

Using IP cameras with NetVu Connected DS2

IP Cameras are configured on the OSD and via the web interface on the unit. The unit uses an on-screen (OSD) paged menu system to guide users through the installation process. The integrated web pages allow remote configuration using an internet browser such as Internet Explorer or Netscape Navigator.

Entering the Menus

There are two types of menu; User and Installer. The Installer menu will enable IP Cameras to be added. To enter the Installer menu, press and hold the Menu button for approximately 3 seconds.

Note: If a password has been set and enabled it will be necessary to enter the Installer password to gain access to the menus. This is disabled by default.

Via the OSD

Tap the Menu button until the 'Camera Setup' page is displayed. Use the Camera buttons to select the input to be configured (select an input that does not already have an analogue feed). Use the down cursor key to highlight the 'Camera Type' menu item and select IP Camer

Camera Type

Colour and monochrome cameras are detected automatically, allowing colour/mono switching cameras to be connected. The camera type can be manually configured as IP Camera, Colour or Mono if necessary. Selecting IP Camera will show the Edit option to enter the IP camera details.

Edit IP Camera Settings

IP Camera Setup

Camera 1		
Type	NetVu Server	<u>See text</u>
URL	<none>	000.000.000.000
PORT	00000	00001-65535
Camera number	00	01 - 64
FPS	00	1 - 99

IP Camera Setup

Camera X

This is the input into the back of the DVR. Since this video feed will be via the network, select a channel that does not have a physical analogue connection.

Type

The unit can recognise a range of IP cameras as well as digital video feeds from NetVu Servers. These include;

NetVu Server	JVC VN-C20	JVC VN-C625	JVC VN-C655
Axis 2120	Axis 211	Axis 2140	Axis 214 PTZ
AL9710			

Note: Other cameras utilising the same stream/telemetry protocol as those listed above will also be supported.

Note: Refer to the Important Configuration notes below.

URL

Enter the IP address that will send the IP stream

Port

Enter the port number to be used for this stream.

Camera Number

If a NetVu Server is being used, this parameter will specify which camera number from the Server will be used to provide the stream.

FPS

Enter the frames per second that the camera has been set to deliver.

Via the Web Interface

The unit supports the capability to connect directly to IP Cameras (Cameras connected directly to a network, broadcasting a digital video stream from an IP address). It can also connect to other NetVu Connected DVR's and treat one of the network feeds from that DVR as a digital video stream.

1. Ensure IP Cameras are enabled in the Advanced Features menu (*System->Advanced Features*)
2. Select *Cameras->Camera and Record Setup*
3. Select a free camera input.

Note: *Because the feed for this camera input will be delivered through the network, it is recommended that you select an input that does not have a camera connected at the back of the unit.*

4. Change the Camera Type for the selected camera input to 'IP'.
5. Repeat this operation for each of the IP feeds to be connected, save the page.
6. Click on *Cameras->IP-Camera and Record Setup* to configure each IP camera feed.
7. The camera type will be filled in for each of the selected IP cameras, logged against the camera number that was selected.
8. Select the type of IP Camera. If the feed is coming from a NetVu Connected Server, select NetVu Server.
9. Enter the URL of the IP video source in the next column.
10. If the video feed is coming from a NetVu Connected DVR or a server with multiple , enter the camera number on the source that will be used as the feed for this IP camera input. If the source is single IP camera, set to camera 1.
11. Enter the xx number into the IPCam Cam column.
12. Enter the Framerate that will be allocated to the camera. This should equate to the camera's internal setting - this will be the maximum viewing or recording rate of the IP camera.

Important Configuration Notes

- Ensure that the IP Source (Camera or DVR) has the capacity available to stream video in addition to any other overhead
- Ensure that any third party IP source is correctly configured to deliver streaming video to the specified requirements.
- All IP Camera Recording should use JPEG profiles, and Profile Recording.
- The IP Camera image size should not exceed 18KB or 2CIF.
- The feeds from all IP Camera should be limited to 4Mbits/sec and be limited to 25pps. If the first cameras absorb the available bandwidth, later IP cameras may not be connected.

i.e. The unit can be configured to record;

- 1 IP Camera @ 16pps using an 18K image, plus 15 composite inputs at 4pps
- 16 IP Cameras @ 1pps using an 18K image with no composite inputs

Contact Technical Support for configurations between the two extremes shown

- For Axis 214 PTZ, select AXIS 214 and select AXIS IP for the telemetry type.
- Axis 211 is the general default protocol used by Axis. It is likely that any future Axis cameras will work using Axis 211, using a default username *root* and password *root*)
- Pre-alarm is not currently supported
- MPEG4 and Unicast RTP is not currently supported.
- VMD and Activity is not currently supported on IP cameras.
- BOSCH iSCSI protocol is not currently supported.

Certain IP cameras must have the same username and password configured in `/etc/ip_cams.ini`.

The default settings for the third party IP cameras should be sufficient. It may be necessary to configure the individual cameras using the individual cameras web pages to optimise results.

If different passwords are required for the same IP camera types, then the camera entry in the `ip_cams.ini` must be duplicated for each password.

i.e. The details in `ip_cams.ini` for Axis 211 and Axis 211A are exactly the same - they could be selected as an alias of each other - if different passwords were wanted for each, or if different responses to high, medium or low requests were needed.

```
[AXIS_211]
image_url=axis-cgi/mjpg/video.cgi?camera=<cam>&resolution=<res>&fps=<fps>
high=2CIF
med=CIF
low=QCIF
user=root
pass=root
netvu=compatible

[AXIS_211A]
image_url=axis-cgi/mjpg/video.cgi?camera=<cam>&resolution=<res>&fps=<fps>
high=2CIF
med=CIF
low=QCIF
user=root
pass=root
netvu=compatible
```

Note: *The ini file dictates what the system requests from the IP camera as high, medium or low. The IP Source will send images based upon the request, or upon what the individual IP source has set up as low, medium or high.*

```
[AXIS_241Q]
image_url=axis-cgi/mjpg/video.cgi?camera=<cam>&resolution=<res>&fps=<fps>
high=2CIF
med=CIF
low=QCIF
user=root
pass=root
netvu=compatible
```

```
[AXIS_241]
image_url=axis-cgi/mjpg/video.cgi?camera=<cam>&resolution=<res>&fps=<fps>
high=2CIF
med=2CIF
low=CIF
user=user
pass=pass
netvu=compatible
```

A user connecting with the password *user* and the password *pass* will be sent a higher quality image from the same camera than a user logging on with username *root* and password *root*.

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