

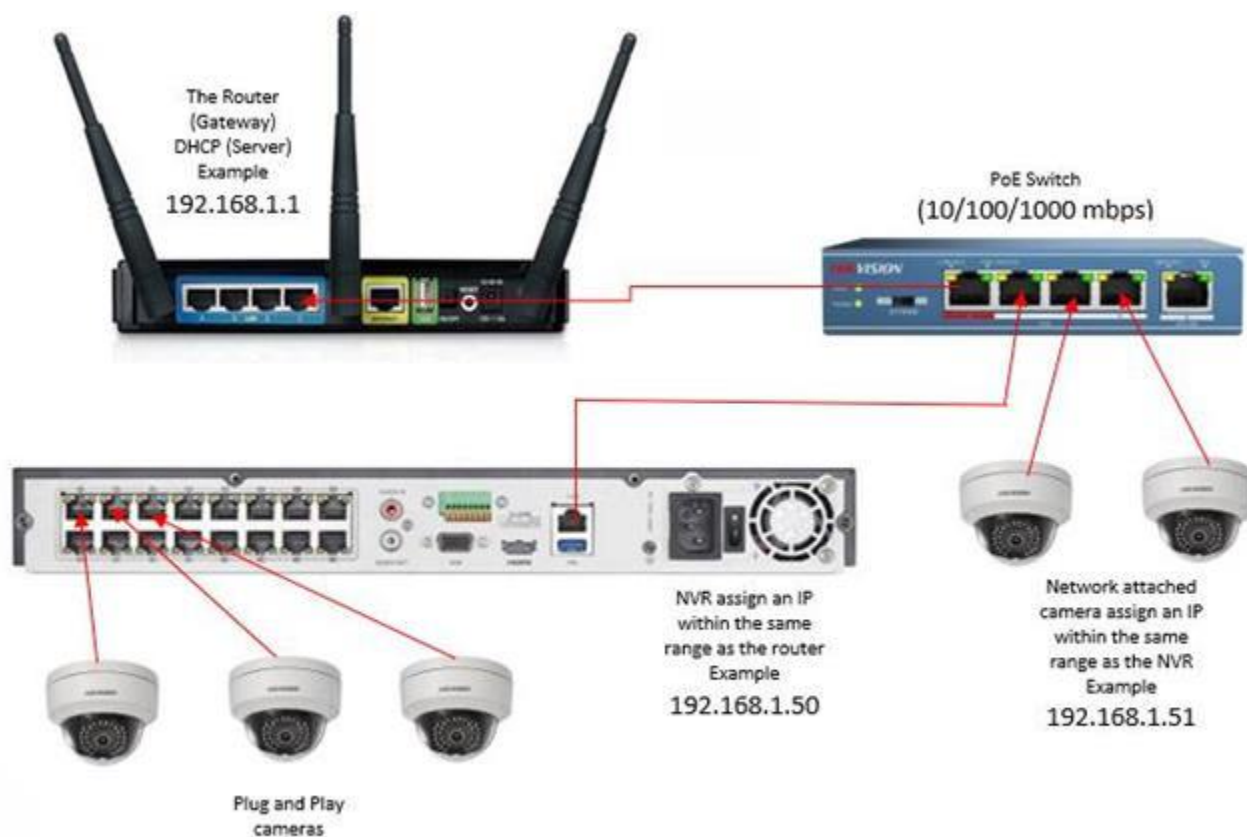
ADDING IPC TO RECORDERS USING EXTERNAL POE SWITCH

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PRODUCTS: HIKVISION CAMERA AND NVR GUI3 & GUI4

TOPICS COVERED IN THIS KBA: How to manually connect a camera to an NVR using external PoE switch

Typical network topology



Adding an IP Camera across a network connection we need to do the following:

1. Activate IP camera

- I. To activate an IP camera a PC/Laptop is required. Both IP camera and PC/Laptop must be on the same network (IP Range). Plug your PC/Laptop and the camera into an unused port on the POE switch.
- II. Make sure you have the latest SADP software on your laptop, if not download the latest SADP software from Hikvision's website.
- III. Run SADP tool.
- IV. Select "Inactive" Device and set a complex password to activate the camera.

Total number of online devices: 5

ID	Device Type	Status	IPv4 Address	Port	Software Version	IPv4 Gateway	HTTP Port	Device Serial No.	Subnet Mask	MAC Address	Encoding Channel(s)
001	D5-7732N6-14/16P	Active	10.0.0.126	8000	V3.3.5build 160115	10.0.0.254	8180	D5-7732N6-14/16P1620160222CCRR...	255.255.255.0	28-57-be-af-6d-57	0
002	D5-7616N6-12/16P	Active	10.10.0.84	8000	V3.4.8.3build 171124	10.10.0.254	80	D5-7616N6-12/16P1620160628CCRR...	255.255.255.0	bc-ad-28-a1-45-77	0
003	D5-2DF6223i-AEL	Active	128.100.0.56	8000	V5.4.9build 170123	0.0.0.0	80	D5-2DF6223i-AEL20150912CCWR54...	255.255.255.0	c4-28-90-cc-d5-02	0
004	D5-2CD2735FW0-12S	Active	128.100.0.54	8000	V5.5.3build 171025	0.0.0.0	80	D5-2CD2735FW0-12S20171118AAW...	255.255.255.0	b4-a3-82-53-18-da	0
005	D5-2CD2H85FW0-12S	Inactive	192.0.0.9	8000	V5.5.3build 171025	0.0.0.0	80	D5-2CD2H85FW0-12S20171118AAA...	255.255.255.0	b4-a3-82-46-56-aa	0

Activate the Device

The device is not activated.

You can modify the network parameters after the device activation.

Activate Now

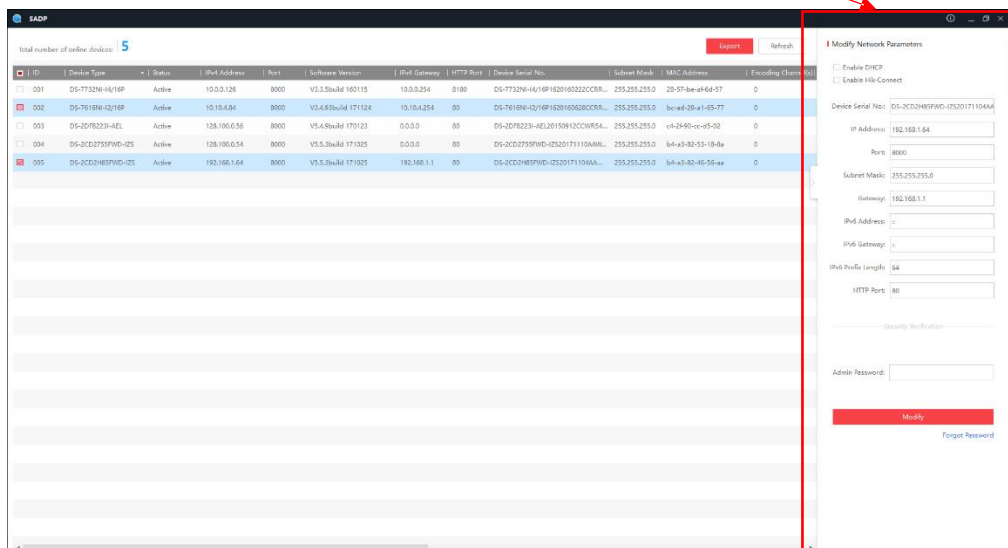
New Password:

Confirm Password:

☐ Enable Hik-Connect

OK

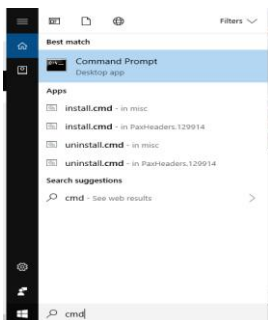
V. Once the device is Active you will be able to Modify Network Parameters (use ping test to find an available IP OR use the IP range your client has specified)



How to perform a Ping test

(Make sure to do ping test using the CMD to check if the IP/address is currently used or not.

From the start menu search CMD:



Type in ping (space) then the IP you want to test,

Ex1: Ping 192.168.1.2

As below the ping result shows reply (Time=<1ms TTL=128)

which means you can't use this IP address as it's been used by another network device.

```
C:\Users\>ping 192.168.1.2

Pinging 192.168.1.2 with 32 bytes of data:
Reply from 192.168.1.2: bytes=32 time=1ms TTL=128
Reply from 192.168.1.2: bytes=32 time<1ms TTL=128
Reply from 192.168.1.2: bytes=32 time<1ms TTL=128
Reply from 192.168.1.2: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.1.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 1ms, Average = 0ms
```

Ex2: ping 192.168.1.10

As below the ping result shows no-reply (Destination host unreachable)

Which means you can use the IP address

```
C:\Users\Amr>ping 192.168.1.10

Pinging 192.168.1.10 with 32 bytes of data:
Reply from 192.168.128.128: Destination host unreachable.
Reply from 192.168.78.3: Destination host unreachable.
Reply from 192.168.128.128: Destination host unreachable.
Reply from 192.168.128.128: Destination host unreachable.

Ping statistics for 192.168.1.10:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
```

VI. Enter the IP address details that you want this camera to have (**must be on the same network range as the NVR or it won't see them**), enter the password you activated the camera with and click modify

"it's recommended to put 0.0.0.0 to the gateway of the camera, to avoid communicating with the WAN network (router)

Modify Network Parameters

☐ Enable DHCP
☐ Enable Hik-Connect

Device Serial No.: DS-2CD2H85FWD-IZS20171104AA

IP Address: 192.168.1.64

Port: 8000

Subnet Mask: 255.255.255.0

Gateway: 192.168.1.1

IPv6 Address: □

IPv6 Gateway: □

IPv6 Prefix Length: 64

HTTP Port: 80

Security Verification

Admin Password: □

Modify

[Forgot Password](#)

Modify Network Parameters

☐ Enable DHCP
☐ Enable Hik-Connect

Device Serial No.: DS-2CD2H85FWD-IZS20171104AA

IP Address: 10.10.4.228

Port: 8000

Subnet Mask: 255.255.255.0

Gateway: 10.10.4.254

IPv6 Address: □

IPv6 Gateway: □

IPv6 Prefix Length: 64

HTTP Port: 80

Security Verification

Admin Password: □

Modify

[Forgot Password](#)

VII. The camera should now have the IP address you assigned

The screenshot displays the SADP interface with a table of online devices. A red arrow points to the IP address 10.10.4.228 in the table, which is assigned to device 005. The right sidebar shows the 'Modify Network Parameters' section for the selected device.

ID	Device Type	Status	IPv4 Address	Port	Software Version	IPv4 Gateway	HTTP Port	Device Serial No.	Subnet Mask	MAC Address	Encoding Channel(s)
001	D5-7732NI-14/16P	Active	10.0.0.186	8000	V3.3.5build 160115	10.0.0.254	8180	D5-7732NI-14/16P1620160222CCRR...	255.255.255.0	28-57-be-a1-6d-57	0
002	D5-7616NI-12/16P	Active	10.10.4.84	8000	V3.4.93build 171124	10.10.4.254	80	D5-7616NI-12/16P1620160628CCRR...	255.255.255.0	bc-ad-28-a1-65-77	0
003	D5-2DF822JI-AEL	Active	128.19.0.56	8000	V5.4.9build 170123	0.0.0.0	80	D5-2DF822JI-AEL20150912CCWR54...	255.255.255.0	c4-24-90-cc-d5-02	0
004	D5-2CD275FWD-1Z5	Active	128.19.0.54	8000	V5.5.3build 171025	0.0.0.0	80	D5-2CD275FWD-1Z520171110AAW...	255.255.255.0	b4-a3-82-53-18-8a	0
005	D6-2CD2H85FWD-1Z5	Active	10.10.4.228	8000	V5.5.3build 171025	10.10.4.254	80	D6-2CD2H85FWD-1Z520171104AA...	255.255.255.0	b4-a3-82-46-56-ae	0

Modify Network Parameters

☐ Enable DHCP
☐ Enable H4-Connect

Device Serial No: D5-2CD2H85FWD-1Z520171104AA

IP Address: 10.10.4.228

Port: 8000

Subnet Mask: 255.255.255.0

Gateway: 10.10.4.254

IPv6 Address:

IPv6 Gateway:

IPv6 Prefix Length: 64

HTTP Port: 80

Security Verification:

Admin Password:

Modify
[Forgot Password](#)

2- Now you need to assign the cameras to the NVR, there are two ways to do it,

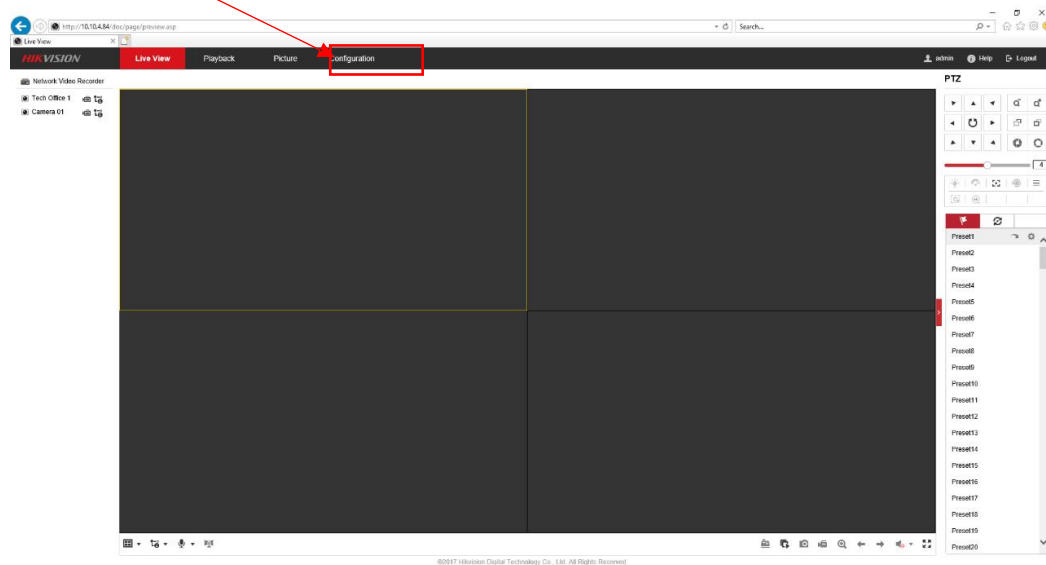
Method 1) Web-Interface of the NVR

Method 2a) Local-GUI of the NVR V3.X

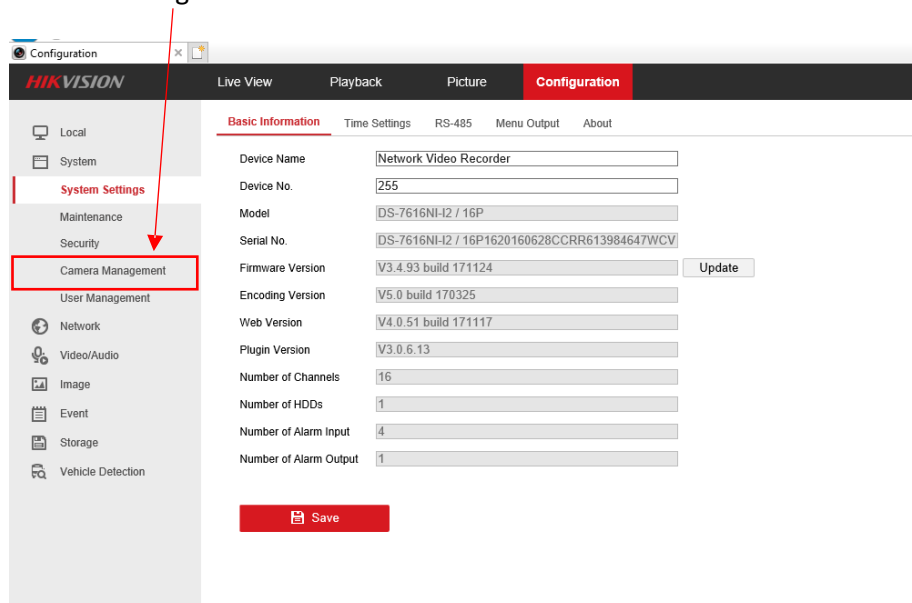
Method 2b) Local-GUI of the NVR V4.X

In this section of the KBA we going to discuss how to assign the cameras to the NVR using Method 1.

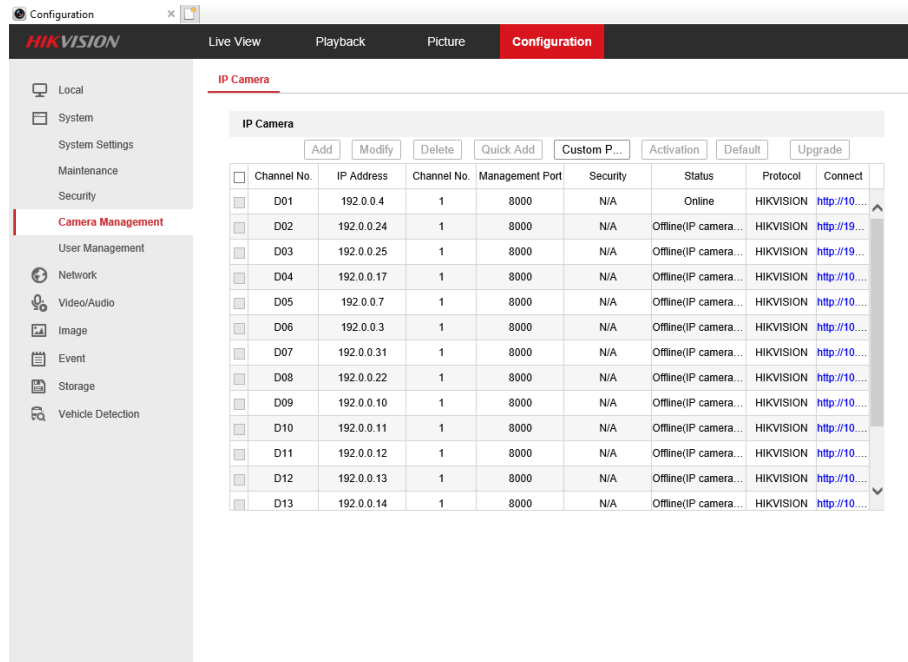
- Using Internet Explorer web browser enter the IP address of your NVR into the address bar
- Log into the NVR using the admin credentials.
- Select configuration



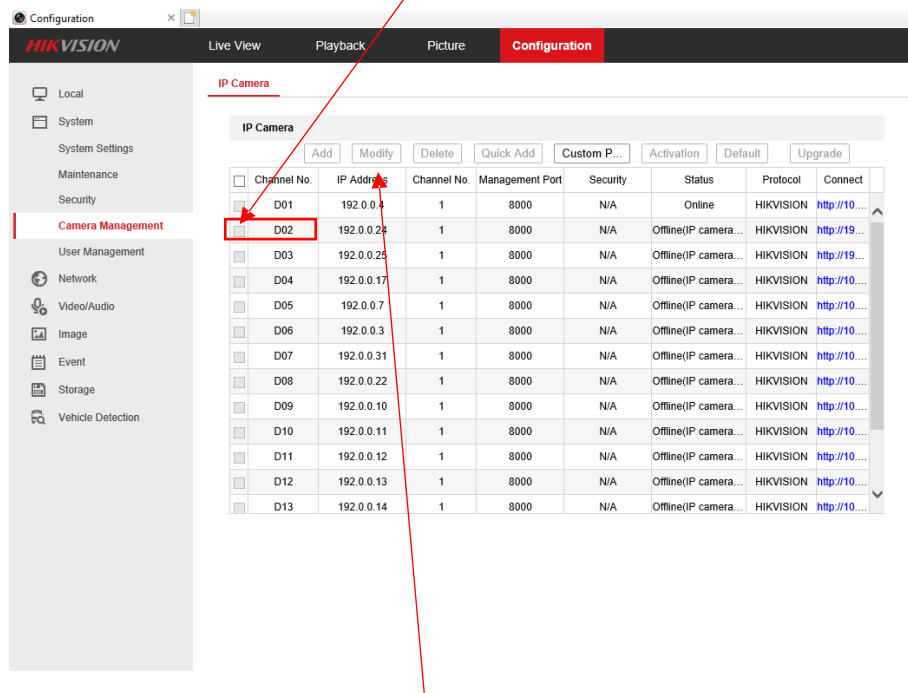
- Then select Camera Management



- You will be presented with the Camera Management screen as follows



- Select the camera channel that you wish to modify (**NOTE: Once a network camera has been assigned this channel cannot be used for plug & play, for example cannot plug camera in o this PoE Port**)



- Select Modify to enter the camera IP details

- You will have the following screen open and you will need to change the adding method to manual

The image shows two screenshots of the 'IP Camera' configuration window. The left window has 'Adding Method' set to 'Plug-and-Play'. The right window has 'Adding Method' set to 'Manual'. Red arrows indicate the change from 'Plug-and-Play' to 'Manual'.

- You will now be able to enter in the IP address details (1) and login credentials (2) for the camera you wish to add, once your details have been added click OK (3)

The image shows the 'IP Camera' configuration window with 'Adding Method' set to 'Manual'. Red boxes and numbers 1, 2, and 3 highlight the 'IP Camera Address' field, the 'Password' and 'Confirm' fields, and the 'OK' button respectively.

- Your camera will now be added but will show as being offline

<input type="checkbox"/>	D02	10.10.4.228	1	8000	N/A	Offline(IP camera...)	HIKVISION
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- Select a different menu option and then select Camera Management again to update the camera status and it should now report that its online

<input type="checkbox"/>	D02	10.10.4.228	1	8000	Weak	Online	
--------------------------	-----	-------------	---	------	------	--------	--

- Repeat the process for all network cameras

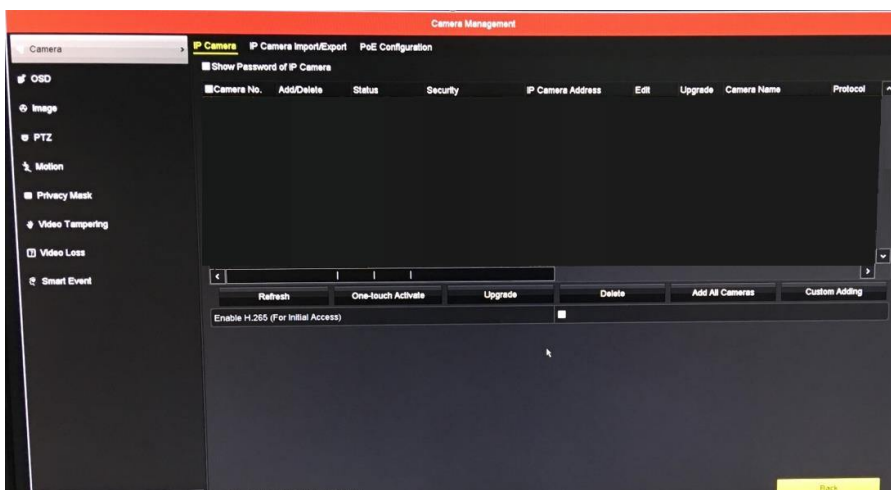
In this section of the KBA we going to discuss how to assign the cameras to the NVR using Method 2a.

- Log into the NVR and go to Camera Management,
- For unit which has Plug and Play Ports, you will see there are already channels in the list, these channels can't be deleted as it's corresponding to the PoE ports on the back.

Camera management for PoE recorder:

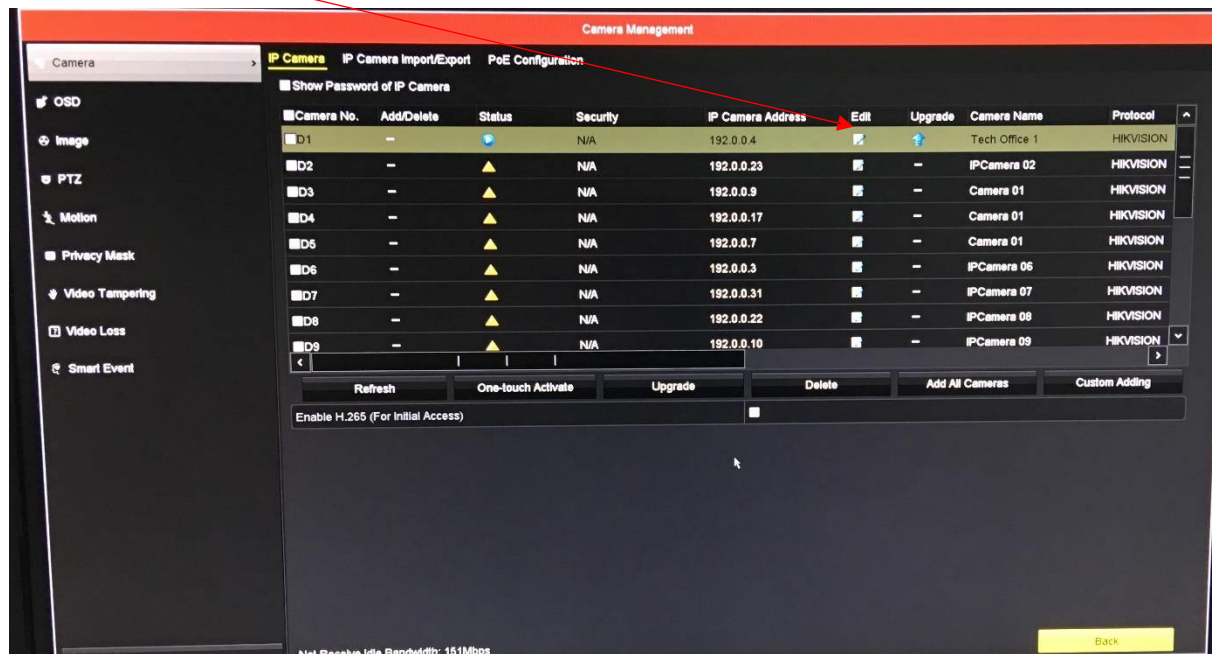


Camera management for Non-PoE recorder:

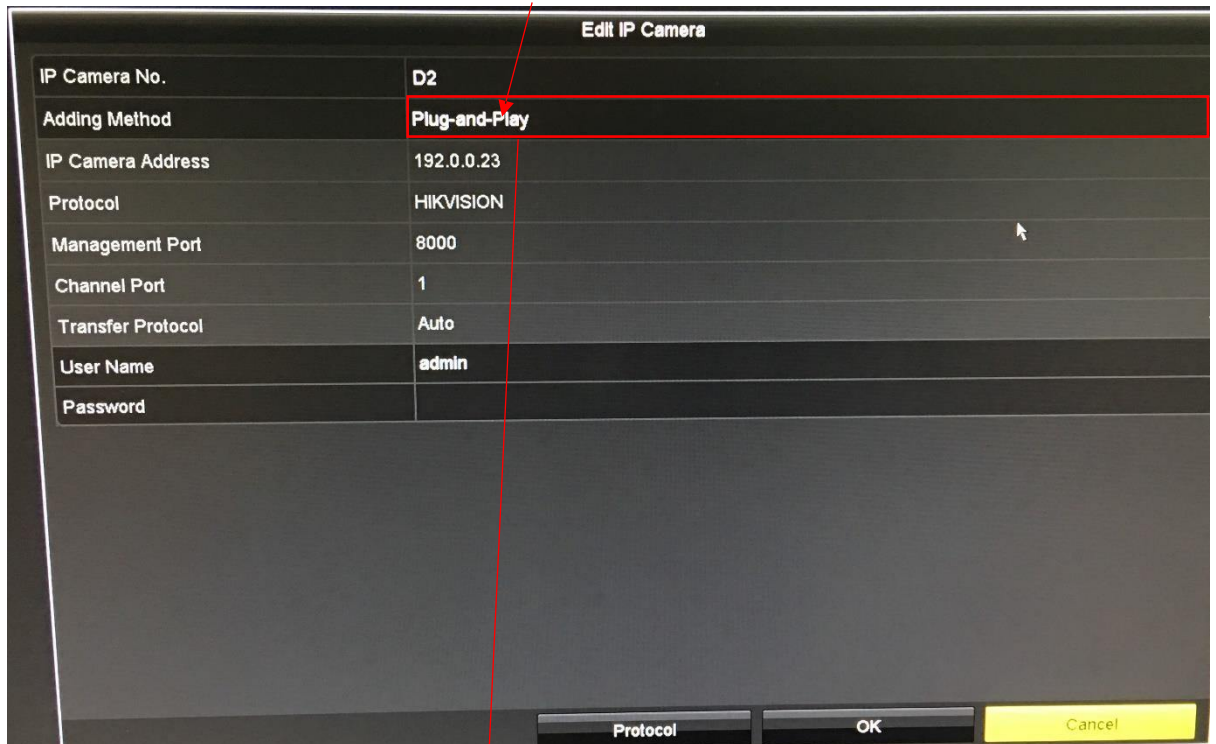


If your Recorder has Plug and Play ports, then all you will need follow the below procedure:

- i) Click the Edit button to change the channel from plug and play to Manual



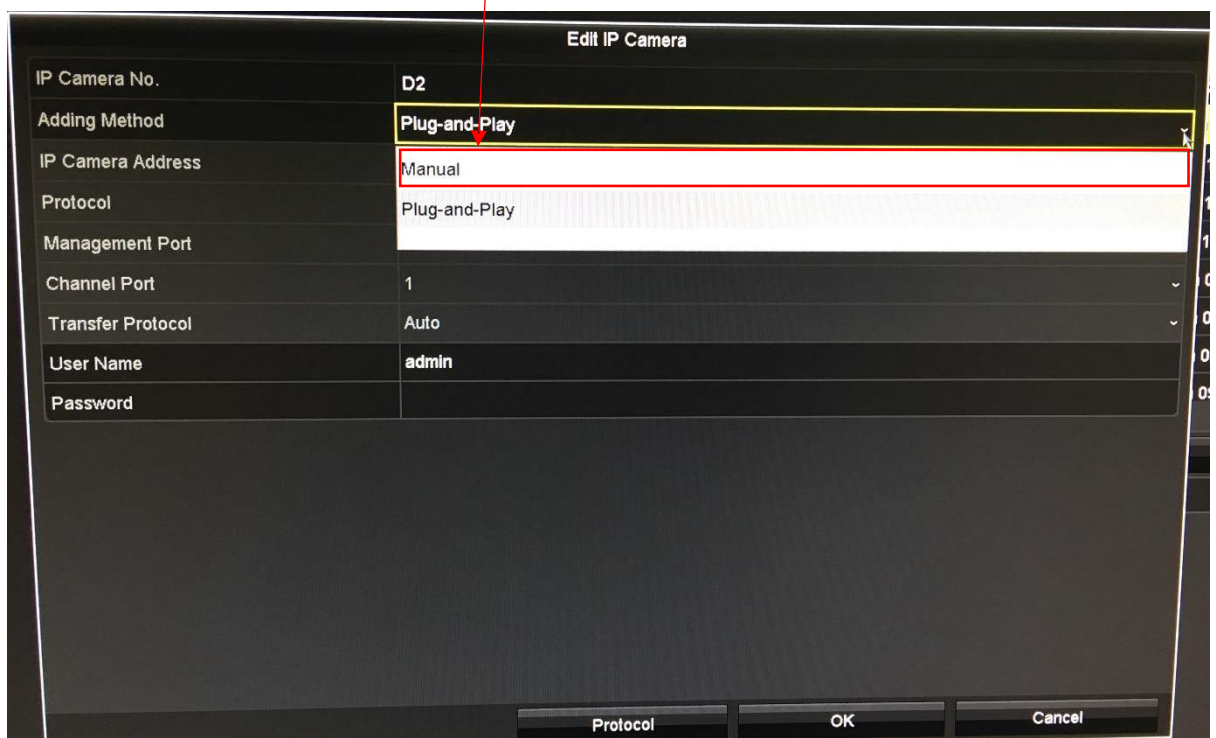
Change the Adding Method to manual by clicking the drop-down box (**NOTE: Once a network camera has been assigned this channel cannot be used for plug & play, for example cannot plug camera into this PoE Port**)



The screenshot shows the 'Edit IP Camera' window with the following fields:

Field	Value
IP Camera No.	D2
Adding Method	Plug-and-Play
IP Camera Address	192.0.0.23
Protocol	HIKVISION
Management Port	8000
Channel Port	1
Transfer Protocol	Auto
User Name	admin
Password	

At the bottom, there are three buttons: 'Protocol', 'OK', and 'Cancel'.



The screenshot shows the 'Edit IP Camera' window with the 'Adding Method' dropdown menu open. The 'Manual' option is selected. The other fields remain the same as in the previous screenshot.

Field	Value
IP Camera No.	D2
Adding Method	Manual
IP Camera Address	192.0.0.23
Protocol	Plug-and-Play
Management Port	8000
Channel Port	1
Transfer Protocol	Auto
User Name	admin
Password	

At the bottom, there are three buttons: 'Protocol', 'OK', and 'Cancel'.

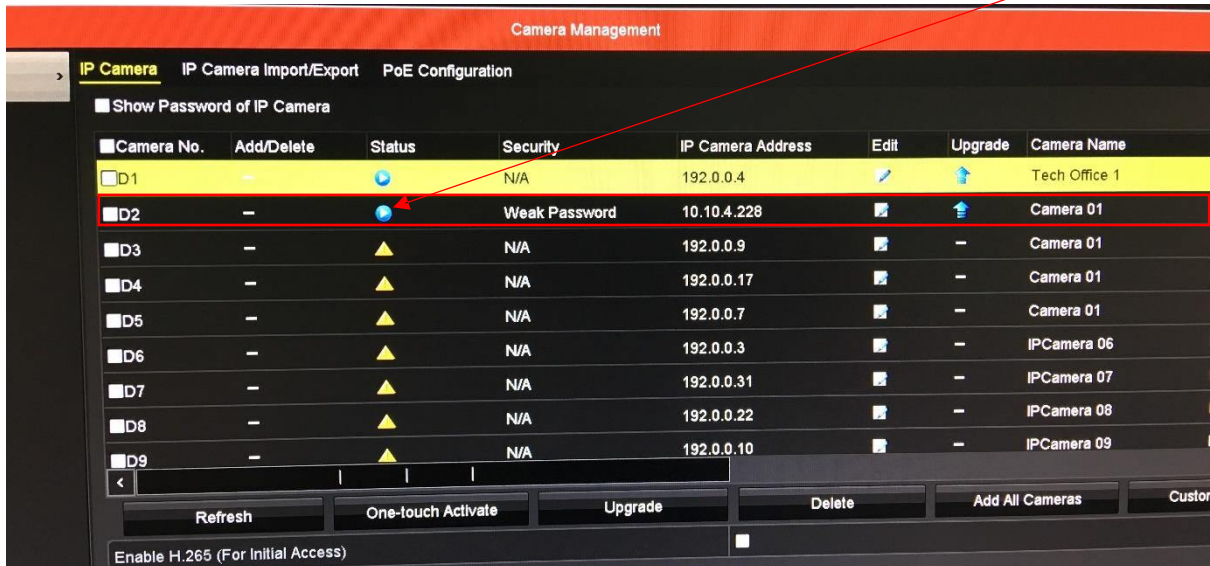
- iii) Enter the IP Address that you have assigned to the camera earlier and enter the password you used to activate the camera and click OK

Edit IP Camera

IP Camera No.	D2
Adding Method	Manual
IP Camera Address	10.10.4.228
Protocol	HIKVISION
Management Port	8000
Channel Port	1
Transfer Protocol	Auto
User Name	admin
Password	*****

Protocol OK Cancel

iv) The camera will attempt to connect and once it does you will have the connected status symbol



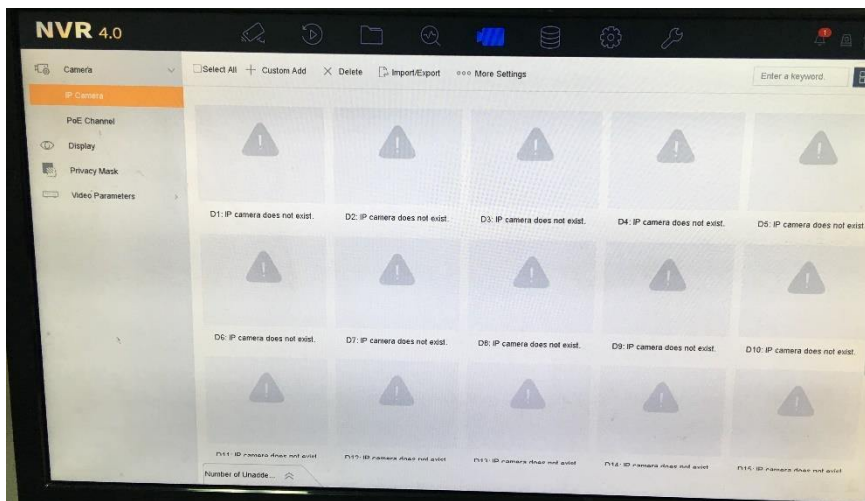
v) Repeat the process for all network cameras

For Non-PoE Recorders, you will need to use the “Custom adding” or “add all the cameras” (after configuring the network settings)

In this section of the KBA we going to discuss how to assign the cameras to the NVR using Method 2b.

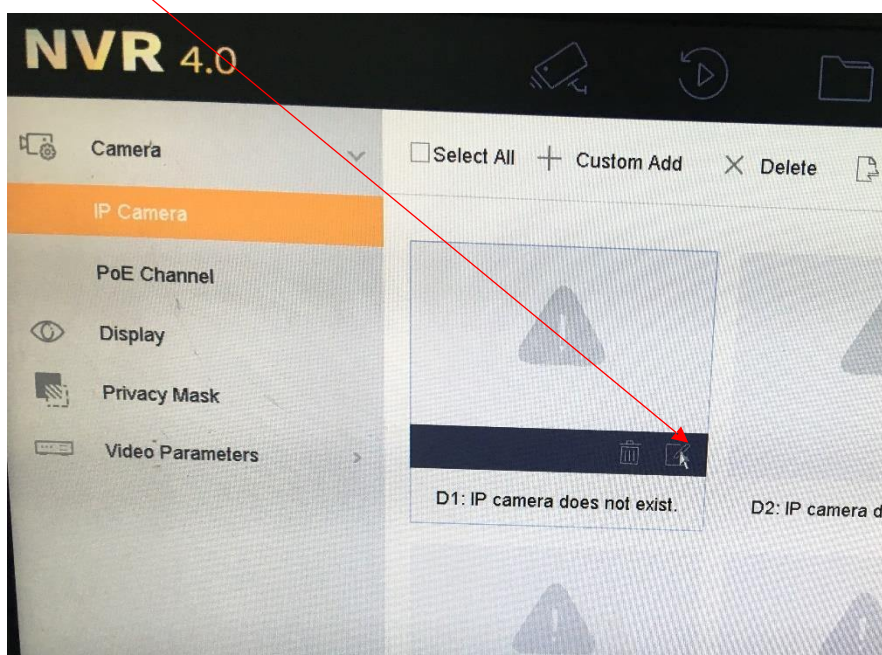
- Log into the NVR and go to Camera Management,
- For unit which has Plug and Play Ports, you will see there are already channels in the list, these channels can't be deleted as it's corresponding to the PoE ports on the back.

Camera management for PoE recorder:

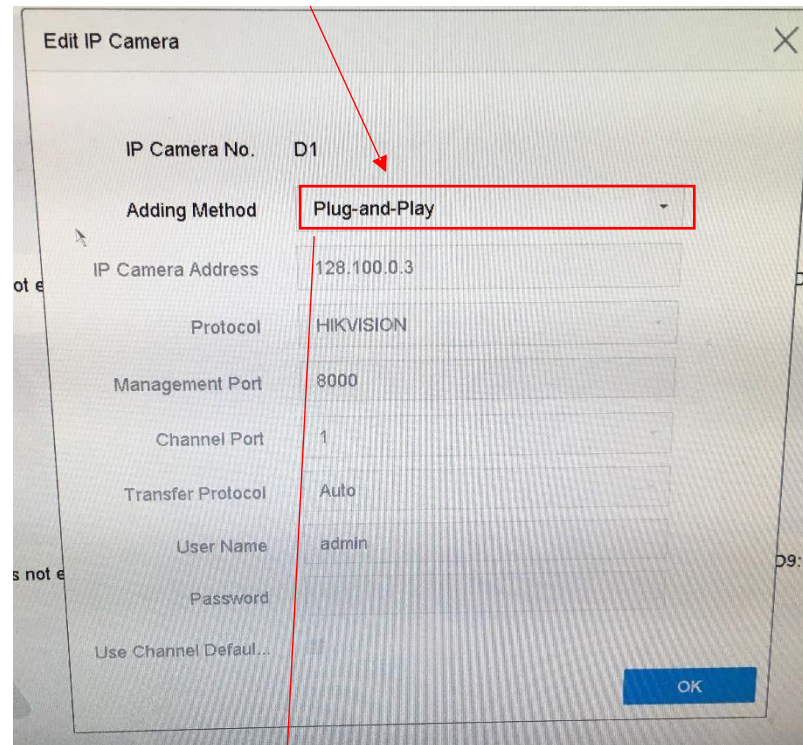


If your Recorder has Plug and Play ports, then all you will need follow the below procedure:

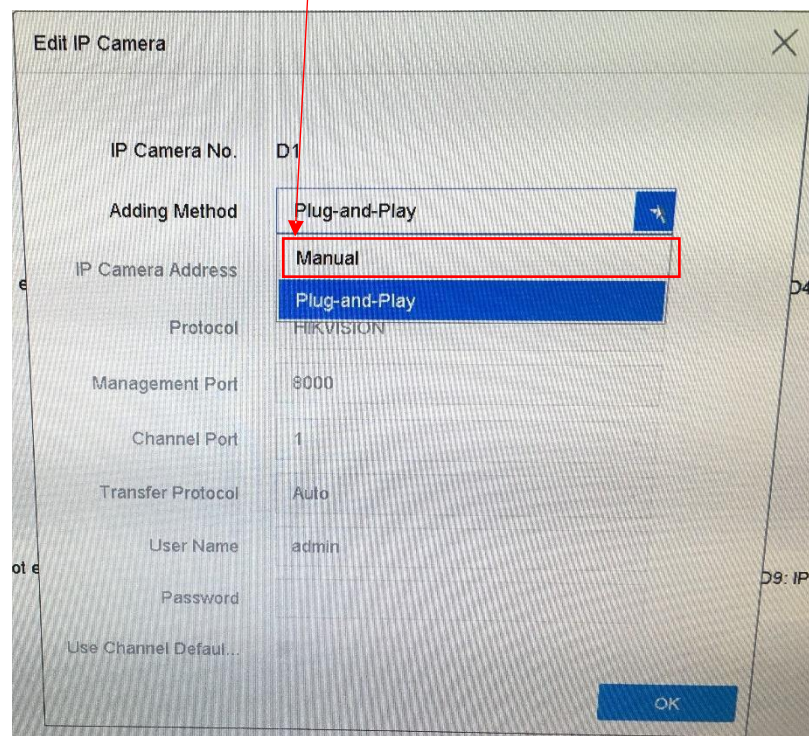
- ii) Click the Edit button to change the channel from plug and play to Manual



Change the Adding Method to manual by clicking the drop-down box (**NOTE: Once a network camera has been assigned this channel cannot be used for plug & play, for example cannot plug camera into this PoE Port**)

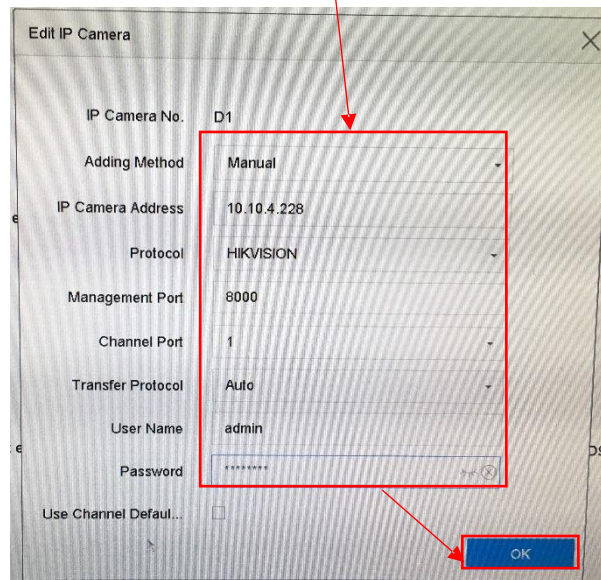


The screenshot shows the 'Edit IP Camera' dialog box. The 'IP Camera No.' is 'D1'. The 'Adding Method' is set to 'Plug-and-Play', which is highlighted with a red box. A red arrow points from the text above to this dropdown menu. Other fields include 'IP Camera Address' (128.100.0.3), 'Protocol' (HIKVISION), 'Management Port' (8000), 'Channel Port' (1), 'Transfer Protocol' (Auto), 'User Name' (admin), and 'Password'. There is an 'OK' button at the bottom right.

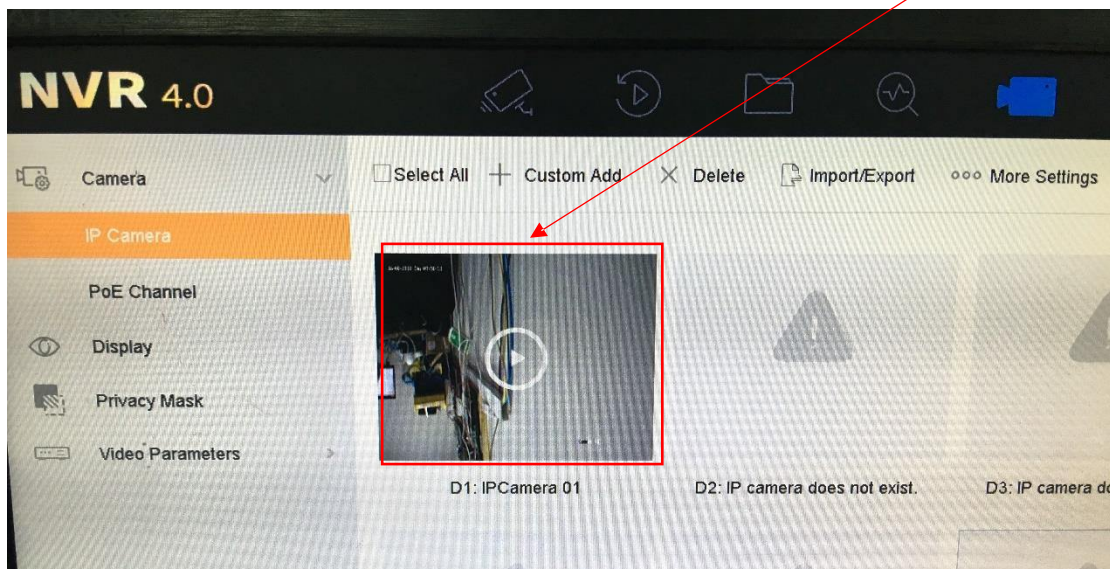


The screenshot shows the 'Edit IP Camera' dialog box with the 'Adding Method' dropdown menu open. The 'Manual' option is selected and highlighted with a red box. A red arrow points from the text above to this dropdown menu. Other fields are the same as in the previous screenshot: 'IP Camera No.' (D1), 'IP Camera Address' (128.100.0.3), 'Protocol' (HIKVISION), 'Management Port' (8000), 'Channel Port' (1), 'Transfer Protocol' (Auto), 'User Name' (admin), and 'Password'. There is an 'OK' button at the bottom right.

- vi) Enter the IP Address that you have assigned to the camera earlier and enter the password you used to activate the camera and click OK



- vii) The camera will attempt to connect and once it does you will see a thumbnail of the camera view



- viii) Repeat the process for all network cameras

For Non-PoE Recorders, you will need to use the “Custom adding” or “add all the cameras” (after configuring the network settings of the cameras and the NVR)