
INSTALLATION MANUAL

Series
7520^{HD}

Fixed Camera System



The 7520^{HD} camera is configured for DHCP

(If a DHCP server is not available, the camera IP address will need to be configured.)

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About this document



This manual contains information on installation and quick start for the 7520^{HD} dome camera system. Please read this manual carefully prior to installation to prevent any accidental damage or misuse. A CD, including this manual, is shipped with the Camera. The manual is also available from the CohuHD website at:

http://www.CohuHD.com/Files/install_manuals/7520_IM.pdf.

The information in this manual is subject to change without notice. Please refer to the above website for the latest information.

NOTE: All graphics contained within this document, including screenshots and other displays, are for reference use only and are subject to change.

Additional information and documents related to the camera system

For information on the camera system operation and configuration, please see the camera system built-in help. Each page of the camera web interface has a question mark symbol . Clicking the symbol  will connect to explanations related to topics on that page.

Copyright/Intellectual Property Rights statement

Copyright 2014 by CohuHD Costar, LLC. CohuHD Costar, LLC has intellectual property rights to technology embodied in the product described in this manual.

CohuHDTM and HeliosTM are trademarks of CohuHD Costar, LLC.

FCC compliance

This equipment has been tested and found to comply with the limits for a Class A digital device pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation. Changes or modifications to this device can void the user's warranty.

Support services

Please contact the Customer Service Department for technical assistance.

Returns

This item was thoroughly tested and carefully packed at the factory prior to shipping. Upon acceptance by the carrier, the carrier assumes responsibility for the item's safe arrival. Should you receive the item in a damaged condition, apparent or concealed, a claim for damage must be made to the carrier.

If a visual inspection shows damage upon receipt of this shipment, it must be noted on the freight bill or express receipt and the notation signed by the carrier's agent. Failure to do this can result in the carrier refusing to honor the claim.

When the damage is not apparent until the unit is unpacked, a claim for concealed damage must be made. Make a mail or phone request to the carrier for inspection immediately upon discovery of the concealed damage. Keep all cartons and packing materials.

To return the product to the factory for service, please contact the Customer Service Department for a Return Material Authorization (RMA) Number.

Prominently display the RMA number on the outside of the shipping container(s) and on paperwork contained inside. Give a brief description of why the equipment is being returned and list the symptoms of any problems being experienced with the equipment.

For shipment, send package with enough foam padding or other packing material to prevent damage that can occur during shipping. The original shipping carton is a good container if it has not been damaged.

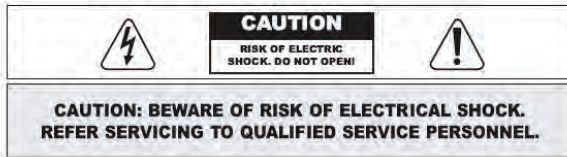
Shipment

IMPORTANT

If the camera needs to be shipped, please use the original packaging material which was designed to protect the product during transportation. If the original packaging is lost or damaged, please order a replacement from Customer Service.

Safety instructions

Important Safeguards



Due to product size and space limitations, this label may not appear on all products.



The lightning flash with an arrowhead symbol within an equilateral triangle is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

**WARNING: TO PREVENT FIRE OR SHOCK HAZARD,
DO NOT EXPOSE UNITS TO RAIN OR MOISTURE.**



Attention: Installation should be performed by qualified service personnel only in accordance with the National Electrical Code or applicable local codes.

- Installation should be done only by qualified installers and conform to all local codes.
- It is the user's responsibility to ensure that the mounting methods are safe and adequate for the location.
- Use appropriate hardware to fasten the mount to an indoor surface.
- All servicing should be performed by qualified service personnel. Procedures in this manual do not require entry into the housing of the camera positioning system. The unit contains sensitive devices that can be damaged by static discharge. To reduce the risk of damage to the unit by static discharge do not perform any servicing other than described in these instructions. If the unit is defective, please contact the Customer Service Department for technical assistance.
- Liability: It is the sole responsibility of the installer to provide proper installation in compliance with all local codes and regulations.

1.0 Unpacking

Unpack carefully. This is an electromechanical device and should be handled carefully. Check to ensure the following items are included:

- 7520^{HD} Camera Assembly
- Torx T-20 Security Wrench
- ½" NPT Plug (installed in the side NPT mount of the enclosure)
- Mounting Hardware
- Mounting Template
- CD-ROM

2.0 Product Description

The 7520^{HD} series is the latest addition to CohuHD's expanding family of HDTV products, offering best-in-class image quality, event management processing and network stability you can rely on.

The performance standards of the 7520^{HD} series are ideal for requirements encountered in security surveillance and remote monitoring applications. Its robust design insures years of continuous operation even in the most demanding environments. A high-quality, ultra-strong polycarbonate bubble and aluminum body combine to make the 7520^{HD} dome vandal-resistant while maintaining an aesthetically pleasing look in any scenario. The IP66 rating allows for installation just about anywhere.

Using a powerful encoding engine, the 7520^{HD} is capable of streaming multiple, individually configured H.264 and MJPEG streams. Features include full HD resolution video of 1080p30 (1920 x 1080), H.264 and MJPEG video compression codecs, configurable image settings, and powerful event management processing. Event triggers include video motion detection, user commands and periodic timers. Event actions include sending snapshots and video clips to an FTP site and emailing event notifications.

Network and security features include static or dynamic IP addressing, domain name, bandwidth limit setting, authentication rules and network time server support. The 7520^{HD} provides a full function web server, allowing complete administrative and operator control capabilities. Administrative features include configuring network settings, user password assignments, setting video streaming properties, event management programming and assigning camera ID labels etc. Access to the camera is protected by username/password authentication.

CohuHD delivers years of clean, reliable images and backs it with a world-class three year warranty.

For information on 7520^{HD} specifications and a datasheet, please refer to the CohuHD website:

www.CohuHD.com/content/7520hd.

2.1 Parts List

The following depicts the parts included (Figure 1.0):

1. Enclosure, Camera, and Lens Assembly
2. Dome Cover, and Shroud Assembly



Figure 1.0

3.0 Mounting Options

The camera is designed to be used in one of the following configurations.

1. Surface mounted to a plenum or other durable ceiling surface.
2. Surface mounted to any interior / exterior durable wall surface.
3. Mounted to the optional interior / exterior wall mount adapter.

NOTE: This guide covers installation of an 7520^{HD} dome camera without the optional wall mount adapter. For guidance on mounting the 7520^{HD} to the wall mount adapter, consult the wall mount adapter manual.

7520^{HD} cameras provide the following connection options shown in (Figure 2.0).

1. Ethernet (Power-over-Ethernet) connector.
2. Audio in/out connector (Requires optional audio cable with 3.5 mm audio connectors).

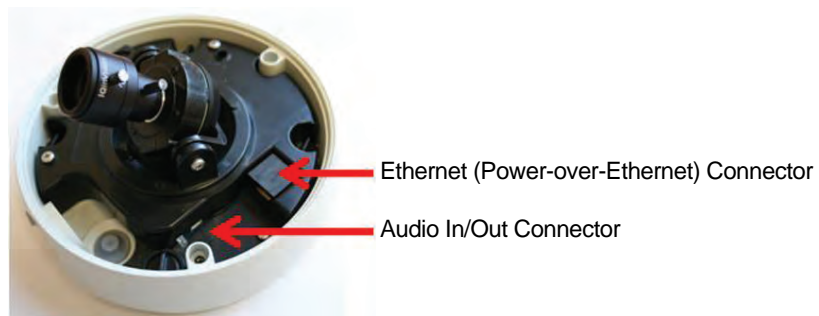
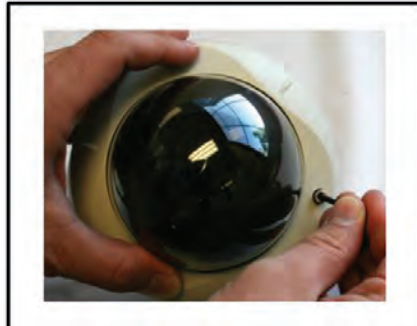


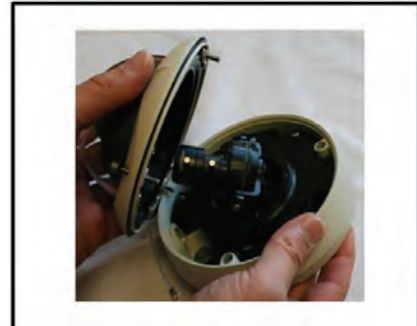
Figure 2.0

4.0 Removal of Dome Cover

1. Using the supplied Torx T-20 security wrench, loosen the three tamper-proof screws holding the dome cover to the enclosure assembly (Figure 3.0). Note that these screws are captive, and held to the dome cover. These screws should not be removed from the dome cover trim ring.



Loosen the three tamper-proof screws



Dome trim ring & shroud removal

Figure 3.0

2. Lift the dome trim ring with shroud away from the camera assembly.

5.0 Mounting the Enclosure, Camera, and Lens Assembly

Mounting to masonry or other durable surface wall, ceiling or overhang with cables routing through the wall or ceiling.

1. Position the supplied mounting template on the surface in the location where the camera will be installed. Trace and drill the mounting holes and the cable pass through hole as indicated.
2. Route the network cable through the wall.
3. Gently push the Ethernet cable through the gasket installed in the enclosure. Pull enough cable through the gasket to attach an RJ-45 network connector, and to allow the network connector to plug into the Ethernet socket (Figure 4.1)

It may be necessary to pierce a hole in the gasket with an Awl tool (not supplied).

NOTE:

- Do not cut the gasket with a knife.
- Do not force the Ethernet cable with connector through the gasket.
- Only pass one cable through the supplied gasket.



Figure 4.1



Figure 4.2

4. To ensure the gasket is sealed gently pull back on the Ethernet cable as shown in Figure 4.3 before mounting the enclosure to the wall or ceiling.

5. Attach the enclosure to the wall or ceiling by tightening the four screws with sealing washers (Figure 4.4).

NOTE: Be sure to use the supplied screws and sealing washers. Alternative washers will not seal the enclosure from moisture. Extra sealing washers are supplied.

Mounting to masonry or other durable surface wall, ceiling or overhang with cables routing along the wall or ceiling for side conduit installation.

1. Position the supplied mounting template on the surface in the location where the camera will be installed. Trace and drill the mounting holes and the cable pass through hole as indicated.

2. Remove the conduit plug from the enclosure. Install a ½" (12.7mm) threaded conduit connector (not supplied) into the conduit hole on the enclosure.

NOTE: To ensure proper weatherization on the conduit entry, properly seal the conduit threads with silicon.

3. Pull the Ethernet cable through the conduit and then through the enclosure. Pull enough cable through the conduit to attach an RJ-45 network connector, and to allow the network connector to plug into the Ethernet socket.

4. Attach the enclosure to the wall or ceiling by tightening the four screws with sealing washers.

NOTE: Be sure to use the supplied screws and sealing washers. Alternative washers will not seal the enclosure from moisture. Extra sealing washers are supplied.

NOTE: When installing the 7520^{HD} onto a ceiling tile, use hardware designed to secure the camera assembly to this surface, and ensure the ceiling tile material is secure.

In addition, follow local regulations and laws that may have specific requirements governing the installation of security equipment on a ceiling tile surface. CohuHD strongly recommends the use of a ceiling tile brace and other mounting hardware designed to secure the 7520^{HD} to the ceiling frame infrastructure.



Figure 4.3



Figure 4.4

6.0 Connect Camera

1. For the 7520^{HD} series cameras attach the supplied ferrite clamp to the Ethernet cable, and connect the cable to the Ethernet connector port in the camera as shown in Figure 5.1.



Figure 5.1

2. Route and connect the optional (not supplied) audio cable when using an external microphone and powered loudspeaker (not supplied) to the 7520^{HD} dome camera as shown in Figure 5.3. The external microphone and powered loud-speaker (not supplied) will connect to 3.5 mm audio connectors.

Optional audio
In/out cable assembly



Audio cable can only pass through
the conduit entry

7.0 Camera Positioning, Field-of-View, Set-up and Focus

1. Set the field-of-view using the 3-axis gimbal. Determine camera pan direction by gripping the camera assembly, and carefully pivot the camera to the viewing direction.
2. Adjust the tilt of the camera by loosening the tilt angle lock screws as shown in Figure 6.1, and tilt the camera to the viewing direction. When finished, tighten the tilt locking screws.
3. Adjust the field-of-view and focus rings to achieve the desired focus as shown in Figure 6.2.

NOTE: The lens on the 7520^{HD} dome camera is fixed iris and therefore no iris adjustment is needed.

When finished, tighten the thumbscrews on the lens.



Figure 6.1

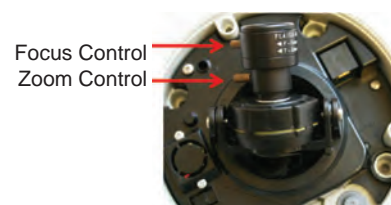


Figure 6.2

8.0 Factory Reset

1. Press and hold the “Reset” button for 10 seconds as illustrated in Figure 7.0.

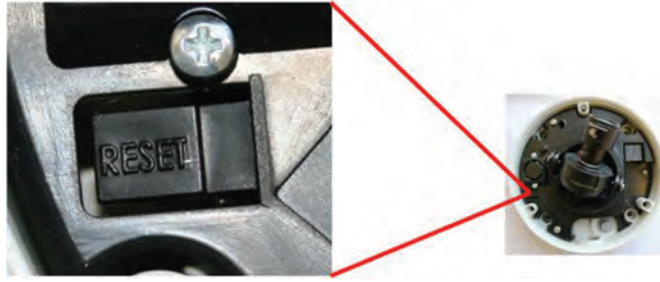


Figure 7.0

9.0 Complete the Dome Camera Installation

1. Attach the tether from the dome trim ring to the tether mounting point in the enclosure as shown in Figure 8.1.
2. Rotate the black shroud inside the dome trim ring cover so it aligns with the camera position.
3. Place the supplied desiccant pack inside the dome as shown in Figure 8.2 to prevent fogging due to moisture that is present when installing the camera. Use the supplied cable tie to keep the desiccant from falling down into the dome bubble.
4. Attach the dome trim ring cover with shroud to the enclosure by tightening the three tamper-proof screws with the supplied Torx T-20 security wrench.



Figure 8.1



Figure 8.2

10.0 PC Configuration of 7520^{HD} Cameras

Installation and testing of the Camera can be performed with the built-in 7520 Series web interface application.

10.1 System Requirements

In order to test the Camera you need the following items:

- laptop or desktop computer (for recommended computer requirements see section 10.2 of this chapter)
- 100/1000BASE-T network card installed in your computer
- Microsoft Internet Explorer, version 8 if the web browser is used or higher
- 100/1000BASE-T network switch
- Ethernet CAT5e cable

10.2 Recommended Computer Requirements

The following are recommended requirements to run and operate a Camera:

- CPU: Intel i7-860S 2.53 GHz or better
- Operating system: Windows XP Service Pack 3 (SP3), 64 Bit or Windows 7 Pro, 64 Bit
- Memory: 4GB DDR3@1066MHz or better
- Hard Drive: 7200 rpm - minimum speed with sufficient free space
- Video card: NVIDIA® GeForce® 9800 GTX+ with 512 MB RAM or better, or high-end ATI Radeon™ HD series

10.3 Power over Ethernet (PoE)

The 7520^{HD} Camera is compliant with IEEE 802.3af standard. Power to the Camera is supplied through the network. Two types of PoE implementations are specified by the standard:

- Endspan PoE - power is applied directly by the switch to the Camera. This method requires the deployment of a PoE-enabled switch.
- Midspan PoE - power is supplied by an injector placed between an existing non-PoE switch and the Camera.

PoE injector can be ordered from CohuHD. Please refer to the CohuHD website in the 7520^{HD} Series specifications section for ordering information. The PoE injector selected for use with 7520^{HD} should meet the following requirement:

- be compatible with IEEE 802.3af standard

Figures 9 and 10 show interconnection diagrams for 7520^{HD}:

- Figure 4 shows a setup of the Camera with PoE-enabled switch.
- Figure 5 shows a typical set up interconnection diagram for the Camera using the PoE injector with non-PoE switch.

These diagrams give some idea of a typical installation. Each installation site will have its own unique requirements.

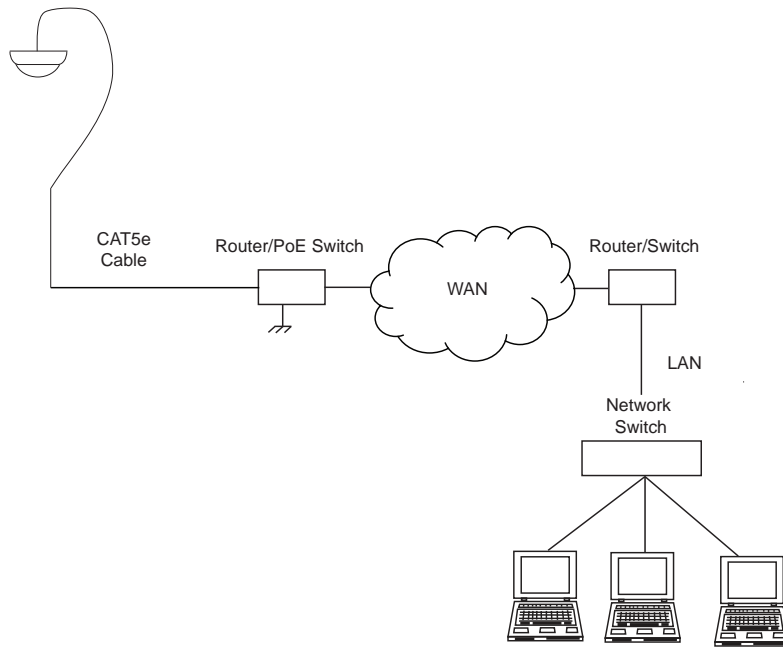


Figure 9. Interconnection Diagram with PoE-enabled switch

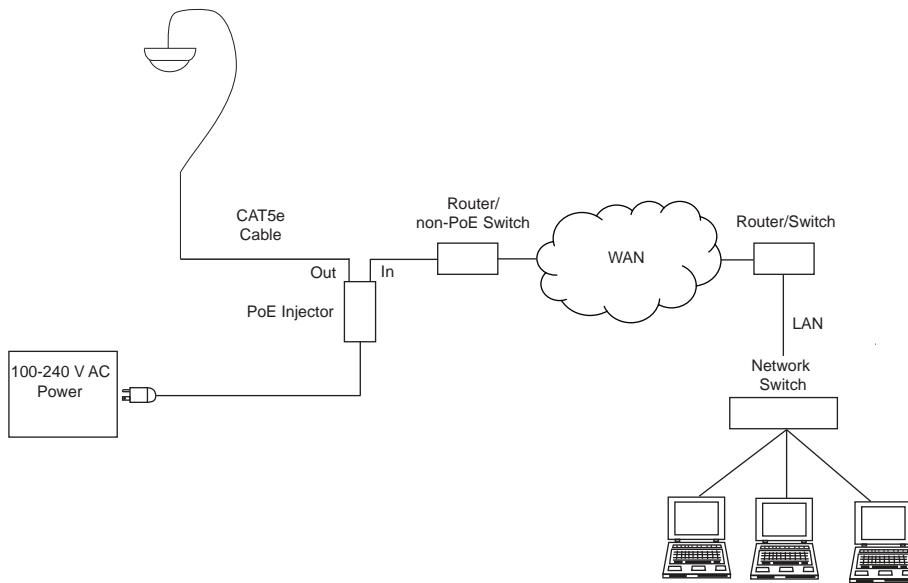


Figure 10. Interconnection Diagram with non-PoE Switch

NOTE: PoE injector can be ordered from CohuHD. Please refer to the CohuHD website in the 7520^{HD} Series specifications section for ordering information.

10.4 Accessing the Camera

NOTE: The default user name for 7500 Series is “**Admin**” and the default password is “**Camera**”.

The 7500 cameras are configured for DHCP and will have an IP address assigned if a DHCP server is on the network. Use the CohuONVIFDiscovery software to find the camera IP address.

10.4.1 Configuring cameras on networks with DHCP

In networks with a DHCP server, the IP camera will acquire dynamic (changeable) network settings when it is initially powered on.

These dynamic settings can easily be converted to static settings, or changed to other static settings that are also compatible with your network.

To configure the network settings of the camera follow the next steps:

- Connect the camera to the LAN, power on the camera.
- Camera automatically will be assigned the DHCP address.
- Discover the camera address using the CohuONVIFDiscovery software. See section 10.4.3.
- Change the PC address to match the camera IP network address. See Section 10.4.5.
- Change the camera assigned address to the desired static Address. See section 10.4.4.

10.4.2 Configuring cameras on networks without DHCP

Cameras installed on a network without a DHCP server will default to the Automatic Private IP Addressing (APIPA), which is a failover mechanism of Microsoft Windows networks.

The IP address range is 169.254.0.1 through 169.254.255.254 with a default class B subnet mask of 255.255.0.0.

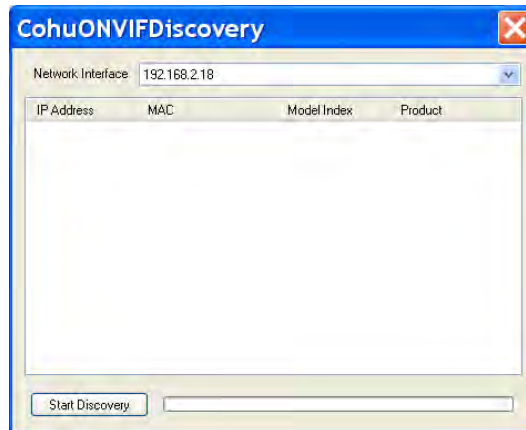
To configure the network settings of the camera follow the next steps:

- Connect the camera to the LAN, power on the camera.
- Camera automatically will be assigned the APIPA address.
- Discover the camera address using the CohuONVIFDiscovery software. See section 10.4.3.
- Access the camera using APIPA address.
- Change the camera assigned address to the desired static Address. See section 10.4.4.

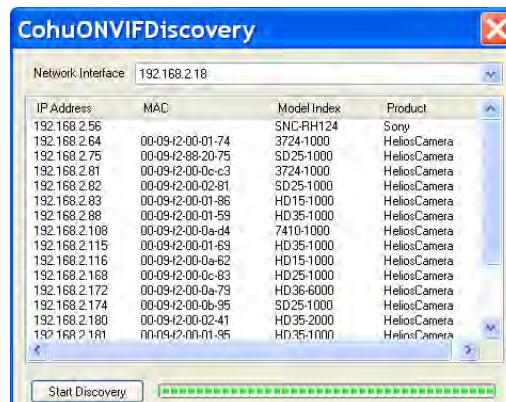
10.4.3 Using the CohuONVIFDiscovery Software to Discover the Camera

- Insert the CohuHD 7500 Series CD into the CD drive of the PC or download the software from the link: <http://www.CohuHD.com/content/downloads>. Under Software & Protocol Downloads see the Helios and 7500 Camera Series discovery tool. Click “download here.”
- Run the CohuONVIFDiscovery.exe file. Click to start it.
- The CohuONVIFDiscovery window will be displayed.

NOTE: Auto discovery feature uses network multicast packets and may not work through network routers.

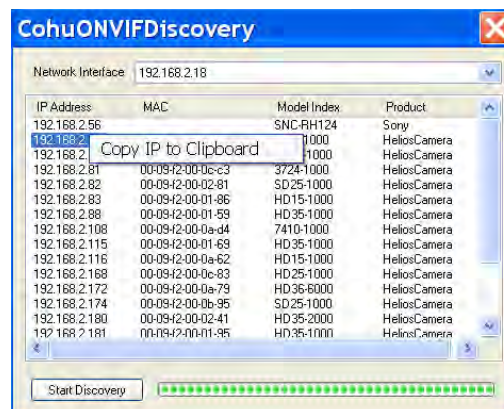


- Click on the “Start Discovery” button. A list of Cameras will be automatically displayed.



NOTE: Use the MAC Address or Model Index to identify CohuHD cameras. “00-09-f2” and 00-50-1a identify cameras as CohuHD cameras.

- Right click a camera entry. Click Copy IP to Clipboard.

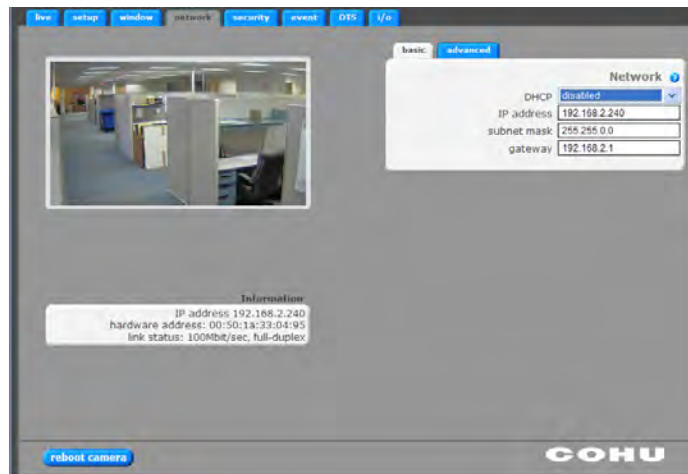


10.4.4 Change the camera IP network address

- Open a browser (IE recommended) and enter the IP address of the 7520^{HD} camera in the address field of the browser. The “Live” page will be displayed.
- If prompted, install the ActiveX control.



- Click the network tab. Choose Disabled line from the DHCP pull-down menu. Type IP address, subnet mask and gateway.



NOTE: Changing between a static IP address and DHCP will cause the camera to reboot.

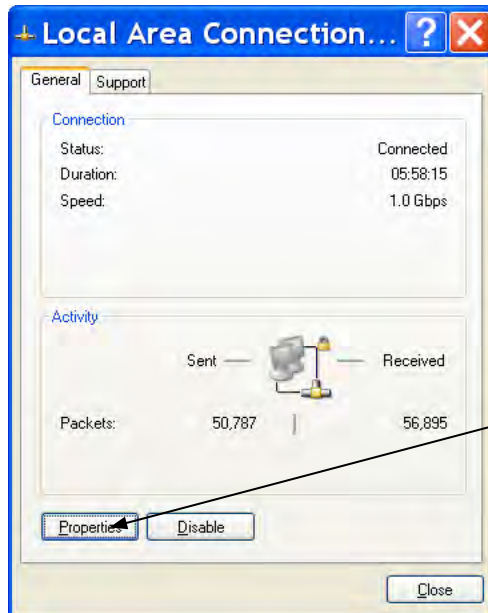
- To perform further configuration of the camera click on the “Setup” tab

NOTE: The default user name is “Admin” and the default password is “Camera”

10.4.5 Assigning the Static IP Address

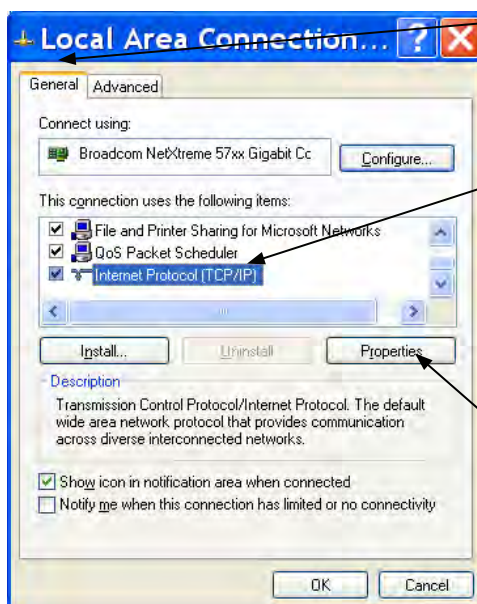
Set your computer IP address to the same subnet as the Camera IP address.

- Go Start > Control Panel > Network connections > Local Area Connection (Windows XP).
 - Go Start > Control Panel > Network and Sharing Center > Local Area Connection (Windows 7).
1. "Local Area Connection" dialog box will appear. Click "Properties."



Click "Properties"

2. The "Local Area Connections Properties" dialog box will be displayed. In the General tab, highlight the "Internet Protocol (TCP/IP)" line. Click "Properties."

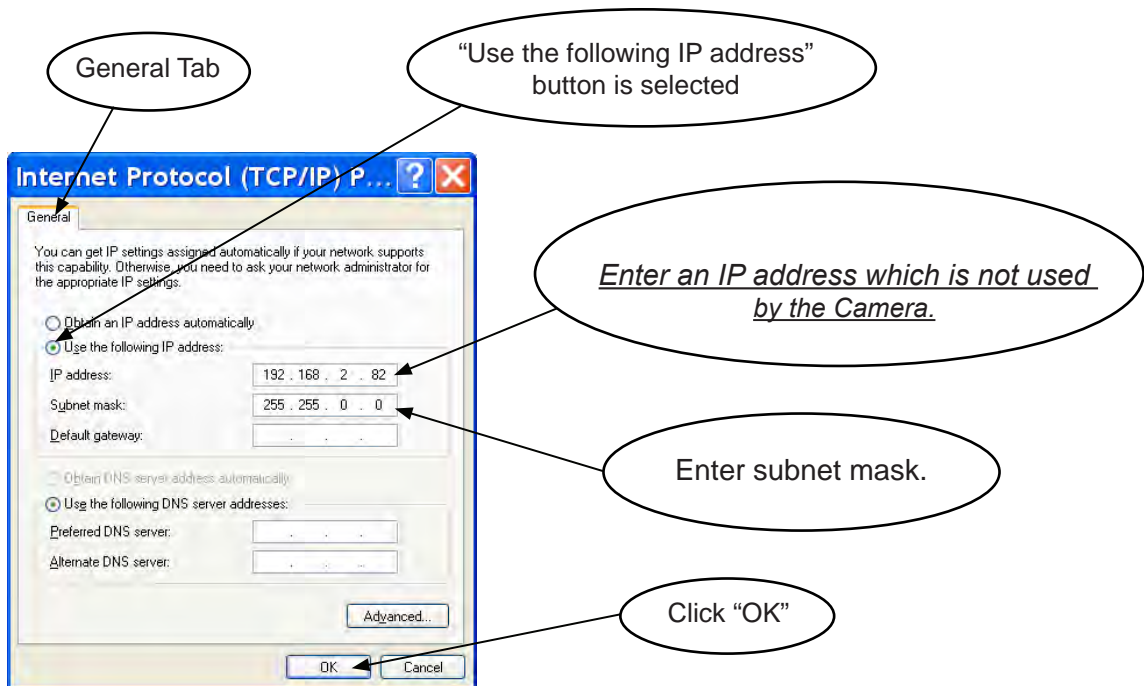


General Tab

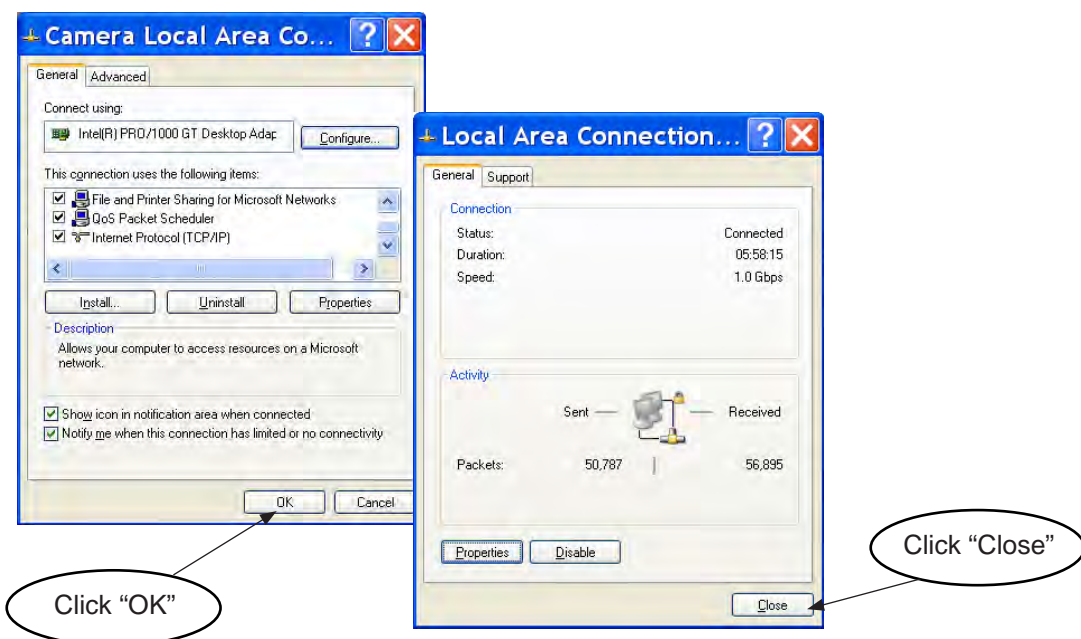
Highlight the "Internet Protocol (TCP/IP)"

Click "Properties"

3. You will see the “Internet Protocol (TCP/IP) dialog box. In the “General” tab the “Use the following IP address” button should be selected. Enter IP and subnet addresses. Click “OK” to close the “Internet Protocol (TCP/IP).

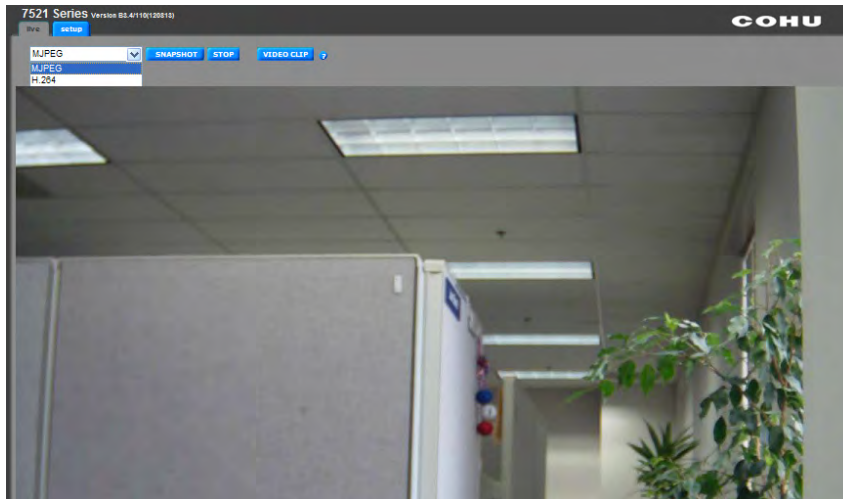




4. Click “OK” to close the the “Local Area Connections Properties” dialog box and click “Close” to close the “Local Area Connection” dialog box.



10.4.6 H.264 Video Streaming

To prepare the camera to serve the H.264 stream, select “H.264” from the drop-down menu. To view the H.264 stream in full screen mode (without ‘Live’ page controls), double click on the video window. Double-click on the video window again to return back to the ‘Live’ page.



NOTE: For information on the camera system operation and configuration, please see the camera system built-in help. Each page of the camera web interface has a question mark symbol . Clicking the symbol  will connect to explanations related to topics on that page.

For additional information and technical documents, please visit www.CohuHD.com.

11.0 Warranty

Please refer to the CohuHD website for product warranty information:

<http://www.CohuHD.com/warranty/WarrantyStatement.pdf>.

Revision History		
Revision	Date	Comments
Rev A	10/1/2012	Initial release
Rev B	10/19/12	p3 - website address was changed
Rev C	7/15/14	• the manual is revised to change company name