

Falcon® -NEO System Restore



1.0 INTRODUCTION	2
2.0 WARNING: LOG FILES WILL BE DELETED	2
2.1 REQUIREMENTS FOR BACKING UP THE LOG FILES – FALCON-NEO DOES NOT BOOT.....	2
2.2 BACKING UP THE LOG FILES – FALCON-NEO DOES NOT BOOT	2
3.0 USING THE BUILT-IN SYSTEM RESTORE.....	4
3.1 BUILT-IN SYSTEM RESTORE (STEP-BY-STEP).....	4
4.0 USING A BOOTABLE USB FLASH DRIVE WITH THE SYSTEM RESTORE	6
4.1 REQUIREMENTS.....	6
4.2 CREATING THE RECOVERY USB FLASH DRIVE	6
4.3 USING THE RECOVERY FLASH DRIVE	9
5.0 UPDATING THE SOFTWARE	12
5.1 REQUIREMENTS.....	12
5.2 UPDATING THE SOFTWARE	12
5.2.1 From Network (Over the internet).....	12
5.2.2 From USB Drive (Through a software file download)	13
6.0 FIRMWARE UPDATE.....	14

Application Note

1.0 Introduction

This document provides instructions on how to perform a system restore on the Forensic Falcon-NEO. There are two ways to restore the Falcon-NEO:

- Using the built-in system restore
- Using a bootable USB flash drive with the system restore

2.0 WARNING: Log files will be deleted

Performing the system restore will delete all of the log files. If desired, the log files can be backed up before the recovery process.

If the Falcon-NEO boots up properly, the audit log files can be backed up easily. See **Section 3.7.1 (Viewing or exporting logs)** or **Section 3.7.4 (Accessing logs over a network)** in the user's manual on how to back up the log files if the Falcon-NEO boots up properly.

If the Falcon-NEO does not boot up properly, there is a possibility the log files may be backed up by following the steps in this section.

2.1 Requirements for backing up the log files – Falcon-NEO does not boot

- The Falcon-NEO connected to a network
- A computer with a Secure FTP (SFTP) client (E.g. FileZilla or WinSCP) connected to the same network

2.2 Backing up the log files – Falcon-NEO does not boot

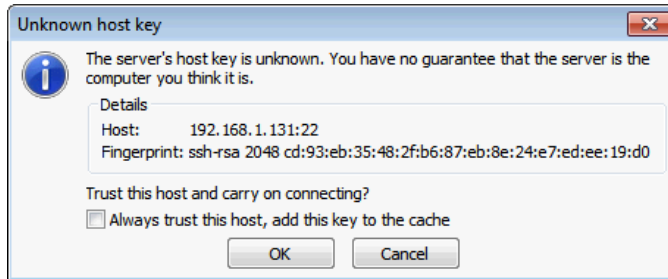
The outlined steps in this section use an open-source SFTP client called FileZilla. Other SFTP clients can be used.

1. Make sure the Logicube device is connected to a network accessible by the computer with the SFTP client and if there is an error message, leave the error message on the screen.
2. Open FileZilla. Similar to the screenshot below, enter the following information then click the Quickconnect button:
 - Host: The IP address or hostname of the Logicube device.
 - Username: logicube
 - Password: logicube
 - Port: 22



Application Note

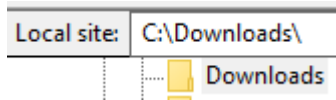
3. A window may appear labeled **Unknown host key**. If this window appears, click the **OK** button.



4. On the right window pane, change the 'Remote site' to `/var/log/ong_audit` then press the **Enter** key.

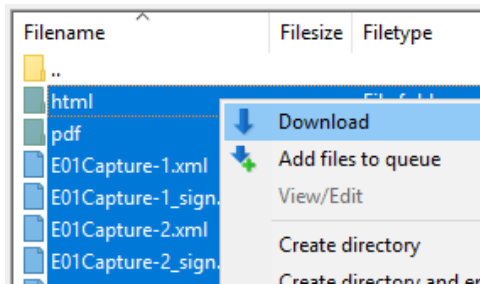


5. On the left window pane, change the 'Local site' to where you want to download the files. In the example below, it will be downloaded to C:\Downloads.

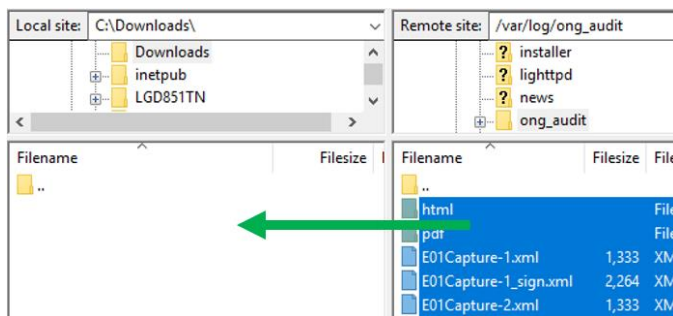


6. On the right side (Remote site), the `/var/log/ong_audit` directory has all of the log files. Highlight all the files and folders. There are two ways to download the files:

- a. Right-click the mouse button and select **Download**, or



- b. While holding down the left mouse button, drag and drop the Evm* files to the left window pane.



7. The log files should now be backed up to your computer.

Application Note

3.0 Using the built-in system restore



Use this method only if at least one of the following is true:

- If your Falcon-NEO unit shipped with software 3.2 or newer, or
- If you have previously performed the System Restore version 3.2

If you are unsure of the above, please use the method in [Section 4.0](#).

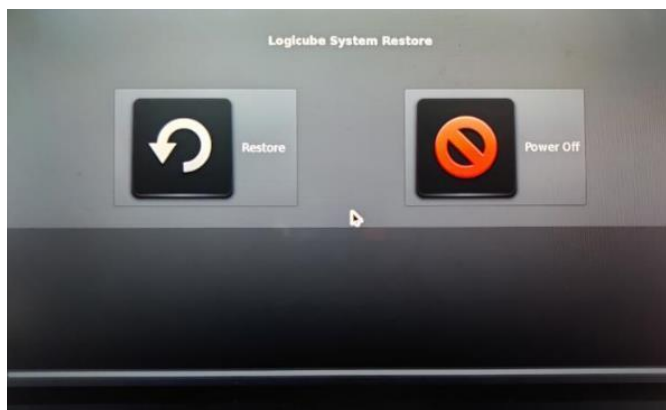
The Falcon-NEO has a built-in system restore. This method requires a USB keyboard.

3.1 Built-in system restore (step-by-step)

1. Disconnect all drives and adapters connected to the Source or Destination ports.
2. Connect a USB keyboard to one of the two front USB ports.
3. Turn the Falcon-NEO on. The Falcon-NEO will display a logo, then beep, then on the top-left of the screen a 3, 2, 1 countdown will appear
4. When the 3, 2, 1 countdown appears, press and release the **Esc** key on the keyboard. A grub bootloader menu will appear.
5. Use the arrow keys on the keyboard and highlight **System Recovery** then press the **Enter** key.



6. After the System Recovery loads, the following screen should appear. Tap **Restore** to continue.

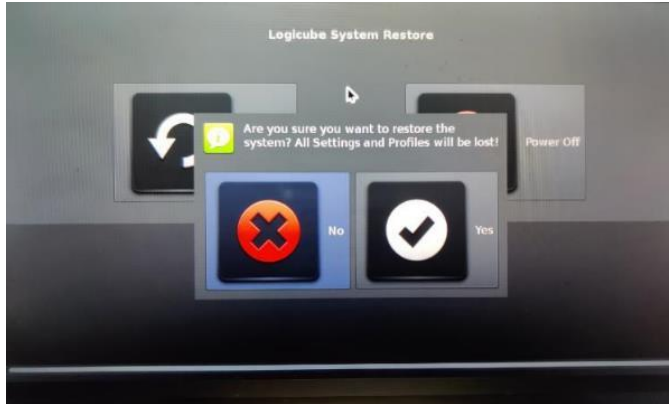


Application Note

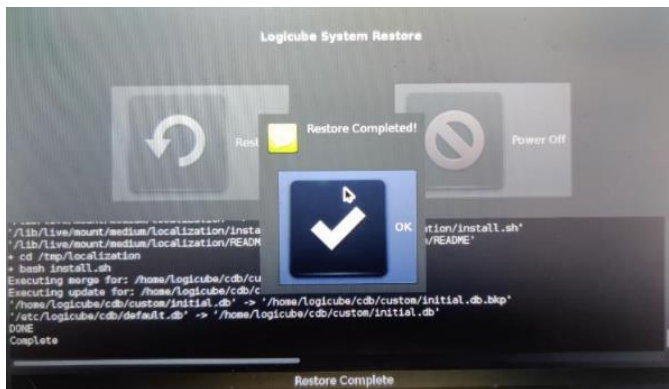


If you see text that shows **Continue with system restore operation? (y/n)** instead of the GUI as seen above, stop and follow the instructions in [Section 4.0](#) to use a bootable USB flash drive.

7. A confirmation screen will appear. Tap **Yes** to continue with the System Restore.



8. The system restore will begin. The entire process may take up to 10 (ten) minutes to complete.
9. When finished, the following screen will appear. Tap **OK**.



10. The main System Restore screen will appear. Tap **Power Off**.



Application Note

11. A confirmation screen will appear. Tap **Yes**.



- 12. The Falcon-NEO should gracefully shut down and will turn itself off. The System Restore process should now be complete. Disconnect the USB keyboard and turn the Falcon-NEO on to make sure it boots properly.
- 13. Follow the instructions in [Section 5.0](#) and [Section 6.0](#) to check for software and firmware updates.

4.0 Using a bootable USB flash drive with the system restore

If the built-in system restore does not work, or if the built-in system restore shows text instead of a graphical interface, a bootable USB flash drive with the system restore can be created.

4.1 Requirements

- Your own 8 GB or larger capacity USB flash drive
- A computer with a Windows Operating System
- A wired USB keyboard

4.2 Creating the recovery USB flash drive

Here are the steps to prepare the flash drive with the software necessary to be bootable:



It is recommended to use Chrome or Firefox to download the files. Internet Explorer and Edge do not download *.img files properly.

1. Go to <http://updates.logicube.com/falcon-neo-recovery>. Look for the following two files:
 - The Falcon-NEO image file (a file with a *.img extension)
 - win32diskimager-v1.0.0-binary.zip – An open source tool used for writing images to USB flash drives or SD/CF cards

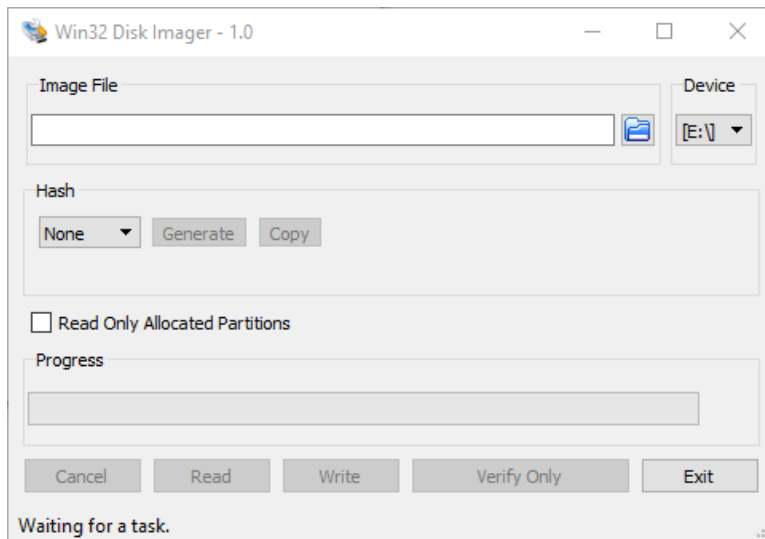
Application Note

2. Download both files. If the image file will not download, right-click on the link and use the 'Save Target As...' or 'Save Link As' option and make sure it is saved with the *.img file extension.
3. Extract all the files in the win32diskimager-v1.0.0-binary.zip file to a folder or directory of your choosing.
4. Connect a USB flash drive that is at least 8 GB in capacity to the computer where the software was downloaded. It is recommended that all other USB drives are unplugged.

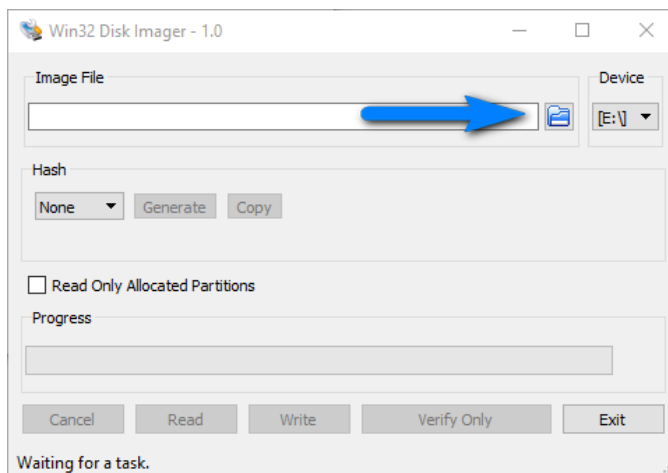


The contents of the USB flash drive will be overwritten. If there is data on the USB flash drive that should not be deleted, back up the contents of the USB flash drive or use another USB flash drive for this procedure.

5. In the win32diskimager-v1.0.0-binary folder where the software was extracted, run the file **Win32DiskImager.exe**. The Win32 Disk Imager window will appear.

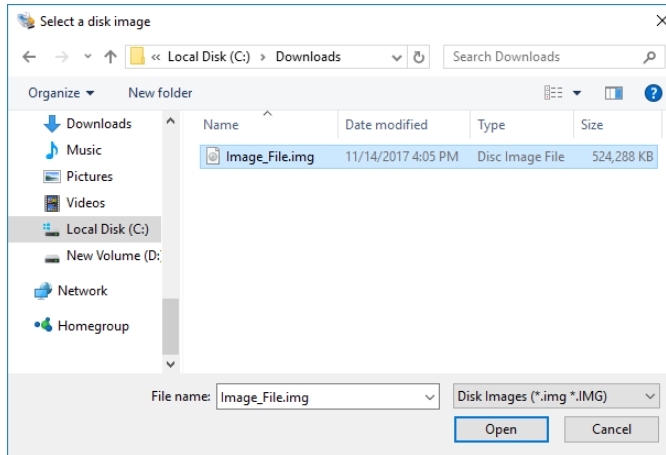


6. Click the folder icon to select a disk image.

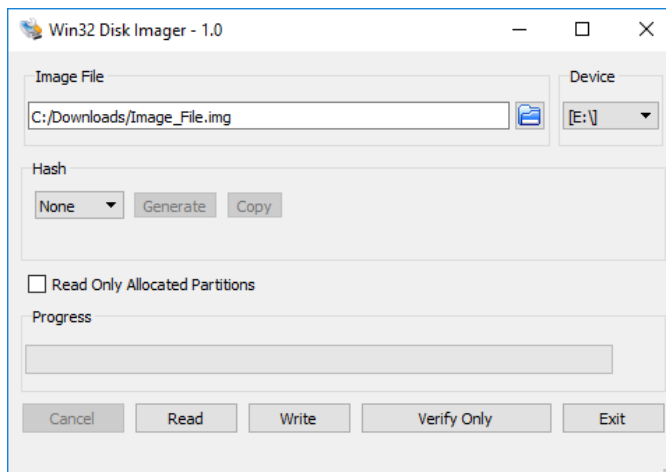


Application Note

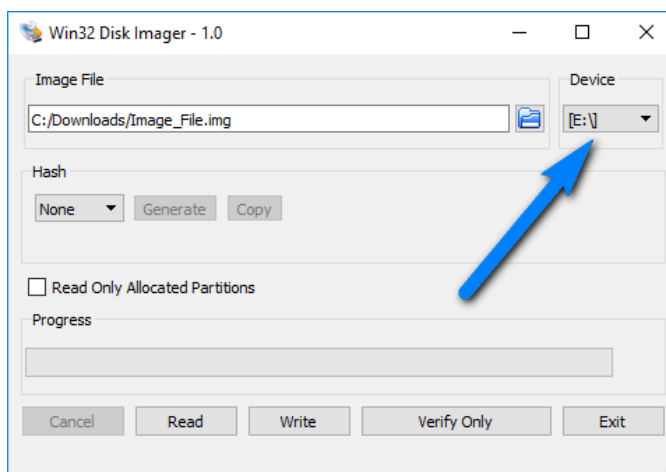
- In the folder where the files were downloaded (in step 2), select the recovery file and click the **Open** icon. Note the screenshot below shows a different file name.



- The Image file should now be seen in the Win32 Disk Imager screen under 'Image File'.

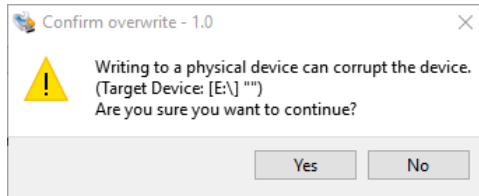


- Under 'Device', select the drive letter for the USB flash drive that was connected during step 3 then click the **Write** icon.

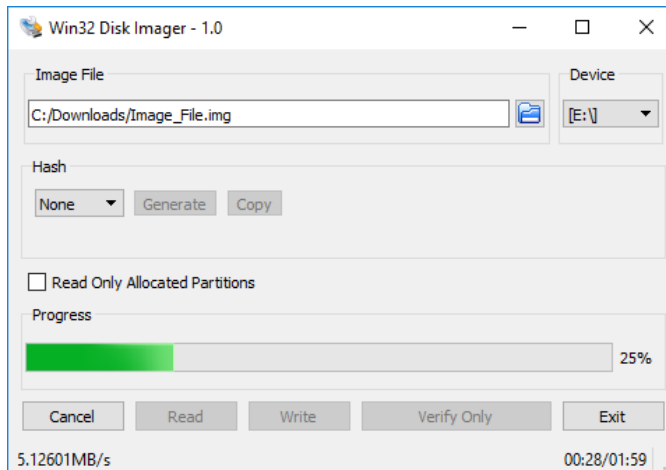


Application Note

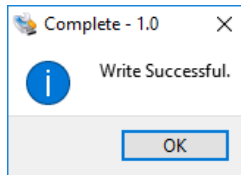
10. A confirmation screen will appear. Make sure that the "Target Device" is set to the correct drive letter. If it is the correct drive letter, click **Yes** to continue. If it is showing the wrong drive letter, click **No**. This will take you back to the previous screen where you can select the correct drive letter (back to step 9).



11. The USB flash drive is now being prepared and the progress bar should be advancing.



12. When it is finished, a prompt should appear stating the write was successful. Click the **OK** icon to continue. Close the Win32 Disk Imager window. The USB flash drive is now ready to be used.



13. Disconnect the USB flash drive from the computer.

4.3 Using the recovery flash drive

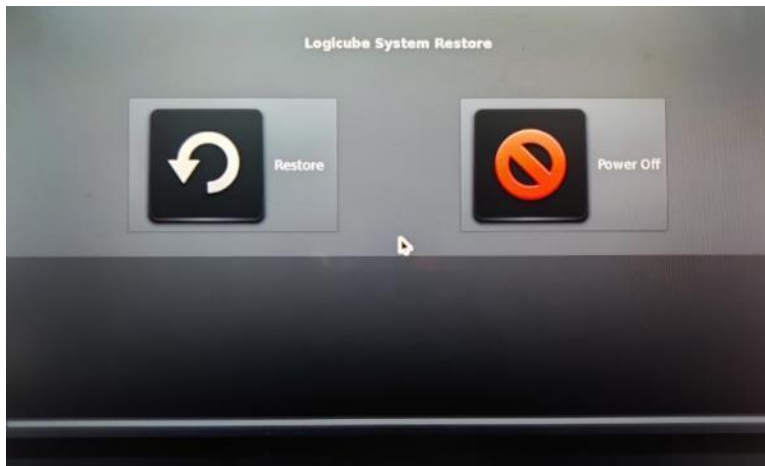
1. Turn the Falcon-NEO OFF and disconnect all drives (and any drive adapters) connected to all source and destination ports.
2. Insert the recovery USB flash drive to one of the front USB ports.
3. Connect a USB keyboard to the other front USB port.
4. Turn the Falcon-NEO on. The Falcon-NEO will display a logo, then beep.
5. Immediately after the beep, press and release the **F7** key. A boot menu should appear.

Application Note

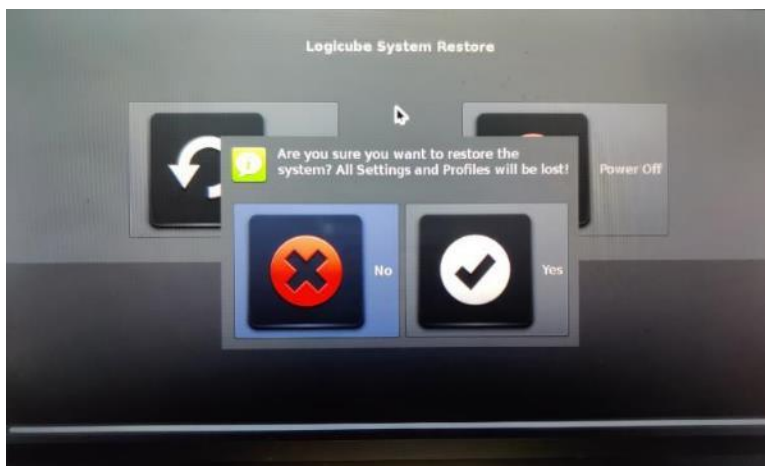
- Using the arrow keys on the keyboard, select the USB flash drive with UEFI in the front of the name of the USB flash drive. **Do not** select "UEFI OS:" if it is available.



- The System Restore will load. When the System Recovery fully loads, the following screen will appear. Tap **Restore**.



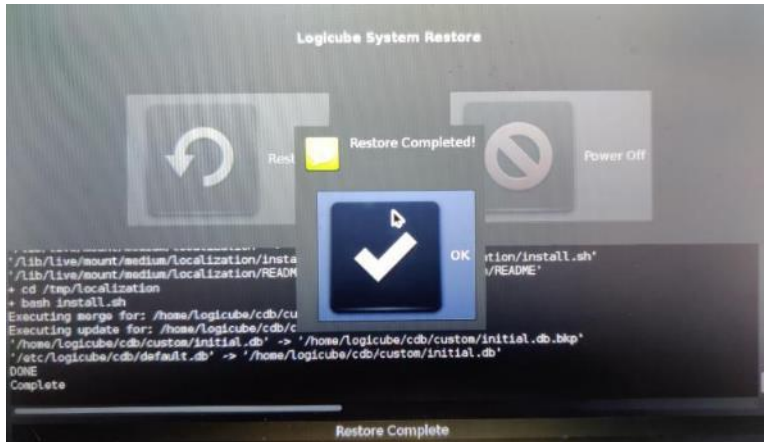
- A confirmation screen will appear. Tap **Yes** to continue with the System Restore.



- The system restore will begin. The entire process may take up to 10 (ten) minutes to complete.

Application Note

10. When finished, the following screen will appear. Tap **OK**.



11. The main System Restore screen will appear. Tap **Power Off**.



12. A confirmation screen will appear. Tap **Yes**.



13. The Falcon-NEO should gracefully shut down and will turn itself off. The System Restore process should now be complete. Disconnect the USB keyboard and turn the Falcon-NEO on to make sure it boots properly.

14. Follow the instructions in [Section 5.0](#) and [Section 6.0](#) to check for software and firmware updates.

5.0 Updating the software

The system restore may not have the latest Falcon-NEO software. After a successful system restore, it is highly recommended to update the software and check the firmware for any available updates. Here are the instructions to update the software:

5.1 Requirements

To perform the software update, one of the following is required:

- The Falcon-NEO connected to a network with internet access (for updating "FROM NETWORK"), or
- The Falcon-NEO with your own USB flash drive. The USB flash drive must be formatted FAT32 or NTFS (for updating "FROM USB DRIVE")

5.2 Updating the software

There are two methods available to re-install or update the Falcon-NEO software:

- A. **FROM NETWORK** – Using a network connection with Internet access.
- B. **FROM USB DRIVE** – Through a software file download onto a USB drive flash.

5.2.1 From Network (Over the internet)

The Falcon-NEO software can be updated/re-installed by connecting the Falcon-NEO to a network with internet access.



It is recommended to disconnect all drives and drive adapters from the Falcon-NEO before the update process.

1. Connect the Falcon-NEO to a network with internet access and turn the Falcon-NEO on.
2. From the main menu on the Falcon-NEO, locate and tap **Software Updates** on the left side.
3. Select **From Network**. The Falcon-NEO will check for software on Logicube's server. After a few seconds, one of the following messages will appear:
 - **NEWER VERSION AVAILABLE** – This message will appear if there is a newer software version found. Tap **OK** to continue.
 - **UP TO DATE** – This message will appear if the software version found is the same as the version currently installed. Tap **OK** to continue.
 - **HTTP://UPDATES.LOGICUBE.CCNEO/ FAILED: 500 CAN'T CONNECT TO UPDATES.LOGICUBE.COM:80** – This message will appear if the Falcon-NEO

cannot connect to the update site. When this message appears, double-check that you have an Internet connection to the Falcon-NEO. For example, try a different network cable or network drop. If the message persists, try the following:

- i. Go to the **About** tab in the **Statistics** screen and check the **N/W Interfaces** to make sure the Falcon-NEO is connected to a network and has a valid **IPAddress**, or
 - ii. Make sure the network the Falcon-NEO is connected to has Internet access, or
 - iii. Try using the "From USB DRIVE" option (see [Section 5.2.2](#)).
4. Tap **Update** to begin the update. The Falcon-NEO should begin the update process. Do not interrupt the update process. It may take several minutes. Once completed, a screen will appear stating the update is complete and will prompt you to turn the unit off then back on.
 5. Turn the Falcon-NEO off. Wait at least 5 seconds then turn the Falcon-NEO back on. Verify the software version by going to the Software Updates screen then go to section [6.0 Firmware Update](#) to check if there is a firmware update available.

5.2.2 From USB Drive (Through a software file download)

Aside from the network option, the latest software can also be downloaded from Logicube's website and be placed onto a USB flash drive to perform the update/re-install. It is recommended to use an empty USB flash drive.

1. Download the latest software from the Falcon-NEO product support page at <https://www.logicube.com/knowledge/forensic-falcon-neo>.
2. Extract the contents of the downloaded zip file to the root of the USB flash drive.
3. Turn the Falcon-NEO on. When the main software screen appears, connect the USB flash drive (that has the extracted software from step 2 to the USB_S1 port (the USB port on the left side).
4. From the main menu on the Falcon-NEO, locate and tap **Software Updates** on the left side.
5. Select **From USB Drive**. The Falcon-NEO will then check for the version of the software on the USB drive. After a few seconds, one of the following messages should appear:
 - **SOFTWARE FOUND** – A software version is found on the USB flash drive. Tap **OK** to continue.
 - **UPDATES NOT FOUND!** – The Falcon-NEO did not find any software on the USB flash drive or could not detect the USB flash drive. If this message is seen, try the following:
 - i. Make sure the correct software use and the files were extracted to the root of the USB flash drive, or
 - ii. Format and use a different USB flash drive, or

Application Note

- iii. Try using the "From Network" option (see [Section 5.2.1](#))
- 6. Tap **Update** to begin the update. The Falcon-NEO should begin the update process. Do not interrupt the update process. It may take several minutes. Once completed, a screen will appear stating the update is complete and will prompt you to turn the unit off then back on.
- 7. Turn the Falcon-NEO off. Wait at least 5 seconds then turn the Falcon-NEO back on. V Verify the software version by going to the Software Updates screen then go to section [6.0 Firmware Update](#) to check if there is a firmware update available.

6.0 Firmware Update

Falcon-NEO software releases may contain a firmware update. This section provides instructions on how to check if a firmware update is available, and how to perform the firmware update.

1. After the software is updated (and after restarting the Falcon-NEO), from the main menu, locate and tap **Software Updates** on the left side.
2. Tap the **Firmware Update** tab. One of two screens will appear:
 - a. **FIRMWARE UPGRADE AVAILABLE** – Tap the **Update** icon. A message will appear: "FIRMWARE UPDATE COULD TAKE UP TO A FEW MINUTES TO COMPLETE; PLEASE DO NOT INTERRUPT POWER DURING THIS TIME. ON COMPLETION THE UNIT WILL AUTO-RESTART AND CONFIRM THE UPDATE." Tap the **OK** icon to start the firmware update process.



When the OK icon is tapped, the screen may appear to do nothing. Do not keep tapping the OK icon. The firmware update will take no more than 60 seconds.

- b. **FIRMWARE UPGRADE NOT AVAILABLE** – This message will appear if the device does not require a firmware update. No further action is necessary if this message appears.