MVS-14

Dual Codec MPEG4 / MJPEG video server

INTRODUCTION

MVS-14 is an autonomous unit capable of digitizing the analog audio / video signal from any camera and send it over a TCP / IP network such as a LAN or the Internet. The video signal is received using Microsoft Internet Explorer that allows the configuration settings. Compared with these cameras' IP cameras "that possess an integrated digitizing circuit, the external video server MVS-14 offers the advantage of being compatible with almost any analog camera, at any staging (classic, waterproof, day / night, IR, vandal , for concealment, etc.) also already previously installed. Compared to the integrated circuit in the camera, the external videoserver also offers the great advantage that it can also be installed at a certain distance from the camera, what is essential, for example in installations in confined spaces. To allow an efficient transfer of the video, MVS-14 has an internal compression chipset that allows you to choose the compression MPEG4 or MJPEG. The choice of compression affects the quality of image, but also on the amount of bandwidth occupied by the video stream. The compression MJPEG by high image quality, but the amount of data to be transferred is large and this can cause a loss of frames if the available bandwidth is insufficient. The MPEG4 compression, much more powerful, reduces the amount of data to be transferred ensuring image quality and high frame rate without excessively bind the network. MVS-14 is compatible with any type of Audio / Video analog input and also enables TCP / IP control of speed dome cameras compatible.

GENERAL CHARACTERISTICS

- **D1 resolution 720x576.** fully enjoyable picture to full screen. Video Compression Selectable **MPEG4 (** Constant bit rate or variable) or **MJPEG**
- Transmission **PCM audio** synchronized
- **Real-Time 25 f / sec.** Images and flowing smoothly. Video Bit rate adjustable from **4Mbits 16K / sec. constant or variable**
- Vision and control via browser **Internet Explorer or Quicktime player.**
- Vision **Quad** max. 4 video servers in the same Explorer window. Graphic interface **Configuration GUI** Built-in Internet Explorer
- **Tool software** for fast IP address and network configuration parameters (IP installer)
- **1 entrance + 1 video output** composite compatible with any camera
- **1 audio input** microphone for connecting cameras with audio
- **RS485 port** for control of cameras **Speed Dome** with protocol Pelco P / D (Max. 64)
- **RJ45 socket** for direct connection to LAN - **1 relay output** Power alarm **12VDC** consumption **< 8W Motion detection** with sending alerts via e-mail / FTP and relay output drive
- **image Adjust** Contrast, Brightness, Hue, Saturation - **digital Rotation** picture
- **overlay** the customizable camera name. Max. **10 users** Configurable access to specific cameras and individual password.
- **Firmware upgradeable** PC via FTP

PRODUCT DESCRIPTION

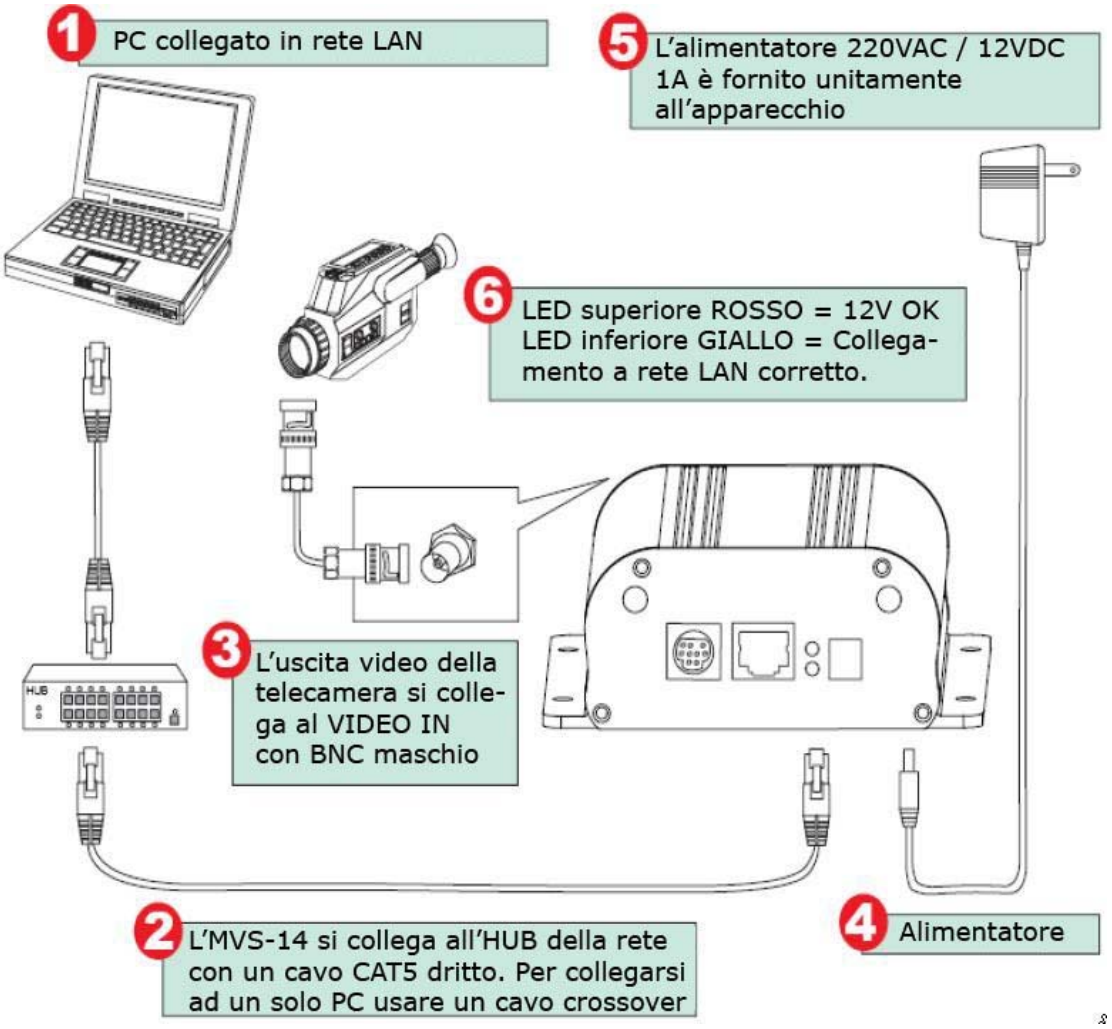
1 - = VIDEO IN BNC video input for camera
2 - VIDEO OUT = BNC video output available to connect a downstream device, eg. an analog monitor.

3 - AUDIO IN = 3.5 mm mini jack socket to connect the microphone output of a camera with audio. IS' supplied adapter cable mini jack / RCA
(Only use the yellow connector.)

4 - 12V DC power supply for input 5 = - = RJ45 socket for LAN

6 - STATUS LED - The top LED is lit in red color if the device is powered. The lowest LED must ignite within 10 seconds from the moment in which it is connected to the LAN.

7 - COM / GPIO connector type multifunctional MINI DIN to connect the RS485 control of speed dome cameras.



ASSEMBLY AND INSTALLATION

Package Contents

- Video Server MVS-14 12VDC
- power supply
- CAT5 network cable for connection to HUB cable minijack / RCA for
- audio CD with software and manual.
-

hardware Connections

- **Connection to the LAN** - The first thing to

to do is connect the video server to the LAN. Typically this is done by connecting to a hub of the network. To connect to a hub using CAT5 cable supplied with the video server. If instead of a LAN network, you want to connect directly to a single PC network card, you must use a crossover CAT5 cable also said CROSSOVER (not supplied)

- **Video Input Connection** - The video signal

from the camera it must be connected to the BNC VIDEO IN Video Server. You are using a video cable with male BNC terminals. If the video cable used has RCA connectors will need an RCA / BNC adapter. E 'can connect any composite video signal from cameras, video recorders, TV etc.

- **video output connection** - If you wish

conducting the camera video signal to another even in the video server downstream equipment, eg. an analog monitor or VCR, you can use the VIDEO OUT of video servers. It is used as the input, one video cable with BNC male terminals.

- **audio Connection** - If the camera is equipped with

audio you can connect the camera audio output to the audio in the video server. And 'it provided for this adapter cable minijack

to RCA.

The entrance audio (MONO) to be connected to the yellow RCA connector.

- **Supply** - Once in place for

LAN, audio and video can power the video server by connecting the 12VDC power supply provided to the power grid.

- **Signaling LED** - The two side LED

LAN RJ45 connector allow you to check the status of the video server. The top LED (POWER) lights red to supply the unit. The bottom LED (NET), lights up when the LAN connection. If the lower LED does not ignite within 10 seconds after the LAN cable connection, check the HUB functionality and operation of connecting to the network cable. The network LED assumes the following states: ON RED: Connected Network

FLASHING RED: Network activity in progress FLASHING GREEN: Output data

SLOW FLASHING GREEN: Network not connected.

Prepare your PC for there connection.

Once the hardware installation work performed moves on one of the PCs connected to the network for the connection to the video server. Typically a PC with updated operating system is already able to connect no preliminary work. We remind you that the following components must be installed on the PC used for the connection:

- **ActiveX Components** - The MVS-14 video server

It uses ActiveX components to be able to send pictures to the browser Internet Explorer. These components are installed automatically in occasion of the first connection. It is necessary that your PC has the ActiveX components of windows version 9 or higher. To check the component version of DirectX installed on your computer you can use the appropriate diagnostic utility included with Windows. Press START / RUN and type dxdiag.exe. Press OK to start the program and wait for the completion of the audit. In the bottom of the first screen you will show the installed version of DirectX files. If the version is less than 9, you must upgrade the operating system.

- **Xvid MPEG4 Codec -** The MVS-14 video server uses MPEG4 compression in video transmission. An updated PC should already have an MPEG4 codec (DivX, etc. ffdshow). **Alternatively you can download the codec from the website: www. xvid. org**

- **Macromedia Flash Player** - Some elements

Graphical interface of the video server using a common player in most websites: Macromedia Flash Player. If you have visited in the past, an Internet site that was using this player, it will be automatically installed. In the opposite case, you can install it for free by visiting www.macromedia.com website.

- **Internet Explorer Browser** - An integral part of the

Windows operating system

COM connector / GPIO

On the front of the MVS-14 is a plug Mini-DIN 9-pin (connector not supplied) that can be used for the following functions:

- **RS485 serial line** - for the command of

motorized speed dome cameras

- **RS232 serial line** - when unused
- **relay input** - Alarm input to which it is

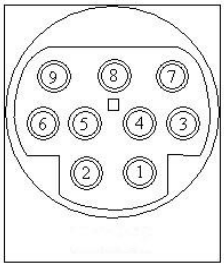
You can connect a Normally Open contact and with it being able to generate an alarm condition.

- **relay output** - Can be operated remotely with software

SCB-IP or motion detection / external input.

video Output additional

The following is the connection diagram of the PIN:

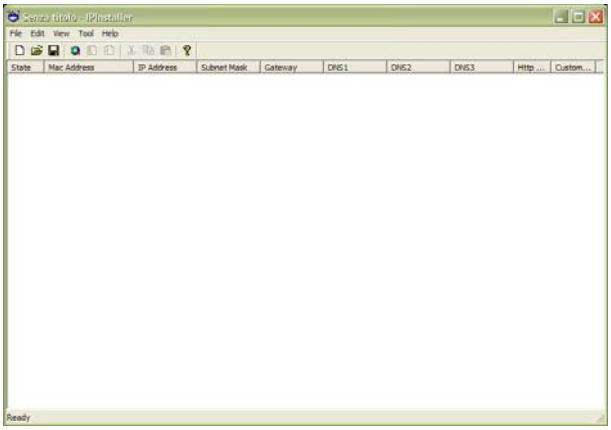


PIN	FUNCTION
1	Alarm (Not used)
2	RXD
3	TXD
4	RS485A
5	GND
6	Relay output NO
7	Relay output COM
8	RS485B
9	video Output

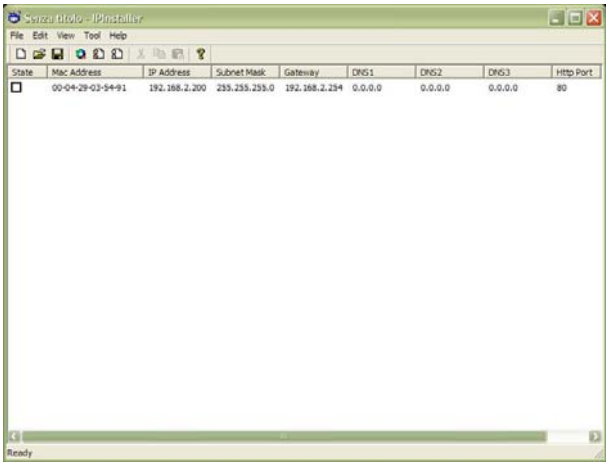
SET UP THE IP ADDRESS

Launch IP Installer

On the installation CD contains a very useful program to quickly configure the IP address of the video server. It is IP INSTALLER. Install it in the PC and run the program.



Click on the icon with the magnifying glass, or choose TOOL / SEARCH NETWORK DEVICE. IP Installer will scan the entire network connected to the PC for video servers MVS-14. After a few seconds to display a list of detected video servers.



For each video servers include the following: the MAC address which is unchangeable and unique to each device and the network parameters IP ADDRESS, SUBNET MASK and GATEWAY. They correspond to the parameters

of factory that I'm set in the unit. The IP address set factory in the MVS-14 will be the type 192.168.0.200.

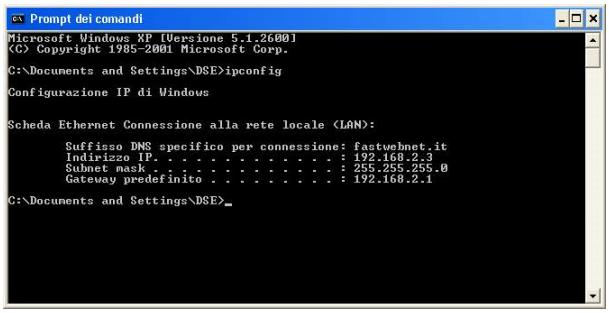
The devices on a LAN, to be able to talk to each other, must belong to the same family, ie

it is necessary that the first 3 IP numbers are common for everyone.

E 'therefore necessary to change the IP address of the video server so that it has the first 3 similar figures to other network PC.

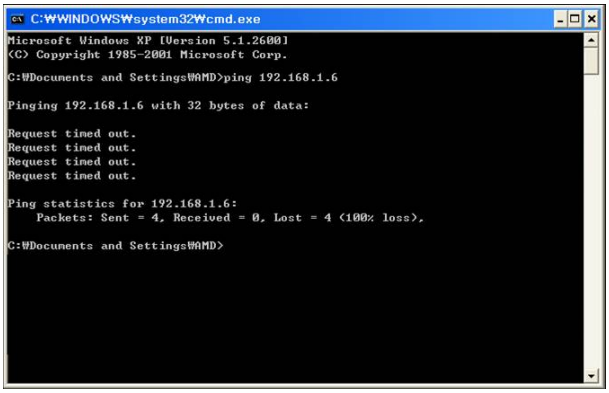
How to choose the IP address of the video server

If you do not know the type of addresses used by your network, you can use the DOS command IP Config. Toss a DOS window available between the Windows accessory programs.



Type IPCONFIG at the command prompt and press ENTER. They will see the TCP / IP parameters. The second line is the IP address assigned to your computer. In the above example the address of the PC on which you are working is 192.168.2.3. In the video server so you can assign an address of your choice on the type

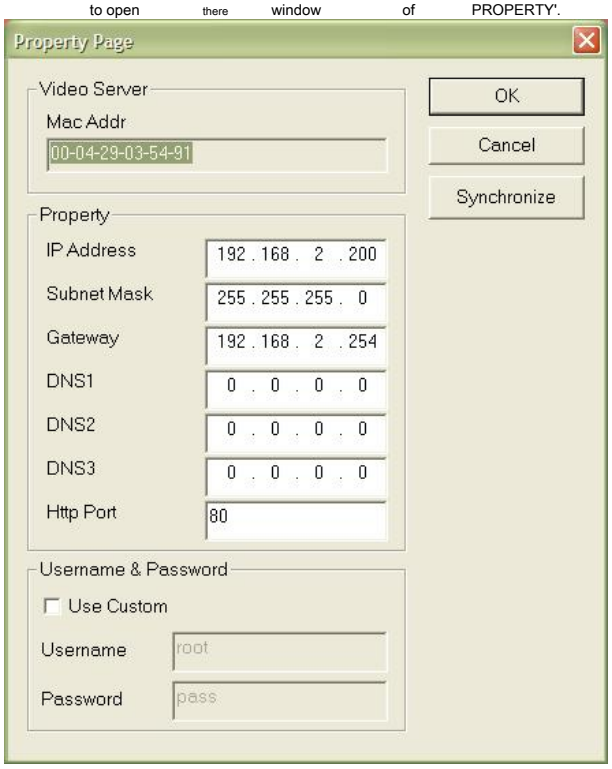
192.168.2.XXX, where XXX is a number between 0 and 255. It 'important **choose an address that is not already used by other devices** of network. To verify that the chosen address is free, try to make a PING from the same DOS window by typing PING followed by a space and by the IP you wish to assign to the video server. If there is no device responds to that address, you will receive 4 REQUEST TIME OUT as in the following example:



How to change the IP address of the video server

- From the list of video servers identified by IP INSTALLER, select the video server that you want to change

- Double-click or click VIEW / PROPERTY for to open there window of PROPERTY'.



- Type the IP address chosen in the IP address box. Also set Subnet Mask, and Gateway so that they are identical to those used by other network PC.

- Click **SYNCHRONIZE** to transfer the new settings to the video server

- Click **VIEW / OPEN WEB.** This will open an Internet Explorer browser window that will activate the first link, as shown in the following chapter.

Other IP Installer functions

The IP Installer program also has some additional functions:

- **SAVE / SAVE AS** - Allow to save the list of equipment detected by IP Installer in a file that you can then open the off-line even if not connected to the network.
- **INSERT SERVER** - Allows enter IP parameters of the video server from scratch, without having it detected with the search function.
- **DEF. USER PASSWORD** - Changing the IP parameters that is carried out by IP Installer provides you access the video server configuration, an operation that involves the use of the USER NAME and PASSWORD. The factory are set to the following values:

USER: ROOT , PASSWORD: PASS.

For IP INSTALLER logic also uses the factory same ROOT / PASS values that here it is possible to modify. In the properties of each video server (see figure previous one) is however possible to modify individual access parameters USE CUSTOM clicking and typing them freely.

Login with Quicktime

The MVS-14 video server allows remote access via Internet Explorer and ActiveX control as described below in detail. However, you can also access the single video display through APPLE QUICKTIME player, downloadable free from www.apple.com. To access the video server via quicktime choose FILE / OPEN URL and type: RTSP: // followed by the IP address of the video server (eg RTSP: //192.168.2.200)

Access via Quicktime is limited to the viewing of the video, but has the advantage of being able to be used on different operating systems and various devices. The activeX access which we will see later, you access to all of the video server functions, but it is possible only by using Internet Explorer in Windows.

ACCESS WITH INTERNET EXPLORER

First access

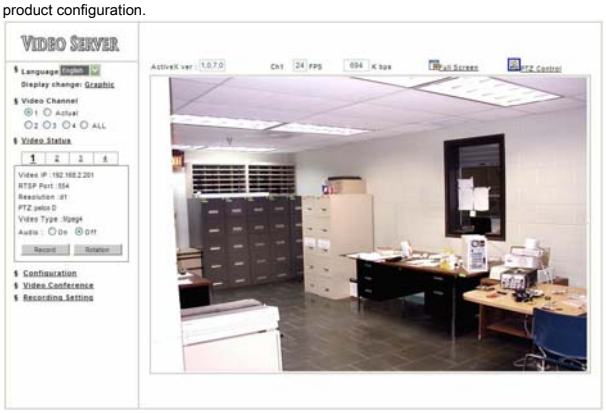
To open Internet Explorer and type in the address box, the IP address that you gave to the video server (you see chapter previous one) to es. http://192.168.2.201.

You will get a confirmation window asking for approval to install the ActiveX control required for the video transfer. Reply OK to install. If it is not no message, obviously the Internet Explorer security settings are set too high. Open TOOLS / OPTIONS

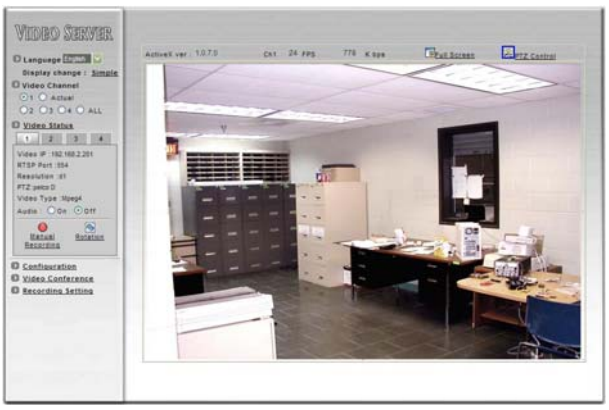
INTERNET and Table PROTECTION set the cursor to MEDIA protection so as to allow the installation of unsigned ActiveX. Once installed and maintained the first access will quietly restore there previous security setting.

Control Console

The MVS-14 video server is able to generate in Internet Explorer a graphical interface that allows viewing of images and also there product configuration.



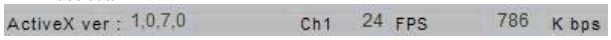
Clicking **DISPLAY CHANGE** It switches from the interface in plain text graphical interface.



Display Commands

The control panel allows several commands and provides a lot of information.

- **Video data**

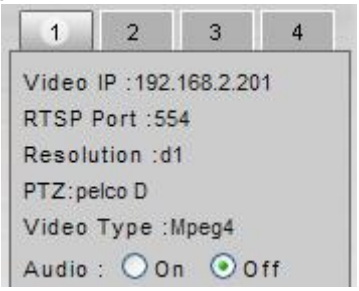


On top of the video shows: the version of the ActiveX control installed, the number of frames / second and the movie-bit / rate.

- **Full Screen** - Allows full display screen.
- **PTZ Control** - Open a window with buttons necessary to command a dome camera (see below). The button is only visible if you have enabled a PTZ protocol in the video server configuration.
- **Language** - Not used. The GUI is Only the English language.
- **Video channel** - The MVS14 of control interface allows you to play simultaneously in one window of the Explorer up to 4 cameras from as many video servers. To use this option you will have to configure the IP addresses of the external server video in the video server configuration, as discussed below.

This section of the console just need to select which camera view: 1,2,3,4 or ALL (all in vision QUAD). To view only the direct input of the video server in real resolution select acquisition the option ACTUAL.

- **Video Status**



This section summarizes the camera video data 1 and possibly of 2,3,4 external cameras. The audio option allows you to enable or exclude the audio playback. Recall that the sound transmission must be previously enabled in the MVS-14 configuration.

- **Manual Recording**

During video playback, you can record in real time by pressing the button MANUAL RECORDING

It will overlay the written REC. Press the record button to stop recording. The program will automatically create a folder C: \ MVS and will save the file in compressed AVI format so that it can play with any player such as Windows Media Player.

- **rotation** - The rotation button allows you to rotate the image 90 degrees clockwise with each click.
- **Configuration** - This button gives access to the The video server configuration section that will be discussed in the next chapter.
- **Video conference** - Having at least 2 video servers you can make high-quality two-way video conferencing.

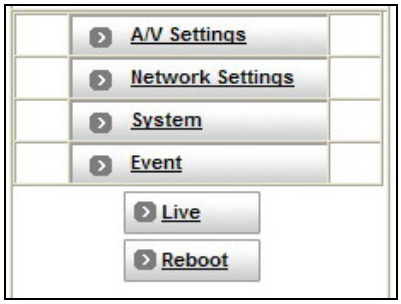
In pane on the left you will see the camera image directly connected to the video server is called LOCAL. In the right pane, you can select one of the three external video server that can be set in the configuration (see in below) or enter an address manually. Top buttons are available to enable the audio and to rotate the image, the lower buttons for the possible registration of the RECORD / STOP videoconferencing. SETTING different are available for recording that let you specify the hard disk space to devote to register (Reserve Space), the duration of each file (Max. Length file), and the location and naming of the files. Ticking CYCLE RECORDING, at the end of the reserved space, the system will continue recording over the oldest files. TimeStamp Sync to synchronize the playback picture with the recording time.

- **Recording Setting** - Here you can set the folder where the clips are saved registered with the Manual Recording button (see above) and also the suffix to be used in the naming of files Direct input (Local Source) and 3 external videoservers (External source)

CONFIGURATION

Access to Settings

To access the video server settings press the CONFIGURATION button from the command console in Internet Explorer

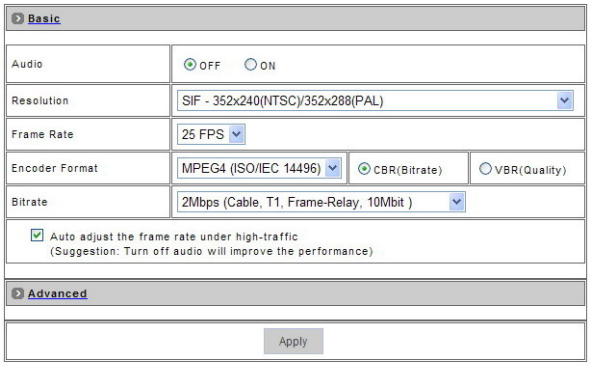


Settings Audio / Video (A / V Setting)

This configuration section is divided into 4 groups of options:

Settings A / V General (A / V Setting - General)

These are the settings Audio / Video General Video Server. The section for viewing convenience, consists of two distinct sections: Basic, Advanced, Image Adjustment



In the section BASIC are available the following settings:

- **Audio** - By default the video server is set

OFF to avoid taking up unnecessary bandwidth. If you have connected a camera with a microphone you can enable audio transmission by selecting ON.

- **Resolution (** Resolution) - And 'the resolution of the video capture. There are 3 options:

D1 - 720x576, the standard resolution DVDs
SIF - 352x288
QSIF - 176x144
Logically, the more resolution it selects a higher bandwidth consumption.

- **Frame Rate** - And 'the number of captured frames.

The PAL system provides 25 f / sec real-time, but you can set lower values to take up less bandwidth if necessary.

- **Compression (** Format Encoder) - MVS-14 is a

Dual Codec video server and can compress images using the classic MJPEG algorithm or the most powerful MPEG4. The MJPEG compression gives high image quality, but little compression, and then engages the band in a remarkable way. The MPEG4 compression has a slightly lower image quality, but rather occupies less bandwidth, so it is preferable in almost all video surveillance applications for the greater smoothness of operation and the possibility of transferring D1 resolution images at 25 f / sec without overly strain the network and equipment.

- **CBR / VBR -** The MVS-14 video server is able to perform MPEG4 compression either

CBR (constant bit rate) and VBR (Variable Bit Rate). The CBR mode is recommended if it provides for the continued use of

connection through Internet, especially with modest bandwidth available. VBR mode allows for better optimization of bandwidth available, but it is recommended only for use on the local network and not via the Internet.

- **BITRATE / with Semi. MPEG4 or MJPEG VBR -**

If you choose MPEG4 or MJPEG compression with variable bit rate, you can set 4 levels of image quality (Low, Average, Good, High). If you use D1 resolution and 25 f / sec is recommended not to exceed the Average value.

- **BITRATE / with Semi. MPEG4 CBR -** If you have

chose the MPEG4 compression with a constant bit rate, you can set the amount of bandwidth that the transmission will occupy and will remain precisely constant. The values from 64 kbps up to 1Mbps are suitable for Internet connections with limited bandwidth available. By using them you should set the resolution and frame rate to the recommended values. The bit rate than 1Mbps

you can use if you

using broadband Internet connections guaranteed or LAN connections.

- **AUTO ADJUST FRAME RATE -** Enabling this

function the number of transmitted frame will shrink

automatically if there is insufficient bandwidth to maintain a constant video quality.

In the section ADVANCED The following settings are available:

- **Interlacing (** Interlacing) - The PAL video can be interlaced or progressive. In interlaced video it contains FIELDS instead of FRAMES and every field contains half the lines of a frame. A progressive video instead contains FRAMES full.

Interlacing allows

reduction of the bitrate required for the transmission by decreasing

the quality so virtually

unnoticeable.

- **TV standard (PAL / NTSC / SECAM) -** Select the video format of the connected cameras, in Italian: PAL.

- **MPEG Sequence (** Sequence mode) - There are 2 options: "Only I-Frames" or "I-Frames and PFrames". "Only I-Frames" takes up more bandwidth it requires less effort to the remote PC to the video stream decoding and can be used if it is expected that you should also connect PC with no recent slower CPUs. The mode I-Frames and P-Frames takes up less bandwidth, but requires a modern PC and fast for proper decoding.

- **Size for the Group of Pictures (** GOP size) is going to GOP: Group of Pictures. Even this parameter relates to the MPEG4 compression mechanism and each indicates how many frames is inserted into an IFrame. Since an I-Frame is less compressed than the other frames it is the highest GOP (distance between two IFrames), the smaller the bandwidth required for

there

transmission. Excessive GOP size can, however, lead to transmission errors.

The GOP size of the DVD is 15. And 'possible to set higher values for the GOP size (1 to 90) to reduce the occupied bandwidth. 60 is the recommended setting and is a good compromise.

- **peak bit rate (** Peak Bitrate) - It ' the value

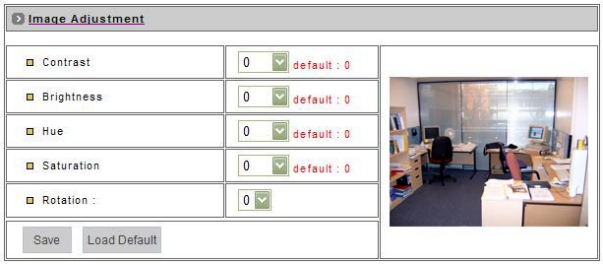
maximum bitrate you want to achieve in Kbps. This value can be set from 64 to 6000 Kbps and is

useful to define intermediate values which are not in the standard options proposed in section BASIC (see above).

Press APPLY to apply the changes

In the section IMAGE ADJUSTMENT the off the initial correction controls are available:

- Toni Contrast Brightness
- Saturation Image Rotation
-
-
-

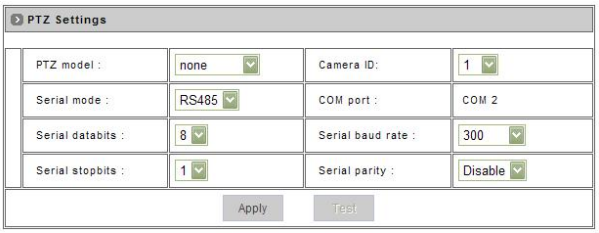


In the preview on the right you can see in real time the results of changes. Use the SAVE button to apply the changes and LOAD DEFAULT to restore factory settings.

Settings PTZ (PTZ setting)

MVS-14 allows the control of dome cameras. The camera's video output is normally attached to a terminal server video. The RS485 serial line necessary for the command of the movements is taken from PIN 4 and 8 of MiniDIN connector 9 PIN (see above).

In this section, you set up the speed dome camera control parameters.



- **PTZ Protocol (** PTZ model) - Select the communication protocol. Pelco P protocols are available, Pelco D (to be used for speed dome SD22 / SD-27), Lilin and Dynacolor.

- **ID (** Room ID) - Enter the address that has been set in the camera

typically through

microswitches. You can control up to 64 cameras

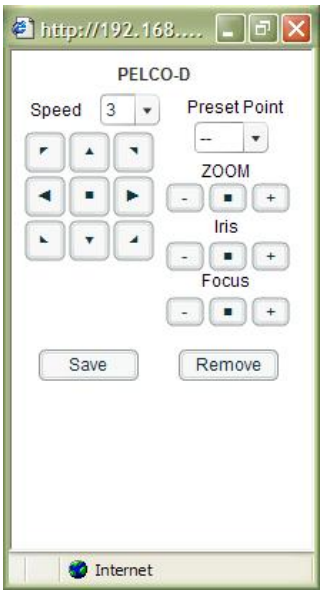
- **SERIAL PORT (** serial mode): RS485 or RS232. Set to RS485.

- **Serial baud rate -** Set the speed of the RS485 protocol, typically 1200,2400,4800 or 9600.

It must match the speed managed by the camera.

- **Databits, Stop bits, Parity -** Refer to the camera documentation.

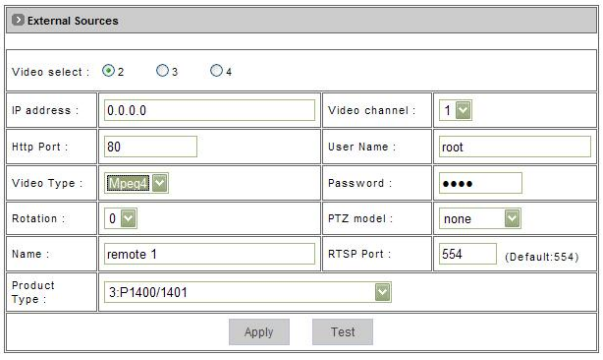
Pressing the TEST button opens the PTZ control console that allows you to give commands to the camera:



The keyboard itself is activated in the LIVE vision for controlling the camera by pressing the PTZ button in the upper right.

External links (External sources)

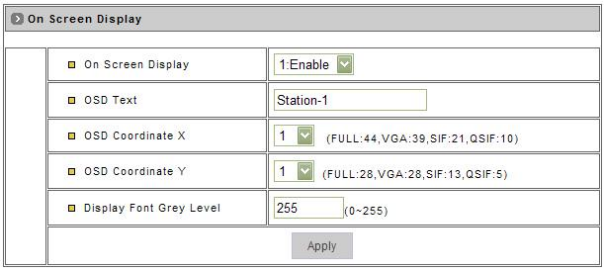
MVS-14 can display in its own control console up to 3 other video remote servers. In this table are set to 2,3,4 channel parameters for the video servers to which you have to connect, in particular IP address.



The Product Type box should be left to P1400 / 1401.

Overlays (On Screen Display)

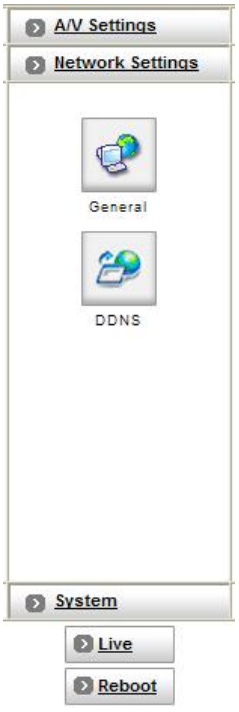
Here you can set the descriptive words superimposed



- **ENABLE / DISABLE** - Enable / Disable there overlay.
- **OSD text** - Enter the camera name
- **OSD coordinates X / Y** - horizontal and Coordinates vertical positioning of descriptive written.
- **Font Gray Level** - From 0 to 255 to set the level of Gray character (0 = black / white = 255) in a way that contrasts with the background color.

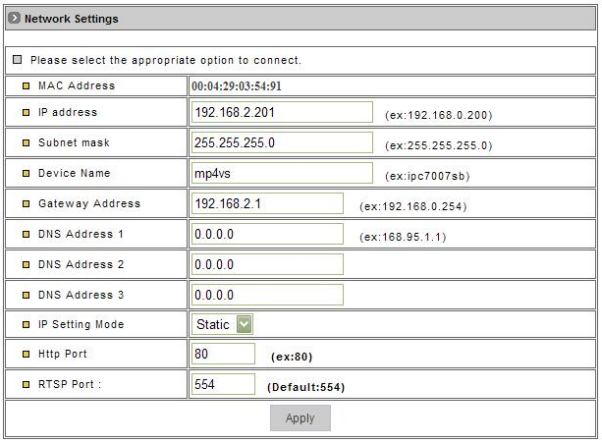
Network Settings (Network Settings)

This configuration section is divided into 2 groups of options:



General Network Settings (Network Settings - General)

This section contains all of the server's video network parameters:



- **MAC Address** - The unique address of the machine.

uneditable.

- **IP address** - The IP address that you set with

IP installer program.

- **Subnet Mask** - The subnet mask used by the

network segment to which the video server is connected. Typically 255.255.255.0

- **Device name** - Enter a descriptive name for the

video server

- **Gateway** - Default Gateway Network
- **DNS 1,2,3** - The IP address of the DNS server

It will convert the names of websites into IP addresses

- **IP Setting Mode** - The STATIC option is preferred

as it allows you to give a static IP video server invariable. However MVS-14 also supports automatic address assignment from a DHCP server. In this case the IP address of the video server may change between a startup and the other, or in the case of restart of the DHCP server:

- **HTTP port** - The port on which the video server receives

HTTP requests

- **RTSP port** - The port on which the video server receives

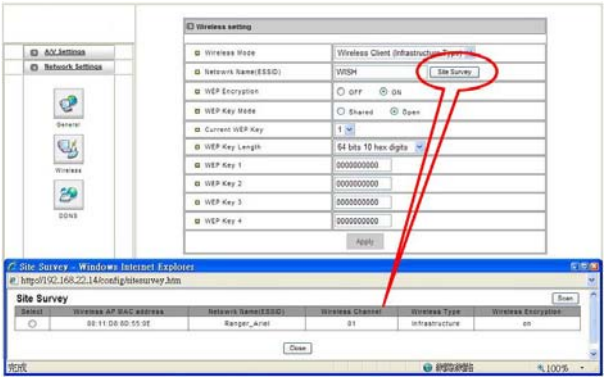
RTSP requests for Video Streaming

Press APPLY to apply the changes

Wireless Settings

(Network Setting-Wireless)

This section is only available in MVS-14W wireless version and contains the settings required to connect to a wireless LAN network video server.



- **Wireless Mode** - Enable / Disable function

Client for wireless networks

- **Network Name (** ESSID) - To connect to a wireless network must indicate which

Access Point (AP) of the network must connect. Pressing SITE SURVEY making an analysis of the surrounding environment and a list of available AP, among which you can select, as a rule, the closer.

- **WEP encryption, WEP key mode, WEP key, WEP key length WEP key 1..4,** Set in

this section of the wireless connection parameters in a manner consistent with those required by the access reference POINT.

Consult your access point manual for more details

on the parameters programming

connection.

Press APPLY to apply the changes

Settings DDNS (DDNS Setting)

This section allows you to configure the parameters of a possible DDNS service. DDNS stands for Dynamic Domain Name Service, and it is a service offered by different

sites web, for can trace back

a device on the Internet even if it does not have a fixed IP address. Having a fixed IP address on the Internet is certainly convenient, but not always possible and sometimes expensive. To this it can be convenient to sign a DDNS service that works very simply. In signing the service you will register the device in a database that will contain its data connection to the internet. Periodically, the video server will send its IP address to the DDNS server to update the database. In this way, even if your ISP has changed the IP address, the database content to the server

DDNS Sara anyway updated.

To connect to the remote PC, the user would type in an address that Internet Explorer will contain the name chosen for the machine and also the DDNS service name (eg.

http://nomevideoserver.ddns.nomeproviderDDNS.com)

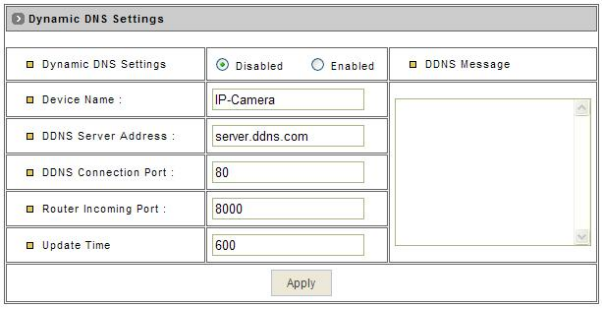
, as instructed by the service provider. The DDNS server will consult its database for the IP address that the required equipment

It has at that time and establish the connection. For any advice about the availability of free DDNS service contact customer service.

There are two DDNS settings pages. You can activate one or the other, even simultaneously, depending on the type of service offered by the provider.

DDNS SETTING 1:

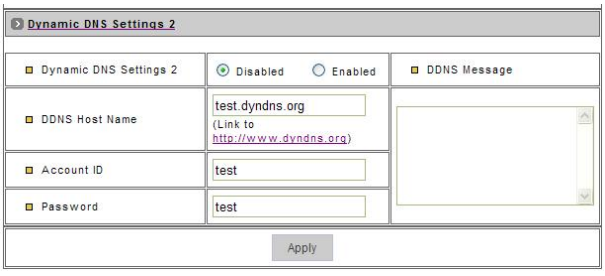
It allows inclusion of parameters for public DDNS services that do not require registration and log in.



- **Disabled / Enabled** - Enable / Stop the use of DDNS
- **Device name** - video server name. Ex. If video server is called IP-ROOM and the DDNS server is called DEMO.DDNS.COM the name will be included IPCAMERA.DEMO.DDNS.COM
- **DDNS server address** - Internet address server that provides DDNS service.
- **DDNS connection port** - The listening port DDNS server (default: 80)
- **Router incoming port -** The listening port to the Internet router to which you connect the video server. The router uses an HTTP listener port to the Internet (es.80) that redirects to a port of the internal LAN depending on its internal settings (es.8000). Here you must enter the port used by the router to the internal LAN (factory 8000)
- **Update time -** IS' the time interval between the Update notices that the video server will send to the DDNS server. The factory value is set to 600 seconds (10 minutes).
- **DDNS message -** In this space you can read the messages sent by the DDNS server that can be of help to understand the causes of connection problems.

DDNS SETTING 2:

It allows inclusion of parameters for DDNS services that require LOG-IN and password



- **Disabled / Enabled** - Enable / Stop the use of DDNS
- **DDNS Host name** - Server Internet Address which provides DDNS service.
- **Account ID** - Username
- **Password -** Assigned by your provider
- **Update time -** And 'the time interval in seconds between the update notices that the video server will send to the DDNS server.
- **DDNS message -** In this space you can read the messages sent by the DDNS server that can be of help to understand the causes of connection problems.

ERROR MESSAGES IN COMMON

- DDNSaddr CGI Fail - MVS-14 does not communicate with the Internet or DDNS server is unreachable. Already registered - The name has already been registered by another
- user.

Press APPLY to apply the changes and connect to the DDNS server.

Settings of system (System Settings)

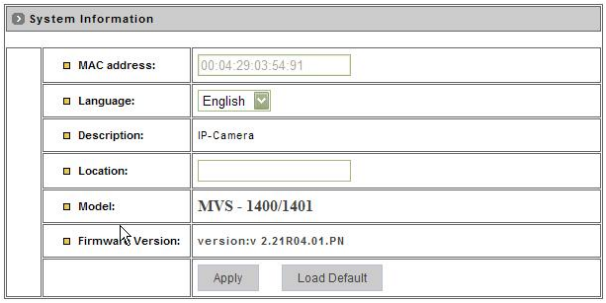
This configuration section is divided into three groups of options.

At icons shown above is added to the firmware update option in the firmware versions

2.30R95 or higher. In versions of firmware prior to the upgrade button is not present and you can make the firmware update with FTP process

Information of system (System Information)

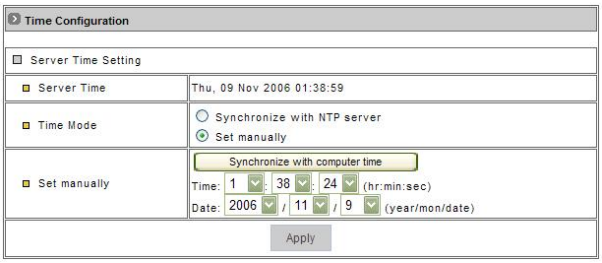
This picture shows the summary information of the video server



- **Mac address** - The identifier univocal appliance
- **Language** - Not used. The software is available in English only.
- **Location** - Customizable Field to indicate the displacement device
- **Model** - Reference technical identification apparatus for internal use.
- **Firmware version** - The version of the firmware installed in the video server.
- **Apply** - Apply changes
- **LOAD default** - Restore settings factory.

Time settings (Time Configuration)

This section allows you to set the times of the device references.



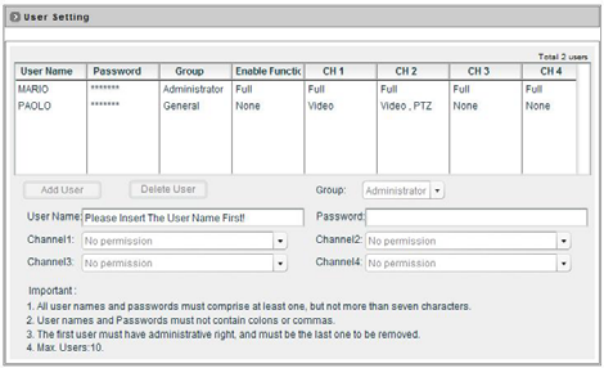
- **Server time** - View the current date and time of video server
- **Time mode** - E 'can set the date / time manually or automatically synchronize with an NTP server.

- **manually September** - By choosing the manual option is can copy the date and current time of the PC by pressing the Pusante "Synchronize with computer time" or manually enter the date and time.

- **Sinchronize with NTP server** - choosing the NTP Server option, the video server will automatically synchronize the time and date of an NTP server. You must set the time zone in which you reside and the address of at least one NTP server

Users (User)

This section allows you to protect access to the video server via Internet Explorer with a password. E 'can enter up to 10 different users.



Each user is distinguished by its own user name and password consist of alphanumeric characters (min.1, max. 7). Each user can have an access level ADMINISTRATOR, who Pineo access to all functions, GENERAL, or that may be restricted.

NOTE: The first user to insert must have type ADMINISTRATOR. When deleting users, the ADMINISTRATOR user must be removed last.

To enter a user do the following:

- **GROUP** - Enter the user's access level.

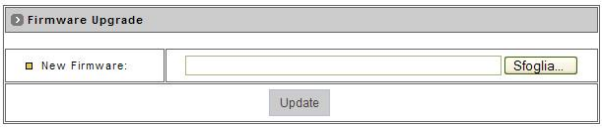
For the first user is required the level ADMINISTRATOR, and for the next you can select the GENERAL option that may have limited access.

- **USER NAME** - Enter your user name (max 7 characters)
- **PASSWORD** - Enter the password (max. 7 characters)
- **CHANNEL 1,2,3,4** - If you selected the GENERAL group of users for each channel (1 + 3 local external) will be possible to give the user access to one of the following grades:

- NO PERMISSION: The user can not access
- LIVE VIDEO ONLY: The user has access to the images
- LIVE VIDEO AND PTZ: The user has access to the images and can control any speed dome cameras.

Firmware update (Firmware upgrade)

The firmware versions 2.30R95 or higher allows the firmware update via Internet Explorer. In previous firmware versions the upgrade button is missing and you can make the firmware update with FTP procedure.



With the browse button to indicate the location of the firmware update file flash.bin. Press UPDATE to start the update.

The update takes several minutes during which time the LED will flash unit. To the term update the LED resume the normal operation and it can resume normal use of the video server.

CAUTION.

Before you start updating close all the connections underway with the video server. To avoid absolutely power outages during upgrade .

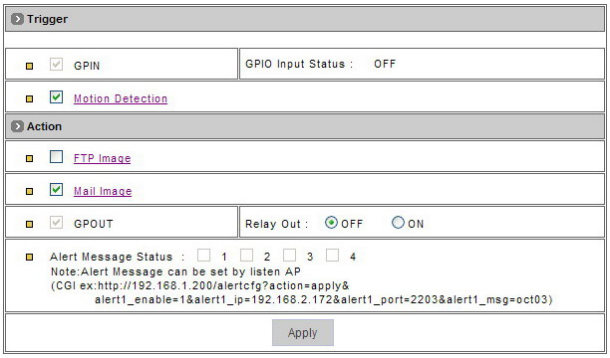
Events (Event)

The MVS-14 video server is equipped with function detection of movement (motion detection), which allows to detect an intrusion on the basis of the change of the shot image from the camera. Following the intrusion is possible to do things, how to send pictures by email or ftp or activate the relay output on board the video server.

This section is divided into three groups of options:

General Event Settings (General)

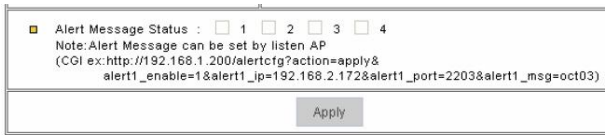
This section sets the general parameters relating to the motion detection and the generation of alarms. The video server can generate alarms in two ways: via the external input state or through the motion analysis (motion detection).



- **GPIN** - Enabling from external input alarm detection (always active).
- **GPIO input status -** Automatically detect the current state input external alarm ON / OFF. The external input detection means OFF and ON if it is open if closed.
- **MOTION DETECTION** - From enabled to use the motion detection function which allows to generate an event in case of intrusion.
- **FTP IMAGE** - From enabled to send pictures go FTP on alarm. It posted a short video clip of about three seconds recorded at the time of alarm generation.
- **MAIL IMAGE** - From enabled to send pictures by email in case of alarm. It posted a short video clip of about three seconds recorded at the time of alarm generation.
- **GPOUT -** Enabling activation relay output in case of external input alarm or motion detection (always active). In case of external input or motion detection alarm, the alarm output is activated (the relay closes). It is not foreseen an automatic return to the idle state which must be restored voluntarily through the RELAY OUT command (see below)
- **RELAY OUT** - This option allows you to enable / disable the relay output voluntarily. Choose ON to close the alarm relay, OFF to open it. Confirm with APPLY to make operational command.
- **ALERT STATUS MESSAGE** - This advanced option lets you send messages in case of an external application alarm. The function is described in detail below

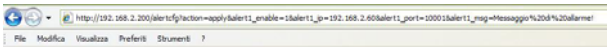
Sending alarm messages to external application

MVS-14 provides developers the ability software applications on alarm to send up to 4 messages to as many external software applications.



To enable sending of messages you need to send a CGI operation via Internet Explorer in the following format:

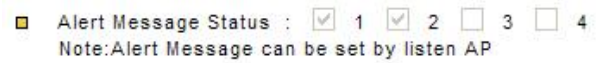
http://192.168.2.200/alertcfg?action=apply&ale rt1_enable = 1 & alert1_ip = 192.168.2.60 alert1_p & ort = 10001 & alert1_msg = Alarm message!



In this example:

- **192.168.2.200** is the IP address of the MVS-14 video server which will send the alarm message
- **alert1 (** repeated 4 times in the course of the command) is the reference to the first alarm message. E 'can set messages 2,3 and 4 by replacing alert1 with alert2, alert3, alert4.
- **enable = 1** enables sending of the message. To disable sending of the message to replace it with: enable = 0
- **192.168.2.60** is the address where will reside the listening application
- **10001** It is the listening port of the application
- **Alarm Message!** is the message to be sent in case of alarm

After pressing ENTER in Internet Explorer activate the alarm message will be confirmed by the appearance of the check mark on the message activated

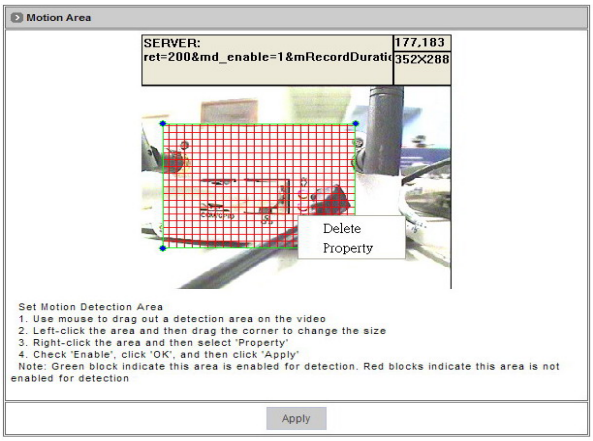


To disable the message just send a new command like

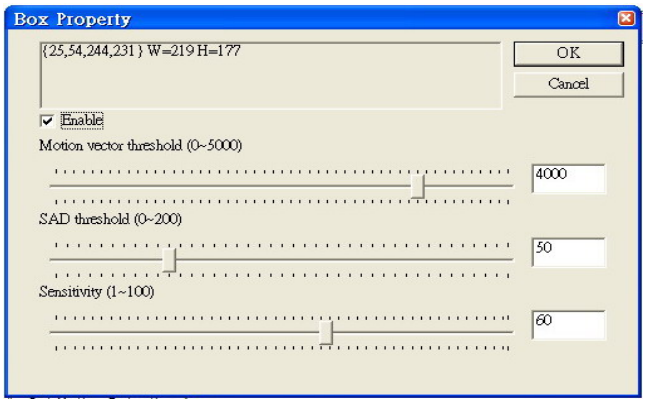
http://192.168.2.200/alertcfg?action=apply&ale rt1_enable = 0

Area of detection motion (Motion Area)

If you have enabled in the general options as video motion detection (see above) you can access setting the detection area by clicking on Motion Area. Only the movements detected within the selected area will be considered for alarm generation.



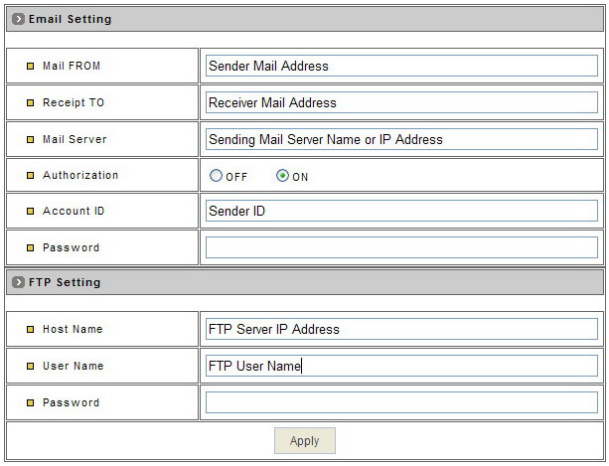
- Drag the mouse to define the detection window within which any intrusion will generate an alarm. Click a corner of the window to resize the selected area if necessary Click the right button on the area to delete (DELETE) or access detection property
- (PROPERTY).



- **ENABLE** - Enable there detection area selected. The square of the area to become red-green (detection enabled). By means **of the sliders below it is possible to set the sensitivity of detection. Caution: because the** detection is enabled it is necessary to have activated the MOTION DETECTION function in the section EVENTS / GENERAL (see above)
- **MOTION VECTOR THRESHOLD** - Maximum path motion. A low value corresponds to greater reactivity of the detection
- **SAD THRESHOLD -** Sum of absolute difference - A low value corresponds to greater reactivity of the detection
- **SENSITIVITY -** Sensitivity - A high value corresponds to greater reactivity of the detection

Parameters E-mail / FTP

If you use the dispatch of events via e-mail / ftp you can set its parameters. The MVS-14 video server sends a short video clip of about three seconds recorded at the time of alarm generation.



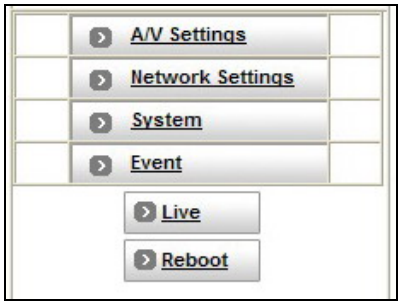
E-MAIL

- **MAIL FROM -** email address to be entered as the sender
- **RECEIPT TO** - Recipient's email address
- **MAIL SERVER** - Name of the outgoing SMTP mail server
- **AUTHORIZATION** - Enable / disable the password required depending on the ISP used
- **IP ACCOUNT / PASSWORD** - Access data to the SMTP mail server

FTP

- **HOST NAME** - IP address of the FTP server
- **USER NAME / PASSWORD** - FTP access data

Live - Reboot



- **LIVE** - The live button returns to the vision of

Real-time images.

- **REBOOT** - The reboot button launches the restart

Video Manual Server NOTE:

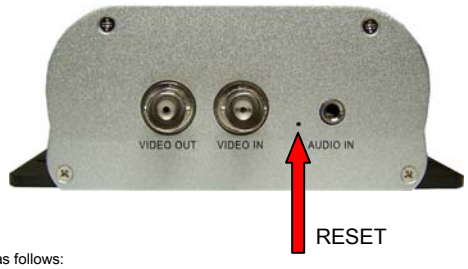
For move in configuration the device and its use is good practice to always use the controls in the video server console and non-pulsed FORWARD / BACK browser. If the button must be used solely

REFRESH to refresh the image of the video if necessary.

hardware reset

For restore the settings of factory device, including TCP / IP parameters and password protection, the possibility exists of a hardware reset, the most radical of the software reboot that activates the system settings. must obtain

a needle or paperweight suitably deformed, small enough to be inserted into the front hole that protects the reset button.



Proceed as follows:

- Disconnect the power supply Insert the needle into the hole to press the button that is located immediately inside. Do not release the button, but hold.
- Connect the power supply to turn on the video server
- Hold down the button for a few seconds The POWER LED will flash 4 times
- Release the reset button

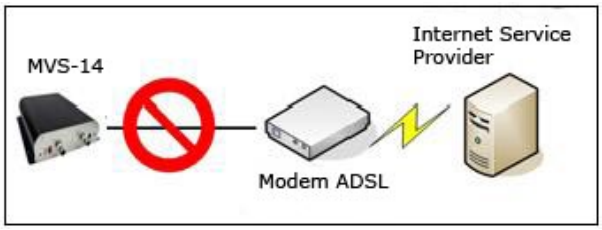
INTERNET CONNECTION

What is the difference between fixed and dynamic IP address.

When a PC connects to the Internet from the provider gets an IP address that identifies it. Typically, this address is different each time you connect (dynamic). Sometimes you can buy from the provider a fixed IP address that remains constant at each connection. This solution is preferable to connect the video server. If you can get a fixed IP address will need to use a DDNS service.

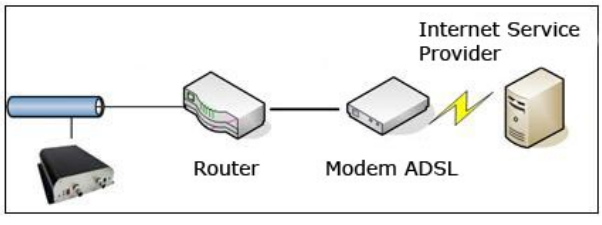
Can I connect an ADSL modem directly to MVS14?

No, because the MVS-14 does not handle the PPPoE protocol and is unable by itself to connect to the Internet Service Provider.



How can I connect to the internet MVS-14?

E 'need to use a **router** who owns PPPoE and light direction of the doors. Today almost all routers on the market have these features and are very inexpensive. On the router you can be connected only the MVS-14 and even other PCs on the network.



How can I connect via the Internet to the MVS-14?

From a remote PC connected to the Internet try to connect to the MVS-14 you have already connected to the Internet through a router. Typing in Internet Explorer the IP address that your ISP assigned to the router nothing will happen. E 'in fact necessary to appropriately configure the router so that it directs towards the MVS14 the communication ports. The operation is described below.

What are communication ports?

Each service that uses the Internet using communication specifications DOORS. Eg. your mail program uses port 25 for sending email and port 110 to receive them. When you browse with Internet Explorer, the Web pages are received on port

80. The doors range from 0 to 65535, the first 1024 are used by many processes, while the upper doors are better suited to choose from for personalized services. The ports used by the MVS-14 video server 2:

- **HTTP PORT:** Default: 80 used to there communication with the browser
- **PORT RTSP:** Default: 554 used for video streaming

E 'need to program the router so that both HTTP and RTSP ports are open and accessible from the outside. The HTTP port must also be directed towards the downstream video server.

As directing ports on the router?

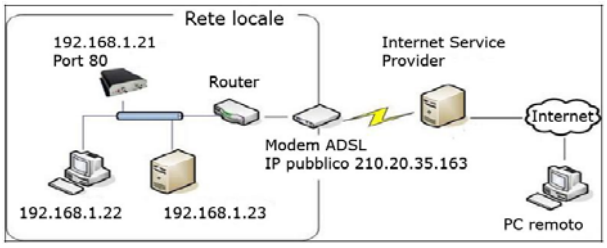
- **Option 1 - Aim all Internet traffic to the video server.**

The easiest way to reach the MVS-14 beyond the router is to program the router so that all incoming requests from the Internet on port 80 are directional to the IP address that 'MVS-14 has on the internal local area network.

Each router has its own proprietary configuration, so you need to consult your router manual. The directing of the doors is also said FORWARDING, NAT, or MAPPING VIRTUAL SERVER. In the configuration generally it looks like this:

Private Private IP	port	Type	Public Port
		v TCP □ UDP	

If we consider the following example:



The directing of the router ports must be:

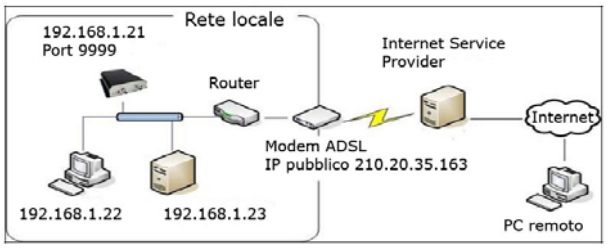
Private IP	Private port	Type	Public Port
192.168.1.21	80	v TCP □ UDP	80

From the remote PC must insert on the Internet Expolorer the public address of the router http://210.20.35.163. Port 80 is the Web standard that is not required.

Although the MVS-14 supports the DHCP IP assignment mode agrees to assign a fixed IP within the network in order to avoid having to reconfigure the router every shutdown.

Option 2 - Aim to the video server a specific port.

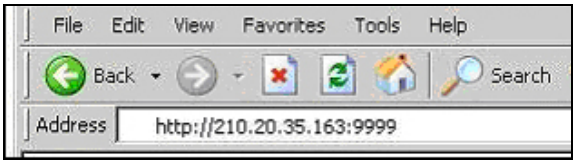
If the routers are connected to other equipment should be able to use the internet browsing on port 80, you should use to connect to a different port. For example, the port 9999.



The directing of the router ports must be:

Private IP	Private port	Type	Public Port
192.168.1.21	9999	v TCP □ UDP	9999

From the remote PC must insert in Internet Explorer the public address of the router, but specifying port 9999 as follows http://210.20.35.163:9999.



CAUTION!! Not forget that over to the redirection of the HTTP port must also be opened on the router port to stream (Default: 554)

Such as it works the network Fastweb?

Fastweb is a very particular ISP. By connecting to the Internet via Fastweb has in fact an IP address that is not visible from the Internet unless the other PC within the same Fastweb network. To access from an external PC to the Fastweb network must apply for the grant to pay an IP public, visible from the outside.

Main technical data

FEATURE	MVS-14
Type	Video Server
video Inputs	1 channel - 1 Vp-p 75 Ohm
video Outputs	1 output 1 Vp-p 75 for TV or external monitor
video Connections	BNC
audio Input	1 2V channel pp 50 Ohm
audio Outputs	None
audio connections	Connector mini jack 3.5 mm - RCA adapter cable supplied.
Lan	RJ45
Other connections	MINI-DIN socket for RS485 + auxiliary video output + 1 input / output external 1
Connection Speed Dome Cameras	It - Protocols Pelco P / D - Lilin - Dynacolor
Network interface	10/100 Ethernet
PAL Resolution	D1 - SIF 720x576 - 352x288 QSIF - 176x144
NTSC Resolution	D1 - SIF 720x480 - 352x240 QSIF - 176x112
video Compression	MPEG4 / MJPEG selectable
audio Compression	PCM
Video Bitrate	16K ... 4M bits / sec. CBR / VBR
Frame rate PAL	25 f / sec.
minimum requirements for remote PC	Pentium 4 min. 2 GHz - 512MB RAM - Windows98 / Me / 2000 / XP
protected access	Up to 10 user configurable
CPU	32-Bit RISC Processor
ROM	4MB Flash ROM
RAM	32MB SDRAM
Watchdog	Indoor
Firmware	Upgradeable from PC via FTP
Tool installation software	IP installer
IP Address Assignment	Fixed or DHCP
DDNS Support	Yes
alarm Generation	Motion detection with email-FTP sending and activation output
Supply	12VDC (AC / DC power supply included)
Consumption	<8W
Operating temperature	+ 5 ... + 50 ° C / 20..80% RHG
dimensions	135 (L) x40 (H) x85 (P)
Weight	Approx. 570 g (excluding power supply)