

Abthorpe Broadband Association Ltd.

Bringing Broadband to the community since 2003.

Fixed Public (static) IP addresses

A public IP address (sometimes referred to as a static IP) is a world-wide unique address of one of your computer devices and is only needed where you need to get access to your device from outside our network. Furthermore, the device needs to recognise it is being accessed, requiring specialised programs.

You might want to access a CCTV controller at your property so you can monitor your cameras, for example.

Public IP addresses in what is known as IPV4 range (e.g. 185.78.11.130) are [becoming rare and](#) expensive to obtain because the 4.3 billion (2^{32}) addresses available originally have all been allocated to organisations and to obtain one requires petitioning one of these organisations.

Public IP addresses in the IPV6 range (2^{128} addresses of the format `2001:0db8:0000:0000:0000:8a2e:0370:7334`) are gradually being used but require modern equipment and programs. In Tove Valley networks, we have a mixture of IPV4 and IPV6 capable equipment and until all our upgrading is completed (especially to the wireless network) we must stick to the IPV4 addressing.

Therefore, if you want an IPV4 public IP (ABbA have a very small number available) you will have to present to us your reasons for requiring it *and you will be charged £120 + VAT per year* for its allocation to you.

I'm going to walk you through a typical scenario of a on-site CCTV controller and its access from outside the network. First, I will explain the difference between the three ways in which you might access CCTV devices at your premises :

1. You have an IP camera on your network, you know the internal IP of the camera and you have arranged routing through your personal network for outside access to this IP. You will also have had to talk to TVB to arrange routing through our network devices to point any outside requests at your network.
So then you can connect to your camera and stream its video out onto the public network.
This is not tolerated by TVB because your constant streaming of video out to our network through your local (possibly wireless) connection severely restricts other people's use of the network. It contravenes the "fair use" policy you signed up to when you registered.
2. You have a CCTV system with several cameras all attached to a CCTV controller (DVR or NVR) and your external access to your cameras and their recordings is to this device. In this case, the traffic between live cameras is restricted to your network and external access to the controller manages the traffic on our network. These devices, as supplied, require an IP address and the suppliers and installers ask for a public IP address to be allocated and directed at the device. There are two ways this can be done:
 - a. A public IP (cost, £144/year) is allocated to you and we set up the routing through our network to your site.

- b. A public address we use for similar traffic is used, (cost, nothing to set up) and its traffic is routed through our network to your site.
3. You have a proxy device such as a RING™ doorbell or a CCTV system which uses the same technique.

These devices do not need a public IP address as they use a proxy service on the internet through which your device is connected. The APP sets this up for you. Bear in mind that the proxy service has control and you may need to pay the service provider for the privilege.

So if your setup is similar to the second description above, and unless you have very good reasons for wanting your own public IP, we recommend scenario 2b.

The technical process for **scenario 2b** is as follows:

- 1) Establish the device on your network and allocate a local IP to it (usually 192.168.xx.yy). Determine what *ports* the device requires for access. This/these may be 80, 8080 or others specific to the manufacture of the device. Example below uses 8123:
So access from your network will be to 192.168.xx.yy:8123 and you can try it from a browser running on another device on your network.
- 2) Get an address and port number from [TVB](#) and note. This will be something like 185.78.11.zzz:8321. Await TVB response that this address has been routed to your site.
- 3) Program your network router to accept this TVB address and route it to your controller device so that 185.78.11.zzz:8321 goes to 192.168.xx.yy:8123

Of course many things can vary this procedure and help is but a [contactus](#) away.