INSTALLATION / OPERATION

EAN-1350

1.3 Megapixel Day-/Night Network Camera
with Progressive Scan CCD Technology

EverFocus®

Safety warnings

To avoid any damage, please consider the following safety warnings:

- ⚠ Never place the recorder near to heaters, furnaces, other heat sources or under direct solar irradiation.
- ⚠ Operate the device only in locations providing the tolerable operating temperature range 0°C~40°C.
- ⚠ Make sure that the device‘s ventilation slots are not covered or sheeted.
- ⚠ For cleaning, make sure the device is plugged off and only use a damp cloth without acid detergent.
- ⚠ Install the device only in dry and dustproof surroundings. Protect the device against any liquid‘s penetration.
- ⚠ Avoid the penetration of any artefacts.
- ⚠ Do not open the recorder yourself. In case of malfunction, contact your local installer or dealer. Unauthorized opening of the device will annul the warranty claim!
- ⚠ Avoid any affection of the device through vibrations or mechanical shock at the recorder‘s installation location.

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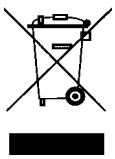
ATTENTION! This is a class A product which may cause radio interference in a domestic environment; in this case, the user may be urged to take adequate measures.

This equipment has been tested and found to comply to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmfulinterference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
• Reorient or relocate the receiving antenna.
• Increase the separation between the equipment andreceiver.
• Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
• Consult the dealer or an experienced radio/ TV technician for help.

This Product is RoHS compliant.

WEEE



Your EverFocus product is designed and manufactured with high quality materials and components which can be recycled and reused.
This symbol means that electrical and electronic equipment, at their end-of-life, should be disposed of separately from your household waste.
Please, dispose of this equipment at your local community waste collection/recycling centre.
In the European Union there are separate collection systems for used electrical and electronic product.
Please, help us to conserve the environment we live in!

Ihr EverFocus Produkt wurde entwickelt und hergestellt mit qualitativ hochwertigen Materialien und Komponenten, die recycelt und wieder verwendet werden können.
Dieses Symbol bedeutet, dass elektrische und elektronische Geräte am Ende ihrer Nutzungsdauer vom Hausmüll getrennt entsorgt werden sollen.
Bitte entsorgen Sie dieses Gerät bei Ihrer örtlichen kommunalen Sammelstelle oder im Recycling Centre.
Helfen Sie uns bitte, die Umwelt zu erhalten, in der wir leben.

The information in this manual was current upon publication. The manufacturer reserves the right to revise and improve his products. Therefore, all specifications are subject to change without prior notice. Misprints reserved. Please read this manual carefully before installing and using this unit. Be sure to keep it handy for later reference.

TABLE OF CONTENTS

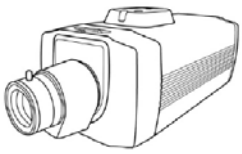
1 INTRODUCTION

1.1 FEATURES

- 1.3 Megapixel Progressive Scan CCD sensor providing high definition video
- Progressive Scan technology for clear reproduction of fast moving objects
- Highest Sensitivity Day/Night Mode with Auto-IR Cut Filter removal technologies and CCD sensor
- With digital pan/tilt and electronic zoom, users can point and see the very details of the region of interest
- Dual codec (MPEG4/MJPEG) simultaneously
- 2-way duplex audio
- C/CS mount DC - lens exchangeable with backfocus adjustment
- Power over Ethernet (PoE) eases installation, security , and maintenance.

1.2 DELIVERY SCOPE

1. EAN-130 camera (without lens)



2. Application / Manual CD

3. C-Mount adapter

4. Hex key 0,9 mm

5. Quick Installation Guide

1.3 SYSTEM REQUIREMENTS

Network environment	LAN 10/100 Ethernet Cable CAT.5E or higher
Monitoring system requirements	
Operating system	Windows 2000 Professional SP4/ XP SP2 / VISTA
Browser	Internet Explorer 6.x or later versions
System hardware	
CPU:	Pentium 4, 2.4GHz or better
RAM:	512MB (1GB recommended)
VGA resolution:	1024x768 or higher
DirectX Version:	DirectX 9.0c

1.4 SPECIFICATIONS

Camera	
Sensor Type	1/3 progressive scan CCD
Effective Pixels	1280x960
Electronic Shutter	1:50 ~ 1:10.000
Digital Slow Shutter	2x ~ 32x max / Off
AGC (Auto gain control)	3 level
AWB (Auto white balance)	Auto, Manual, Indoor, Outdoor
IR-Cutfilter	automatic / manual / ext. contact mode
Lens Mount	CS-mount/C-mount DC-drive, backfocus adjustment
Minimum Illumination	1 Lux / F 1,2 color mode 0,2 Lux / F1,2 b/w mode
Analog Video Out	
Video Output	Composite PAL 1 VSS, BNC (switchable between Video-out and IP streaming)
Network Streaming	
Video Compression	MPEG4 / JPEG (dual streaming)
Video Frame Rate	12, 5 IPS max (JPEG 1260x980) 25 IPS max (MPEG4 640x480) Configurable
Compression Rate	5 level
Video Resolution	MPEG4: 640x480, 352x288, 320x240, 176 x 144 MJPEG: 1260x960, 640x480, 352x288, 320x240, 176 x 144
Pan/Tilt	digital and support for RS-485 PT devices (Pelco-D / P)
Motion Detection	3 zones + 1 exclusive zone
Video Streaming Protocols	RTSP/RTP/UDP ,RTSP/RTP/TCP, RTSP/RTP HTTP Tunnel ,LAN Multicast
OSD	Text, Time, and Date configurable (except MJPG 1280x960)

Audio	1 x line in, 1 x line out, 3,5 mm stereo sockets
Audio modes	duplex / full duplex / simplex
Audio Codec	G.711, G.726 selectable
Communication	
LAN Port	RJ-45 10/100M auto-sensed, auto crossover
Communication Protocol	HTTP, RTSP, FTP, SMTP, TCP/IP, UDP, ARP, ICMP, DHCP, PPPoE, DDNS, UPnP, SAMBA
Alarm	2x input, 1 relay output, screwless terminal
RS485	1 x RS-485 telemetry out (Pelco-D/P), screwless terminal
Status LED	3x: Status, network link / traffic
Power	12V DC/ 24V AC, 8W max. or PoE 802.3af
Dimensions	166 mm(L) x 80mm(W) x 81mm(H) (w.o. sockets / lens)
Operating temperature	0°C ~ 55°C
Storage temperature	-20°C ~ 70°C
Humidity	10% ~ 95% non-condensing

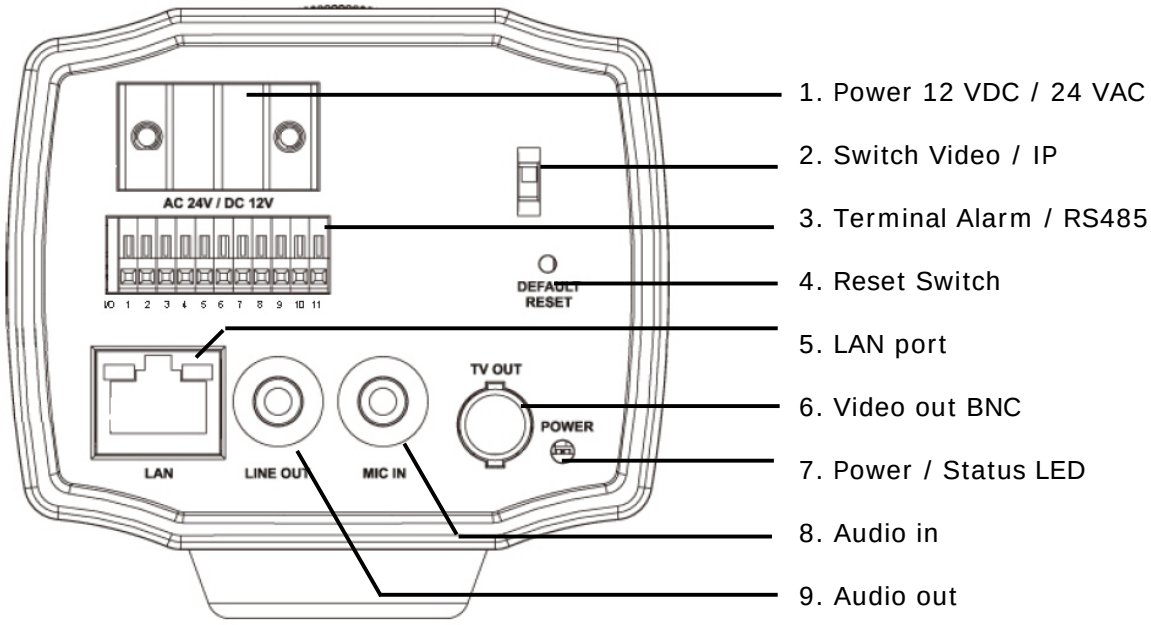
Software	
Browser	Integrated browser applet (Internet Explorer 6.0 or above required)
Application Software	PowerCon 4.3 or higher (optional) EverFocus NVR series
OS supported	Microsoft Windows XP, Vista

Software Features / Functions

TCP/IP	Static IP Address / DHCP, PPPoE, DDNS, UPnP, SAMBA Multicast, SMTP (Event notification), IP filtering, Primary /Secondary DNS Server
User management	3 level user rights, anonymous login
Date/ Time	Time / Date overlay internal RTC or sychr. by NTP or PC-time 3 redundant NTP server
Event management	Event trigger Motion, Alarm In, Boot
Event schedule	Weekly schedule with 1 timezone per weekday
Event reaction	Record to FTP / Samba, E-Mail notification, HTTP / TCP - notification, Relay output
Motion	3 zones with adjustable sensitivity and treshold
Pre-Alarm-Buffer	up to 10 s
Display	Overlay time/date/text Image normal, flip h/v, rotate 180° Digital Zoom 100%~800% (client browser) 100~1200% (camera)
Video settings	Brightness, Saturation, Contrast, Sharpness, Backlight,
Others	Remote firmware upgrade, Remote reboot, Configuration up- / download

2 HARDWARE INSTALLATION

2.1 BACKPANEL CONNECTORS



1. **Power input:** 12 V DC / 24 V AC input, no polarity for 12 V DC

2. **Switch IP / TV Teset:** Network or Video mode work alternative
   For lens and camera adjustment connect a video monitor to the BNC socket, turn the switch to "TV Test", then turn OFF and turn ON power (no network streaming in this mode)
   For network streaming switch back to "IP Cam" and OFF and turn ON power (no BNC video out in "IP Cam" mode.

3. **Terminal Alarm / RS485:** Screwless terminal for alarm inputs / outputs and RS-485 interface.

4. **Reset switch:** Complete reset of camera to default settings

5. **LAN-Port:** 10/100 Mbit Lan Interface, RJ45 socket with autosensing function (Patch - or crossover cables supported), PoE powering supported

6. **Video out:** BNC socket for composite video output signal 1 V pp. If switch (2) is in position "TV test", this output can be used for adjusting lens and camera position.

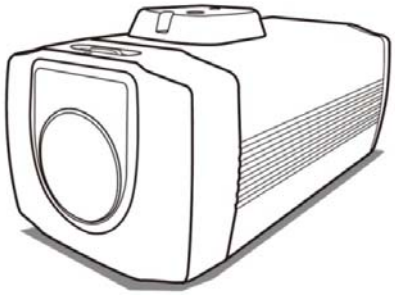
7. **Power LED:** Red light indicates power on.

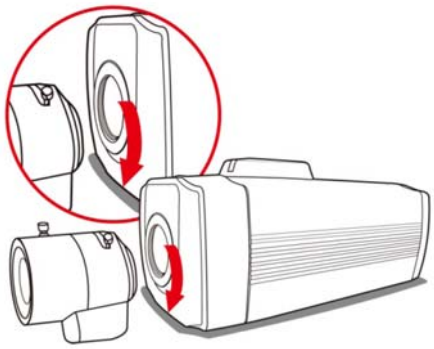
8. **Audio Input:** 3,5 mm audio socket for Audio line input 1 V max / 10 KOhm

9. **Audio Output:** 3,5 mm audio socket for Audio line output 1 V max to 10 KOhm

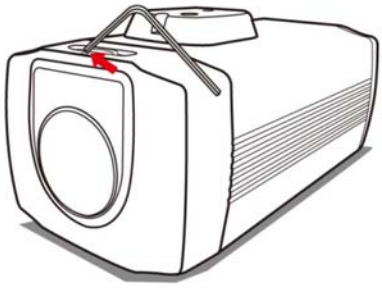
2.2 LENS MOUNTING

For lens mounting, remove the protection cover at the front and screw the lens on the camera body.
The EAN-1350 camera supports lenses with manual iris and DC-controlled iris.
Please make sure, that the used lens supports 1/3" CCD chip format.
It is recommanded to use Megapixel lenses to achieve best image quality.
If a C-Mount lens is used, mount the C-Mount adapter between camera and lens.





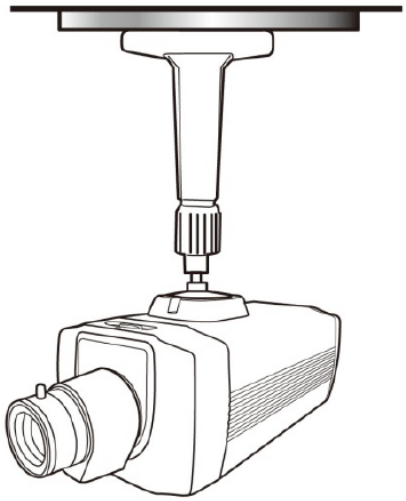
If it is not possible to get a focussed image by lens focus adjustment, correct the backfocus by the lever on top of the camera. Unlock the fixation screw first by the hex key (in camera package).



If a DC-controlled lens is installed, make sure to connect the control cable to the DC iris socket ("IRIS") at the right side of the camera.

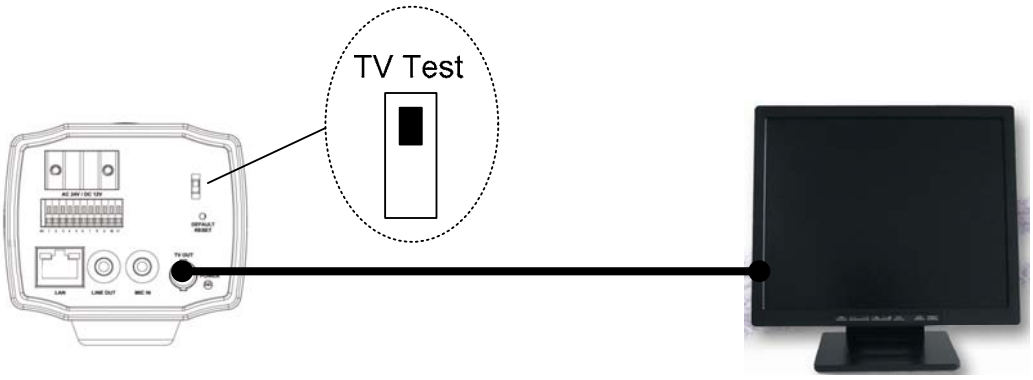
2.3 CAMERA MOUNTING

The camera monting adapter allows using standard camera brackets with 1/4" thread.
The mounting adapter can be mounted at top or botton side of the camera body.



2.4 VIDEO INSTALLATION FOR CAMERA / LENS ADJUSTMENT

For checking and adjusting lens and camera viewing direction connect a standard video monitor to the BNC socket.

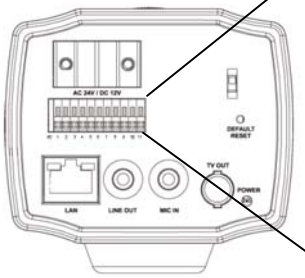


Switch the mode switch to "TV test" and switch OFF / ON camera power.
In this "TV test" mode is no IP streaming possible.
After adjustment switch the mode back to "IP Cam" and switch OFF / ON camera power.

2.5 ALARM IN- / OUT INSTALLATION

Alarm- in- and outputs are connected to the screwless terminal at backside of the camera. For Details to input/output circuit refer to Attachment A.

2.5.1 Terminal pin assignment:



Contact	Description
1	Alarm IN 1 + (max 50 V DC)
2	Alarm IN 1 -
3	Alarm IN 2 + (max 50 V DC)
4	Alarm IN 2 -
5	Relay COM (max. 24 V DC / 1 A)
6	Relay N.C. (max. 24 V DC / 1 A)
7	Relay N.O. (max. 24 V DC / 1 A)
8	RS-485+
9	RS-485-
10	+ 3,3 VDC Output
11	GND

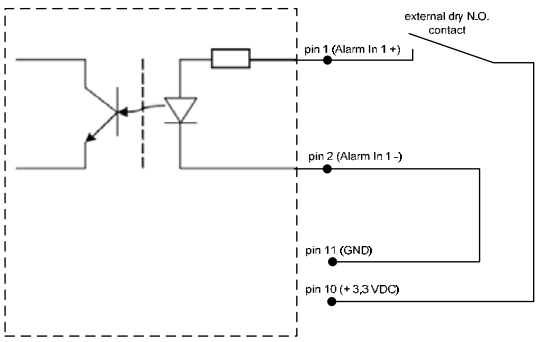
Both alarm inputs are opto-coupler inputs and require DC Voltage 3~50 VDC for activation.

2.5.2 Alarm Inputs

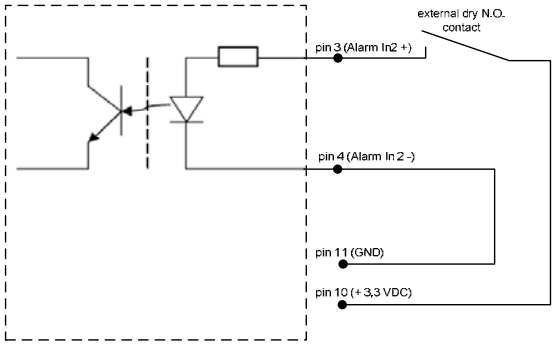
Following connection methods are possible:

A) Installation of dry N.O. contact with camera power source

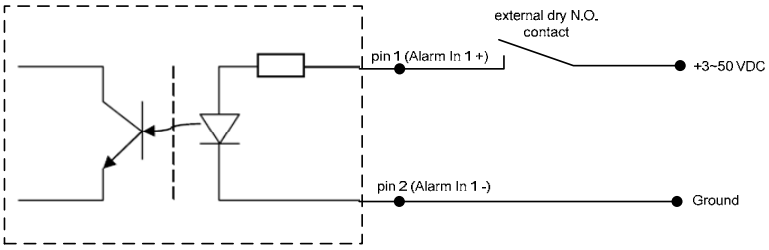
Alarm In 1



Alarm In 2



B) Installation with dry N.O. contact using external DC voltage

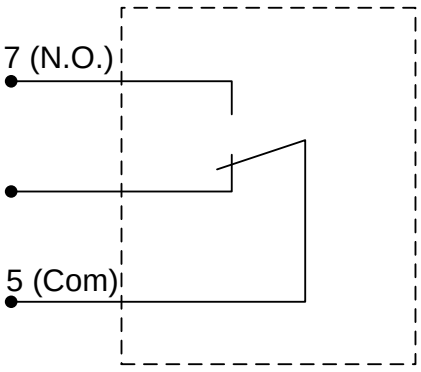


ATTENTION: Do not exceed the maximum input voltage of 50 V DC. This may cause serious hardware damage.

2.5.3 Alarm Output

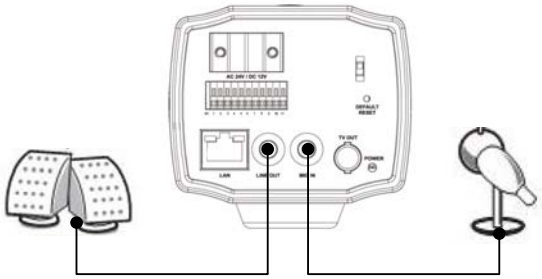
The relay output provides dry contacts, maximum load is 24 V DC, 1 A.

Relay output contacts:



2.6 AUDIO INSTALLATION

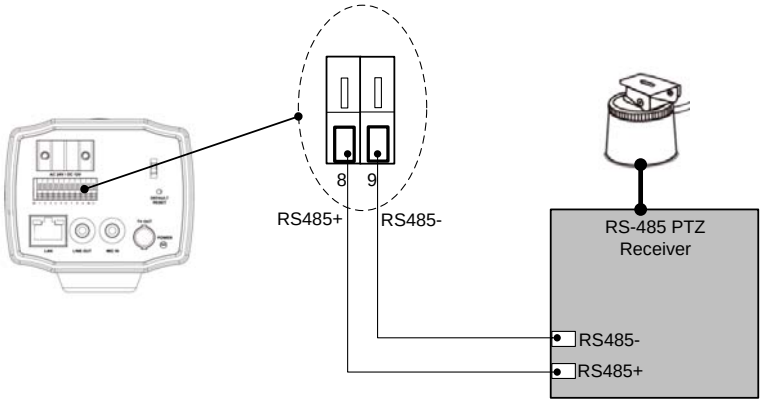
Audio input and output are connected to the 3,5mm sockets.



Please make sure to use a pre-amplified microphone with line level 1 V max.
For audio output please use active speakers only.

2.7 RS-485 TELEMETRY INSTALLATION

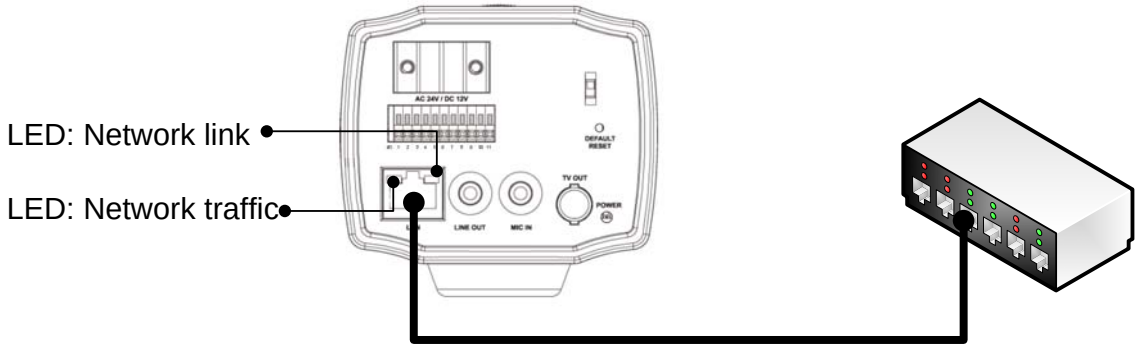
The EAN-1350 supports Pan-/Tilt/Zoom control of RS-485 PTZ receivers with Pelco-D/P telemetry protocol.
Contacts at terminal: 8: RS-485 +
9: RS-485 -



ATTENTION: Please make shure, that the receiver supports Pelco-D or Pelco-P mode with simplex wiring (2 wire twisted pair), possible baudrates are 2400, 4800 or 9600.

2.8 NETWORK INSTALLATION / WIRING

Depending on the network environment at installation site, connect camera network connector to the LAN (switch, router, PC...).
Use CAT.5 cable or better for installation.
The camera network interface is auto-sensing, this means normal straight wired patch cable or crossover cable are supported.

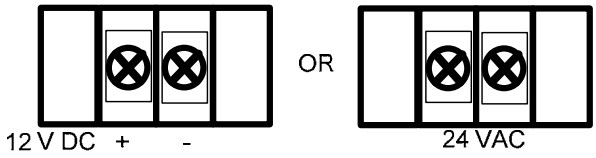


The LEDs at the network socket inicate the status of network connection:

Network link (right): ON, if network is connected
Network traffic (left): blinks in interval at any network traffic

2.9 POWER INPUT CONNECTION

The EAN-1350 provides a dual power input for 12 V DC or 24 V AC.
The power input is non-polarized:



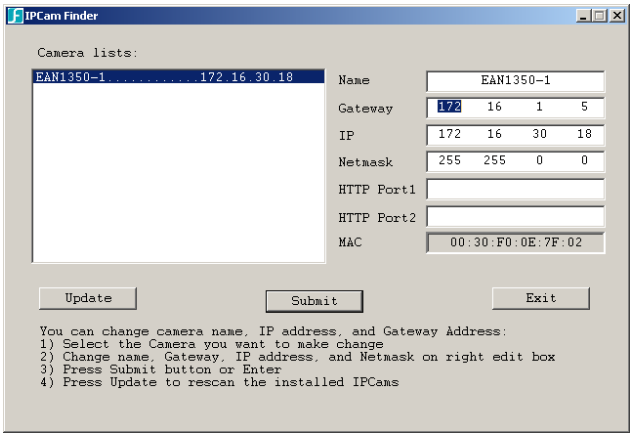
For 12 V DC connection use stabilized power supplies only.

The camera provides alternative powering by PoE (Power over Ethernet) via network interface.

3 IP- SETUP

3.1 NETWORK INSTALLATION / BASIC IP - SETUP WITH IP-FINDER

The IP-Finder application (on application CD in camera package) is a useful tool for initial IP - setup f the camera.
Start the IP-Finder at a PC, which is connected in to the same network as the camera is or use a direct network connection camera<>PC.
Click on "Update" to search cameras in your network, the cameras will be listed in the left side of the screen.



Mark a camera in the list by mouseclick. The current IP - settings, name and the MAC - address of the camera are shown now at the right screen side.
Modify the IP settings fitting to your requirements. The field "Name" is free editable for camera title.
With clicking "Submit" the new settings will be sent to the camera.

Default factory IP settings:
IP-Address: 192.168.0.20
Subnet mask: 255.255.255.0
Gateway: 192.168.0.254
HTTP Port 1: 80
HTTP Port 2: -

3.2 NETWORK INSTALLATION / ROUTER SETTINGS

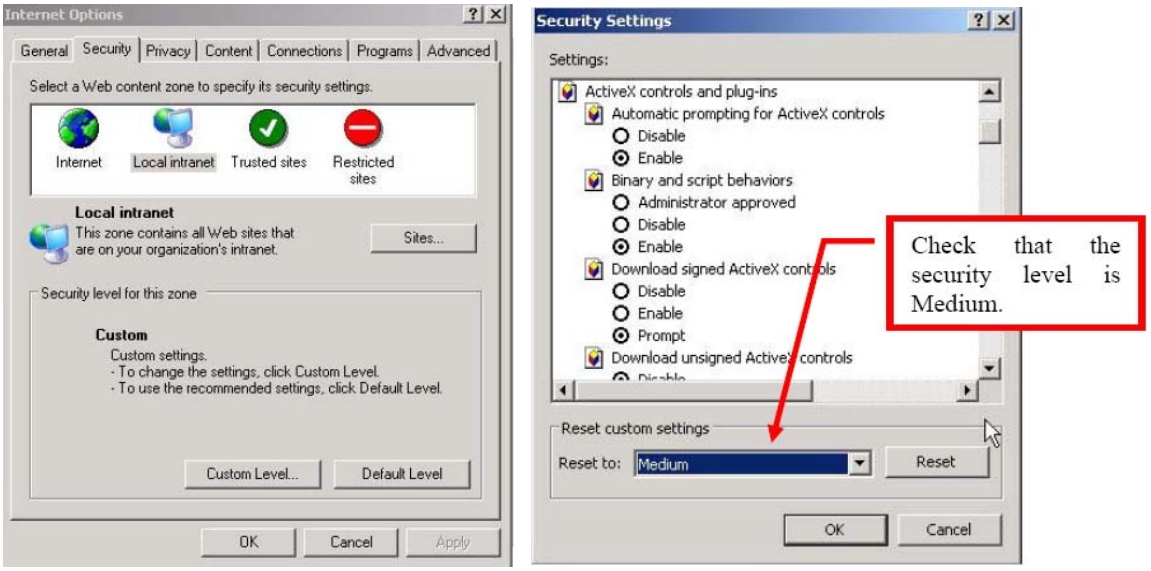
The router setup methods depend on manufacturer and type. Important is the mapping of IP - address and port of the camera.
The required port for standard operation is port 80.
Optional installed services may require additional port mappings.

3.3 NETWORK INSTALLATION / BROWSER SETUP

At initial connecting by web browser an installation of the camera ActiveX control is required.
Supported we browsers are Internet Explorer (version 6.0 or higher) or Mozilla Firefox (version 3.0 or higher) with installed IE-Tab Add-On.
Make sure that user rights at this PC allow installation of ActiveX components.
Set the security level of the browser to "Medium" for ActiveX installation.

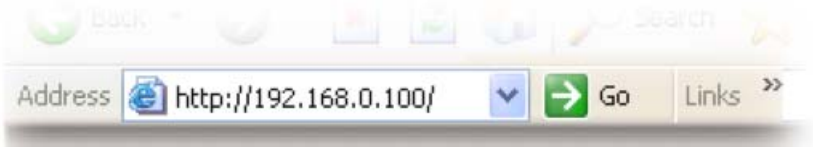
Steps:

IE browser > Tools > Internet Options > Security > Custom Level



3.4 ACTIVE X - INSTALLATION AT FIRST TIME LOGIN

Open the IE browser and enter the IP address of the camera.

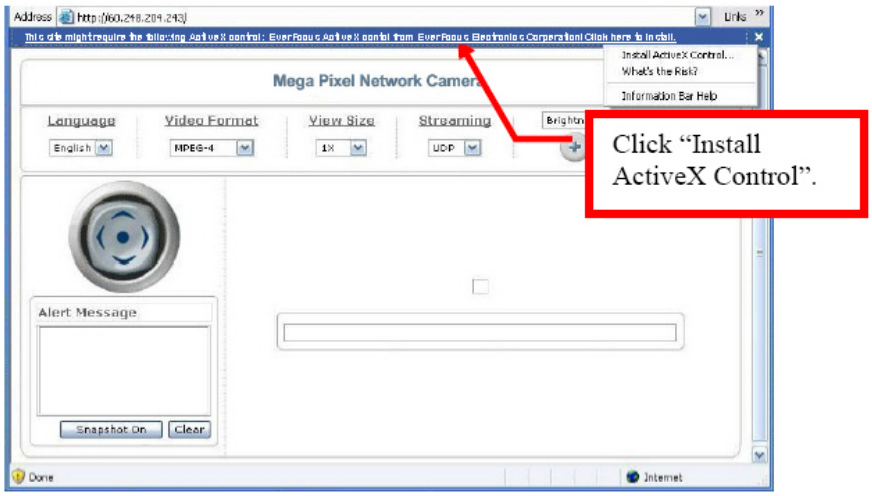


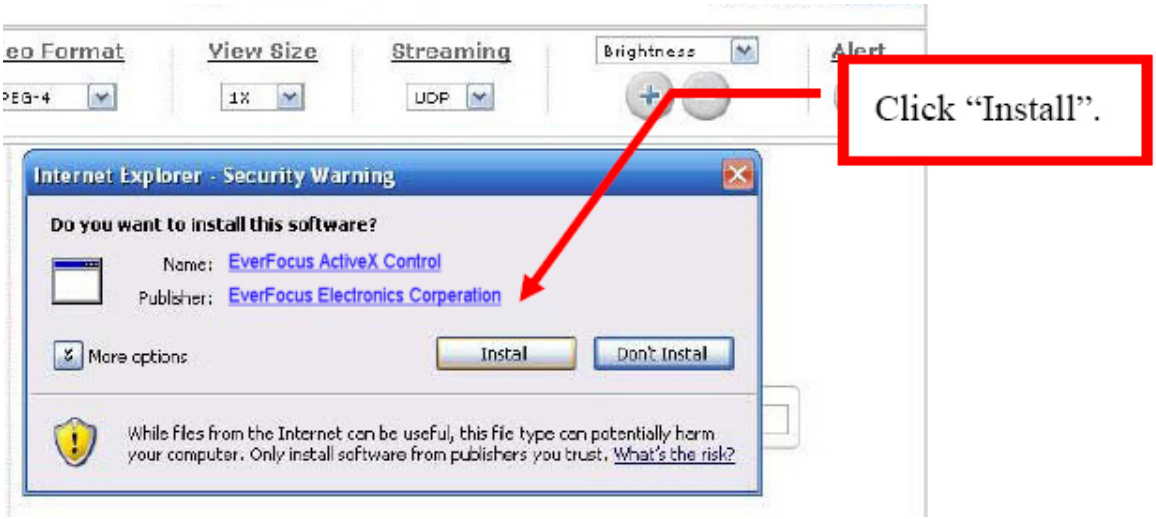
The login screen appears.

Enter the default usermane and password:
Default User name: user1
Default Password: 11111111

Click on OK.

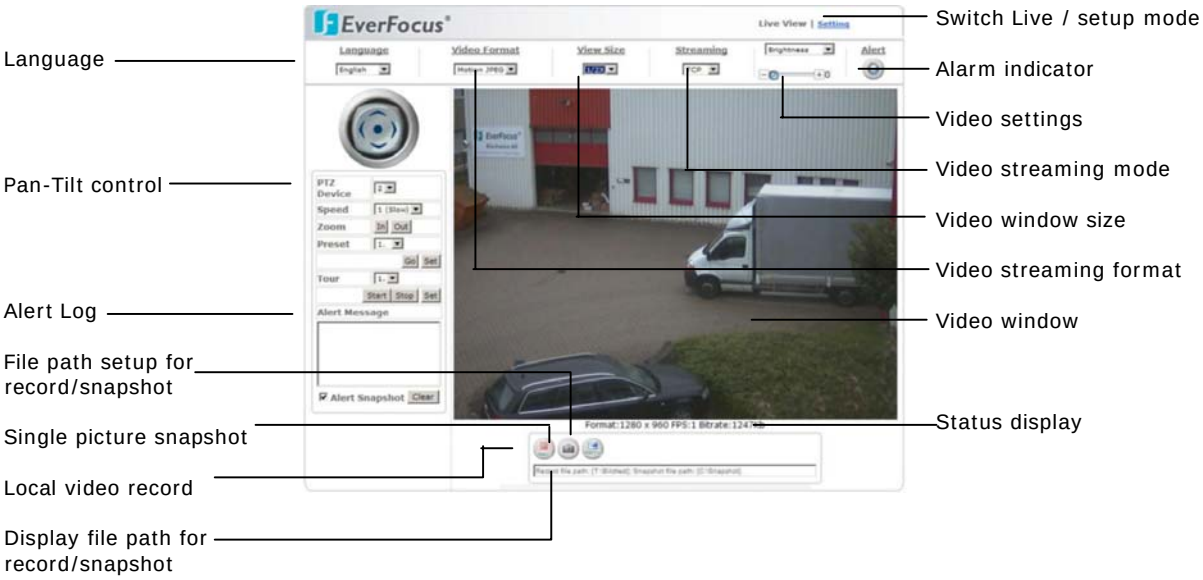
At first time login the installation of the ActiveX control for the camera is required:





4 MAIN OPERATION SCREEN

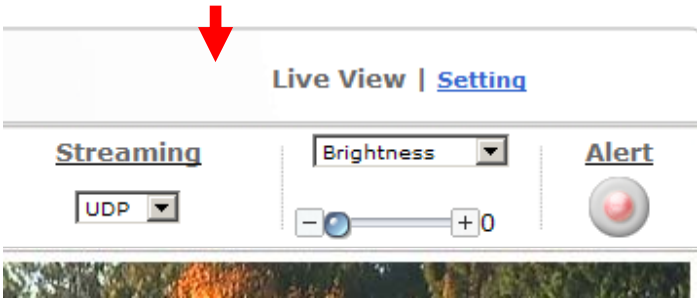
After successful login the main screen appears:



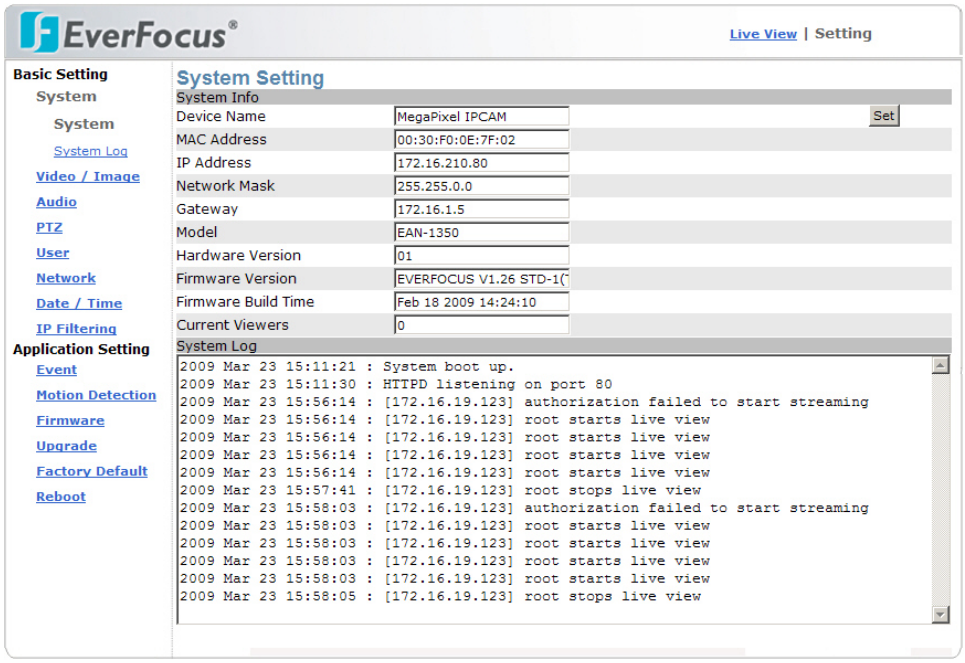
5 SETTINGS - BASIC SETTING

5.1 SETUP SCREEN

To access the detailled camera setup click on "Settings" in upper right corner of the window.



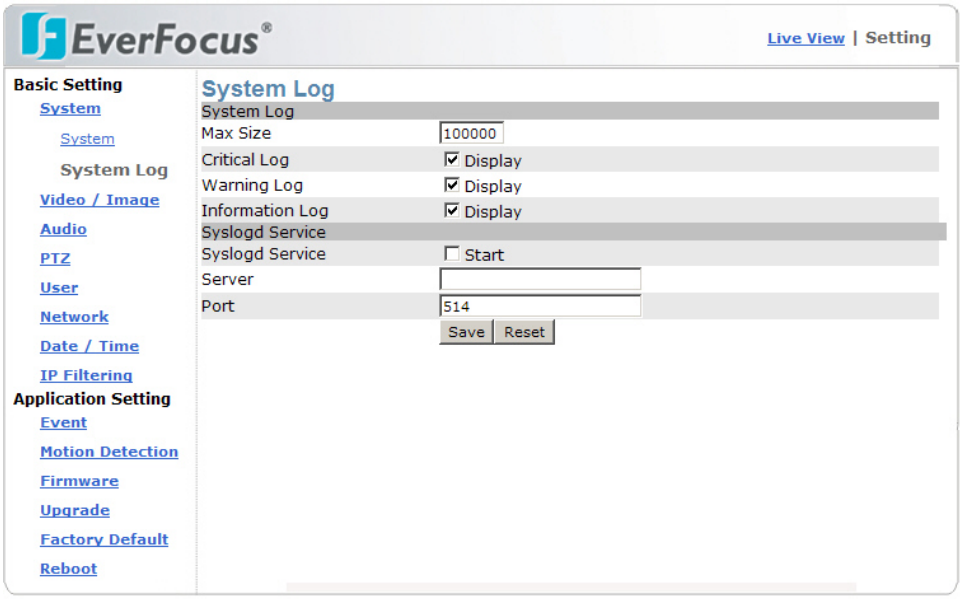
5.2 SYSTEM



The System setting page gives an overview about camera version and basic IP settings. The values are not editable at this page except the Device name.

5.2.1 System Log

The administrator can view all login information of this camera, including boot record, video streaming mode, login IP, changes, and the date/time information. You can copy the entries to a Word document and save them manually. Please note that all information is deleted when you turn off the machine.

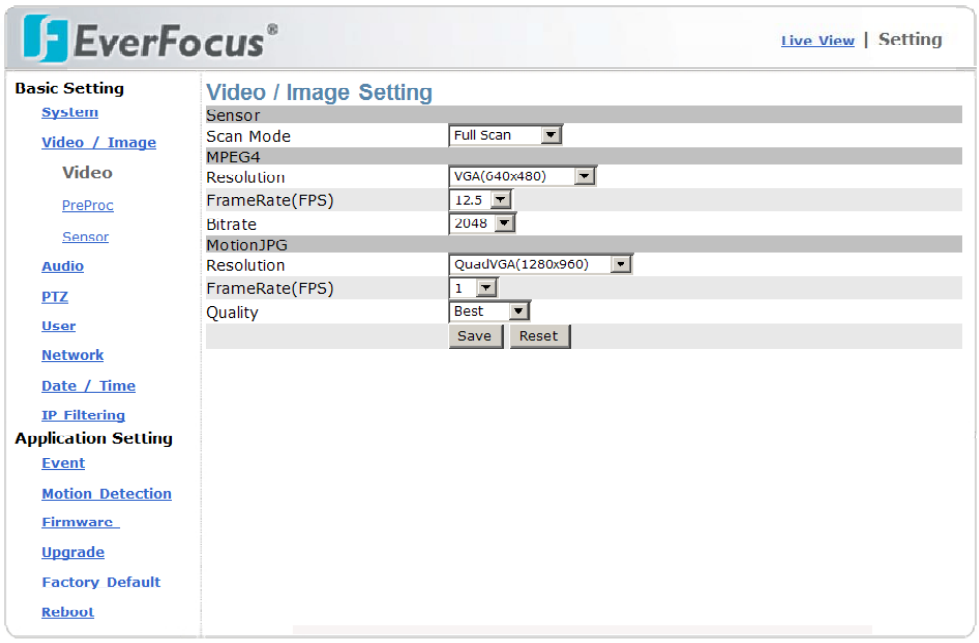


Syslogd Service
The Syslogd service allows to transmit log informations to a server, which provides Syslogd function. Enter the Syslogd server IP - Address and the used port to install this function.

5.3 VIDEO / IMAGE

Setup menu for general video quality and streaming settings.

5.3.1 Video



Sensor Scan Mode

2 modes are available:
Full scan: Mode with highest available resolution, reduced framerate
Partial scan: In this mode 4 pixel are combined in scanning. Realtime framerate and enhanced light sensitivity are available in this mode.

MPEG 4

Resolution

In MPEG4 mode are following resolutions available:
VGA 640x480 pixel
QVGA 320x240 pixel
CIF 352x288 pixel
QCIF 176x144 pixel

Framerate (FPS)

The framerate setting is depending on the setting for scan mode:
Full scan mode: 12,5 or 8 images/second
Partial scan mode: 25,13 or 9 images / second

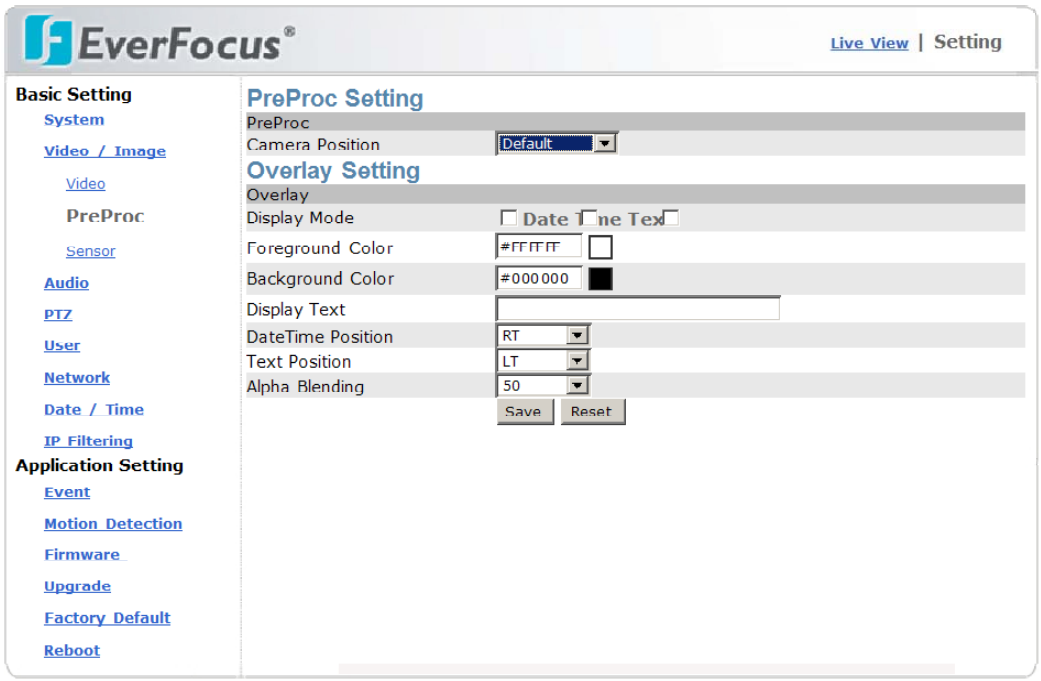
Bitrate

The bitrate setting allows to reduce the network bandwidth for MPEG4 transmission by using higer compression rate. The image quality is reduced with lower bitrate.
Values: 4096, 3072, 2560, 2048, 1536, 1280, 1024, 768, 512 BPS

Motion JPEG

Resolution	**Full scan mode:** QuadVGA 1280x960 pixel or same as MPEG4 setting, **Partial scan mode:** always similar to MPEG4 setting
Framerate (FPS)	**Full scan mode:** 12,5 or 8 images/second **Partial scan mode:** 1 ~ 12 IPS images / second
Quality	image quality (compression, adjustable in 5 steps)

5.3.2 PreProc



Preproc	Overlay and special video settings
Camera position	Display settings for special applications: **Default:** standard image display **Flip:** image is displayed vertically flipped **Mirror:** image is displayed horizontally flipped **Rotate180:** image is displayed rotated 180°
Overlay setting	Display settings for time, date and text overlay. **ATTENTION:** This overlay display is only available in MPEG4 mode
Display mode	Activate the checkboxes for date, time and/or text for display in the video image
Foreground color	Color of characters: clicking in the color box at right opens a

color palette. Select a character color by clicking in a color in the palette.

Background color Color of character´s outline: clicking in the color box at right opens a color palette. Select a outline color by clicking in a color in the palette.

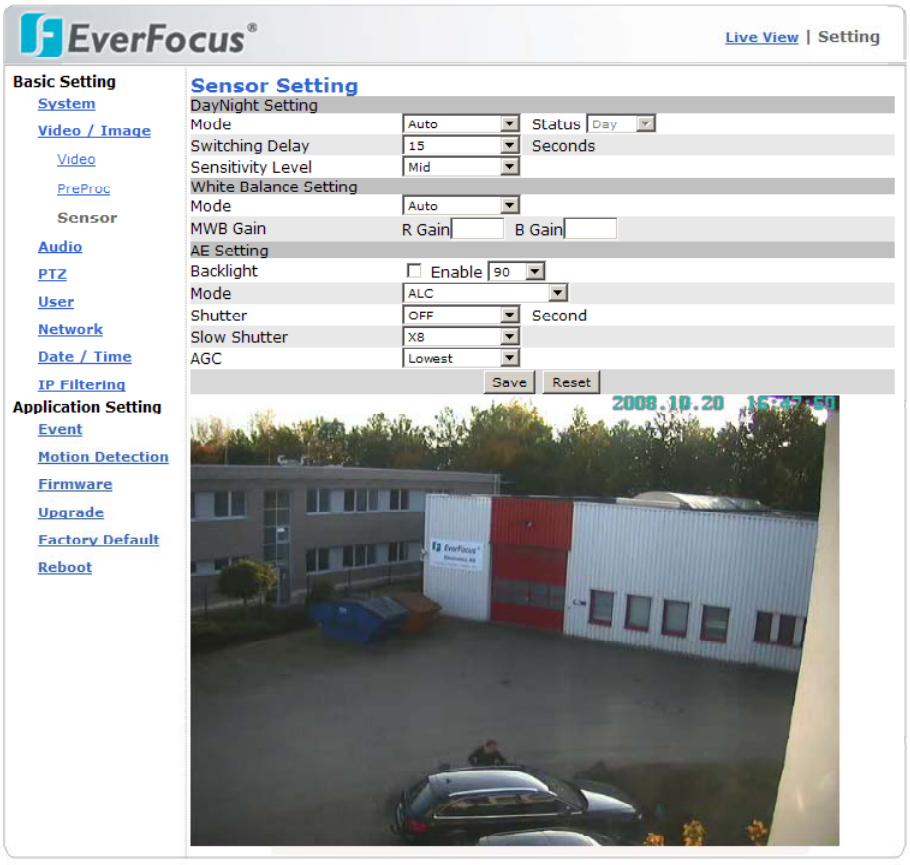
Display Text Free editable text / camera title for overlay function

Date Time Position position of Time / Date overlay in the image:
RT: right top
LT: left top
RB: right bottom
LB: left bottom

Text position position of Display text overlay in the image:
RT: right top
LT: left top
RB: right bottom
LB: left bottom

5.3.3 Sensor

Enhanced video settings



DayNight Setting

Mode

Mode for day (color) and night (b/w without IR-Cutfilter) switching:
Auto: automatic switching to dayand night mode, "Status" shows the current mode (not editable)
Manual: Manual setup of day / night mode
External: D/N switching by external contact, setup under "EVENT"

Switching delay

Delay of D/N switching in AUTO - mode. Setup range 1~15 seconds. A longer delay time avoids false D/N switching caused by car light, clouds, reflections or other effects.

Sensitivity level

Sensitivity treshold value for D/N switching in AUTO mode.

White Balance Setting

Mode

White Balance adjustment mode:
Auto: automatic mode, optimized for most applications
Outdoor: outdoor mode, colder color temperature
Indoor: indoor mode, warmer color temperature
Manual: manual setup of red (R Gain) and blue (B Gain) in the range 1~100%

MWB Gain

In manual White Balance mode setup of red (R Gain) and blue (B Gain) in the range 1~100%

AE Setting

Backlight

Backlight compensation. Activate the checkbox to aloow baclight compensation. With active BLC adjust the BLC level from 10 to 100% for optimizeld image result.

Mode

Mode of aperture control:
ALC: mode for use with DC - controlled lenses, combined DC lens control and automatic electronic shutter (AES)
ELC: mode for lenses with manual iris, automatic electronic shutter (AES)

Shutter

Electronic shutter: adjustable in ALC mode in the range 1/50 s to 1/10.000 s,
In ELC mode shuter mode is automatic only.

Slow Shutter

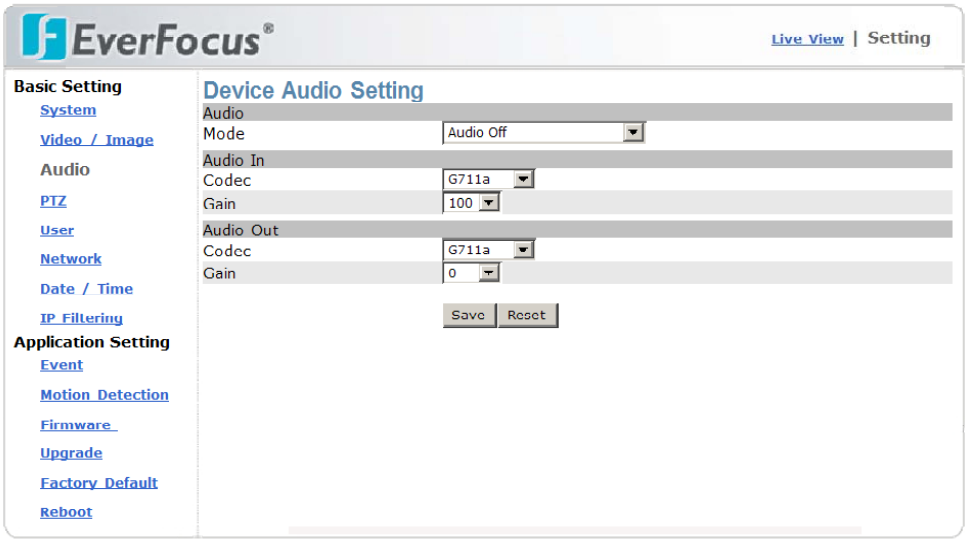
Image interpolation for enhancement of low lux performance, adjustable in the range 2x to 32x
ATTENTION: For clearer reproduction of moving objects adjust this value to the lowest possible value!

AGC

Automatic Gain Control, adjustable in 5 steps.
Higher setting creates brighter image in low lux conditions, but increases also noise in the picture.

5.4 AUDIO

The EAN-1350 provides bidirectional audio transmission with different quality options.



Mode

Full duplex: Allows using a microphone and amplifier at the same time, or turning them off at main page.
Half duplex: Allows using a microphone or amplifier by manual switch.
Simplex microphone only: Allows using the microphone only.
Simplex amplifier only: Allows using the speaker only.
Audio off: Turns audio off; i.e. both the microphone and speaker are inactive.

Audio In
Codec

G726/24: Uses G.726 24Kbps for audio encryption.
G726/32: Uses G.726 32Kbps for audio encryption.
G711a: Uses G.711 a-law 64Kbps for audio encryption.
G711u: Uses G.711 u-law 64Kbps for audio encryption.

Gain

Audio in gain (volume) adjustment 10~100%

Audio out
Codec

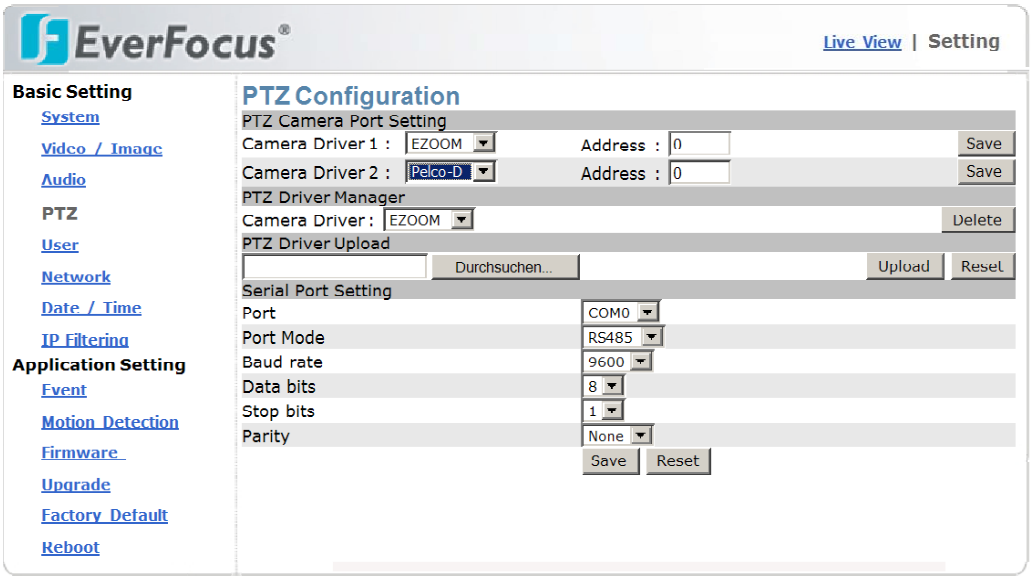
G726/24: Uses G.726 24Kbps for audio decryption.
G726/32: Uses G.726 32Kbps for audio decryption.
G711a: Uses G.711 a-law 64Kbps for audio decryption.
G711u: Uses G.711 u-law 64Kbps for audio decryption.

Gain

Audio out gain (volume) adjustment 10~100%

5.5 PTZ

This Setup page contains settings for electronic zoom and external RS-485 PTZ devices. The EAN-1350 provides control of 2 PTZ devices, this allows a combined control of electronic zoom and external PTZ - device.



Camera Diver 1 Driver setting for PTZ driver 1:

EZOOM: electronic zoom (only for MPEG4 mode) , address setting is not relevant
Pelco-D: setting for external PTZ receiver with Pelco-D protocol, please set receiver address in the range 0~255
Pelco-P: setting for external PTZ receiver with Pelco-P protocol, please set receiver address in the range 0~255
None: no PTZ control

Camera Diver 2 Driver setting for PTZ driver 2:

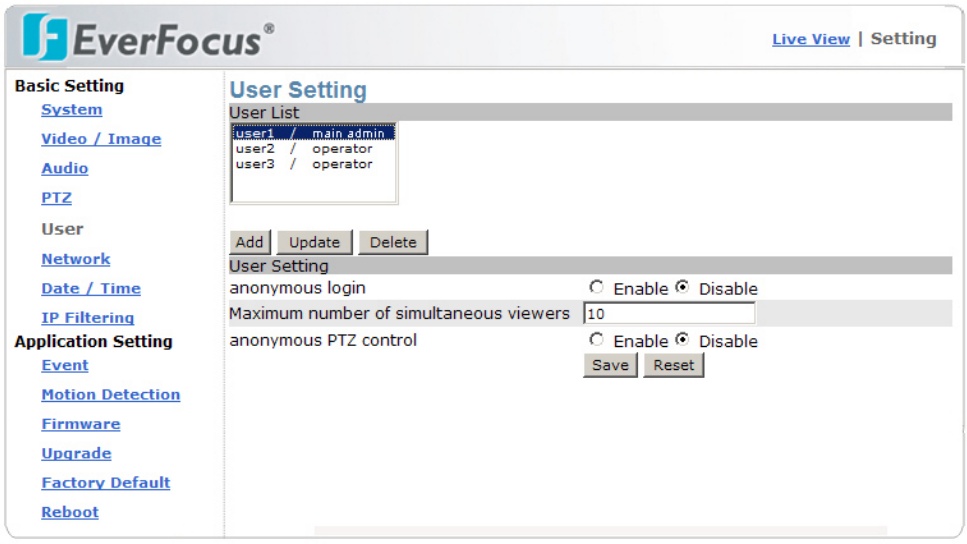
EZOOM: electronic zoom (only for MPEG4 mode) , address setting is not relevant
Pelco-D: setting for external PTZ receiver with Pelco-D protocol, please set receiver address in the range 0~255
Pelco-P: setting for external PTZ receiver with Pelco-P protocol, please set receiver address in the range 0~255

PTZ Driver Manager
Camera Driver...
Delete **Delete:** removes current PTZ drivers from camera firmware.

PTZ Driver Upload	Upload of new available PTZ drivers: **Search:** Enter the file path to the new PTZ driver files. **Upload:** Load the drivers to camera **Reset:** Reset the PTZ drivers, neccessary after Upload
Serial port settings	Interface parameter of the RS-485 port, these parameters should be identical to the PTZ device
Port	Locked at COM 0, no selection needed
Port mode	Locked at RS-485, no selection needed
Baudrate	Baudrate of RS-485, steps: 1200, 2400, 4800, 9600
Stopbits	Number of stopbits, 1 or 2
Databits	Number of databits, 1 or 2
Parity	Parity setting for RS-485, even, odd or none

5.6 USER

This setup page defines users and user rights for access to the EAN-1350 camera.
The EAN-1350 provides a flexible user management with 4 different user right levels.

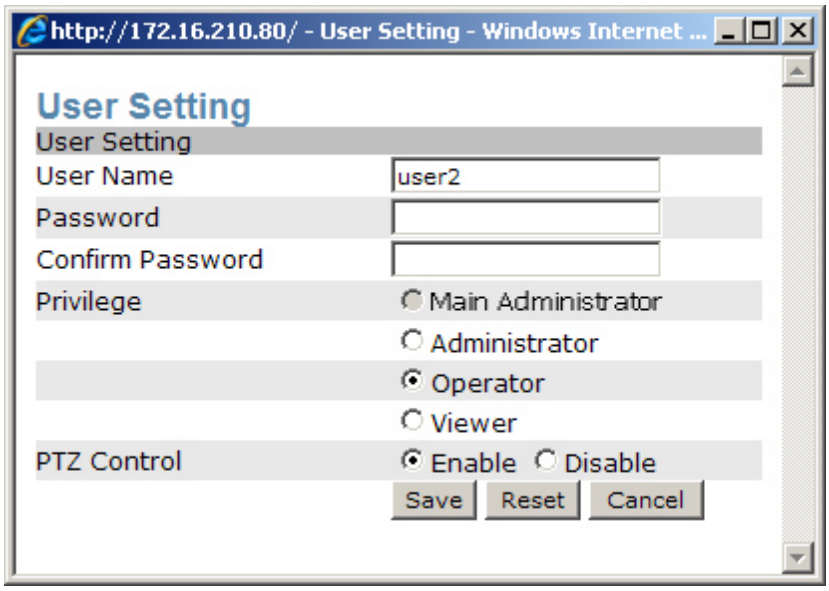


Default user:

Username	**Passwort**	**User right**
user1	11111111	Main Administrator

Add / Modify / Delete User

Press "Add" to define a new user, "Update" to modify the settings for a selected user. "Delete" removes a user from the list ("user1" can not be deleted).



User setting:

anonymous login	"Enable" allows access to the camera without login by username /password. This function could be helpful for public cameras, for security applications the default setting "Disable" is recommended.
Maximum number of simultaneous viewers	If "anonymous login" is set to "Enable", enter here the number of maximum anonymous users. The max. limit is 10 users.
anonymous PTZ control	If "anonymous login" is set to "Enable", enter here, if anonymous users are allowed to operate PTZ control.

The EAN 1350 provides 4 level of different user rights. The details are listed in table below:

User		Main Administrator	Administrator	Operator	Viewer
Live View		✓	✓	✓	✓
Record File Path		✓	✓	✓	✓
System Setting		✓	✓	✓	×
Video Setting		✓	✓	✓	×
	PreProc	✓	✓	✓	×
	Sensor	✓	✓	✓	×
Audio Setting		✓	✓	✓	×
Date / Time Setting		✓	✓	×	×
User Setting		✓	×	×	×
Network Setting		✓	✓	×	×
	DDNS setting	✓	✓	×	×
	PPPoE setting	✓	✓	×	×
	Streaming	✓	✓	×	×
	UPnP	✓	✓	×	×
	SMTP	✓	✓	×	×
	SAMBA	✓	✓	×	×
	Notification	✓	✓	×	×
	Multicast	✓	✓	×	×
	IP Filter setting	✓	✓	×	×
Event Setting		✓	✓	✓	×
	schedule setting	✓	✓	✓	×
	event server	✓	✓	✓	×
	trigger setting	✓	✓	✓	×
Motion Setting		✓	✓	✓	×
Firmware Upgrade		✓	×	×	×
Factory default		✓	✓	×	×
Reboot Setting		✓	✓	×	×
PTZ Control		✓	✓	✓	×

5.7 NETWORK

5.7.1 Network

IP - Assignment

DHCP — **OFF:** Fixed IP address
ON: IP-address assignment provided by DHCP (requires DHCP support in the network)

IP-Address — In the mode DHCP ON: display of IP - Address,
in mode DHCP OFF: manual entering of the cameras IP adress
(alternative to the setting by the "IP-Finder" application)

Subnet mask — Display of Subnet mask setting, in mode "DHCP Off" possibility to change setting
(alternative to the setting by the "IP-Finder" application)

Gateway — Enter the IP - Address of the Gateway of connected network

DNS1 / DNS2 — Enter the IP - address of the DNS1 (Dynamic Name Server) and DNS2 (if available)

MAC - Address — Display of the camera´s MAC - Address (not editable)

5.7.2 Services

The FTP function allows FTP access to the camera. This function is currently not supported by this camera model.

5.7.3 Streaming

Streaming method	Setting
HTTP	Port 80(80 by default) can pass through most firewalls under Internet environment. Video streams are transmitted through HTTP Port (80 by default) to ensure passage through firewalls.
RTSP	Port 554 uses a fixed port (i.e. TCP) or can be defined by users to ensure reliable data transmission. Video streams are transmitted through RTSP Port (554 by default) to avoid video fragment or mosaics due to poor transmission quality.
RTP	Port 50000 to 60000 are UDP ports and can be defined by users. They provide the fastest but also most unreliable transmission service. Video streams are transmitted through UDP Port (50000~60000 by default) to ensure the fastest image transmission. Occuring of video fragment or mosaics may occur due to poor transmission quality are possible.

5.7.4 PPPoE

PPPoE (Point-to-Point Protocol over Ethernet) is a protocol that supports access to a high-speed wideband network using a PC and a wideband modem (such as xDSL, Cable, Wireless modem).
The user need only to equip the PC with an Ethernet card and apply to an ISP and an ADSL provider for ADSL service to roam the Internet through ordinary twisted copper wires.
PPPoE is applicable to networking via a xDSL or cable modem. PPPoE setting must be executed in the LAN environment for your PC to connect to ADSL.

PPPoE	**Setting**
Dial	On Boot: The camera will establish connection after startup. Off: PPPoE dialing disabled
Username	Enter the username of your DSL account
Password	Enter the password of your DSL account

5.7.5 DDNS

DDNS (Dynamic Domain Name Service) provides a central (public) database where DNS information can be stored and retrieved. It allows those using a dynamic IP address (i.e. one where it changes each time the computer connects to the internet) to be registered centrally so others can connect to it by name.

Most of the ADSL service providers will provide a dynamic IP for ADSL environments, which means your IP address will constantly change each time you connect to the Internet.
As a result, users from WAN environments will have much difficulty finding the correct IP address. The DDNS (Dynamic DNS service) undates the camera´s IP address when accessing the web.
Currently the EAN1350 camera supports DDNS service of Dyndns.org. (Oray.net is only available in chinese language).

DDNS	**Setting**
Active	**Enable:** Allow DDNS service **Disable:** DDNS service off
Username	Enter the username of your DDNS account
Password	Enter the password of your DDNS account
Domain Name	Domain name of the camera (e.g. my-ean1350.dyndns.org)

5.7.6 UPnP

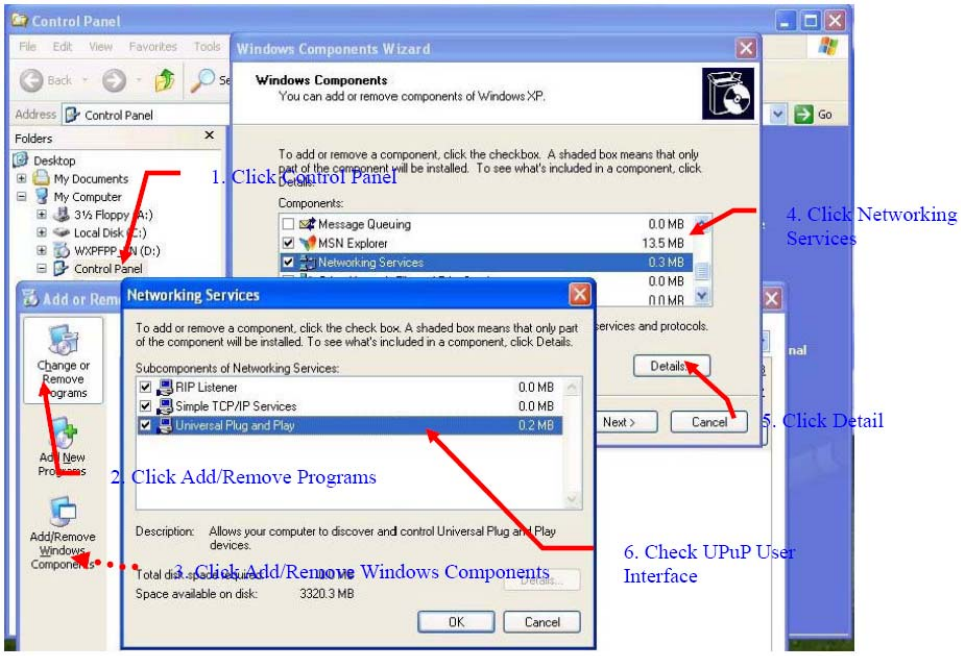
UPnP (Universal Plug and Play) If you connect your camera to a router, IP allocator, or wireless AP, the camera will possibly be blocked by the NAT (network address translation) and can't be located on the Internet.
To penetrate the firewall, activate the supportive item UPnP. The Link URL shows the external IP address and the port of the router.

UPnP	**Setting**
Active	**Yes:** UPnP function on **No:** UPnP function off
UPnP Traversal Active	**Yes:** UPnP Traversal active **No:** UPnP Traversal disabled
Port range	Range of usable ports, default 32768 ~ 65535
Link URL	Not editable: display of current external IP-Adress of the camera. If display shows: " http://Trying to traverse..." after pressing "Safe", the UPnP function failed. Please check settings of PC peripheral UPnP devices.

To activate the UPnP function in Windows OS:

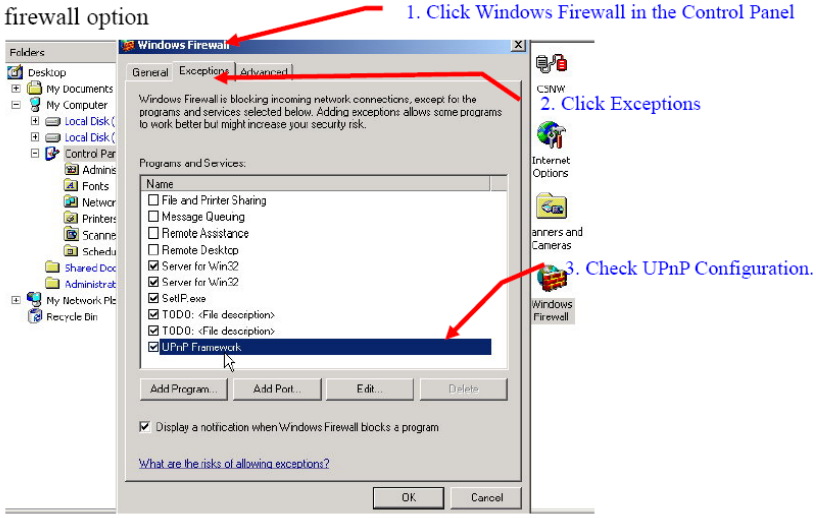
Ex: Windows XP:
Windows component installation.

1. Click Control Panel
2. Click Add/Remove Programs
3. Click Add/Remove Windows Components
4. Click Networking Services
5. Click Detail
6. Check / add UPnP User Interface

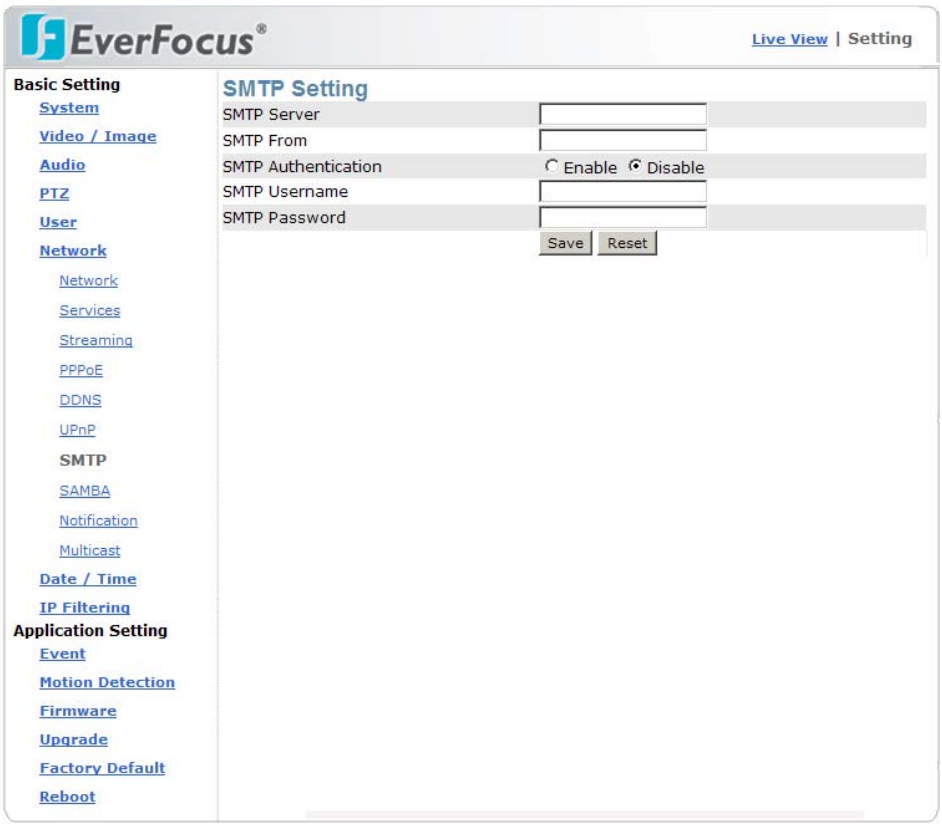


Firewall settings

1. Click Windows Firewall in the Control Panel
2. Open Windows firewall option
2. Click Exceptions
3. Check UPnP configuration and edit ports, if needed.



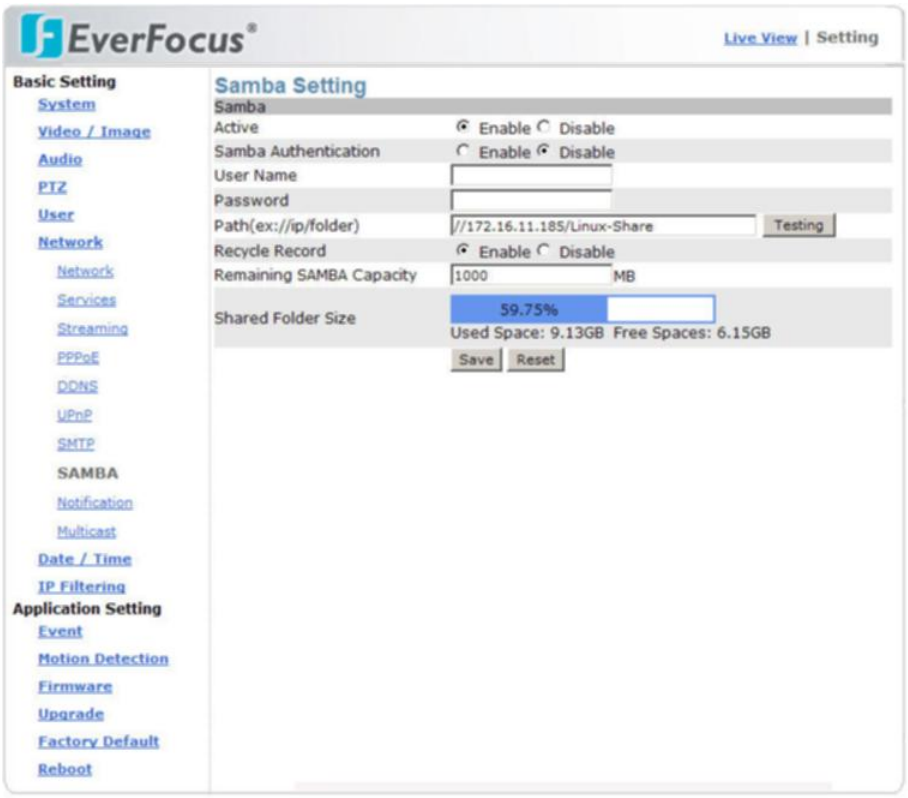
5.7.7 SMTP



SMTP	**Setting**
SMTP server	Send Mail server domain name / IP- Address
SMTP from	Sender E-mail address
SMTP authentification	**Enable:** enable SMTP authentification **Disable:** setting for SMTP server, which work without authentification
SMTP username	SMTP login username
SMTP password	SMTP login password

5.7.8 SAMBA

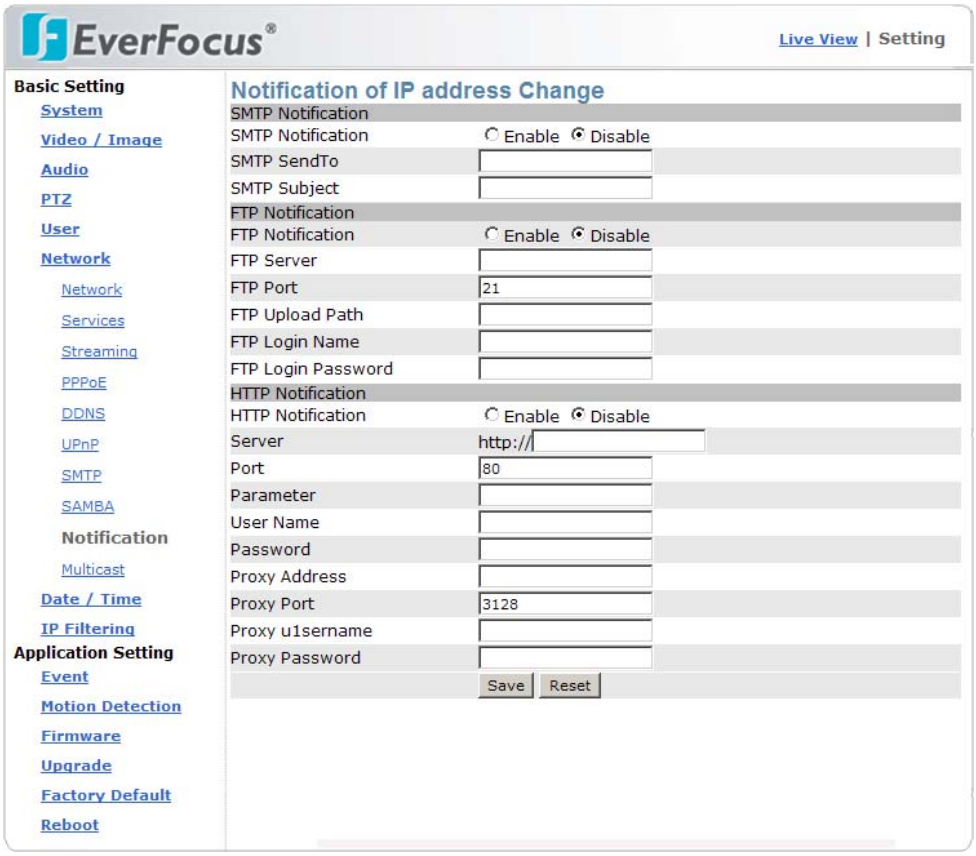
The EAN-1350 supports SAMBA server for storage of event snapshots and video recordings.



SAMBA	**Setting**	
Active	**Enable:** **Disable:**	enable SAMBA server deactivate SAMBA server
SAMBA authentification	**Enable:** **Disable:**	enable SAMBA authentification setting for SAMBA server, which work without authentification
Username	SAMBA login username	
Password	SAMBA login password	
Path(ex://ip/folder)	IP adress of the SAMBA server and path of recording folder	
Recycle record	**Enable:** **Disable:**	If maximum capacity is reached, oldest recorded files will be deleted automatically. If maximum capacity is reached, recording to Samba will be stopped
Remaining SAMBA Capacity	Reserved free capacity of SAMBA drive, which is not used for recordings. (Capacity of recording folder = Total capacity of Samba drive - entered value in MB)	
Shared Folder Size	Shows used and free space of SAMBA folder.	

5.7.9 Notification

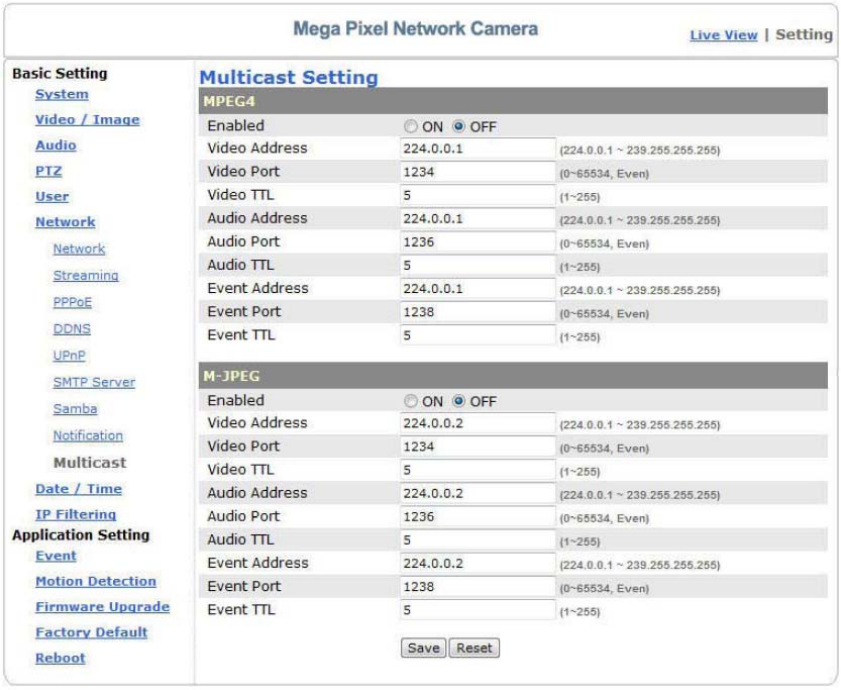
Notification service for installations with dynamic IP-Adressing.
After IP-Adress change the camera can send out notification by email, ftp or HTTP.
This service is not needed for installations with fixed IP-Address.



Notification	**Setting**
SMTP	If activated, enter email - address Email subject
FTP	If activated, enter access data to the FTP server
HTTP	If activated, enter access data to the HTTP server

5.7.10 Multicast

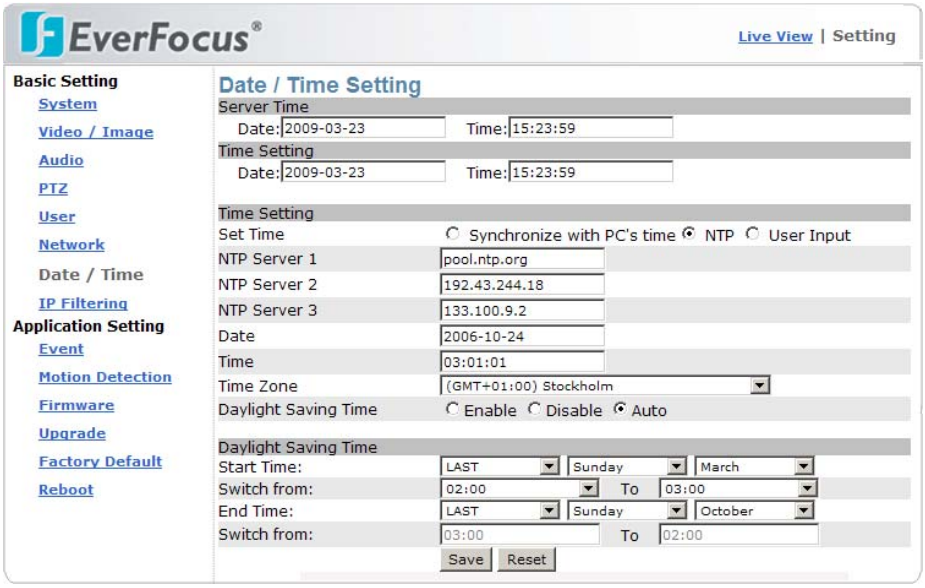
This function allows multiple people to watch video streaming without limitation on the number of users. Multicast is only applicable in the LAN environment.
The function requires support of Multicast function in the connected network.
The video streaming format (MPEG4/MJPEG) depends on the selected image format setting in Video settings.



Multicast MPEG-4 / M-JPEG	**Setting (similar setting procedure for both modes)**
Enable	**On:** MPEG-4 Multicast enabled **Off:** MPEG-4 Multicast disabled
Video Address	Multicast Video streaming adress, IP - range 224.1.1.1 ~ 239.255.255.255
Video Port	Multicast Video streaming port, range 2~65534, Even only !
Video TTL	TTL (Time To Live) value of multicast video stream, 1~255
Audio Address	Multicast Audio streaming adress, IP - range 224.1.1.1 ~ 239.255.255.255224.1.1.1 ~ 239.255.255.255
Audio Port	Multicast Audio streaming port, range 2~65534, Even only !
Audio TTL	TTL (Time To Live) value of multicast audio stream, 1~255
Event Address	Multicast Event streaming adress, IP - range 224.1.1.1 ~ 239.255.255.255
Event Port	Multicast Event streaming port, range 2~65534, Even only !
Event TTL	TTL (Time To Live) value of multicast audio stream, 1~255

5.7.11 Date / Time

The EAN-1350 camera supports date / time setting in manually, synchronized with client PC or automatic adjustment by NTP time server.

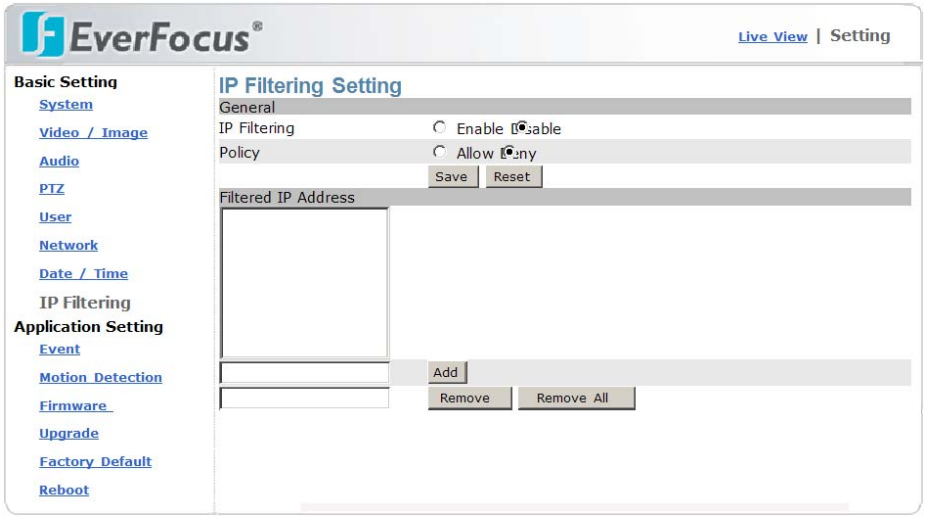


Date / Time	**Setting**
Server Time	Current time and date of the camera, display only.
Time setting	Current time and date of client PC, used for function " "Synchronize with PC´s time"
Time setting	
Set time	Mode of time setup: **Synchronize with PC´s time:** Client PC date and time are taken over by the camera **NTP:** Camera time / date is synchronized by NTP (Network Time Protocol) server **User Input:** Manual input of time and date
NTP Server 1 ~ 3	IP - address of NTP servers, 3 servers can be entered optional, which work redundant
Date	Input field for date only for mode "User Input"
Time	Input field for time only for mode "User Input"
Time zone	Set the time zone depending on the camera´s location. This setting is mandatory for working in NTP mode.
Daylight Saving Time	**Enable:** Switch to Daylight Saving Time (summer period) manually **Disable:** Switch off Daylight Saving Time **Auto:** Automatic DST switching, only in "NTP" mode
Start time	Start date of DST (summer period)

Switch from	Time for switching to DST and updated time
End time	End date of DST
Switch from	Time for switching off DST and updated time

5.7.12 IP Filtering

The EAN-1350 provides IP filtering for network access to the camera based on a blacklist or whitelist.



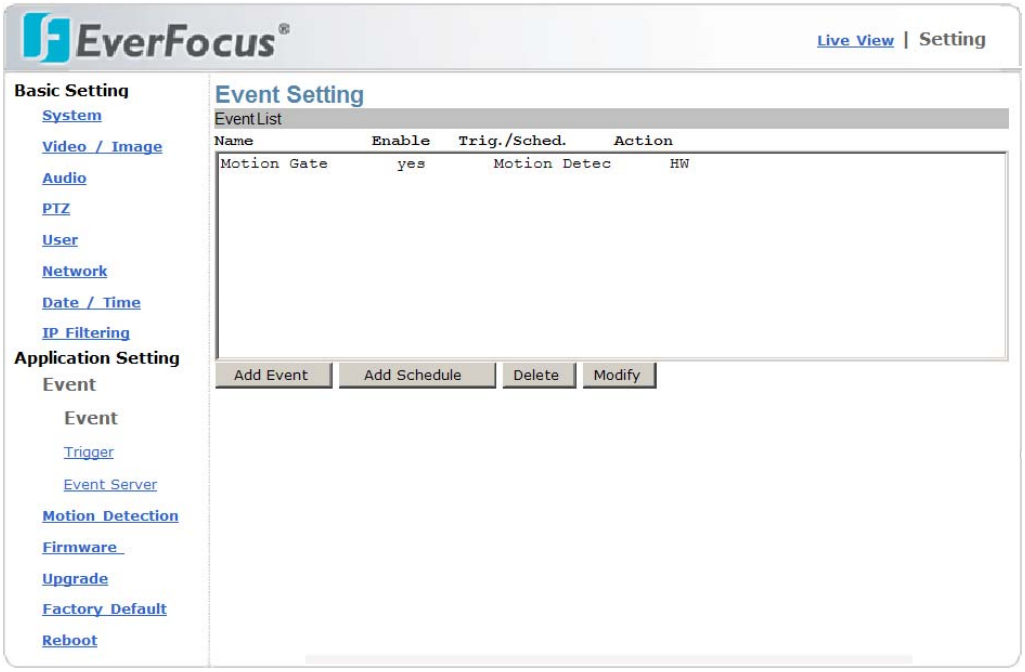
IP Filtering	**Setting**
IP - Filtering	**Enable:** IP - Filtering active **Disable:** IP - Filtering off
Policy	**Allow:** "whitelist" mode, all entered IP - Adresses can access the camera, other IP - addresses are blocked **Deny:** "blacklist" mode, all entered IP - addresses have no access to the camera
Filtered IP - addresses	
Add	For adding an IP - address to the list enter an IP - address below the list and press "Add".
Remove	To remove an address from filter select an IP - address from the list and press "Remove".
Remove all	Removes all IP - addresses from the list.

6 SETTINGS - APPLICATION SETTING

6.1 EVENT

6.1.1 Event

These setup pages provide settings for event related actions such as recording, notification and contact output.

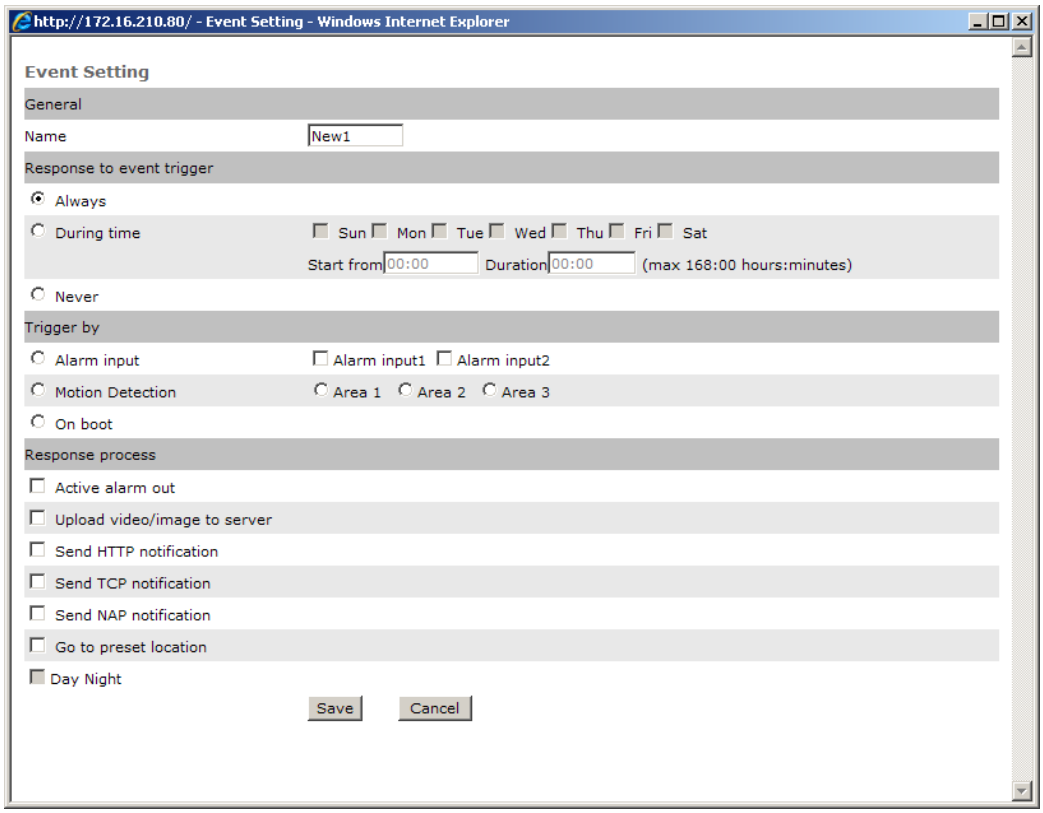


Add / Modify Event

Press "Add" to define a new event.
Depending on current settings several status / warning messages for event related settings may appear.

Examples:

Confirm all messages, the event definition menu will open:

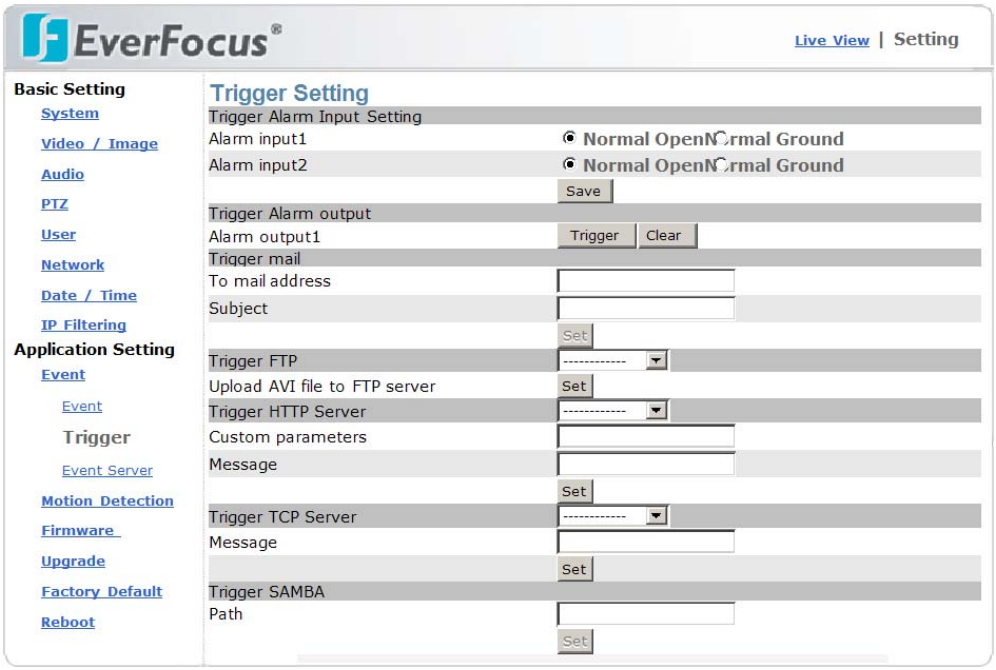


Event	**Setting**
Name	Name of the event (appears in the event list)
Response to event trigger	**Always:** permanent event handling **During time:** simple weekly schedule function for event handling, set a start time and a duration of activity (in hours, max 168) **Example:** Event handling shall be activated from Saturday 08:00 am to Monday 8:00 am. Set Checkbox "Sat"; Start from: 08:00; Duration: 48:00 **Never:** Event handling disabled
Trigger by	**Alarm input:** select input 1,2 or 3 for contact alarm event **Motion detection:** Select Area 1, 2 or 3 for motion event **On boot:** select this checkbox to create an event at camera startup (or reboot)
Response Process	Event actions, multiple selections are possible
Active alarm out	Set this checkbox to switch the contact output of the camera, set duration time
Upload video/image to server	Record event images or videos to FTP or SAMBA server. Note: A definition of FTP or SAMBA server in NETWORK menu is required to activate server upload.
Send HTTP notification	In case of event the camera will send a notification message to a HTTP server. **Note:** A definition of Notification server in EVENT > EVENT

	SERVER menu is required to activate server upload.
Send TCP notification	In case of event the camera will send a notification message to a TCP server. **Note:** A definition of Notification server in EVENT > EVENT SERVER menu is required to activate server upload.
Send NAP notification	In case of event the camera will send a notification message and alarm image to a NAP server. Use this function to create network alarm event for PowerCon management software (Version 4.3 or higher). Refer to Powercon 4.3 documentation for more details. **Note:** A definition of Notification server in EVENT > EVENT SERVER menu is required to activate server upload. Note: For correct communication with Powercon the device ID must contain 10 characters without space.
Go to preset location	Only for cameras mounted to PTZ devices with preset functionality. Select a preset position number.
Day/Night	Switch Day / Night mode. Using this feature is only possible with the setting: Setup menu > Video/Image > Sensor > Day/Night setting > Mode: EXTERNAL

6.1.2 Trigger

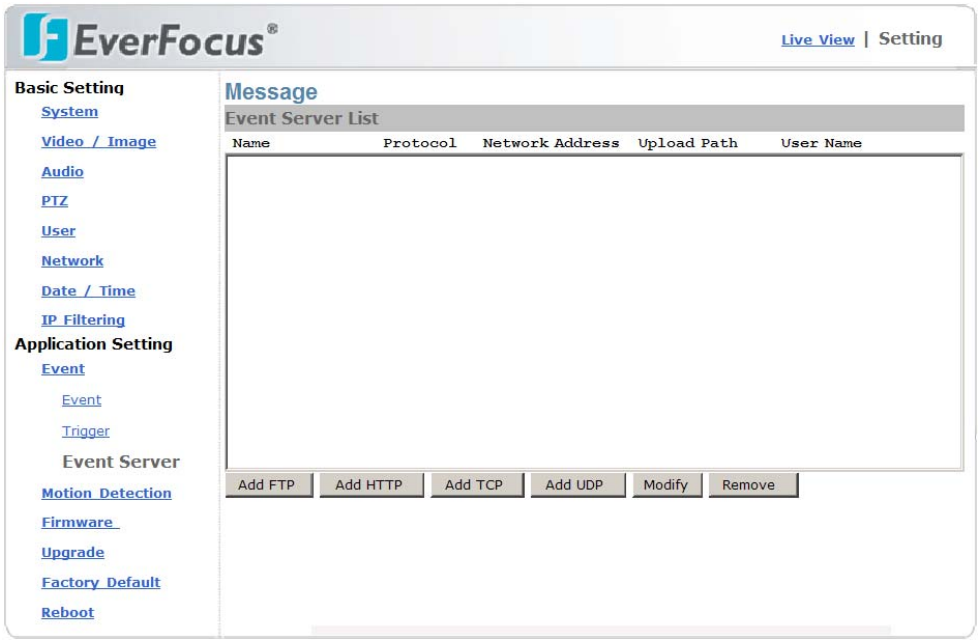
This menu provides setting for alarm input contact modes and test functions.



Event	Setting
Alarm Input 1 / 2	Contact mode of alarm inputs, Normal Open or Normal Closed.
Triiger Alarm Out	Manual trigger of relay output (latched function). "Clear" releases the relay.
Trigger Mail	Test of email transmission.
Trigger FTP	Test FTP: a test video file will be transmitted to FTP.
Trigger HTTP server	Test HTTP server: a test message will be transmitted.
Trigger TCP server	Test TCP server: a test message will be transmitted.
Trigger SAMBA	Test SAMBA server: a test file will be transmitted to SAMBA folder.

6.1.3 Event Server

Setup for the event servers.

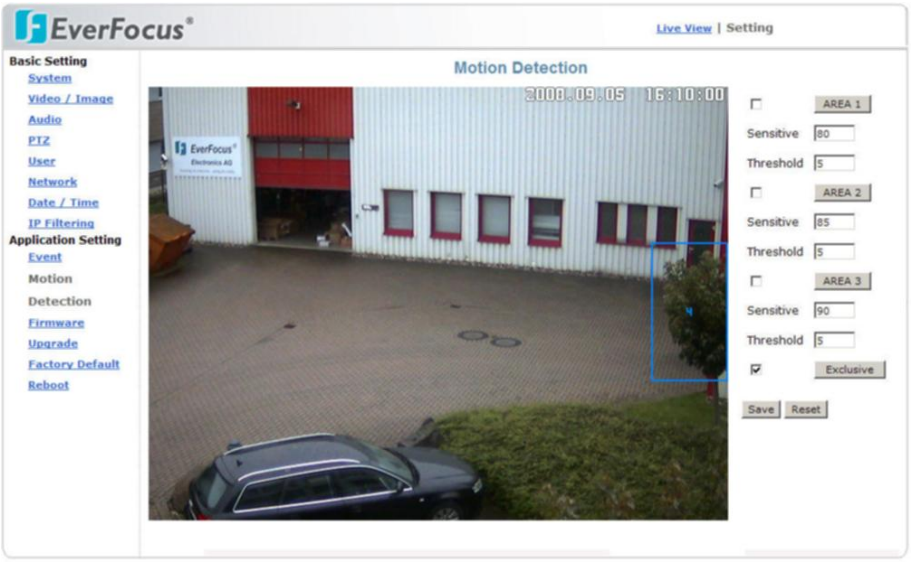


Press "Add FTP", "Add HTTP", "Add TCP" or "Add UDP" to define the access data for event servers.
Press "Modify" to change selected server.
Press "Remove" to delete event server.

6.2 MOTION DETECTION

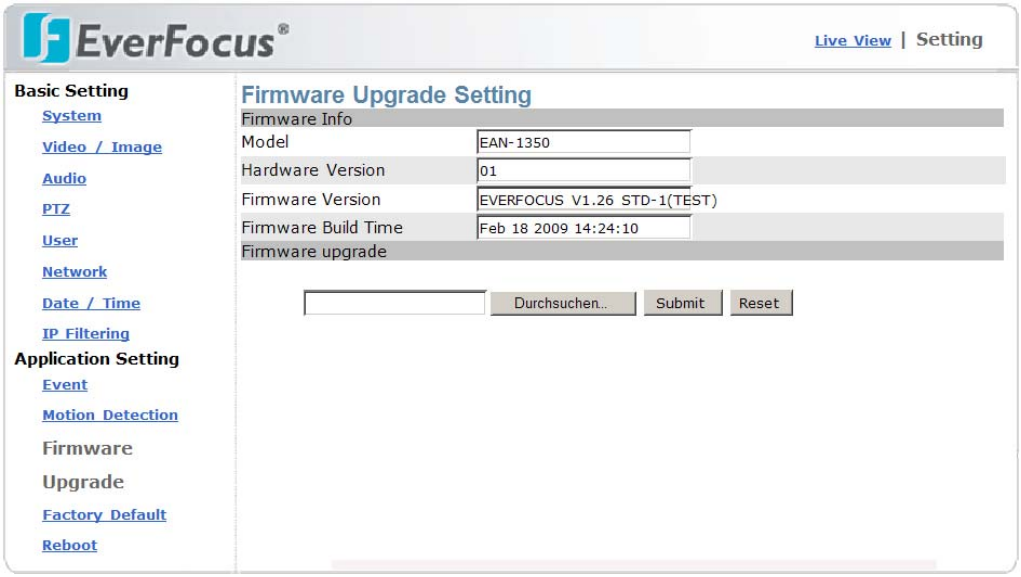
The EAN-1350 offers motion detection in 3 independent zones. Zone 3 can be defined as "Exclusive" zone, no motion will be detected.

Setup of "EXCLUSIVE" zone:



Motion detection	**Setting**
Area 1 ~ 3	Set the checkbox to enable the motion detection zone. Click on "AREA1(2,3)" to show the detection area. Click in der middle of the zone to move the area, click at the borders to change area size.
Detect level	Detection sensitivity setup, 5 steps available.
Area3 > EXCLUSIVE	Activate the "EXCLUSIVE" checkbox for zone 3 to set this zone to "No Detection" mode. This function is useful to cover areas in other detection zones, where false alarms are expected (e.g. moving trees)

6.3 FIRMWARE UPGRADE



Firmware upgrade **Setting**

Model Shows the camera type

Hardware version Shows hardware version of the camera

Firmware version Shows current firmware version

Firmware build time Creation date of current firmware

Firmware upgrade Search Enter the file path to the upgrade firmware file

Submit Send the selected firmware file to the camera.
This procedure may take several minutes. follow the screen instructions.

WARNING: Do not power off the camera during upgrade procedure. This may damage the camera irreversible!

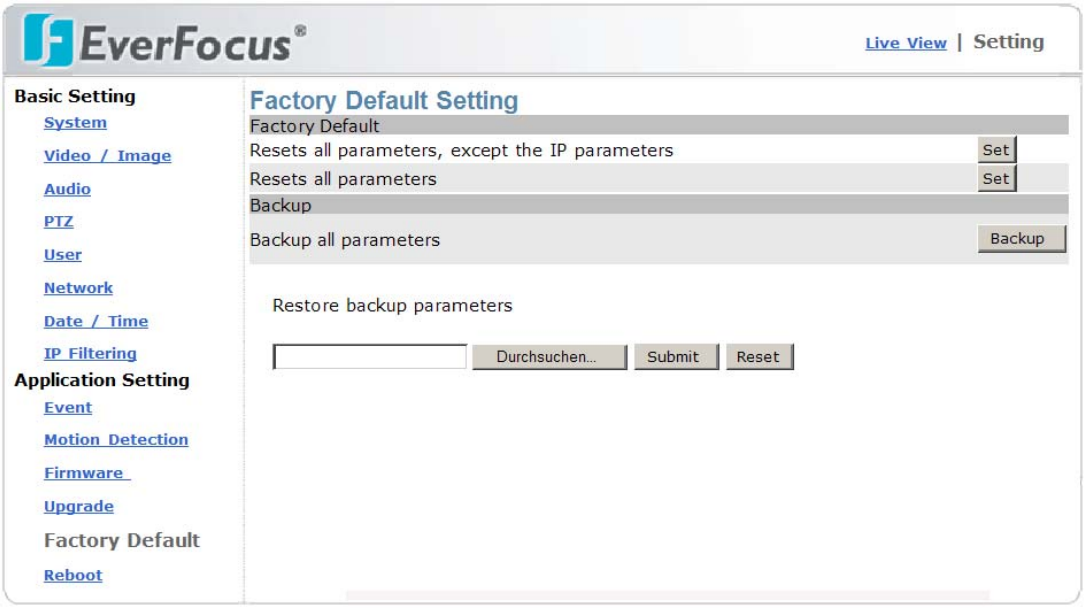
WARNING: Do not use low bandwidth or unsafe network connections to upgrade the camera. An interrupted connection during update may damage the camera irreversible!

The camera will reboot after successful update.
Verify the new firmware version after re-login in this menu or SYSTEM menu.
Load Default settings after firmware upgrade.

Reset Deletes the selected firmware file path.

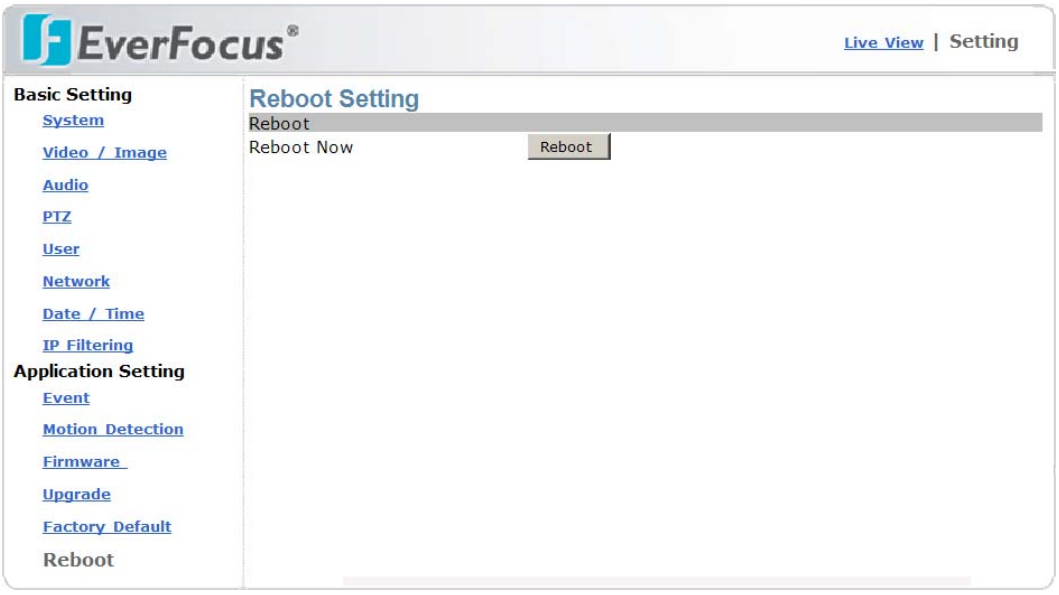
6.4 FACTORY DEFAULT

This menu allows to load factory default values and backup / restore camera settings.



Factory Default	**Setting**
Resets all settings, except IP - parameters	All values will be set to factory defaults except the basic settings for IP parameters.
Resets all parameters	All parameters incl. IP settings are set to factory default values.
Backup all parameters	Saves the current camera settings in a configuration file. Confirm to save the file.
Restore all parameters	Loade a camera configuration.
Search	Enter the file path to the EAN1350 configuration file.
Submit	Send the selected configuration file to the camera
Reset	Delete the file path to the configuration file

6.5 REBOOT



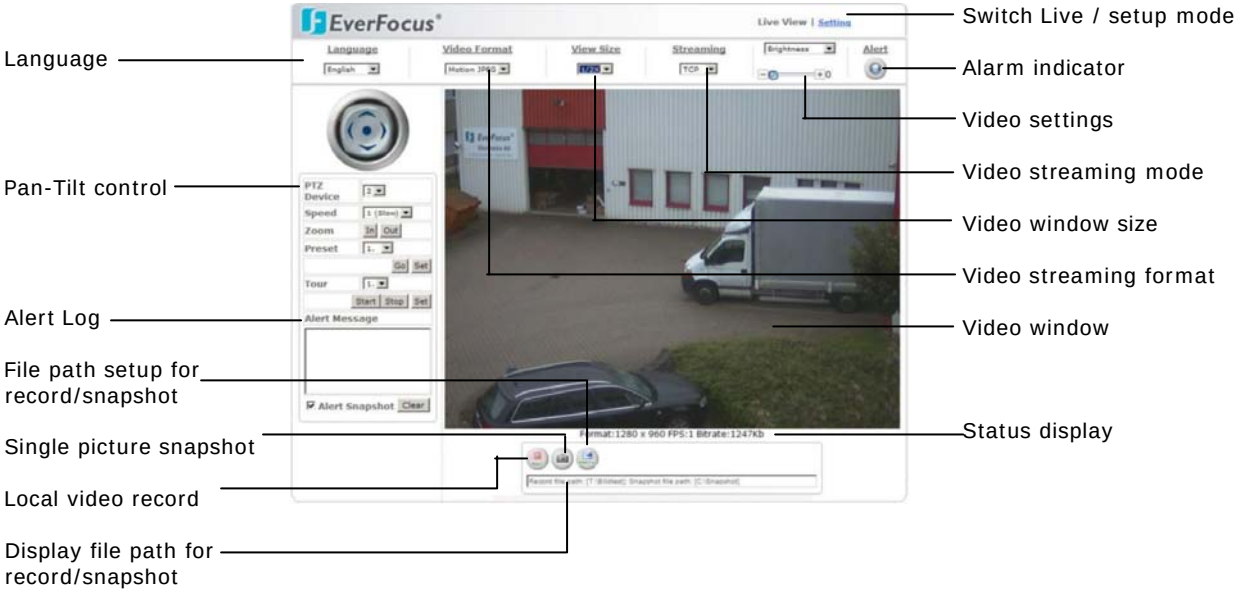
Press "Reboot" to initialize the camera by restarting.
A confirmation popup will appear.

Confirm the request with "OK".

7 OPERATION

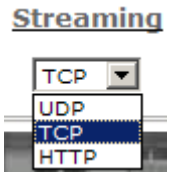
7.1 MAIN SCREEN CONTROLS

After successful login the main screen appears:



7.2 GENERAL AND VIDEO SETTINGS

Control item	Function
Language English	Language selection
Video Format MPEG-4 MPEG-4 Motion JPEG	Selection of videostream, MPEG-4 or Motion JPEG. Quality, size and framerate depent on the settings in >SETTING > VIDEO / IMAGE > VIDEO
View Size 1X 1/2X 1X 2X 4X	Display size of the videostream, 1/2x, 1x, 2x, or 4x size.



Transmission mode of the video stream, the ideal mode depends on the network conditions:

UDP: Provides the fastest but most unreliable transmission service. Video steams are transmitted through UDP Port (50000~60000 by default) to ensure the fastest image transmission. However, video fragment or mosaics may occur due to poor transmission quality.

TCP: Provides reliable data transmission. Video streams are transmitted through RTSP Port (554 by default) to avoid video fragment or mosaics due to poor transmission quality.

HTTP: Video streams are transmitted through HTTP Port (80 by default) to ensure passing through firewalls.

Comparison between stream protocols

	Tunneling	Pocket Loss	Speed
HTTP	Easy	Fair	Fair
TCP	Fair	Lower	Fast
UDP	Hard	Lowest	Fastest

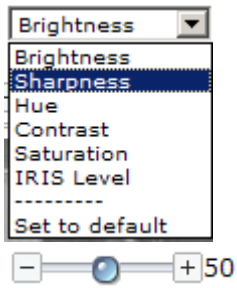
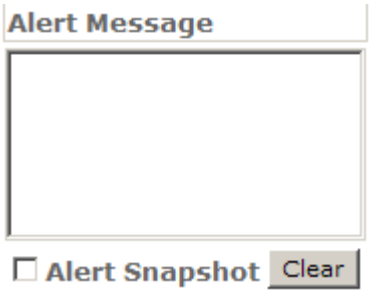


Image settings for Brightness, sharpness, contrast, Hue and saturation.
Use the slider to adjust best image quality.

Iris level: If a lens with DC - Autoiris is installed, the Iris level can be adjusted here. "-" closes the iris, "+" opens the iris.

7.3 EVENT ALERTS

Event alert indicator. The display is flashing red in case of event.



Event alert list.

Appearing events are listed in the message box.

Alert Snapshot: With activated checkbox a single event picture will be stored.

Clear: Delete all alert messages in the box.

7.4 PAN / TILT / ZOOM

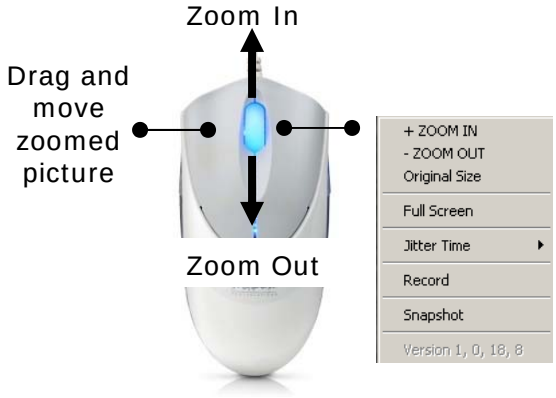
Depending on setting the PTZ control works with electronic zoom (setting EZOOM in > SETTING > PTZ) or with external PTZ devices.

PTZ-Device: Select a PTZ device (setup in > SETTING > PTZ)
Zoom IN / OUT: Zoom In or Out in the picture.
Arrow keys: Move a zoomed picture up/down/left/right
Speed: Speed of pan / tilt movements

NOTE: This way of PTZ operation is global for this video stream. This means, all other users watching this stream at other client PCs will see this PTZ operation. Alternative is a "local" PTZ - operation by mouse possible.

Alternative PTZ mode by mouse

Electronic zoom and electronic pan tilt is also possible by mouse, in this mode the PTZ operation is only visable at local client PC.
Set Mouse focus to the video image.

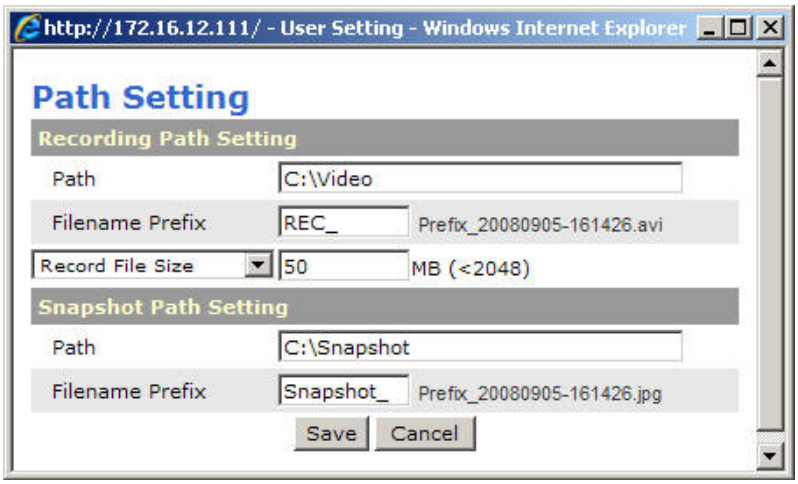


- use mouse wheel up for Zoom In, mouse wheel down for Zoom out
  or
- open context menu by right click, select Zoom In / Zoom Out
- in zoomed in picture left click and hold in the picture, the mouse will move the picture up/down/left/right

7.5 RECORD / SNAPSHOT SETTING

Click on 

to define the settings for manual record and snapshots.



Recording

Path

Doubleclick in the setup field to define the folder location for manual records.

Filename Prefix

Define a prefix for the record file name. The file name contains the prefix, start date and start time.

Example: Lobby1_20090128-142524.avi
Prefix: Lobby1
Start Date: Jan. 28. 2009
Start Time: 14:25:24

Record File Size / Record Duration

Record file size: Maximum size of a single record file in MB , up to 2048 MB

alternative:

Record Duration: Maximum lenght in seconds of a single record file

Snapshot

Path

Doubleclick in the setup field to define the folder location for snapshots.

Filename Prefix

Define a prefix for the snapshot file name. The file name contains the prefix, start date and start time.

Example: Lobby1_20090128-142524.jpg
Prefix: Lobby1
Start Date: Jan. 28. 2009
Start Time: 14:25:24

7.6 MANUAL RECORD

Press on "REC" to start a manual record. The file format is AVI. The storage location is defined by the "PATH" icon.

The icon will start to flash.

A RECORD symbol appears in lower left corner of the video window.

Press "REC" again to stop the record. The record will also stop after reaching maximum file size / maximum recording duration, which is defined in "PATH".

Note: Record will also stop with closing the Browser!

7.7 MANUAL SNAPSHOT

Pressing this icon will create a snashot of current video image in JPG format.

The message box below shows the path of saved image:

7.8 AUDIO

The audio fuctionality depends on the installation and on settings in > SETTINGS > AUDIO.

Listen

Audio transmission from camera to client PC.
Click on the icon to switch the mode.

No audio from camera to client PC.
Click on the icon to switch the mode.

Speak

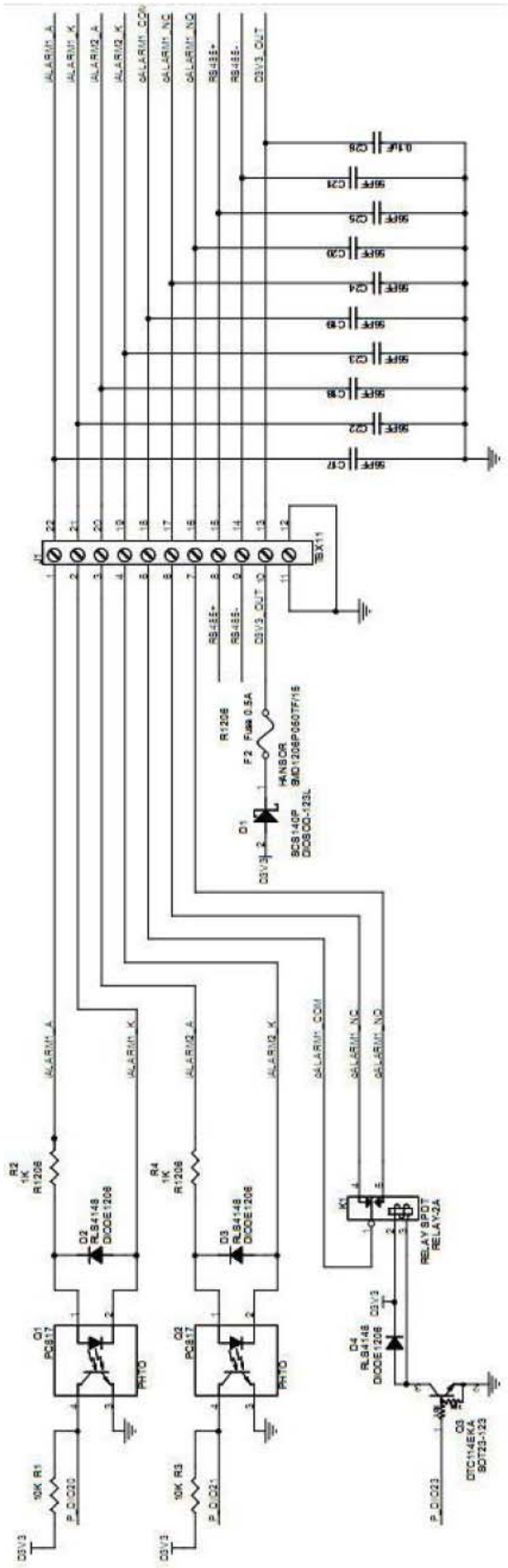
Audio transmission from client PC to camera.
Click on the icon to switch the mode.

No audio transmission from client PC to camera.
Click on the icon to switch the mode.

7.9 FULL SCREEN MODE

For switching image to full screen right click in the image and select "Full Screen".
In full screen mode press ESC or double click in the window to switch back to normal screen.

8 ATTACHMENT A: ALARM INTERFACE CIRCUIT



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