



AV-30-E

Service Bulletin

Software Upgrade to 2.0.3



AV-30-E Service Bulletin Software Upgrade 2.0.3

UAV-1005261-001 Rev B

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Patent uavionix.com/patents

1 Revision History

Revision	Date	Comments
A	5/17/2021	Initial release
B	5/20/2021	Add two button bootloader mode section 7&9

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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4 Planning Information

4.1 Applicability

This Service Bulletin applies to uAvionix AV-30-E UAV-1004035-001 with operating software release 1.1 or earlier. Use Table 4-1 Applicability to determine applicability of the software update.

P/N Marking	Applicability
UAV-1004035-001	Verify by procedure

Table 4-1 Applicability

To determine which version of software is installed either:

- Verify the software version as presented when the AV-30-E powers up. The software version is displayed while uAvionix logo is presented. The version appears under heading SOFTWARE VERSION.
- If the version displayed is 1.1.0 or earlier proceed with this service bulletin.

or

- Navigate to the system information menu after the AV-30-E has completed startup using the following steps.
 1. Press and hold center rotary knob while powering up unit. Once the uAvionix splash screen displays you can release.
 2. Press left button under the MENU 3 times until the “Install ROT TO SEL” appears.
 3. Rotate knob until you see “SW VERSION”
 4. If the version displayed is 1.1.0 or earlier proceed with this service bulletin.

4.2 Description

This Service Bulletin provides instructions for loading uAvionix AV-30-E UAV-1004035-001 with updated software release 2.0.3.

4.3 Time Required

Up to 90 minutes is required to perform this update procedure.

4.4 Weight and Balance

No change.

4.5 Electrical Load Data

No change.

4.6 Applicable Publications

The following documents are applicable to the software release 2.0.3.

Title	Part Number	Revision
AV-30-E Installation Manual	UAV-1004234-001	B
AV-30-E Pilot's Guide	UAV-1004233-001	C

5 Required Items

The following items are required to perform the update:

QTY	Description
1	Windows PC running Windows 7 or later
1	Available serial port or appropriate RS-232 to USB converter Examples: Parallax 28030, Sabrent CB-9P6F or similar
1	Female 9 pin d-sub connector (DB-9) with solder or crimp terminals
2	Female terminals suitable for the installed 15-pin d-sub (DB-15)
4'	22-24 AWG wire
1	uAvionix Updater Application
1	AV-30-E software version 2.0.3 as shown in table 5-1

Item	Filename	SHA1 Hash
AV-30-E	UAV-1004037-001-av30e-2_0_3-68867db.bin	

Table 5-1 Software Update Files

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

<https://uavionix.com/av-30-e-service-bulletin-software-upgrade-to-2-0-3/>

Please download the uAvionix Updater and latest software update prior to visiting the aircraft. An internet connection is required to download the necessary application and software. An internet connection is not required to perform the update.

6 Update Notes

All AV-30-E configuration settings will be preserved during this update procedure.

7 Update Procedure Methods

Ensure you are running a previous version of AV-30-E software. Specifically, your AV-30-E should currently be running 2.0.3 or earlier.

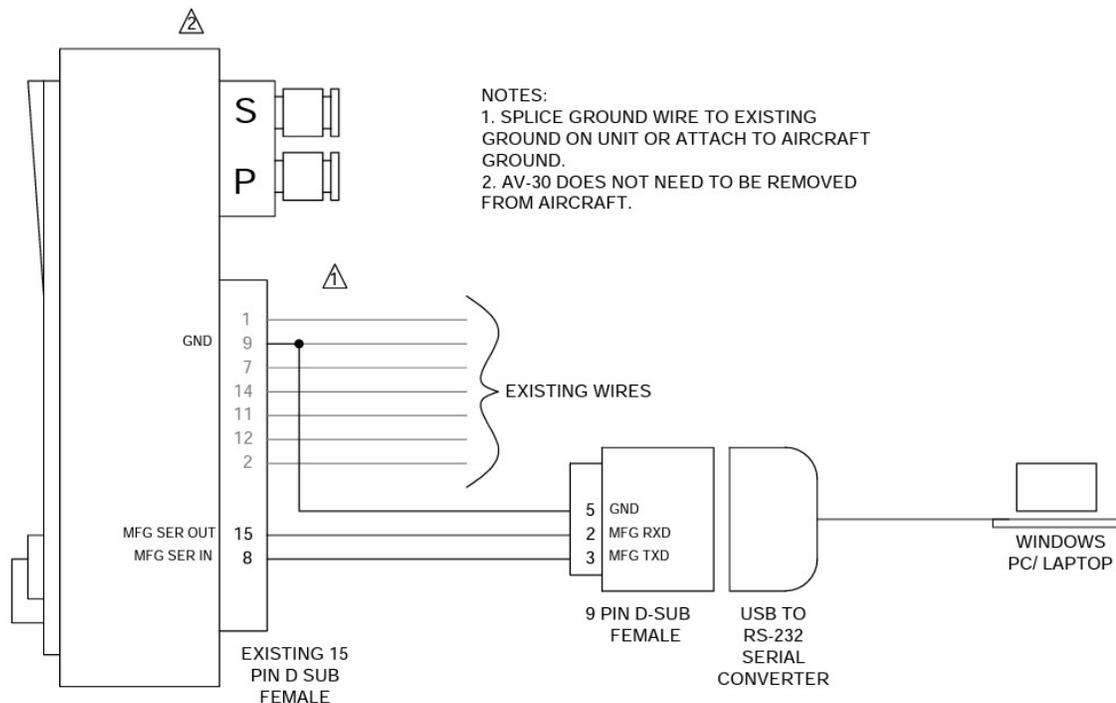
There are two approved methods for update of the AV-30-E. The AV-30 can be updated using either a traditional direct serial connection or the AV-Link can be used to update the AV-30 via wireless interface. Either method is suitable, the choice is installer preference. The AV-Link can be removed after update.

If performing the update using direct serial connection, proceed to section 7.1

If performing the update using the AV-Link, proceed to section 8.

7.1 Prepare the AV-30-E for Direct Serial Update Procedure

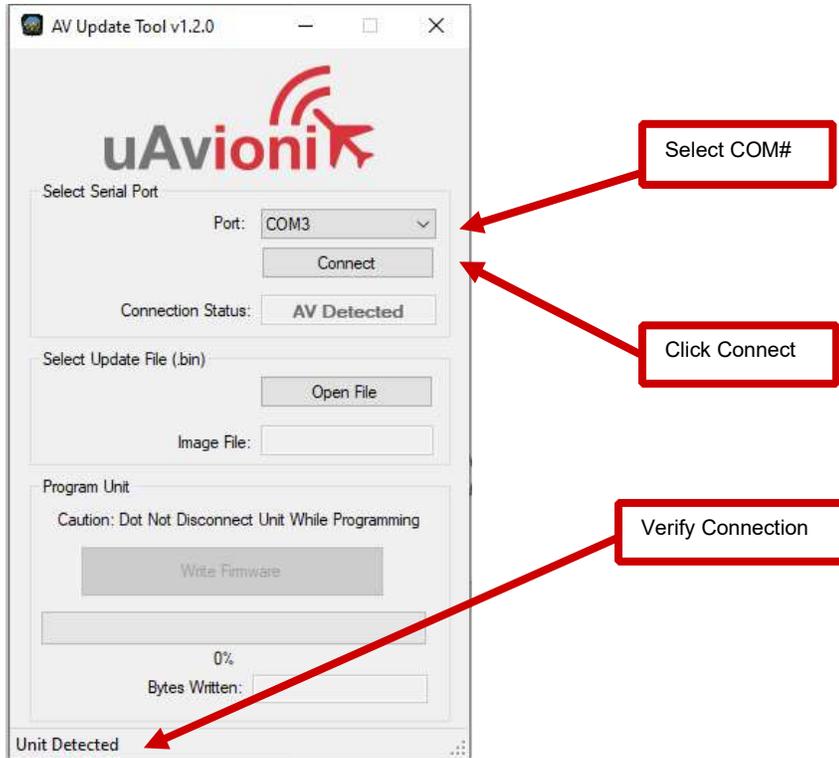
1. Add wires to pins 8 and 15 of the AV-30 harness if not already connected. Add an additional ground wire to either existing the ground from the AV-30 harness or ground the new wire directly to aircraft ground.
2. Connect the new wires to the DB-9 connector as shown below. Upon completion of wiring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



*AV-Link cannot be installed if performing an update using a USB serial converter.

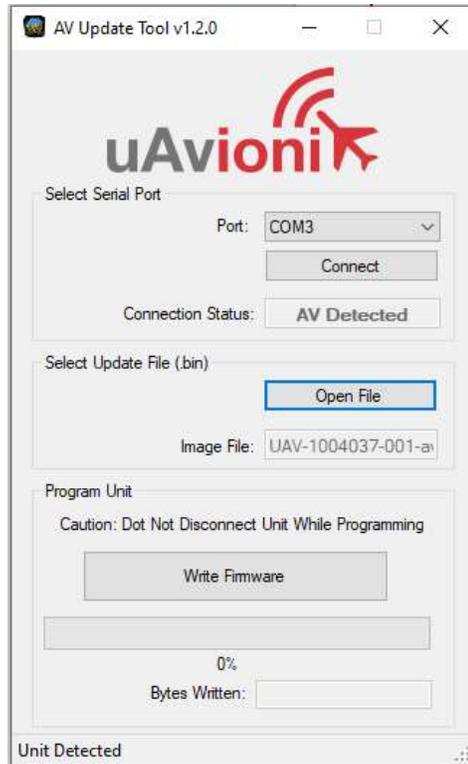
7.2 Perform the Update Procedure

1. Connect the AV-30-E to the Windows PC through the DB-9 connection previously installed in Section 7.1.
2. Hold down left and right button while applying power to the AV-30 and AV-Link. Hold for 5 seconds. This will allow the AV-30 to enter the bootloader mode. The screen will remain black. 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".



3. Proper connection has been made when the message “Unit Detected” has appeared on the bottom left corner of the AV Updater Tool.
4. Once proper connection has been made, select the firmware file to upload to the AV-30-E by clicking “Open File” and selecting the previously downloaded firmware file:

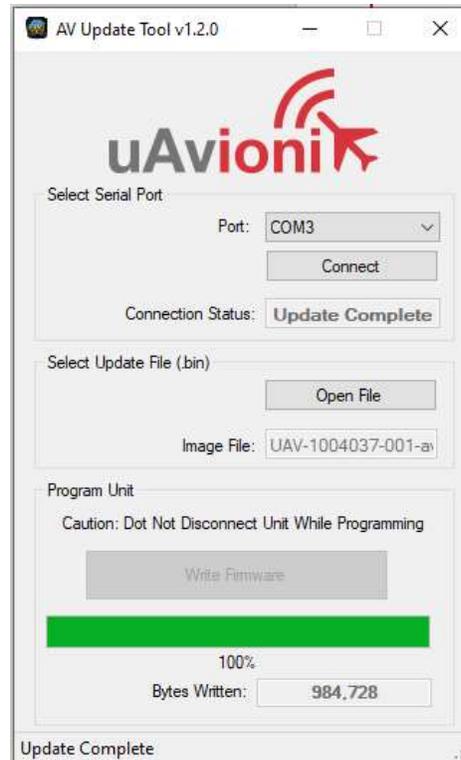
UAV-1004037-001-av30e-2_0_3-68867db



5. Select “Write Firmware” to begin the upload.

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

*SCREEN OF THE AV-30 WILL GO BLACK WHILE THE DEVICE REBOOTS, THIS BEHAVIOR IS NORMAL.



6. When the AV Update Tool displays “100%” and the lower status reads “Update Complete” the process is complete.
7. Upon restart of the unit, verify the splash screen indicates firmware 2.0.3.
8. If the unit was removed to perform the update it can now be reinstalled as per the installation manual.
9. Any new wiring as a result of the update process should be properly secured.
10. Following completion of reinstallation perform the Hard Calibration as described in section 10.

8 Alternate Update Method: AV-Link

The AV-Link is a wireless bridge that extends the functionality of the AV-30. AV-Link includes wireless update functionality.

8.1 AV-Link Installation Materials and Tools

If the AV-Link is not installed in the aircraft, perform the remainder of Section 8.

If the AV-Link is already installed in the aircraft, proceed to Section 9.

AV-Link installation requires access to the following tools:

- Flat Screwdriver
- 3/16" Nut Driver

8.2 Additional Required Equipment

AV-Link is designed to interface with an existing AV-30-E display. To take advantage of the AV-Link the following equipment is required.

AV-30-E 3" Display

8.3 Mounting

AV-Link is mounted in series between the AV-30 and the AV-30 Backshell Connector.

8.3.1 Remove AV-30 From Instrument Panel (Optional)

It may be necessary, because of space limitations, to remove the AV-30 unit in order to perform AV-Link installation. Using a Phillips screwdriver, remove the four [4] screws that attach the AV-30 to the aircraft instrument panel. Pull unit down to a workable position. Note that it may also be necessary to disconnect the Pitot and Static lines to bring into reach. Ensure that the lines are properly labeled before disconnecting.

8.3.2 AV-30 Backshell Connector Removal

Using a flat screwdriver, loosen the two [2] screws that hold the Backshell Connector to the DB-15 connector on the back of the AV-30 until the

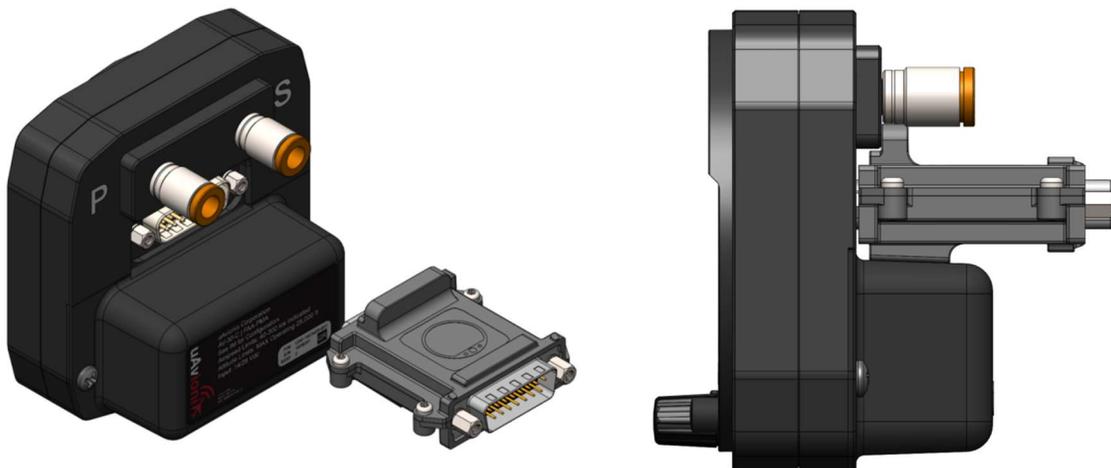
AV-30-E Service Bulletin Software Upgrade 2.0.3

Backshell Connector is free to detach from the AV-30. If present, leave the bonding/ground strap attached to the Backshell Connector.

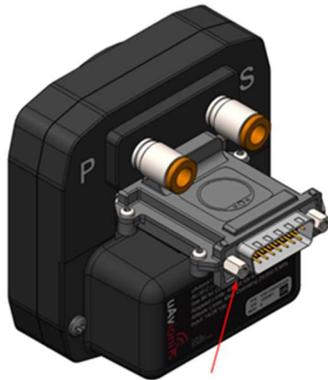


8.3.3 AV-Link Attachment

Do not attempt to remove the two [2] captive Jack Screws from the AV-Link Housing. Attach the AV-Link to the back of the AV-30 by inserting the unit into the DB-15 connector on the back of the AV-30. Do not push against the Jack Screws as they will stop against the screw bosses on the AV-30 connector preventing proper seating of the AV-Link. Also, make sure to seat the AV-Link completely before tightening the Jack Screws. Do not attempt to use the Jack Screws to pull the AV-Link into the AV-30 connector. AV-Link should seat firmly into the AV-30 as shown in the image on the right below.



Using a 3/16" nut driver, tighten the two [2] Jack Screws to 5in*lbs max. Do Not Overtighten!



Reattach the original AV-30 Backshell Connector. Using a flat screwdriver, tighten the two [2] screws to 5in*lbs max. Do Not Overtighten!



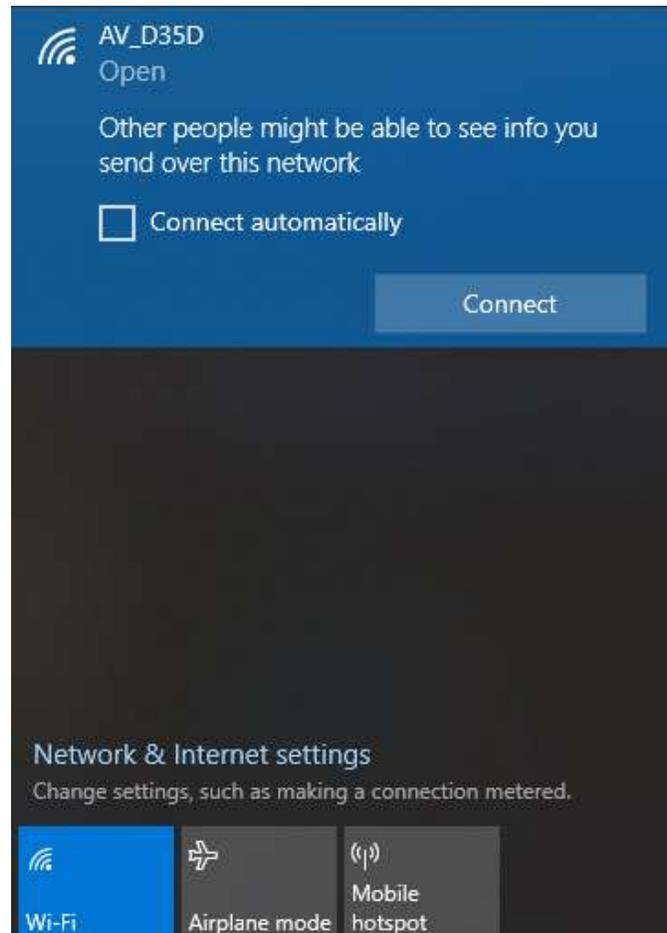
8.3.4 Reinstall AV-30 in Instrument Panel (If Removed)

If the AV-30 was removed from the aircraft instrument panel, reinstall the unit. If the original screws have been misplaced please observe Section 9.6 Mounting Screw Length Restriction from the AV-30 Installation Manual.

9 System Update

After the AV-Link and AV-30 have been installed, a firmware update will be required to enable the AV-Link features of the AV-30. Download the latest firmware and save it on the PC.

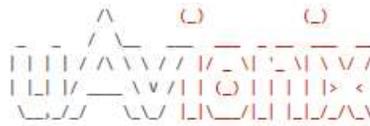
1. Hold down left and right button while applying power to the AV-30 and AV-Link. Hold for 5 seconds. This will allow the AV-30 to enter the bootloader mode. The screen will remain black. Do not interrupt power during the update process.
2. Connect a PC to the AV-Link Wi-Fi Network. This will be displayed as AV-#### where #### will be 4 random characters ranging from 0-8 and A-F.



- In a Web Browser navigate to the AV-Link home page via the following URL:

192.168.4.1

- At the bottom of the page select *AV Firmware Update*



Settings		
Firmware	0.2.29-AVLink	
AVLink SSID	AV_47C1	
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	0.2.29	1073491488



[Wi-Fi Settings](#)

[Statistics](#)

[AV Firmware Update](#)

[Coredump](#)

5. On the AV Display Firmware Update page select *Choose File* then select the previously downloaded AV-30 firmware UAV-1004037-001-av30e-2_0_3-68867db

AV Display Firmware Update

No file chosen

[Main Page](#)

6. Once the file has been selected click *Start Update*

AV Display Firmware Update

DO NOT power off the unit or close the web browser until the update is complete. The AV-30 will power back on when complete and the AV-Link home page will be displayed.

Note: File name will be different than shown in image.

UAV-10040...b15e7 (1).bin

[Main Page](#)

10 Post-Accomplishment Verification

Upon completion of the update, power off the AV-30-E and power it back on, during power up verify the displayed firmware version is 2.0.3

10.1 Hard Calibration

Hard Calibration must be completed after AV-30 is installed. There must be no movement when completing the calibration. Allow the AV-30-E to align and warm up before completing.

1. Before applying power, press and hold the center rotary knob and apply power.
2. With the AV-30 in the AI mode enter the “Install menu” page by pressing the left button 3 times. The aircraft must be on the ground with no movement.
3. Rotate the center knob until “HARD CAL PRESS TO CAL” is displayed.



4. Press the center knob
5. Ensure the aircraft is completely motionless and on the ground during the next several steps. **Do not leave the aircraft during the countdown.**
6. Press the right button below “CALIB”



7. "Calibration in progress" will be displayed with a % complete.



8. AV-30 will indicate "Calibration successfully completed Press DONE" Press the left button under "DONE" and the calibration will be complete. If an error is shown, repeat the calibration process.



If any post-accomplishment check fails, please contact uAvionix support, as directed in Section 12.

11 System Checkout

Perform the System Checkout procedure as described in “AV-30-E Installation Manual” UAV-1004234-001 Section 9.6 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-1005501-001 for AV-30-E UAV-1004035-001, 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-E Information	
Serial Number:	
Customer Information	
Name:	
Email:	
Telephone:	
Address:	

