Using a PoE Switch with ENVR Application Note

Notice  Please follow the steps below when adding cameras using an external PoE switch. Do NOT connect all the camera devices at the same time. Please refer to the steps below for the procedure to use a PoE switch with ENVR.

Introduction

The ENVR factory default IP address is 192.168.1.108 and the IP camera’s factory default IP addresses are also 192.168.1.108. The NVR will automatically provide the IP addresses for the IP cameras that are connected directly to the ENVR through the built-in PoE switch. In this case, no additional configuration is required.

Note  4-channel units have 4 built-in PoE ports and 8-channel units have 8 built-in PoE ports so additional PoE ports are unnecessary for these units. Typically this procedure will only be needed on 16-channel units (which have 8 built-in PoE ports), as some installation scenarios will require an external PoE switch to connect the additional 8 cameras that cannot be connected through the 8 built-in PoE ports.

However, for the IP cameras that are connected to the ENVR through the external PoE switch, the camera IP addresses must be added manually. Please ensure that the manually added IP addresses have the same segments (192.168.1.***) as the NVR IP address. Refer to the screen shot examples in the following sections for a guide. The following Connection Instructions (see page 2) are for cameras that are connected through the external PoE switch.

Figure 1  Topology of the PoE Device and ENVR Network
Connecting IP Cameras through a PoE Switch

Step 1: Modifying the ENVR IP Address

1. Right-click anywhere on the GUI and select Main Menu from the list of options.

2. Open the Network Settings screen (Main Menu ➔ SETTING ➔ NETWORK).

3. Modify the IP Address of the ENVR on the Network Setting screen (Figure 5). Change the IP Address to 192.168.1.*** and click Save to confirm the change.
Note  The reason for modifying the ENVR IP address is to avoid any IP conflicts with the IP cameras.

Figure 5  ENVR Network Settings

Step 2: Adding Remote Devices

1. Go back to the Main Menu and select REMOTE DEVICE (see Figure 7).

Figure 6  Open Remote Device Page

CAUTION Performing step 2 through step 7 in this section carefully and in the proper sequence is very important to getting the IP cameras connected and configured. After connecting the PoE switch to the NVR, the IP cameras should be connected ONE BY ONE to minimize and avoid any IP conflicts. Wait for the first IP camera to be connected and configured before connecting the next camera.

2. Connect the PoE switch to the ENVR’s LAN port (see Figure 1).
3. Connect the first IP camera to the PoE switch.
4. Click the Pencil icon ( ) to edit the camera settings for one of the connected cameras.
5. Modify the **IP Address** for the camera to have the same segments (192.168.1.*** as the NVR IP address. See the screen images in this document for IP address examples.

6. Click **OK** to save the modified IP address.

7. You should see the **Modify IP successfully** message (see Figure 9). Click **OK**.

8. Repeat **step 2 to step 7** for every camera you are connecting. Make sure to do the full procedure for each camera, one at a time until they are all added and have had their IP addresses modified.
9. When all of the IP cameras are connected and configured, you will have a Remote Device list similar to Figure 12.

Figure 12  Remote Device List Full of Devices

Step 3: Adding a Device

There are two ways to add the devices in the list (Figure 12) to the ENVR:

- Method 1: Double-Click to Add, page 6, to add devices by double-clicking them in the list.
- Method 2: Adding a Device Manually, page 6, to add devices using the Manual Add button.
**Method 1: Double-Click to Add**

1. Select the device to add from the upper list on the **REMOTE DEVICE** screen (see **Figure 12**).

2. Double-click the device to add it to the **Added Devices** list (lower list) on the **REMOTE DEVICE** screen (see **Figure 13**).

**Figure 13 Double-Click a Device in the List**

3. The added camera will populate in the **Added Device** list.

4. The camera status will change from red to green when the camera is successfully added (see **Figure 14**).

**Figure 14 Camera Added when Status Green**

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**Method 2: Adding a Device Manually**

1. Select the device to add from the upper list on the **REMOTE DEVICE** screen (see **Figure 12**) and click **Manual Add**. The Manual Add screen opens (see **Figure 15**).

2. Enter the **IP Address**, **User** name and **Password** of the camera to add in the fields (**Figure 15**).

3. Click **OK** to add the camera.
4. The camera status will change from red to green when the camera is successfully added (see Figure 16 and Figure 17).

Figure 15  Manual Add Screen

Figure 16  Device Status Red

Figure 17  Device Status Green
Installation Notes

Keep follow the advice in these installation notes while performing the installation procedures in this document:

1. The internal PoE ports on the ENVR units will automatically configure IP addresses when cameras are plugged in. 4-channel units have 4 built-in PoE ports and 8-channel units have 8 built-in PoE ports so additional PoE ports are unnecessary for these units. Typically this procedure will only be needed on 16-channel units (which have 8 built-in PoE ports), as some installation scenarios will require an external PoE switch for the additional 8 cameras that cannot be connected through the 8 built-in PoE ports. 16-channel units, such as HEN16131 and HEN16161, only support 8 built-in PoE ports which can only cover half of the 16 channels for those units. For this reason an external PoE switch may be the best option.

2. ADI carries a wide range of PoE switches. The Luxul XMS-1010P supports 8 full PoE ports plus the addition of two extra network ports. This convenient feature will allow you to connect the NVR network port and the Local network connection into a router or cable modem. The Luxul PoE switches are looking for the following open ports on your NVR by default: 37777, 554 and 80.

3. You have two options (a and b, below) for configuring IP cameras on an external PoE switch. The cameras need to be in the same IP range as the NVR, and not in the built-in PoE default 10.1.1.*** range.
   a. Configure the IP cameras directly off of the Remote Device screen from the Main Menu of the NVR.
      When using the Remote Device screen from the Main Menu of the NVR, the Remote Device page is divided into two panels, top and bottom. On the top panel, click IP Search to discover all of the connected cameras. Only pay attention to the cameras that have a Device ID, as several streams will appear from each camera. Click the Show Filter drop-down arrow and select Camera Type to show the stream that you want. Select the Edit check boxes for the cameras marked for ports 1-8 (which are connected through the built-in PoE) and click Add. Cameras showing Port 37777 are connected through the external PoE switch. Click the Edit pencil icon ( ) for each externally connected camera to edit the IP Address and Gateway values for those cameras. Change the Gateway address to match the NVR Gateway as seen on the Network setup screen. Give the cameras an IP range to match the range of the NVR. In most cases you will use the same IP address of the NVR and only change the last number for each camera to make it a unique IP address. Check with your IT administrator to confirm that they are satisfied with the range you have chosen.
   b. Configure the IP cameras using the Honeywell Configtool that comes on the DVD provided with the Honeywell IP cameras.
      When you are using the Honeywell Configtool from a PC connected to the same network as the NVR, the PC and NVR must be in the same IP range as well. The Configtool should be very similar to users that have used other IP camera configuration tools in the past. Things to Note:
      • Only the NVR and external PoE cameras will be detected by the Configtool.
      • By clicking the Gear icon for each camera setup will change the camera to an IP range that matches the NVR IP address.
      • You must change the Gateway field to match the NVR’s gateway (as seen in the Network screen) or it will prompt you with an error when you click Modify.
      • Once all of the cameras have been modified, go to the NVR’s Remote Device screen, do an IP Search and follow the rest of the instruction in step a, above.