

3rd PARTY INTEGRATION

Sometimes it is necessary to combine video surveillance equipment from other providers with uniview tec products. Uniview tec makes this possible through providing cameras and recorders that are Onvif compliant. When Onvif protocol is not possible, we can also integrate through RTSP.

Locating Cameras and Setting IP's

All devices on a network must be able to communicate with each other, so they use distinct numbers called IP addresses. IP addresses are like phone numbers. There is a **Network** portion, like a country or area code, and a **Host** portion, like those remaining digits. Where that division is made in an IP address is controlled by the **Subnet Mask**. Devices are configured with a **Static IP** or an automatically obtained IP (**DHCP**).

A static address is fixed and must be manually configured. With a DHCP, the address is provided by the network, it is both automatically obtained and can dynamically change. This presents the problem of trying to "call" the device on a "disconnected number". Therefore, If the cameras are not being directly connected to an NVR, we always recommend a static IP address be used.

Changing a camera IP address often requires software that most manufacturers supply. These tools can be used for locating and making basic settings changes. In some cases, the software from the provider is the <u>only</u> way to access their camera setup.

Note - To make any changes you almost always require the username and password for the device. If you don't have this you will likely need to contact the camera provider for assistance with resetting the camera.

Guard Tools is our program for uniview tec equipment. It can also be used to locate and make basic changes to **some** 3rd party devices. Guard Tools is available for downloaded from our website at <u>www.univiewtechnology.com/support-center/client-software-vms</u>. Once you have installed the necessary software on a computer that is connected to the same network as the equipment that you want to configure, you are ready to change IP addresses.

Change IP with Guard Tools

For our example, we will demonstrate how this is accomplished with uniview tec cameras. On launch, Guard Tools will locate uniview tec and other Onvif cameras on the network and display them in a list. As previously stated, the address to use will depend on the network. For example, the default IP scheme for the PoE ports on a uniview tec NVR is 172.16.0.x, the Network (area/country code) portion of the address.

The uniview tec NVR will occupy the 172.16.0.1 address, so a camera is being added to this network would need to have an address in the range of 172.16.0.2 to 172.16.0.254. No devices on the network should have the same address.

Guard Tools 2.0	Tot	al 12 de	vice(s)			5	J R	efresh		ର	Search Setup
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Device Cfg.					-						
111	1	Login	Manage Device Pass	sword	P Modify IP		\$	Devic	e Con	fig	
Channel Cfg.	1	Device Name	IP	Model	Op	eratio	n				Operation St
	₽	IPB5M28X	192.168.10.53	IPB5M28X		ł	2	Φ.	е	4	
Upgrade	~	IPB4K28AIX	192.168.10.54	IPB4K28AIX	Ē	IP	~	•	е	6	
*		HNR162X	192.168.10.57	HNR162X	Ē	IP	2	٥	е	4	
Maintenance		NR162XPC	192.168.10.59	NR162XPC		IP	۶	0	е	6	

New IP

Subnet Mask

Gateway

Select the desired camera and then click on the **Modify IP** button. Then click on the numbers to modify the **New IP** to an appropriate IP address and set **Gateway** to the router or NVR IP address. Once complete click **OK** on the bottom. If requested, enter the username and password for the

	192	168	10	20
t	255	255	255	0
	192	168	10	1

camera, the default credentials for uniview tec devices are username: admin and password: 123456.

After changing the camera's IP address, click **Refresh** to ensure it has changed.

If you click on the 😑 next to the camera, you will be taken to its web portal.

Change IP with Web Portal

To access the camera, you can also type the IP address of the camera into the address bar of a compatible browser. Once you login from that page, if the password was default, you will be prompted to change the camera password. Make a note of that password as it will be needed to access or register the camera in the future.

Navigate to **Setup** > **Network** > **Network**. Change the **Obtain IP Address** dropdown to Static.

Change the **IP Address** to your desired IP. Change **Default Gateway** to the recorder IP or, if on a local network, the router IP.

Uniview tec PLive View	📰 Playback	🖻 Photo 🌞 Setup	
Common	Network		
Network	-IPv4		
Network	Obtain IP Address	Static	~
DNS	IP Address	192.168.10.87	
Port	Subnet Mask	255.255.255.0	
DDNS	Default Gateway	192.168.10.1	

Only if you are using uniview tec cameras with a 3rd party recorder, there are some more changes to make here.

1. Disable RTSP/HTTP authentication in Setup > Security > Network Security > Authentication

2. Turn on Hide Vendor Info in Setup > Security > Registration Info

3. Set Video Compression to H.264 and turn off Smart Encoding in Setup > Video & Audio > Video

4. Upgrade the firmware by clicking **Detect** next to Cloud Upgrade in **Setup > System > Maintenance**

Note: 3rd Party Cameras may also have settings to make them more compatible with uniview tec equipment, contact support to find out more.

Registering 3rd Party Cameras

Registering a camera can be done directly at the uniview tec recorder or through its browser interface.

Browser Interface

Again, you can type the IP address of the recorder into a browser, or click \bigcirc in guard tools next to a listed recorder, then log in.

Navigate to **Setup** > **Camera** > **Camera** > **Camera**. Select a Channel and then click **Modify**. Change **Add Mode** to IP Address.

If the NVR does not have PoE ports, or has 32 or more channels, click on **Add** at the top of the camera page to get to the registration page, and IP Address will already be the **Add Mode**.

You can Enter the **IP Address** you set for the camera or click on **Search**.

You should see your recorder listed in the **Search IP Camera** list, select it and click on **OK**. It will populate the **IP Address** and possibly even change the **Protocol** to ONVIF.

If you did not use **Search**, you can manually change **Protocol** to ONVIF.

You will now need to update the **Username** and **Password** to that of the camera.

Click **Save**, and within about 1 minute your camera should connect.

The **Status** column will indicate the issue that connection is having, to

Status	IP Address	Configure	Port	Qty	Protocol	Vendor	Model	Serial No.
	172.16.0.22	Ø	80	1	Private	univiewtec	IPT4212MX	210235TKXKA216000173
	172.16.0.52	Ø	80	1	Private	univiewtec	IPB4K28AIX	210235TUHF3223000674
	172.16.0.58	Ø	80	24	ONVIF	univiewtec	HNR162X	210235XGC03233000020
	172.16.0.76	Ø	80	24	ONVIF	univiewtec	HNRXAI16	210235XB533211000035
	172.16.0.86	Ø	80	16	ONVIF	UniviewTec	HNR08	210235TA0MF18C000080
Added	172.16.0.13		80	1	Private	univiewtec	IPB4K212MX	210235TM3R3217000137
Added	172.16.0.14		80	1	Private	univiewtec	IPT528AIX	210235TQ71321A000209
Added	172.16.0.15		80	1	Private	univiewtec	IPT528AIX	210235TQ71321A000410
Added	172.16.0.16		80	1	Private	univiewtec	IPFE5360X	210235TTBL321B000277
Added	192.168.2.17		80	5	Private	univiewtec	IPFE12360X	210235U3A83234000008
Added	192.168.10.73		80	1	Private	univiewtec	IPCSD425X	210235XGV63235000026
	102 169 10 114		80	1	ONVIE	univiewtec	IPLPRB2447MX	210235U3BY3234000015

help you troubleshoot. You may have to navigate away from and back to the Camera page to get the **Status** indicators to refresh.



	uniview te	Ē	🖳 Live	e View	🛄 Pla	yback	٠	Setup	
	Client	*	Came	ra		Fisheye			
	System	~							
ſ	Camera	~	Auto	Switch to H.	265	● On () Off	Note: Effecti	ve wł
l	Camera		Auto	Switch to Sn	na Encodir	Advance	d Mo	de 🗸	Note:
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	OSD		Ken	esii	nouny	Auto Search	364	i ch segment	
	Image			No.	Ca	mera ID		Address	
		_		1		D1		172.16.0.1	8
	Schedule			2		D2		172.16.0.3	1
	NA - Al - A								



<u>RTSP</u>

If nothing seems to resolve the ONVIF connection issues, connecting by RTSP may be the only effective means of accessing your camera video. When connected by RTSP, the only available recording mode is 24/7 or **Normal** recording.

To add a camera using an RTSP stream, from the NVR Camera menu click on **Add**, or if editing an existing channel, select that channel and then click **Modify**.

Change the **Add Mode** to IP Address, and enter the **IP Address**, or use the **Search** feature. Change the **Protocol** to Custom, then enter the **Username** and **Password** for the camera.

Click the **Protocol** button to pull up the Protocol page.

Here you can set multiple custom protocols by selecting one from the **Custom** dropdown. You can rename that protocol

by typing a new name into **Protocol Name**.

Set the port by typing it into the **Port** textbox, for RTSP it should be 554 by default. This will be used in the <port> variable locations within the resource path.

Resource Path is where you fill in the stream path. DO NOT enter an IP address or port number in these fields, that portion is resolved by the **Port** option on line 3, and the **IP Address** field from the previous menu, when using this custom protocol.

uniview tec camera RTSP paths are as follows:

rtsp://<IP address>:<port #>/media/video<stream> OR rtsp://192.168.1.20:554/media/video1

Stream: 1 = main stream, 2 = sub stream



To access a camera on a uniview tec NVR or HVR: rtsp://<IP address>:<Port>/unicast/c<Channel>/s<Stream>/live OR

rtsp://192.168.10.200:554/unicast/c1/s0/live

Stream: 0 = main stream, 1 = sub stream. Channel: 1-16 = static channel from the recorder [%C] = A variable that links to Remote Camera ID

Using the variable [%C] can extend the functionality of your custom protocol. Instead of filling in a static connection to a single channel as in "unicast/c1/s0/live", we can set a variable channel by changing "1" to "[%C]" like this "unicast/c[%C]/s0/live". Now we can use that custom protocol and access the channel of that NVR equal to the **Remote Camera ID**. If the recorder has more than 16 channels, to access higher channel numbers we can adjust the [%C] variable to [%C+16]. In this case a **Remote Camera ID** of 1 would give us channel 17 from that NVR. So, with a custom protocol using [%C] and another using [%C+16], you could get access to 32 channels, repeat as needed. Don't forget to **Save**.

Using ODM to find RTSP resource paths

Device list

IPB4K28AIX

IPB5213MX

PLPRB2447MX

Adde

IPCSD425X

Firmware Address

Location

Location

Address Location

Manual

Add

IPBP4K180

Firmware Address 127.0.0.1 Location

Firmware Address 192.168.10.52 Location

Name, location or address Cancel

Firmware GIPC-B6202.9.5.C03135.NB.2 Address 192.168.10.212 Location

192.168.10.73

Firmware QIPC-B8701.13.11.230222 Address 192.168.10.211

10.0.0.130

Edit Delete

Refresh

ANPR-B1105.2.2.C00501.230 192.168.10.114

For locating an RTSP stream we recommend using Onvif Device Manager (ODM). Searching online it can be located at <u>https://sourceforge.net/projects/onvifdm</u>



Identification

Time settings

Maintenance

Certificates

System log

Relays Web page

Network settings

User management

Imaging settings

Analytics

Metadata

Profiles

PTZ control

Rules

Refresh

Live video

« IPLPRB2447MX

Οηνιέ

Download and install it on a computer that can be connected to the same network as the camera.

IPT4212MX

IPCSD425X Firmware Address 19 Location

IPLPRB2447MX

Firmware Address Location

ONVIF Device Manager v2.2.250

dress Cancel

0 22

192. 68.10.73

192.168.10.114

Once ODM is opened it will start locating Onvif devices and display them in a list on the left.

Type in the username and password at the top left of the screen and select your device.

IPB5213MX Firmware Address 192.168.10.212 Location

To the right there will be several options.

Click on Live Video.

At the bottom-right of the video screen it will display the RTSP URL.

It is recommended to test the RTSP since ODM is not always able to detect it correctly.

RTSP Testing with VLC

To test the RTSP stream we recommend using VLC Media Player. It can be located online at <u>https://www.videolan.org/vlc</u>. Download and install it on a computer that can be connected to the same network as the camera.

Open VLC.

Click on Media and then select Open Network Stream....



rtsp://192.168.10.114/media/video1

Type the RTSP URL into the **Please enter a network URL:** field and click **Play**. It will then have you enter the login credentials for the camera to access that stream.

If the stream information is correct video will be displayed. If no video is displayed the resource path may be incorrect. Check with the camera manufacturer for the correct path.

It is possible the stream may not request the username and password for the camera, or the RTSP port may be different, if so you can type the URL like this:

📥 Open Media	_	
🕑 File 📎 Disc 👎 Network 🖽 Capture Device		
Network Protocol		
Please enter a network URL:		
rtsp://192.168.10.114/media/video1		~
http://www.example.com/stream.avi rtp://@1234 mms://mms.examples.com/stream.asx rtsp://server.example.org/8080/test.sdp http://www.yourtube.com/watch?v=gg64x		
Show more options	ay 🔻	Cancel

rtsp://<username>:<password>@<IP>:<port>/<resource path> OR rtsp://admin:123456@192.168.1.20:554/media/video1

This will provide the username and password with the stream request and make that request to the port entered. This may provide video in some cases where it otherwise would not.

