



Integration Note

Manufacturer:	AXIS
Model Number(s):	240Q/241Q
Minimum Core Module Version:	4.0 Build 1475
Comments:	Axis Server Firmware: 240Q - v4.49; 241Q - v4.47
Document Revision Date:	2/13/2013

OVERVIEW

The Axis 240Q/241Q video servers are network devices that have four analog video inputs. When integrated to the **g!** system the analog video images can be accessed from the viewer interface locally and or remotely. The 240Q will stream up to 6 frames per second (fps), the 241Q will stream up to 30 fps.

Note: The remote access video quality will be dependant on the internet connection speed.

SUPPORTED FEATURES

- Viewing of up to four analog cameras
- Motion Detection as a event trigger
- Quad Camera view

Note: The Quad Camera View is a built in function of the server. Some performance problems/lockups have been seen if a quad view is custom-built from four separate video streams. As a result we recommend using the built in quad video stream if required. See **g! Configuration step 8** for details.

UNSUPPORTED FEATURES

- The DB-9 connection on the Axis Video Server is not supported.
- The Input/Output terminal strip is also not supported.

INSTALLATION OVERVIEW

Installing the Video Server can be broken down into the following steps:

1. Install the Video Server at the desired location, and pull power, Cat5 and coax video cabling as needed.
2. Connect the Video Server electrically to the cameras and the home network and configure the Video Server. See **Video Server Configuration**.
3. Integrate the cameras into the **g!** system and test proper operation. This step is outlined in **g! Configuration Details**.

VIDEO SERVER CONFIGURATION

The camera configuration is done with software provided by Axis, which must be run from a computer with Windows also connected to the same network as the camera. Alternatively the camera can be setup by searching for it on the network and browsing to its IP to access its web server setup pages.

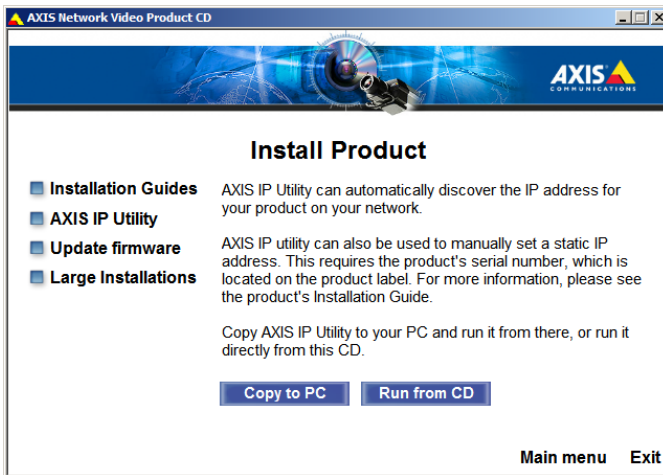
The software program from Axis is the **AXIS IP Utility**, and the version used for this document is shown in the header above.


VIDEO SERVER CD CONFIGURATION

1. Insert the CD included with the video server into a PC connected to the same network as the server, it may start automatically and open a web page.



2. Click the "Install Product" link.



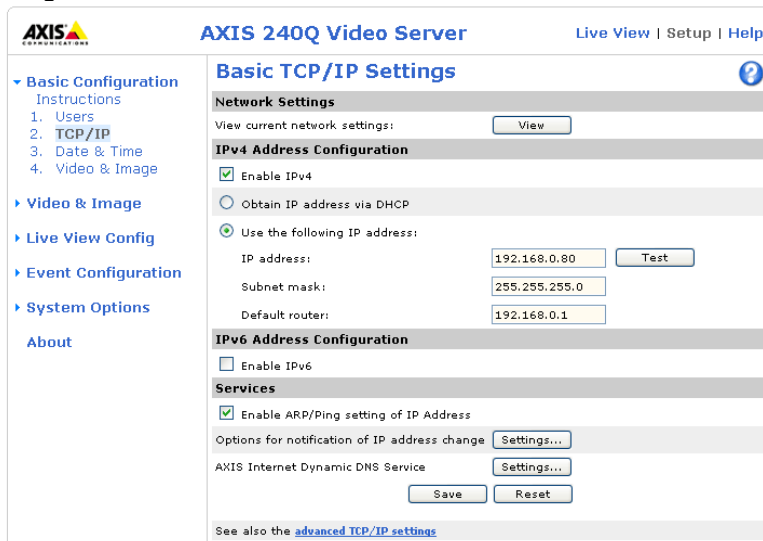
3. Click the "Axis IP Utility" link. The IP Utility Window will open and display any Video Servers on the local network. Find the serial number of the device you wish to configure and highlight it, then click the "Assign new IP address to selected device" button- 
4. In the "Assign New IP Address" window, give the unit a unique static IP address on your network.
5. Click the "Display device home page" button and proceed as above to set the user name and password.

VIDEO SERVER BROWSER CONFIGURATION

1. Connect the Video Server Ethernet port to the network and power up the server.
2. Start a browser and bring up the video server interface by typing in the IP Address- you should see a screen similar to the one below. The first time you log in to the Video Server, you will be prompted to set a password for the default administrative user, "root". Remember this password, it will be needed in the following steps to allow the **g!** software to connect to the Server.



3. Click **Setup** at the left to bring up the setup window. Click **TCP/IP** to access the IP address assignment window as shown in the window below.



4. Select the radio button for "Use the following IP Address". Assign the Axis a static IP address on your network. **g!** recommends using 192.168.0.80 for the first Axis server, 192.168.0.81 for the second, and so on.
5. Click **Save** then Click ok to the warnings, wait 30 seconds, reboot the camera then browse to the camera at the new IP.

- From the home page click **Setup** then select “**Date & Time**” from the Basic Configurations menu on the left. Configure for your location then click **Save**.

The screenshot shows the 'Date & Time Settings' page for an AXIS 240Q Video Server. The page has a navigation menu on the left with options: Basic Configuration (Instructions, Users, TCP/IP, Date & Time, Video & Image), Video & Image, Live View Config, Event Configuration, System Options, and About. The main content area is titled 'Date & Time Settings' and includes a help icon. It is divided into several sections: 'Current Server Time' (Date: 2001-08-05, Time: 09:01:40), 'New Server Time' (Time zone: GMT-05 (New York, Toronto, Washington DC), Automatically adjust for daylight saving time changes: checked), 'Time mode' (Synchronize with computer time: selected, Synchronize with NTP server: unselected, Set manually: unselected), and 'Date & Time Format Used in Images' (Specify date format: Predefined YYYY-MM-DD, Own %F; Specify time format: Predefined 24h, With resolution: 1 second, Own %T). At the bottom are 'Save' and 'Reset' buttons.

- Reboot the camera** to ensure the settings take effect.

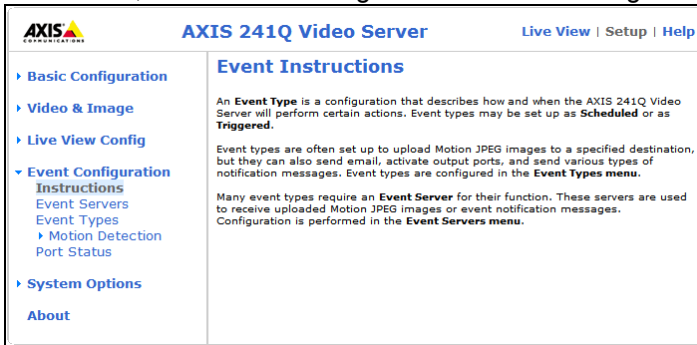
Start a browser and type the camera’s IP Address into the address bar, confirm the settings were saved.

MOTION DETECTION SETUP

Motion detection setup is only required if you will be using motion detection by the camera as an event map trigger. This is most commonly used for the **g!** DVR recording.

Note: We recommend using **Internet Explorer** as your browser when setting up motion detection as we have found this process may be slow with other browsers.

1. Access the Video Server's configuration by opening a web browser and entering the camera's IP address. Enter the root user credentials.
2. Click the "Setup" link in the upper right.
3. On the Left, click "Event Configuration". The following window will appear:



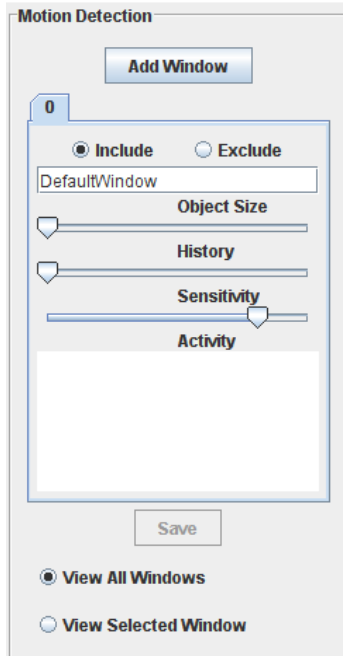
4. Select "Motion Detection" to access the following screen:



5. Select the camera you wish to set up from the menu on the left.
6. Click **NEW** to add an include window to the image. For motion detection the camera will need at least one include window to define the area to look for motion. Additional include windows may be added as well as exclude windows to mask motion from items that may frequently move but are not desired to be considered motion.
7. For example: To limit the area where the server is looking for motion, decrease the size of the Default Window and drag it to center on the area of the image where relevant motion is expected.

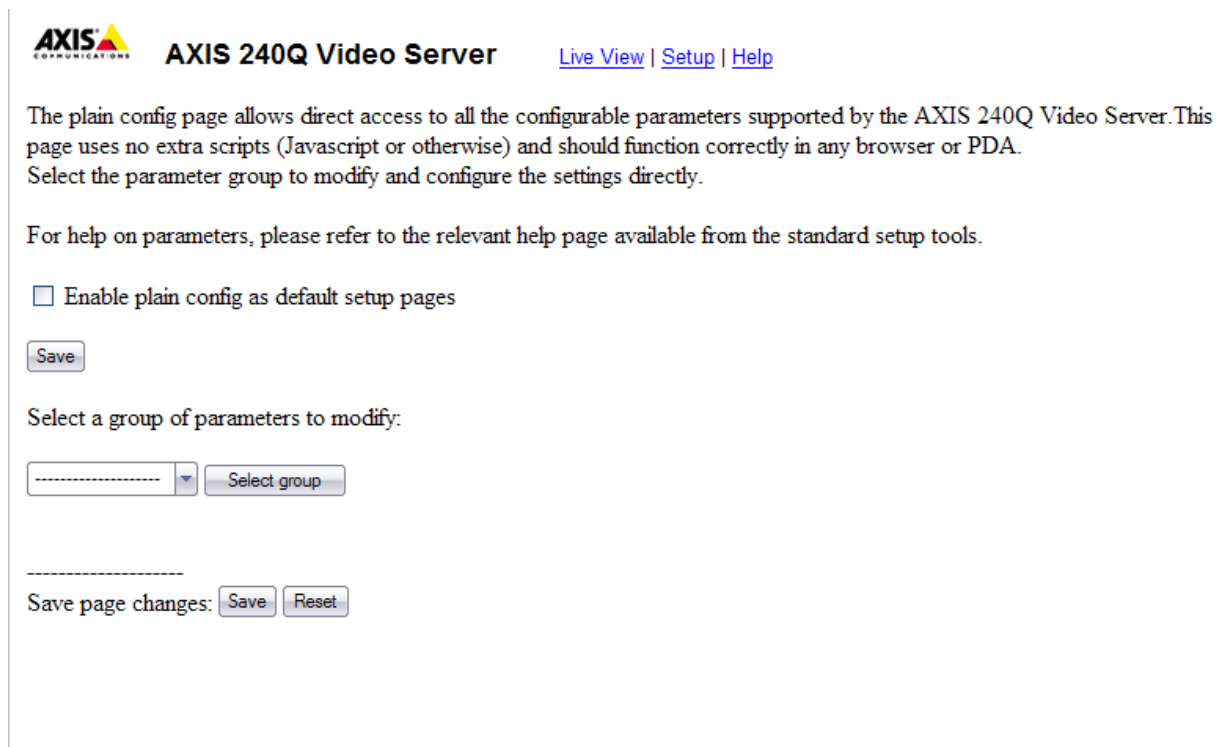
This will limit the number of false triggers due to background motion, thus conserving disk space. If you wish to capture all motion that the camera sees, this window can be left full screen. Additional windows can also be added, and the windows can be set to “Include” or “Exclude” depending on your preference. An “Exclude” window might be useful if there is a tree or flag in the image that is frequently moved by the wind, and it is not desired to trigger and event if the tree or flag moves.

- For configuring the Motion Detection sensitivity there are three values that can be individually set for all included windows, “Object Size”, “History”, and “Sensitivity”:



- Object Size refers to the number of pixels that need to change to trigger a motion event. The larger the object size, the less sensitive the detection. It is recommended that this be set to the minimum value possible.
- History refers to the length of time a moving object remains in the window before it is considered to be a non-moving part of the scene. A high setting will continue to trigger motion as long as the object is moving. A low setting will trigger motions when the object initially moves but then will be ignored. It is recommended that this slider be set high somewhere above 80%.
- Sensitivity refers to the difference in luminance from one frame to the next. A low setting will only trigger motion of there is a great difference in luminance, i.e. a bright object suddenly appears on a dark background. It is recommended to set this slider as high as possible. Typically greater than 90%. This setting will most likely need adjustment during initial setup to obtain the most reliable motion detection.

- Select “**System Options**” on the left, then choose “**Advanced**”, then “**Plain Config**”:



10. Using the dropdown box, select **“Image”** as the group of parameters to modify. In the first section, “Image”, check the box for **“Trigger Data Enabled”**:

Image	
Referrers enabled:	<input type="checkbox"/>
Referrers:	<input type="text"/>
Max viewers:	<input type="text" value="20"/> [0..20]
Nbr of configs:	<input type="text" value="5"/>
Overlay path:	<input "="" type="text" value="/etc/overlays/axis("/>
Privacy mask type:	<input type="text" value="None"/>
Date format:	<input type="text" value="YYYY-MM-DD"/>
Own date format:	<input type="text" value="%F"/>
Own date format enabled:	<input type="checkbox"/>
Time format:	<input type="text" value="24"/>
Own time format:	<input type="text" value="%T"/>
Own time format enabled:	<input type="checkbox"/>
Time resolution:	<input type="text" value="1"/>
Trigger data enabled:	<input checked="" type="checkbox"/>

11. Scroll down to the entry for each port (I0, I1, I2, etc.) and find the entry labeled **“Ix Trigger Data”** (Where “x” is the specific port number) and place a check in the box labeled **“Motion Level Enabled”**:

Image I0 TriggerData:	
IO enabled:	<input checked="" type="checkbox"/>
Audio enabled:	<input checked="" type="checkbox"/>
Motion detection enabled:	<input checked="" type="checkbox"/>
Motion level enabled:	<input checked="" type="checkbox"/>
Video loss enabled:	<input checked="" type="checkbox"/>
User triggers:	<input type="text"/>
Save page changes:	<input type="button" value="Save"/> <input type="button" value="Reset"/>

Note: The port numbering begins at 0 rather than 1. Thus, camera 1 is I0, Camera 2 is I1, etc.

12. Repeat step 10 for the other feeds.
13. Close the browser and **reboot the server every time any motion detection adjustments are completed on the server to allow g! to reconnect and detect motion.**

See the DVR Technical Note for information on setting up motion detection in the g! Software.

COMMON MISTAKES:

1. Failure to configure the motion detection properly. The settings for motion detection need to be configured as above for motion detection to function correctly.