Rev A

Nexus Hawk™+ QuickConfig Guide

Nexus iSR 207 Tremont Street Rochester, New York 14608 585-436-0400

Configuring Nexus Hawk for:	**Video Camera** Connection	
Activity	Result	Explanation
1. Reset camera to factory defaults	1. Restores camera settings to factory defaults	1. Sets the camera to a known state
2. Connect Hawk to a hub or enable it as an Access Point	2. Connection with camera made	2. Allow configuration of camera with the Nexus Hawk
3. Connect camera to the Hawk's Eth1 port or the hub	3. Enables the Hawk to show the camera's MAC address	3. Retrieves the MAC address of the camera
4. Open Hawk's Management Console (default IP: 192.168.1.1) and note the camera's MAC address under **Setup|10/100 Ethernet** page	4. Assigns the camera a Static DHCP	4. Allows you to set an IP of your choice
5. Navigate to **Administration|Management|Static DHCP** page. Enter MAC address, descriptive host name, and IP address that you wish to be assigned to this device. A value outside the DHCP lease pool	5. The Nexus Hawk will now assign to the camera the specified IP address	5. Enables camera to always connect to the same IP address upon every connection
6. Press <Apply Changes>	6. Power cycles camera	6. Camera receives new address
7. Power cycle camera	7. Visually verify camera's operation	7. Connects camera to the Nexus Hawk
8. Verify camera's proper operation by logging into it's management console at the statically assigned IP address	8. Change the camera's HTTP port if needed	8. Notes camera HTTP port for future reference
9. Make note of camera's HTTP Port (usually defaults to 80). Change HTTP Port to another value preferably 8081.	9. Sets the camera's HTTP port	9. Allows camera to be accessed
10. Save changes and close camera management console	10. Open management console	10. Opens Nexus Hawk management console
11. Open Hawk's management console	11. Open configuration page for port forwarding	11. Allows you to configure port forwarding
12. Navigate to **Applications|Port Forwarding** page	12. Enables port forwarding	12. Enables port forwarding for configuration
13. Check Enabled	13. Forwards the camera's HTTP port to the specified IP address	13. Enables Nexus Hawk to forward camera's HTTP port to a specified IP address
14. Enter your camera's HTTP port into both the **From** and **To** fields.	14. Applies changes	14. Connects camera to the specified IP address allowing access to the camera from the internet
15. Enter your camera's static IP address into the host field	15. Visually verify the camera's operation	
16. Press <Apply Changes>		
17. Navigate to your WAN IP address at that port to access the camera's management console		

Note: It is possible for your Hawk's data card to change IP address dynamically and without warning. This is controlled by your service provider. To assure that you can always gain access to your Nexus Hawk you may either (1) request a static IP address from your provider or (2) use the embedded Dynamic DNS (DDNS) feature in conjunction with a service hosted by http://www.DynDNS.com.

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Configuring Nexus Hawk for:	**WiFi Access Point** Connection	
Activity	Result	Explanation
1. Within the web browser: Select **Setup|WiFi|AP/Client Config** menu	1. Open configuration page for WiFi	1. Allow configuration of WiFi
2. Check the '**AP**' box	2. Access Point functionality is selected	2. Enables AP functionality
3. Enter SSID	3. This names your WiFi network to others	3. Allows you to uniquely name your AP
4. Press <Apply Changes> button **Note:** To secure the AP, choose a security level from the drop menu and enter a pre-shared key supplied by your network administrator and press <Apply Changes>.	4. The Nexus Hawk is now active as an AP	4. Connects Nexus Hawk to the Internet services.
5. Select **Status** menu to verify Note: May take 30-seconds to update	5. Visually verify connection status. Exit when satisfied.	

Configuring Nexus Hawk for:	**WiFi Client** Connection	
Activity	Result	Explanation
1. Within the web browser: Select **Setup|WiFi|AP/Client Config** menu	1. Open configuration page for WiFi	1. Allow configuration of WiFi
2. Check the '**Client**' box	2. Client functionality is selected	2. Enable client functionality
3. If SSID is known enter it. If not press '**[Scan]**'	3. Will search for enabled AP connections	3. Allows you to connect to a named WiFi access point
4. Press <Apply Changes> **Note:** To secure the Client, choose a security level from the drop menu and enter a pre-shared key supplied by your network administrator and press <Apply Changes>.	4. The Nexus Hawk is now active as a client	4. Connects Nexus Hawk to the Internet services.
5. Select **Status** menu to verify Note: May take 30-seconds to update	5. Visually verify connection status. Exit when satisfied.	

Configuring Nexus Hawk for:	**Internal GPS**	
Activity	Result	Explanation
1. Within the web browser: Select **Setup|Serial** menu	1. Open configuration page for GPS	1. Allow configuration of GPS
2. Check the '**Enable GPSd**' box	2. GPS functionality is enabled	2. Enable GPS functionality
3. Press <Apply Changes>	3. The Nexus Hawk will now send GPS data	3. Enable GPS to send data
4. On the Nexus Hawk turn GPS switch toward GPS antenna	4. Turns internal GPS on	4. Allows the Nexus Hawk to send GPS data
5. Select **Status** menu to verify Note: May take 30-seconds to update	5. Visually verify connection status. Exit when satisfied.	

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Configuring Nexus Hawk for:	**GPS Aggregation** ("pushing" GPS to a remote host)	
Activity	Result	Explanation
1. Within the web browser: Select **Setup**|**Serial**|**GPS Aggregation** menu	1. Open configuration page for GPS aggregation	1. Allow configuration of GPS aggregation
2. Check the '**Connect to aggregator**' box	2. GPS aggregation functionality is enabled	2. Enables GPS aggregation functionality
3. Enter the aggregator IP address or hostname in the **'Host'** field	3. The Nexus Hawk will send GPS data to the specified host	3. Enables the Nexus Hawk to send data to the aggregator
4. Enter the port to connect to on the aggregator in the **'Port'** field	4. The Nexus Hawk will send GPS data to the specified port	4. Enables the Nexus Hawk to send data to the aggregator's port
5. Select Continuous or Timed data stream	5. The Nexus Hawk will send GPS data at specified interval	5. Enables the Nexus Hawk to send data at specified intervals
6. Select 'Raw' or 'APRS-style' (based on your individual needs) from the drop down box	6. The user defines the format that the GPS data will take – either "user defined" (Raw) or "structured" *(APRS-style)	6. The user defines the format that the GPS data will take – either "user defined" (Raw) or "structured" *(APRS-style)
7. Fill-in information as requested.		
8. Press <Apply Changes>	7. Applies changes to the system.	7. Applies changes to the remote host system via TCP.

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