## **Remote Network Setup**

Once you have completed the <u>Local Network Setup</u>, you should have an internal IP address for your DVR.

The next step in the process is to forward ports pertaining to the DVR, so that you can see your cameras remotely.

We recommend that you follow the steps in our network tutorial located at <u>www.zmodo.com/network</u>. This video walks through using our network tutorial:

### Forward DVR's Ports

1) Log in to your router by entering the gateway IP, such as 192.168.1.1, in to your browser window. Enter the login information for your router. If you cannot remember this, you can check the default username/password combinations for most routers at <a href="http://www.pcwintech.com/default-router-modem-passwords">http://www.pcwintech.com/default-router-modem-passwords</a>. If you are unable to locate this information, please contact your router manufacturer or Internet Service Provider.

2) Once you've logged in to your router, you will need to enter the Port Forwarding section of your router. There, you'll enter the IP address, protocols, and port numbers for your DVR.

**IP Address** = IP address in your DVR's Network Settings

**Protocol** = BOTH (TCP/UDP) OR TCP

**Service or Application Name** can be anything you wish, like DVR1 or DVR2

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Create 1 rule per port number; Start and End Ports will be the same number

Here are the default ports for Zmodo units (last port # is the mobile port):

H9104, H9108, H9106, H9116: 80, 9000, 18004

**H9114, H9118**: 80, 5050, 6050, 7050

H9124, H9128, DR-SFN6: 80, 9000, 15961

H8000/H8100 series: 80, 7777, 8888

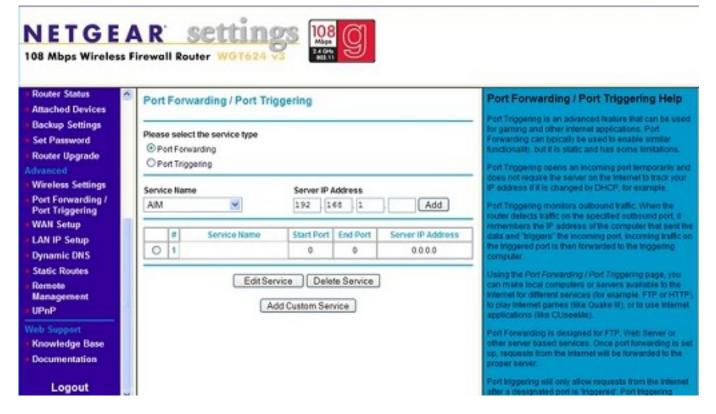
**Note**: If you are using a DSL internet service, you may need to use port 81 (instead of 80) as your web port. If so, be sure to change this in your DVR's network settings, and restart the unit. Once the port number is changed, you will need to use it when connecting to the unit (ie. <u>http://192.168.1.1</u> becomes <u>http://192.168.1.140:81</u>)

3)Below are screenshot samples of common router's Port Forwarding sections. Please note that exact locations may differ depending on your router's model. If your model is not listed, try looking through Advanced, Firewall, or Forwarding sections in your router to find the exact location.

Applications & Gaming		Wireless-6 Breadband Router wets-st.									
	Setup Wireless		Security Access			Applications & Garning	Administration	Status			
	Port Range F	anward 1		Fort Trig	izaring I	0HZ	6v5				
Port Range Forward								Port Range Fee	rwarding:		
				Per	i Range			Certain application to open specific			
	Application	51	ert	End	Professel	IP Address	Enable	for 8 to Function Examples of the			
		0	10	Ú.	Both 💌	152.168.10		include servers online games .Vi	dien is request		
		0	10	0	Both 🖌	132.168.10.0		for a certain por the internet, the	router will rout		
		0	10	0	Both M	112.168.10.0		the data to the co specify. Due to a	security		
		Û.	10	Û	Both 🛩	152.168.10		port for working	to only those		
		0	10	0	Both M	192.168.10 0		ports you are us uncheck the Ena after you are fin	vole checkbox		
		0	10	0	Both M	182 160 10 0		More			
		0	to	0	Both 💌	192.168.10					
		0	10	0	Both M	192.168.10.0					
		Û.	10	0	Both 🛩	192.168.10.0					
		A	-	A		1					

In Linksys routers, you will typically enter Applications & Gaming, then Port Range Forward. Exact names/places will differ depending on model. Be sure to create forward 1 port range per line, and check the 'Enable' box at the end of the line, then save changes.

Netgear



In Netgear routers, you will typically look under Advanced for Port Forwarding/Triggering. Select Port Forwarding as your service type. Then, select 'Add Custom Service' for each port you forward.

**D-Link** 

Product: DSL-27408					Firmware Version: EU_5.17
D-Lin	ĸ				
DSL-27408	SETUP	ADVANCED	MAINTENANCE	STATUS	HELP
Port Forwarding	PORT FORWARD	ING			Helpful Hints
Application Rules	This is the ability to oper	ports in your router and re-dire	ct data through those ports	to a single PC on your	Check the Application Name drop down menu for
QoS Setup	network.				a list of predefined applications. If not you
Outbound Filter	PORT FORWARD	ING RULES CONFIGURAT	TION		can still easily define a new rule.
Inbound Filter	Remaining number o	f rules that can be created:	48		More_
Wireless Miter					C THE OWNER
DNS Setup	Name		External Port TCP	Internal Port TCP	
Firewall & DMZ				<u> </u>	
Advanced Internet	IP Address	<< Computer Name +	UDP	UDP	
Advanced Wireless	Use Interface:	pppos_0/pppoa0 +	81	1. 19	
Advanced LAN	Use interfaces	[bbbca_o/bbbcao +]			
SHAP Setup		Add/Ap	ply		
Remote Management					
Routing Setup	ACTIVE PORT FO	RWARDING RULES			
Wi-Fi Protected Setup	Name Address	xternal Port Internal Port	Protocol WAN Inter	face Edit Remove	
Logout					
Britan State					

For D-Link Routers, you will enter Advanced, then Port Forwarding. Click 'Add/Apply' when you have finished each rule.

Belkin

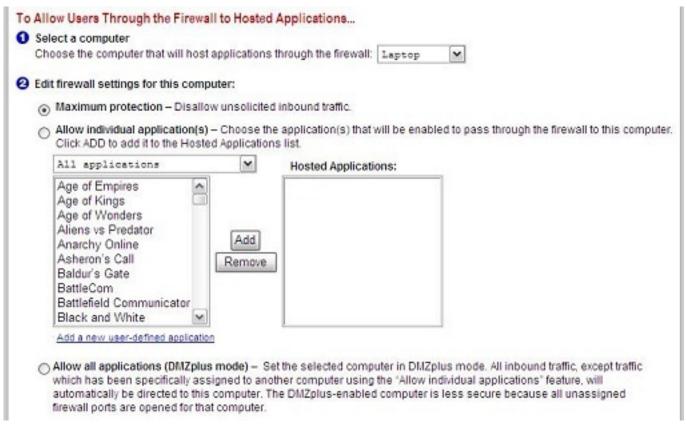
BELKIN		Route	ar Setup Utility	Hor	me   Help   Log	out Internet Status: Con	nected
LAN Setup LAN Settings DHCP Clent Unit	Fire	This fund				es such as a web server (p a your internal network, <b>No</b>	
Internet WAN Contection Type DNS MAC Address	L		Add Active World Clear entry 1	5	ly Changes	Add     Clear	
Wireless Channel and SSID		Enable	Description	Inbound port	Type	Private IP address	Private port
Security	1.	E		•	BOTH .	192.168.2.	
	2,				BOTH .	192.168.2.	
	з.			•	BOTH .	192.160.2.	
Firewall	4.	8		-	BOTH .	192.168-2.	-
Virtual General Cleat P Filters	5.				BOTH -	192.168.2.	
MAC Address Filtering	6.				BOTH .	192.160.2.	-
	7.	8		-	BOTH .	192.168.2.	-
	٥.	11			BOTH .	192.168.2.	
Security Log	9,			· ·	BOTH .	192.168.2.	-
Utilities		-		1.1.1			

For Belkin routers, access port fowarding under Firewall, Virtual Servers. Be sure to check the 'Enable' box, then hit the 'Set' button, and save your changes.

#### 2-Wire

For 2-Wire modems, enter Firewall, then Advanced Settings.

Manuals
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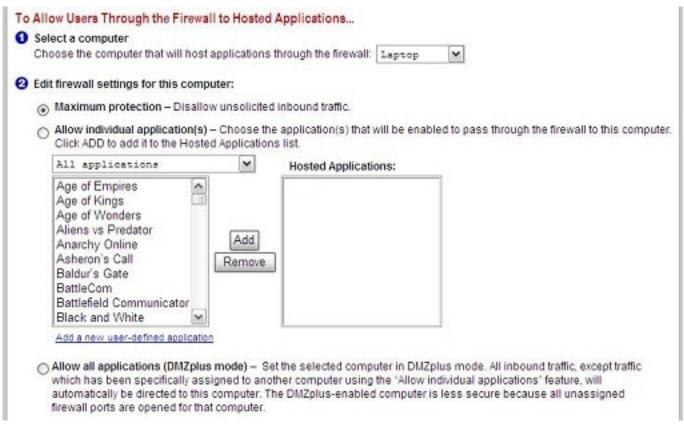


First, look for the DVR's IP address under (1) Select a computer. If you do not see the DVR's IP address here, you may need to go in to the DVR's Network Settings, and set the DVR to DHCP (instead of Static), then reboot the DVR. Once the unit reboots, check it's IP address in the Network Settings, then go back to your router to select the DVR from the list.

Next, you will need to click on "Add a new user-defined application", to come to the this new screen:

Profile Name				
Enter a name for th	e applica	tion profil	e that you are	creating.
Application Name:	Γ			
Definition				
ADD DEFINITION to application requires need to add multipl	s multiple	ports or		tion List If the 1 UDP ports, you will
changes in addition to	simple po	rt forwardi	ng. If the appli	equire specialized firev cation you are adding ended that you select it
Protocol:	@ T0	P	CUDP	
Port (or Range):	From:		To:	
		<b></b>	TCP defa	
		5.5	UDP defa	ult 600
(seconds):				ult 600 the same port as define
Protocol Timeout (seconds): Map to Host Port: Application Type:	None	(Defeu	Default = above.	

Create your rule, and click 'Add Definition'. Create a rule for each port. Then, click Back.



When done, select each application you have created, and click 'Add', so that you see the desired applications in the Hosted Applications table. When finished, click 'Done' at the bottom of the screen.

#### Netopia

For Netopia routers, click on the Configure tab at the top of the page.

Home	Configure Tr	oubleshoot	Security	Install					Restart	Help	
notonia	Home Configu	re									
netopia. Duickstart LAN WAN Advanced	<ol> <li>Make a G</li> <li>Click Su</li> <li>Make mid</li> <li>Click the</li> <li>If your ch</li> </ol>	<ol> <li>Make a change to a field or parameter.</li> <li>Click Submit. This change isn't permanent; you'll save it later. The Alert button (top right corner) appears.</li> <li>Make more changes, if desired.</li> <li>Click the Alert button. The Save Changes page appears.</li> <li>If your changes are validated, you can save them. If not, a descriptive message appears.</li> <li>Choose Save and Restart. The Gateway restarts with your changes.</li> </ol>									
	Quickstart		For most users, Quickstart includes everything needed to configure a connection to y Provider.							Service	
	LAN	Confi	Configuration options for the Local Area Network side of the Galeway.								
	WAN	Confi	Configuration options for the Wide Area Network connection on the Gateway.								
	Advanced		nced configu e changing a					user docume	ntation or help	o text	
				02	003 Netopi	la, ínc.					

### Next, click on Advanced.

Configure Troubleshoot Sec	curity Install Restart	Hel
Home > Configure > Advanced		
	Network Configuration	
IP Static Routes	Build IP static route table	
IP Static ARP	Build IP static ARP table	
	NAT	
Pinholes	Set up pinholes through NAT	
IPMaps	Set up NAT one-to-one IP address mappings	
Default Server	Set up NAT default server options	
NAT Table Monitoring	Set up NAT Table Monitoring options	
	Services	
Differentiated Services	Set up Differentiated Service options	
DNS	Set up DNS options	
DHCP Server	Set up DHCP server and relay-agent options	
RADIUS Server	Set up RADIUS server options	
SNMP	Set up SNMP community, trap and system group options	
IGMP	Set up IGMP options	
Access Control	Set up Access Control	
UPnP	Enable or disable Universal Plug'n'Play	
LAN Management (TR-06	64) Enable or disable DSL Forum LAN-Side DSL CPE Configuration services	
Ethernet Bridge	Set up ethernet MAC bridge	
	Miscellaneous	
	Home > Configure > Advanced	Configure > Advanced           Network Configuration           P Static Routes         Build IP static route table           P Static ARP         Build IP static ARP table           NAT         Pinholes         Set up pinholes through NAT           Pinholes         Set up INAT one-to-one IP address mappings           Default Server         Set up NAT default server options           NAT Table Monitoring         Set up NAT default server options           NAT Table Monitoring         Set up INS options           Differentiated Services         Set up DIfferentiated Service options           DINS         Set up DNS options           DHCP Server         Set up DNO server and relay-agent options           SNMP         Set up SNMP community, trap and system group options           SNMP         Set up IGMP options           Access Control         Set up Access Control           UP/nP         Enable or disable Universal Plugh/Play           LAN Management (TR-064)         Enable or disable DSL Forum LAN-Side DSL CPE Configuration services

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From the Advanced menu, click on Pinholes.

Home	Configure 1	Froubleshoot	Security	Insta	ill in the second s		Restart	Help
	Home > Config	gure > Advance	d > <u>Pinholes</u>	i > Edi	t Pinhole			
netopia.			P	inhol	e Entry			
Quickstart		P	inhole Name					
LAN		P	rotocol Selec	at (	ТСР ≑			
Advanced		E	xternal Port S	Start	0			
		E	xternal Port E	End	0			
		In	ternal IP Add	iress	192.168.1.0			
		In	ternal Port	[	0			
				Sub	omit			
		_				-		

Create your rule, then hit 'Submit', and repeat for each port. When you have completed, click on the yellow triangle with an '!' inside (located at the top righthand corner) to save your changes.

#### **Checking Your Connection**

4) Once you have forwarded all ports necessary for your DVR, you'll want to check and make sure each of these ports was successfully opened. To check this, go to <u>http://www.yougetsignal.com/tools/open-ports/</u>

Here, you will see fields for **Remote Address** and **Port Number**.

To check that your ports are open, enter each port you've forwarded (one at a time) in to the Port Number field, and click 'Check'.

If you see a green flag, and a statement "Port X is open on XXX.XXX.XXX.XXX", you have fowarded your ports correctly. You are now able to view your DVR remotely.

If you see a red flag, the port is not open. Go back in to your router, and double check at all information is correct. In some cases, a port may be blocked by your ISP. To find out why, or to request it opened, please contact your ISP.

**Important**: The Remote Address that you see is **your DVR's external IP address**. This is the address that you will use to access your DVR from a different computer. Write this down!! And remember, ActiveX settings must be changed on each new computer that you are viewing from before you'll be able to bring your DVR up.

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