UltrA Upgrade Notes

Ultra 9.2.1

- Release Date: December, 2025.

Important: *You MUST review all your custom controls! Custom control pause events in version 3.0 or earlier with the switcher operating in an interlaced video format (480i, 576i, 1080i) have changed in length. The pause duration was shown in fields but calculated in frames. This led to durations being half as long as expected. This has been corrected, but any existing CC pause events, in interlaced, will now be twice as long as previously calculated. You must edit the event to reduce the duration by half to get the same result.*

Important: *Please review the **End User Software License Agreement** before installing or using this software.*

Important: *You must power cycle the switcher after performing an upgrade, changing the **Switcher Mode** between SD, HD, and UHDTV1, or installing a software option. Refer to the relevant sections in your Manual for more information on performing the power cycle.*

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.

v9.2.0 Features

MaxLicense Support

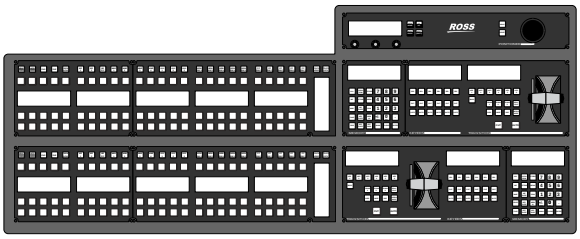
The MaxLicense (CHMFR-ADD-MAXLIC) is a universal license that can be applied to any supported Carbonite product to provide two (2) fully functional ME layers to the switcher. This will be similar to the ADD-ME2 option.

Tip: *If the MaxLicense is requested from Ross Platform Manager it can be dynamically releases and redeployed to another switcher as needed.*

Note: *The CHMFR-ADD-MAXLIC license must be renewed with CHMFR-ADD-MAXLIC-SM every year to be entitled to new software updates.*

TD Modular Memory Panel Support Expanded

Support has been expanded for the TD 4882AR Series Rev02 Modular Memory Panels to include the TD2S, TD3S, TD3, TD4, TDx3, and TDx4. In this configuration, the memory module is located on the far right on the bottom row.



Tip: *Some existing panel can be upgraded to this configuration with a hardware option.*

Panel Xpt Memory Store Personality Option

A Personality option was added that allows you to hide the memory function source (mnemonic) buttons (**EFF DISS**, **MEM AI**, **PGM**, **INCLUSIONS**, **STORE**) on TouchDrive control panel.

RossTalk Chroma Key Recall

The RossTalk command for memory recalls has been expanded to include chroma key keyers.

For example, `MEM 29:CK:2` recalls memory 9 on bank 2 of Chroma Key 2.

New Devices Supported

No new device support or commands were added to this version of software.

New Devices

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

New/Updated Commands

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

Bugs Addressed

The following bugs were addressed in this version of software:

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- CR-140 — Fixed Clip Player AES audio out throwing validity bit errors.
- CR-144 — Fixed AES channel status for Clip Player audio output.
- CR-348 — Memory inclusions now work on a per-slot basis and respect MultiPanel permissions.
- CR-5614 — Fix glitch in Clip Player where clip would be shifted to the right.
- CR-5658 — Include UltraScene in sequencer events.
- CR-6023 — Fixed issue causing over-saturation in MV boxes.
- CR-6108 — Add missing scene selection association for RCP.
- CR-6224 — Fix flickering image in box 1 and box 2 of Video Processor MultiViewer layout H2-6-6 in UHDTV1.
- CR-6332 — Improve startup sequence for TSL thread.
- CR-6389 — Improve upgrade script to prevent unnecessary restarts.
- CR-6476 — Fix aux selection issue from touch display.
- CR-6497 — Cleanup status menu for DashBoard connections after failure.
- CR-6526 — Use custom names instead of hardcoded default names on panel displays.
- CR-6555 — Allow Dual Delegation button text position to be manually adjusted.
- CR-6711 — Fix Roll Clip function for non ME P/P ME layers.
- CR-6714 — Fix memory leak caused by repeated clip player actions.
- CR-6723 — Clip Player cleanup and memory fixes.
- CR-6729 — Fix memory leak when loading Media-Store.
- CR-6738 — Correct interlacing artifacts when converting 1080i to 1080p.
- CR-6744 — Fix issue where TouchDrive Panel Memory Bank Button light is offset.
- CR-6748 — Fix global memory pad bug needing to toggle from normal to legacy.
- CR-6752 — Stop RossTalk MNEM command from defaulting the mnemonic colour and icon.
- CR-6766 — Fix OGScript race condition related to non-ME transition rates.
- CR-6767 — Fix issue where GV Grass Valley® commands were being dropped.
- CR-6793 — Remove invalid Flash and Dissolve buttons from vertical touch displays.
- CR-6794 — Fix SoftPanel button parsing error.
- CR-6803 — Increase range of DVE Border gain to fix sharp edges.
- CR-6804 — Fix effect dissolves to take duration into account when triggered from Caprica.
- CR-6841 — Fix issue where with a USB inserted, display will still say “No USB Inserted.”
- CR-6843 — Remove Mask Force for Chromakeys in DashBoard.
- CR-6848 — Memory recall camera attribute now recalls properly.
- CR-6859 — Improve load time for sets with a large number of CC events.
- CR-6874 — Prevent unexpected License Change Request from rebooting switcher.
- CR-6882 — Improve button press detection on TouchDrive panels.
- CR-6884 — Remove invalid MEs from CC event list description.
- CR-6889 — TimeCode reporting and messaging improvements.
- CR-6892 — Temperature Monitor message improvements.
- CR-6896 — Fix CMA region to avoid kernel memory fragmentation.
- CR-6899 — Prevent thread exhaustion that could be caused by fast OGP reconnects.
- CR-6907 — Fix issue where new OGP connections can cause existing connections to hang.
- CR-6912 — Fix issue when down-converting to 720p.

- CR-6967 — Robustness fixes for internal messaging.
- CR-6987 — On panels change “No Still Loaded” to “No Media Loaded” for consistency with DashBoard.
- CR-6990 — Light up the correct PST buttons for media sources when the “Media Wipe” button is held on the panel regardless of shift row.
- CR-6992 — Fix media name display on TouchDrive panels to show the selected media of the row not the current selected media of another row.
- CR-7015 — Fix seg fault caused by cross-thread access.
- CR-7018 — Fix problem where messages could be processed out of order causing devices to not load correctly.
- CR-9142 — Fix a crash that could happen with invalid data in OGP CCs.
- CR-9145 — Fix bug in conversion of Media Alpha IPE to RCP input.
- CR-9146 — Fix font corruption on TouchDrive panel left side vertical display area.
- CR-9163 — Fix issues with VISCA zoom control not stopping.
- CR-9169 — Remove Box Mask Force from Panel UI for MiniME™ and Canvas.
- CR-9170 — Stop Audio faders from going to zero when using Caprica.
- CR-9174 — Improve temperature fan control.
- CR-9211 — Fix issue with 3-knob display not following when ME changes for a row.
- CR-9212 — Fix panel crash when USB is removed while in the Clip Player menu.
- CR-9221 — Fix TouchDrive Panel to properly show key type when changing from chroma to self key.

Known Issues and Limitations

Keep these notes in mind when upgrading your system 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. 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.
- **Disable Device** — The device disable feature in DashBoard is not available for audio mixer and some robotic cameras at this time.

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.
- **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.
- **GPI and Tally Diagnostics** — If you run the GPI or Tally diagnostic tests, you may have to reboot the switcher to end the test.
- **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.

- **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.
- **Reboot after Upgrade, Switcher Mode Change, or Option Installation** — You must power cycle the switcher after performing an upgrade, changing the **Switcher Mode** between SD, HD, and UHDTV1, or installing a software option. Refer to the relevant sections in your Manual for more information on performing the power cycle.
- **Long CC Pause Delays** — If you created a Pause for a custom control in version 3.0 or earlier and the switcher is operating in an interlaced video format, the pause duration was shown in fields but calculated in frames. This lead to durations being half as long as expected. This has been corrected, but any existing CC pause events, in interlaced, will now be twice as long as previously calculated. You must edit the event to reduce the duration by half to get the same result.
- **720p in BT.2020 SDR** — The combination of 720p and the BT.2020 color gamut in SDR is not documented in the applicable standards and may not be supported by other downstream devices.
- **Sets Not Backwards Compatible** — If you save a set in one version, you may not be able to load the set in an older version of switcher software.
- **Incorrect Dynamic Range and Color Gamut PID in UHDTV1** — In UHDTV1, only the first link in the output carries the correct Dynamic Range and Color Gamut information. The other three links will continue to carry the SDR BT.709 PID.
- **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.
- **Jumbo Frames Not Supported** — Ethernet frames with more than 1,500 bytes of payload (Jumbo Frames) are not supported at this time. If your device has an option to send jumbo frames, it must be turned off to properly communicate with the switcher.
- **MediaWipe and DVE Wipe** — If you switch back and forth between a DVE transition and a MediaWipe DVE transition, the DVE transition may only perform a cut at the end of the transition duration. Select a different DVE transition pattern and then switch back to the pattern you want to fix the issue.
- **Can't Recall Memory Without Inclusions** — The ability to store or recall a memory without inclusions to recall just a Media-Store or Aux bus is not available. If you need a memory to recall just a Media-Store or Aux bus, you must include a sacrificial inclusion, such as a chroma key.

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 Ultra.

Software Upgrade

The switcher software is upgraded from DashBoard either by dragging and dropping the software onto the Upgrade page, or by saving the upgrade file to the USB drive inserted in the frame.

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

Software Upgrade Matrix

The following tables show supported upgrade paths for the recent versions.

Important: *For **Recovery Upgrades**, it is important to contact Ross Technical Support for the version of Recovery Upgrade you need.*

Table 1: Supported Ultra Upgrades

Current	Upgrading to...		
	Ultra 9.x	Ultra 11.x	Mosaic
Ultra 9.x			
9.1.0	9.1.0 - 9.2.1	Recovery	2.0.0 - 2.1.0
9.1.4			
9.1.5			
9.1.12			
9.1.14			
9.2.1			
Ultra 11.x			
11.1.0	Recovery	11.1.0 +Higher	Recovery
Mosaic			
2.0.0	9.1.0 - 9.2.0	Recovery	2.0.0 - 2.1.0
2.1.0			

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 2: Version Compatibility

Software	Version	To Verify
Ultra	9.2.1	The current version is shown on the **Status** page in DashBoard for the Ultra node.
RAVE Loader	5.0.0.19188	The current version of the application that is used to upgrade the 1RU Audio Breakout Unit.
1RU Audio Breakout Unit	4.5.1.326	The current version of the 1RU Audio Breakout Unit is shown on the menu display of the unit.
1RU Audio Breakout Unit-12G	5.1.2.446	The current version of the 1RU Audio Breakout Unit is shown on the menu display of the unit.
DashBoard	9.15.2	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	3.3.1	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.*

To Upgrade the Switcher Software

Use DashBoard to upload the upgrade file to the switcher.

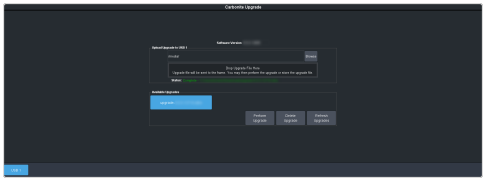
Note: *Save your switcher setup information to a set on a separate USB drive before upgrading. This switcher set can be used as a backup in case there is a critical error during the upgrade.*

Tip: *Switcher sets are not backwards compatible. Keep an archive copy of your sets in case you want to downgrade to the previous software version.*

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

Tip: *Insert a USB drive into the USB Port on the switcher. Although not required for the upgrade, the switcher copies the system logs to the USB before the upgrade. This information can be useful for Technical Support if there is an issue with the upgrade.*

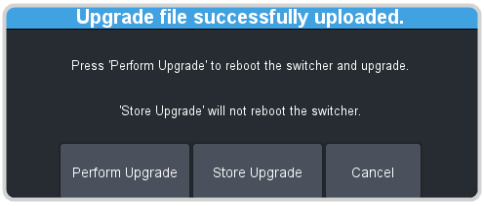
1. Click **Navigation Menu** > **Configuration** > **System** > **Upgrade**.



2. Locate the software upgrade file (`upgrade-x.x.x.xxxx.ultra`) for the switcher.

> ***Tip:*** *You can store the upgrade file to the USB in the switcher without upgrading. For example, you can upload the regular and Mosaic upgrade files to the USB so that you can quickly switch between them.*

3. Drag and drop the upgrade file into the **Drag and Drop Upgrade** area on DashBoard. The file is uploaded and you are asked what you would like to do with the file.



- **Perform Upgrade** — perform the upgrade with the file that was just uploaded.
- **Store Upgrade** — store the file locally in the `upgrade` folder.
- **Cancel** — cancel the process and delete the upgrade file from the switcher.

> ***Tip:*** *You can also upgrade from the USB. All upgrade files located on the USB are shown listed. Click the file you want to use and click* ***Perform Upgrade****.*

> ***Tip:*** *You can also upgrade by clicking* ***Browse****, locating the upgrade file, and then clicking* ***Upload File****.*

> ***Tip:*** *You can delete an upgrade file by selecting the file and clicking* ***Delete Upgrade****.*

4. Click **OK** to confirm the upgrade.
5. Wait for the DashBoard pages to come back up. This may take a few minutes.
6. Power cycle the frame by switching the power button **Off** and then **On** again.

The switcher will come up with the new software version.

Upgrade Issues

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

Table 3: 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 Carbonite Black Panel

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**.