



NETWORKING TUTORIALS



SETTING A RECORDERS NETWORK

NETWORKING A RECORDER

Making sure that the network settings on a locations recorder is set correctly is a very important duty. It will ensure less service calls, access to the recorder remotely, access to the recorder locally, and on sites where IP cameras are present it will ensure that the cameras stay running with no dropouts or skipping.

SETTING UP A NETWORK (BASIC INFORMATION)

- Make sure that all IP address on the network are different and there are not conflicting IP addresses. When addressing a NVR/IPC's make sure that the IP chosen is not the same as anything else on the network this includes printers, computers, tablets, cell phones, TVs, chromecast, fire stick, amazon Alexa, and more. Today anything can be on the network. Make sure to check for each IP address.
- Find the gateway on the network and make sure that the devices that are being added to the network have the same gateway and an IP address on that gateway. The Gateway and the IP address of the device are NOT the same.
- Make sure not to bottleneck the network, always use the uplink ports on the network switches.
- It is recommended to never daisy chain more than 3 switches together at a time
- It is recommended to have at least 10MBPS upload speed on a network for 8 cameras or more, and at least 5MBPS upload for anything under 8 cameras.
- It is recommended to have a full gigabit local network for 8 cameras or more, and a 10/100 fast local network for 8 cameras or less.
- When setting up a custom network or a standalone network just for the camera it is suggested to use a network IP scheme that is 100 different than the customer's network. Example if the customers network is a standard 192.168.1.xxx network it would be suggested to use a 172.16.1.xxx network for the camera.
- Find the network settings is best done from a computer on the local network. On a windows PC run a command prompt by opening the start menu and then typing "CMD" into the start search bar. Once in the command prompt run the command ipconfig. This command will list all of the computers network settings, search for the wired connections IP, Subnet mask, and Gateway. Then take note of each and copy the Subnet mask and gateway to the network settings of the recorder.

SETTING UP THE RECORDERS NETWORK SETTINGS

1. Right click on the live view of the recorder
2. Select the Main Menu from the right click menu

3. Log in using the 888888 or the Admin account. (Default password for 888888 is 888888, default password for the admin account is admin but some firmware versions request the admin password be changed on the first boot).
4. Once in the main menu navigate to the Network menu under settings (network in the bottom row)
5. In the network menu select TCP/IP from the sub menu selection on the left hand side.
6. Settings for the network menu
 - a. Mode: Static (always use this option when port forwarding) or DHCP (always use this option when using P2P)
 - b. IP address: If using static assign the recorder an IP matching the local network that is unique and different from other IPs on the network. On DHCP this will auto set and be grayed out.
 - c. Subnet Mask: Normally 255.255.255.0, it is suggested to run a command prompt on a pc from the local network and then run command ipconfig and match the subnet masks. On DHCP this will auto set and be grayed out.
 - d. Gateway: When using static match the gateway with the networks gateway. It is suggested to run a command prompt on a pc from the local network and then run command ipconfig and match the gateways. On DHCP this will auto set and be grayed out.
 - e. Preferred DNS: It is suggested to use 8.8.8.8
 - f. Alt DNS: It is suggested to use 8.8.4.4
 - g. MTU: Very often this will be 1500, if different for the network the customers IT department will set.
7. After setting the TCP/IP settings, navigate to Connection in the left hand menu.
 - a. Max Connections: 128
 - b. TCP: This is the recorders connection port used to stream the camera live video, this port needs to be opened for remote viewing.
 - c. UDP: This port is for streaming a fluid live non buffering stream, this requires very fast internet. This port does not need to be opened.
 - d. HTTP: This port is for viewing the recorder from the web browser this port will allow for the web portal login to be displayed. This port needs to be opened for remote computer access, but not for remote phone access.
 - e. HTTPS: This port is for a secure remote access that requires the user to install a security certificate. This port does not need to be opened unless being used.
 - f. RTSP: This port is for streaming video via the RTSP protocol, this is normally used for streaming to 3rd party VMS software.

USING A SECOND NETWORK

1. Things to remember: Take note of the video recorder's ports - labeled "1" and "2".
2. It is important that port "1" is plugged into the location's main network and port "2" is plugged into the camera network.
3. Network Settings Information:

4. Network Mode: Set up how each port is used and interacts with each other. Default Card: Sets what network port is being used to scan the network for cameras.
5. Ethernet Port: The port currently being modified (settings). IP Version: Sets what IP address version being modified. MAC Address: The permanent MAC Address for the recorder hardware Mode: Sets up the recorders IP address for "Static (Never changes)" or "DHCP (changes with network reboots or a unit reboot)" IP Address: IP Address for the currently selected Ethernet port. Subnet Mask: Subnet Mask for the network. Default Gateway: Default Gateway that matches the network or the camera network. Preferred DNS: DNS of the network Alternate DNS: DNS of the network
6. Multi-Address: Sets up different IP addresses and LAN gateway for each port Fault-tolerance: Binds two ports together to work as one; if one port goes down or has a wire or connection problem the other will continue to function Load Balance: Evenly distribute network load between each port
7. Select which port to modify settings using the Ethernet Port option
8. When setting up the second network port the only setting that will have to be changed is the subnet (3rd octet in the IP). Ensure the second network port and the first one are not on the same subnet. All cameras will need to be modified to be on the same subnet as the second network port. To do this, connect a PC with a static IP address matching Port "2" network information and use the ConfigTool to edit the camera's IP addresses. All camera's IP address last octet must be different from each other. Setting the Default network port
9. Next set the default card as "Ethernet Port2"; this will tell the recorder to use port "2" as the camera port. Port "1" will remain active to allow internet access from the main network LAN.
10. Go to "Remote Device" and do a "Device Search". Scan the network for all iMaxCamPro equipment. Look for all of the cameras with a subnet matching port "2". After checking off the cameras click "Add" this will add the cameras to the unit.

ADDITIONAL NETWORKING INFORMATION

Please visit us online and navigate to our support section. In our support section we offer a multipage guide on port forwarding and advanced network settings and information.

Having problems networking after the tutorials please call our technical support line (direct customers only. Exclude end users) at 866.334.6875 option 3