

# NEOS™ ATAK Plugin

Quick Reference Guide



# NEOS MIL™





# NEOS™ - Overview

**NEOS™** Designed to enhance the operational efficiency of UXV platforms. By utilizing the power of the Aries NEOS™ DogBone, NEOS™ can provide battlefield commanders with multiple video feeds over tactical networks.

**NEOS™** allows users to Network & TAK enable the Full Motion Video of their sensor from the Ground Control System.

**NEOS™** allows users to stream multiple controlled video feeds concurrently over Mobile, Tactical & Command systems.

**NEOS™** is a low-voltage capability designed for extended operations. The system provides automatic network routing for rapid deployment and ease of use.

There is no configuration required and the tool has successfully integrated with Mission Systems such as TAK, APASS, MCH, and others.



# Before We Begin...



This document assumes the following:

1. ATAK Must be installed on the End User Device before installing the NEOS™ Plugin.
2. The Reader has followed the steps found in the NEOS™ Setup Guide.
3. The Reader has the system set up and the EUD is receiving an IP Address from the NEOS™ System.



This icon indicates the tablet/EUD detects a network connection

This icon indicates the tablet/EUD is receiving an IP address from the NEOS™ System

# NEOS™ Plugin for ATAK Table of Contents



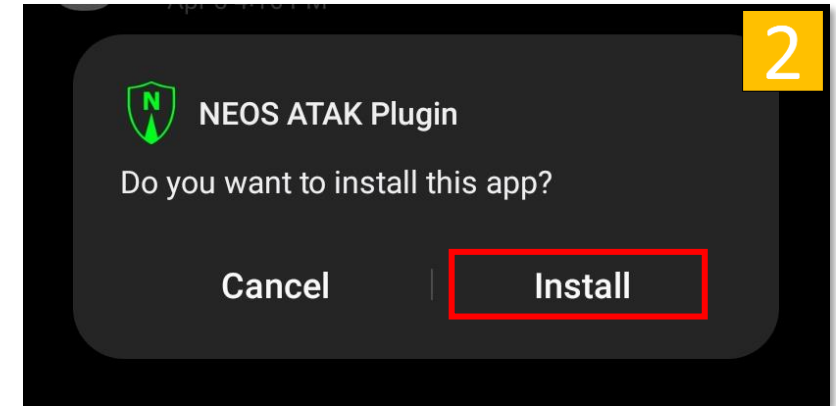
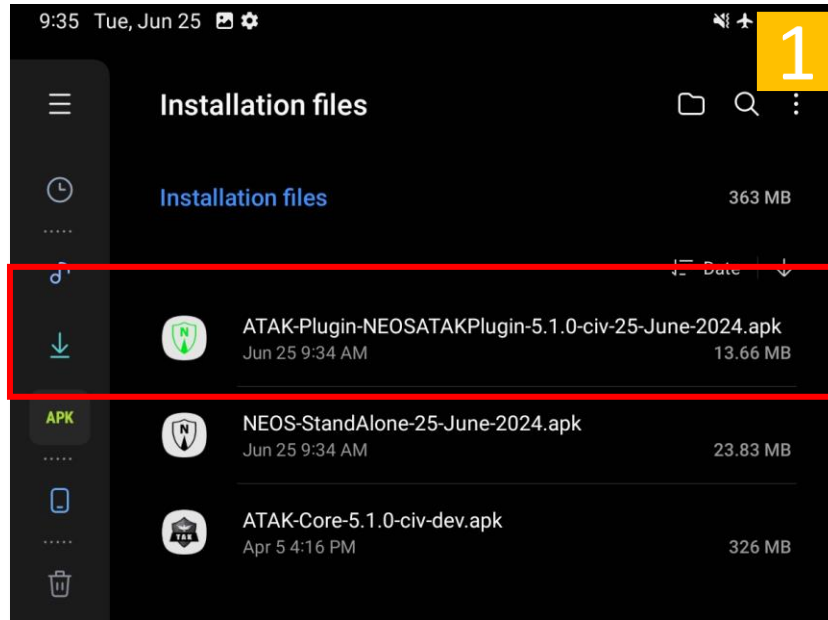
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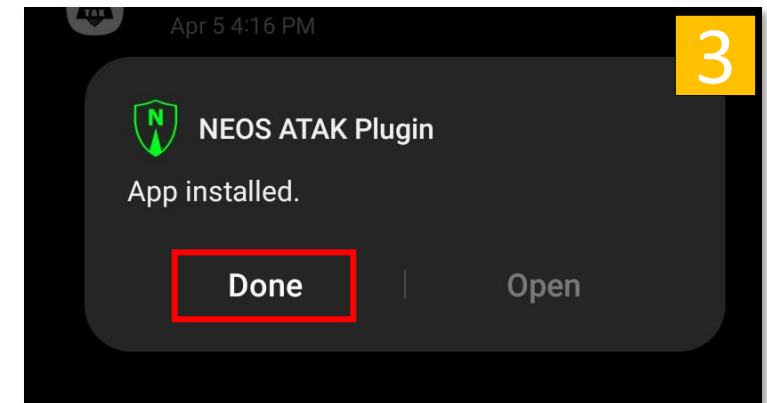
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# Install NEOS™ Plugin for ATAK



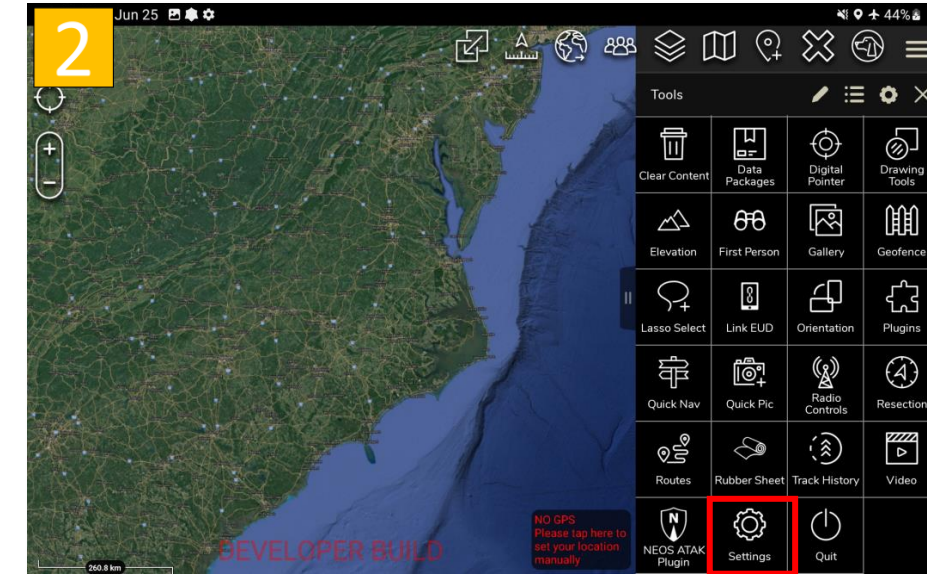
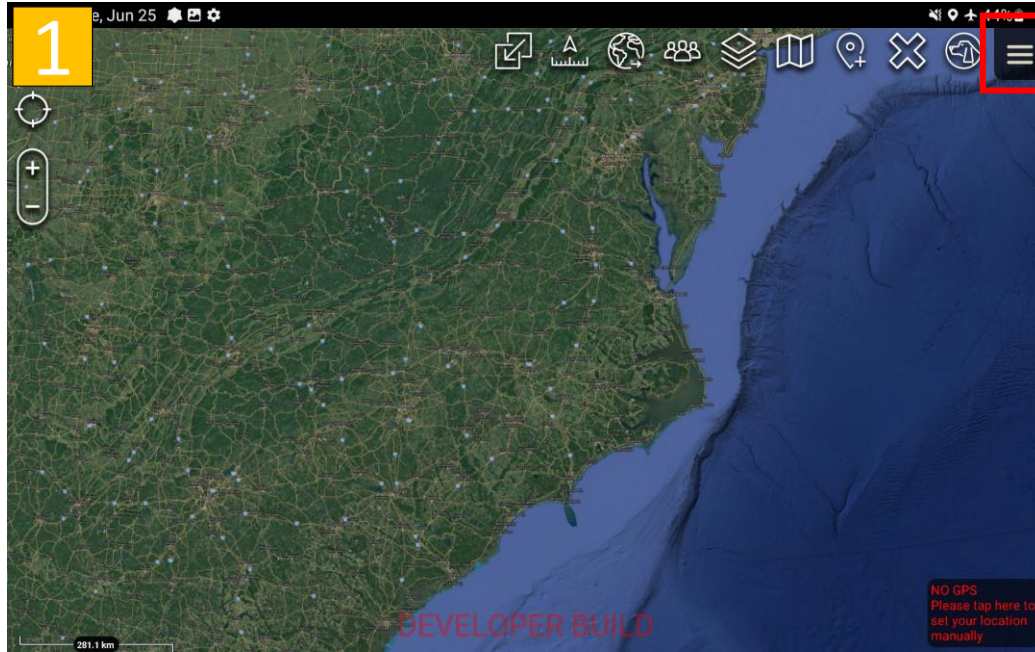
1. **Tap** the NEOS™ Plugin APK file to begin installation.
2. Review the Permissions Statement then **tap Install**.
3. **Tap DONE** once the installation is complete.

**Note:** you may have to adjust the security settings on your device to install this application.

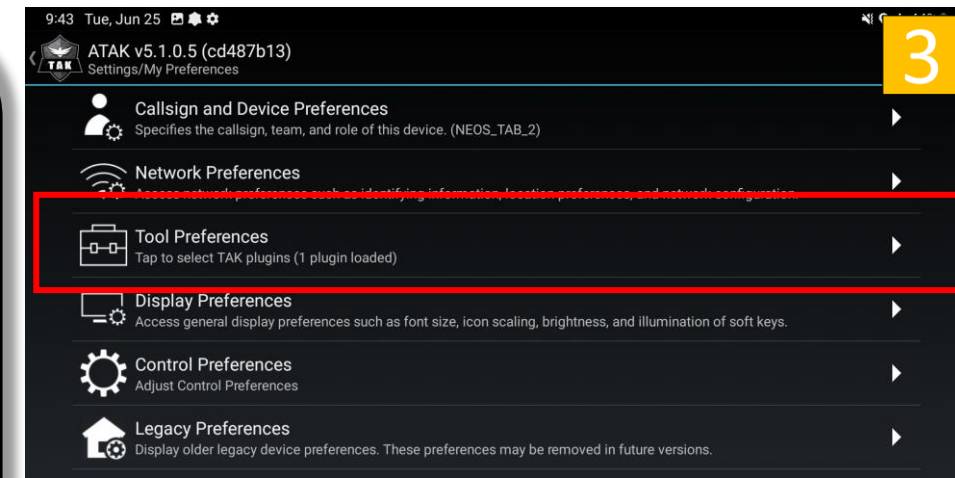




# Load NEOS™ Plugin for ATAK

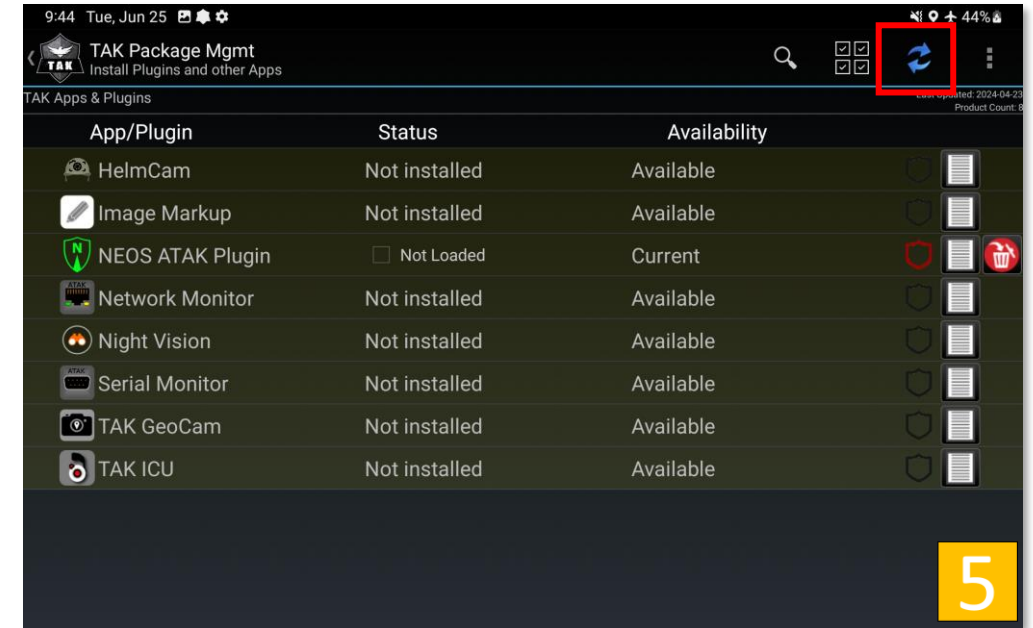
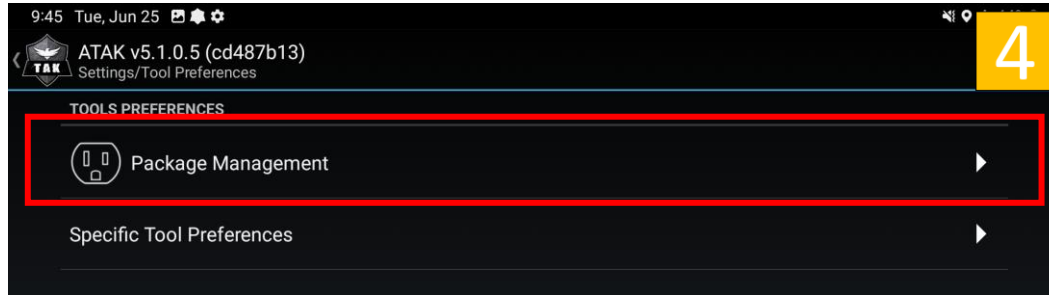


1. **Launch** ATAK then **tap** the Triple Dots button to open the overflow menu.
2. Scroll down to the bottom of the list then **tap** Settings.
3. **Tap** Tool Preferences under the “Manage My Device” section.

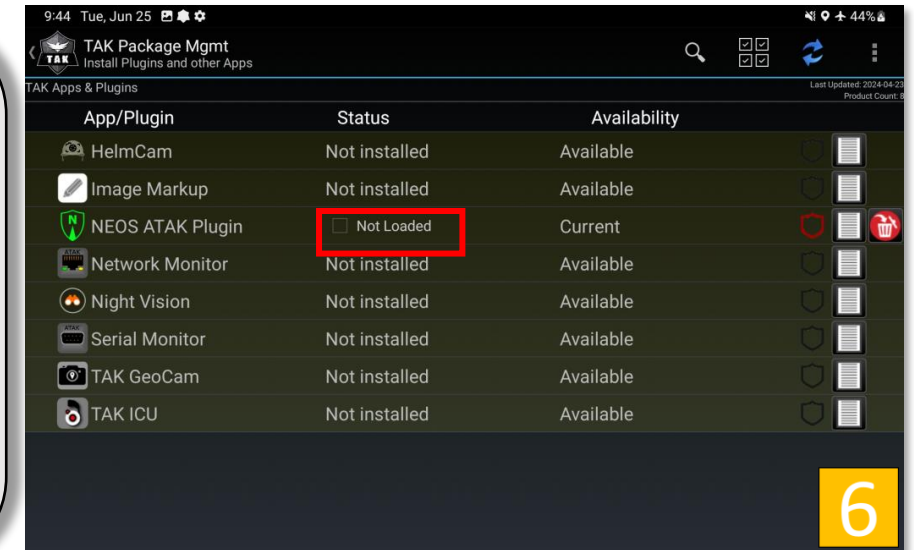




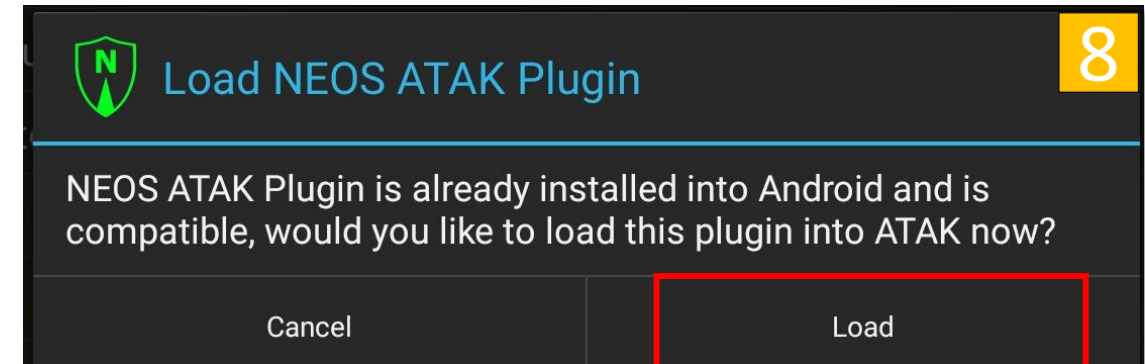
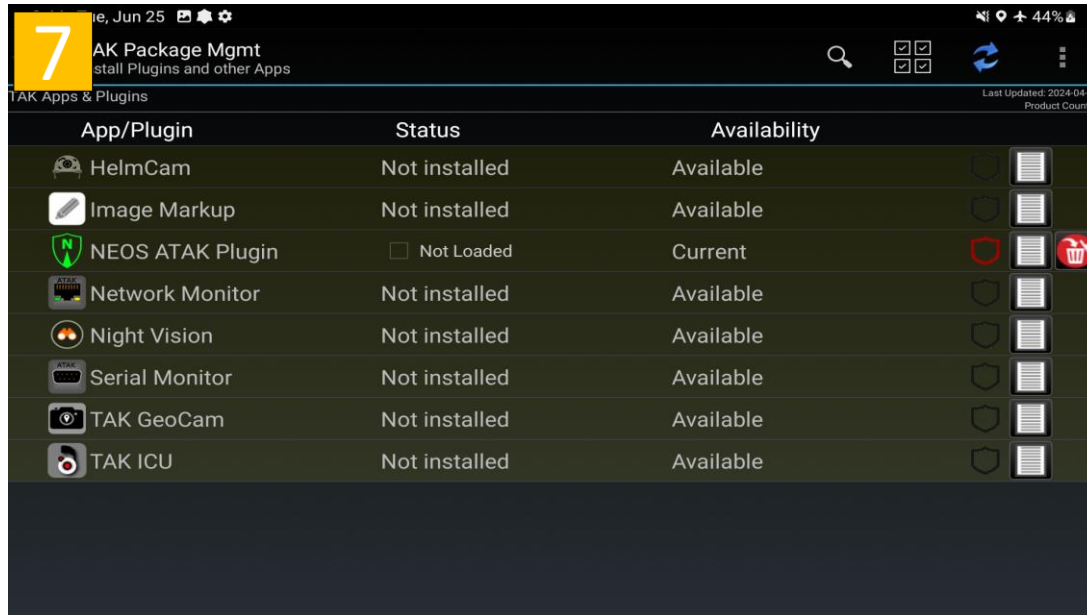
# Load NEOS™ Plugin for ATAK (Cont...)



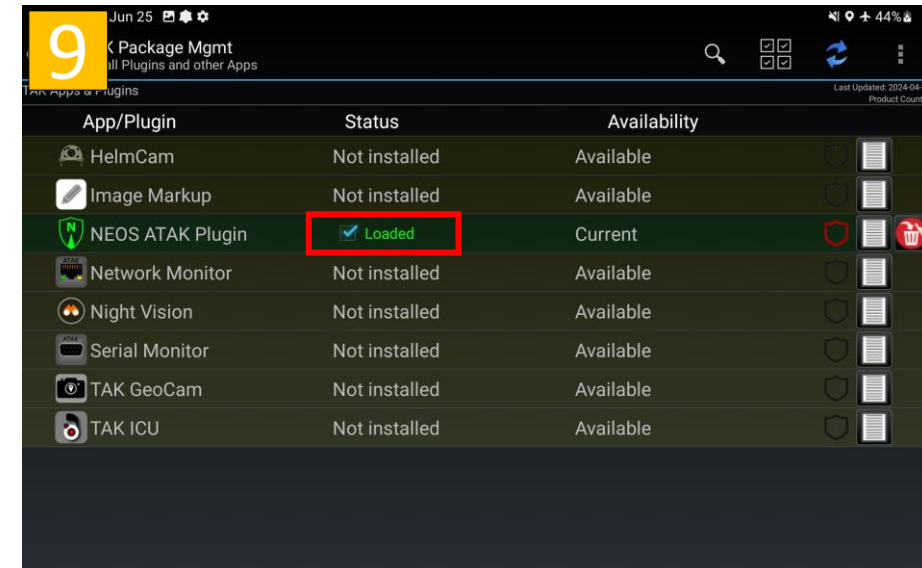
4. **Tap** TAK Package Mgmt.
5. If the NEOS™ Plugin is not loaded **tap** the **Refresh** button then **tap** OK to Sync Packages.
6. **Tap** the Not Loaded checkbox.



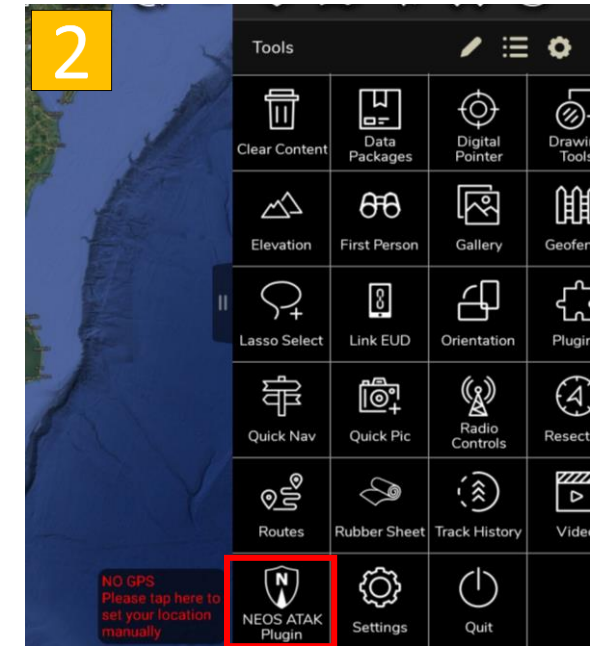
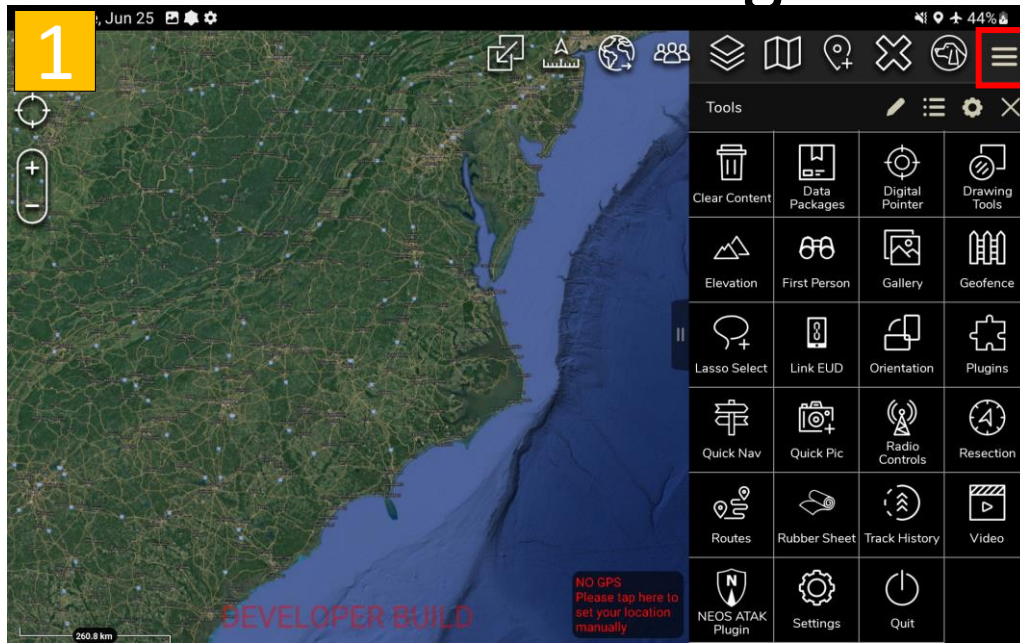
# Load NEOS™ Plugin for ATAK (Cont...)



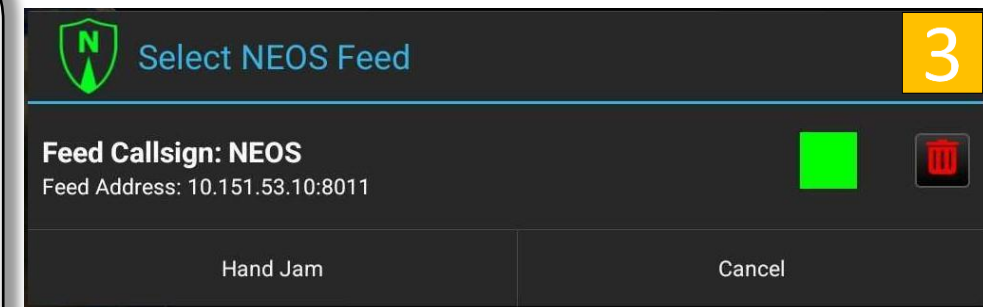
7. Review the NEOS™ Plugin details then **tap** the square next to Not Loaded.
8. **Tap Load** to load the plugin.
9. **NEOS™** is now loaded. Tap the back button on the EUD to return to the main ATAK Interface.



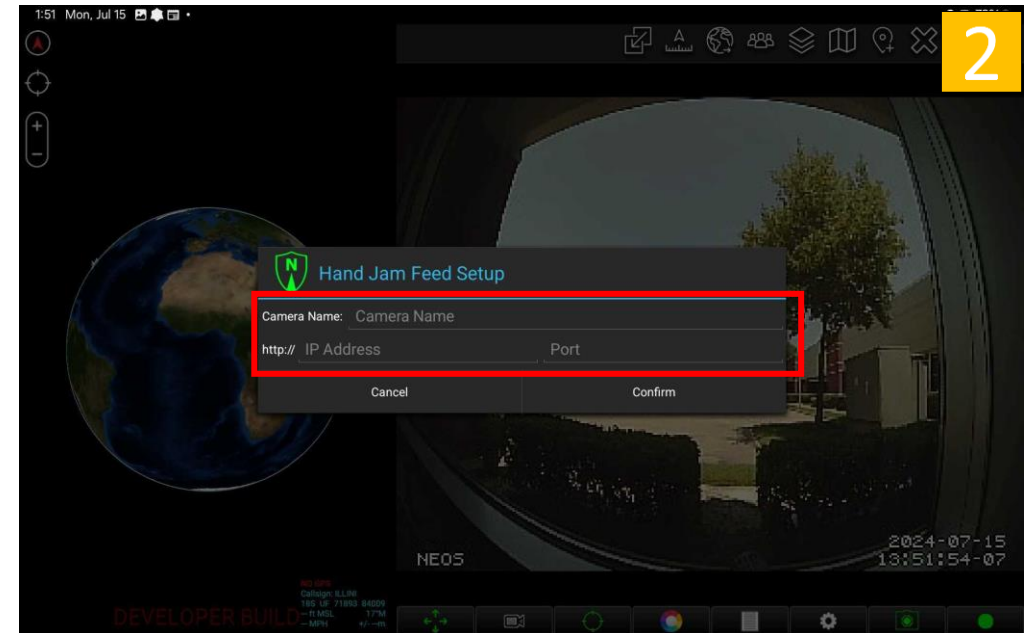
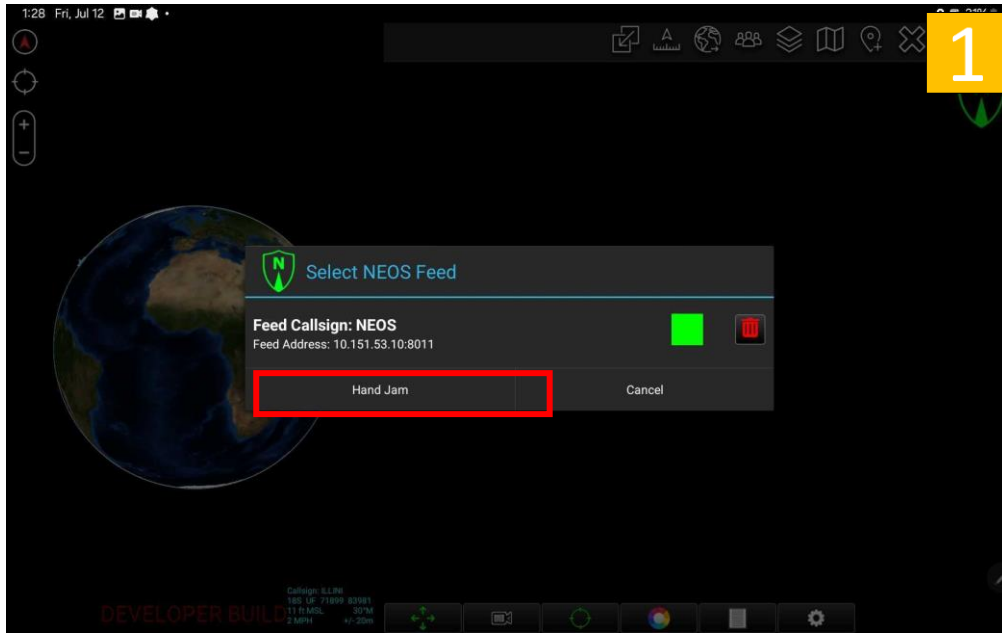
# Launch NEOS™ Plugin



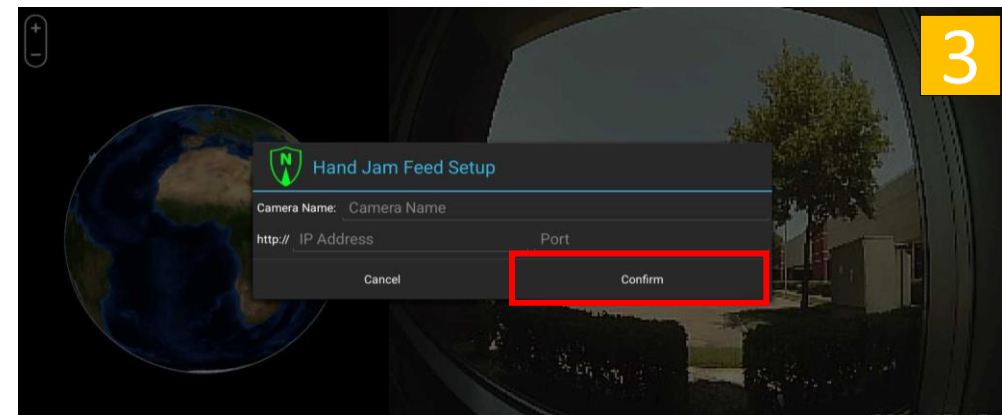
1. **Tap** the Triple Dots button.
2. Scroll down to the bottom of the list and **tap** NEOS™.
3. The first time NEOS™ is launched you will be provided a dialog of the detected feeds on the network. Once selected the video will start streaming.



# Initial Camera Setup



1. **Select** Hand Jam
2. **Enter** Required Fields
  - Camera Names are user defined.
  - The Default Camera URL is: 10.151.53.10.
  - The Default Port is 8011.
3. **Tap** Confirm to continue.



# Initial Camera Setup (Cont...)



The screenshot shows a 'Select NEOS Feed' interface with two feed entries. The first entry, 'Feed Callsign: NEOS', has a red trash icon and a green square. The second entry, 'Feed Callsign: NEOS-Handjam', has a hand icon, a red trash icon, and a grey square. Callouts on the right identify these icons: 'Delete Feed' (trash icon), 'Active Feed' (green square), 'Stale Feed (after 5 minutes of inactivity)' (grey square), and 'Hand Jammed' (hand icon). At the bottom of the interface are 'HAND JAM' and 'CANCEL' buttons.

**Select NEOS Feed**

**Feed Callsign: NEOS**  
Feed Address: 10.151.53.10:8011

**Feed Callsign: NEOS-Handjam**  
Feed Address: 10.151.53.10:8011

**Delete Feed**

**Active Feed**

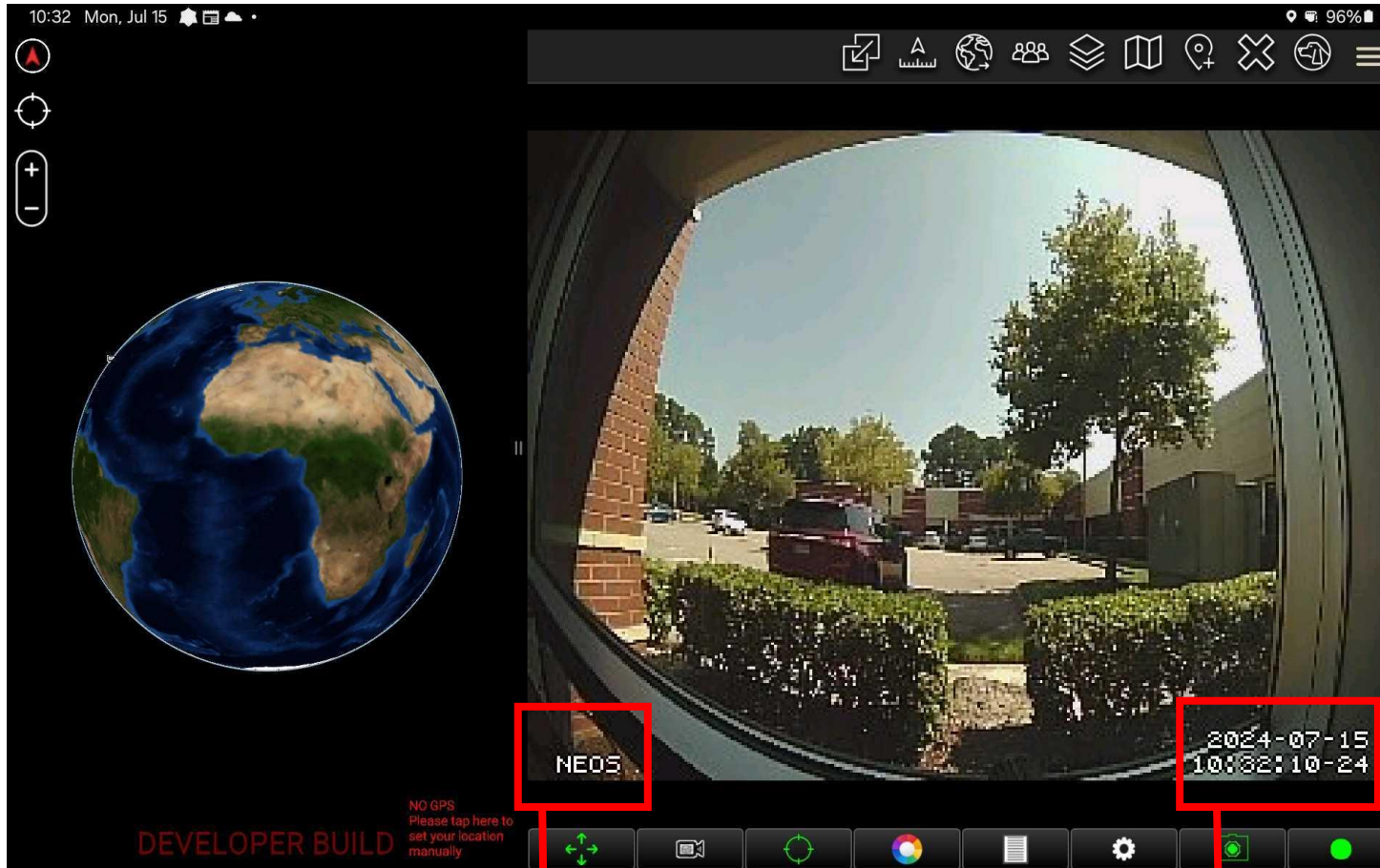
**Stale Feed (after 5 minutes of inactivity)**

**Hand Jammed**

**HAND JAM** **CANCEL**











# NEOS™ Plugin for ATAK User Interface



Sensor Name

Date & Time

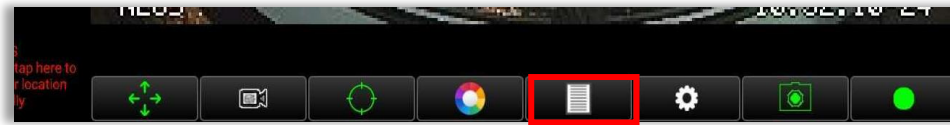
-  Adjust Reticle
-  Select Source
-  Select Reticle
-  Choose Color
-  Recordings
-  Settings
-  Take Snapshot
-  Start Recording







# NEOS™ Plugin for ATAK: Files

# NEOS™ Plugin for ATAK: Files Overview



The NEOS™ Files allows users to view snapshots and recordings. These files are manually created using the snapshot or record buttons   from the main interface. Files tagged with M\_ were manually captured. These files can be sent to other ATAK Users.



# NEOS™ Plugin for ATAK: Files - Recordings



Recordings Screen

Recordings

Snap Shots

Video Date Stamp


Size and Length

Delete

Rename


Delete Confirmation

Rename Dialog

 **Delete**

Are you sure you want to delete: M-neos1-2024-06-18 11\_15\_25\_270.mp4?

NO YES

 **Rename**

Rename M-neos1-2024-06-18 11\_15\_25\_270.mp4

New File Name .mp4

CANCEL CONFIRM

# NEOS™ Plugin for ATAK: Files – Recordings (Cont...)



Video Recording File Syntax

M neos1 2024-07-15 15\_55\_44\_583 MP4

1 2 3 4

1. M – Manual Recording
2. Camera Name
3. Date Time Stamp
4. File Extension

3 of 3

Current file of total files

Video Progress Bar

Previous Next

Go to Previous Video Go to Next Video

Play / Stop Video Back

Go Back to Files

# NEOS™ Plugin for ATAK: Files - Snapshots



Files Screen

File Date Stamp

Snap Shots

File Size

Delete Confirmation

Rename Dialog

Recording Name	File Size	Duration
M-neos1-2024-06-28 10_21_07_163.mp4	298.4 KB	00h:00m:01s
M-neos1-2024-07-11 15_41_45_783.mp4	249.3 KB	00h:00m:01s



# NEOS™ Plugin for ATAK: Files – Snapshots (Cont...)



Snapshot File Syntax

M neos1 2024-07-15 15\_55\_18\_468 JPG

- 1
- 2
- 3
- 4

1. M – Manual Snapshot
2. Camera Name
3. Date Time Stamp
4. File Extension

3 of 3

Current file of total files

**Previous** **Next**

Go to Previous Snapshot      Go to Next Snapshot

**Back**

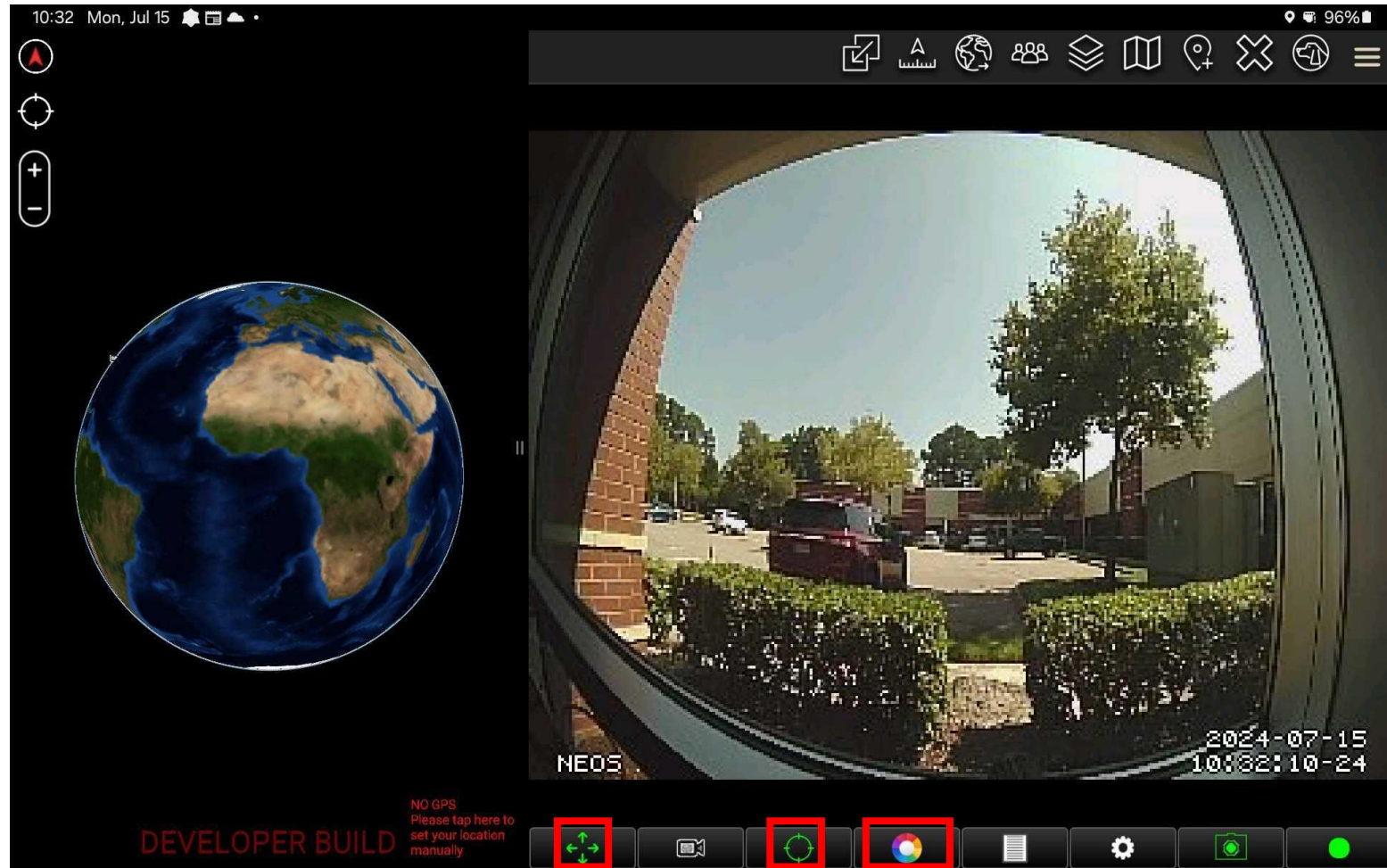
Go Back to Files





# NEOS™ Plugin for ATAK: Reticle Adjustments

# NEOS Reticle Adjustments

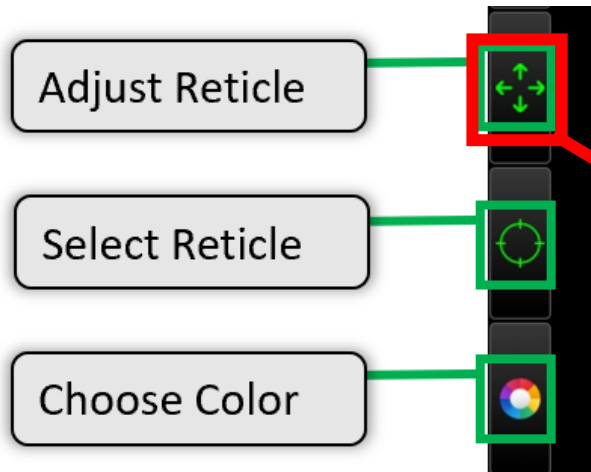


Adjust Reticle

Reticle Select

Color Select

# NEOS Reticle Adjustment (Cont...)



Adjust Reticle

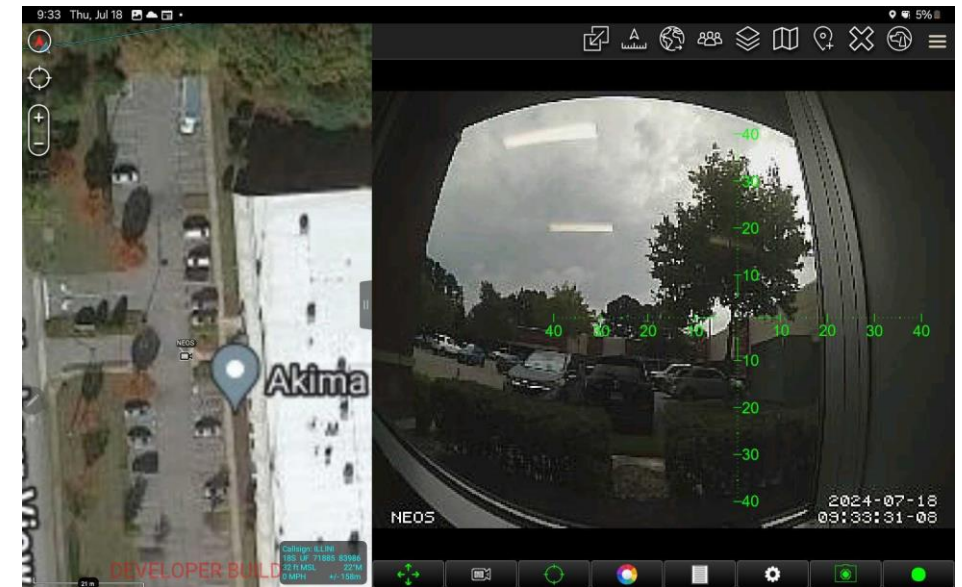


Up / Down

Resize Reticle

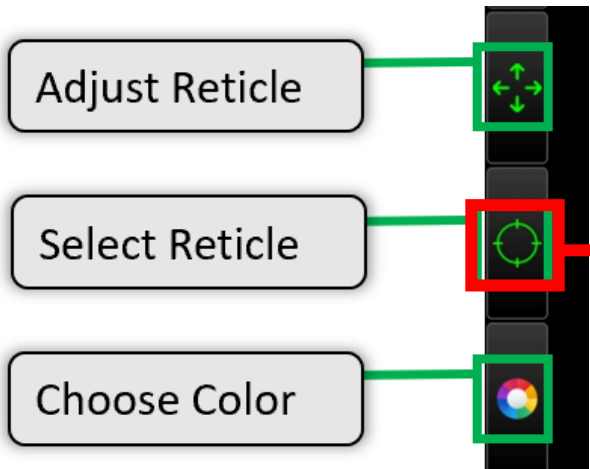
Left / Right

Reset / Confirm

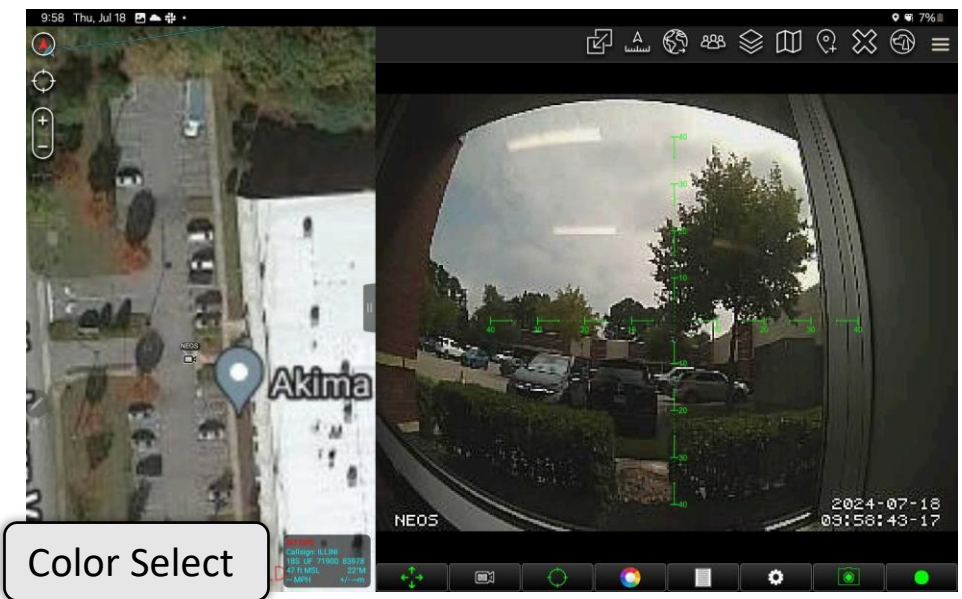
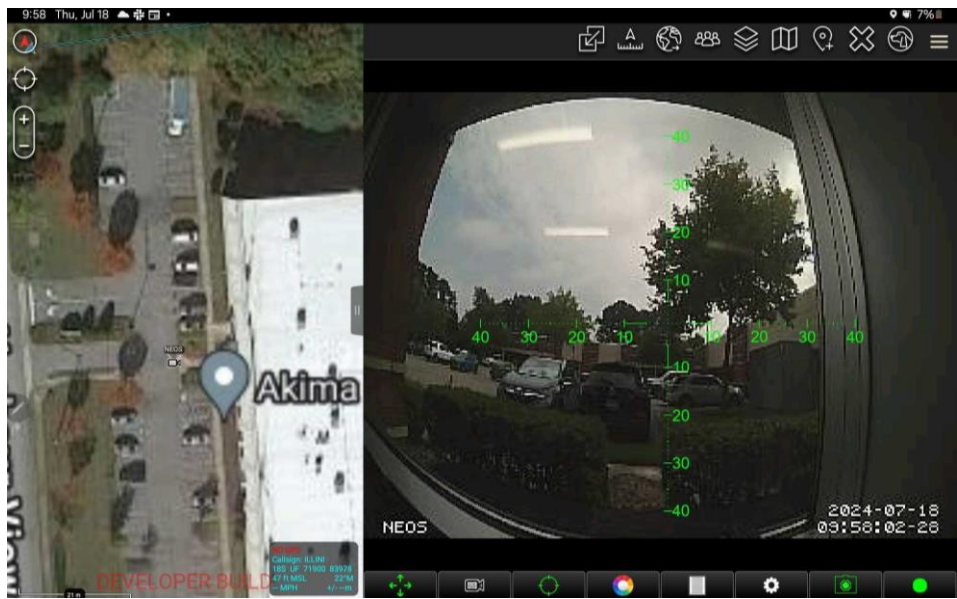
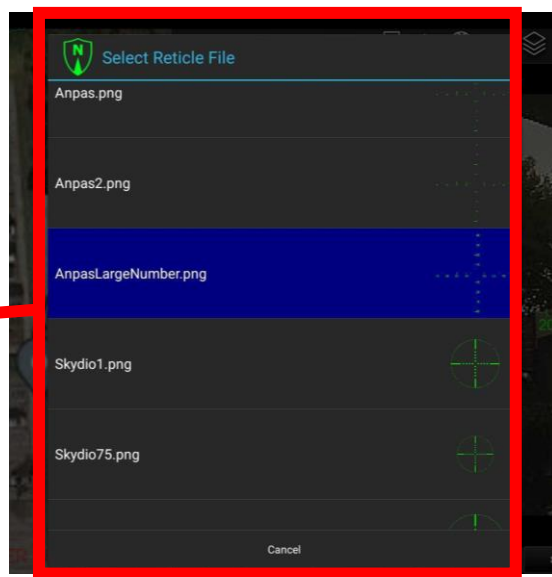




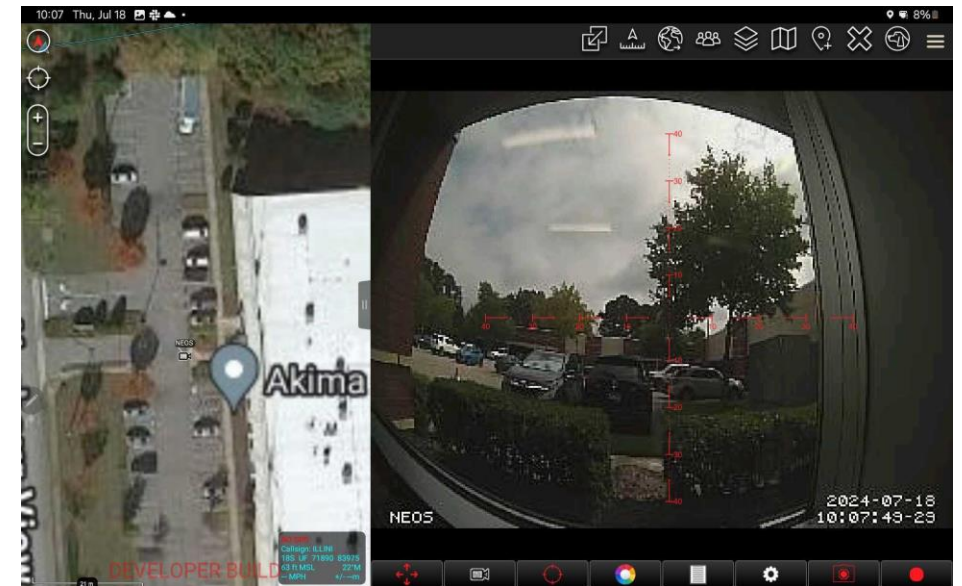
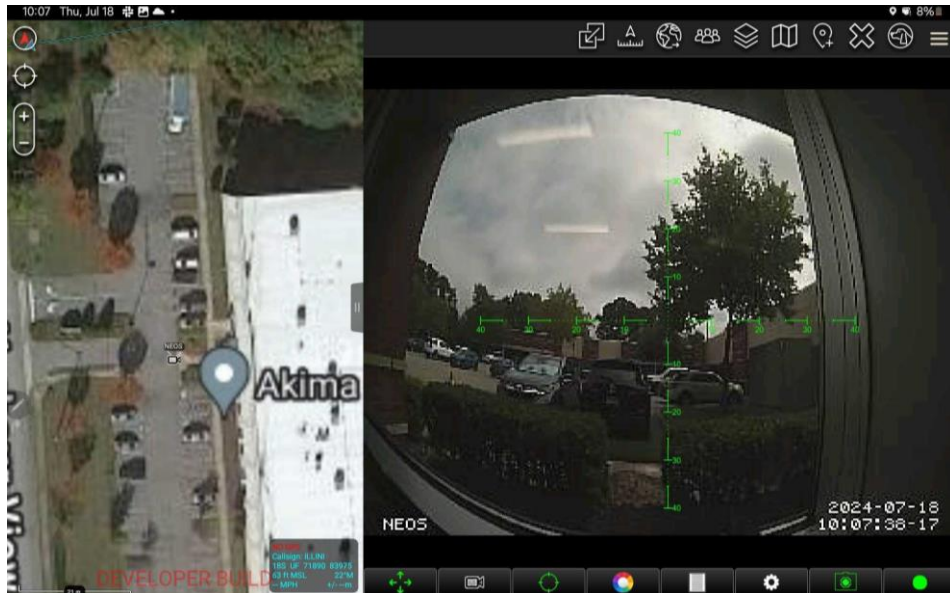
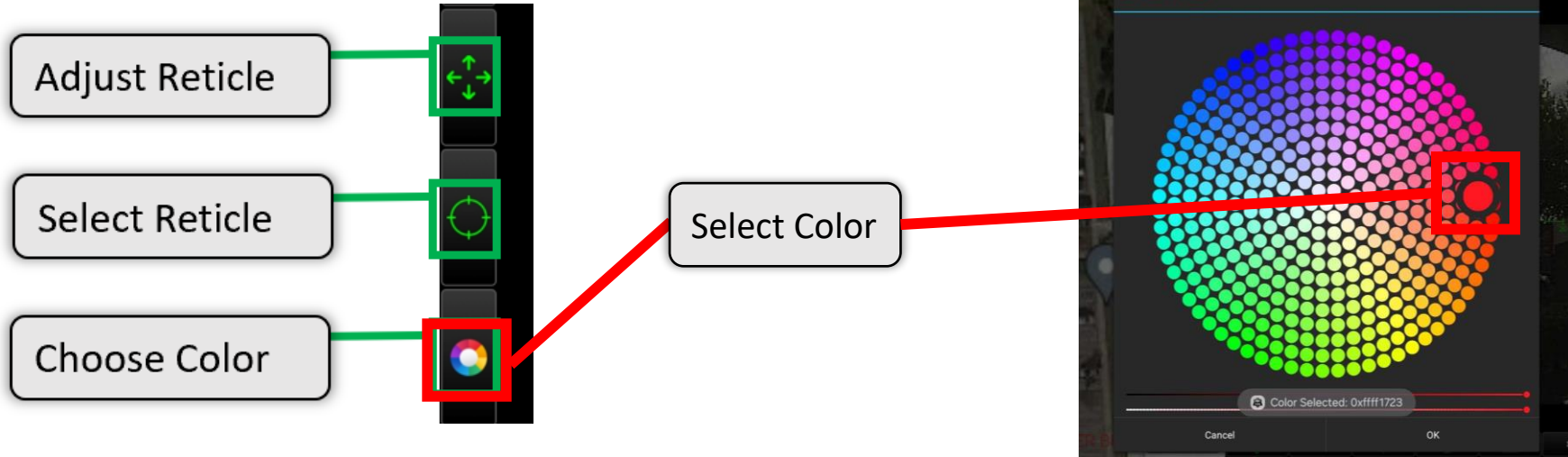
# NEOS Select Reticle



Select a Reticle



# NEOS Select Color Palette

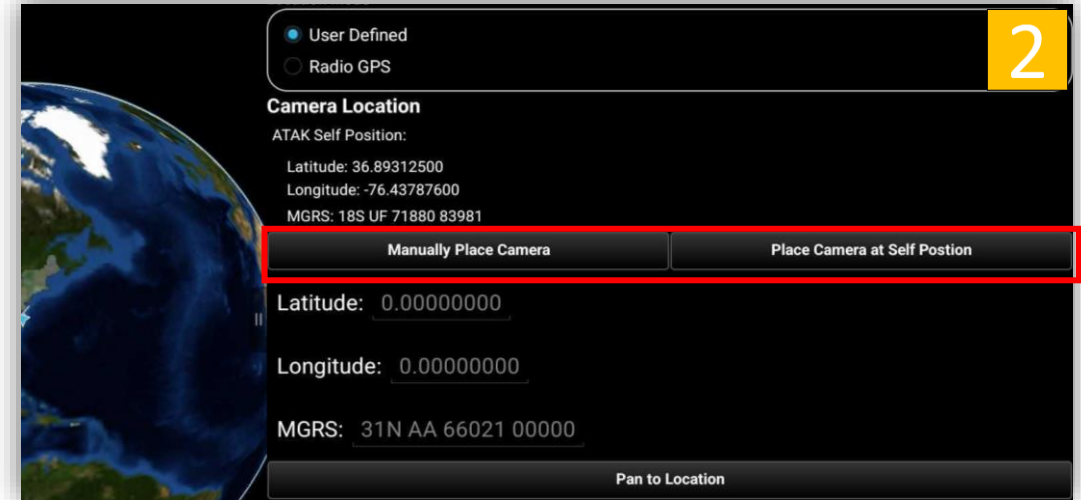
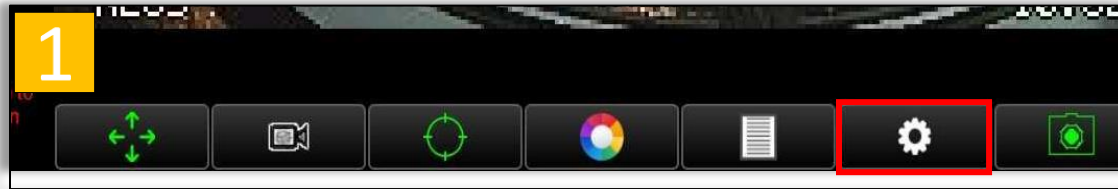




# NEOS™ Plugin for ATAK: Place NEOS Sensor Point of Interest (SPI)



# NEOS™ Plugin for ATAK: Place Camera



1. **Tap** the Toggle Camera/FOV Button. (Gear Icon)
2. **Tap** Place Camera.
3. **Tap** the location of Camera on the Map.

A Field of View (FOV) cone will automatically be placed at the camera location. Instructions on how to modify The FOV cone can be found on page ( ).



# NEOS™ Plugin for ATAK: Place Camera cont.



1. After placing your camera location, the latitude and longitude will update with the current coordinates shown along with an icon appearing.
2. You can adjust location placement again by using the place camera options. Once where desired hit commit and the sensor will be saved to the selected location.





# NEOS™ Plugin for ATAK: Preferences

# NEOS™ Plugin for ATAK: Preferences Overview



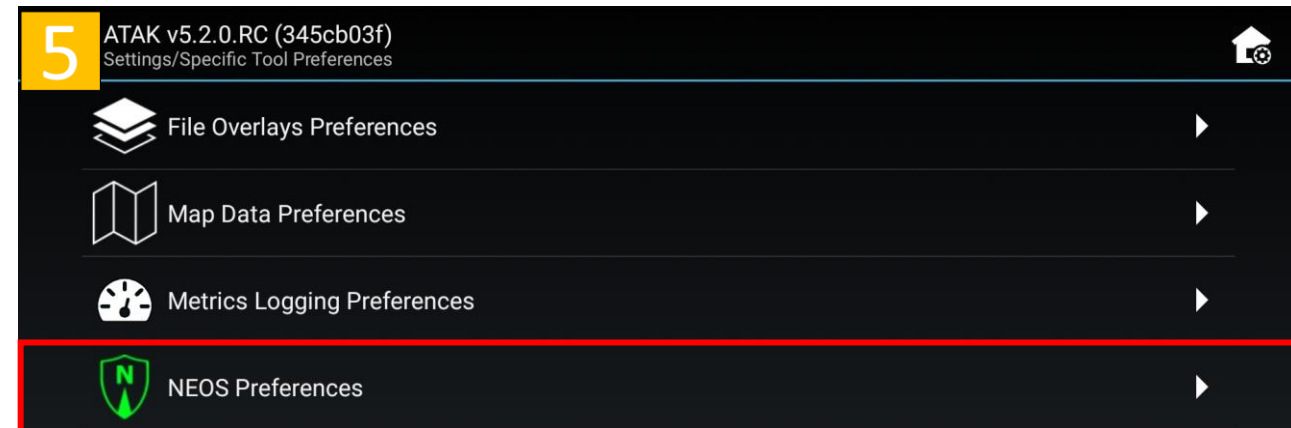
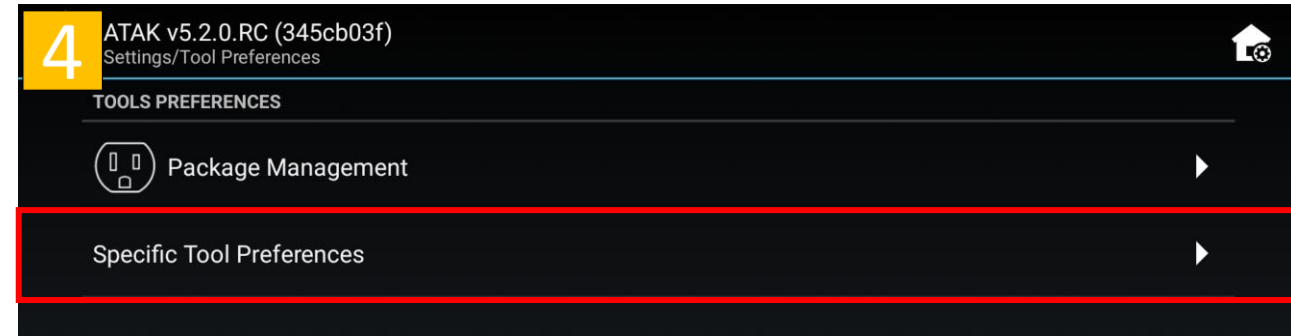
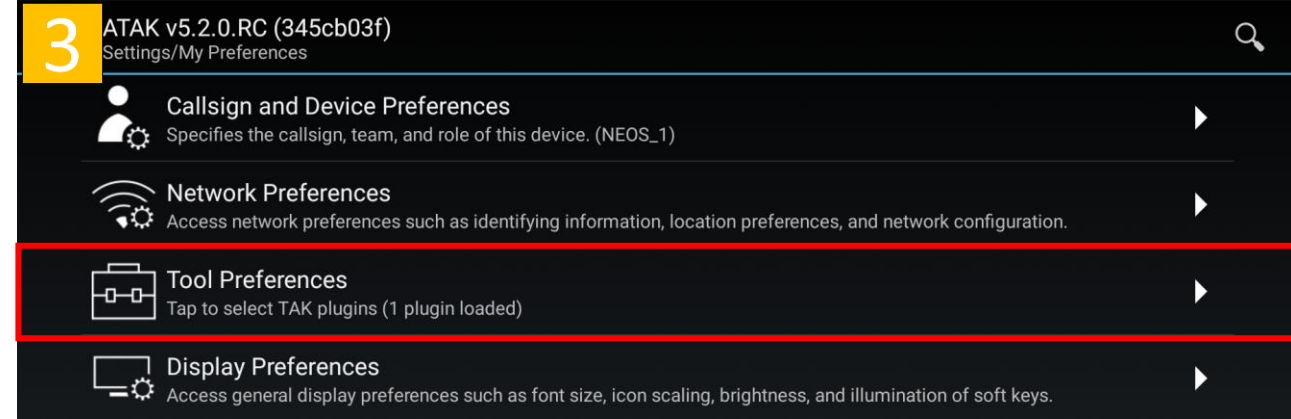
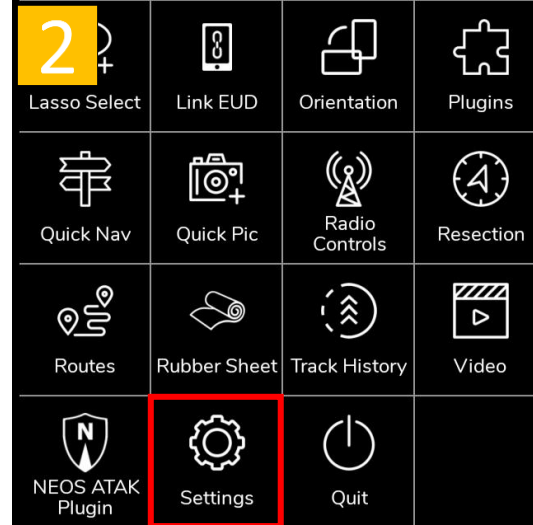
The NEOS™ Preferences allows the user to:

- Enable/Disable the reticle overlay on the ATAK native video player
- Modify snapshot settings
- View this user guide
- View a setup guide
- View information about NEOS™
- Configure the settings on the NEOS™ (ADVANCED)\*

\*This should be done with extreme caution!

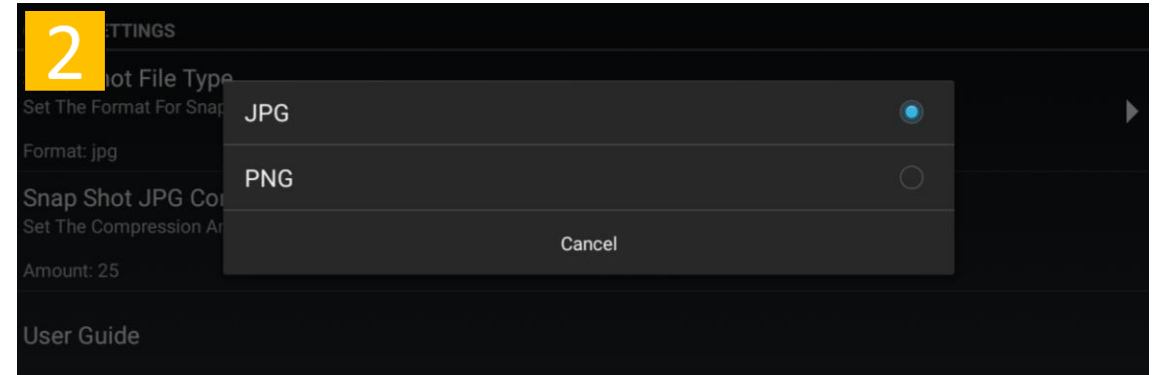
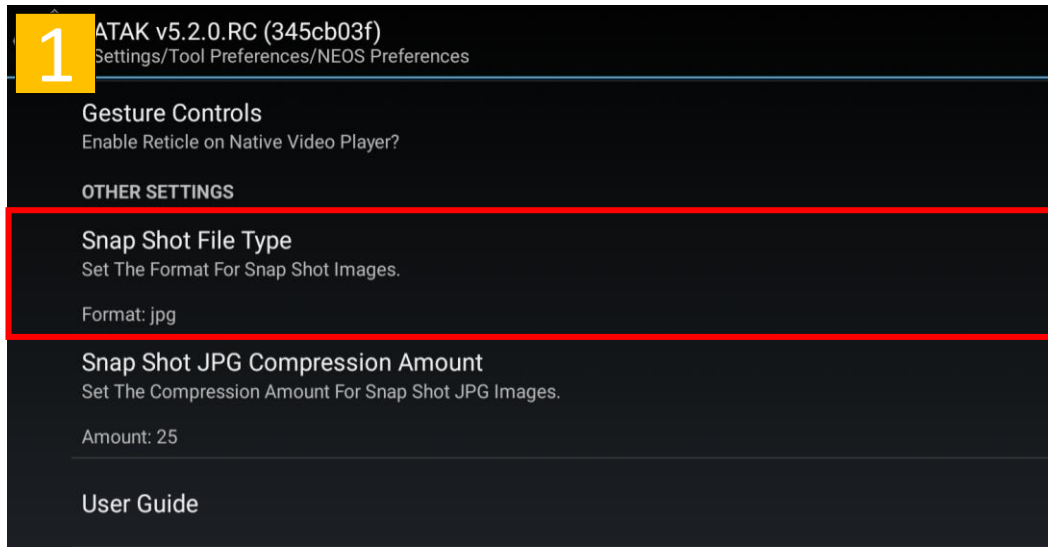


# NEOS™ Plugin for ATAK: Access Preferences



1. **Tap** the Triple Stack button.
2. **Tap** Settings.
3. **Tap** Tool Preferences.
4. **Tap** Specific Tool Preferences
5. **Tap** NEOS™ Preferences.

# NEOS™ Plugin for ATAK: Preferences – Snap Shot File Type

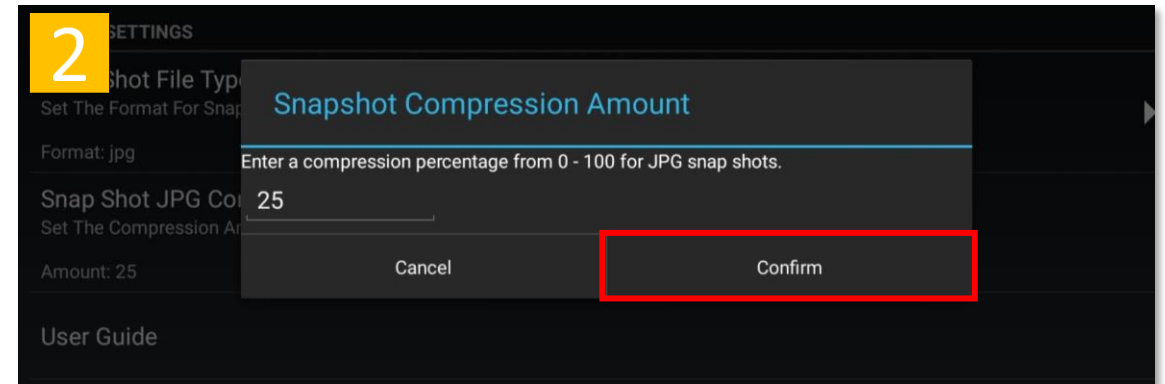
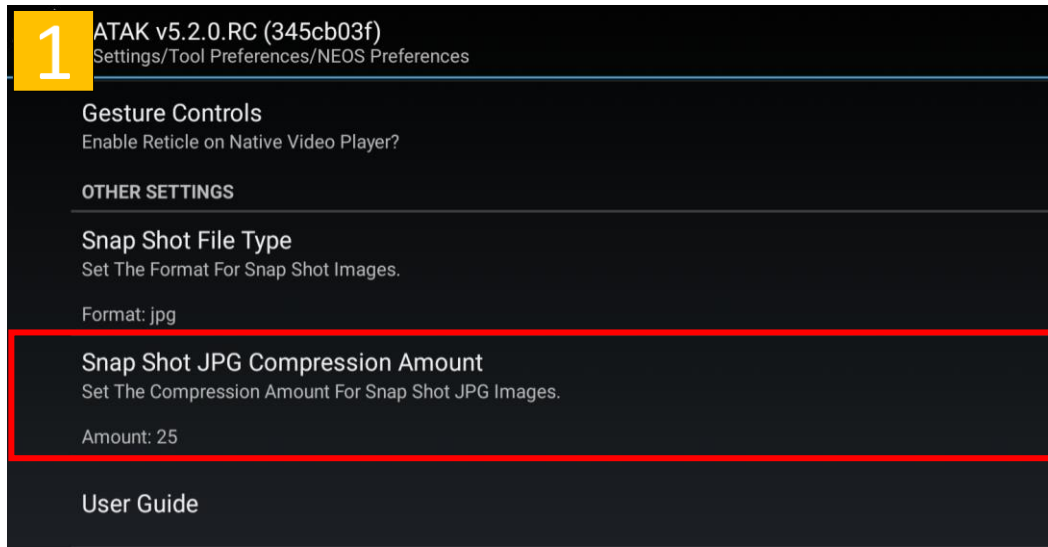


1. Locate and **tap** Snap Shot File Type under Other Settings.
2. **Tap** JPG or PNG to change the snapshot file type. The default value is JPG. Continue to make changes to the preferences or **tap** back on the EUD to return the main ATAK screen.

JPG are slightly smaller in size and better for network considerations. PNG is better quality for post mission analysis.



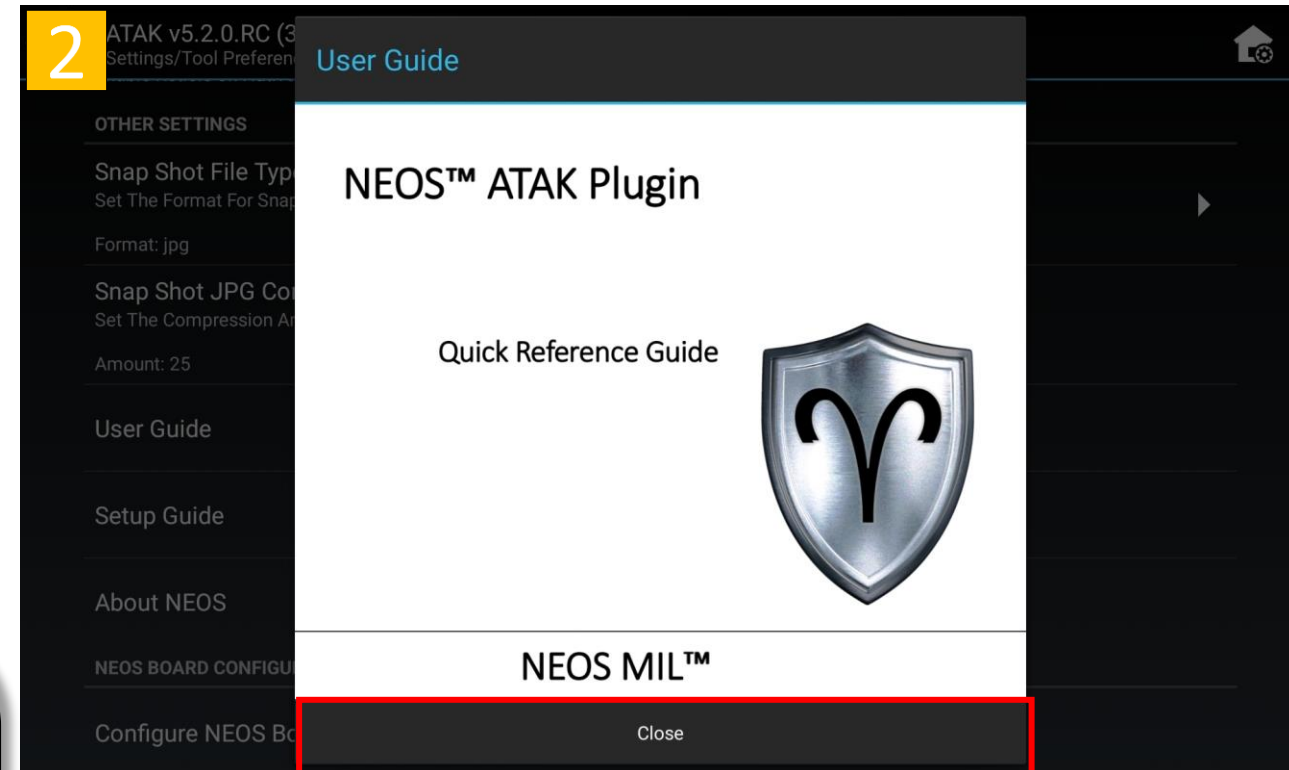
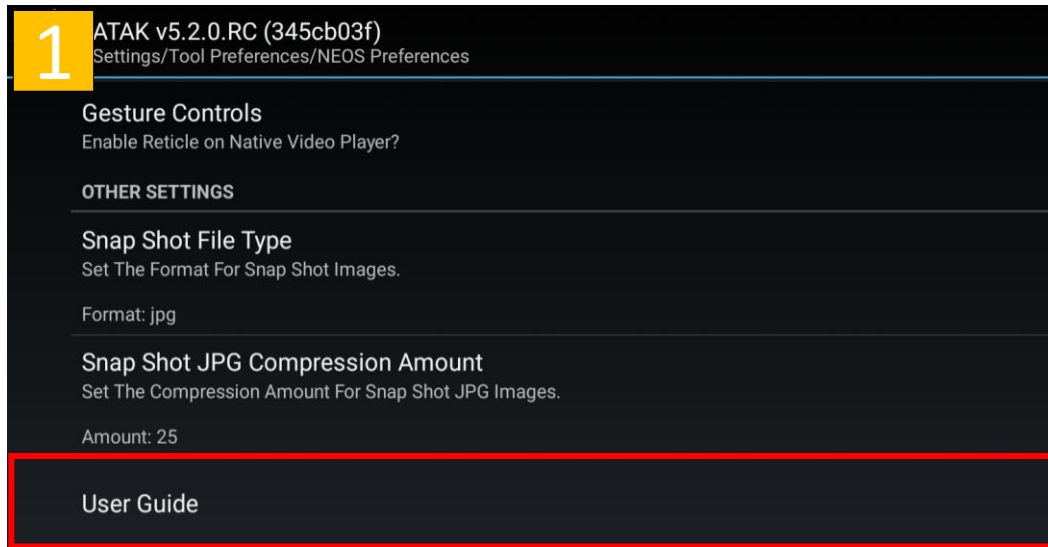
# NEOS™ Plugin for ATAK: Preferences – JPG Compression



1. Locate and **tap** Snap Shot JPG Compression Amount Type under Other Settings.
2. Enter the new compression value. The default value is 25%. Continue to make changes to the preferences or **tap back** on the EUD to return to the main ATAK screen.

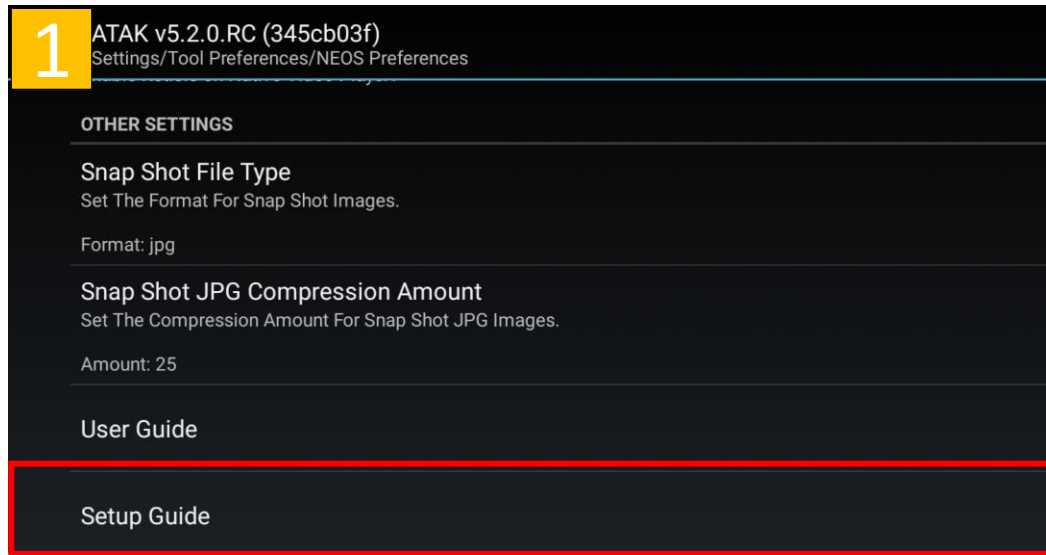
Note: Snap Shot compression is only compatible with JPG file types.

# NEOS™ Plugin for ATAK: Preferences – User Guide



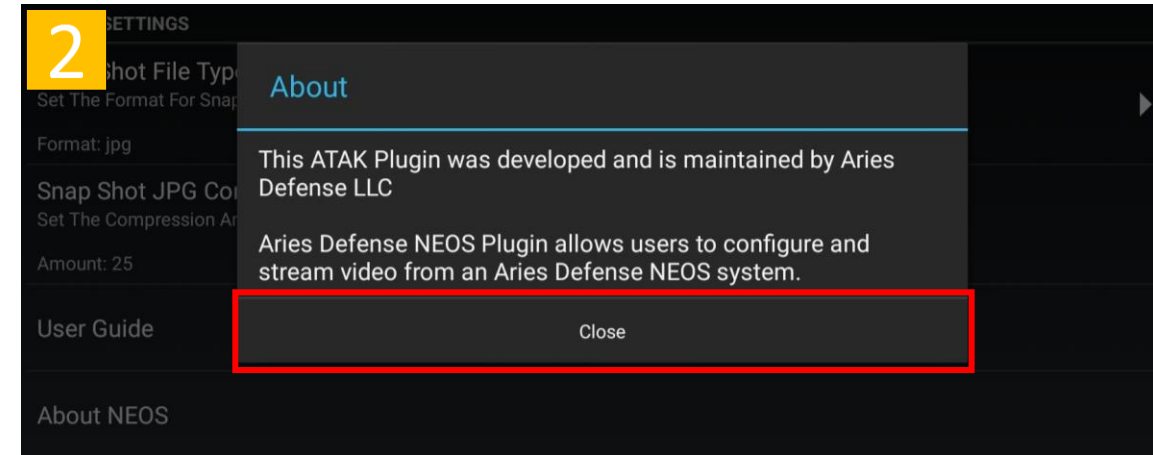
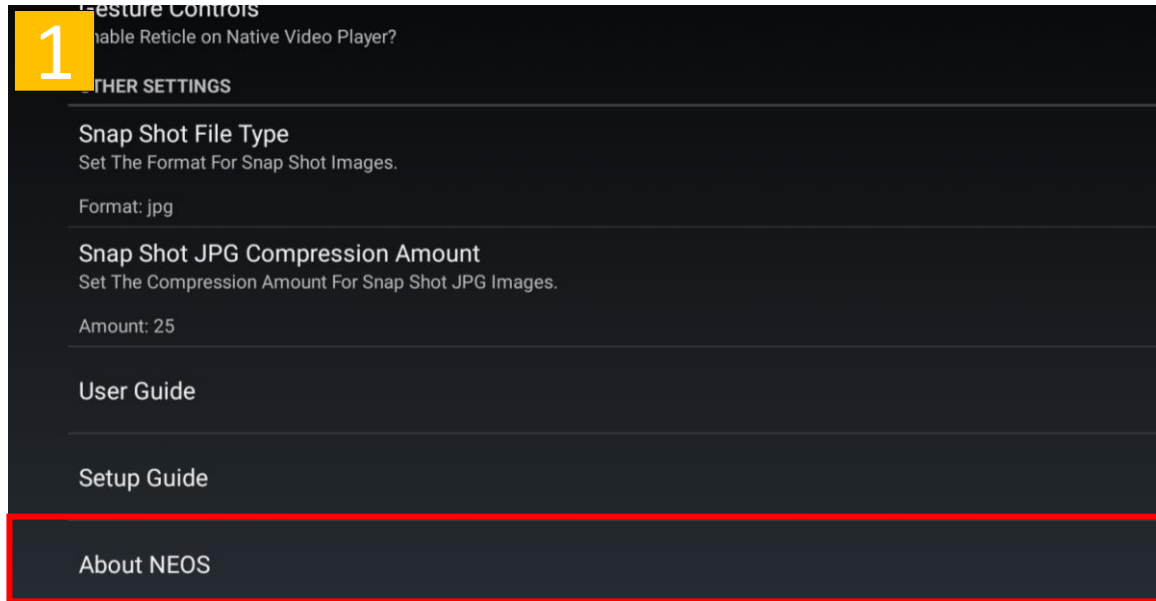
1. Locate and **tap** User Guide under Other Settings.
2. **Tap** Close to exit the User Guide window. Continue to make changes to the preferences or **tap back** on the EUD to return to the main ATAK screen.

# NEOS™ Plugin for ATAK: Preferences – Setup Guide



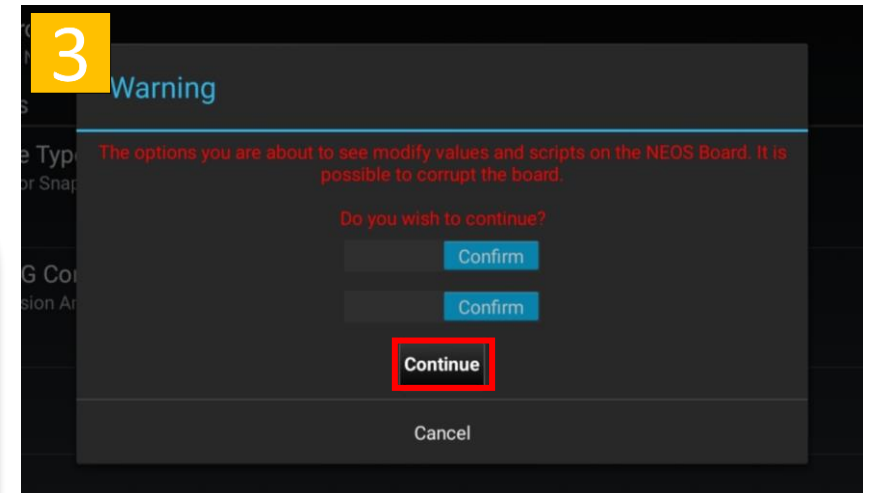
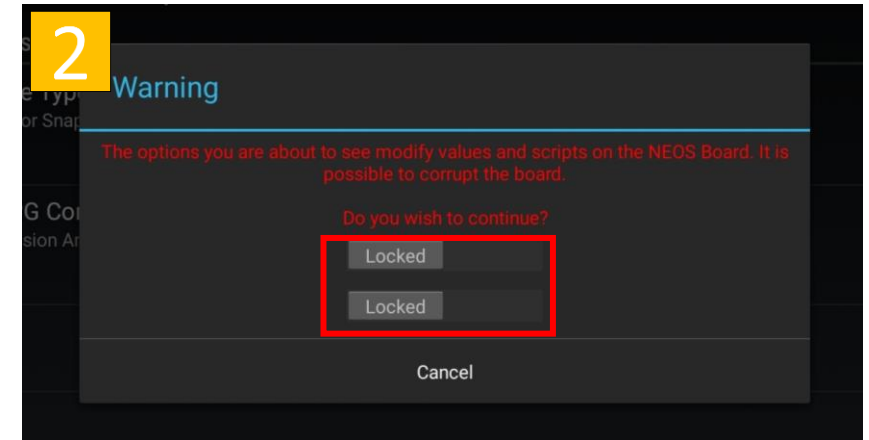
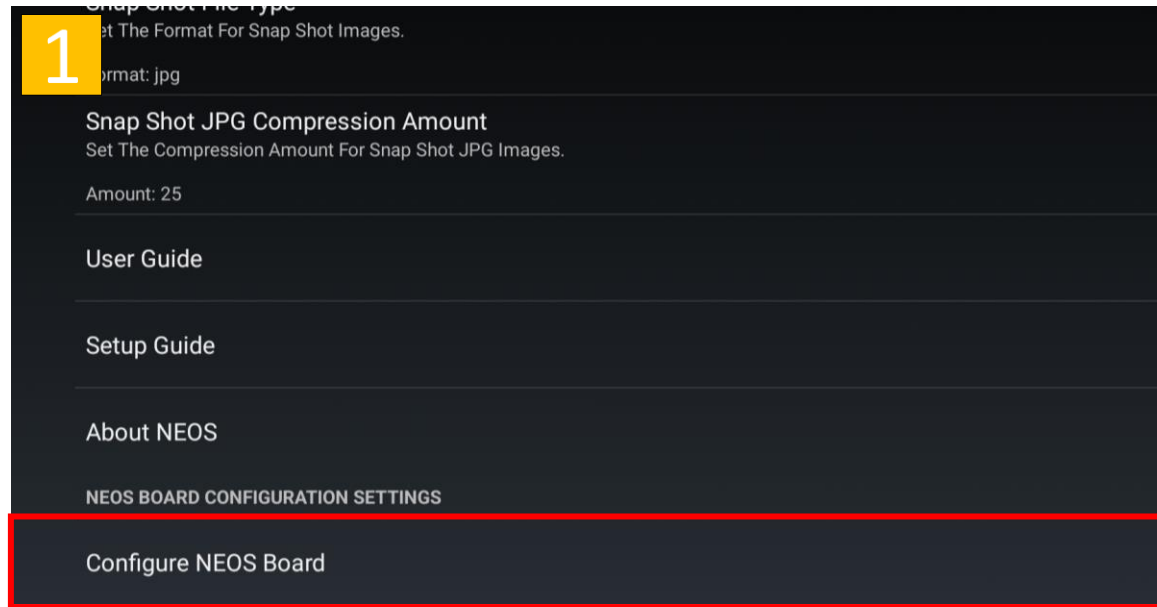
1. Locate and **tap** Setup Guide under Other Settings.
2. **Tap** Close to exit the Setup Guide window. Continue to make changes to the preferences or **tap** back on the EUD to return to the main ATAK screen.

# NEOS™ Plugin for ATAK: Preferences – About NEOS™



1. Locate and **tap** About NEOS™ Type under Other Settings.
2. **Tap** Close to exit the About window. Continue to make changes to the preferences or **tap** back on the EUD to return to the main ATAK screen.

# NEOS™ Plugin for ATAK: Settings – Board Configuration



1. Locate and **tap** Configure NEOS™ Board under NEOS™ Board Configuration Settings
2. Read the warning message then **Tap** both Locked Buttons to set them to Confirm
3. **Tap** Continue to enter the Configuration Menu.  
\*WARNING\* Entering in invalid settings could potentially render the system inoperable.





# NEOS™ Board Configuration

# NEOS™ Board Configuration - Overview



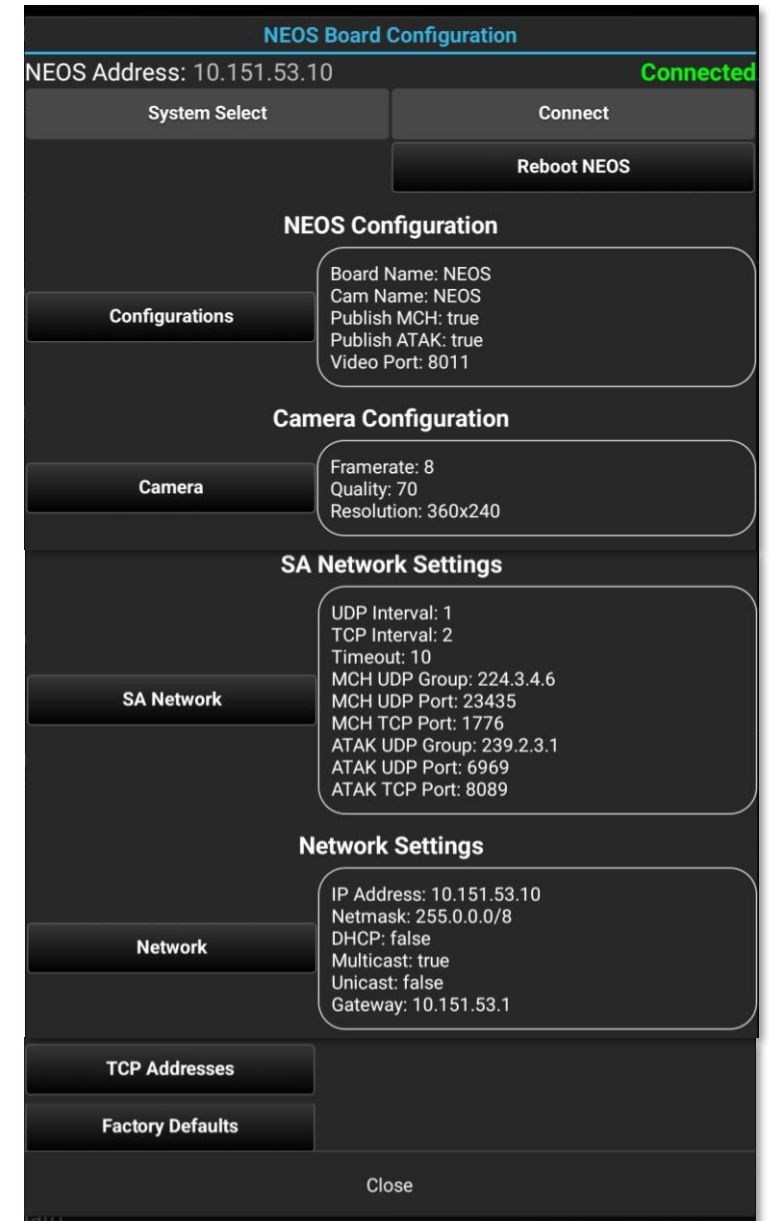
Please see “NEOS™ Settings – Board Configuration” on Page 27 and follow the steps to access the Board Configuration Menu. Configuring the preferences options in this section assumes the user has done this step.

The NEOS™ Board Configuration allows the user to:

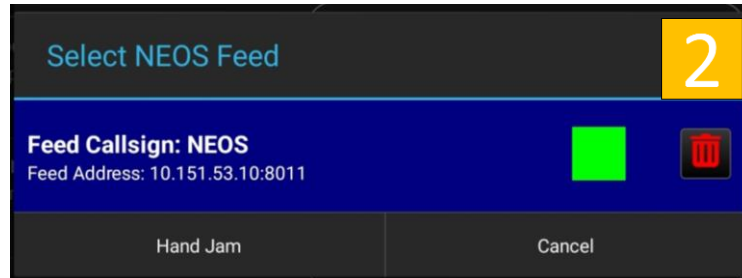
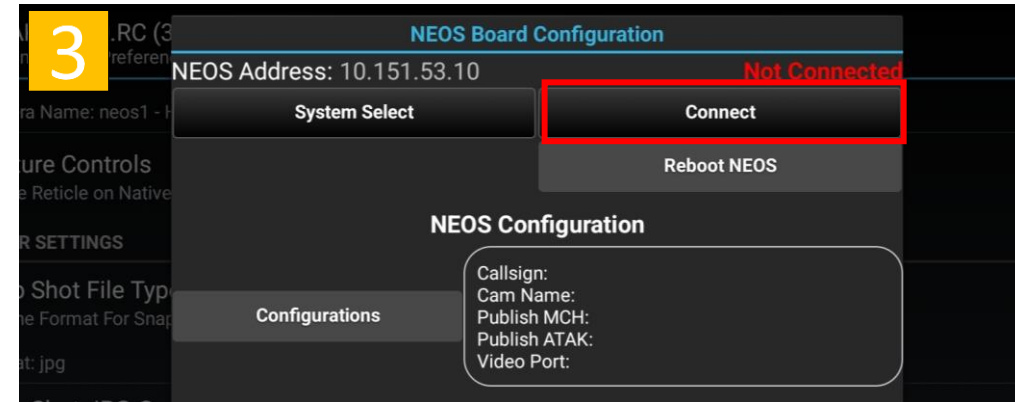
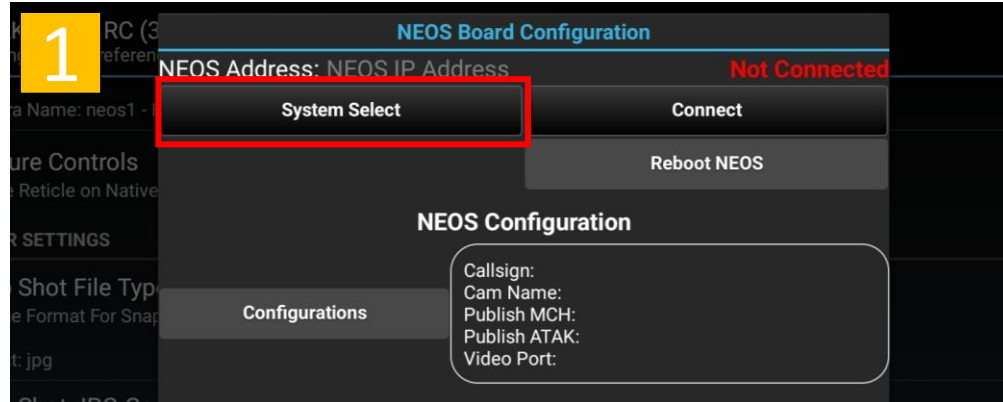
- Set Camera Label
- Adjust Camera Framerate
- Modify IP Addresses and Ports
- Modify network settings

**\*\*IMPORTANT\*\*** After the configurations have been altered the board must be rebooted. This can be done by **tapping** the Reboot NEOS™ Button. Close the NEOS™ App and relaunch once the EUD receives a DHCP IP Address from the NEOS™ Board.

**Proceed with caution**



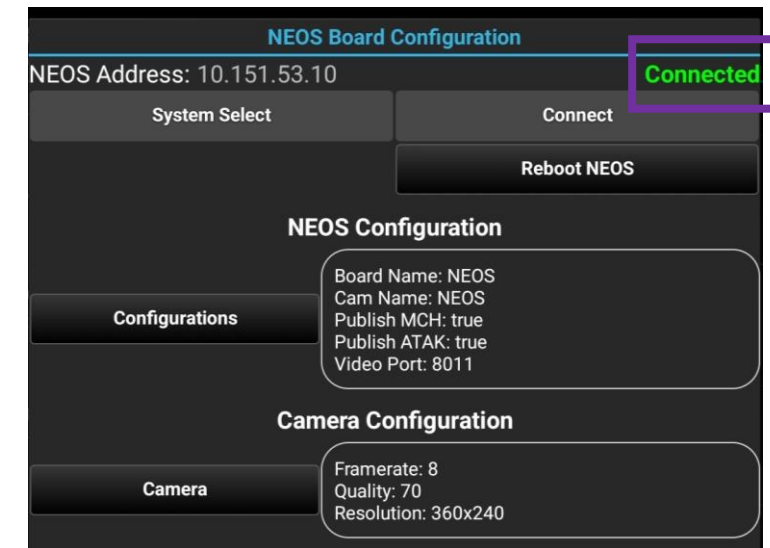
# NEOS™ Board Configuration – Connect to Board



1. **Tap System Select** to choose a NEOS system to login to.
2. **Tap** a NEOS system from the list.
3. **Tap Connect**.

### Connection Status:

- Not Connected** – The NEOS™ App is not logged into the board
- Connecting...** – The NEOS™ App is trying to establish a logon session
- Connected** – The NEOS™ App is currently logged into the board.

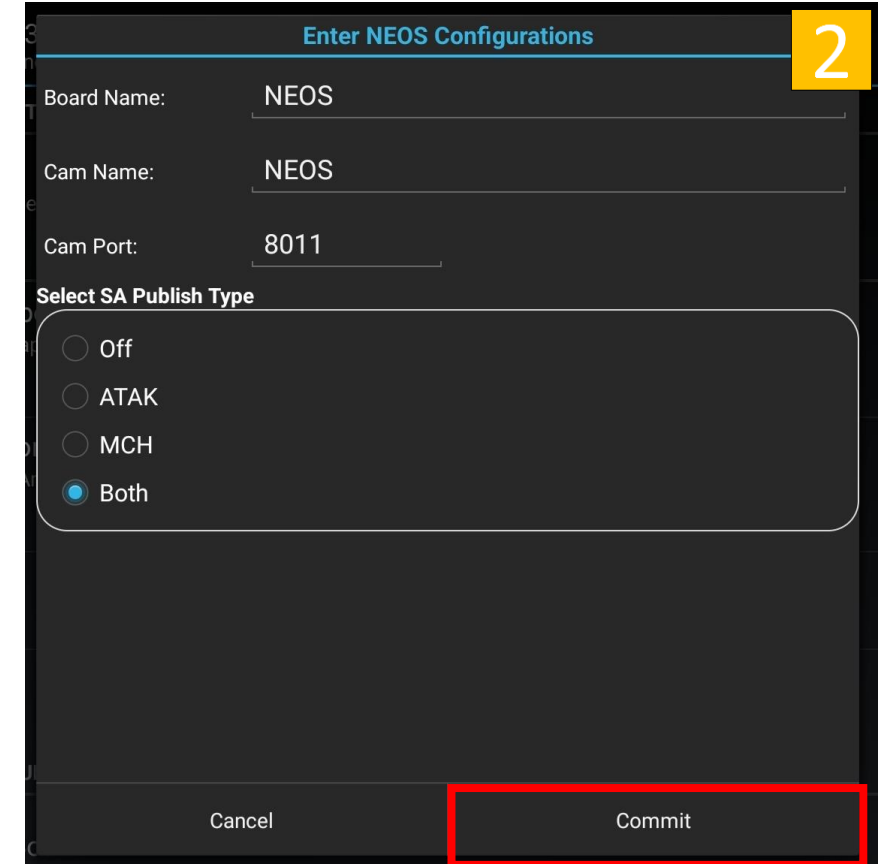
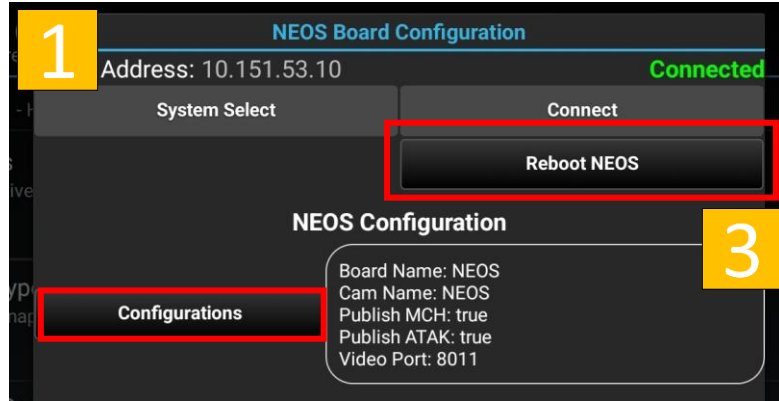




# NEOS™ Board Configuration

## Configuration Settings

# NEOS™ Board Configuration – Configuration Settings



1. Locate and **tap** Configurations under Configuration Settings.
2. **Tap** Commit to apply changes when done configuring NEOS Configurations.

- Board Name - refers to the name of the camera icon that is placed on the ATAK map. This is the name other users will see the NEOS system as.
- Cam Name - refers to the lower left text field on the video stream.
- Cam Port - is which port the video stream will use.
- The SA Publish Type - will send situational awareness ports to either ATAK or MCH but can be set to publish to both (default setting)

3. You may continue to make changes to the board. When finished **Tap** the Reboot NEOS button.

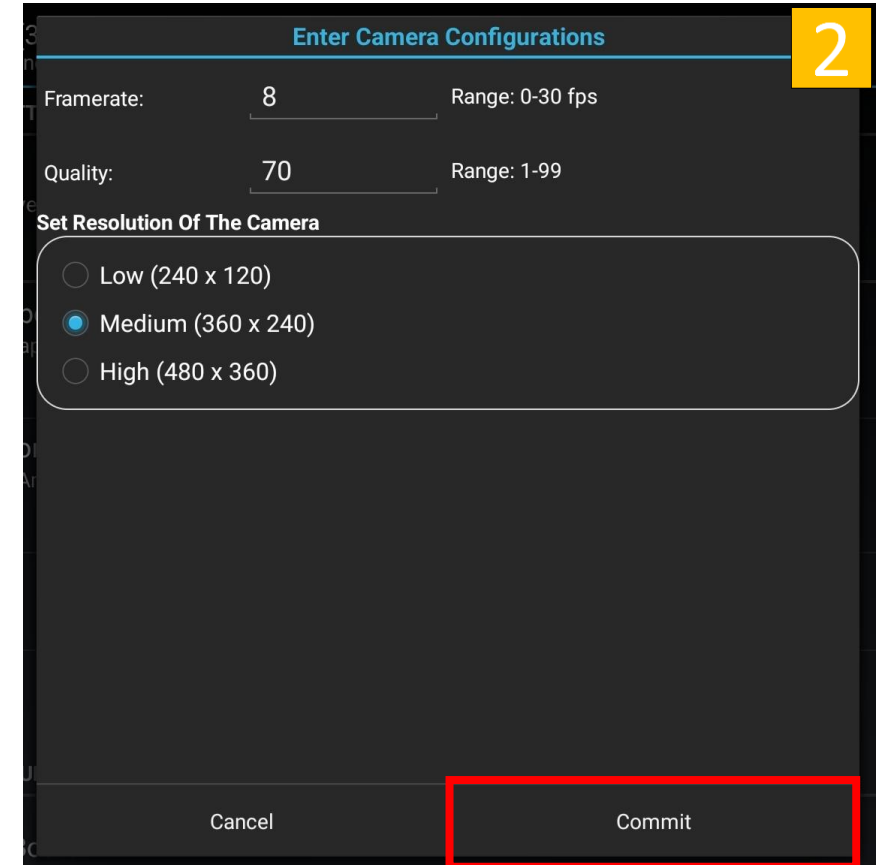
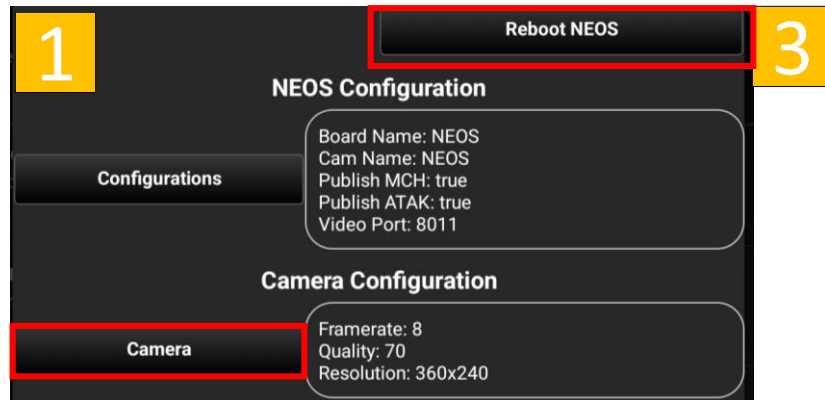




# NEOS™ Board Configuration

## Camera Settings

# NEOS™ Board Configuration – Camera Settings



1. Locate and **tap** Camera under Configuration Settings.
2. **Tap** Commit to apply changes when done configuring NEOS Camera Configurations.

NOTE: If on a tactical radio network use lower values (5-15) for the framerate, 70 or less for quality, and low or medium resolution.

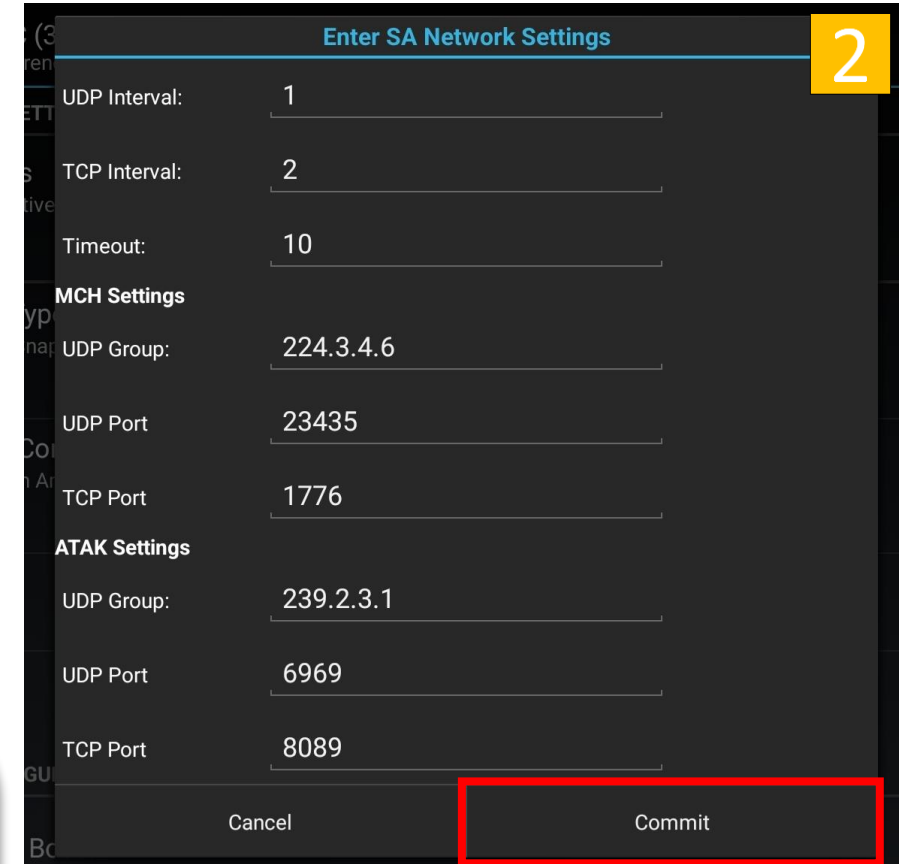
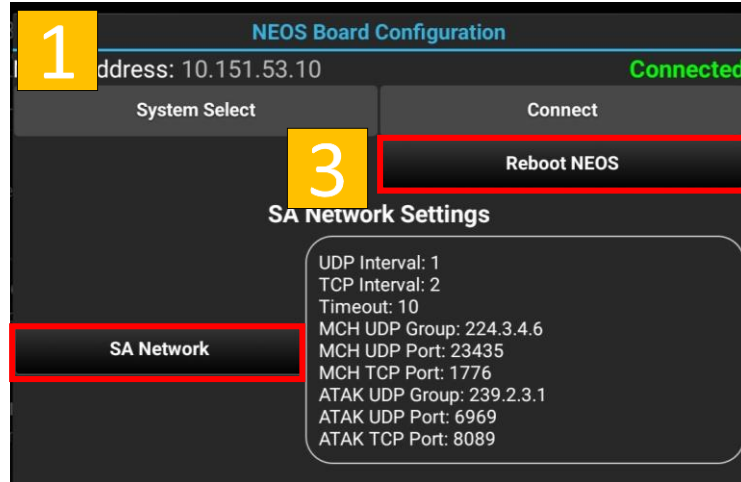
3. You may continue to make changes to the board. When finished **Tap** the Reboot NEOS button.



# NEOS™ Board Configuration

## SA Network Settings

# NEOS™ Board Configuration – SA Network Settings



1. Locate and **tap** SA Network under Configuration Settings.
2. **Tap** Commit to apply changes when done configuring NEOS SA Network Settings.

Note: Most users DO NOT NEED to change these values!

3. You may continue to make changes to the board. When finished **Tap** the Reboot NEOS button.

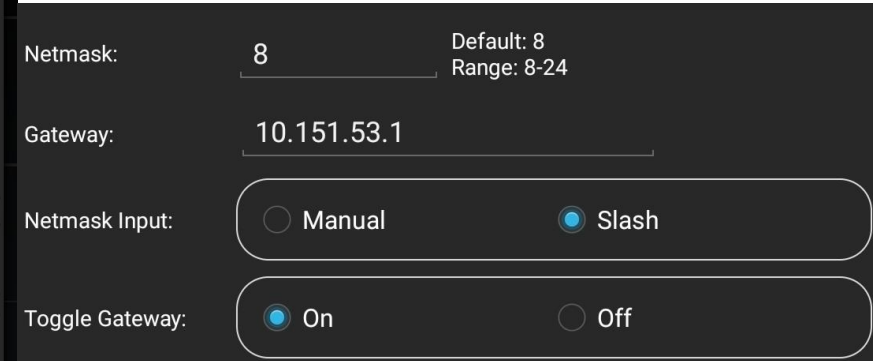
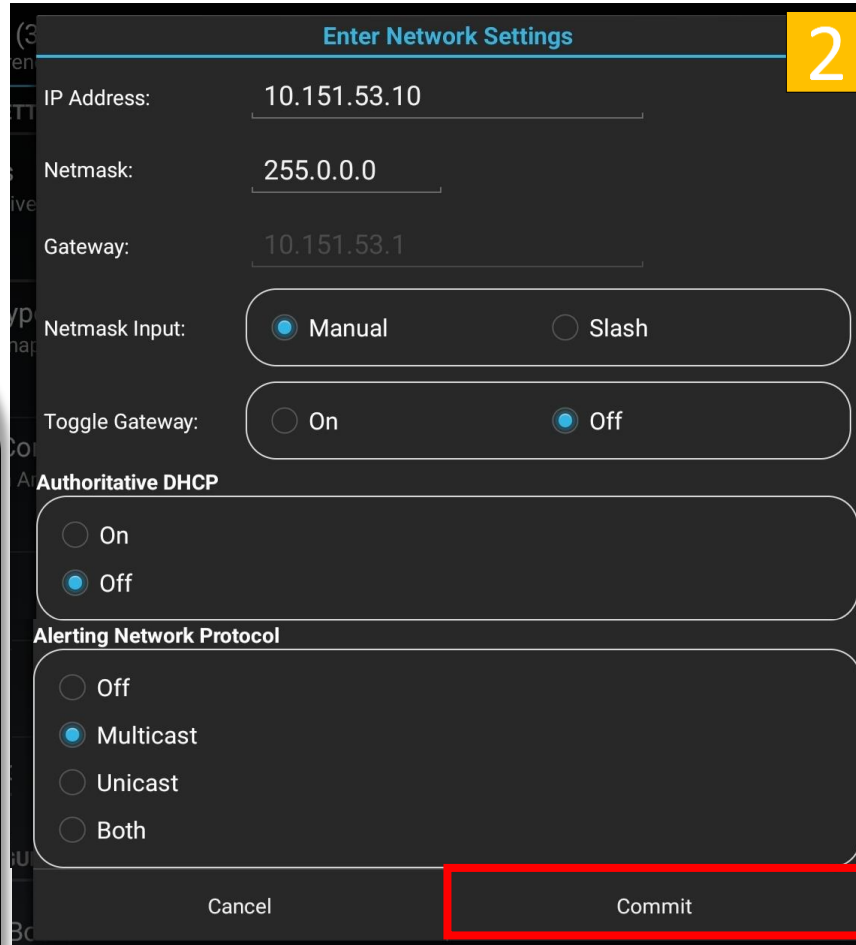
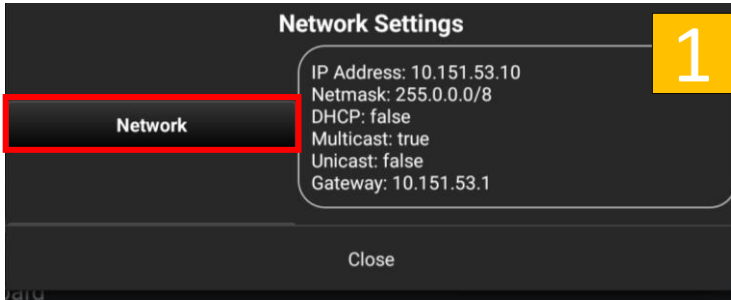


# NEOS™ Board Configuration

## Network Settings



# NEOS™ Board Configuration – Network Settings



1. Locate and **tap** Network under Configuration Settings.
2. **Tap** Commit to apply changes when done configuring NEOS Network Settings.

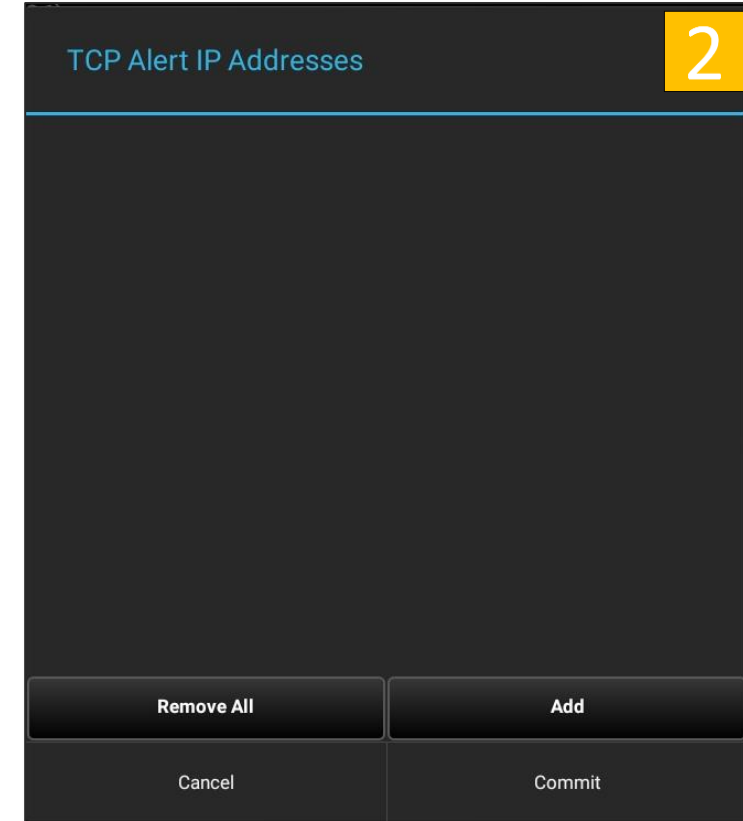
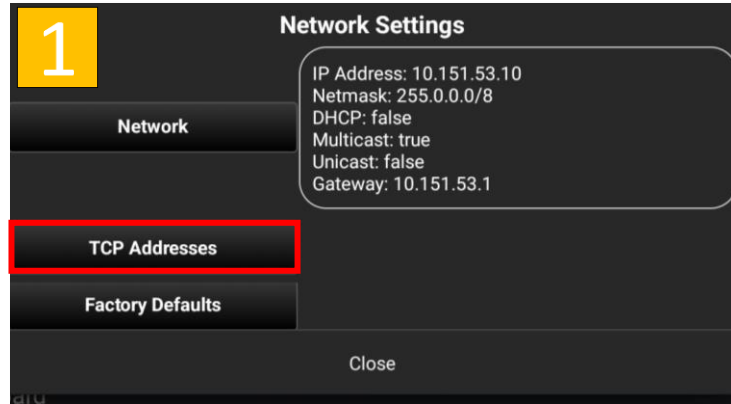
If your network configuration requires a Gateway IP Address select Unicast or Both from the Network Protocol Options

You may continue to make changes to the board. When finished **Tap** the Reboot NEOS button.

Notice toggling gateway to On enables the gateways text field.

Notice changing netmask input changes the way the netmask is input.

# NEOS™ Board Configuration – TCP Addresses

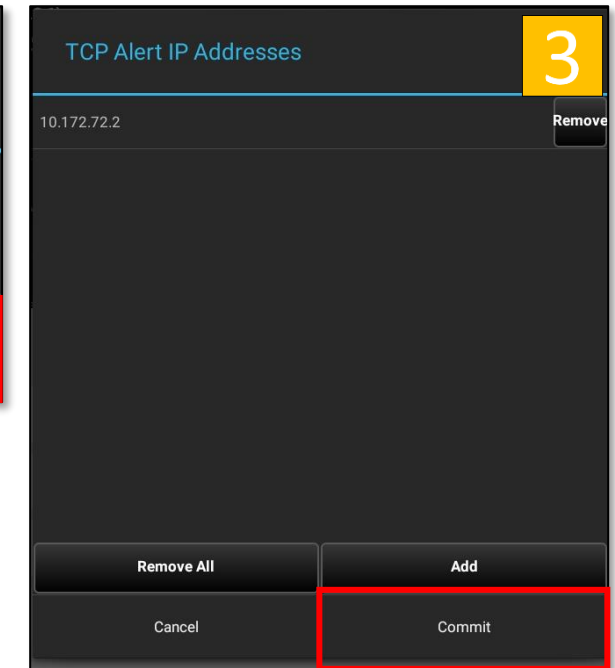
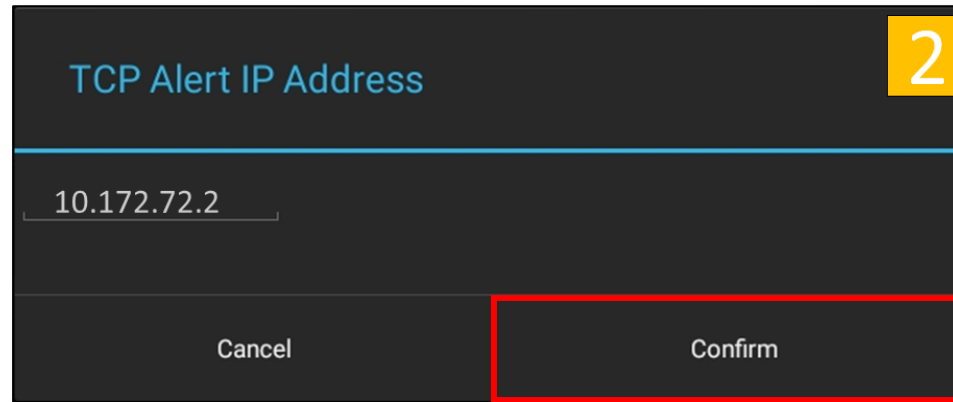
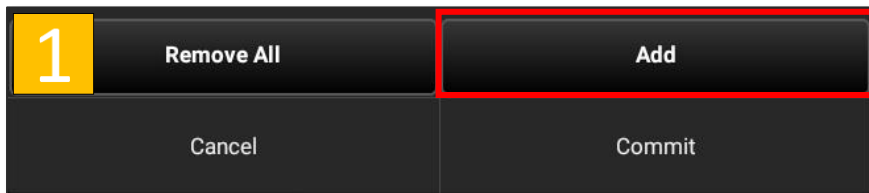


1. Locate and **tap** TCP Addresses under Configuration Settings
2. This menu will allow the user the ability to Add, Remove, and Commit IP addresses to receive TCP based alerts.

You may continue to make changes to the board. When finished **Tap** the Reboot NEOS button.

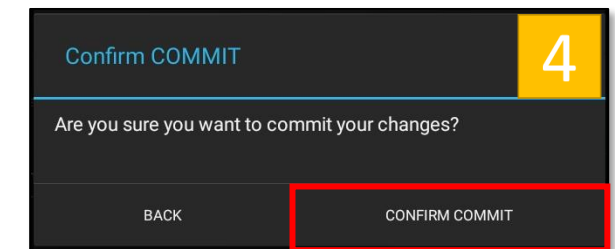
Button	Description
Remove All	Remove All IP Addresses in the list
Add	Add an IP address to receive TCP Alerts
Commit	Commit newly added TCP Addresses
Cancel	Cancel current actions.

# NEOS™ Board Configuration – Add TCP Address

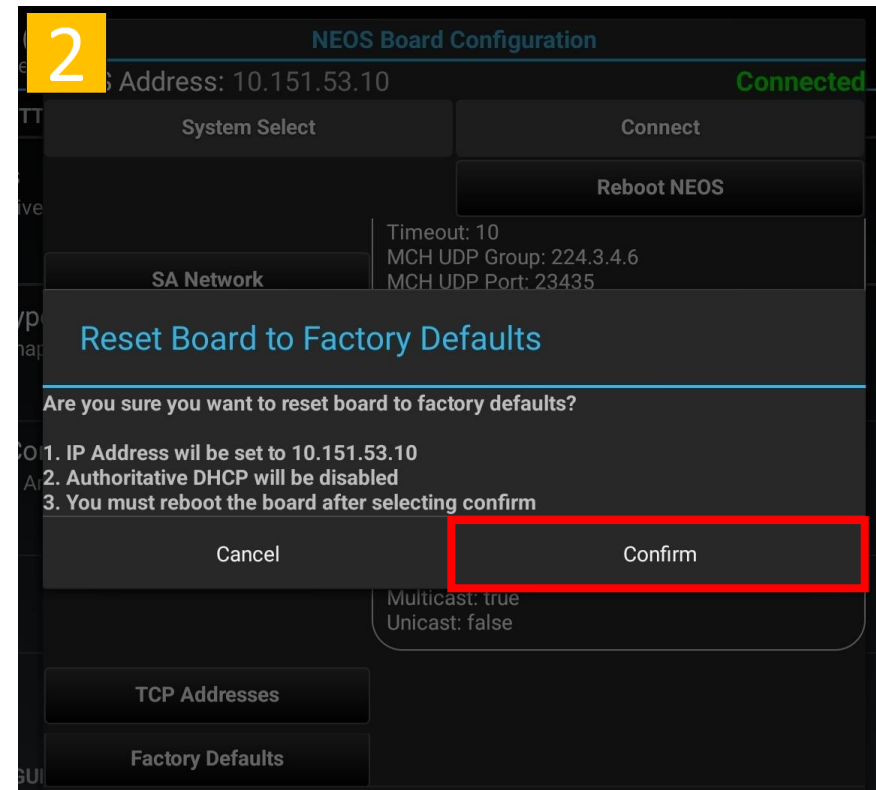
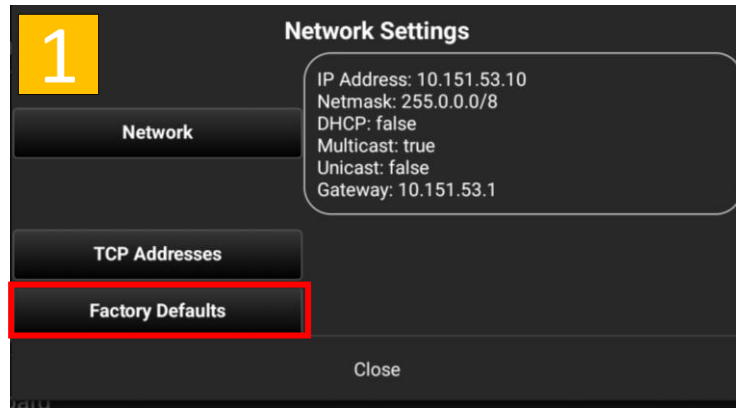


1. Locate and **tap** the Add button under TCP Alert IP Addresses Menu.
2. **Enter** an IP address to receive TCP Alerts then tap Confirm.
3. **Tap** Commit and then
4. Confirm Commit to add the IP address

You may continue to make changes to the board. When finished **Tap** the Reboot NEOS button.

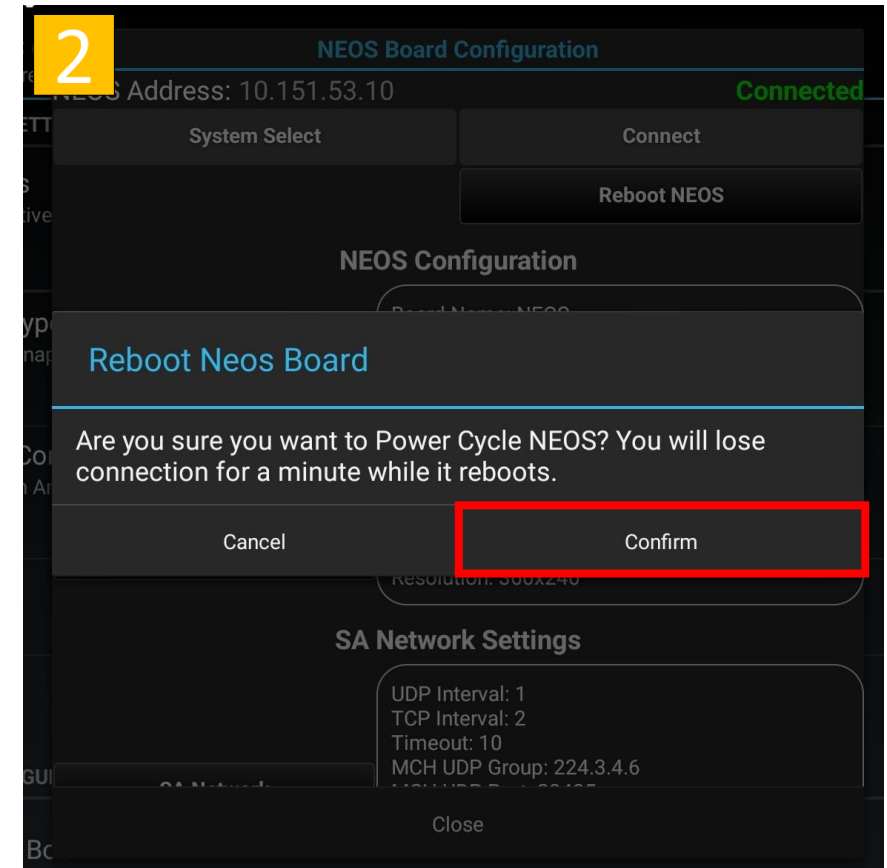
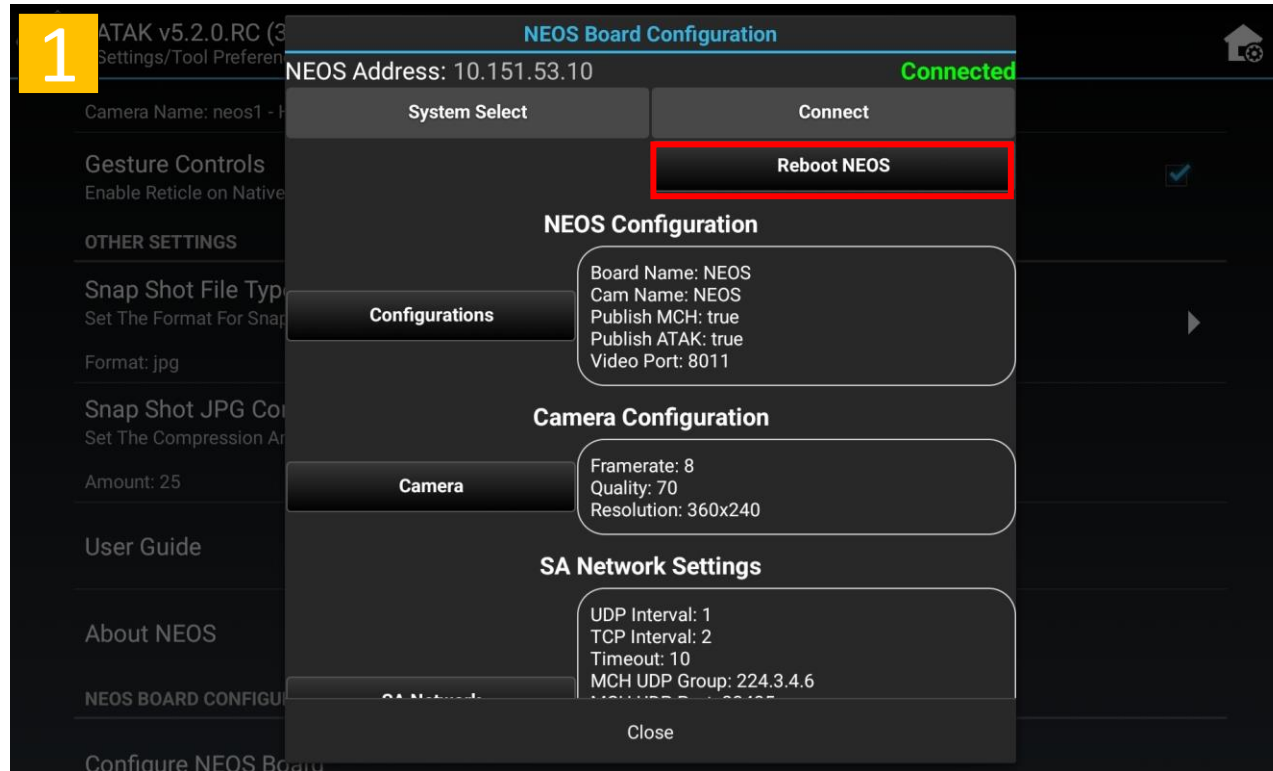


# NEOS™ Board Configuration – Factory Defaults



1. Locate and **tap** Factory Defaults.
2. The board will wipe out all changes you have made to it and revert to factory settings. Tap Confirm when you are ready.

# NEOS™ Board Configuration – Reboot



1. Locate and **tap** Reboot NEOS.
2. **Tap** Confirm to initiate NEOS system reboot.



