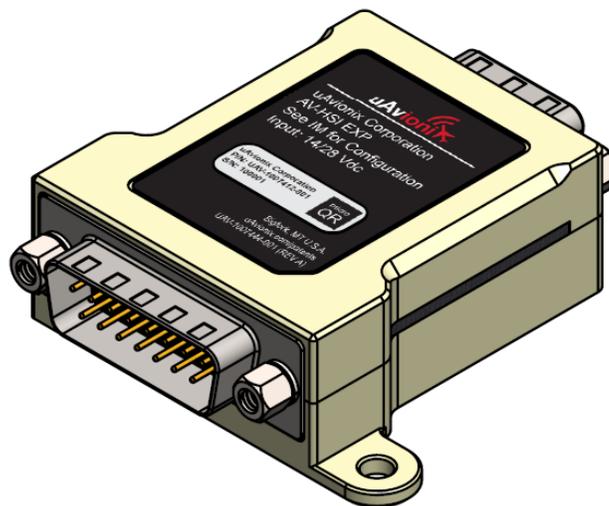




AV-HSI-E

Service Bulletin

Software Upgrade to 0.1.3



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Patent uavionix.com/patents

1 Revision History

Revision	Date	Comments
A	7/15/2024	Initial release

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

There are no distribution or eligibility restrictions for the instructions in this document.

5.2 Applicability

This Service Bulletin applies to the AV-HSI-E (also referred to as AV-HSI EXP) accessory with operating software release 0.1.1 or previous. Use Table 5-1 Applicability to determine applicability of the software update.

Table 5-1 Applicability

Hardware P/N Marking	Applicability
UAV-1007444-001	Verify by procedure

Parts identified above as “Verify by procedure” may have software release 0.1.1 or previous installed. To determine what version of software is installed:

1. With your AV-HSI-E connected to an AV-30-E, enter installation mode on the AV-30-E by holding down the center knob while power on.
2. Press the left button three times on the AV-30-E to access the installation menu.
3. Turn the AV-30-E center knob clockwise until you reach a menu item “AVHSI SW VER”. Your software version will be listed below.
4. If your AV-HSI-E displays version 0.1.1 or earlier, proceed with this Service Bulletin.

Note: AV-HSI-E software version 0.1.3 is intended for use with AV-30-E 3.0.0 or newer. Refer to <https://uavionix.com/support/av-30-e-support/> for the relevant AV-30-E service bulletin. This AV-HSI-E service bulletin may be performed before or after the AV-30-E service bulletin.

5.3 Description

This Service Bulletin provides instructions for loading uAvionix AV-HSI-E UAV-1007444-001 with updated software release 0.1.3.

This release includes the following changes:

- Ability to connect AV-Link directly to AV-HSI to serve traffic and updates to all connected AV-30.
- Ability to connect NMEA GPS to AV-HSI to serve all connected AV-30.
- Update to AV-30 attitude miscompare alert algorithm to reduce nuisance alerts.
- Implement set altitude “off” mode for better compatibility with Aerocruze autopilot.
- Fix vertical deviation (label 117) forwarding logic for better autopilot compatibility.
- Fix reversed SDI on receive channels.
- Fix intermittent parity error on label 204 transmission.

5.4 Time Required

For field software update, up to 30 minutes is required to perform this update procedure.

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 0.1.3.

Table 5-2 AV-30-E Documents

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

6 Required Items

Download the software update file below.

Table 6-1 Software Update Files

Filename	Version	SW Part Number	SHA1 Hash	App CRC
UAV-1007513-002- AV-HSI-E-0_1_3- a957adf.uav	0.1.3	UAV-1007513-001	86e5241c1916 76a0ef4e625b 5c617dbcdca5 e1d8	0xcFEB3FEC

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

<https://uavionix.com/av-hsi-e-service-bulletin-software-upgrade-0-1-3/>

Click on the link in the section **AV-HSI-E v0.1.3 Firmware** and save it to your PC or mobile device.

Ensure the software has 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 Items Required for Over-The-Air Update

The following items are required to perform the update:

Quantity	Description
1	Windows PC running Windows 7 or later or iOS® device
1	802.11 Wi-Fi interface
1	A Supported computing platform with Web Browser. The following combinations are recommended <ul style="list-style-type: none">• Windows PC with Google Chrome• Windows PC with Microsoft Edge• Windows PC with Internet Explorer• iPhone® with Safari® (must be in airplane mode with Wi-Fi on)• iPad® with Safari® (must be in airplane mode with Wi-Fi on)
1	AV-HSI-E Software as shown in <i>Table 6-1 Software Update Files</i> .
1	AV-Link-E running software version 0.3.5 or later

6.2 Items Required for Update Over Serial

The following items are required to perform the update:

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-DB9P or similar (See https://uavionix.com/support/av-30-e-support/ for the recommended USB to Serial Cable)
1	PingBootFlasher (UAV-1002813-001) v2.12 or greater
1	AV-HSI-E Software as shown in <i>Table 6-1 Software Update Files</i> .

7 Update Notes

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

Ensure you are running a previous version of AV-HSI-E software. Specifically, your AV-HSI-E should be running 0.1.1 or earlier.

8 AV-HSI-E Update Procedure

The AV-HSI-E may be updated over a wireless network connection or a wired serial connection. Section 8.1 describes the process for an update over a wireless network connection, and Section 8.2 describes the process for an update over a wired serial connection.

These instructions assume a valid installation as described in the applicable documentation listed in Table 5-2 AV-30-E Documents.

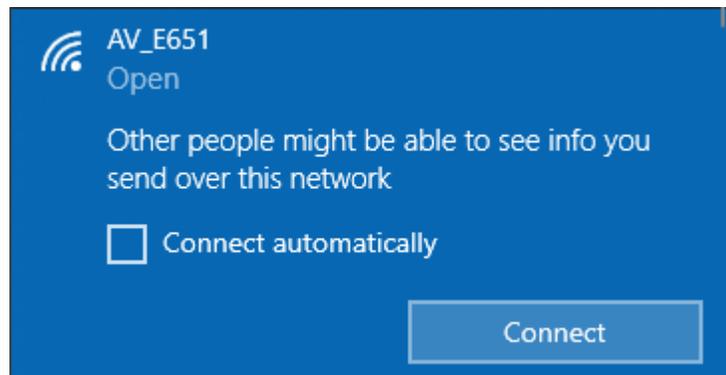
The following illustrations and procedures show the update procedure when using a Windows PC. Apply the same procedures, modified as necessary, when using an iPhone® or iPad®.

8.1 Over-The-Air Update

The AV-Link-E acts as a Wi-Fi hotspot to which your PC will connect. If you are using a phone or a tablet, put it in airplane mode first, then enable Wi-Fi to avoid being connected to multiple networks at once.

NOTE: An AV-Link-E will disable its Wi-Fi network after 5 minutes if it is not connected to an AV-30 configured for an AV-Link and no clients have connected. If this occurs, cycle power to the unit.

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



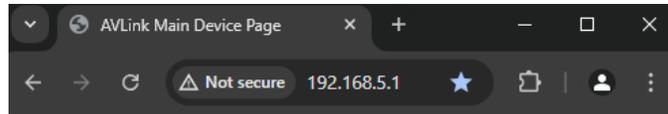
- In the Web Browser navigate to the AV-Link-E homepage via the following URL:

192.168.5.1

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

- The AV-Link-E **MUST** be running software version 0.3.5 or newer to be able to perform AV-HSI-E updates. If the Software listing at the top of this webpage isn't 0.3.5 or newer, please visit <https://uavionix.com/support/av-30-e-support/> for the latest AV-Link-E Service bulletin. Apply it **BEFORE** proceeding.

- If the AV-Link-E was not previously configured to interface with the AV-HSI-E, configure it by clicking on Wi-Fi Settings and setting the AV-HSI Connected Device to reflect an AV-HSI connected with or without an AV-30 connected to COM 4 (Pins 8 and 15) of the AV-HSI. See the AV-30-



Settings		
Software	UAV-1007753-001-0.3.5-AVLink	
AV-Link SSID	AV_E651	
Clients	1	
ADS-B Receiver	Not assigned	Disabled (More Info)

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

Device Information		
Hardware	Version	Serial Number
AV-Link	0.3.5	66971667850833
AV-HSI	0.1.2	3688818647418273857

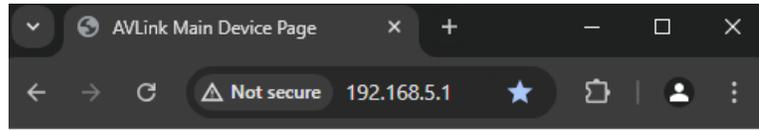
[Wi-Fi Settings](#)
[Statistics](#)
[AV Display Software Update](#)
[AV-HSI Update](#)

ADS-B Receiver Settings	
SSID	<input type="text"/> <input checked="" type="checkbox"/> Auto Connect
Password	<input type="text"/>
Port	<input type="text" value="4000"/>
Status	Waiting

AV-HSI Settings	
Connected Devices:	<input type="text"/> <ul style="list-style-type: none"> None AV-HSI without AV-30 on COM4 AV-HSI with AV-30 on COM4
<input type="button" value="Save"/> <input type="button" value="Cancel"/> <input type="button" value="Defaults"/>	

E Installation manual for more details.

6. At the bottom of the page, click the link named *AV-HSI Update* or the version number of the AV-HSI in the Device Information table.

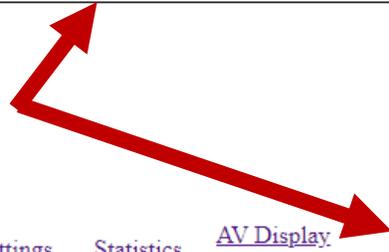


Settings	
Software	UAV-1007753-001-0.3.5-AVLink
AV-Link SSID	AV_E651
Clients	1
ADS-B Receiver	Not assigned Disabled (More Info)

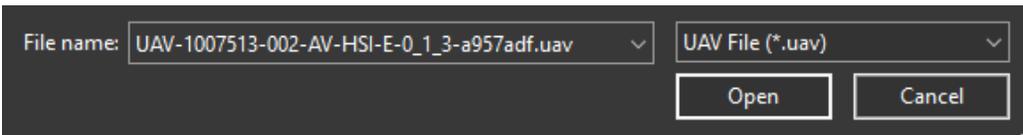
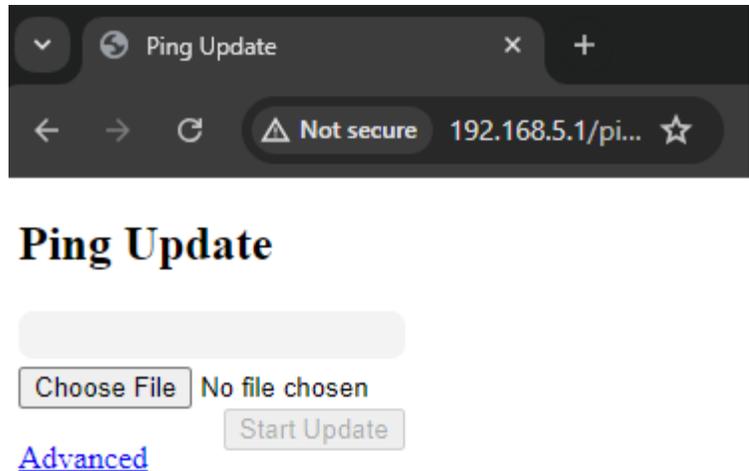
Status	
ICAO Address	000000
Callsign	-----
GPS Fix	None
GPS Satellites	0
Position	---
Altitude (GNSS)	---
Altitude (Baro)	---

Device Information		
Hardware	Version	Serial Number
AV-Link	0.3.5	66971667850833
AV-HSI	0.1.2	3688818647418273857

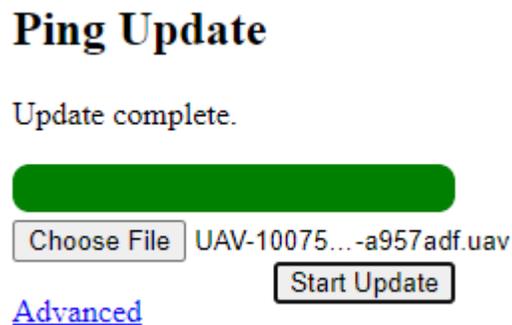
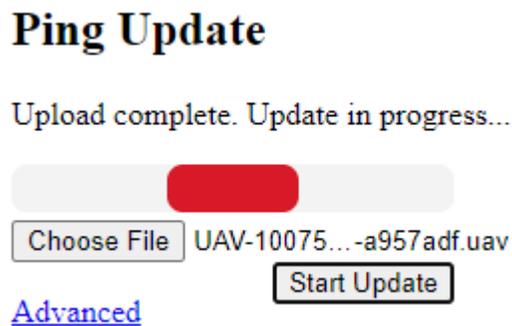
[Wi-Fi Settings](#) [Statistics](#) [AV Display Software Update](#) [AV-HSI Update](#)



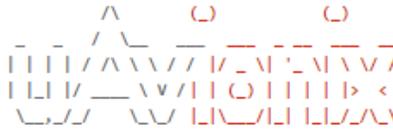
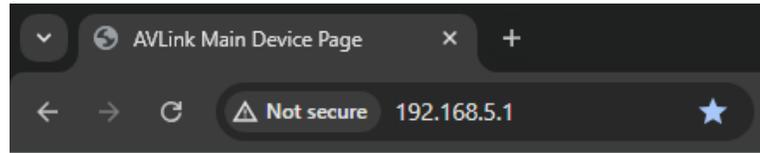
7. On the Ping Update page, click *Choose File* then select the previously downloaded AV-HSI-E V0.1.3 software.



8. Once the file has been selected click Start Update. Wait for “Update complete” to be displayed.



7. Return to the home page if not redirected automatically. Verify that the AV-HSI is displayed with the new version number in the Device Information table. Power cycling the AV-Link and AV-HSI may be required to indicate the new version.



Settings		
Software	UAV-1007753-001-0.3.5-AVLink	
AV-Link SSID	AV_E651	
Clients	1	
ADS-B Receiver	Not assigned	Disabled (More Info)

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

Device Information		
Hardware	Version	Serial Number
AV-Link	0.3.5	66971667850833
AV-HSI	0.1.3	3688818647418273857

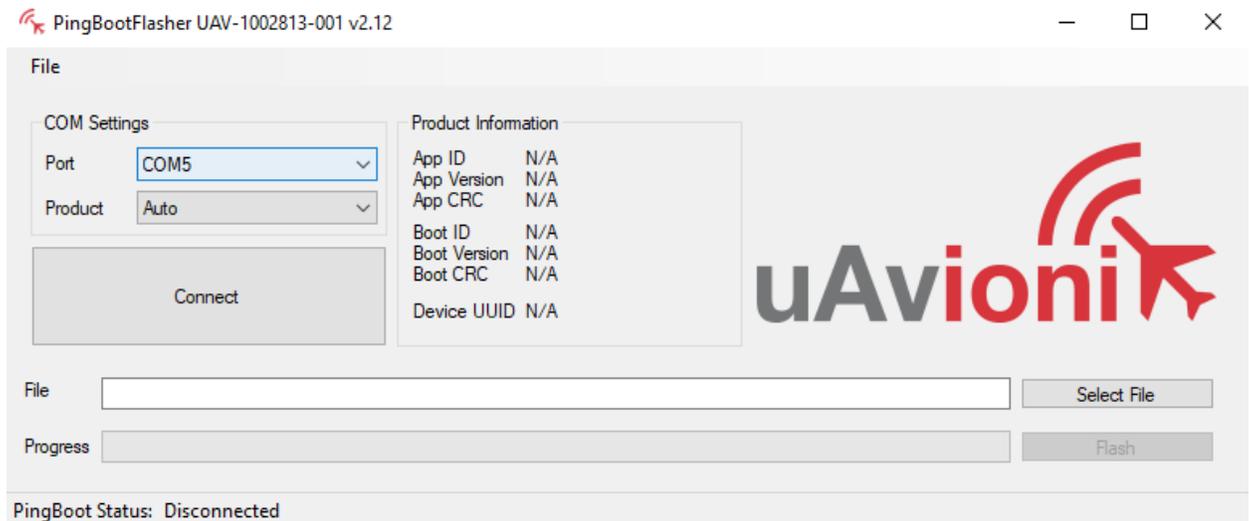
[Wi-Fi Settings](#)
 [Statistics](#)
 [AV Display Software Update](#)
 [AV-HSI Update](#)

8.2 Update Over Serial

The PingBootFlasher utility can be used to update an AV-HSI over a wired serial connection. If an AV-Link-E is installed with the AV-HSI, it does NOT need to be removed in order to update the AV-HSI-E over serial.

Prerequisite: COM4 of the AV-HSI-E (pins 8 and 15) must be accessible and have a female DB9 connector attached. See the AV-30-E Installation manual for more details. If an AV-30-E is connected to COM4, disconnect it from the AV-HSI-E harness before continuing.

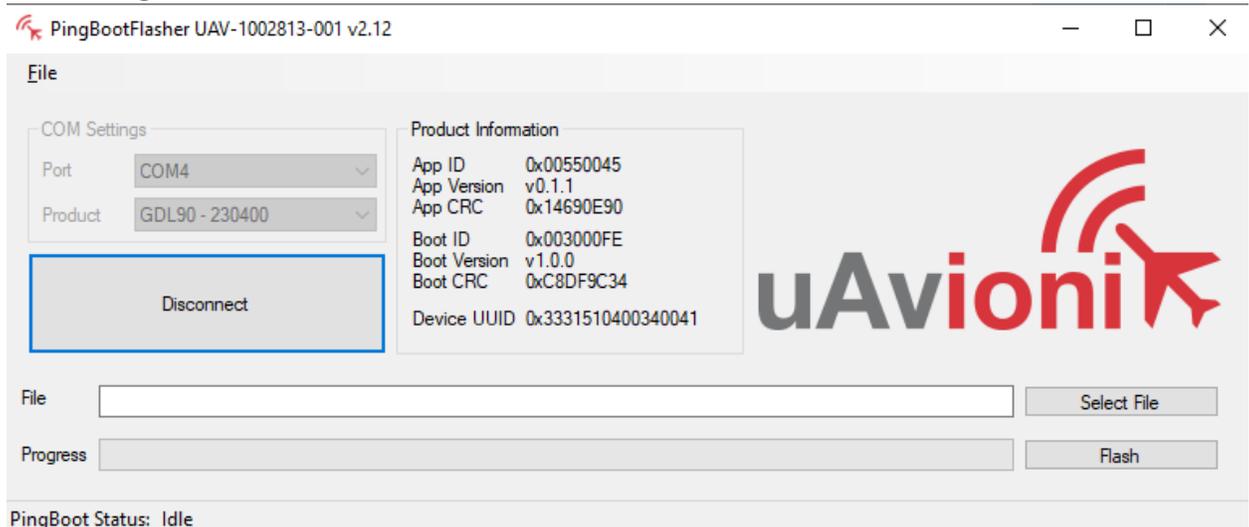
1. Open the PingBootFlasher utility.



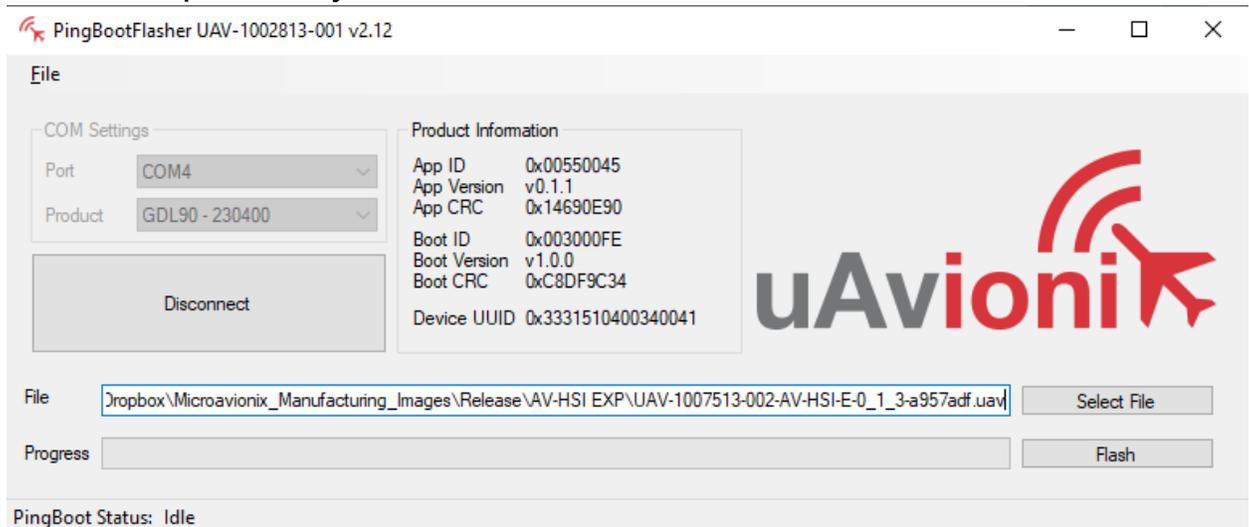
2. Connect the PC to COM4 of the AV-HSI-E using the serial data cable.
3. Identify which of the PC's serial ports is assigned to the serial connection with the AV-HSI-E and select it under "COM Settings -> Port."
4. Refer to the following table to select the appropriate option for "COM Settings -> Product." You can check the "AV-Link-E AV-HSI Setting" on the AV-Link's web interface at <http://192.168.5.1/settings> while connected to its Wi-Fi network.

AV-Link-E Present?	AV-Link-E AV-HSI Setting?	Product Protocol
No	N/A	GDL90 230400
Yes	AV-HSI with AV-30 on COM4	GDL90 230400
Yes	AV-HSI without AV-30 on COM4	GDL90 115200
Yes	None	(invalid; change AV-Link settings)

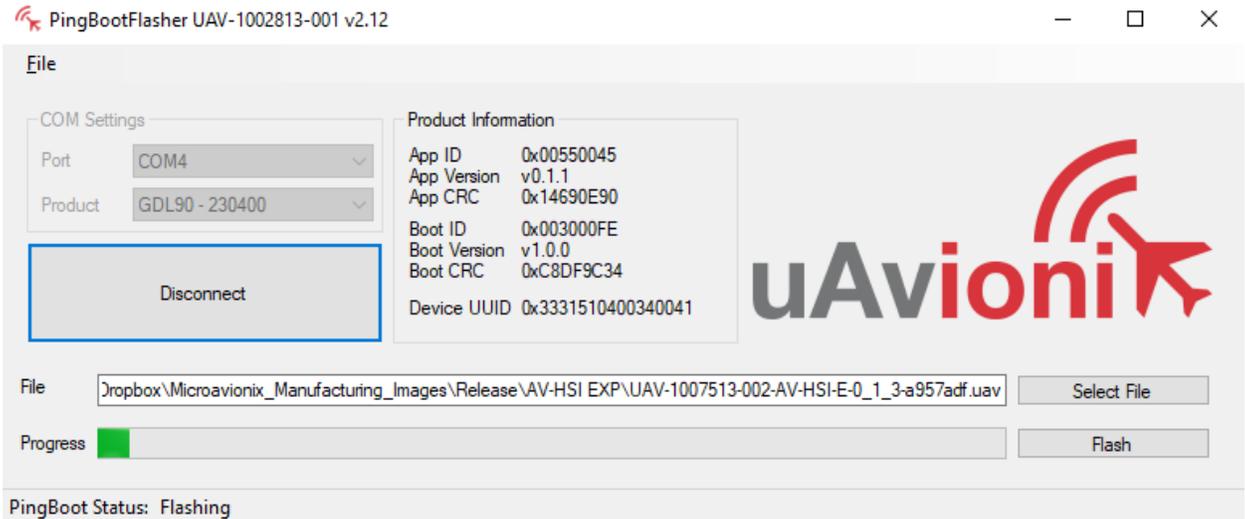
- Click “Connect,” then wait for “Product Information” to populate and the “PingBoot Status” banner at the bottom to read “Idle.”



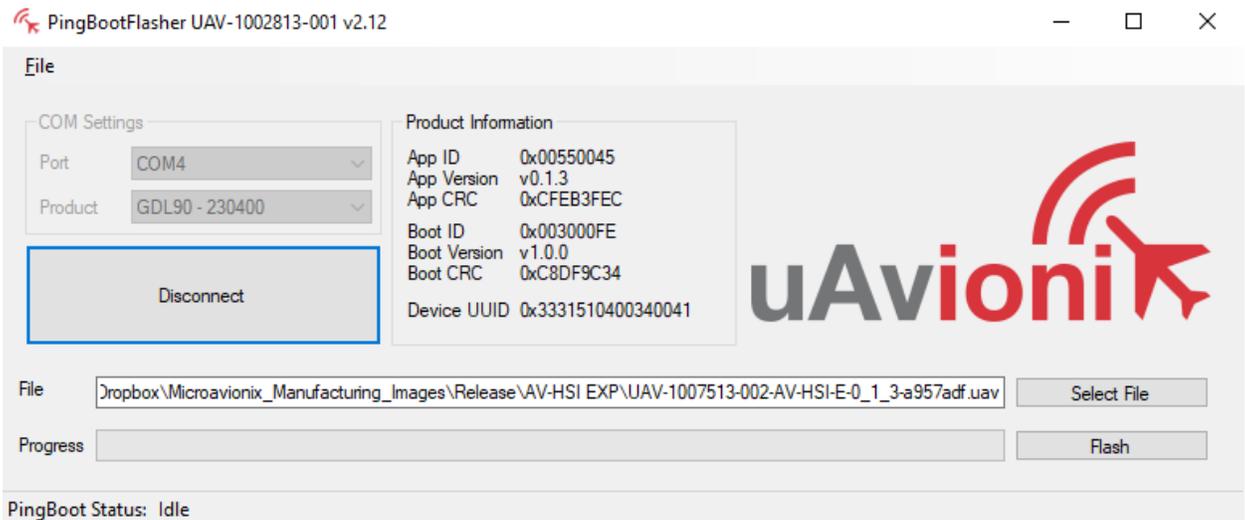
- Select the previously downloaded .uav file, then click “Flash.”



7. Wait for the progress bar to fill. The utility will automatically disconnect once complete.



8. Verify the update was successful by clicking "Connect" again and ensuring the App Version and App CRC under Product Information match those listed in Table 6-1 Software Update Files.



9 Post-Accomplishment Verification and Actions

Refer to the specific update procedure for verification actions applicable to the update method.

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

10 System Checkout

No specific checkout procedure is required.

11 Support

For additional questions or support please visit:

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

12 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-8275-001 Rev A to install software v0.1.3 for AV-HSI-E UAV-1007845-(____), 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-Link Information	
Serial Number:	
Hardware Part Number:	UAV-1004413-_____
Customer Information	
Name:	
Email:	
Telephone:	