

Videstra

Get the Most From
Your Micro Local Cameras



AXIS Q61 SERIES CAMERA SETUP GUIDE



Videstra LLC

WWW.VIDESTRA.COM | SUPPORT LINE: 608.999.9003

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Note: This document may be read on-line using the following URL

<http://www.videstra.com/download/doc/AxisSetup.pdf>

Welcome

This document is intended as a step-by-step guide to preparing your Axis Q61 series cameras for use with VestraView by Videstra and the V-Manager. It is recommended you place all cameras on your bench(es) and power them all prior to going through these steps. Connecting them to a DHCP capable network makes the process easier, however manually setting the IP Address is possible (see steps).

Step-by-Step (In House Pre-Deployment)

- Place the camera(s) on your local networks for setup
 - If your network hands out DHCP addresses then you can use the Axis IP Utility available at the following link:
<https://www.axis.com/au/en/support/downloads/axis-ip-utility>
 - If your network does not hand out DHCP then you will need to put each camera on the network one at a time and set a local IP Address. The default IP address for each camera will be 192.168.0.90
- Install the SDHC card into each camera
 - Twist the removable part of the dome *counter-clockwise* about 1 inch, the pulling it straight off. Hold the back of the dome with your one hand while using your other hand to twist.
 - Replace the Dome being careful to make sure you twist it back all the way. Failure to twist back all the way will present an obstruction in the image.
 - Format the SDHC card: Setup → System Options → Storage → Overview → SD Card (Format using ext4 for best wear leveling)
 - Note: This is installed for future recording capabilities
- Make sure each camera has at least Version 6.50.1 (feel free to update to the latest version available at <https://www.axis.com/gb/en/products/axis-q6114-e/support-and-documentation>)
- Prepare the STP Cable
 - Newer pole mounts will come with their own Axis approved IP66 RJ-45 connector. If you have an older unit that does not have one of these you will need to use the approved IP66 connector from axis (instructions in the next bullet point). If you do not have one please contact Videstra support.
 - Cut the proper length of STP Cat5 cable (Total length from switch cannot exceed 358') required and terminate one end with the supplied Axis IP66 shielded Connector.



Axis IP66 push-pull Grounded RJ45

- A handy video for wiring this connector is available on YouTube <https://www.youtube.com/watch?v=0ELqcXYPngM>
- Terminate the other end with a shielded RJ45 connector with the drain-wire connected to the ground terminal on the Surge Suppressor. This is the only STP cable you will need as the surge protector will provide the only necessary path to ground.



Note: You will not need STP Cable between the Surge Suppressor and the midspan, nor between the midspan and the network switch.

The configuration shown protects the camera from surges originating from the network and power lines and reduces the likelihood of damage by lightning.

Recommended Camera Settings

- There are several *recommended* settings for each camera. Because the User Interface for the Axis cameras varies (depending on the revision of firmware) we will give general settings below.
 - In Security section set a secure password for the camera
 - Note: *Leaving the default password in place is very insecure!*
 - For more information on camera security see our white paper at <https://www.videstra.com/bestpractices/bp-security.pdf>
 -
 - In PTZ Section set near focus to the farthest setting available (this will help prevent focusing on raindrops that form on the camera dome)
 - In the Image section set the IR Filter to ON (not automatic).
 - Set the Gain to no more than 18 to 24 db.

Field Deployment

IMPORTANT: Before taking the cameras into the field we recommend you assign each a fixed IP address. This will make it easier to 'find' the camera when on-site.

Equipment for Field Deployment

- Tools for installing the camera/mount
- Your Ethernet Cable(s)
- Camera | Midspan | Surge Suppressor | Grounding Wire & Clamp
- Router if desired (required if remote power units are being installed)
- IP Power Controller (Ambery IP-P2) if desired
- A laptop computer - *Required*

Installation using a router

Set up port forwarding rules for all devices being deployed (Camera, Power Controller)

Each device must have their own IP Address – and these should either be reserved by MAC address in the router or set to fixed IP addresses (fixed IP Addresses recommended).

Ports to forward

Although you can select any outside ports you want here is what we recommend

Camera (Axis Q6114e/Q6115e/I6128e)

External	Internal
42080	80
42554	554
42021	21

IP Power Control (Ambery IP-P2)

External	Internal
42081	80

Note: It is recommended you use a typical local IP scheme for the camera & IP Power Controller (e.g. 192.168.1.x) – and that you leave the local ports set to defaults (e.g. http=80, rtsp=554, ftp=21)

Note: All the external ports must be open for incoming connections for the devices/protocols to be accessible!

Installation without a local switch

If you are installing the camera directly onto the internet (DMZ) then you will want to set the IP Address of the camera to your assigned Internet Address and the ports on the camera to something *other* than the defaults.

Recommended Ports

Although you may select any ports per your security requirements, here are some recommended port assignments:

External	Internal
42080	80
42554	554

Note: All the external ports must be open for incoming connections for the devices/protocols to be accessible!

Default Ports

It is a very good idea to also open the default port for HTTP (80) even if you have moved the camera's HTTP port to something like 42080. The reason is if you must ever *reset the camera back to factory defaults*. When you do that its web server will also be set to port 80. If port 80 and port 42080 are open you will at least be able to connect to the camera and change to the settings you want. Having port 80 open with nothing responding is not a significant security issue.

Enable IP Address Filtering

System Options → Security → IP Address Filter

Note: You must know the IP Addresses from which you will need to access any cameras that have enabled IP Address Filtering. With this security feature enabled you will be unable to access the camera from any IP Address outside of the range entered here.

You may place multiple IP Addresses into this table as singular IP Addresses, or you may put IP Address *ranges* into the list in CIDR format (e.g. 192.168.1.0/24). CIDR format is good if your facility will be seen connecting from a small, grouped, range of IP Addresses. You can enter the IP Address range in a calculator at the following web site to get the CIDR entry.

<http://www.ipaddressguide.com/cidr>

Caution: If the IP Address range for your facility changes and falls outside the range you will no longer be able to access the cameras without going on-site. Although this is an *excellent* way to secure your camera(s) – please use this feature with caution.

Grounding

The Ditek MRJPOE Surge Suppressor must be installed between the Axis MidSpan (POE Injector) and camera. The Grounding Wire must be properly grounded for any protection to take place. The recommended resistance to ground is < 25 Ohm (5 or less recommended) and should be measured. See the following installation document from Ditek for reference:

<http://www.ditekurgeprotection.com/component/jdownloads/send/23-installation-guides/291-dtk-mrj45c5e-dtk-mrjpoe-installation-guide.html>

Leveling

If you are installing cameras using the Axis T91B62 Parapet mount, you should make sure you level it correctly.



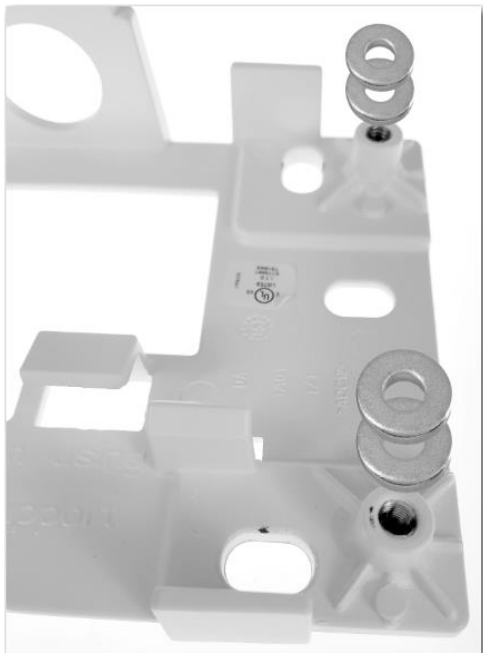
Axis T91B62 Parapet Mt.

NOTE: The proper level must be made at the *camera mounting* point of the Parapet mount. Leveling the base will result in improper leveling and cause the image to become tilted when panning the camera,

Level Line



To properly level the unit, you must make sure the mounting plate is level. This can be done using washers or metal wedges. Do not use wood or plastic wedges as they will either rot or compress and introduce wobble over time.



Using washers to level the base

Installing the Memory Card

To take advantage of the Clip Factory Feature in VestraView a 32 GB memory card needs to be installed on the Axis Camera(s). To install the card, you will first need to remove the clear dome from the camera:



The Clear Dome Twists Count-Clockwise about 4 degrees – and then can easily be removed.



The slot for the memory card is located on the turret assembly. Some models call for an SDHC card while other call for a Micro SDHC card.



Final Check

Before leaving make sure you check access to all devices deployed on-site. This would include access to the camera(s), Router and IP Power Controller if installed. You must check this from *outside* the internal network (i.e. from the WAN side through a Public IP Address).

Using a browser such as FireFox you can enter the equipment(s) *Public Facing* URL:

`http://[public ip address]:[external port to device]`

For example: If the cameras public IP address is 71.13.251.251 and the *external* port to access it is 42080 then enter the following URL into your browser: `http://71.13.248.251:42080`

