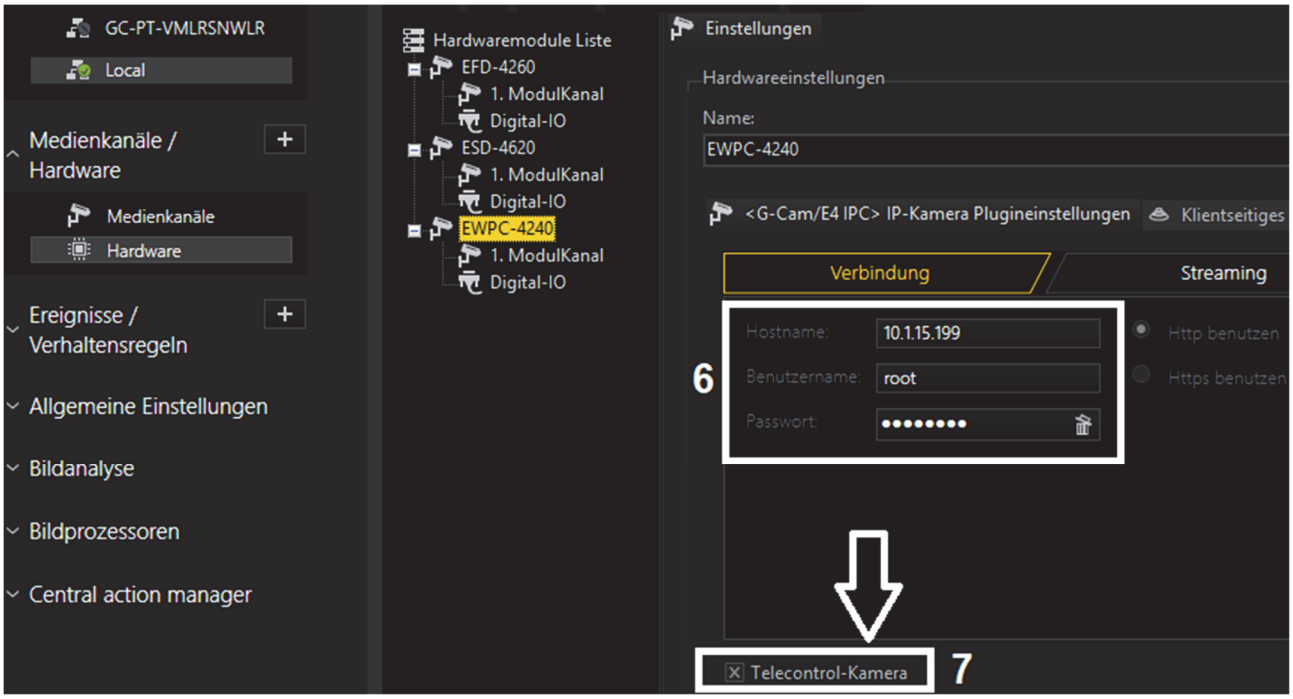
4. choose a plugin (here: **<G-Cam/E4 IPC>**),
5. click on „**Add**“ or doubleclick onto the plugin

Please note, that E4 cameras exclusively run with this plugin.

Eventually existing E3 models have to be setup with the E3 plugin continously.

You can name the channel like the camera model.





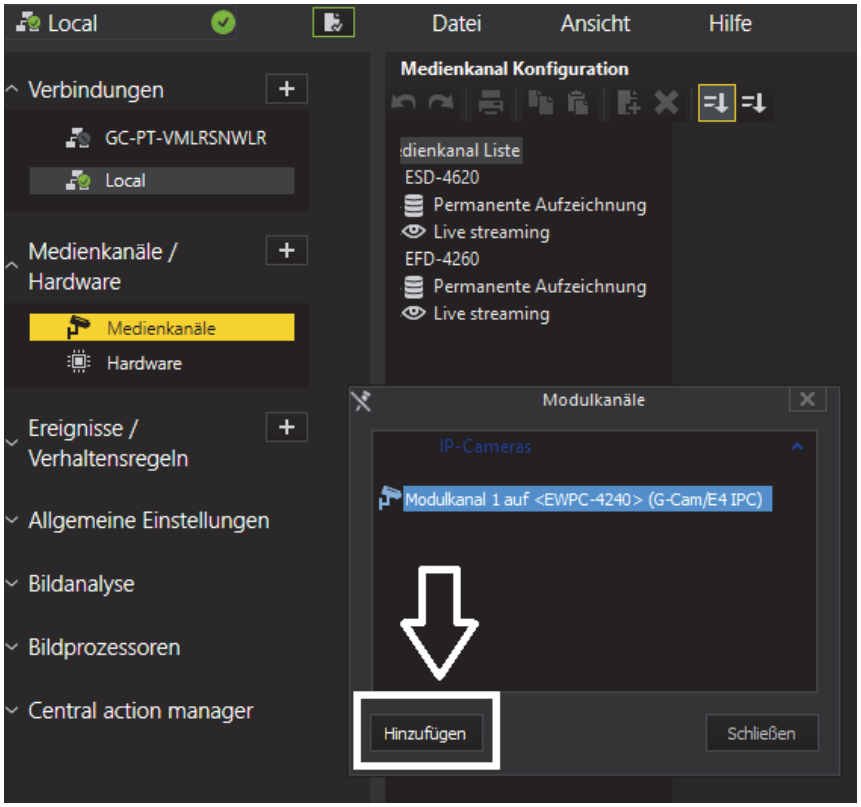
6. Insert IP address, user name and password.

7. It is recommended to set cameras with a remote controlled lens as „Telecontrol camera“, because these functions can be executed in G-View with the zoom/focus buttons, or via mouse **IN** the viewer.

Open the the dialog window with a click on „**Media channels**“.

With a right click on „**Media channel list**“ the window „**Module channels**“ opens.

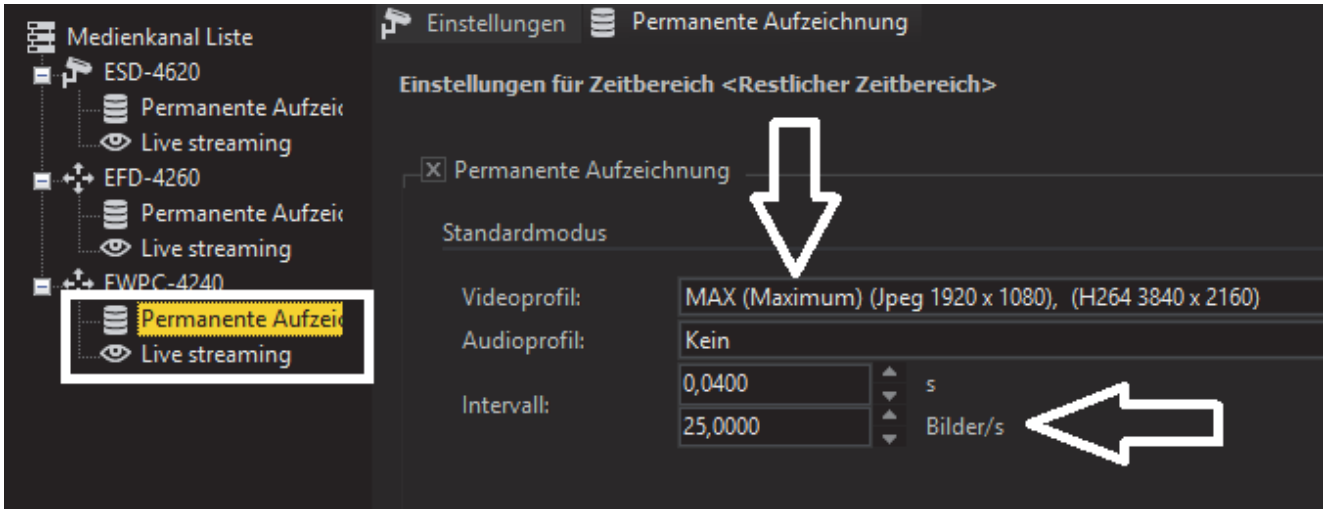
Choose the desired channel and click on „**Add**“ and „**Close**“, or doubleclick onto the desired channel.



The desired channel now appears in the Media channel list.

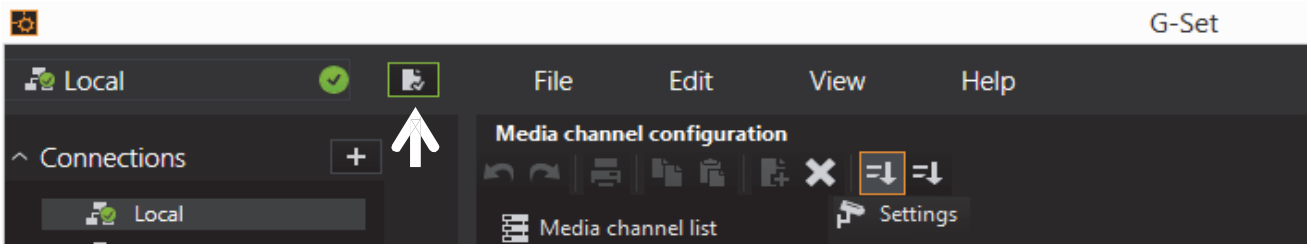
Click on „**Permanent Recording**“, set the tickbox, choose a Videoprofile and its framerate (fps).

Click on „**Live Streaming**“. Here you only have to choose a **Videoprofile** and its **framerate** (fps).



IMPORTANT: For settings to take effect, they **must** be sent to the server by clicking the icon .

You can find the *transfer button* on the *command bar* of G-Set.



7. 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 > Maintenance.

Users can export configuration files to a specified location and retrieve data by uploading an existing configuration file to the camera. It is especially convenient to make multiple cameras having the same configuration.

Export
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
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.

8. Tech Support Information

This chapter shows, how to delete older installations of DCViewer und how to setup the Internet Security.

8.1 Delete the Existing DC Viewer

For users who have installed DC Viewer in the PC previously, please remove the existing DC Viewer before accessing the IP camera.

Deleting the DC Viewer
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 DC Viewer.

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, click on the <Tools> tab on the menu bar and select <Internet Options>.

Step 2: Click on the <Delete> button under the <Browsing History> section.

Step 3: In the appeared window, tick the box beside <Temporary Internet Files> and click on <Delete> to start deleting the files.

8.2 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*.
    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 IP camera.

Technical Data

Mega pixel	2 MP (Full HD)
Effective pixels	1945 x 1097
Image sensor	1/2,8" Sony Progressive CMOS
Pixel size	2.9 µm
Picture Format	16:9
Lens	4.3 - 170 mm
Auto Focus	Automatic, Manual
Optical zoom	40x
Digital zoom	On/Off, x10
Preset positions	256 positions
Digital Image Stabilizing (DIS)	Yes
Electrical Image Stabilizer	No
F-Stop	F1.6 (Wide)
Angle of view	Wide: 66° (H) x 40° (V) Tele: 2° (H) x 1° (V)
Panning range	360° endless
Tilting range	-20° to +100°
Panning/Tilting speed	0.1°/s to 90°/s (manual)
Preset speed	5°/s to 400°/s (pan/tilt)
Auto / Digital flip	Mechanical, Off
Sequence	8 x
Cruise	8 x
Auto Pan	4 x
Servo Feedback	Yes
Video output	Composite video: 1 Vpp, 75 Ohm (BNC)
Minimum sensitivity	0.02 Lux color, 0.001 Lux BW
Wide Dynamic Range	HDR (110 dB max.)
White balance	Auto, ATW, One Push, Manual
Shutter	1/1 - 1/10,000 s
Backlight Compensation	No
Text overlay	Yes
Automatic gain control (AGC)	Automatic, Manual
Interface	10/100 Mbps Ethernet
Colour / B/W switching	Automatic/Manual (IR-cut filter)
OSD Menu	English, German, French, Italian, Korean, Simplified Chinese, Traditional Chinese, Russian, Spanish, Japanese, Portugese
Compression	H.264/H264CCTV, H.265/H265CCTV, MJPEG
Picture rate (full resolution)	H.264+H264CCTV/H.265+H265CCTV with HDR: 2M@30fps + 2M@30fps
Picture Rate	H.264/H264CCTV: 1080p @ 60fps + 1080p @ 59fps; H.265/H265CCTV: 1080p @ 60fps + 1080p @ 47fps
Resolution	640 x 360, 960 x 540, 1280 x 720, 1920 x 1080
Video Streaming	Single, Dual, Triple, Quad
Protocols	IPv4/v6, TCP/IP, UDP, RTP, RTSP, HTTP, ICMP, FTP, SMTP, DHCP, PPPoE, UPnP, IGMP, SNMP, QoS, ONVIF, ARP
Network security	HTTPS (TLS 1.2), IEEE802.1X (SHA-2) (EAP-TLS), IP-Filter
Browser	Internet Explorer 11.0+/Chrome/Firefox/Safari
ONVIF compatible	Profile S, G, Q, T
Motion detection	4 Zones
Privacy masking	20 zones, polygons, free scalable, 8 colors

Alarm In/Output	4 In (potential free) / 2 out
Alarm reactions	Preset, Sequence, Auto Pan, Cruise
Home Function	Preset, Sequence, Auto Pan, Cruise
Audio	Line-in, Line-out, G.711, G.726, AAC, LPCM
Picture memory	µSD slot (128 GB max.)
Operating Temperature	- 40 °C to + 50 °C (w/ heater)
Humidity in operation	0 % to 90 % rel. humidity (non condensing)
Fan	No
Heater	Yes
Voltage supply	24 VAC; PoE+ (IEEE802.3at, class 4, 30 W -> Model s. Homepage)
Power consumption	24 VAC/25,4 W
Zero downtime power switching	double power supply required
Housing	(Diameter x H): 210 mm x 279 mm (w/sunshield) 2.9 kg
Protection rating	IP 66, IK10
Certification	CE, FCC
Licensing	G-Core
Optional accessories	G-Cam/PoE-Adapter-07 (5.03038) Bracket Wall Mount - G-Cam/BWM-004 (5.04869) Corner Mount Adaptor - G-Cam/CMA-004 (5.04870) Pole Mount Adaptor - GSD/PMA-003 (5.18374) Bracket Ceiling Extension - G-Cam/BPE-001 (5.04862)
Application area	Outdoor
Brand	Geutebrück
Order No.	5.03738

G-Cam/ESD-4620_IA_EN 13.03.2023

Technical alterations reserved.

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