



## Using a Remote Switch to Consolidate Traffic from Several OMNI Plug-and-Play IP Cameras

Applies to F/W Versions 3.X.X and up

OMNI-IP Plug-and-Play [PnP] is based on the concept of “camera per port”. That is, every camera is ‘home run’ on its own cable back to its own port on the PnP switch. The NVR assigns an address to each camera based on the port to which it is connected, and matches those addresses to specific camera numbers. This allows the IP camera [IPC] connected to port 4, for example, to become Camera 4 in the NVR.

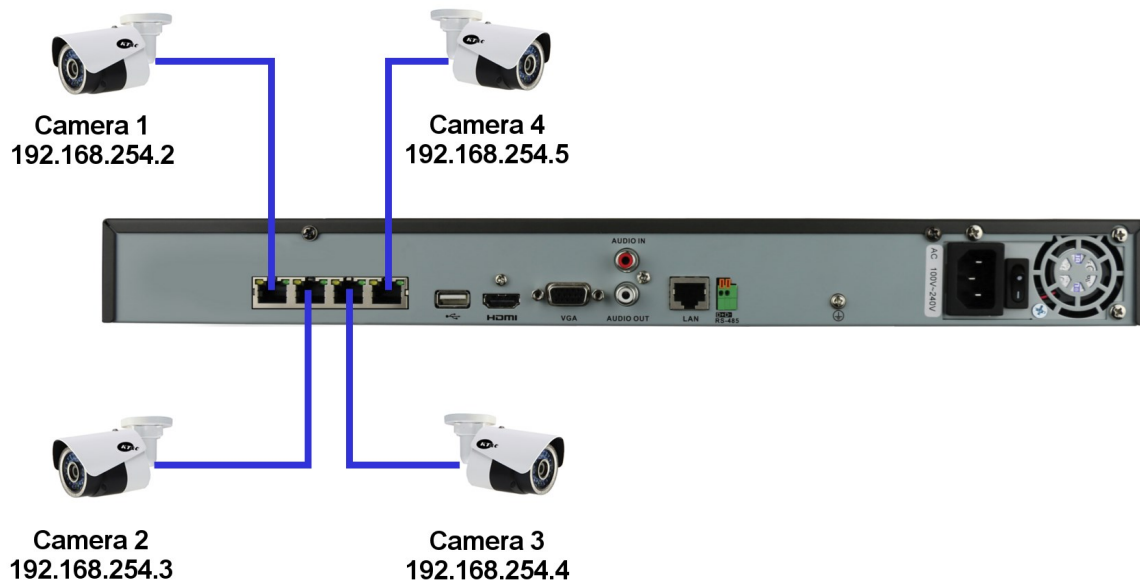
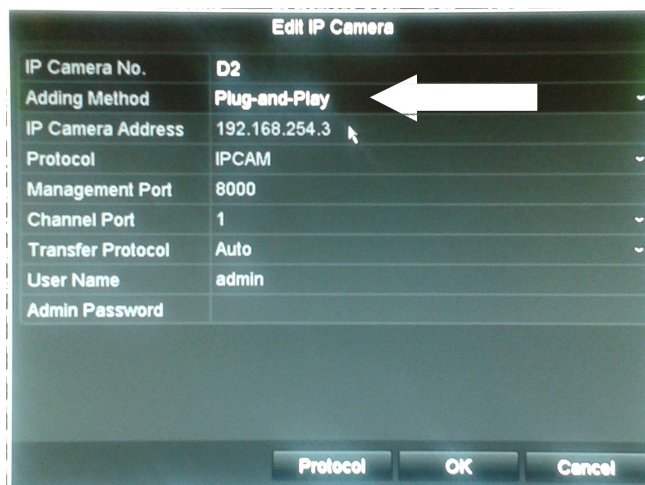


Figure 1—Direct Connect Plug-and-Play Configuration

In this example, the NVR has assigned IP addresses to the IPC based on the port where the camera is connected, and ‘knows’ which cameras/addresses correspond to the PnP Camera Numbers/Ports. In part, this happens because the NVR has been told to connect these cameras using the **Plug-and-Play** mode. This is set in the CAMERA menu CAMERA MANAGEMENT screen, in the pop-up box when you click the EDIT icon for a camera.



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Suppose that two or more cameras are located at a distance from the NVR, but close to one another. They could be located in a distant part of a building, or together on a different floor of a building. It could be more convenient from a wiring standpoint to connect those cameras to a separate switch (either a PoE switch, or a conventional switch and power the cameras from a local 12VDC power supply).

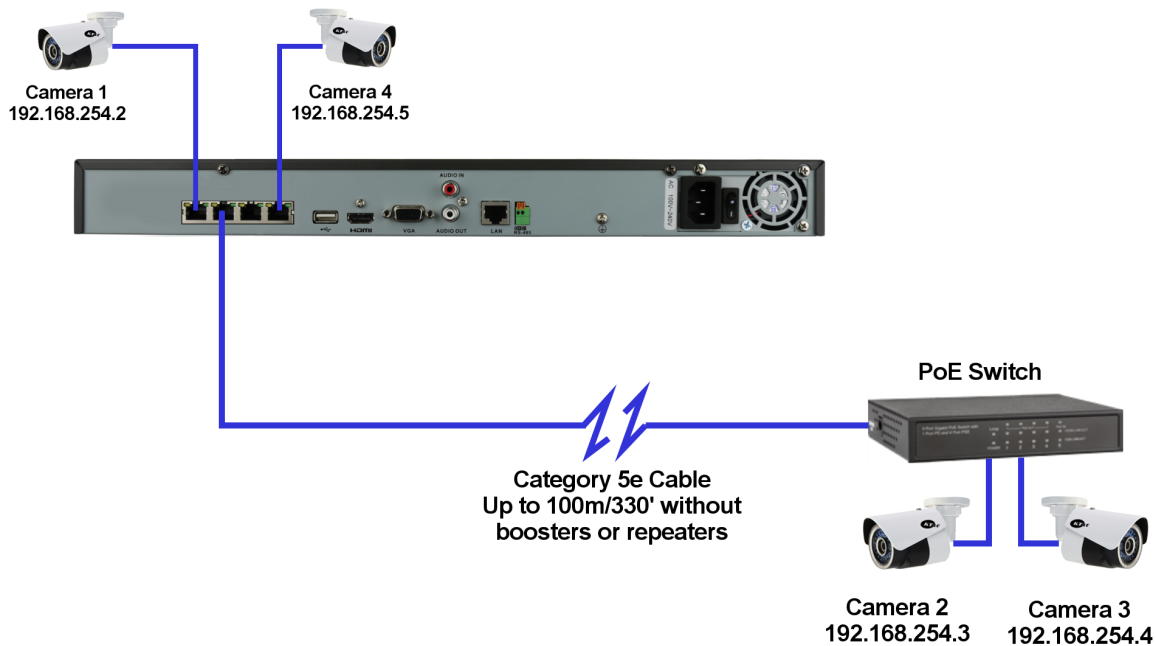


Figure 2—Auxiliary Switch Supporting Two IP Cameras

**NOTE:** In the figure above, the cable from the NVR to the auxiliary switch can be up to 330' of Cat5e cable; the cables from the IP cameras to the auxiliary switch can also be 330' long each, so this is one way in which one or more cameras can be located beyond 330' from the NVR.

The simplest way to prepare this type of configuration is:

- (1) Connect the IPC to the NVR, and allow the NVR to configure the setup cameras and the system
- (2) Label the cameras (e.g. Camera 2 and Camera 3)
- (3) Disconnect the cameras and install them at their intended location.
- (4) Connect the cameras to the auxiliary switch
- (5) Connect the auxiliary switch to one of the now open camera ports (e.g. Port #2)
- (6) Change the “Adding Method” from Plug-and-Play to Manual (see below for details)

Plug-and-Play ports expect a SINGLE camera to be connected to each port. In this case two cameras are connected to a single port on the NVR. The NVR may recognize one of the cameras (e.g. Camera 2), but will not recognize the second camera. To resolve this conflict, one changes the NVR settings so that Ports 2 & 3 / Cameras 2 & 3 are NO LONGER PnP. In the CAMERA menu CAMERA MANAGEMENT screen, in the pop-up box when you click the EDIT icon for a camera, change the “Adding

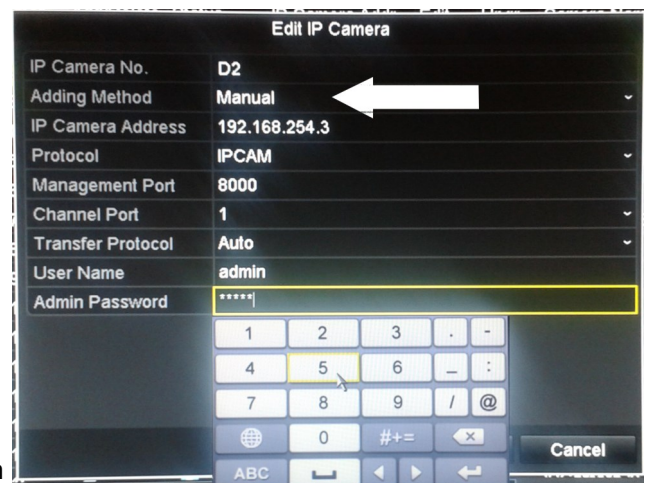


Figure 3—Manual Mode

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Method” for Cameras 2 & 3 from “Plug-and-Play” to Manual. After changing from PnP to Manual, confirm (enter) the password for the IP camera (the default password is “12345”) and click “OK”. Cameras 2 & 3 should now connect and display normally.

What if it is not convenient to connect the ‘remote’ cameras to the NVR before installation? How do you use the PnP function to configure the cameras and NVR? The answer is to connect each remote camera to a different port, one at a time.

Step 1: Connect the auxiliary switch to NVR PnP port #2.

Step 2: Connect ONLY the camera intended to be Camera #2 to the auxiliary switch. Allow the system to display video from Camera 2. See Figure 4A.

Step 3: Disconnect Camera 2.

Step 4: Connect the auxiliary switch to NVR PnP port #3

Step 5: Connect ONLY the camera intended to be Camera #3 to the auxiliary switch. Allow the system to display video from Camera 3. See Figure 4B.

Step 6: Connect camera 2 to the auxiliary switch.

Step 7: In the CAMERA menu CAMERA MANAGEMENT screen, in the pop-up box when you click the EDIT icon for a camera, change the “Adding Method” for Cameras 2 & 3 from “Plug-and-Play” to Manual. [See Figure 3.] After changing from PnP to Manual, confirm (enter) the password for the IP camera (the default password is “12345”) and click “OK”. Cameras 2 & 3 should now connect and display normally.

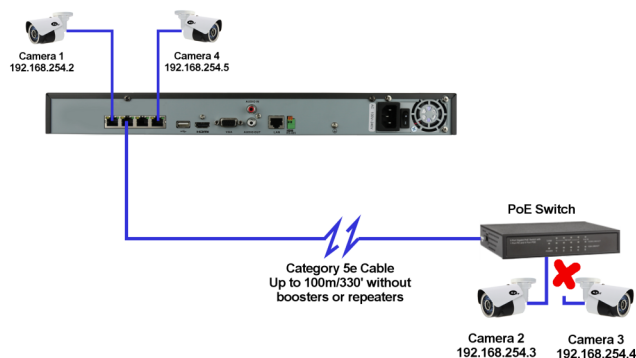


Figure 4A—Connect Camera 2 Only

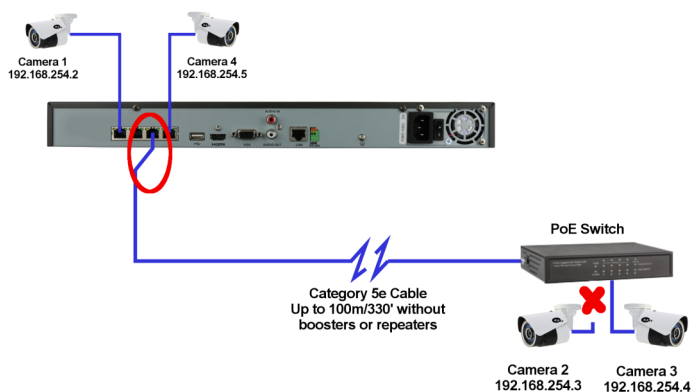


Figure 4B—Connect Camera 3 Only



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