DVR / IP CAMERA NETWORK SETTING

1. What is the PHYSICAL & VIRTUAL IP address?

Under networking environment, several sets of numbers are used to identify each single networking device (PC/DVR/IPCAMERA/ROUTE & etc). These number sets are not only for single network identification purpose but also acting as an interchange or a crossway on the road. This is why we hear terms like IP address, mask, gateway, DNS and so on.

Since the number of IP addresses is limited, there are two different kinds of IP: Virtual IP and Physical IP:

PHYSICAL IP: Means we could access to this device directly on the internet.

VIRTUAL IP: Means this IP using behind the ROTUE (ACCESS POINT), most user using. And we could found the IP address header as <u>10.x.x.x</u> or <u>172.16.x.x</u> or <u>192.168.x.x</u> will be virtual IP address, in most situations using <u>192.168.x.x</u>.

IANA (Internet Assigned Number Authority) suggest virtue/private IP address

IP	MASK	IP ADDRESS RANGE
10.0.0.0	255.0.0.0	10.0.0.1 10.255.255.254
172.16.0.0	255.240.0.0	172.16.0.1 172.31.255.254
169.168.0.0	255.255.255.0	192.168.0.1 192.168.255.254

Under private network if went network device connect to each other, at least <u>IP</u> <u>Address</u> & <u>MASK</u> & <u>GATEWATY</u> must be set. The <u>last IP address number</u> must differ from each other, but <u>Subnet mask</u> & <u>Default gateway</u> will be same.

2. How to set my own PC / DVR / IP CAMERA network setting?

PC (WIN XP)-> START -> Control Panel -> Network and Internet Connections -> Network Connections -> Double click on Local Area Connection # -> Properties -> Key in following address -> OK

🕹 Local Area Connectior Properties 🛛 🔹 🔀	Internet Protocol (TCP/IP) Properties
General Authentication Advanced	General
Connect using: Realtek RTL8139/810x Family Fast E	You can get IP settings assigned automatically if your network supports this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings.
This connection uses the following items:	Obtain an IP address automatically
Client for Microsoft Networks	Use the following IP address:
File and Printer Sharing for Microsoft Networks Boss Reset Scheduler	IP address: 192.168.0.2
Internet Protocol (TCP/IP)	Subnet mask: 255 . 255 . 0
Install	Default gateway: 192 . 168 . 0 . 1
Description	Obtain DNS server address automatically
Transmission Control Protocol/Internet Protocol. The default	Use the following DNS server addresses:
across diverse interconnected networks.	Preferred DNS server:
Show icon in patification area when connected	Alternate DNS server:
Notify me when this connection has limited or no connectivity	Advanced
Close Cancel	OK Cancel

DVR / IP CAM -> IPINSTALLER -> Search Device -> Searched device will list on "Device lists" -> Click on the device to modify / set up -> Submit -> Device Rebooting -> After 30 sec device as set.

IP Installer V2.0		IP Installer V2.0				
Device lists:		Device lists:				
IFCAM/DVR	Name	IFCAM/DVR	Name	IPCA	¶∕DVR	
	IP Address		IP Address	192 168	0	4
	Netmask		Netmask	255 255	255	0
	Gateway		Gateway	192 168	0	1
	DNS 1		DNS 1	0 0	0	0
	DNS 2		DNS 2	0 0	0	0
	Port		Port	8	0	
	MAC		MAC	00:0F:0D	:20:02:3	36
You can change Device name. IP addres 1) Select the Device you want to make 2) Change name. IP. Netmask, and Gate 3) Press Submit button or Enter 4) Press Search Device to rescan the	t Exit s, and Gateway Address: ochange way on right edit box installed IPCams	Search Device Submit You can change Device name, IP address 1) Select the Device you want to make 2) Change name, IP. Netnask, and Gatew 3) Press Submit button or Enter 4) Press Search Device to rescan the i	, and Gateway change ay on right ed nstalled IPCaw	E: Address: dit box as	it .	

3. If dial up to internet via ADSL/HUB, who to connect to each other?

DVR / IP CAMERA can be saved private & physical (PPPoE dial up) IP in the same time, thus we could access to DVR / IP CAMERA from private & physical IP both.

VIRTUE/PRIVATE IP PART (Please refer to above setting parts):

The <u>last IP address number</u> must differ from each other, but <u>Subnet mask</u> & <u>Default gateway</u> will be:





IP address: 192.168.0.4 Subnet mask: 255.255.255.0 Default gateway: 192.168.0.1

Dial Up Part:

PC (WIN XP)-> <u>START</u> -> <u>Control Panel</u> -> <u>Network and Internet</u> <u>Connections</u> -> <u>Network Connections</u> -> Double click on "<u>Create a new</u> <u>connection</u>" from Network Task item at left side -> Click "<u>Next</u>" on New Connection Wizard -> <u>Connect to the Internet</u> -> <u>Set up my connection</u> <u>manually</u> -> <u>Connect using a broadband connection that requires a user</u> <u>name and password</u> -> Key in ADSL ISP dial up name -> Fill in <u>Username</u> <u>& Password</u> -> a dial up icon created on Network Connections -> press <u>Connect</u> link to internet.

DVR / IP CAMERA

Open http://192.168.0.4/ on an Internet Explorer address bar, and login into DVR /IP CAMERA:

<u>Configuration</u> -> <u>Network</u> -> scroll down to <u>PPPoE</u> -> fill in ADSL dial up Username & Password -> press <u>Save & Dial Now</u>

PPPoE		Save & Dial Now		
🗹 Dial On Powe	er Up			
	Username	ac01418491		
	Password	•••••		

If dial up successfully, related physical IP address setting shown from very bottom.

PPPAE	Disconnect
Dial On Power Up	
Username	ac01418491
Password	
Send mail after dialed.	
Mail server	
Username on mail server	
Password	
Sender email	
Receiver email	
CC email	
Boo email	
Subject	IP Camera PPP Dialed
Subject	Sava Satting
	Save Setting
Remote IP: 211.78.218.40	
DNS 0: 168.95.1.1	
DNS 1: 139.175.55.244	
DNS 2: 0.0.0.0	
Gateway: 211.78.218.40	
Net Mask: 255.255.255.0	

DDNS setup

Note: DDNS service must be able connect DVR /IP CAMERA from internet directly.

Open http://192.168.0.4/ on an Internet Explorer address bar, and login into DVR /IP CAMERA:

Configuration -> DDNS -> Enable -> Name a UserName for DDNS -> Submit.

Dynamic DNS	http://192.	168.0.4	4	
🗢 Enable 🔍 Dischle				
UserName	IPCAM-DVR			
Schedule Update	5			
	State			
			Submit	

Schedule Update: Feature of DDNS schedule update is designed for IP products which installed behind the ICS or NAT devices. Update range from every 5 (minutes) to 5000 (minutes) and 0 remain to off.

Status will show "Updating".

Dynamic DNS	http://192.168.0.4	ļ.
● Enable ● Disable		
UserName	IPCAM-DVR	
Schedule Update	5	
	State	
Updating		~
		Submit

Schedule Update: Feature of DDNS schedule update is designed for IP products which installed behind the ICS or NAT devices. Update range from every 5 (minutes) to 5000 (minutes) and 0 remain to off.

Registered to <u>http://IPCAM-DVR.ddns.camddns.com</u> Dynamic DNS http://192.168.0.4

● Enable ● Disable	
UserName	IPCAM-DVR
Schedule Update	5
	State
Register DNS DVR.ddns.came	Entry : http://IPCAM-
	Submit

Schedule Update: Feature of DDNS schedule update is designed for IP products which installed behind the ICS or NAT devices. Update range from every 5 (minutes) to 5000 (minutes) and 0 remain to off.

4. If we using 169.168.x.x as the PRIVATE / VITURE IP address to connect 3 network devices, these setting at least will be:

The <u>last IP address number</u> must differ from each other, but <u>Subnet mask</u> & <u>Default gateway</u> will be same.



5. If we using 169.168.x.x as the PRIVATE / VITURE IP address to connect 3 network devices, and a broadband route (D-LINK DI-704P) access to internet by PHYSICAL IP, these PRIVATE / VITURE IP setting at least will be:

The <u>last IP address number</u> must differ from each other, but <u>Subnet mask &</u> <u>Default gateway</u> will be same. (The physical IP address setting by ISP differs thus please refer to your Internet Service Provider.) PRIVATE / VITURE IP address parts:

IP address: Subnet mask: Default gateway: (Route default setti	192.168.0.1 255.255.255.0 192.168.0.1 ng)
IP address: Subnet mask: Default gateway:	192.168.0.2 255.255.255.0 192.168.0.1
IP address: Subnet mask: Default gateway:	192.168.0.3 255.255.255.0 192.168.0.1
IP address: Subnet mask: Default gateway:	192.168.0.4 255.255.255.0 192.168.0.1

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6. How to view the IP CAM /DVR image from internet, if via broadband route (D-LINK DI-704P) and a dynamic PHYSICAL IP access to internet?

If DVR / IP CAMERA setting as below:



 IP address:
 192.168.0.4

 Subnet mask:
 255.255.05

 Default gateway:
 192.168.0.1

 Port:
 80 (Preset)

ROUTE SIDE:

Open <u>http://192.168.0.1/</u> on an Internet Explorer address bar, and login into broadband route:

Advanced -> Virtual Server -> Virtual Server HTTP -> Click on edit icon to edit the virtual service -> Enabled -> Key in DVR / IP CAMERA IP address -> Apply (Now we can viewing via dynamic physical IP, for DDNS service please refer following DVR / IP CAMERA side).



DVR / IP CAMERA SIDE

Open http://192.168.0.4/ on an Internet Explorer address bar, and login into DVR /IP CAMERA:

Configuration -> DDNS -> Enable -> Name a UserName for DDNS -> Submit.

Dynamic DNS	http://192.	168.0.4	4
🗢 Enable 🔍 Diszble			
UserName	IPCAM-DVR		
Schedule Update	5		
	State		
			Submit

Schedule Update: Feature of DDNS schedule update is designed for IP products which installed behind the ICS or NAT devices. Update range from every 5 (minutes) to 5000 (minutes) and 0 remain to off.

Status will show "Updating".

Dynamic DNS	http://192.168.0.4	1
● Enable ● Disable		
UserName	IPCAM-DVR	
Schedule Update	5	
	State	
Updating		<
		Submit

Schedule Update: Feature of DDNS schedule update is designed for IP products which installed behind the ICS or NAT devices. Update range from every 5 (minutes) to 5000 (minutes) and 0 remain to off.

Registered to <u>http://IPCAM-DVR.ddns.camddns.com</u> Dynamic DNS http://192.168.0.4

● Enable 🕒 Disable	2	
UserName	IPCAM-DVR	
Schedule Update	5	
	State	
Register DNS DVR.ddns.came	Entry : http://IPCAM-	
	[Submit

Schedule Update: Feature of DDNS schedule update is designed for IP products which installed behind the ICS or NAT devices. Update range from every 5 (minutes) to 5000 (minutes) and 0 remain to off. 7. How to view the various IP CAM /DVR image from internet, if via broadband route (D-LINK DI-704P) and a dynamic PHYSICAL IP access to internet?

We must separate IP CAM / DVR's port number first, thus we modify IP CAM & DVR port number from 80 to 8888 & 9999, modify ports please refer to "How to set my own PC / DVR / IP CAMERA network setting" DVR / IP CAM parts.



IP address: 192.168.0.4 Subnet mask: 255.255.255.0 Default gateway: 192.168.0.1 Port: 8888

Port:



IP address: 192.168.0.5 Subnet mask: 255.255.255.0 Default gateway: 192.168.0.1 9999

ROUTE SIDE:

Open <u>http://192.168.0.1/</u> on an Internet Explorer address bar, and login into broadband route:

As IP Camera:

Advanced -> Virtual Server -> Enabled (from very upper) -> Name a name for memory (IPCAM) -> key in private IP address (192.168.0.4) -> Private & Public Port (8888) -> Schedule (always) -> Apply

Virtual Server Virtual Server is u	used to allow Internet users access to LAN services.
	Enabled Obisabled
Name	IPCAM
Private IP	192.168.0.4
Protocol Type	TCP 💌
Private Port	8888
Public Port	8888
Schedule	 Always
	○ From Time 00 💌 00 💌 To 00 💌 00 💌
	day Sun 💌 to Sun 💌
	on 😏 🖸
	Apply Cancel Help

As DVR:

Advanced -> Virtual Server -> Enabled (from very upper) -> Name a name for memory (DVR) -> key in private IP address (192.168.0.5) -> Private & Public Port (9999) -> Schedule (always) -> Apply

Virtual Server Virtual Server is u	used to allow Internet users access to LAN services.
	⊙ Enabled ○ Disabled
Name	DVR
Private IP	192.168.0.5
Protocol Type	TCP 💌
Private Port	9999
Public Port	9999
Schedule	 Always
	○ From Time 00 ♥: 00 ♥ To 00 ♥: 00 ♥
	day Sun 💌 to Sun 💌
	🌍 🙆 🔂
	Apply Cancel Help

The Server List will be added:

Virtual Server List				
Name	Private IP	Protocol	Schedule	
Virtual Server FTP	0.0.0.0	TCP 21 / 21	always	📝 间
Virtual Server HTTP	0.0.0.0	TCP 80/80	always	📝 📋
Virtual Server HTTPS	0.0.0.0	TCP 443/443	always	📝 📋
Virtual Server DNS	0.0.0.0	UDP 53753	always	📝 📋
Virtual Server SMTP	0.0.0.0	TCP 25/25	always	📝 📋
Virtual Server POP3	0.0.0.0	TCP 110 / 110	always	📝 📋
Virtual Server Telnet	0.0.0.0	TCP 23/23	always	📝 📋
IPSec	0.0.0.0	UDP 500 / 500	always	📝 📋
PPTP	0.0.0.0	TCP 1723 <i>1</i> 1723	always	📝 间
DCS-900,DCS-1000	0.0.0.0	TCP 80/80	always	📝 📋
DCS-2000,DCS-5300	0.0.0.0	TCP 800/800	always	📝 间
DCS-3120	0.0.0.0	UDP 5002- 5003 / 5002- 5003	always	D 🗎
IPCAM	192.168.0.4	TCP 88887 8888	always	21
🗹 DVR	192.168.0.5	TCP 99997 9999	always	

If route get the physical IP as 219.86.41.41, thus the IP camera would http://219.86.41.41:8888 & DVR http://219.86.41.41:9999 on an Internet Explorer address bar from internet,

Home	Advanced	Tools	Status	Help		
Device Informa	tion					
	Firmware Version: V3.06b01, Fri, Aug 27 2004					
LAN	LAN					
	MAC Address	00-0F-3D-17-A5-C	1			
	IP Address	192.168.0.1				
	Subnet Mask	255.255.255.0				
	DHCP Server	Enabled				
WAN						
	MAC Address	00-0F-3D-17-A5-C)			
	Connection	PPPoE Connected Connect Disco	nnect			
	IP Address	219.86.41.41				
	Connection Time 00:02:10					
	Subnet Mask	ask 255.255.255.255				
	Gateway	219.86.41.41				
Do	omain Name Server	168.95.1.1, 139.17	5.55.244			

🗉 IP Camera - Microsoft Internet	Explorer 📃 🗖 🔀	🗿 IP Camera - Microsoft Interne	t Explorer
Eile Edit View Favorites Iools Help		<u>File E</u> dit <u>V</u> iew F <u>a</u> vorites <u>T</u> ools	Help 🧦
🕒 Back 🝷 🕥 - 💌 😰 🏈	🔎 Search 🤺 Favorites 🧑 🂙	🕝 Back - 🕥 - 🖹 🛃	🗳 🔎 Search 🤺 Favorites 🥝 🂙
Address http://219.86.41.41:8888	Go Links 🎽	Address http://219.86.41.41:9999	Go Links 🌺
	IP Camera		IP Camera
Image Adjust		Image Adjust	
Best VQuality	IPCAM 6/14/2005 19:50:23	Best v Quality VGA v Resolution	IP_CAM_82F 0/14/2005 19.5600
-Advanced-		-Advanced-	
Operation Mode	and State For at The metric	Operation Mode	
Image Capture		Image Capture	
Configuration		Configuration	
Delete Camera	atching: nttp://219.66.41.41:8888 Add	Delete Camera	vvatching: http://219.86.41.41:9999 Add
E Done	🔮 Internet	🙆 Done	🔮 Internet