

There are two ways connection allow you to watch your device remotely.

- 1. IP/Domain Connection aka IP Port forwarding
- 2. P2P Connection aka PTCloud connection

Here is the comparison table, but personally I prefer to use the IP/Domain access:

	IP/Domain Access	PTCloud connection	Comment
Connection Speed	Faster	Fair	
Port Forwarding?	Yes, Need	No need	But PTCloud do require connect DVR/NVR to 1st level router only
Live View Channel	Up to 16	Up to 16	
Playback Channel	4	1	
Browser Support	Internet Explorer only (IE Only)	NA	
Download Video	Support	NA	
Two Ways Audio	Yes, NVR / IPC	Yes, LTS Connect Only	
Push Notification	Х	Yes	NVMS7000 support IP/Domain with Push Notification.
Fisheye Support	Yes	Х	
Alarm Support	Yes	Х	
PTZ Support	More, Call Preset	Basic	
Share Settings	Х	Cloud Access Only	

## **IP/Domain** Port forwarding (UPnP Simple / Manual Port Forward)

There are two ways to program your router port forwarding.

- 1. UPnP Port forwarding using router UPnP function.
- 2. Manually Program Port forwarding from the Router.



This method does require two things:

- 1. Connect DVR/NVR to the 1<sup>st</sup> Level Router.
- 2. The router must support UPnP port forwarding. (ie. NETGEAR router)



**This KB Shows** 

**IP/Domain** 

**Port forwarding Only** 



Try UPNP first

## Simple way Port Forwarding UPnP Port Forwarding

UPnP is the easiest way to do the port forwarding, but you must support these requirements first.

Requirement:

1. Connect DVR to the 1<sup>st</sup> level Router.

2. Router must support UPNP function.

## Configure from the Local DVR Console•

- 1. First, set DVR IP to DHCP. Go to **MENU > Configuration > Network** Enable DHCP, and Apply
- 2. Go to NAT section. Enable UPnP

Change Mapping Type to Manual Mapping, then Apply at the bottom.

泰 General	General PT Cloud PPPOE	DDNS	NTP Email SN	IMP NAT More Settings		
& Network	Enable UPnP		<b>1</b>			
	Mapping Type		Manual			
\land Alarm	Port Type	Edit	External Port	External IP Address	Port	UPnP Status
,∉ RS-232	HTTP Port			0.0.0.0		Inactive
	RTSP Port	1	8554	0.0.0.0	8554	Inactive
<ul> <li>▲ Live View</li> </ul>	Server Port	1	8000	0.0.0.0	8000	Inactive
▲ Exceptions	HTTPS Port	<b>1</b>	443	0.0.0.0	443	Inactive
at Lipor						Refresh
D POS						
★ Live View					Apply	Back

- 3. Go to General tab, and wait for 10sec. Then, Go back to NAT section again.
- 4. <u>If the UPnP Status section shows all Active</u>, and the External IP address is not 0.0.0.0. Then, <u>the port forward is completed</u>.
- 5. Go back to Network > General tab. Disable DHCP and Apply. Then, you are ready to go!
- 6. If all UPnP status still shows inactive, then you need manual doing the port forwarding from your PC.

### •Configure from PC (IE Browser) •

- 1. Go to Configuration > Network > Basic Settings
- 2. Go to NAT, Enable UPNP, Change Port Mapping Mode to Manual. Click Save

Platinum	Live View P	layback Config	juration		
Local	TCP/IP DDNS ✓ Enable UPnP™	PPPoE Port NA	T		
Network	Port Mapping Mo	ode Manual	~		
Basic Settings	Port Type	External Port	External IP Address	Internal Port	Status
Advanced Settings	HTTP	80	172.01.102.86	80	Valid
. Video/Audio	RTSP	8554	173.91.102.85	8554	Valid
🔝 Image	Server Port	8000	172,91,182,98	8000	Valid
Event	HTTPS	443	172.01.102.05	443	Valid
🖺 Storage					
Ko VCA					



## Manual Port Forwarding Traditional Port Forwarding / Trouble Shooting

There are many kinds of router. I only list one example in there. You can do the same way for all others.

\*\*Remember always write down the info what you find into the Notepad.

Windows PC version:



 Now, type Notepad <Enter> to open the notepad program Write down all the information you need to know.

/// Untitle	d - Notepad	—	×
File Edit	Format View Help		
THIS PC	192.168.0.5		~
GW	192.168.0.1		
DVR	(find the IPv4 from the DVR)		
0.00T			
PORT			
80			
8000			
8554			
OUTSIDE	IP:		
=======			~
<			>



CMD

- Now, find out and write down the DVR/NVR IP address into the notepad.
   For example, my DVR IP is 192.168.0.200
- Please watch out the DVR IP address! <u>192</u>. <u>168</u>. <u>0</u>. xxx First 3 group of ip# must be same as your PC address. If it is not the same, troubleshoot first. see Appendix 2 – How to set up DVR/NVR IP address

/ Unti	tled - Notepad —	×
File Ed	it Format View Help	
THIS P	C 192.168.0.5	^
GW	192.168.0.1	
DVR	192.168.0.200	
PORT		
80	If you don't know the DVR/NVR, see	
8000 8554	Appendix 1 - How to find the DVR/NVR IP	
OUTSID	E IP:	
======		~
1		5

5. Open Browser and type DVR IP (for example, 192.168.0.200) address to verify it first.

				C		×
(→)  192.168.0.200	$\rightarrow$	Search 🔎	-	<b>ff</b> 7	<b>k</b> 0	E 😃
🖉 Login 🛛 🗙 🎦 🧲						
		Sign in with your account admin [ Login	777	English		×

Make sure you can see this login page first.

6. Open another browser tab. Now, we need to program the Port forwarding in your Router. Usually, your GW (Gateway) IP is your router IP. For example, 192.168.0.1 (ARRIS Router)

	192.16	58.0.1	$\times$	+ ~										-	
$\rightarrow$	Ö	ώ	i) 192.1	68.0.1/								□ ☆	≵≡	L	ß
		AR	RIS		Wireless	HSD	Logo	ut							
		Login													
		LOGIN			Login The default user as \$, !, ?, &, #, @	name is 'admin'. Va ②, and others.)	alid character	s are the numbers	0 to 9, the le	tters a through :	z, and printal	ble special cha	racters (suc	:h	
					Login										
					User Name			admin		?					
					Password			•••••	۲	?					
					Apply										
		-	-	-	-	-	-		-	-			-		
					Password Apply			••••••	Φ	3					

Default router username & password: admin password

#### 7. After Login to the router. Go to Firewall > VIRTUAL SERVERS / PORT FORWARDING

ARRIS	Wireless	HSD	Logout				
asic Setup WAN Setup	LAN Setup	Wireless 2.4 GHz	Wireless 5 GHz	Firewall	MoCA	Utilities	
FIREWALL	Firewa	III Settings	k.				
FIREWALL SETTINGS	Your Router in	s equipped with a firev	wall that will protect yor	ur netwo	ide array of common	n hacker attacks includin	g Ping of
VIRTUAL SERVERS / PORT	Death (PoD) a	and Denial of Service /	(DoS) attacks. You car	n turn the firewall fu	inction off if needed.	Turning off the firewall p	rotection w
PORT TRIGGERS	not leave your	r network completely v	ulnerable to hacker at	tacks, but it is recon	mmended that you to	in the firewall on whene	ver possibi
CLIENT IP FILTERS							
CLIENT IPV6 FILTERS	Firewall	Enable/Disabl					
DMZ	Enable Fire	wall					
PARENTAL CONTROLS							
ALG	DoS Atta	ack Protection					

(Note: ARRIS router must enable the Firewall. If you disable the firewall, it also disabled the port forwarding)

8. Then, adding the Port Forward rule. Common Ports: 8000, 8554 and 80

sic Setup WAN Setup	LAN Setup Wireless 2.4 GH	z Wineless 5 GHz Firewall	MoCA	U	tilities
REWALL	Virtual Servers	Port Forwarding			
REWALL SETTINGS	This function will allow you to rout	e external (Internet) calls for services su	ich as a web serve	r (port 80), FT	P server (Port 21), or of
RTUAL SERVERS / PORT	Add Virtual Server	o vour internal notwork			
ORT TRIGGERS	Add the cual beitter			111	
LIENT IP FILTERS	Description	DVR8000	3	999	
JENT IPV6 FILTERS	Inbound Port	8000 to 8000	2	Address	Local Port
KZ	Format	TCP ~ 2		0.150	8008-8008
RENTAL CONTROLS	Private IP Address	192.168.1.200	2	0.150	555-555
			1 .	0.450	070.070

9. After finish adding. Go to <u>www.CanYouSeeMe.org</u> to check the Port# (for example, 8000) forward is a success or fail. If it is **success**, then you just finish the port forwarding. Use your smartphone to view.

Open Port Check Tool									
This is a free utility for remotely verifying if a port is open port forwaring and check to see if a server is running o	n or closed. It is useful to users who wish to verify r a firewall or ISP is blocking certain ports.								
Success: I can see your service on a set on port (8000) Your ISP is not blocking port 8000	Common PortsFTP21SSH22Telnet23								
Your IP: HIEREN H	SMTP 25 DNS 53 Your Outside IP								



# **Appendix 1 – How to find DVR/NVR IP Address**



IPv4 is your current DVR/NVR IP address

**Trouble Shooting:** If your network IP address is 192.0.0.64, then you need to check your network signal first. Either it is not connected to the router, or the cable is broken.

## Appendix 2 - How to Setup DVR/NVR IP Address

Go to DVR/NVR,

**MENU > Configuration > Network** 

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泰 Gener	ral			<u>(</u>	General	PT Cloud	PPPOI	E DDNS	NTP	Email	SNMP	NAT	More Settir	ngs		
윤 Netwo	ork			,	NIC Ty	pe				10M/	10M/1000M Self-adaptive					
Enable DHCP					☑ (	☑ 2										
▲ Alarm NEW IPv4 Address 192.168.1 .57									IPv6 Address 1	fe80::2a57:beff:fe89:6a66/64						
IPv4 Subnet Mask 255.255.255.0					IPv6 Address 2											
• R0-202			IPv4 De	efault Gatev	fault Gateway 192 . 168 . 1 . 1				IPv6 Default Gateway			IPv6 Default Gateway				
Play	back	•			MAC Address					28:5	/:be:89:6	a:66				
土 Expo	ort	•			MTU(B	ytes)				1500						
¤5 VCA	Search	•	General		Enable	DNS DHC				<ul><li>✓</li></ul>						
🗳 Man	iual	•	Network	1	Preferr	ed DNS Sei				192.168.1.1						
🚔 HDD	>	•	Alarm		Alterna	te DNS Ser	ver									
🕮 Rec	ord	•	RS-232							100						
🖷 Cam	nera	•	Live View		Internal	I NIC IPv4 A	ddress			192.	168.188	.1				
© Con	figuration	•	Exception	:												
🦋 Mair	ntenance	•	User												<b></b>	
🖒 Shu	tdown	•	POS												Apply	Back

# **Reference:**

•	dex.htm				Q 🖣 🔂 📈
NETGEAD	'aonio'				Logout
WNR2000v5	genie				Firmware Versio V1.0.0.2
BASIC ADVANCE	σ				Auto
ADVANCED Home	Port Forwarding / P	ort Triggering			
Setup Wizard	Please select the service tv	pe.			
WPS Wizard	<ul> <li>Port Forwarding</li> </ul>				
► Setup	Port Triggering				
► Security	Service Name FTP •	Server IP Address	+ Add		
Administration	#	Sonvico Namo	Extornal Ports	Internal Ports	internal IP a
<ul> <li>Advanced Setup</li> </ul>	#	Service Name	External Ports		
Wireless Settings	Edit Service	× Delete Service	+ Add Cust	om Service	Arrange by interr
<u>Wireless AP</u>					
Port Forwarding / Port Triggering					
Dynamic DNS Static Routes					
etationtoutoo					

# Linksys

Firewall DMZ A	lops and Gaming				
Firewall		Internet filters			
IPv4 SPI firewall protection IPv4 Enabled		Filter anonymous Internet requests			
IPv6 SPI firewall protection 🔀 Enabled		Filter multicast			
VPN Passthrough		Filter Internet NAT redirection			
IPSec Passtbrough		Filter ident (Port 113)			
PPTP Passthrough	Enabled				
L2TP Passtbrough	Z Enabled				
IPv6 Port Services					
Description	Protocol	IPv6 Address	Allow	Enabled	
				-	