



AV-30-C

STC Service Bulletin

Software Upgrade to 2.3.9



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Patent uavionix.com/patents

1 Revision History

Revision	Date	Comments
A	2/28/2023	Initial release
B	6/9/2023	Add instructions to reconfigure GPS settings. Fix typo in AV-Link update instructions.

2 Warnings / Disclaimers

uAvionix is not liable for damages arising from the use or misuse of this product.

This equipment is classified by the United States Department of Commerce's Bureau of Industry and Security (BIS) as Export Control Classification Number (ECCN) 7A994.

These items are controlled by the U.S. Government and authorized for export only to the country of ultimate destination for use by the ultimate consignee or end-user(s) herein identified. They may not be resold, transferred, or otherwise disposed of, to any other country or to any person other than the authorized ultimate consignee or end-user(s), either in their original form or after being incorporated into other items, without first obtaining approval from the U.S. government or as otherwise authorized by U.S. law and regulations.

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5 Planning Information

5.1 Distribution / Eligibility

The Accomplishment Instructions contained in Section 10 may only be performed by appropriately authorized personnel.

5.2 Applicability

This Service Bulletin applies to AML STC SA00410BO for the uAvionix AV-30-C UAV-1003429-001 and UAV-1003429-002, with operating software release 2.1.5 or earlier. Use Table 5-1 Applicability to determine applicability of the software update.

Table 5-1 Applicability

Hardware P/N Marking	Applicability
UAV-1003429-001	Verify by procedure
UAV-1003429-002	Verify by procedure

Parts identified above as “Verify by procedure” may have software release 2.1.5 or previous installed. To determine what version of software is installed:

1. Push and hold center rotary knob while powering up unit.



2. Once the uAvionix startup screen displays you can release.
3. Push left button under the MENU until the “INSTALL / ROT TO SEL” appears.

4. Rotate knob until you see “SW VERSION”
5. If the version displayed is 2.1.5 or earlier proceed with this Service Bulletin.

5.3 Description

This Service Bulletin provides instructions for loading uAvionix AV-30-C UAV-1003429-001 and UAV-1003429-002 with updated software release 2.3.9.

For increased performance in DG mode, the pitot and static pneumatic lines shall be connected if not already installed. This Service Bulletin does not describe or provide authority for that work.

5.4 Time Required

For field software update, up to 90 minutes is required to perform this update procedure. Additional time and approval may be required if pitot and static connections are not installed.

5.5 Weight and Balance

No change.

5.6 Electrical Load Data

No change.

5.7 Applicable Publications

The following documents are applicable to the software release 2.3.9.

Table 5-2 AV-30-C Documents

Title	Part Number	Revision
AV-30-C Installation Manual	UAV-1003947-001	I
AV-30-C Pilot’s Guide	UAV-1003946-001	F

6 Required Items

There are two methods available to perform the update. The first involves a Windows PC and serial port, the second uses the optional AV-Link device over Wi-Fi.

Both methods require you to download the software update file below.

Table 6-1 Software Update Files

Filename	Version	SW Part Number	Checksum	SHA1 Hash
UAV-1003494-005-av30c-2_3_9-79025d9.bin	2.3.9	UAV-1003494-005	0x95BD6B45	ddfd9ae1335cd9d8c88f08775606a8aad67b1eb8

uAvionix software update files are available for download from the uAvionix Support website at no charge, at:

<https://uavionix.com/av-30-c-service-bulletin-software-upgrade-2-3-9/>

Click on the link in the section **AV-30-C v2.3.9 Firmware** and save it to your PC or mobile device.

Ensure the software and any necessary update tools have been downloaded prior to visiting the aircraft. An internet connection is required to download the software and application. An internet connection is not required to perform the update.

6.1 Windows PC with Serial Port

The following items are required to perform the update when using a Windows PC with serial cable:

Quantity	Description
1	Windows PC running Windows 7 or later
1	Available serial port or appropriate USB to RS-232 converter Examples: FTDI, Parallax 28030, Sabrent CB-8P6F or similar
1	Female DB-9 with solder or crimp terminals
2	Female terminals suitable for the installed DB-15
4'	22-24 AWG wire
1	uAvionix AV Update Tool for Windows (UAV-1005199-001)
1	AV-30-C Software as shown in Table 6-1 Software Update Files.

The uAvionix AV Update Tool is available on the website linked above in the section **AV Update Tool**. Download it to your PC.

6.2 AV-Link

The following items are required to perform the update when using AV-Link over Wi-Fi:

Quantity	Description
1	PC or mobile device
1	uAvionix AV-Link (UAV-1004413-001 or UAV-1004414-001) running software version 0.2.39 or later.
1	AV-30-C Software as shown in Table 6-1 Software Update Files.

AV-Link software version 0.2.39 is required. The uAvionix software update files are available for download from the uAvionix Support website at no charge, at:

<https://uavionix.com/av-link-e-service-bulletin-software-upgrade-0-2-39/>

Follow the instructions in AV-Link Service Bulletin Upgrade to 0.2.39 UAV-1006731-001 Rev A.pdf to update the AV-Link to version 0.2.39.

7 Update Notes

AV-30-C configuration settings will be preserved during the update procedure when possible. However, please take note of all settings before performing the update, and verify settings are correct after the update has been applied.

GPS, Serial 1, and Serial 2 settings have changed and are reset to default by the update. Please check these settings and reconfigure as necessary.

If pitot and static lines were not previously connected, ensure appropriate approval and connect the lines now to ensure full performance and functionality.

Ensure you are running a previous version of AV-30-C software. Specifically, your AV-30-C should currently be running 2.1.5 or earlier.

There are two approved methods for update of the AV-30-C. The AV-30-C can be updated using either a traditional direct serial connection or using the AV-Link to update the AV-30-C via wireless interface. Either method is suitable, and the choice can be made according to installer preference or equipment availability. If the AV-Link installation is not approved, it must be used only for the update and removed after.

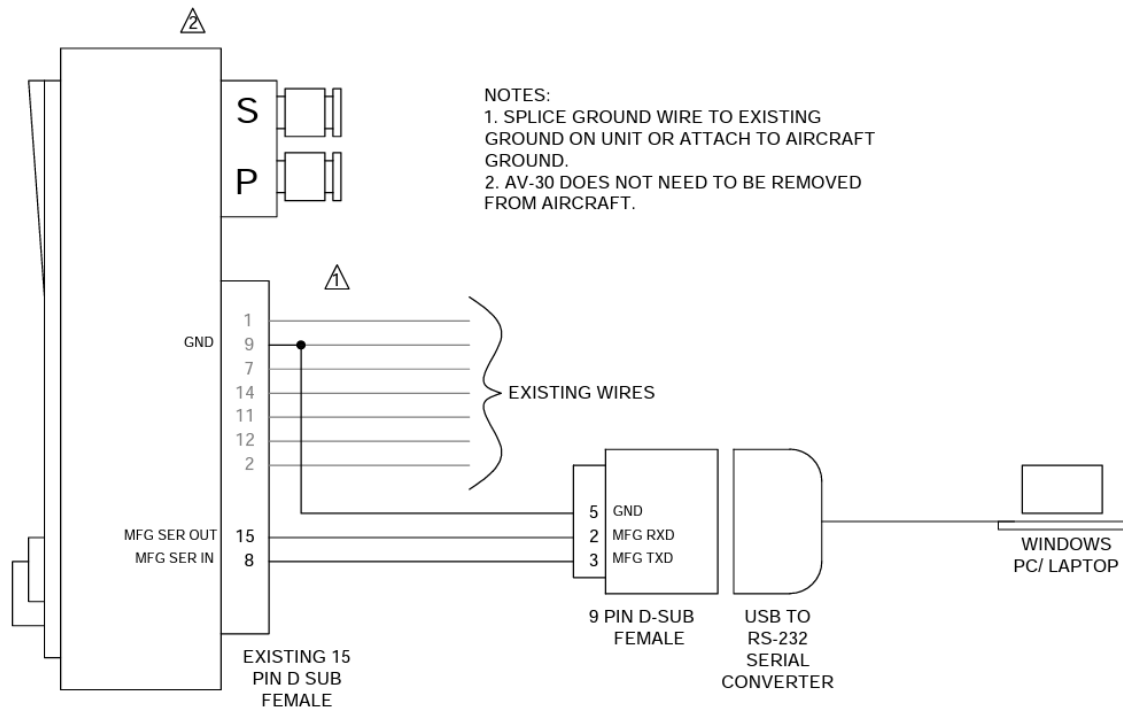
If performing the update using PC serial connection, proceed to §8 PC Serial Update.

If performing the update using the AV-Link, first verify that it is running software version 0.2.39 or later then proceed to §9 AV-Link Update. If the AV-Link is running version 0.2.38 or earlier, update the AV-Link to version 0.2.39 before proceeding. Refer to section 6.2 for links to AV-Link version 0.2.39 upgrade files.

8 PC Serial Update

8.1 Serial Update Preparation

1. Add wires to pins 8 and 15 to the AV-30-C harness if not already connected. Add an additional ground wire to either existing the ground from the AV-30-C harness or ground the new wire directly to aircraft ground.
2. Connect the new wires to the DB-9 connector as shown below. Upon completion of wiring, connect the new assembly to an available serial port or USB serial adapter.

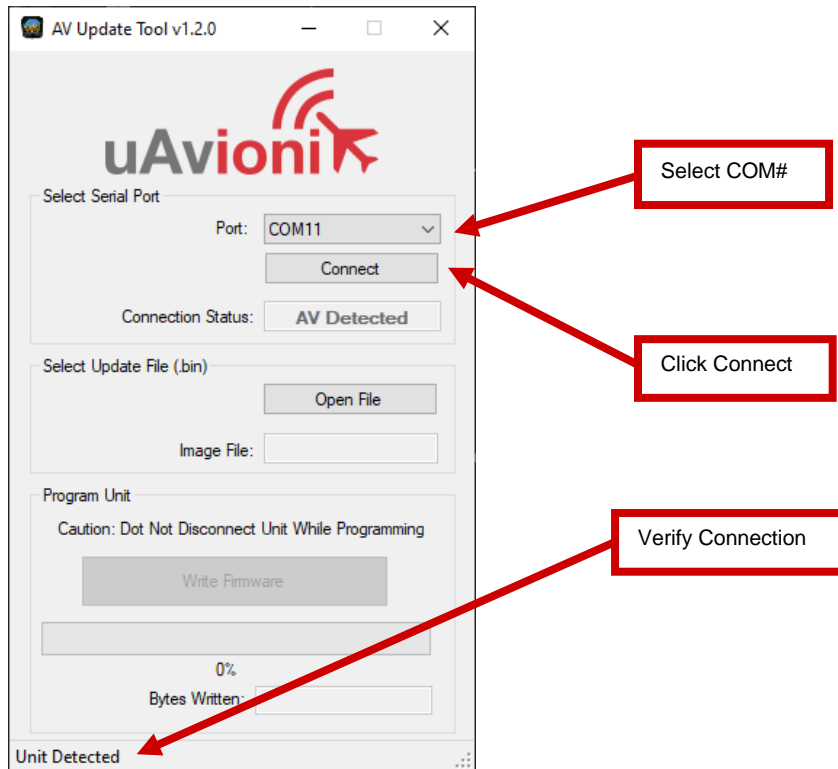


Note: AV-Link must not be installed if performing an update using the PC serial update procedure.

8.2 Serial Update Procedure

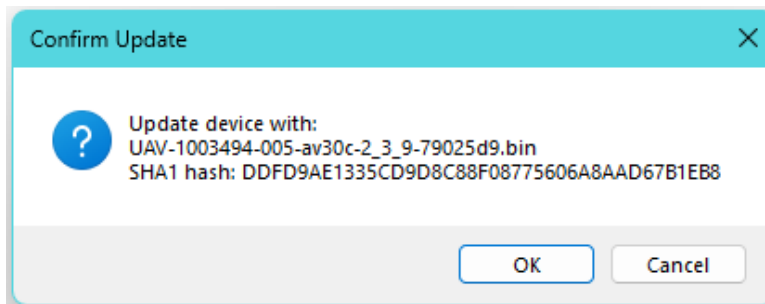
1. Connect the AV-30-C to the Windows PC through the DB-9 connection previously installed in Section 8.1.

2. Apply power to the AV-30-C. Do not interrupt power during the update process.
3. Launch the previously downloaded AV Updater application.
4. On the AV Updater tool, select the appropriate COM Port from the dropdown menu and click “Connect”.

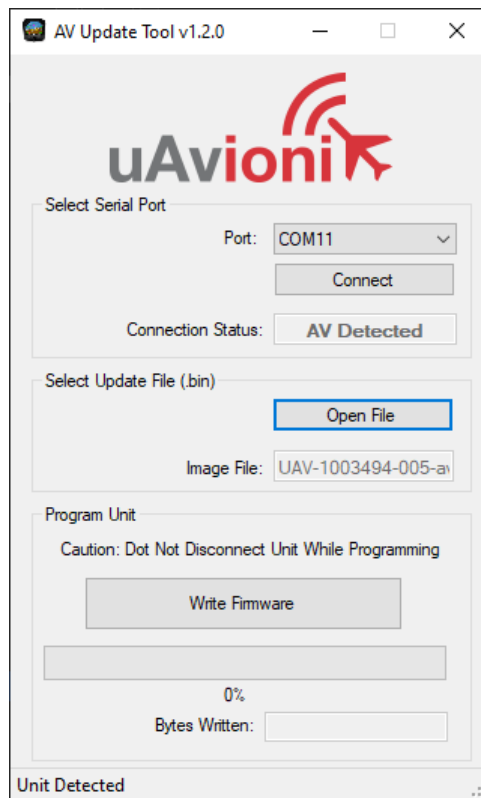


5. Proper connection has been made when the message “Unit Detected” has appeared on the bottom left corner of the AV Updater Tool. The screen on the AV-30-C will go black for the remainder of this procedure. If “Unit Detected” does not appear, contact uAvionix Support for additional guidance.
6. Once proper connection has been made, select the firmware file to upload to the AV-30-C by clicking “Open File” and selecting the previously downloaded firmware file as identified in Table 6-1 Software Update Files. A confirmation dialog will appear with the filename and a calculated SHA1 hash. To confirm integrity of the file, compare the

displayed SHA1 hash to that in Table 6-1 Software Update Files. Note that the hash is not case sensitive.



7. When confirmed, press OK and the main dialog will re-appear.



8. Select "Write Firmware" to begin the upload.



DO NOT POWER OFF THE AV-30-C OR CLOSE THE UPDATER TOOL UNTIL THE UPDATE IS COMPLETE.

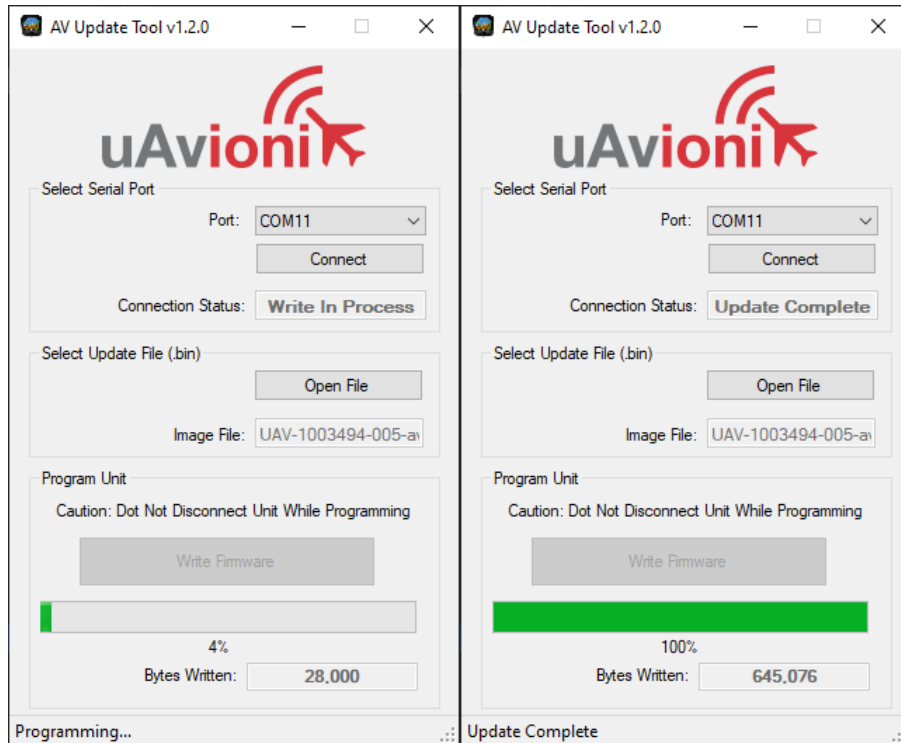


Figure 8-1 AV Update Tool

9. When the AV Update Tool displays “100%” and the lower status reads “Update Complete” the process is complete.
10. The unit will automatically restart. Upon restart of the unit, verify the startup screen indicates the updated software version.



THE SCREEN OF THE AV-30-C WILL GO BLACK WHILE THE DEVICE REBOOTS, THIS BEHAVIOR IS NORMAL AND THE STARTUP SCREEN WILL APPEAR AFTER REBOOTING.

11. If the unit was removed to perform the update it can now be reinstalled as per the installation manual.
12. Any new wiring because of the update process should be properly secured.
13. Following the completion of update, follow Section 10 to perform required post-installation procedures.

9 AV-Link Update

The AV-Link is a wireless bridge that extends the functionality of the AV-30-C. One of the functions AV-Link provides is the ability to update software on the AV-30-C through a web interface.

9.1 AV-Link Update Preparation

If AV-Link is already installed in the aircraft, proceed to Section 9.2.

If AV-Link is available but not installed, follow the installation procedure as described in “AV-30-E Installation Manual” UAV-1004234-001 Rev F (or latest available), Section 11.1.



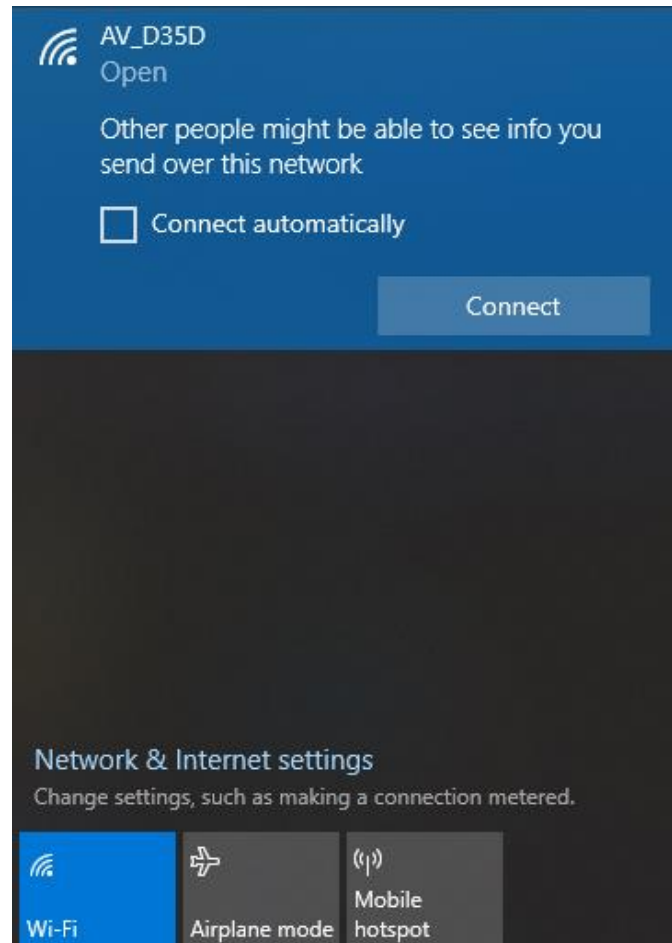
Note: This product is not authorized for installation and use with AV-30-C other than installing firmware updates for certified aircraft. It must be removed before flight.

9.2 AV-Link Update Procedure

After the AV-Link and AV-30-C have been installed, AV-30-C firmware updates can be performed using the AV-Link web interface. The web interface is accessible through any PC or mobile device. Ensure the PC or device has the AV-30-C software noted in Table 6-1 Software Update Files downloaded and available before traveling to the aircraft site.

The following instructions show the update procedure when using a Windows PC. Apply the same procedures, modified as necessary, when using an alternate installation PC or device.

1. Apply power to the AV-30-C and AV-Link. Do not interrupt power during the update process.
2. Connect a PC to the AV-Link Wi-Fi Network. This will be displayed as AV-#### where #### will be 4 random characters ranging from 0-8 and A-F.



3. In a Web Browser (such as Google Chrome) navigate to the AV-Link home page via the following URL:

192.168.4.1

A page like the one shown on the right should appear.

4. At the bottom of the page select *AV Firmware Update*

The screenshot shows a web browser window titled "AVLink Main Device Page". The browser's address bar shows "Not secure | 1...". The page content is as follows:

Settings

Firmware	0.2.39-AVLink
AVLink SSID	AV_1049
Clients	1
ADS-B Receiver	Not assigned Waiting to scan

Status

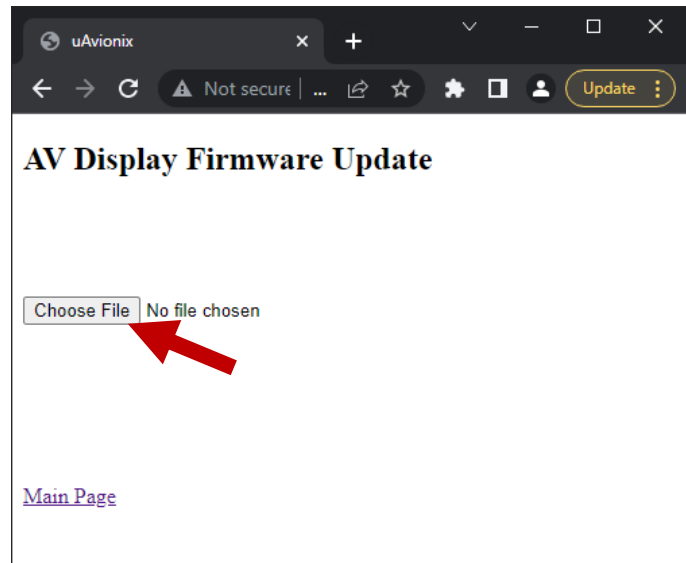
ICAO Address	000000
Callsign	-----
GPS Fix	None
GPS Satellites	0
Position	---
Altitude (GNSS)	---
Altitude (Baro)	---

Device Information

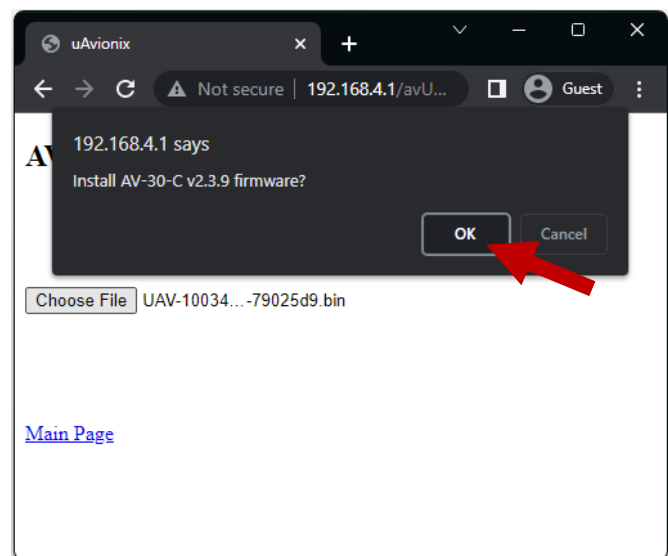
Hardware	Version	Serial Number
AV-Link	0.2.39	1073509088
AV-30	2.1.5	18446744073709552000

At the bottom of the page, there are three links: [Wi-Fi Settings](#), [Statistics](#), and [AV Firmware Update](#). A red arrow points to the [AV Firmware Update](#) link.

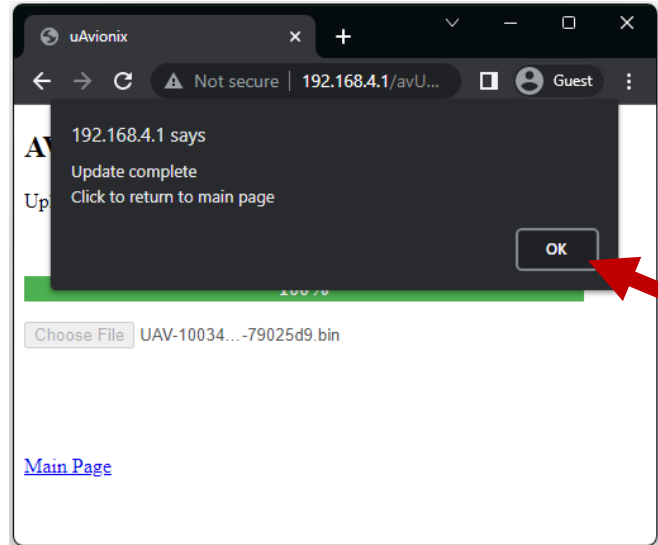
5. On the AV Display Firmware Update page select *Choose File* then select the previously downloaded AV-30-C firmware.



6. Once the file has been selected you will be prompted with “Install AV-30-C v2.3.9 firmware?” Press *OK* to proceed.

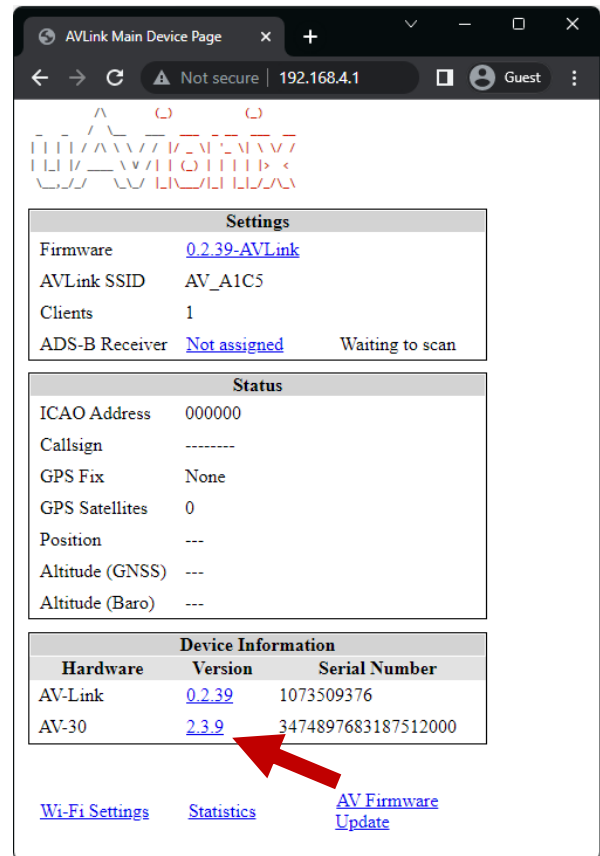


The screen on the AV-30-C will go black during the update. DO NOT power off the unit or close the web browser until the update is complete. The AV-30-C will restart when complete and the AV-Link home page will be displayed in the web browser.



7. Upon restart of the AV-30-C, verify the startup screen indicates the updated software version.

8.



10 Post-Accomplishment Verification and Actions

On restart, verify that the startup screen displays the correct version number. Access the Installation Menu to complete post-accomplishment verification steps.

1. To enable access to the Installation Menu, ensure the unit is completely turned off. Push and hold the main control knob in while power is applied.



2. Keep the knob pushed until the startup screen displays, and then release.
3. Ensure the unit is in AI or DG mode; select the mode by pushing and holding the center button until the mode display changes.
4. In AI or DG mode, push the left button under the MENU until the "INSTALL / ROT TO SEL" appears.



5. Rotate the knob until you see “GPS NAV SRC”. Confirm that this source matches your GPS source. If not, click the center button and rotate the knob to change to the correct GPS source.
6. Rotate the knob until you see “SERIAL 1”. Confirm that this matches the device connected to serial 1. If not, click the center button and rotate the knob to change to the correct device.
7. Rotate the knob until you see “SERIAL 2”. Confirm that this matches the device connected to serial 2. If not, click the center button and rotate the knob to change to the correct device.
8. Rotate the knob until you see “SW PART NUM”. Confirm part number matches that shown in Table 6-1 Software Update Files.
9. Rotate the knob until you see “SW VERSION”. Confirm version matches that shown in Table 6-1 Software Update Files.
10. Rotate the knob until you see “SW CHECKSUM”. Confirm checksum matches that shown in Table 6-1 Software Update Files. Note that the checksum is not case sensitive.

If all software fields match, continue with these instructions. Otherwise, contact uAvionix Support.

11 System Checkout

Perform the System Checkout procedure as described in “AV-30-C Installation Manual” UAV-1003947-001 Rev I Section 14.2 prior to returning to service.

12 Support

For additional questions or support please visit:

<http://www.uavionix.com/support/>

13 Maintenance Record

When post-accomplishment verification and system checkout is completed, make appropriate entries in the Aircraft Maintenance Log Book.

Maintenance Record

Service Bulletin UAV-1005689-004 Rev B to install software v2.3.9 for AV-30-C UAV-1003429-(____), AML STC SA00410BO, has been complied with.



A copy of this form must be submitted by visiting:

<https://uavionix.com/logbook/>

Date:	By:
Aircraft Information	
Make:	Model:
Serial Number:	Registration Number:
AV-30-C Information	
Serial Number:	
Hardware Part Number:	UAV-1003429-_____
Customer Information	
Name:	
Email:	
Telephone:	