

Carbonite 15.7.0

- Release Date: May, 2026.
- Equipment: This document applies to the following frames.
 - Carbonite (4802AR-200-xx)
 - Carbonite MultiMedia (4802AR-201-xx)
 - Carbonite+ (4802AR-202-xx)
 - Carbonite eXtreme (2500AR-202-xx)

Feature Enhancements

A number of features have been added, or updated, to this version of software. This section provides a brief introduction to these features, and how to use them.

v15.7.0 Features

TouchDrive Panel Support

Support has been added for the TD1, TD1C, TD2, TD2S, and TD3S. The TD3, TDx3, TD4, and TDx4 are not supported at this time.

New Devices Supported

No new devices were added or updated for this version of software.

Bugs Addressed

The following bugs were addressed in this version of software:

- CR-4995 — Updated Canon® camera controller driver (v1.2 to v1.5) and Sony® camera controller driver (v1.4 to v1.8) for improved camera compatibility.
- CR-4864 — Memory names now display on the display on the Memory module of the TouchDrive panel, making it easier to identify stored memories directly from the panel.
- CR-10010 — Fixed an issue where the SoftPanel had an ME offset, causing operations on one ME to incorrectly affect a different ME (e.g., selecting ME 1 would

control ME 2). ME P/P will now display correctly.

- CR-9215 — Fixed an issue where using RossTalk to auto-transition a single keyer would incorrectly reset the next transition selection back to Background. The selected keyer now remains selected after the transition completes.
- CR-4622 — Fixed an issue where DashBoard would display incorrect MultiViewer box sources after loading a saved set. The on-screen video output was correct, but DashBoard showed the wrong source assignments.
- CR-1040 — Fixed an issue where cutting to a key with certain media content could cause a black screen on the program output.
- CR-3604 — Fixed intermittent video disruption on sources caused by an internal system maintenance process running too frequently.
- CR-6809 — Addressed multiple security vulnerabilities. Updated FTP drivers.

Known Issues and Limitations

Keep these notes in mind when upgrading your switcher to this version of software. Contact Ross Video Technical Support if you have any questions about performing a software upgrade.

External Devices

The following issues have been identified when working with external devices:

- **Sony EVI-HD1** — If you are switching between a Vision and Carbonite switcher, you must reconfigure your camera to communicate with the other switcher. The Vision switcher communicates with the camera at 38400 baud, and the Carbonite switcher communicates with the camera at 9600 baud.
- **Switcher Fails to Boot** — If you have a cable connected to the serial port of the switcher with only an RS-422/232 converter connected to it, the switcher may not boot up properly.

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Disconnect the cable and power-cycle to switcher to have it boot properly. You can re-connect the cable after the switcher has booted up.

Operational Notes

The following issues have been identified when working with the switcher:

- **Reboot After Diagnostics** — The switcher must be rebooted after performing any diagnostic test.
- **Corrupt USB** — If you remove the USB drive while the switcher is writing to it, the USB could become corrupted and will need to be re-formatted.
- **Master Control Fail-Over Trigger on Boot-up** — GPI output 37, used for Master Control fail-over, will trigger a number of times during boot up.
- **Master Control Fail-Over Trigger on USB** — GPI output 37, user for Master Control fail-over, can trigger when a USB is inserted into and immediately removed from the USB port. This does not impact switcher performance.
- **External Re-Entry Video Errors** — A video timing error can occur when a video output of the switcher is routed back into the switcher using an input BNC. If video timing errors do occur, assigning a frame synchronizer to the input BNC will remove the timing errors.
- **Unable to Set New IP Address** — If the switcher is locked to the static IP address 192.168.0.123, and you cannot set a new address, check that DIP switch 3 inside the Carbonite frame (1 on the Carbonite Black Solo) is set to ON. The DIP switch must be set to the up position to be able to set a new IP address.
- **GPI and Tally Diagnostics** — If you run the GPI or Tally diagnostic tests, you may have to reboot the switcher to end the test.
- **Alpha Slider** — The alpha slider on the border color section of the Live Assist node in DashBoard is not implemented at this time.
- **Master Control Fail-Over** — The GPI output 37 used for Master Control fail-over is not implemented at this time.
- **Stills with same Name** — You cannot have two or more Media-Store files with the same name but different file extensions in the same folder. The switcher treats capital and lowercase letters as the same.
- **Key and Background Dissolves on MiniME™** — Keys on a MiniME™ dissolve independently from the background. If you include the keys in a background transition on a MiniME™, the keys will appear to dissolve into the background as the background dissolves.
- **ViewControl on MultiViewer 2** — If you set up ViewControl for MultiViewer 2, the sources from MultiViewer 1 are used instead.
- **Using Still for a MediaWipe** — If you use a still image for a MediaWipe, the transition may not appear as desired. The still image is flashed on screen for a frame and then the cut is performed after.
- **CarboNET vs. Direct Serial** — If you are switching between a CarboNET (ethernet) connection and a direct serial connection between the control panel and the frame you must restart the frame after each time. When the frame restarts it detects the new connection method.
- **Ethernet Port 2 Non-Operational** — The ethernet port 2 on the back of the Carbonite Black control panels does not function at this time.
- **CPS-AUX-053B** — There auxiliary control panel only supports up to 24 video sources and 8 aux buses.
- **FSFC Bus Mode Video Errors** — If the switcher is in the FSFC MiniME switcher mode, bus mode FSFCs may cause video errors on preview or aux buses when switching sources.
- **FSFC Bus Mode Not Supported on MiniME™/MultiScreen** — If the switcher is in the FSFC MiniME switcher mode, bus mode FSFCs are not available for MiniME™ or MultiScreen buses.

- **CancelAll CC** — If a custom control contains the CancelAll event and was created in software version 11.1 or older, the custom control will not load in version 12.0 or higher. You must re-create the custom control with the CancelAll event in version 12.0 or higher.
- **MediaWipe Fill/Alpha Timing** — If you are performing a MediaWipe and one of the Media-Store channels is used in a DVE key anywhere else in the switcher, the fill and alpha of the MediaWipe will not be timed the same. This applies even if the DVE key isn't on-air on the ME. Remove the Media-Store channel from the DVE key to correct the timing issue.
- **Transitions with Show Alpha** — If the show alpha feature is on, only cut transition are possible on the ME. The switcher will perform a cut at the end of the transition duration instead of the selected transition type.
- **1080p/720p 50Hz Video Errors** — There could be video errors on some inputs if the switcher (Carbonite Black+ and Carbonite Black+ 12G only) is operating in 720p 50Hz or 1080p 50Hz and the video mode changes to 720p 50Hz or 1080p 50Hz, the reference is changed, or the switcher is powered up. These errors are temporary and will correct themselves without any action required.
- **User Select Buttons** — When you upgrade from a previous version of software to 15.0, or higher, the configuration of the User Select buttons may be lost. You must reconfigure the User Select buttons after the upgrade.
- **Decimal Accuracy** — DashBoard and the 3-knob menu show numerical values slightly differently. DashBoard shows values accurate to 2 decimal places and the 3-knob menu shows values rounded to 1 decimal place.
- **Frame Simulator Support For Wi-Fi** — The virtual network adapter in VM VirtualBox may not be able to obtain an IP address in some network environments using Wi-Fi. A wired connection is recommended.

Security & Network Vulnerabilities

The following exploits have been identified:

- **CVE-2024-6387: Remote Unauthenticated Code Execution Vulnerability in OpenSSH server** — At this time this exploit is only theoretical for 64-bit operating systems such as that used in Carbonite.

Upgrade File Verification

All the upgrade files for this version of Carbonite can be independently verified using the GNU Privacy Guard application and the signature file provided with the download.

Note: Each file has a corresponding signature file.

You will need to download and install the GNU Privacy Guard (GPG) application for the computer you want to use to verify the download files. Please visit <https://gnupg.org/index.html> to get the latest download and follow the installation instructions.

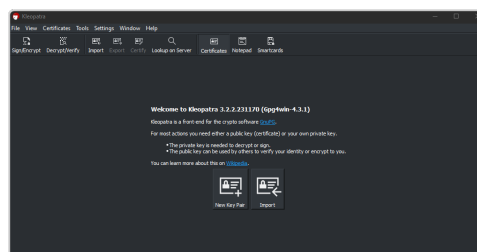
To Verify the Upgrade Files

Each upgrade file is verified independently.

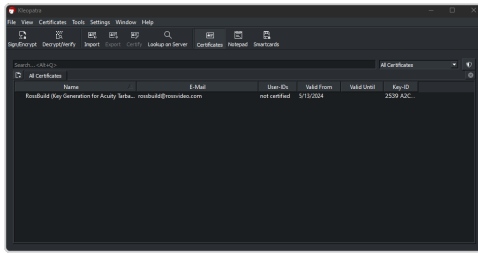
Download and install the GPG verification tool from <https://gnupg.org/index.html>.

Note: The signature files are located on the USB that came with your switcher and in the download package for software upgrades.

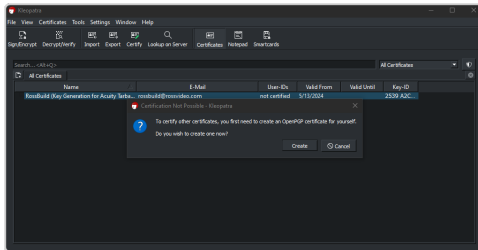
1. Launch the **Kleopatra** application installed by GPG.



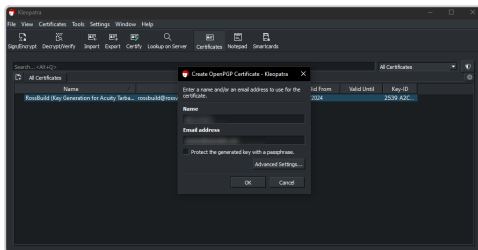
2. Click **Import** and select the `publickey.gpg` file.



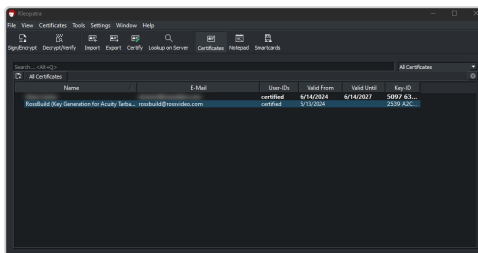
3. Right-click on the new Rossbuild entry and click **Certify**.



4. Click **Create**.

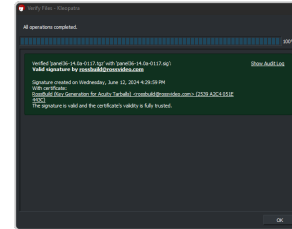


5. Enter a name and email address in the **Name** and **Email address** fields and click **OK** to create a local certificate with those credentials.



6. Click **Decrypt/Verify** and select the signature file (for example `upgrade-full-12.0.0.375_s20244_f519.hypermax.sha256`) for the upgrade file that you want to verify. It will have the same filename as the upgrade file but with a `.sha256` extension.

7. Click **Open**.
8. Select the upgrade file (for example `upgrade-15.7.3.19353.carbonite`) that you want to verify.
9. Click **Open**.
10. The application will check the file against the signature and verify it.



Important: If an upgrade file does not pass verification, do not use the files and contact Ross Video Technical Support.

11. Verify the other upgrade files with their corresponding signature files (`.sha256`).

Software Upgrade

Software upgrades are performed from the USB installed in the frame. You must copy the upgrade file to a USB before starting the upgrade.

Depending on the version of software you are upgrading from, your menus may be arranged or appear differently.

Note: Upgrading to version 11.0, or higher, from a version lower than 11.0 requires a special upgrade of the switcher. This upgrade will take significantly longer than normal upgrades (about 15 minutes longer) and requires a 2GB, or larger, USB for temporary storage during the upgrade. If there is a failure during the upgrade, your settings may be lost. It is important to save your switcher set and record the current IP address.

Software Compatibility

Before installing any software, review the following version compatibility information.

Note: Compatibility, unless otherwise indicated, shows the combination of software versions that were tested together. Other combinations may not have all the features introduced with the most recent version of software.

Table 1: Version Compatibility

Software	Version	To Verify
Carbonite	15.7.0	The current version is shown on the Status page in DashBoard for the Carbonite node.
DashBoard	9.4.1	Refer to the documentation what came with DashBoard for information on getting the current version number.
Carbonite Black Panel	1.5.530	A software mismatch message is shown on the control panel if you need to upgrade the software on the control panel.
TouchDrive Panel	1.5	The current version is shown on the Status page in DashBoard for the TouchDrive node.



Important: Depending on the components that need to be upgraded, not all of the upgrade procedures need to be completed.

Downgrade Compatibility

Before downgrading your switcher, review the following version compatibility information:



Important: If you upgrade to version 11.0, or higher, you cannot downgrade past 11.0.

- If your switcher uses the **C3S** or **C3X** control panel, you cannot downgrade past software version **9.0.0**.
- If your switcher frame is model **4802AR-200-02A** or higher, you cannot downgrade past software version **6.1.1**.
- If your switcher frame is model **4802AR-201-01** or higher, you cannot downgrade past software version **7.0.0**.
- If your switcher frame is model **4802AR-202-01** or higher, you cannot downgrade past software version **7.0.0**.
- If your switcher frame is model **2500AR-202-01** or higher, you cannot downgrade past software version **7.3.0**.
- If your switcher frame is model **4804AR-200-02** or higher, you cannot downgrade past software version **11.0.0**.

- If you are using one of the Carbonite Black control panels, you cannot downgrade past software version **11.0.1**.
- If your switcher frame is model **4804AR-202-01** or higher, you cannot downgrade past software version **12.0.0**.

To Upgrade the Switcher Software

You must download the upgrade file and store it onto a 2GB, or larger, USB drive before you can upgrade the switcher.

Note: Save your switcher setup information to a set on a separate USB drive before upgrading. This switcher set can be used as a backup in case there is a critical error during the upgrade.



Important: If you upgrade to version 11.0, or higher, you cannot downgrade past 11.0.



Important: Do NOT turn the switcher power off during the upgrade. Doing so may corrupt the switcher software or damage the switcher components.

1. Ensure that DIP switch 4 (5 on Carbonite eXtreme) on the frame is set in the up position. If this DIP switch is set in the down position, you will not be able to upgrade the switcher.
2. Insert the 2GB USB drive with the upgrade file into the USB Port on the frame. You must wait 5 seconds for the switcher to recognize the USB drive. Insert the 2GB USB drive with the upgrade file into the USB Port on the frame or control panel. You must wait 5 seconds for the switcher to recognize the USB drive.
3. Press **MENU > Reset > NEXT > NEXT > NEXT**.
4. Press the **From USB** knob.
5. Use the **USB** knob to select the upgrade file you want to install onto the switcher.
6. Press the **USB** knob.
7. Press the **Confirm** knob to install the selected file.

If the message **CRITICAL UPGRADE** is shown on the display, the switcher is performing

an upgrade that includes critical software components. This does not indicate a problem with your switcher.

The switcher starts upgrading with the selected file. The upgrade will take several minutes to complete.

Upgrade Issues

If there is a problem during the upgrade procedure an error message is shown on the display of the control panel.

Table 2: Upgrade Error Messages

Error Message	Description
USB not inserted	The USB drive was removed or unmounted during the upgrade. Re-insert the same USB drive back into the frame.
USB < 1G free	The USB drive requires at least 1GB of free space for temporary files during the upgrade. Copy the upgrade file to a larger USB drive and start the upgrade again.
USB failure	There has been a critical failure with the USB drive. A forced upgrade must be performed and switcher setting will have to be restored from the saved setup. Contact Ross Technical Support for support with this error.
USB file failure	There has been a critical failure with the files on the USB drive. A forced upgrade must be performed and switcher setting will have to be restored from the saved setup. Contact Ross Technical Support for support with this error.

To Upgrade the Panel or CarboNET

After the frame has been upgraded and reconnected to the panel, a message may be displayed indicating that a software mismatch. You only need to upgrade the panel or CarboNET if the mismatch message is displayed.

Note: It is important to upgrade all devices connected to a frame to the same version. This includes in a MultiPanel configuration.

1. In DashBoard, double-click on the **CarbonitePanel** node for the Carbonite Black panel or CarboNET that you want to upgrade.
2. Click **Upload > Browse**.
3. Locate the CarbonitePanel-v#_#_###.bin upgrade file and click **Open**.

Tip: If you have multiple devices to upgrade click **Next** and select all the devices that you want to upgrade.

4. Click **Finish**.
DashBoard uploads the upgrade file to the device and performs the upgrade.
5. Click **Reboot > OK**.