DVR Network Setup

Connect the DVR to a router using a networking cable. The cable should snap in on both ends. Check the network port lights on both sides. Power on the DVR.

On a computer connected to the same router as the DVR:

Go to the Start Menu and Search or Run “cmd”.

If using Windows 8, press Windows + X and select “Command Prompt”

Type in “ipconfig” and press enter.

Write down the IP address, subnet mask, and default gateway.

If using Mac OS X, go to System Preferences > Network > Advanced and note the IPv4 address, subnet mask, and router (gateway) address.

On the DVR, go to Menu->System->Network. The default login is “admin” with no password. Uncheck “DHCP enable”

Set the IP address to the same as the PC’s except the last 3 digits. The last 3 digits must be unique on the network (not used by any other device including the default gateway). If you don’t know which addresses are already in use, check your router’s list of connected devices. The last 3 digits should be less than 254 and greater than 1. Some routers may have additional restrictions on the range of allowed addresses. Here we have selected “112” for the last 3 digits. Write down the new IP address.

Set the Subnet and Gateway numbers to be same as the PC’s. The DNS number can be either your Gateway number, or the DNS address provided by your ISP.

Set Media Port to 7001 (if not being used by other devices on the same external IP) or other unused port. If 7001 is already used by another device on the local network, try using another available number. Take notes of port assignments.

Set HTTP Port to 7000 (if not being used by other devices on the same external IP). This port will be used by web browsers.

Click “OK”

Go to System->NetService->Mobile Monitor and set the port to 7002 (if not being used by other devices on the same external IP.) This port will be used by the mobile phone app. Make sure to check the “Enable” box.

[If you already assigned port 7002 to another device on the same local network, try using an unused number, such as 7003, 7004, etc. Note: the mobile port must be different from the media port. Every port assignment should be unique.]

[Optional]

Dynamic DNS allows you to access the DVR using a URL name instead of ip address. For example, we would access the DVR using “http://xxxx.no-ip.com:7000” in a web browser, where xxxx is user-specific.

If you wish to set up dynamic DNS, go to System->NetService->DDNS
Select from the available servers. You may need to sign up for an account. The service shown in this example is from noip.com

Fill out the fields with the DDNS account information and check the “Enable” button.

Click “OK”

You can also setup mail and FTP notifications in the other menu items.

On the router the DVR is connected to, you may set port forwarding for the DVR’s local IP address and port 7000 (HTTP port), 7001 (media port), & 7002 (mobile port) of the DVR. Port forwarding will allow for outside internet access to the DVR.

For your specific router, please check the router manual or go to http://www.portforward.com (select router and refer to the default guide) for reference.

Port forward on the local IP address of the DVR, port 7000-7002, and both UDP and TCP protocols. Make individual entries per port if necessary.

On our Linksys router, we went to Applications->Port Range Forward. We port forwarded ports 7000 to 7002 on both protocols to the local IP, and checked ‘Enable’. We clicked “save settings”.

If the current router is connected to another upstream router or modem/router, you may port forward on the upstream router to the current router on port 7000/7001/7002, the local IP address of the current router (log into this router to find its WAN address) and UDP/TCP protocols.
Local Internet Access
We can test the DVR’s local internet access by typing in the local IP address and port number in a web browser on a computer connected to the same router. Make sure to include “http://” at the beginning. Here, we typed in http://192.168.1.112:7000

Internet Explorer users
You will be prompted to install web.cab from PI Manufacturing. Proceed with this installation. It may take a couple of minutes. If you had a previous version of the driver installed, then you may be prompted thru a series of ActiveX controls (this could take several minutes.)
If you see a user access control dialog for “PI Manufacturing Corp”, you may allow it. When you see the login button read “Login”, you may log in (use “admin” and blank, or “admin” and “admin”).
The main DVR screen should show. If there are any problems, restart the browser and log in again. For further troubleshooting, please see the FAQ at end.

All users
The login is “admin” and no password (or “admin” as password.) This verifies that the DVR’s network hardware is working, and that the local IP address and HTTP port are correct. If you can’t access the login prompt, see the troubleshooting steps at the bottom.

Now we are ready to test outside internet access to the DVR.

Remote Access
We now need the external IP address. Using a computer on the same router as the DVR, check http://ip-lookup.net for the “WAN” IP address.

Using a web browser, type into the address bar “http://” and the external IP address of the DVR followed by “:7000” (see image on left). If you have a domain name for the DVR, you can append “:7000” to the domain name. Here, 362.223.13.45 is our external ip.

This screen should come up. If you do not get this screen, or if Internet Explorer does not work, see the troubleshooting steps at the bottom. You may log in with “admin” and no password. If Internet Explorer does not show any video, see the troubleshooting steps at the end.

Mobile Access
After setting up internet access using a computer, you can install the mobile app.

For Android, use vMEyeSuper or vMEyeCloud from the play store.
For iPhone/iPad, use vMEyeSuper or vMEyeCloud Lite from the app store.
For iPad, use vMEyeSuper HD.

Setup
Our example here is using the Android app (iPhone version will be similar.)
Go to “Device List” (if using the cloud app, go to device mode.)
Enter the IP (external IP, if used remotely) address or hostname of the DVR.
For “Port” or “TCP Port” enter port 7001 (or whatever is assigned to the media port.)
Do not use the mobile port.
Type in the login information.
Select the number of channels on the DVR.
Click “OK”
Expand the DVR dropdown. Click on a channel. Here, we click on channel 1.

It should say “Connecting” and show the video. It may take a few seconds. If it says “Successful Connection” without showing video, make sure the port number, ip, and login settings are correct, and restart the DVR or the camera.

You can click on another quadrant and make another channel selection.

After successful connection, you can verify that “Auto play” is selected under “Option”. This will automate the display of channels in the Live Preview mode.

On Android, you may use the back button to exit the app and save settings. The only way to save settings is to use the app to exit.

If you were not able to connect, make sure your mobile device is currently on wi-fi or data. Make sure you typed in the correct port. If you are at a remote location make sure the ip address is current external ip address of the DVR.

If the video lags on an IP camera during high motion, you can decrease the framerate for the “Extra” stream in the System > Encode settings of the camera (not the DVR). Another way is to set up another connection in the app going directly to the IP camera instead of the DVR. You would need to assign unique ports (not used by the DVR) in the camera’s networking settings, do port forwarding for the camera, and add a new connection in the app.

(OPTIONAL) ARSP Setup (some models)

On occasion the DVR’s external IP may change because of the internet service provider. The ARSP option allows for remote browser login to the DVR to check for the DVR’s current external address even if it changes. This would allow you to remotely look up the DVR’s current IP, and manually update it in the app settings. This can be useful if you choose not to use dynamic DNS.

Go to System > Netservice > ARSP
Check “Enable”
Server IP is xmsecu.com
Port, username, and password are default values and do not need to be modified.
Click “OK”, “OK”, and close

(OPTIONAL) ARSP Setup (2)
Go to Info > Version
Write down the MAC number.

(OPTIONAL) ARSP Setup (3)
Using a web browser, go to http://xmsecu.com:8080
and login using the MAC number.
If it fails to login, verify the MAC number, and try logging in again.
Current information about the DVR will be shown.
“True IP” is the current external IP address of the DVR.
Troubleshooting Tips

1. Can't log into the DVR from the internet.
Check the address bar to verify you are using the correct IP address and port number. Check every single digit because typos can be common. The address should start with "http://", followed by the external IP address, followed by the colon symbol and the port (".:7000"). Try another web browser to see if you can get a login. Make sure that any software firewall or hardware firewall is not blocking ports 7000-7002. Check for any port restrictions imposed by the router on both the DVR side and the remote computer side. Check all relevant settings including port filtering and application exception lists. Double check that the port and local IP addresses of the DVR are assigned for forwarding on the router. If you were previously able to access the DVR from the outside, make sure that the external IP address specified in the address bar is still valid (the router's external IP address may change from time to time.) If using Dynamic DNS, make sure your account has not expired or test with the DVR's current external ip address instead of the host name. Double check the settings on the DVR. Make sure the DVR can be accessed locally (see below). If you can access DVR locally but not remotely, there is a problem with port forwarding. Review your router port forwarding settings. Review the router manual. If the router is attached to another router upstream, you will need to do port forwarding from the upstream router to the current router.

2. No local network access to the DVR.
Make sure you are on the same router as the DVR. You can use the “ping” command from the command line (ie “ping 192.168.1.112”) to see if the DVR is accessible at all. Ping the local IP address that was assigned to the DVR. You should see response times from the DVR (no timeouts). If you get response times, you can log in locally using a web browser. If you get a timeout, reconnect the DVR's network cable on both ends, or test with another cable. Most network cables will snap in. You may also power cycle the DVR. Check network lights on the router and on the DVR network port. Try connecting to another physical port on the router. Make sure the DVR is using a unique local IP address. Check the validity of the IP address assigned on the DVR. Some routers have a numeric restriction on the range of local addresses (you may need to reassign a static address to the DVR.) Make sure you log in with the correct local IP address and port. Check every single digit because typos can be common. Go in the DVR menu and verify the assigned address numbers. Recheck your assigned web port, media port, and mobile port. Check firewall settings. Use another web browser. Access the DVR from another computer on the same router. Test the DVR with another router.

3. Internet Explorer can log in but no video
Click refresh or restart the browser. Make sure you port forwarded the media port. You can add the DVR to the local zone under Internet Options > Security > Local intranet > Sites > Advanced. Check Internet Explorer's security settings for ActiveX (set “Prompt” for “Download unsigned ActiveX controls”.) If the browser seems to take a long time or freeze, please allow a few minutes for the control to load.
If IE still doesn't work, you may use the CMS software that is on the CD (see below for setup.)
CMS usage
Here are the steps for using the CMS:
1) Install the CMS software from the CD.
2) Start up the software, and login with the default login (“Super” and blank.) You may check auto-login.
3) In the CMS, go to “System” -> “Device Manager”. If you see preexisting devices and zones that you don't recognize, you may remove them.
4) Go to “Add Area” and add a zone.
5) Highlight the zone, then click “Add Device”
   a) Click “IP Search”
   b) Highlight the device corresponding to the DVR.
   c) Enter the username and password. Click “OK” and “OK”
6) Highlight a quadrant.
7) On the left, double-click on the new zone, wait for connection, and then double-click an active channel to display.

4. IE ActiveX control crashes with NOD32 installed
In order to allow the ActiveX software to work, you will need to go to the Advanced Setup for NOD32. Expand “Web and E-mail” and click on “Protocol Filtering”.
In “Protocol Filtering”, click on “Excluded Applications” and then make sure a check is on Internet Explorer and the DVR software.

5. Android app loses settings.
Remember to exit the app using the hardware “back” button.
If autoplay does not play all channels, go to tools and select “Auto play” again.

6. Mobile access from the outside doesn't work anymore
Make sure the external IP address of the DVR has not changed. Test local internet access locally (and see troubleshooting case 2.)
If local IP access works, test with a PC (or another mobile device) at a remote location (and see troubleshooting case 1.)
Test with WiFi instead of data. You may need to restart the mobile device.

7. Camera drops out / poor picture
Make sure you have the correct password and login for each IP camera. See if you can log directly into the IP camera. Restart the DVR.
Make sure you are using a power adapter with the correct voltage and adequate amperage rating for the camera. Test with another power adapter if possible.
Make sure you are using quality cables between the DVR and the camera. Make sure the hub or switch the DVR is connected to can handle the bandwidth of multiple network cameras. A gigabit switch or router will have higher bandwidth and is better suited for multi-channel HD video streaming.

8. Internet Explorer crashes
Test this locally:
   You can add the DVR to the local zone under Internet Options > Security > Local Intranet > Sites > Advanced
If it still crashes, you can try using the CMS software on the CD (see previous step for instructions.)