



## IN-4009

- / Scheduled motion detection via image analysis
- / Automatic alarm by email and FTP snapshot upload
- / Video recording via your Internet Explorer
- / Easy camera configuration via the integrated WebUI
- / Multi-level user management and access control
- / Accessible over the internet DDNS
- / Full smartphone integration (iOS & Android App)
- / Easy integration into your existing WiFi/LAN network
- / MJPEG video compression for plugin-free playback



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4009





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## INSTAR VGA IP Camera – Quick Installation

IN-4009 WiFi/LAN IP Camera

The following topics will be shortly explained in this Quick Installation Guide:

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More information (German/English) can be found  
on [www.instar.de](http://www.instar.de)

**This Quick-Installation Guide  
was made exclusively for INSTAR customers.**



Your Manufacturer for Network and  
Security Technology

## 1 | SAFETY WARNINGS

Please read the following safety warnings carefully and keep them in a safe place.

- » Make sure the power cord is not near any hot surfaces.
- » Place the power and network cable properly so that no one can be hurt.
- » To avoid damage to the pan and tilt mechanics, never try to pan or tilt the lense by hand.
- » This device shall not be used by people (including children) with limited physical, sensory and mental capabilities. Only the trained person that knows how to use the device carefully can use the device.
- » Children should be supervised to make sure they don't play with the device.
- » If the power cord of this device gets damaged, it can only be replaced by the manufacturer or the customer service person or a similar qualified person to avoid any damage to you and the device.
- » Never do any repair by yourself. By opening the device the warranty will automatically expire. If any repair is needed, please contact your INSTAR Service Center.
- » When cleaning, please never place the device in water.
- » Make sure you only install the device in a 100V - 230V power socket.
- » Only use this device to secure your home, office and similar places. If you are planning to install the device in an public area please make sure you have all certificates to do so.
- » Never install the device near explosive or flammable substances.
- » Don't use the camera for any other purpose that it isn't made for.
- » INSTAR does not give any warranty if you use any third party firmware or WebUI.

### CE-Conformity



This device suites the basic requirements of the European regulations for electromagnetic compliance (2004/108/EC) and the low voltage regulations (2006/95/EC ).

## 2 | PRODUCT FEATURES

### Hardware

- » High Quality Metal Camera Housing with premium varnish
- » Integrated Alarm I/O Relay for **External Sensors** and Signalling Devices
- » Resolution: 640 x 480 (VGA), 320 x 240 (QVGA), 160 x 120 (QQVGA)
- » **Interchangeable Wide-Angle Lense** available
- » 3x optical **Zoom Lense** with integrated IR-Filter
- » **Pan & Tilt mechanism**: horizontal 355° / vertical 90°
- » Audio-**Input** and Audio-**Output** can be used as a two-way intercom system
- » High-sensitive 1/5 inch **CMOS sensor** (300.000 Pixel)

### Connectivity

- » Supported Network Protocols: TCP/IP, HTTP, ARP, RARP, TCP, ICMP, DHCP, UPnP
- » Integrated 10/100Mbit Network Interface
- » Supports W-LAN (Wi-Fi 802.11b/g)
- » Integrated Webserver with Web User Interface (based on **HTML5/CSS3** and **jQuery**)
- » **Free DDNS** Address for Remote Access preinstalled

### Software

- » MJPEG Video Compression
- » Snapshot Function and Video Recording (the latter only in Internet Explorer!)
- » Adjustable Framerate (only in Internet Explorer)
- » Remote Pan and Tilt control
- » Motion Detection Alarm Notification by Email (6 Snapshots)
- » FTP Snapshot Upload - Continuous and Alarm Triggered

### 3 | INSTALLATION



1	Lense	Standard Zoom-Lense (3x optical zoom focal length: 4.0-9.0mm, 29-51°)
2	Audio-Input	Audio-Transmission (Internet Explorer or ASF Stream)
3	Power Connector	12V/3A DC voltage / plug: 2.1mm inside, 5.5mm outside
4	Audio Output	Headphone / active loudspeaker connector
5	Reset button	Reset to factory settings
6	I/O Connectors	For external motion detector (3&4) and alarm indicator (1&2) (potential-free alarm output: max. 60VDC/125VAC and 1A)
7	Network Port	RJ45 Connector for the supplied LAN Cable
8	Antenna Connector	SMA wifi antenna connector
9	Antenna	To ensure a stable WiFi-connection

## Connect the camera to your Network

Take out the package content from the box: the camera, a CAT5e LAN cable, a 5 dBi SMA WiFi antenna, mounting bracket and the software CD.



Connect the **WiFi antenna** to the SMA connector on the back of camera (see #8 and #9, page 5), align it vertically to your router and place the camera close to your Wifi router for the rest of the installation process. Please be aware that the camera has to be installed via LAN cable first before it can be used in your wireless network.



Plug the **ethernet cable** to the RJ45 LAN port on the camera case (see #7, page 5) and use it to connect the camera to a free LAN port of your network router. For a direct connection to your Windows PC or Mac, please refer to our online FAQ section on [www.faq.instar.de](http://www.faq.instar.de). We recommend to connect the camera to your network router for the initial installation.



Connect the **power adapter** to the camera cable (see #3, page 5) and plug it into a suitable power outlet. Both network indicator LEDs on the network port will light up showing that the camera is connected to your network and the camera will execute a pan&tilt calibration. An IP-address will be assigned to your camera.



The **green LED** signals a hardware link to your router and therefore should be on continuously. The **orange LED** should be flashing irregularly indicating network traffic. The green status LED on the powersupply has to be on continuously indicating a steady power supply. Please plug the powersupply directly into a wall socket. Using it on a multi power strip or an extension cord is not recommended.



## Troubleshooting

### The green LED isn't on

Your camera doesn't have a connection to your router, because the LAN cable is damaged, the connector is loose or your camera is connected to a wrong port on your router or switch.

### The green LED goes on and off every x seconds

Your camera is continuously restarting - probably because of a loose contact. Please check the power connector on the camera side. Turn the plug by 180 degrees in both direction and check if the problem persists. Make sure the green status LED on the power supply is on continuously.

For a **direct cable connection** between camera and computer, please note:

The network cable provided with the camera is not a crossover cable. It is just a normal patch cable. Most modern computers network interfaces support the automatic switching between crossover and normal patch cable - you can use the cable that came with the camera to connect it directly. If you are using an older system to connect your camera directly you might need a crossover network cable.

To set up the camera for the first installation we recommend to connect the camera directly to your router. This router on the other side has to be connected with your computer. Other ways of connections are only recommended to experienced users. Please refer to our online documentation on [www.faq.instar.de](http://www.faq.instar.de).

### **Connect the camera using an IN-LAN® Adapter (optional)**

Simply plug one IN-LAN adapter into a power socket next to your broadband router and connect the adapter to your router via an Ethernet cable. Plug the second IN-LAN unit into an outlet close to your INSTAR camera and connect the camera to the IN-LAN adapter using the camera's Ethernet cable.



**IN-LAN 500/p**  
Powerline Adapter

IN-LAN uses the household power grid to transfer data between computers equipped with suitable adapters and other network components. As a result, any power outlet can be used as a network access point. IN-LAN is an intelligent and secure technology that lets you set up a home network easily via your household power grid - without the need of complex and expensive dedicated cabling.

Additional accessories, like the IN-LAN Adapter, can be found in the accessories of your camera model on [www.instar.de](http://www.instar.de) and are sold separately.

## 4 | START UP

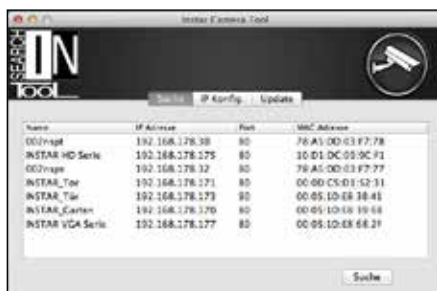
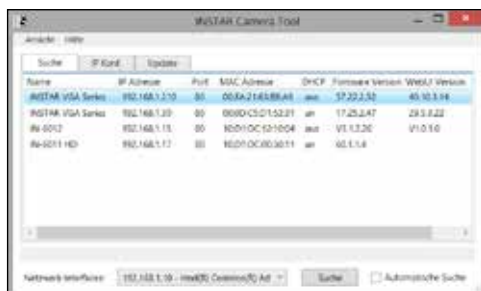


You can start the online setup wizard manually from the included Installation.htm file on the CD or download the tool directly from [www.download.instar.de](http://www.download.instar.de). Alternatively simply check your router log file for a new DHCP address to avoid installing additional software. Your camera will send a request for an IP address once connected to the router via LAN cable and your router will list the camera as a new device.



### 4.1 | NETWORK INSTALLATION

- 1 Please start the setup wizard from the CD and install the INSTAR Camera Tool linked on the CD for Windows, LINUX or MacOS. (You can find documentations for the use of other IP scanners on [www.faq.instar.de](http://www.faq.instar.de))
- 2 Please start the INSTAR Camera Tool.
- 3 The camera tool will automatically find all INSTAR IP cameras in your network and will show their IP address.
- 4 In case your camera isn't found right away please wait 10 to 15 seconds for your routers DHCP service to assign an IP address to your camera.



- 5 Doubleclick the camera's IP address inside the camera tool to open the web user interface (webUI) with your default browser and you will be greeted by the camera's login window. If so, please skip the following paragraph and go straight to **4.2 THE LOGIN** (see page 10).

## Troubleshooting:

In case the INSTAR Camera Tool doesn't find your INSTAR IP camera please make sure that both status LEDs on the LAN connector are active - the green LED should be continuously on indicating a hardware link and the orange LED should flash irregularly showing network communication.(see page 7).

In case your camera isn't automatically assigned an IP address, the camera will be shown inside *a wrong* IP address space. A double click on the camera's IP will then open the IP / Network configuration window (see below) allowing to manually assign an address.



Please set the following information according to your network:

- **IP Address** (for example 192.168.x.x)
- **Subnet Mask** (for example 255.255.255.0)
- **Gateway** (IP Address of your router; for example 192.168.x.1)
- **DNS Server** (IP Address of your router; for example 192.168.x.1)
- **Http Port** (TCP Port; for example 80)

To check the IP address of your Windows computer and your network parameters please do the following:

- ① Click on [START] -> and type in „cmd” into the search field.
- ② In the window that pops up please type „ipconfig”.
- ③ Now the IP address and the subnet mask will be shown.

```
Ethernet adapter Local Area Connection:

Connection-specific DNS Suffix . : fritz.box
Link-local IPv6 Address . . . . . : fe80::4d73:fc13:dc1b:5018%
IPv4 Address. . . . . : 192.168.178.93
Subnet Mask . . . . . : 255.255.255.0
Default Gateway . . . . . : 192.168.178.1
```

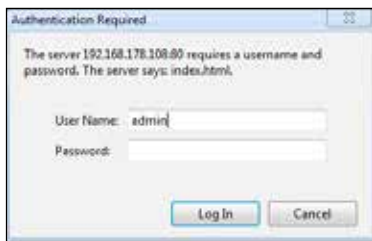
#### EXAMPLE:

If your computer's IP address is "192.168.178.10" then please give your camera an IP like this "192.168.178.110". For Subnet mask, Gateway and DNS Server please use the same settings as for your computer (s. above). If your computer has the IP "192.168.178.10" then the Gateway and DNS should be "192.168.178.1" and the subnetmask is "255.255.255.0".

#### How to setup your Camera without a router:

If you want to connect your camera directly to your computer, please set a fixed IP address for the network interface in your computer, as well as for the IP camera. You can set the camera IP by using the INSTAR Camera Tool. As for Gateway and DNS server please fill in the computer IP. After submitting the settings to the camera please wait a moment until the camera has restarted. For a detailed instruction please refer to our FAQ section on [www.faq.instar.de](http://www.faq.instar.de).

## 4.2 | THE LOGIN



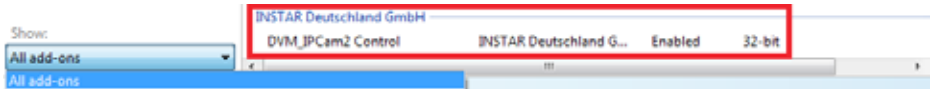
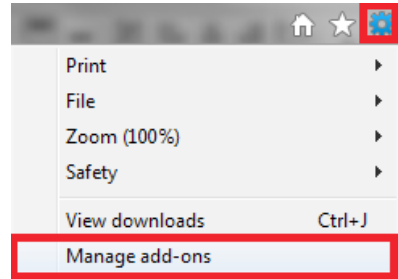
For the first installation of the camera please log in with the following username and password:

<b>user:</b>	<b>admin</b>
<b>password :</b>	<b>&lt;empty&gt;</b>

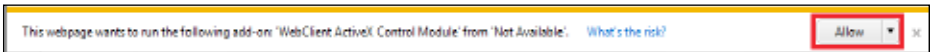
## 4.3 | PLUGIN INSTALLATION (only Internet Explorer)

After the login (**Internet Explorer**) you will be asked to install the ActiveX control element. Please run it and confirm when your Internet Explorer is asking you to install the control element:



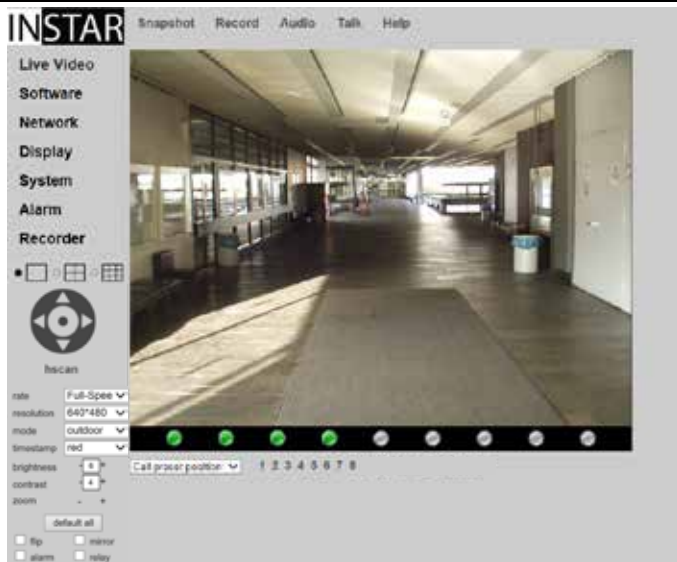


When accessing the webUI for the first time after installation, please allow the installation of the ActiveX control element (only **Internet Explorer**):



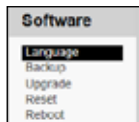
For alternative browsers (**Firefox, Chrome, Safari, etc...**) **no additional Plugins are needed**. You can quickly access your camera's video stream and adjust its settings. Use alternative browser on computers where you lack the administration rights to install the ActiveX plugin (for example in the office).

## 5 | THE WEB USER INTERFACE



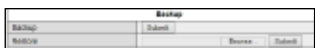
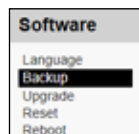
## 5.1 | SOFTWARE

### 5.1.1 SOFTWARE/LANGUAGE



Here you can choose the language of the web user interface. The web user interface will reload after you click *submit*.

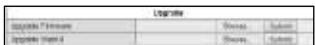
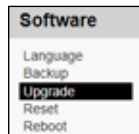
### 5.1.2 SOFTWARE/BACKUP



To save your camera settings please click the upper *Submit* button. The default file name for the backup is ***params.bin*** and the file path is the download folder of your browser. To restore the settings, e.g. after a

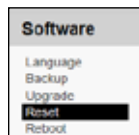
factory reset, please click *Browse* to search for the backup file and click *Submit* to restore the settings.

### 5.1.3 SOFTWARE/UPGRADE



You can download firmware and WebUI updates from our homepage [www.download.instar.de](http://www.download.instar.de) and install them using the **Upgrade** mask.

### 5.1.4 SOFTWARE/RESET



Click on **Reset** to reset your camera's software to the factory defaults. In case you misplaced the camera's password please use the optional **Reset Button** (s. S.5 #5) to go back to the standard login.


### 5.1.5 SOFTWARE/REBOOT



Click on Reboot to reboot your camera's operating system.

## 5.2 | NETWORK

### 5.2.1 NETWORK/IP CONFIGURATION



The screenshot shows the 'Network' menu on the left with 'IP Configuration' selected. The main area displays the 'IP Configuration' form with the following fields:

IP Configuration	
Choose network settings via DHCP	
IP address	192.168.1.76.255
Subnet mask	255.255.255.0
Gateway	192.168.1.10.0
DNS server	192.168.1.10.0
Static IP	192.168.1.10.0
Dynamic IP	192.168.1.10.0

You can set whether the camera will be assigned an IP address by your router (DHCP) or if you want to set a fixed address manually. Please check **page 9** on how to set a fixed IP address. In general, we recommend that

you **deactivate** the automatic service and set a manual IP to avoid further trouble with the remote access to your camera.

### 5.2.2 NETWORK/WiFi



The screenshot shows the 'Network' menu on the left with 'WiFi' selected. The main area displays the 'WiFi' configuration form with the following fields:

WiFi	
Choose network List	
Using wireless LAN	on
Search	Search
Network Type	WiFi
Country Code	United States (United States)
Encryption	WPA2 (Preferred) (WPA2)
Channel	Channel 1 (2.412 GHz)
Share Key	Share Key (WPA2)

To integrate the camera into your local WiFi network, please click the **Search** button 2 times to start the WiFi scanner. Choose your own network and click on its name. Now you simply have to add the WiFi pass-

word (Share Key) and click *submit* to save the settings. Please wait for the camera to reboot - then disconnect the LAN cable. The camera will automatically - within **max. 5 minutes** - connect to your WiFi network. The camera's WiFi module might receive a new address from your router - if you didn't assign a static IP address to your camera yet (s. 5.2.1). You might have to use the INSTAR Camera Tool again to rediscover your camera (s. 4). Your camera is now connected via WiFi!

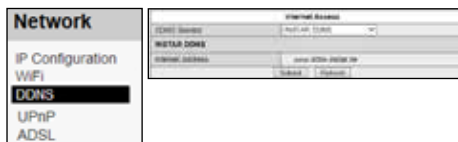
#### Attention:

Your WiFi modules MAC address is **not identical** with the LAN MAC address of your camera! In case you are using a MAC filtering rule for your WiFi network please deactivate the filter and add your camera to the list of trusted devices before reactivating it. Please refer to your routers manual for further instructions.

#### Additional Remark:

Your camera supports a range of encryption standards - we recommend for your safety and reliability of your connection, that you set your WiFi network to WPA2 (PSK) with AES (or CCMP). With older routers choose WPA (PSK) / AES. Avoid using a mixed mode like WPA&WPA2 - TKIP! If your WiFi stays unstable please choose a fixed WiFi channel for your router - we recommend the channels 1 - 6.

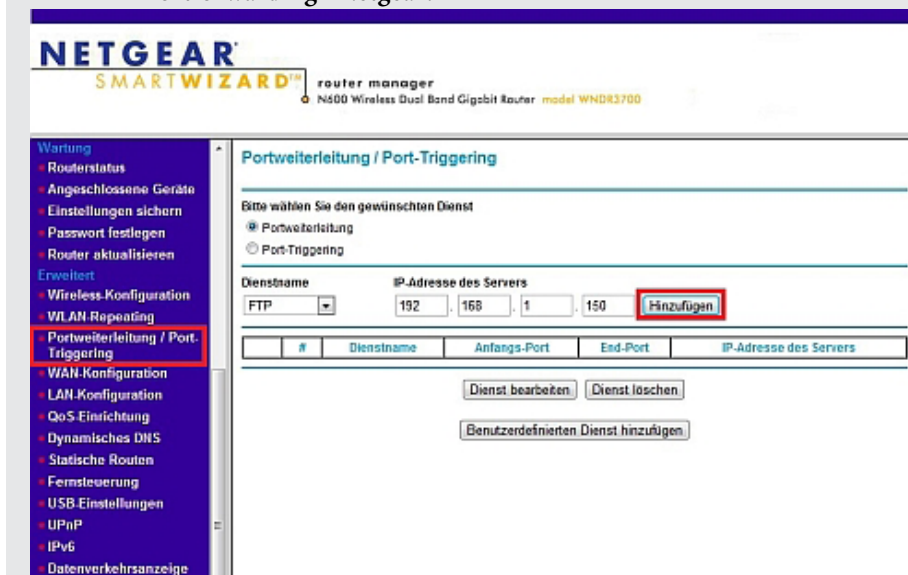
### 5.2.3 NETWORK/DDNS



Your camera comes with a personal DDNS address - e.g. <http://xxx77.ddns-instar.de>. Everything you need for a remote access to your camera is a **port forwarding** rule (s. next page) in your router. You can access your camera afterwards through the internet using this http address.

Please visit our online FAQ section on [www.faq.instar.de](http://www.faq.instar.de) for detailed information on the port forwarding setup as well as video instruction for many common routers. Or refer to your router's user manual for further guidelines on how to set up a port forwarding rule.

#### EXAMPLE Portforwarding - Netgear:



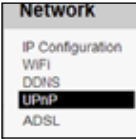
Please refer to our online help [www.faq.instar.de](http://www.faq.instar.de) for detailed instructions for all common routers.

In case you want to use an account from DynDNS.org or NoIP simply choose the third party service and type in your personal login credentials. By doing so you will temporarily **deactivate** your INSTAR DDNS address.

In case you are using several cameras behind a single internet access point, please set up the third party address in **only one** of the cameras. Or if possible directly inside your router! All your cameras will be accessible through this address - just assign a unique HTTP port to every camera (s. 5.2.1). For example if *camera 1* is assigned the HTTP port 85 and *camera 2* the HTTP port 86, use *myaddress.dyndns.org:85* to reach *camera 1* and *myaddress.dyndns.org:86* to be forwarded to *camera 2*.



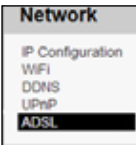
### 5.2.4 NETWORK/UPnP



If you are using **Universal Plug and Play** for your network devices. Please activate the UPnP service in your camera. In case you are using a manual port forwarding rule in

your router to access your camera from the internet, make sure the camera's UPnP service is deactivated! We recommend setting up a manual port forwarding.

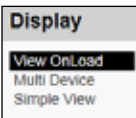
### 5.2.5 NETWORK/ADSL



You can use the **ADSL** function to use the camera directly plugged into a ADSL modem instead of a network router. Simply use the login from your internet service provider.

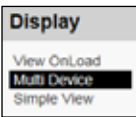
## 5.3 | DISPLAY

### 5.3.1 DISPLAY/VIEW ONLOAD

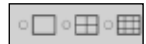


Use the **View OnLoad** function to set the default view - you can choose between the **Setup View** and a **Simple View**.

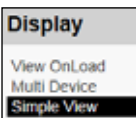
### 5.3.2 DISPLAY/MULTI DEVICE (only Internet Explorer!)



Use the **Multi Device** mask to add cameras to your live view. Just add the camera's IP or DDNS address and user login and click **Add**. Repeat the step for additional cameras and click **Submit**. Then choose a corresponding grid type in your Live-View Tab:



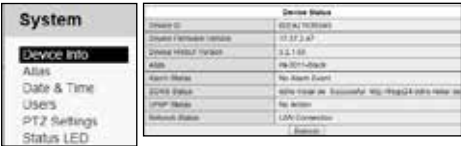
### 5.3.3 DISPLAY/SIMPLE VIEW



The **Simple View** is designed for your daily use after you finished the initial setup of your camera. You can click on **Setup View** to return to the extended menu.

# 5.4 | SYSTEM

## 5.4.1 SYSTEM/DEVICE INFO



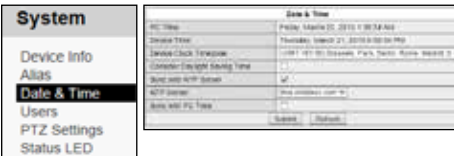
The *Device Info* menu gives you an overview of several important camera parameters - like your software version and connection status.

## 5.4.2 SYSTEM/ALIAS



Set an Alias for your camera to identify the camera in your network.

## 5.4.3 SYSTEM/DATE&TIME



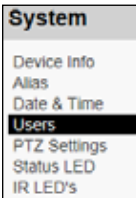
You can set up the internal clock of the camera to be either synchronised with your PC clock or with one of several NTP servers. As long as your camera has access to the internet it is recommended to use an NTP

server synchronisation to achieve a higher accuracy for alarm trigger events. Please activate “Consider Daylight Saving Time” when in effect.

### Additional Remark:

If the phrase “**No Action**” is displayed under DDNS-Status in *SYSTEM/INFO*, please make sure that you’ve put in the correct Gateway and DNS-Server information. Simply go to *Network -> IP Configuration* and check your settings (s. 5.2.1).

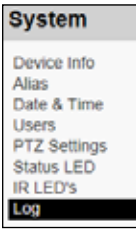
### 5.4.4 SYSTEM/USERS

A screenshot of the 'Users' configuration table. It has columns for Username, Password, User Level, and Access. There are three rows for Administrator, Operator, and Visitor, each with a corresponding password and user level. At the bottom, there are buttons for 'Save' and 'Reset'.

The web user interface offers a 3-level user management with different access rights for administrators, operators and visitors. You can set user names and passwords for all three user levels in the **Users** mask. *Visitors* will only have access to the videostream of

the camera, *Operators* in addition are able to use the pan&tilt function and only the *Administrator* will have access to all the camera's configuration menus.

### 5.4.8 SYSTEM/LOG

A screenshot of the 'Log' table. It shows a list of events with columns for Date, Time, Event, and User. The events include logins for Administrator, Operator, and Visitor, as well as general notifications like motion alerts.

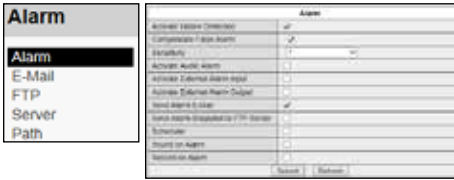
The Access Log shows you every login to the camera as well as the IP address of the incoming connection. Additionally you can find general notifications from the camera's operating system such as motion alerts.

#### Additional Remark:

If you wish to embedd the Live-Stream of the camera in a website, we recommend to create a separate User Profile with “**Guest**”-rights (s. 11, page 29). Further information and a step-by-step tutorial can be found on [www.faq.instar.de](http://www.faq.instar.de) .

## 5.5 | ALARM



### 5.5.1 ALARM/ALARM



Here you can adjust the camera's behaviour in case of a motion alert trigger event. Once the motion detection is activated, its **sensitivity** can be adjusted from very insensitive (value=0) to very sensitive (value=10).

Your camera detects motion by a picture analysis that is sensitive to every change inside the video frame instead of employing an infrared or microwave sensor. In case the camera's position is prone to rapid light changes, e.g. changes in sun intensity due to cloud movements, you might be confronted with a high number of false alarms.

To solve this problem you can attach an **external motion detector** (IN-Motion 300; s. below) to the I/O relay of the camera. Please check "*Activate External Input*" to start using the external sensor and set the trigger level according to your devices demands. Please only activate the external input if an external sensor is connected - since you might receive false alerts otherwise.



## IN-Motion 300

Plug & Play - PIR Motion Detector

IN-Motion 300 - the passive infrared detector especially designed for your INSTAR camera. The simplest way to avoid false alerts by changes in light conditions.

All components needed for the installation are already included in the delivery !

Additional accessories, like the IN-Motion 300, can be found in the accessories of your camera on [www.instar.de](http://www.instar.de) and are not part of the scope of the delivery.

You can use the **Scheduler** to automatically activate the alarm in desired time intervals. Every blue box set inside the scheduler represents a 15 minutes time window in which the alarm function is active.

Be aware that the internal camera time is used for the scheduler. Please make sure that the camera's timezone is set correctly and the daylight saving time function is activated if indicated (s. 5.4.3).

You can also attach an external device to the camera's **signal output** - please check “*Activate External Output*” to let the camera send a signal to your external signal device or to integrate the camera into your home burglar system.

Below that you can set whether in case of an alarm you want to receive an email or have the alarm snapshots send to your FTP server. Please be advised that you will have to set your SMTP login first (s. 5.5.2) to receive an alarm email and set the FTP server login accordingly if you want the camera to upload the images (s. 5.5.3).

### 5.5.2 ALARM/EMAIL



Here you need to input the sender, the receivers and your SMTP server login to be notified by email in case of an alarm. The sender address should be set in accordance with the SMTP server login data, though some email providers let you choose this field freely. If you want to send the email to

more than one address, simply add more addresses in the fields below. The SMTP Server login should be the same username and password that you use to login to your email account. The server address and port depends on your email provider. Some common examples are:

- Gmail - *smtp.googlemail.com* (SSL; Port 465 or 587)
- Verizon - *outgoing.verizon.net* (SSL; Port 465)
- O2 - *smtp.o2.co.uk* (Port 587 or 25)
- AT&T - *smtp.att.yahoo.com* (SSL; Port 465)
- Orange - *smtp.orange.co.uk* (Port 25)

The chosen Port often depends on the encryption that your email provider is offering:  
SMTP AUTH: Port 25 or 587 (some ISPs are blocking port 25)  
SMTP StartTLS Port 587  
SMTP SSL Port 465

### 5.5.3 ALARM/FTP



To use the FTP upload (s. also 5.5.1) you first have to set your FTP server address and login credentials. E.g. you can use your routers FTP service as a **FTP Server** - in this case simply put in your routers IP as the FTP Server address.

If you set up a FTP server on a local PC (for example using *Filezilla Server*), use the PC's local IP address. Of course you can use webservers URL's as well. The standard **FTP port** is 21.

You can define an upload directory for your camera under **FTP Folder**. The root folder of the FTP server can be reached by "/". The separator for the folders is the forward slash. A subfolder (e.g. INSTAR) can be reached by "/INSTAR". An ending forward slash is not obligatory, but can be used.

The **FTP Username** and **FTP Password** are the login credentials for your FTP Account.

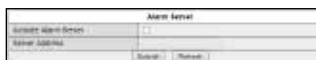
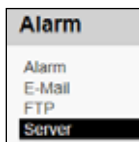
For the **FTP Mode** you can choose between a passive (PASV) and an active mode (PORT). The standard is the active PORT mode. If your server is installed behind a router with an active network address translation (NAT), or if a firewall is blocking the servers network from an external access by your camera, you should choose the PASV mode.

For the time lapse option you can either choose a fixed file name to override the file on server with each new upload (if you want to **embed the image into your website**) or leave the name field blank to let the camera generate a filename from a timestamp.

Please refer to our website [www.faq.instar.de](http://www.faq.instar.de) for information on how to set up a FTP server.

---

#### 5.5.4 ALARM/SERVER

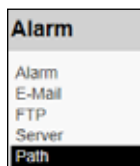


You can use the **Alarm Server** function to send a http request to a connected server. The server needs a compatible software to recognize this request as an alarm event

and trigger further actions. This function is often supported by home alarm systems.

Please add the http prefix when entering the servers IP address - e.g. *http://192.168.0.22*.

## 5.5.5 ALARM/PATH (only Internet Explorer!)

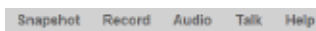


PATH			
RecordPath	C:\MSDIA_Pan	Stream	
Alarm Record Path	D:\MSDIA_Pan	Stream	

Here you can set the record path for the video recording function under Internet Explorer. The record paths are both set globally by the ActiveX Control - you therefore only need to set it in one camera in case you are managing more than one in the ActiveX Multiview.

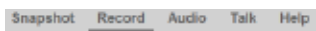
## 5.6 MENU BAR

### 5.6.1 MENU BAR/SNAPSHOT



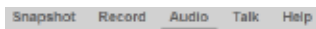
Click on **Snapshot** to save a single JPG snapshot of the current video frame. For Internet Explorer the snapshot will be saved locally in the download directory. Otherwise the snapshot will be opened in a new browser window or tab and can be downloaded from there.

### 5.6.2 MENU BAR/RECORD (*only Internet Explorer*)



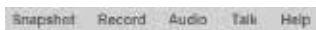
Click on **Record** to manually start a video recording. The Video will be saved in the record directory set in 5.4.4. In case you use more than one camera this directory will be used globally.

### 5.6.3 MENU BAR/AUDIO (*only Internet Explorer*)



Click here to activate the camera's audiostream. To access the camera's audio with other clients (e.g. VLC Player) please use the direct path *<IP address of your Camera>/videostream.asf*.

### 5.6.4 MENU BAR/TALK (*only Internet Explorer*)



Use the **Talk** function to send an audio signal from your PC's microphone to the camera's audio-out.

### 5.6.5 MENU BAR/HELP



Clicking on **Help** will bring you to our constantly expanding online FAQ section on [www.faq.instar.de](http://www.faq.instar.de).

## 5.7 | VIDEO MENU BAR



The screenshot shows a web-based control interface for a camera. It features a list of settings on the left and their corresponding controls on the right. The settings include rate, resolution, mode, timestamp, brightness, contrast, zoom, and a 'default all' button. At the bottom, there are four checkboxes: flip, mirror, alarm, and relay.

rate	Full-Spee ▾
resolution	640*480 ▾
mode	outdoor ▾
timestamp	red ▾
brightness	6 +
contrast	4 +
zoom	- +
<input type="button" value="default all"/>	
<input type="checkbox"/> flip	<input type="checkbox"/> mirror
<input type="checkbox"/> alarm	<input type="checkbox"/> relay

The **Video Menu Bar** allows you a quick access to the most important video parameter. Please be aware that the timestamp and frame rate function are only available in the ActiveX mode (Internet Explorer).

To use the **zoom** feature simply click on the plus and minus buttons. The camera makes use of a built-in optical zoom of the lense unit.

If you notice that the **automatic brightness** control doesn't seem to work (e.g. you get a white screen after sunrise), please set the default values (brightness: 6 and contrast: 4) and switch the mode from “**outdoor**” to “**50Hz**” or “**60Hz**” and then back to “outdoor”. The

automatic brightness control is active again until you change either the **brightness** or **contrast** and switch the camera back to the manual mode.

If you find the checkboxes “**Flip**” and “**Mirror**” not functioning, please delete your browsing history.

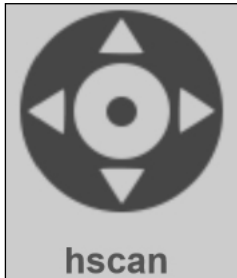
Please be aware that the InstarVision Windows Software can override the “Flip” and “Mirror” settings from your camera's WebUI. Please set those functions inside **both** software accordingly.

Check the **Alarm** box to activate or deactivate your camera's alarm settings. Use the **Relay** function to switch the camera's alarm I/O- for example to activate or deactivate a device connected to the alarm output (see page 5 #6).



## 5.8 | PAN&TILT CONTROL

### 5.8.1 PAN&TILT CONTROL/CONTROL PAD



You can use the control pad to pan and tilt your camera's head. You can also start a horizontal patrol (*hscan*) or stop the camera's movement (*stop*). The camera will move into the according terminal positions and then go back to the initial position. If you are using the Internet Explorer you can double-click the center of the frame to get into a full screen mode.

### 5.8.2 PAN&TILT CONTROL/POSITIONS



You can save up to 8 camera orientations by moving the camera into the desired direction and clicking on one of the numbered slots next to *Set Position*. Clicking on the slots 1-8 when *Call Positions* is activated will move the camera back to the saved position.

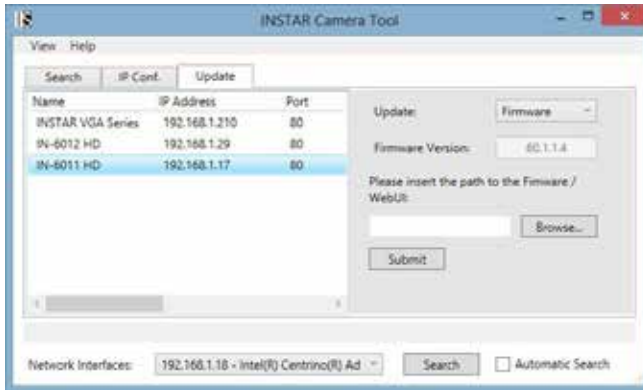
**Please be advised:** The accuracy of the positions will degrade over time. Please restart your camera once in a while to enforce a re-calibration.

## 6 | RESET YOUR CAMERA

In order to reset your camera (if you have lost your password), please press the small reset button (see 5 #5) for 60 seconds. Please make sure the camera is connected to the power supply and disconnected from the LAN cable. **Please don't cut the power supply** during the reset process. In case that the reset was incomplete the camera might become irresponsive.

## 7 | FIRMWARE UPDATE

INSTAR regularly offers updates for your camera's firmware and for the integrated user interface. There are currently two ways to update to newer versions of your devices firmware and WebUI. You can choose to do the update process either through the Camera Tool or directly within the WebUI itself.



**Step 1:** Visit our website and download the most recent update files for your camera.

**Step 2:** Run the INSTAR Camera Tool. Then choose “Update” and select the camera you want to update. A login prompt will pop up and ask for your user data. Make sure to login with an admin account.

**Step 3:** Please choose either Firmware or WebUI, depending on what you want to update. Then click on “Browse” to select the corresponding update file on your hard drive.

**Step 4:** Make sure you have selected the right file before clicking the “Submit” button. This will upload the update file into your device and reboot the camera.

Updates via WebUI follow a similar process. It doesn't matter which method you choose.

**WARNING:** During the update process, please make sure NOT to cut the power supply. This may cause irreversible damage to your device.

## 8 | LENSE ADJUSTMENT

The IN-4009's lense offers a limited field depth that was adjusted to a field between 1m to 10m. In case the object you want to observe lies outside of this area, you will have to adjust the lense accordingly.



**Fig. 1**



**Fig. 2**



**Fig. 3**



**Fig. 4**

Please open the dome and adjust to maximum zoom (**Fig.1**). Carefully remove the lens-fixing screw from the mount (**Fig.3**) and adjust the focus by changing the distance between lens and the sensor unit using single millimetres (**Fig.4**). While adjusting the lens check the live-feed on the WebUI until you reach desired sharpness. Make sure to fasten the fixing screw before reattaching the dome.

## 9 | ANDROID AND iPhone APP



To integrate your IP camera in the Android/iPhone App “InstarVision” we recommend to first download the newest version in the Market/App Store. To find the newest version just type “instar” for the search.

**(Fig. 1)** After installing the newest version please start the App to open the following interface (s. next page).

**(Fig. 2)** Now press the new camera button and type in all necessary data for your IP camera.

**(Fig. 3)** Adjust your camera parameter over the apps user interface.

**(Fig. 4)** Press a channel to access the corresponding livestream and take control over your camera.



Fig. 1



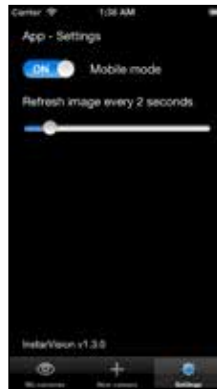
Fig. 2



Fig. 3



Fig. 4



Here you find a short overview of all necessary settings (Fig.2):

- Name:** Please choose a name for each camera so you can differentiate between your cameras.
- Host/IP Address:** Here you have to type in the IP address of the camera or the DDNS address (see 5.2.3) to access the camera over the internet.
- Port:** Type in the HTTP Port which you assigned to your IP camera. The standard Port is "80".
- Username:** The username with which you log in to your camera. The admin account name is "admin".
- Password:** The password with which you log in to your camera. By default there is no password.
- Model:** Please choose your INSTAR camera model.

Now please choose "Save/Add Camera" to save the settings and to return to the home screen (Fig.1).



InstarVision® is a 16/32 Channel Video Surveillance Software for Windows (the number of available channels depends on your license!) The Software can record the live stream of any Webcam, TV Cards, Video-Recording Cards (DVR), INSTAR IP Camera or other devices with up to 30 fps.

InstarVision® covers below features:

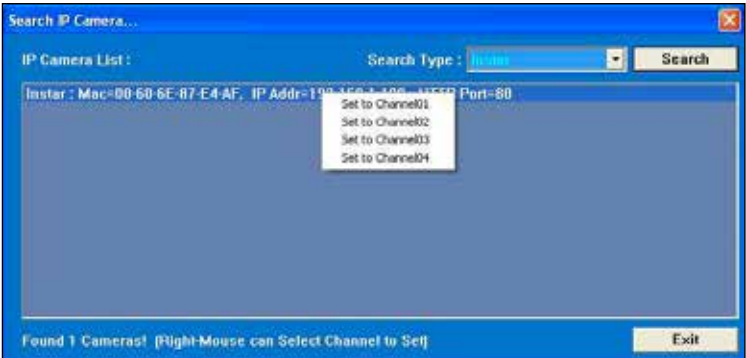
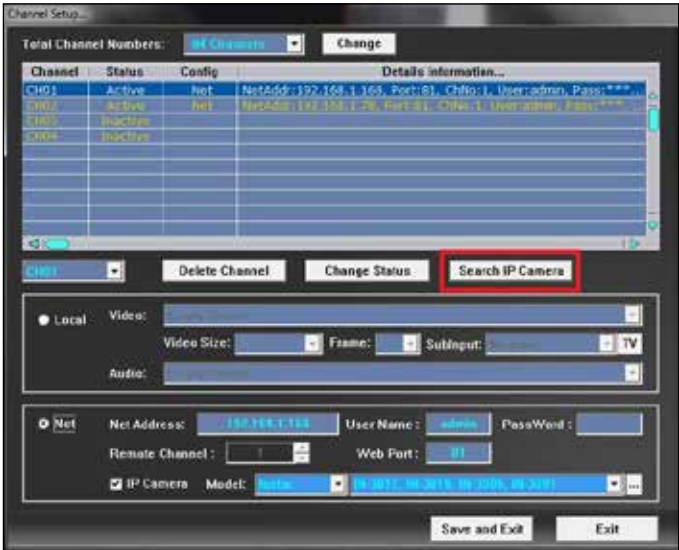
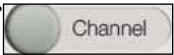
- 1). Advanced motion detection algorithm with a mask matrix – free adaption of the motion detection mask with a 64 square resolution inside the picture.
- 2). Multiple ways of notification are available in case of an alarm - by email, FTP upload, acoustic alarm or by 3rd party software triggering.
- 3). Easy integration of the camera's audio & video stream into websites - present your live video to friends, family or customers through your homepage.
- 4). Support for multiple video output formats: such as MP4, MOV, FLV, SWF, WMV and AVI and video codecs like H.264, MPEG4 and WMV3.
- 5). An affordable price and all the functions necessary to achieve your camera's full potential.

A detailed online manual can be found on [www.instarvision.de](http://www.instarvision.de) and a 7-day trial version can be downloaded from our homepage [www.download.instar.de](http://www.download.instar.de).

Add your INSTAR Camera to the InstarVision® Surveillance Center:

To integrate a camera in InstarVision it doesn't take much. We recommend that you give your camera a static IP address to prevent it from changing automatically by the DHCP server. (s. 5.2.1).

Afterwards please open the channel setup window and choose “Search” IP Camera to start the Camera Tool. Click on search to discover all INSTAR cameras inside your local network and right-click the cameras to assign it to a channel. The number of available channels can be set in the channel setup window.



(e.g. VLC Player, iSpy, VitaminD, EvoCam, go1984...

To use third party software you sometimes need the direct path for the live video in order to grab the video from your camera. Then the program is able to get the videostream from your camera to work with it. You can find a selection of compatible software and detailed step-by-step instructions on how to integrate your camera in our FAQ section on [www.faq.instar.de](http://www.faq.instar.de).

### Access over the local network:

Please use the following path to use your camera with third party software.

MJPEG: <http://192.168.x.x:80/videostream.cgi?user=admin&pwd=>  
ASF Stream: <http://192.168.x.x:80/videostream.asf?user=admin&pwd=>  
Snapshot: <http://192.168.x.x:80/snapshot.cgi?user=admin&pwd=>

x = local IP address of your camera (for example 192.168.0.21)

The “80” after your camera’s IP is the web/http port. If the web port has been changed in the camera menu (network/network) please adjust it here as well.

### Access over the Internet:

To access your camera via the internet you first have to set a port forwarding rule inside your router on the camera’s IP address!

Please refer to the DDNS Service section above (5.2.3) or visit our websites FAQ’s on [www.faq.instar.de](http://www.faq.instar.de) to find detailed step-by-step instruction for all common routers.

<http://xxx.ddns-instar.de:yy/videostream.cgi?user=admin&pwd=>

**xxx** = from your personal DDNS address (see 5.2.3 *Network/DDNS Service*)

**yy** = the camera’s HTTP Port (Standard: **80**)

**user** = please change the “admin” if you already set a different user name for your camera login!

**pwd** = add your password after the “=” sign in case you set a personal password for your camera login. The password is left blank by default.

**Image Sensor & Lense**

Sensor	1/5" CMOS colour sensor
Resolution	max. 640x480 Pixel
Lense	f = 4,0 - 9,0mm; F 2.0 (IR lense)
Viewing Angle	29 - 51°
Min. Illumination	0.5 Lux @ F 2.0

**Video Properties**

Video Compression	MJPEG Compression
Video Framerate	30fps (QVGA), 15fps (VGA)
Supported Resolutions	640x480 (VGA), 320x240 (QVGA), 160x120 (QQVGA)
Flip/Mirror Image	Horizontal / Vertical
Frequency Adjustment	50 Hz, 60 Hz or "Outdoor"
Motion Detection	Supported
Snapshot	Supported
Video Settings	Brightness / Contrast

**Communication**

Network Interface	10Base-T/100Base-TX Ethernet Port
Supported Protocols	TCP/IP, HTTP, ARP, RARP, TCP, ICMP, DHCP
Wireless	Wifi 802.11b/g
WEP Encryption	64 bit / 128 bit
WPA/2 Encryption	TKIP / AES

**Hardware**

Audio	2-Way Audio
Pan & Tilt	355° / 90°
Power Supply	DC12V / 1.5A (50-60Hz/110-220V)
Power Consumption	max. 8 W
Operating Temperature	- 5°C to 55°C (- 20°C with optional heater)

**PC System Requirements**

CPU	2GHz or better
System Memory	256 MB or better
Graphic Card Memory	64 MB or better
Supported Operating Systems	Windows XP / Vista / 7 / 8, MacOSX, Linux, iOS, Android



### Warranty

INSTAR offers a 2-year warranty on its products. During this period you can send in your camera for a free repair. This excludes cameras installed with custom-made or 3rd party Firmware and WebUIs which have not been approved by INSTAR. The warranty is only for hardware parts of the camera.

If you are contacting our Service Team please keep your model and serial number ready. If you want to send your camera for repair, please use the RMA form that came with your camera. You can also download it from our website [www.instar.de](http://www.instar.de) or contact the INSTAR Service Team.

You can find your INSTAR SERVICE CENTER at the following destination:

Company:

INSTAR Deutschland GmbH

Auf der Hostert 17

65510 Hünstetten Bechtheim

Germany

Hotline: +49 6438 9198992

(Mo - Fr, 12 – 18 o'clock GMT+1)

Website: [www.instar.de](http://www.instar.de)

Email: [support@instar.de](mailto:support@instar.de)

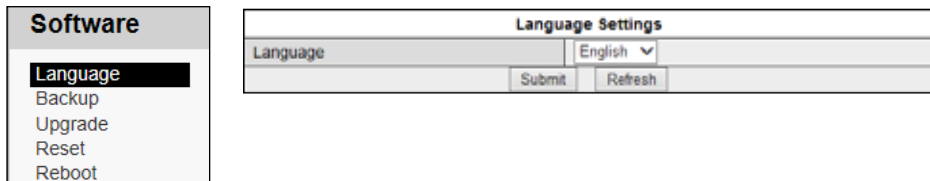
### WE WILL HELP YOU ANY TIME AFTER YOUR PURCHASE!

#### Disposal of old electrical appliances

The European Directive 2002/96/EC on Waste Electrical and Electronic Equipment (WEEE), requires that old household electrical appliances must not be disposed of in the normal unsorted municipal waste stream. Old appliances must be collected separately in order to optimize the recovery and recycling of the materials they contain and reduce the impact on human health and the environment. The crossed out “wheeled bin” symbols on the product reminds you of your obligation, that when you dispose of the appliance it must be separately collected. Consumers should contact their local authority or retailer for information concerning the correct disposal of their old appliance.

### 1) Where can I set the language of the camera's web interface?

The camera automatically detects the language setting of your operating system and adjusts the user interface accordingly. In case you need to override the camera setting, please go to Software/Language to choose a custom setting:



### 2) Why are some objects shown grayish/ pinkish instead of green?

The lense in the camera does not use an Infrared filter. This is why your camera can see at night but shows false colours during sunlight. You can install an IR Filter lense from our accessories to get around this problem - but you will loose the night vision. The alternative is an automatic IRcut filter that is only deployed during the day - still allowing you to use the nightvision functionality.

**Only cameras without a pre-installed auto IRcut filter will be affected!**



f2.2mm without IR Filter

f2.2mm with IR Filter



Please feel free to browse our wide variety of lenses with focal lengths from the wide-angle range to the telefocus end of the scale. Please behold that by installing a lense **with an IR Filter you will lose the nightvision capabilities of your camera!** In case you need both - natural colours during the day and the camera's nightvision - please refer to the automatic IRcut Filter from your camera's accessories page on [www.instar.de](http://www.instar.de) (**not** compatible with all camera models).

### 3) Can I change the angle of view of my camera?



In case you are unsatisfied with the standard lens (6mm focal length, above, middle) you can upgrade your camera to a wideangle lens (2.2mm focal length, above, left) or go the other way and install a telefocus lens to keep an eye on the finer details in the picture (16mm focal length, above, right).



You can find a suitable lens for every surveillance task in our accessory section on [www.instar.de](http://www.instar.de). Please be aware that you will gain more and more level of detail in your image the smaller the angle of view of your camera. Lens charts with all the information needed are available on our website - so you can pick the best focal length for your surveillance.

### 4) Where can I download the newest Firmware / WebUI?

You can find the latest Firmware and WebUI on [www.instar.de](http://www.instar.de) in the category “Downloads”.

### 5) How can I find out the MAC Address of the Wi-Fi Network Interface?

Deactivate the Routers MAC Address Filter. Connect the camera with Wi-Fi and access the web interface of the camera shortly. Now please go on “Start” in Windows and then on “Run”. Type “cmd” and press “Enter”. In the Dos-Window please type in “arp -a”. You will now get the IP and MAC Addresses listed which your PC is connected with.

### 6) Are the other cameras compatible with this camera?

Yes, all INSTAR VGA cameras are using the same or similar chipsets which allows each camera to be combined with another one.

For more Information and FAQs please visit us on [www.instar.de](http://www.instar.de).

## 15 | AVAILABLE ACCESSORIES

We are continuously expanding our range of accessories. For a complete overview please refer to our accessory page on [www.instar.de](http://www.instar.de).

## PERSONAL NOTES

[illegible]