NEXUS

RECYCLING MANAGEMENT SYSTEM

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(424) 222-8080

Congratulations on your purchase!

We know it's a big step, but you'll be very happy you took that step.

Of course, we appreciate your business and thank you very much for choosing us.

Now that introductions are out of the way, let's get started…

There may be lots of words here, but don't be discouraged early on, we specifically wrote this as detailed as possible to alleviate even the most minor frustration and to give you a bit of an education instead of relying on expensive tech people. If you get lost at all just call us!

Step 1. We need remote access.

In order to set Nexus up, we need to be able to get in your computers remotely.

Here is what we need you to do:

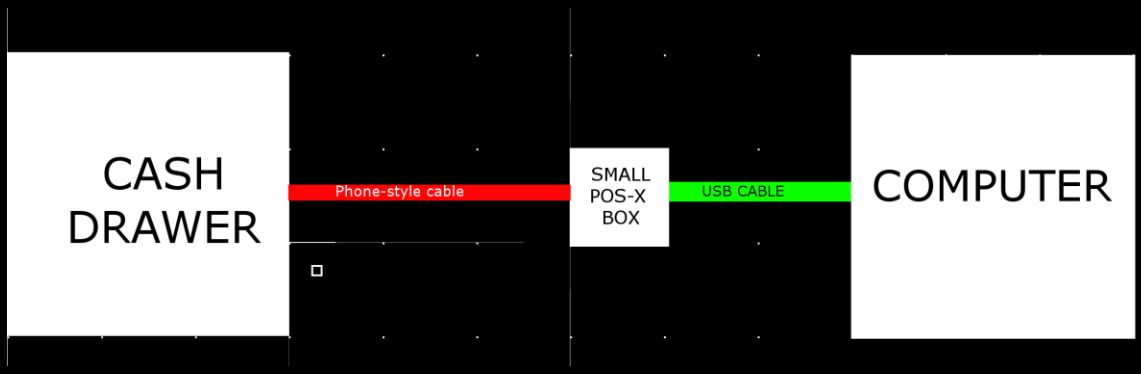
1. Go to www.teamviewer.com
2. Click the "Download TeamViewer" button
3. Let the file download and run, which will install the remote access software
    a. If it asks how you will use this software, choose "Personal / Non Commercial"
4. Choose "Installation to access this computer remotely (unattended)"
5. Click Next or Finish.
    a. TeamViewer may ask you to create an account, do not create a TeamViewer account.
6. TeamViewer may ask you to set an unattended password.
    a. Feel free to choose your own, set all computers to the same password.
    b. If you don't see this option, once TeamViewer opens, put your mouse by the 'Password' field, look for a wheel to the right, click the wheel and click set personal password.
    c. **Make sure you tell us the password afterwards.** If we don't know the unattended password, the TeamViewer password will change often, which will cause delays in your installation.
7. TeamViewer will appear, and give you an ID and password. Write down all ID's and passwords for all computers and then e-mail them to us. Make sure you indicate which computer does what (payment computer, outside scale, inside scale, manager's computer, etc.)

8.

Step 2. Connect your devices

Connect the following to the main payment computer:

1. Cash drawer
    1. When connecting the cash drawer, a small rolled up cable should have been included with your purchase. Connect that cable into the small black box which says “POS-X” on it.
    2. A USB cable which accompanies that box should be connected from the box to the computer.



2. Topaz signature pad
3. Drivers license scanner (ScanShell, SnapShell, etc.)
4. Epson / Thermal Receipt Printer (paper size should be 3 1/8th)
5. Fingerprint scanner (Secugen Hamster Plus)
6. Any other printers (check printers, report printers, plastic card printers)

Connect the following to the outside or scale computers:

1. Honeywell Xenon barcode scanner
2. Hawking scale adapter (see next page for explanation)
3. Any additional thermal receipt printers you purchased.

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Step 3. Configure your scales

Scales must be set up a certain way. You may need to call the scale company, however, you may also be able to do this yourself.

1. Disconnect the RS232 cable (if any) from the scale ticket printer that came with your scale.
    a. For each scale indicator that you want to read weights from on the main computer, you will need a scale adapter connected to the computer. If you do not have the cable that goes from the scale to the adapter, it will need to be purchased separately online. You will need an RS-232 cable. (see next page)
    b. If the port on your scale is very wide (25 pins), you will need a DB-25 RS-232 cable, and you will also need a pin reducer from 25 pins to 9 pins.
        i. Be aware: Cables and connectors are “gender” specific (male or female)
    c. If the port on your scale is smaller (9 pin), and almost looks like a monitor cable, it likely requires a DB-9 RS-232 serial cable.
2.
3. Look up the manual for your scale indicator
4. Find instructions which detail how to set the scale into “CONTINUOUS OUTPUT MODE” or “PC MODE”
    a. Tip: if you don’t want to read the whole document, hold CTRL+F to open the find box, enter the word “continuous” or “baud” and it will likely come up.
5. Follow those instructions.
6. If it asks for settings in the menu, choose the following:
    a. BAUD 9600
    b. DATA BITS 8
    c. STOP BIT 1
    d. PARITY NONE

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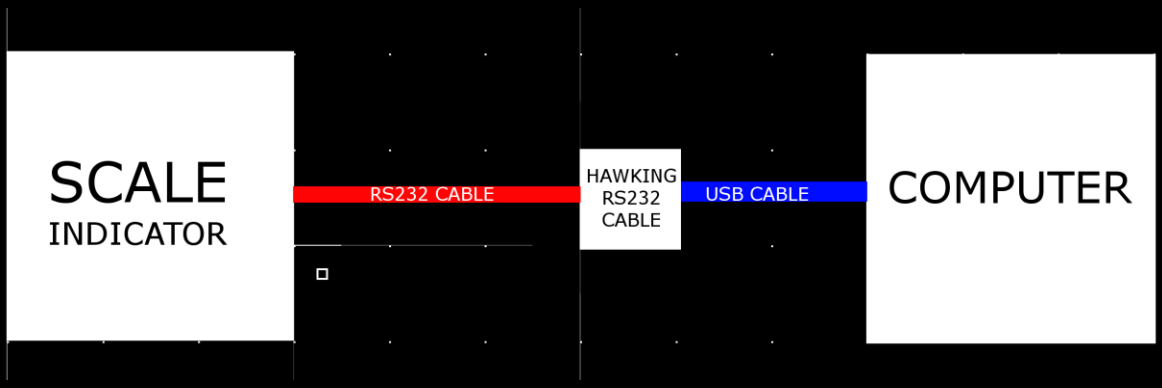
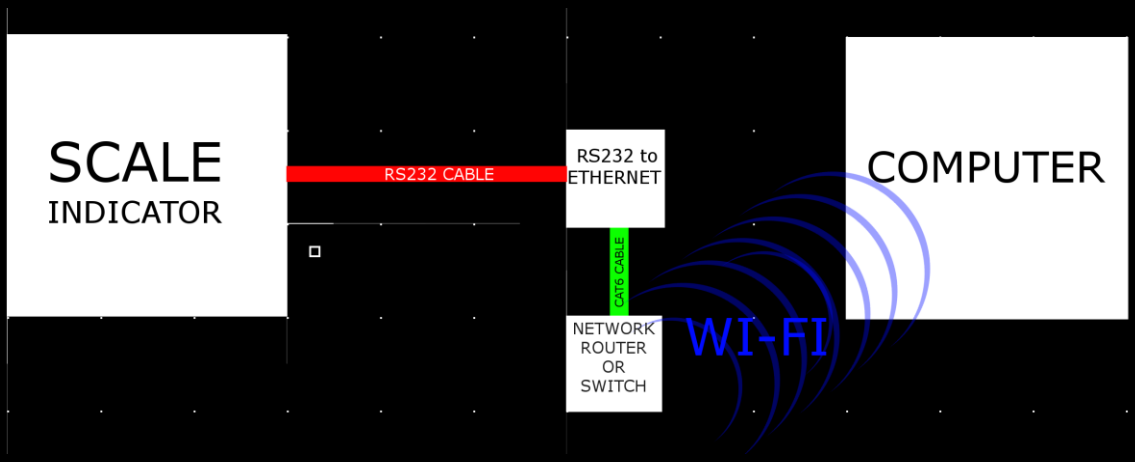
7. **If you purchased the Hawking cable (or similar):**
   Connect the RS232 cable to the Hawking USB cable and connect it to your computer:



8. **If you do not have a Hawking cable because you purchased USR rs232 to Ethernet box**:
   Connect the RS232 cable to that box and then connect that box to your network using CAT5/CAT6 Ethernet cable:

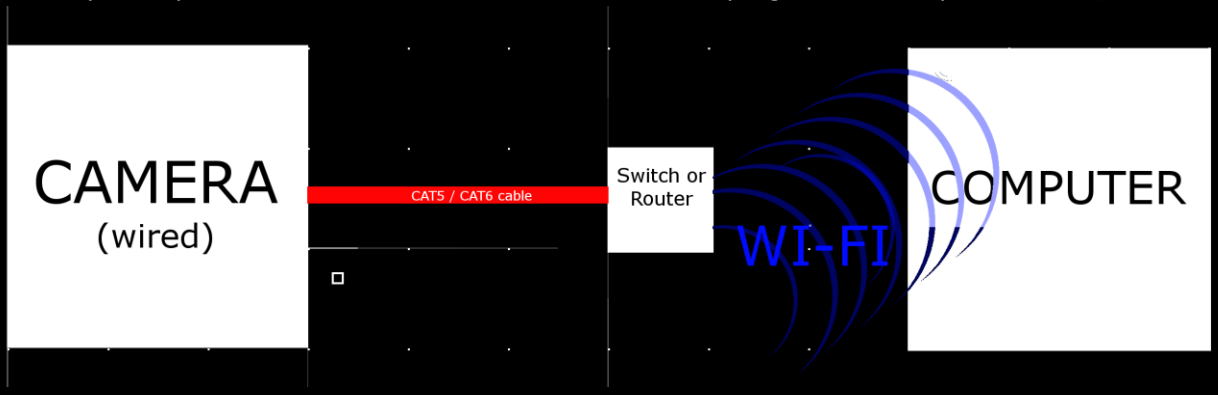


Step 4. Configure your cameras

IT IS VERY IMPORTANT TO FOLLOW THE INSTRUCTIONS THAT CAME WITH YOUR CAMERAS. FAILING THIS IMPORTANT DIRECTION WILL RESULT IN ADDITIONAL EFFORT, TIME AND POSSIBLY COSTLY TECHNICAL SUPPORT.

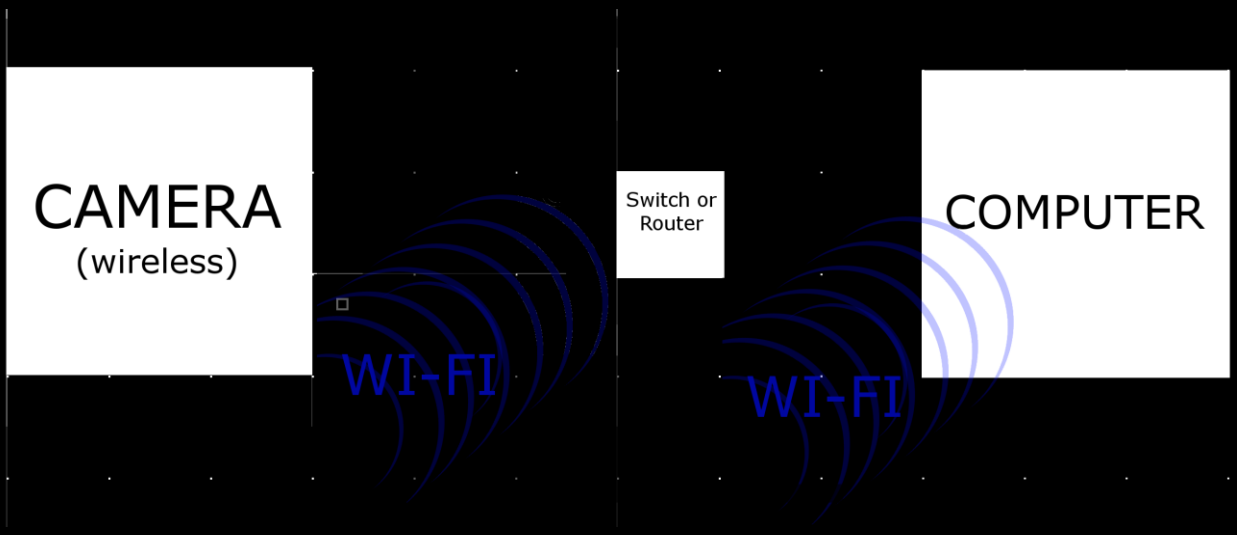
These diagrams are only for illustration, skip ahead to the instructions below them to get started.

Wired-to-wireless networking diagram:
(NOTE: you may have to do this INITIALLY for each camera to program them to your network)



Wireless-to-Wireless connectivity diagram:

Wireless devices communicate with a centralized router, they do not need additional cables, except sometimes initially to program the units. Follow the directions the cameras came with or the directions on the manufacturers website.



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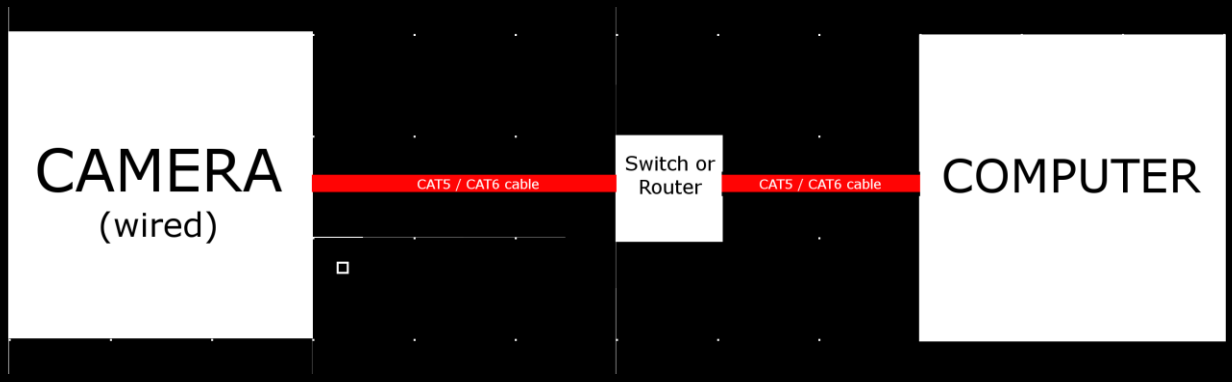
Wired-to-wired connectivity (Non-PoE Cameras OR PoE camera w/ PoE router):

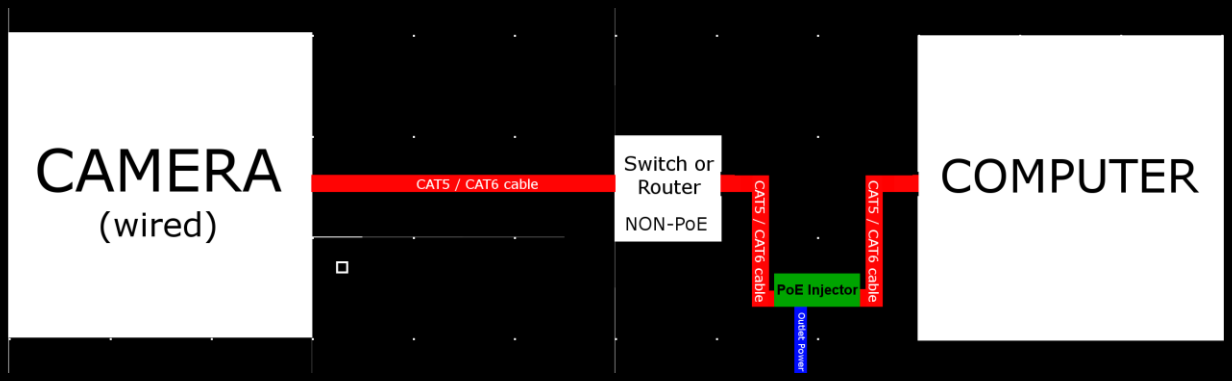
If you are connecting non-PoE cameras (Power over Ethernet), just connect CAT5/CAT6 cables directly and you will have operational cameras.



Wired-to-wired connectivity (PoE Cameras connecting to non-PoE router):

If you are connecting PoE cameras to a non-PoE router or switch, you will need a PoE injector to be connected BETWEEN the router and the camera. The injector takes power from an AC outlet and injects it into the CAT5/CAT6 cable giving the camera its power later down the line.

NOTE: ANY PoE injector will work. A popular and inexpensive brand is TPLink. You will need ONE PER CAMERA.



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Camera Setup

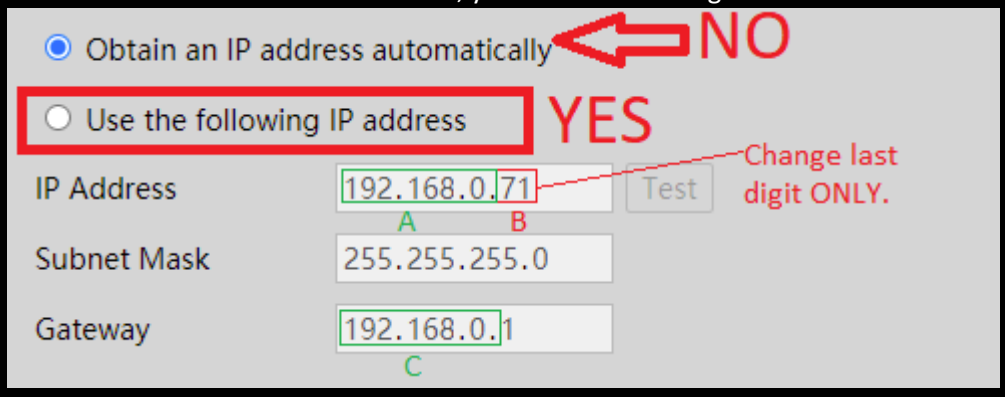
Once you get your cameras on the network follow these steps while you are configuring them, do this for EACH camera:

1. Log into your camera by opening your web browser (Chrome, FireFox, Edge, etc.)
    a. Enter the IP address of your camera in the address bar (like 192.168.0.69)
    b. Enter the username and password to log into the camera

    NOTE: If you don't know your IP addresses, log into Nexus, click Settings, click Cameras and click Find Cameras On Network. We built a tool specifically for this purpose.

2. Click the Network tab under Setup.
3. This part will seem complicated. Don't be discouraged, it's not complicated, but requires some explanation:
    a. All devices use an IP address on a network, that's how routers know where to route data to and from the right device.
    b. Consider an IP address like a 'phone number' for a device.
    c. IP addresses use a 4-octet layout, or 4 sets of numbers separated by periods.
        i. IP address: **192 . 168 . 25 . 140**
        ii. # Set: 1 2 3 4
    d. We need to set a STATIC IP address for your cameras, meaning they'll never change, otherwise, if we skip this step, your cameras IP address (again think phone number) will change any time the device restarts, which means we won't know how or where to contact it anymore.

4. Under the Network tab of the camera, you'll find something similar to this:



5. Click the "Use The Following IP address".
    a. If you don't see that, you may see a drop down that says "DHCP" or "STATIC".
    b. Choose Static.
6. Change the last set of numbers (labeled B above) to 140.
    a. EACH number on EACH camera needs to be UNIQUE.
    b. For camera 1, change the last digit to 140, for camera 2, change it to 141, for camera 3 change it to 143 and so on.
7. MAKE SURE the first three digits of the IP address (labeled A above) match the first three digits of the gateway (labeled C above).
8. Click Save.
9. Use the new IP address to access the camera.

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Step 5. Install the device drivers

Each of those devices came with a disc, or a link to download the drivers.

If they didn't – visit the manufacturers website to download them.

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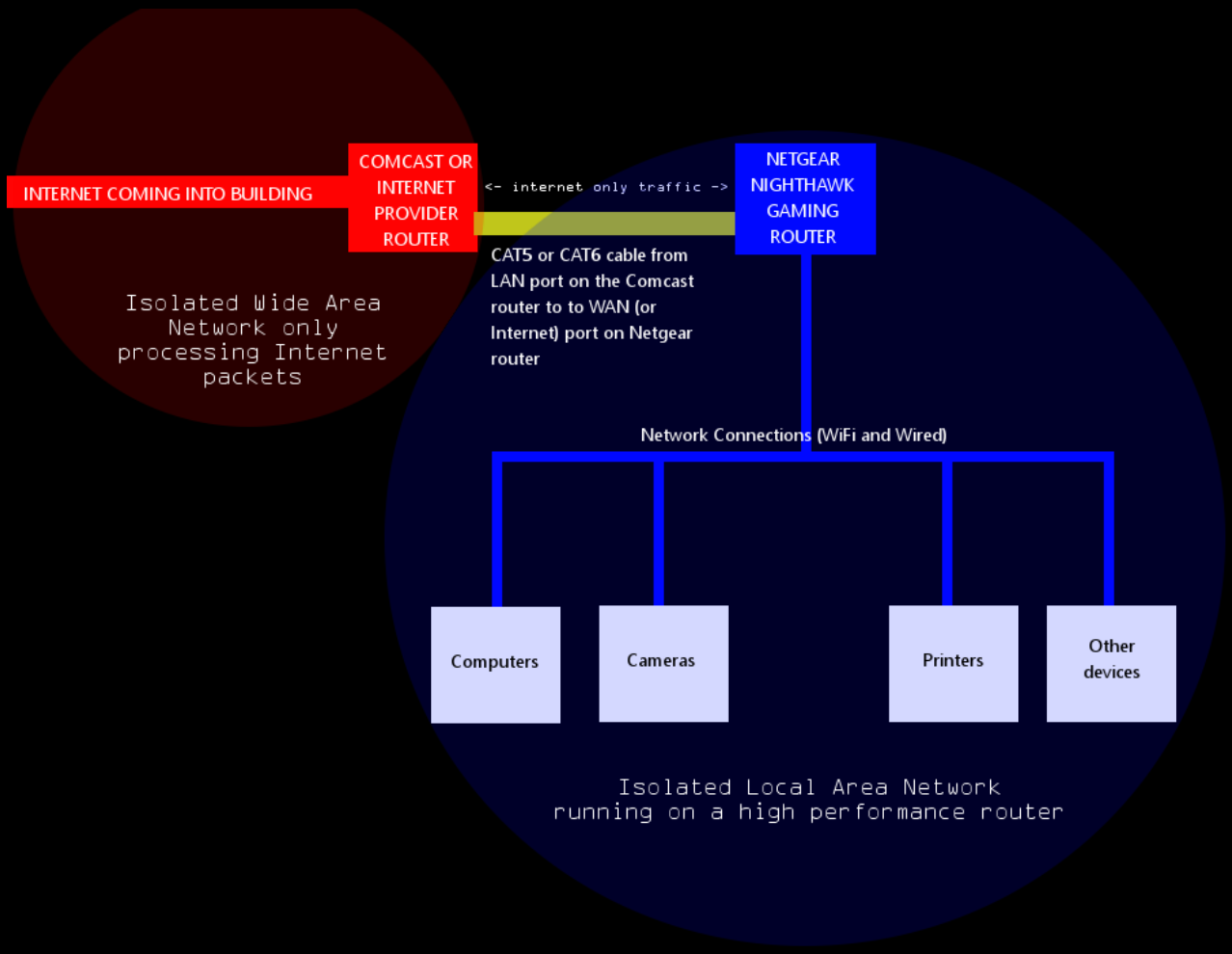
Important Network Considerations

We **highly recommend** you configure your network similar to the description below.



We highly advise you to purchase a Netgear Nighthawk or other similar high performance gaming router and connect it as illustrated above.

Your Comcast or internet company router **is not sufficient to run a high performance local area network (LAN).**

By adding a secondary router, you isolate all your computers away from the performance limitations your internet providers router has.

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This is a very simple process:

1. Purchase the NetGear Nighthawk router.
2. Disconnect all your devices from the Comcast router.
3. If you are upgrading an existing network, do the following:
    a. Log into your router by entering it's IP address in the web browser.
        i. If you do not know your routers IP address, press the windows key on your keyboard and type "cmd", press enter. Type "ipconfig", press enter.
        ii. Look for "Default Gateway" and write those numbers down, that is the router IP address.
    b. You will see a field that says "router IP address" possibly under the Networking or General tab.
    c. You will see an IP address similar to 192.168.1.1 or 10.1.10.1 or something similar.
    d. Write down this number on a piece of paper.
    e. Change the 3rd number to anything between 0 and 254, it doesn't matter what you choose. For simplicity, just add a 1 to whatever is there.
    f. Go into the Wi-Fi/Wireless tab
    g. Write down the SSID or Wireless Network Name you are using, as well as the password.
    h. Change the SSID or Wireless Network Name to anything else.
4. Connect a single CAT6 cable from between the two routers by plugging it first into a LAN port on the Comcast router, then connect the other end to the NetGear's Internet or WAN port.
5. Connect your devices to the NetGear Nighthawk router.
6. Get the IP address of the NetGear Nighthawk router (as outlined in Step 3)
7. Log into the Netgear router by entering the IP address in the web browser.
    a. **If this is an existing network you are upgrading:**
    Under the Wireless / Wi-Fi tab set the SSID/Wireless Network Name and password to the settings you wrote down in Step 3(d). Click Save.

    b. **If this is a new network installation/setup:**
    Make up anything you want for your WiFi information. Click Save.

8. Under the General or Networking tab:
    a. **If this is an existing network you are upgrading:**
    set the router IP address to the IP address you wrote down in step 3(d).

    If this is a new network installation/setup:
    Leave this field alone.

9. The network setup is now complete! Click Save and close the browser.

If this was an existing network, reboot your cameras and computers and everything should begin operating exactly as it was.

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Important Computer Considerations

The performance of Nexus will only be as fast as the slowest device you employ.

The most common bottleneck for performance is the server / main computer's hard drive.

Most new computers will still ship with mechanical hard drives, which are slow and will absolutely cause performance issues. We highly recommend getting a computer with a solid state drive (SSD) or a RAID 10 array, either will suffice.

IF YOUR COMPUTER DOES NOT HAVE A SOLID STATE DRIVE: You, or your IT professional can add one as a secondary device leaving your existing drive in place, it's very simple to do. We recommend Samsung EVO SSD drives.

System recommendations for the main PC:

- **SYSTEM ARCHITECTURE**
  Dual or quad processor true-server architectures will provide the best performance, but are not required. For medium-to-large organizations, it would be preferred as you can also run other services on it such as QuickBooks, company-wide file sharing, etc.

  The most common setup is a high-end tower PC for the main/server PC, essentially a high performance gaming rig without a GPU. We do not recommend laptops for many reasons even if they categorically meet the requirements below.

- **CPU**
  Minimum: AMD Ryzen 7 (or Intel i7)
  Recommended: AMD Ryzen 9 (or Intel i9) processor (liquid cooling recommended)

- **HARD DRIVE**
  Minimum: Single 1TB Samsung EVO SSD
  Recommended: Four 1TB Samsung Evo SSD or WD Blue 6tb/sec drives in a RAID 10 array

- RAM
  Minimum: 12gb RAM
  Recommended: 32gb RAM

System recommendations for touch screen or secondary machines:

- AMD Ryzen 3 or Intel i3 processor or above is fine, 8gb RAM or above is fine, hard drive specifications are not important. The main pc / server does all the work, so secondary machines can be low-performance/low-cost.

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Don’t hesitate to ask for help!

Just give us a call!

Thank you again for your purchase

We look forward to working with you!

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