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ADDING 3RD PARTY CAMERAS TO A uniview tec RECORDER

LOCATING CAMERAS AND SETTING IP ADDRESS

All network devices are configured for either a fixed or automatic IP address. A fixed address is static. It has been manually configured and in most cases needs to be changed to match the network where the device is going to be connected. An automatic IP address is dynamic (DHCP). It is one that the device obtains from the network where it will be connected. Which address is best is determined by the network where it's going to be connected and is beyond the scope of this tech note. In most cases when a 3rd party camera is connected to a uniview tec NVR it should be using a static IP address. To change an IP address, most camera manufactures will make their own software for locating their cameras on a network. Using their program is always best since it should have optimal control as well as have the ability to change the IP address of the camera. For uniview tec cameras we have a similar program which is Guard Tool and is available for download from the univiewtechnology.com website. It can scan the network where the computer is connected and find uniview tec devices as well as many 3rd party devices. Guard Tool might also be able change the IP address of some 3rd party cameras.

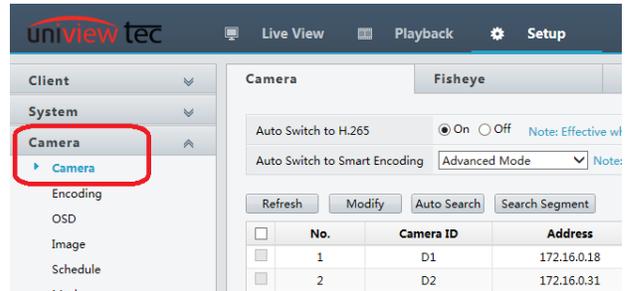
All	IP	Device Name	Model	Version	MAC	Configuration	Status
<input type="checkbox"/>	192.168.10.29	RU8NVR2	RU8NVR2	B3226P23C02510	e4f1:4c:01:c4:1e		Not logged in
<input type="checkbox"/>	192.168.10.57	IPV5E28	IPV5E28	IPC_D1202-B0006P20D1812	48:ea:63:af:01:70		Not logged in
<input type="checkbox"/>	192.168.10.85	HNR08	HNR08	B3305P02	e4f1:4c:0f:f9:c5		Not logged in
<input type="checkbox"/>	192.168.10.140	48-EA-63-99-B4-50	DC4K	R3706P57	48:ea:63:99:b4:50		Not logged in
<input type="checkbox"/>	192.168.10.200	NR16P2	NR16P2	B3326P30C12510T	e4f1:4c:02:18:06		Not logged in
<input type="checkbox"/>	192.168.10.210	IPCS4K22	IPCS4K22	IPC_HCMN2105-B0009P30D1711	48:ea:63:71:a4:9a		Not logged in
<input type="checkbox"/>	192.168.10.211	IPB5213M	IPB5213M IPB5213M	IPC_G6102-B5018P11D1711LJ02	48:ea:63:79:35:98		Not logged in

After locating your camera, setup the IP address appropriately to match the network where it will be connected. For example the default IP address for the camera ports on uniview tec NVR's is 172.16.0.x and uniview tec cameras are configured for DHCP. Once the addressing is setup for all of the 3rd party cameras the next step is to move on to adding them to the recorder.

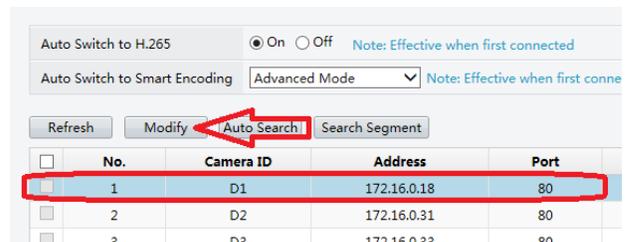
ADDING CAMERAS

Some camera manufacturers are supported by uniview tec Plug-and-Play and will automatically add to the NVR. If they do not automatically add, then cameras will need to be manually added. Adding your cameras can be done directly at the recorder or by browsing into the recorder. For this example we are adding cameras over the web browser.

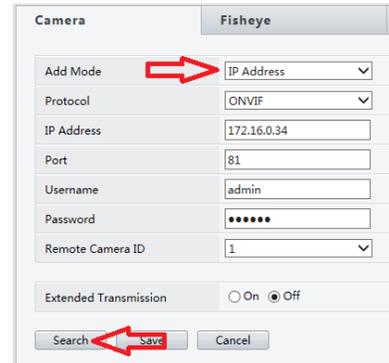
Browse to the recorder's IP address and login. Open the Setup page and navigate to the Camera > Camera menu. This menu is where you can add your cameras to the recorder, change the channel positions from the built in PoE Plug-and-Play to manual add.



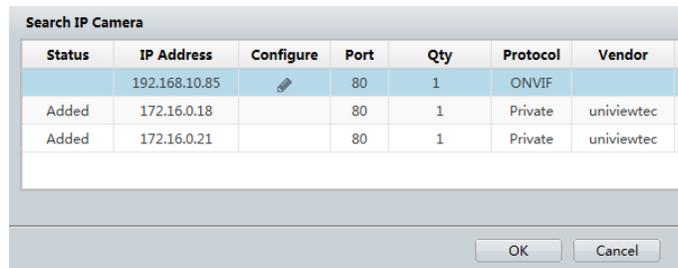
Highlight one of the channels and then click the Modify button at the top of the menu.



Change the Add Mode from Plug-and-Play to IP Address. Click on Search and the Search screen will come up. If your camera is listed select it and click OK.



Not all 3rd party cameras are supported so it might not have been discovered and will need to be manually entered.



Ensure that the IP address, user name, password, and HTTP port are correct.

In most cases when adding a camera select ONVIF as the protocol.

Once done with adding the camera click Save.

Note: Extended Transmission is for uniview tec camera only and should not be turned on for 3rd party cameras.

Client	Camera	Fisheye
System	Add Mode	IP Address
Camera	Protocol	ONVIF
Encoding	IP Address	192.168.10.96
OSD	Port	80
Image	Username	admin
Schedule	Password	*****
Motion	Remote Camera ID	1
Video Loss	Extended Transmission	<input type="radio"/> On <input checked="" type="radio"/> Off
Tampering	Search	Save
Privacy Mask	Cancel	
Snapshot		
VCA		

The NVR will try to communicate with the camera. Monitor the camera status icon.

Once successful communication is established the icon will turn green.

Protocol	Status	Vendor
Private		univiewtec

It might take a couple of minutes for the camera and NVR to communicate. So click on Refresh at the top corner of the menu to update the screen.

Once the icon goes green you are done and the camera is connected.

If the icon does not go green hover the mouse pointer over the status icon and it will provide more information, to assist with troubleshooting (see below).

Camera	Fisheye
Auto Switch to H.265	<input checked="" type="radio"/> On <input type="radio"/> Off
Auto Switch to Smart Encoding	Advanced
Refresh	Modify
Auto Search	
<input type="checkbox"/>	No.
<input type="checkbox"/>	1
<input type="checkbox"/>	2
<input type="checkbox"/>	3
	Camera ID
	D1
	D2
	D3

REASONS WHY A CAMERA MIGHT NOT CONNECT

1. The protocol was not set to ONVIF
2. The camera is not ONVIF compliant (preferably profile S and above). Please refer to Onvif.org. For cameras that don't support Onvif camera registration refer to Adding Cameras Using RTSP Stream
3. The IP address was entered incorrectly
4. The HTTP port was entered incorrectly
5. The camera is not compatible with the recorder. This can sometimes be resolved by updating the recorder and camera firmware to the latest revision.
6. The network is not properly setup at the local level. This means that the IP address of any device could be on the incorrect subnet, the IP is conflicting with another device, or the network is not properly wired / connected.

ADDING CAMERAS USING RTSP STREAM

In some instances you may have to add a 3rd party camera using the RTSP stream. To add a camera using an RTSP stream, from the camera menu select the channel you would like to add and click Modify.

Once on the Modify page you will want to change the add mode to IP Address and the Protocol to Custom. You will also need to enter the IP Address and the login credentials for the camera. As well, you will need to define the protocol settings. To do this you will need to click the Protocol button.

On the Protocol page you will need to fill in the information for the RTSP stream of the camera you are adding. One method of obtaining this is with the program Onvif Device Manager. In some cases the best source will be from the camera manufacturer.

After entering the information click the Save button on the protocol page.

Note: If you are adding multiple cameras of the same model, you can make your resource path generic by inserting <IP Address> and <Port number> where indicated on the RTSP stream. This will allow you to use the same Custom definition for those cameras and not define them individually.

Once you return to the camera Modify page click the Save button. This should add the camera as a RTSP stream. Monitor the camera status icon. If the camera does not connect you may want to test the RTSP stream. We suggest testing with the program VLC Media Player to confirm that the RTSP is valid.

Note: RTSP does not support advanced functions like motion detection and PTZ control

The top screenshot shows the 'Camera' configuration page in the 'Fisheye' tab. The 'Add Mode' dropdown is set to 'IP Address' and the 'Protocol' dropdown is set to 'Custom'. Both dropdowns are highlighted with a red box. Below these, there are fields for 'Custom' (set to 'Custom1'), 'IP Address' (172.16.0.15), 'Port' (0), 'Username' (admin), 'Password' (masked with dots), and 'Remote Camera ID' (1). There is also an 'Extended Transmission' section with 'On' and 'Off' radio buttons, and 'Search', 'Save', and 'Cancel' buttons at the bottom.

The bottom screenshot shows the same configuration page, but with a red arrow pointing to the 'Protocol' button located to the right of the 'Custom' dropdown.

The 'Protocol' configuration page shows the following fields: 'Custom' (Custom1), 'Protocol Name' (Custom1), 'Port' (554), 'Transfer Protocol' (UDP), 'Enable Main Stream' (checked), 'Resource Path' (rtsp://<ip>:<port>/), 'Enable Sub Stream' (checked), and another 'Resource Path' field (rtsp://<ip>:<port>/). Below these fields is an example RTSP URL: 'Example : rtsp://<IP address>:<Port number>/<Resource Path>'. There are also instructions for one channel, multi-channel, and camera ID offsets. 'Save' and 'Cancel' buttons are at the bottom.