

# Port Forwarding

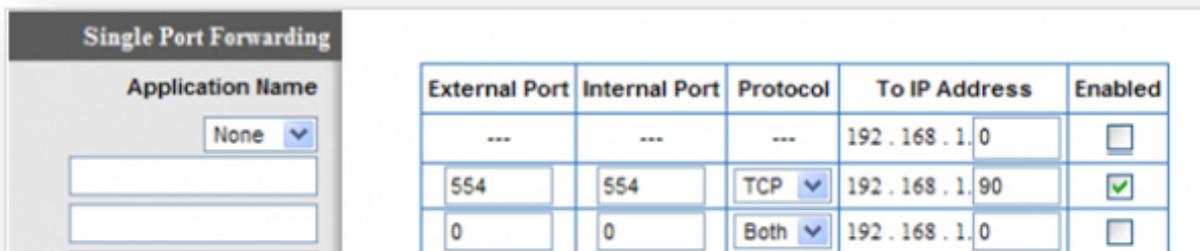
This guide is intended for the following audience:

- any IP camera user who wants to access live video from their camera with Unicom HCV (Hosted Cloud Video)
- if you simply want to use Unicom HCV's cloud storage feature with an IP camera, this guide is not applicable
- this guide assumes you know your camera's IP address and it has been successfully configured on your network

In order for Unicom HCV to access live video from your camera, the camera needs to be accessible from outside your network. There is a fairly simple process to accomplish this known as "port forwarding". These are the basic steps to follow:

1. Login to your camera's admin interface and go to the network settings area. Confirm what port has been assigned to your camera. Often it will be port 554, 80 or 88 but could be anything. It is recommended to stay away from port 80, so change it to something >1024 (doesn't really matter what port you use but better to pick a high number and stay away from any reserved ports).
2. Now login to your router and look for a menu called 'port forwarding' (sometimes it will be under an "Application and Gaming" menu). Once in this menu, create a rule to forward the port selected from Step (1) to the internal (192.168.x.x or 10.x.x.x) IP address of your camera. Be sure to assign the port number to both the internal and external ports. If there is a protocol option, choose TCP or BOTH.
3. If you are using multiple cameras then you need to select a unique port number for each camera. For example, Camera1=Port 1025, Camera2=Port 1026, etc.

Example router settings:



## More Resources:

- A great website that has a wealth of resources is [Portforward.com](http://Portforward.com).
- They also publish port forwarding guides for virtually every router.

If you're still having problems here are a number of tips and tricks that might help:

### Tip #1: Know the ports

First of all it is important to know what port you need to forward. This depends on the type of camera. For example if you are setting up a Foscam camera typically you only need one port, HTTP (usually port 80 or 88 in the case of Foscam). Some cameras will require you to setup the RTSP port (usually port 554). Some require BOTH the RTSP and HTTP port. If you are setting up your camera on Unicom HCV, it will ask you for one or both of the ports and that is how you will know what to port forward. Log into your camera's web interface to verify the ports that are used.

### **Tip #2: Use help resources**

If you are a total newbie with port forwarding, don't be scared. It is quite easy, you just need the proper resource. If you Google search your router name along with "port forwarding" often you will find documentation from your router. But even better, just go to <http://portforward.com>. This site has an extensive list of routers and applications you can use to help you understand how to port forward for your router. The key here is to navigate to your router (the link above gives you a direct link to the router list), skip all the ads then select an example camera. For example select any Foscam or D-Link in the list. This may not be your camera but the point is just to see how a port is forwarded.

### **Tip #3: Port 80 is evil**

Many cameras by default use port 80. Bad idea. Everything uses port 80. Avoid conflicts with other devices by changing this. I've even seen some ISPs forbid this. In fact many ports under 1024 are already [reserved](#). Save yourself the headache and just change it now to something >1024. Simply log into your camera's web interface, find the HTTP or RTSP port (depending which one you are using) and change accordingly. Remember if you change the HTTP port to access your camera locally add the port, for example: 192.168.1.20:8080.

### **Tip #4: Multiple cameras**

If you have more than one camera you can't use the same port. You will need to increment accordingly. If you have one camera setup on port 8080, change the next one to 8081 and so on.

### **Tip #5: Enable button**

In the screen shot above I can't tell you how many times someone has just forgotten to "Enable" the rule. Many routers let you create the rule, but don't actually turn it on or "enable" it. Sometimes this is a checkbox or simply a button to apply settings.

### **Tip #6: Buggy routers**

Some routers have bugs. This is reality. I've found several routers that have caused me tons of pain. Typically they have come from the ISP branding their own device. For example here at work we have a Bell router. Took me a long time to figure out but when you create a rule and name that rule you can't use spaces. So for this router I would select "Create a new rule" I would name the rule "Unicom HCV camera" because seemingly it can be anything. Then I fill out the rest. Awesome it works. The gotcha is that the next rule you create won't work. Intuitive no?

### **Tip #7: Create rule or custom application**

In the screen shot above it shows some default "rules" or "applications". Those will never match what you need. Sometimes it lists tons of applications such as games. They are trying to help you along the way by providing some default ports. You don't need this. So in most cases you will have to "Create a new rule" as shown above or in many cases you will need to create a new "application". So the process of port forwarding is a two step process. Here is an example of [one router](#) where not only do you need to enable "Application support" first then you have a 2 step process just to add the rule.

### **Tip #8: Test it works**

How do you know your port forwarding works? Try any one of the many port checking tools on the web. I like using the one from [yougetsignal](#). Enter in the port you just forwarded and that's it. It will tell you if it is open (success!) or closed (you failed!).

This might seem like a lot to know. But it really is simple as long as your router behaves as it should. Hope these tips help.