

SERVICE BULLETIN

NUMBER: 600870-000010
SUBJECT: VISION 1000 EMBEDDED SOFTWARE UPDATE #6
COMPLIANCE LEVEL: OPTIONAL
DATE: 2/14/2014

1 Planning Information

A. Effectivity

(1) Unit Applicability

MODEL DESCRIPTION	APPAREO PART NUMBER	VERSIONS AFFECTED
Vision 1000 Final Assembly	150575-000003 150575-000007 150575-000008 153070-000005 153070-000016 153025-000010	Embedded software configuration*: <ul style="list-style-type: none"> • 501010-000003 R13 or earlier (STC #SR02797CH Eurocopter AS350) • 501010-000004 R10 or earlier (STC #SR02825CH Bell 206)

*To determine the embedded software version currently installed on the Vision 1000, follow the instructions in Section 3.B.

(2) Aircraft Affected

MODELS AFFECTED
All aircraft models

B. Reason

Appareo has released an embedded software update for the Vision 1000 that address imager performance issues.

C. Description

This Service Bulletin is for informational purposes only; the update will be applied by qualified Appareo representatives. It outlines the method of obtaining the embedded software update and applying that update to a Vision 1000. Instructions are included for uploading the embedded software update files on your Vision 1000. This update is applied free of charge.

D. Compliance Time

Appareo recommends that this Service Bulletin be applied at the earliest opportunity where manpower and facilities are available.

E. Approval

This Service Bulletin contains no modification information that revises the approved configuration and therefore does not require governmental or other regulatory agency approval. For the 153070-000005 and 153070-000016 Vision 1000 configurations: the technical information contained in this Service Bulletin was approved by Airbus Helicopters under the prerogative awarded by EASA Design Organization Approval No. 21J.056 only for the Airbus Helicopters range concerned.

F. Manpower

Action	Estimated time (in minutes)
Determine current embedded software version	5
Apply SD card #1	7
Apply SD card #2	10
Apply SD card #3	5
Confirm application of update is successful	5
Record compliance of the Service Bulletin	1
Total elapsed time to perform Service Bulletin procedures (R14 AS350 STC/R11 Bell 206 STC)	33

G. Weight Change

None.

H. Electrical Load Change

Not changed.

2 Material Information

A. Materials Required

Appareo Part Number	Material Description	Note
153090-000005 or 153090-000006	Vision 1000 SD card update Kits A and B	Available from Appareo upon request Kit A for embedded software version 501010-000003 Kit B for embedded software version 501010-000004
No applicable Appareo part number	Timer or stop watch	
153560-000004	6 ft Ethernet Harness with CPC <i>(Optional)</i>	Included with the Vision 1000 installation kit. Allow for the connection of a portable computer to the Vision 1000.
500210-000009	Vision 1000 Configuration Tool desktop software <i>(Optional)</i>	Included in the purchase price of the Vision 1000 and available for download from the Appareo website. Contact support@appareo.com for download and installation instructions.
No applicable Appareo part number	Portable computer with Windows XP or later operating system <i>(Optional)</i>	Installed with the Vision 1000 Configuration Tool. Reference the Vision 1000 Configuration Tool user's guide for minimum system requirements.

3 Accomplishment Instructions

The accomplishment instructions are given in this Service Bulletin in the order that they are to be performed. Please note, though, that not all of the procedures are mandatory. Steps that are not required to be performed by all users are noted as optional.

A. Updating desktop software applications

In complement of the embedded software release, Appareo has released new versions of several of its Vision 1000-compatible software applications. Customers who currently use any of the following software applications for Vision 1000 data will need to update that software in order to ensure compatibility between the software and the Vision 1000.

(1) Updating the Vision 1000 Configuration Tool

If your computer is installed with a version of the Vision 1000 Configuration Tool that is earlier than version 1.0. 233.4, follow the instructions below to download the latest release of the software application. The version number is displayed on the bottom left corner of the Vision 1000 Configuration Tool screen.

1. Navigate to *www.appareo.com/account/* in an internet web browser.
2. Type your Appareo user name and password in the respective fields and click **Submit**.

NOTE: Use the **Forgot your username or password?** or **Click here to create a new account** links on the right side of the page if needed.

3. If you have previously downloaded the Vision 1000 Configuration Tool from your Appareo account, the Vision 1000 Configuration Tool will display as a downloaded product on your account Home page. If this is the case, skip to Step 7. If you have not previously downloaded the Vision 1000 Configuration Tool from your Appareo account, continue to follow the instructions in order.
4. Click the **Add Product** link on the right side of the page.
5. Select *Vision 1000 Configuration Tool* from the product drop-down menu and type your Vision 1000 Configuration Tool product key into the product key field and click **Submit**.

NOTE: The Vision 1000 Configuration Tool product key may be found on the product key document, which is included in the Vision 1000 installation kit.

6. A message stating *Success! Product successfully added to your account* will appear at the bottom of the page. Click the **Home** link on the right side of the page and navigate back to your account Home page.
7. Click the red **Vision1000ConfigurationTool.exe** file link from your account's Home page to download the application installer.
8. Click the **Click here to** download the requested file on the pop-up dialog box to start the file download process.
9. Follow the on-screen instructions to complete the download process.

(2) Updating the Vision 1000 Playback Utility

If your computer is installed with a version of the Vision 1000 Playback Utility that is earlier than version 1.0.206.1, follow the instructions below to download the latest release of the software application. The version number is displayed on the bottom of the Vision 1000 Playback Utility screen.

To download the latest version of the Vision 1000 Playback Utility:

1. Navigate to *www.appareo.com/account/* in an internet web browser.
2. Type your Appareo account user name and password in the respective fields and click **Submit**.

NOTE: Use the **Forgot your username or password?** or **Click here to create a new account** links on the right side of the page if needed.

3. If you have previously downloaded the Vision 1000 Playback Utility from your Appareo account, the Vision 1000 Playback Utility will display as a downloaded product on your account Home page. If this is the case, skip to Step 7. If you have not previously downloaded the Vision 1000 Playback Utility from your Appareo account, continue to follow the instructions in order.

4. Click the **Add Product** link on the right side of the page.
5. Select **Vision 1000 Playback Utility** from the product drop-down menu and type your Vision 1000 Playback Utility product key in the product key field and click **Submit**.

NOTE: The Vision 1000 Playback Utility product key may be found on the product key document, which is included in the Vision 1000 installation kit.

6. A message stating *Success! Product successfully added to your account* will appear at the bottom of the page. Click the **Home** link on the right side of the page to navigate back to your account Home page.
7. Click the red **Click here** to download the requested file on the pop-up dialog box to start the file download process.
8. Follow the on-screen instructions to complete the download process.

NOTE: Due to the system performance changes in the Vision 1000, the Vision 1000 data is now presented in a Windows virtual drive, typically assigned to drive M of the computer. The virtual drive is labeled the serial number of the Vision 1000 used to record that data. When accessing Vision 1000 data for playback, retrieve the flight files from the virtual drive.

(3) Updating the Appareo Transfer Utility

The Appareo Transfer Utility is an optional Appareo software product that may be purchased to transfer the files recorded by your Vision 1000 to the Appareo ALERTS server. If you currently have the Appareo Transfer Utility installed on your computer and have a version earlier than 1.0.172.4, you must download the updated version to ensure proper functionality with Vision 1000 files. The version number of the software application is displayed on the bottom left corner of the Appareo Transfer Utility screen.

To download the latest version of the Appareo Transfer Utility:

1. Navigate to www.appareo.com/account/ in an internet web browser.
2. Type your Appareo account user name and password in the respective fields and click **Submit**.

NOTE: Use the **Forgot your username or password?** or **Click here to create a new account** links on the right side of the page if needed.

3. If you have previously downloaded the Appareo Transfer Utility from your Appareo account, skip to Step 7. If you have purchased the Appareo Transfer Utility but have not previously downloaded it from your Appareo account, continue to follow the instructions in order.
4. Click the **Add Product** link on the right side of the page.
5. Select **Appareo Transfer Utility** from the product drop-down menu and type your Appareo Transfer Utility product key in the product key fields and click **Submit**.

NOTE: The Appareo Transfer Utility product key is provided to you at the time of purchase. If you did not receive the product key, or have misplaced it, please contact Appareo for assistance.

6. A message stating *Success! Product successfully added to your account* will appear at the bottom of the page. Click the **Home** link on the right side of the page to navigate back to your account Home page.
7. The Appareo Transfer Utility will appear in your account Home page. To download the file, click the red **AppareoTransferUtility.exe** file link.
8. Click the **Click here** to download the requested file on the pop-up dialog box to start the file download process.
9. Follow the on-screen instructions to complete the download process.

NOTE: Due to the system performance changes in the Vision 1000, Vision 1000 data is now presented in a Windows virtual drive, typically assigned to drive M of the computer. The virtual drive is labeled the serial number of the Vision 1000 used to record that data. Once the newest version of the Appareo Transfer Utility is installed, include the drive letter assigned to the virtual drive in the Watchable Drives field of the Appareo Transfer Utility.

(4) Updating AS Flight Analysis Software

AS Flight Analysis Software (ASFAS) is an optional Appareo software application that may be purchased to view files recorded by the Vision 1000. If you currently have AS Flight Analysis Software installed on your computer and have a version earlier than 2.1.2512.4983, you must download the updated version to ensure proper functionality with Vision 1000 recorded files. The version number of the software application is displayed on the bottom left corner of the AS Flight Analysis Software screen.

To download the latest version of ASFAS:

1. Navigate to *www.appareo.com/account/* in an internet web browser.
2. Type your Appareo account user name and password in the respective fields and click **Submit**.
NOTE: Use the **Forgot your username or password?** or **Click here to create a new account** links on the right side of the page if needed.
3. If you have previously downloaded ASFAS from your Appareo account, ASFAS will display as a downloaded product on your account Home page. If this is the case, skip to Step 7. If you have purchased ASFAS but have not previously downloaded it from your Appareo account, continue to follow the instructions in order.
4. Click the **Add Product** link on the right side of the page.
5. Select **AS Flight Analysis** from the product drop-down menu and type your ASFAS product key in the product key fields and click **Submit**.
NOTE: The ASFAS product key is provided to you at the time of purchase. If you did not receive the product key or have misplaced it, please contact Appareo for assistance.
6. A message stating *Success! Product successfully added to your account* will appear at the bottom of the page. Click the **Home** link on the right side of the page to navigate back to your account Home page.
7. AS Flight Analysis will appear in your account's Home page. To download the file, click the red **ASFlightAnalysisSoftware.exe** file link.
8. Click the **Click here** to download the requested file on the pop-up dialog box to start the file download process.
9. Follow the on-screen instructions to complete the download process.

NOTE: Due to system performance changes in the Vision 1000, Vision 1000 data is now presented in a Windows virtual drive, typically assigned to drive M of the computer. The virtual drive is labeled the serial number of the Vision 1000 used to recorded that data. Once the newest version of ASFAS is installed, use this virtual drive to locate flights recorded on a Vision 1000 SDHC card.

B. Determining the current embedded software version

NOTE: This is an optional procedure.

1. Configure the portable computer's network settings.
 - a. If you are using a computer with a Windows XP operating system:
 - i. Click the **Windows Start** button.
 - ii. Click **Control Panel** and double-click **Network Connections**.
 - iii. Right-click the **Local Area Connections** icon and click **Properties**.
 - iv. Select **Internet Protocol (TCP/IP)** and click **Properties**.
 - v. Take note of the current property settings as you will have to restore them after configuration is complete.
 - vi. Select **Use the following IP address**, if it is not already selected, and type the following information in the respective fields:
 - IP address: 192.168.16.200
 - Subnet mask: 255.255.255.0
 - Default gateway: 192.168.16.1
 - vii. Press **OK** to save the network changes.
 - b. If you using a computer with a Windows Vista operating system:
 - i. Click the **Windows Start** button.
 - ii. Click **Control Panel** and click **Network & Sharing Center**.
 - iii. Click the **Manage network connections** link on the left side of the page.
 - iv. Right-click the **Local Area Network** icon and click **Properties**.
 - v. Click **Continue** on the pop-up dialog box.
 - vi. Take note of the current property settings as they will have to be restored after configuration has been completed.
 - vii. Select **Internet Protocol Version 4 (TCP/IPx4)** on the **Network** tab.
 - viii. Select **Use the following IP address** if not already selected and type the following information in the respective fields:
 - IP address: 192.168.16.200
 - Subnet mask: 255.255.255.0
 - Default gateway: 192.168.16.1
 - ix. Press **OK** to save the network changes.
 - c. If using a computer with a Windows 7 operating system:
 - i. Click the **Windows Start** button.
 - ii. Click **Control Panel**.
 - iii. Click the **View network status and task** link under the **Network and Internet** icon.
 - iv. Click the **Change adapter settings** link.
 - v. Right-click **Local Area Connection** and select **Properties** from the drop-down menu.

- vi. Select **Internet Protocol (TCP/IPv4)** and click **Properties**.
 - vii. Take note of the current property settings as they will have to be restored after configuration has been completed.
 - viii. Select **Use the following IP address**, if it is not already selected, and type the following information in the respective fields:
 - IP address: 192.168.16.200
 - Subnet mask: 255.255.255.0
 - Default gateway: 192.168.16.1
 - ix. Click **OK** to save the network changes.
2. Connect the Vision 1000 to the portable computer installed with the Vision 1000 Configuration Tool software application.
- a. Ensure an SDHC card used for recording flight data is in the Vision 1000's SDHC card slot.
 - b. Close the circuit breaker labeled *Camera* to power on the Vision 1000
 - c. Connect the portable computer to the Vision 1000.
- NOTE:** The Vision 1000 will need to be powered on during configuration. Given that the Vision 1000 draws its power from the aircraft, the aircraft must be powered on too. While the Vision 1000 is starting up, the LED status light will illuminate blue. After it has finished its start-up, the LED will switch to green. Once the LED has been green for approximately two minutes, you can connect to the Vision 1000.
- i. Insert the appropriate end of the specialized Ethernet cord (included in the Vision 1000 installation kit) into the computer's Ethernet port.
 - ii. Remove the dust cover from the Vision 1000's E1 port and connect the other end of the Ethernet cord to it.
3. Determine the embedded software version number.
- a. Open the Vision 1000 Configuration Tool on the portable computer.
 - b. Ensure "Device Connected" appears on the Vision 1000 Configuration Tool's top status bar.
 - c. Select **Operator** from the role drop-down menu, type *h2StAste* in the password field, and click **Login**.
 - d. Click the **BIT** tab. If your Vision 1000 is in the Eurocopter AS350 STC configuration, "501010-000003RXX" will appear in the **Device Version Information** box. If your Vision 1000 is in Bell 206 STC configuration, "501010-00004RXX" will appear in the **Device Version Information** box. The numbers immediately following *R* are the version number.
4. Disconnect the Vision 1000 from the portable computer:
- a. Disconnect the Ethernet cord from the Vision 1000's E1 port and the portable computer's Ethernet port and replace the port's dust cap.
 - b. Log out of the Vision 1000 Configuration Tool.

5. Restore your portable computer's original network settings.
 - a. Once you have finished performing the built-in-tests, you must restore your portable computer's original network settings so that it may function normally. Refer to the instructions for your operating systems in Section 3.B, Step 1 for guidance on restoring the computer to its original network settings.

C. Applying the embedded software update files on your Vision 1000

1. Open the circuit breaker labeled *Camera*, located on the aircraft's main circuit breaker, to power off the Vision 1000.
 2. Open the Vision 1000 SDHC card access door.
NOTE: Push the door latch to the side and swing the access door open. Remove the SDHC card in the slot, if there is one there currently.
 3. Insert SD card #1 into the slot.
 4. Close the circuit breaker labeled *Camera* to power on the Vision 1000.
 5. Leave the Vision 1000 powered on and SD card #1 in the card slot for 7 minutes.
IMPORTANT: Removing the SD card or power before 7 minutes may result in the update failing and may render your Vision 1000 inoperable.
 6. Open the circuit breaker labeled *Camera* to power off the Vision 1000.
 7. Remove SD card #1 and insert SD card #2.
 8. Close the circuit breaker labeled *Camera* to power on the Vision 1000.
 9. Leave the Vision 1000 powered on and SD card #2 in the card slot until the Vision 1000 LED status light is flashing blue/green. This takes approximately 10 minutes.
NOTE: If the LED status light does not turn to flashing blue/green after 10 minutes, contact Appareo support for assistance.
 10. Open the circuit breaker labeled *Camera* to power off the Vision 1000.
 11. Remove SD card #2 and insert SD card #3.
 12. Close the circuit breaker labeled *Camera* to power on the Vision 1000.
 13. Leave the Vision 1000 powered on and SD card #3 in the card slot until the Vision 1000 LED status light is flashing blue/green. This takes approximately 5 minutes.
 14. Open the circuit breaker labeled *Camera* to power off the Vision 1000.
 15. Remove SD card #3 and insert the 16 GB SDHC card used for normal Vision 1000 flight data recording purposes.
IMPORTANT: The software update SD cards cannot be used for Vision 1000 recording purposes.
- NOTE:** The software update SD cards can be used to update multiple Vision 1000s.

D. Verifying the embedded software update was correctly installed

NOTE: This is an optional procedure.

Once you have applied the embedded software update, follow the instructions below to ensure that the complete embedded software update has been applied successfully to the Vision 1000.

1. Configure the portable computer's network settings. See the instructions that are applicable to your portable computer's operating system in the instructions in Section 3.B, Step 1.
2. Connect the portable computer to the Vision 1000. See instructions in Section 3.B, Step 2. Wait until the LED status light has been green for two minutes before attempting to connect the portable computer to the Vision 1000.

NOTE: If you plan to use the same SDHC card containing update files to update several Vision 1000s in your fleet, do you reinsert that SDHC card into a Vision 1000 after it has been updated. The Vision 1000 will delete update files on an SDHC card it has been updated.

3. Verify the embedded software version number. See instructions in Section 3.B, Step 3.
 - a. If your Vision 1000 is installed with the AS350 STC version of embedded software, ensure that "501010-000003R14" appears in the *Device Version Information* box. If your Vision 1000 is installed with the Bell 206 STC version, ensure that "501010-000004R11" appears in the *Device Version Information* box.

IMPORTANT: If the wrong part number appears in the *Device Version Information* box (e.g. your Vision 1000 was in Eurocopter AS350 STC configuration, but 501010-000004 appears), the wrong update file was downloaded from the Appareo website and applied to your Vision 1000. To remedy this issue, download the correct update files and apply them to your Vision 1000.

IMPORTANT: If your Vision 1000 is installed with embedded software versions 501010-000003 R13 or 501010-000004 R10 and did not update to the most recent embedded software update, ensure that you deleted the *.hfx file from the SDHC card as described in Step 4 of Section 3.E "Uploading the embedded software update files to an SDHC card."

4. Disconnect the Vision 1000 from the portable computer:
 - a. Disconnect the Ethernet cord from the Vision 1000's E1 port and the portable computer's Ethernet port.
 - b. Replace the dust cap on the E1 port.
5. Restore your portable computer's original network settings.
 - a. Once you have finished performing the built-in-tests, you must restore your portable computer's original network settings so that it may function normally. Refer to the instructions for your operating systems in Section 3.B, Step 1 for guidance on restoring the computer to its original network settings.

E. Replacing part number label

IMPORTANT: This step should only be performed for Vision 1000s with part number 153070-000005, 153070-000016, or 153025-000010. The part number label may be found on the top of the Vision 1000. Only qualified Appareo representatives are to perform this step.

The completion of the embedded software update from R13 or earlier versions to R14 for Vision 1000s with part number 153070-000005 or 153025-000010 changes the revision level of the device from A or B to C. The completion of the embedded software update from R13 or earlier versions to R14 for Vision 1000s with part number 153070-000016 changes the revision level of the device from A to B. For this reason, the part number label must be replaced to reflect that the device is now at a later revision and the date this update was completed.

1. Locate and remove the currently installed Part Number Label.
2. Peel the label off of the Vision 1000. Take care so as to not scratch or otherwise damage the plastic housing.
3. Clean the area where the sticker previously was using a microfiber cloth and isopropyl alcohol.
 - a. **NOTE:** The IPA should be a concentration of 95% or greater and diluted with water at a 1:1 ratio.
4. Ensure that the area where the sticker previously was is completely dry and free of debris.
5. Apply the new Part Number Label. The sticker should be orientated in the same direction as the serial number sticker.
6. Apply the Date of Manufacture label on top of the Part Number Label, immediately to the right of the *Manufactured:* field.
7. Ensure lens window has not become contaminated with dirt or debris during the preceding operation. Clean the lens per instructions found in the Abbreviated Component Maintenance Manual (600815-000002).

F. Recording compliance of Service Bulletin

IMPORTANT: Please follow these instructions to notify Appareo that you have completed the steps required to be compliant with this Service Bulletin.

1. Once you have finished performing the embedded software update to your Vision 1000, send an e-mail to support@appareo.com signifying that you have done so. Please include the Vision 1000 serial number, the aircraft tail number, and the date the update was applied in your e-mail.

NOTE: If you are unable to send e-mail, please contact Appareo via telephone (701-356-2200) or via mail (1810 NDSU Research Circle N, Fargo, ND 58102 US).

2. Mark an entry in your aircraft's log book to record compliance of the service bulletin.

NOTE: Please notify Appareo of any address/ownership corrections. Changes should include model description, serial number, current owner's name and address.

Corrections and/or changes should be sent to:

Appareo Systems
Attn: Support Department
1810 NDSU Research Circle N
Fargo, ND 58102

support@appareo.com

+1-701-356-2200

Appendix A: Applying the embedded software update files on your Vision 1000 checklist

Service Bulletin 600870-000010 (Firmware 2.4.5)
Embedding Software Files to V1K

Preparing to Update		
Inspect	P1 Cable for secure connection	
Confirm	Safe to Add Power to Aircraft	
Connect	Vision 1000 Power (ON)	
Monitor/ Wait	Steady Blue Light Followed by Steady Green Light	
Disconnect	Vision 1000 Power (OFF)	
Remove	SD Card Used for Flight/Normal Operations	
Insert	SD Update Card #1	
Connect	Vision 1000 Power (ON)	
Monitor/ Time	Steady Blue Light/Step Complete AFTER 7 Minutes	
Disconnect	Vision 1000 Power (OFF)	
Insert	SD Update Card #2	
Connect	Vision 1000 Power (ON)	
Monitor/ Time	Steady Blue Light/Step Complete At Flashing Blue/Green Light	
Disconnect	Vision 1000 Power (OFF)	
Insert	SD Update Card #3	
Connect	Vision 1000 Power (ON)	
Monitor/ Time	Steady Blue Light/Step Complete At Flashing Blue/Green Light	
Disconnect	Vision 1000 Power (OFF)	
Replace	SD Card #3 With Flight Data Card	
Connect	Vision 1000 Power (ON)	
Monitor/ Wait	Steady Blue Light Followed by Steady Green Light	
Disconnect	Vision 1000 Power (OFF)	
Update	Aircraft Records to Reflect Change	

OPTIONAL – Embedded Software Verification		
Execute	Determining Loaded Firmware Checklist	

Replacing Part Number Label		
Locate	Current Installed Part Label	
Remove	Label	
Clean	Area Where Label Was Removed	
Ensure	Area is Dry and Free of Debris	
Apply	New Part Label on Top of the Part Number Label, immediately to Right of the <i>Manufactured</i> Field	
Clean	Lens Area per Abbreviated Component Maintenance Manual (600815-000002) Instructions	