Release Notes

Ultrix
Ultricore BCS
Ultricore CC

ROSS

GENERAL RELEASE NOTES

VERSION HISTORY

VERSION 6.7.0 (05069557) 10/01/25

EQUIPMENT
- ULTRIX-FR1/FR2 (including -NS)
- ULTRIX-FR5 (including -NS)
  - UCCI Upgrade Required?   YES ☐ NO☒
- ULTRIX-FR12
- ULTRICORE-CC
- ULTRICORE-BCS
- ULTRICORE-OE

FEATURES & ENHANCEMENTS
- Introduction of the Ultriformat license enabling format conversion for the Ultrix HDX and MODX series IO blades.
- Ultrix-IPX-IO / Adds HDR support on NMOS.
- Ultrix-MOD-NDI / Adds support for sending/receiving up to 8 channels of audio.
- Ultricore-Tally / Adds a new switcher profile to support HyperMax, the latest Ross Production Engine.
- User interface and workflow improvements:
  - Each device's free source with Ultricore-TLX is now assigned using a drop-down menu instead of being defined using a naming convention.
  - Improved database editing experience when using channel aliases by adding a toggle button to the toolbar, allowing users to hide the slots/ports panes. When hidden, the interface displays a simplified flat list of channels.
  - Salvo editor now has a scroll bar allowing visibility to more than 17 levels.

BUG FIXES
- UR-9480: Ultricore-Tally / Addressed an issue where the license redundancy was not automatically applied in redundant BCS systems.
- UR-9693: Ultricore-BCS / Fixed an issue where both BCS nodes in a pair could incorrectly become active during boot-up.
- UR-10557: Ultricore-BCS / The system now rotates diagnostic files to prevent storage from filling up.
- UR-10657: Fixed a gap introduced in HANC packets when looping Ultrix output to input.
- UR-10700: Ultrix-IPX-IO / Resolved an issue that could cause a loss of NMOS control.
- UR-10951: Ultrix-IPX-IO / Resolved an issue with importing IP Media Config files.
- UR-11433: Fixed an issue where the user was unable to delete legacy databases.
- UR-11917: Ultriscape / Addressed an issue where updating an alias caused a temporary disruption to the multiviewer display.
- UR-11918: Ultriscape / Fixed an issue where source label changes could override assigned alias labels on multiviewer PiPs.
- UR-11985: Ultrix-FR12 / Resolved an issue where the wave light and ENET LEDs would remain off after closing the Ultrix-FR12 door.

- UR-12097: Ultriscape / Improved handling of non-sequential PiP IDs to avoid unintended destination follows.
- UR-12117: Ultrix-FR5 / Fixed an issue that reported false UCCI communication alarms.
- UR-12182: Resolved an issue where frame routing device status could report as "Not available" in standalone configurations.
- UR-12269: Resolved an issue that could cause remote control panels to disconnect.
- UR-12559: Fixed an issue that caused Salvo definitions to fail when creating breakaways.
- UR-12576: Acuity / Fixed an issue where the Ultrix frame was not available in DashBoard and routing was not possible.
- UR-12635: Ultriscape / Corrected an issue where the PiP UMD used the name of the first source matching the VID port channel instead of the routed source.
- UR-12687: Resolved a Database Builder conflict when Ultrimix-Dante is selected.
- UR-12739: Ultrimix-MXR / Fixed an issue where paging buttons did not function correctly.
- UR-12804: Improved the precision of clock objects when used with NTP.
- UR-12888: Ultrix-FR12 / Fixed an issue where the fan temperature log was not available.
- UR-12892: Resolved an issue with the Assign function in the Group Categories menu that could create duplicate entries.
- UR-12902: Fixed an issue where the default alias set was not automatically loaded on the Ultritouch PB soft panel.
- UR-12903: Ultriscape / Fixed an issue where the PiP UMD label would revert to DST:SRC format when an alias set is modified in SRC Label mode.
- UR-12908: Ultriscape / Resolved an issue where Multiviewer captions would stop rendering on some inputs.
- UR-12913: Fixed the missing title bar option for the Operations window on Ultritouch PB panel.
- UR-12976: Ultrix FR5 / Corrected an issue where the PiP UMD's in Destination Follow mode were not working properly on flex slot heads.

APPLICATION NOTES
- Before upgrading to v6.7.0:
    - Export a copy of the current system database in the rare occurrence that a recovery to a prior version is required.
    - Verify whether the Ultrix connection name in the Outgoing Connections section (refers to Connections page) is different from the Ultrix frame's name. If it is, rename the connection's name to match with the existing Ultrix frame name.
    - If the router was upgraded to v6.x and the user imported a v5.x database, check the Ultrix > Database > Configuration > Routing Devices page and fill any missing settings (e.g. the IP address may have defaulted to 0.0.0.0)
    - Upgrading a redundant Ultricore-BCS system to v6.7.0 requires that the system be decoupled prior to upgrade. Also, the standby system must be upgraded first.
- On first upgrade to v5.1.0 or newer, users must re-enable previously used external protocol servers (Services Setting).

- As of v5.2.0, the default SNMP community name for factory installation has been updated to *ultricore* from the less secure *public*. For stronger security, it is strongly recommended that users set their own community string.
- Ultrix SW Compatibility with SWR-SDPE blades.
  - o Ultrix Carbonite v9.1.14
  - o Ultrix Acuity v14.0i
  - o HyperMax v11.0.2
- On ULTRIX-FR5, the cooling fans can remain at 100% even at lower temperatures. This will be fixed in an upcoming release.
- DashBoard v9.15.0 is required for the best user experience.
- Starting at v4.8.X, the upgrades should be done in the following order:
  - o Upgrade all cards (including switcher cards) but don't upgrade the ULTRIX-MODX modules (i.e NDI/DPT Modules) -- **DO NOT Reboot** when prompted by DashBoard in between card updates.
  - o Upgrade Frame -- **DO NOT Reboot** when prompted by DashBoard after frame update.
  - o After both FRAME and ALL CARDS have been successfully updated, power-cycle the frame.
  - o After the frame and cards are back on-line, upgrade the software on the ULTRIX-MODX module(s). No reboot is required after the module upgrade.
- In the rare occurrence of a failed card upgrade, the user should power-cycle the Ultrix and perform the upgrade again.
- To upgrade from versions prior to 4.0.0, contact Ross Technical Support for assistance

VERSION 6.6.2 (D871FFBF) LIMITED AVAILABILITY 09/12/25

EQUIPMENT
- ULTRIX-FR1/FR2 (including -NS)
- ULTRIX-FR5 (including -NS)
    - UCCI Upgrade Required?   YES ☐ NO☒
- ULTRIX-FR12
- ULTRICORE-CC
- ULTRICORE-BCS
- ULTRICORE-OE

FEATURES & ENHANCEMENTS
- This is a maintenance release only.

BUG FIXES
- UR-12661: Ultrix-IPX-IO / Fixed an issue where adding more than 32 audio receivers caused existing Ultriscape audio meters to be overwritten instead of displaying on their respective audio meters.
- UR-12666: Ultrix-IPX-IO / Fixed an issue where enabling four channel multi-audio sessions caused incorrect audio receiver channel ordering.

APPLICATION NOTES
- Before upgrading to v6.6.2:
    - Export a copy of the current system database in the rare occurrence that a recovery to a prior version is required.
    - Verify whether the Ultrix connection name in the Outgoing Connections section (refers to Connections page) is different from the Ultrix frame's name. If it is, rename the connection's name to match with the existing Ultrix frame name.
    - If the router was upgraded to v6.x and the user imported a v5.x database, check the Ultrix > Database > Configuration > Routing Devices page and fill any missing settings (e.g. the IP address may have defaulted to 0.0.0.0)
- Upgrading a redundant Ultricore-BCS system to v6.6.2 requires that the system be decoupled prior to upgrade. Also, the standby system must be upgraded first.
- On first upgrade to v5.1.0 or newer, users must re-enable previously used external protocol servers (Services Setting).
- As of v5.2.0, the default SNMP community name for factory installation has been updated to *ultricore* from the less secure *public*. For stronger security, it is strongly recommended that users set their own community string.
- Ultrix SW Compatibility with SWR-SDPE blades.
    - Ultrix Carbonite v9.1.12
    - Ultrix Acuity v14.0i
    - HyperMax v11.0.2
- On ULTRIX-FR5, the cooling fans can remain at 100% even at lower temperatures. This will be fixed in an upcoming release.
- DashBoard v9.15.0 is required for the best user experience.

- Starting at v4.8.X, the upgrades should be done in the following order:
  - Upgrade all cards (including switcher cards) but don't upgrade the ULTRIX-MODX modules (i.e NDI/DPT Modules) -- **DO NOT Reboot** when prompted by DashBoard in between card updates.
  - Upgrade Frame -- **DO NOT Reboot** when prompted by DashBoard after frame update.
  - After both FRAME and ALL CARDS have been successfully updated, power-cycle the frame.
  - After the frame and cards are back on-line, upgrade the software on the ULTRIX-MODX module(s). No reboot is required after the module upgrade.
- In the rare occurrence of a failed card upgrade, the user should power-cycle the Ultrix and perform the upgrade again.
- To upgrade from versions prior to 4.0.0, contact Ross Technical Support for assistance

VERSION 6.6.1 (31FA54D6) 09/17/25

EQUIPMENT
- ULTRIX-FR1/FR2 (including -NS)
- ULTRIX-FR5 (including -NS)
  - UCCI Upgrade Required?   YES ☐ NO☒
- ULTRIX-FR12
- ULTRICORE-CC
- ULTRICORE-BCS
- ULTRICORE-OE

FEATURES & ENHANCEMENTS
- Supports hardware updates affecting newly manufactured SWR-SDPE blades.
- Ultricore-BCS / Improved general robustness when used in a redundant configuration.

BUG FIXES
- UR-9602: Ultricore-TLX / Fixed an issue where audio only routes with tielines could fail.
- UR-12636: Ultriscape / Fixed an issue that caused the RossTalk clock commands STOP, END, and SET to not function correctly.
- UR-12676: Ultriscape / Fixed an issue where on occasion, the video in PiPs did not recover after a power cycle when running version 6.6.0.
- UR-12895: Ultrix-FR12 / Fixed an issue that occasionally reported false temperature alarms for the Ultrix-HDX-IO and Ultrix-MODX-IO blades when running version 6.6.0.

APPLICATION NOTES
- Before upgrading to v6.6.1:
  - Export a copy of the current system database in the rare occurrence that a recovery to a prior version is required.
  - Verify whether the Ultrix connection name in the Outgoing Connections section (refers to Connections page) is different from the Ultrix frame's name. If it is, rename the connection's name to match with the existing Ultrix frame name.
  - If the router was upgraded to v6.x and the user imported a v5.x database, check the Ultrix > Database > Configuration > Routing Devices page and fill any missing settings (e.g. the IP address may have defaulted to 0.0.0.0)
- Upgrading a redundant Ultricore-BCS system to v6.6.1 requires that the system be decoupled prior to upgrade. Also, the standby system must be upgraded first.
- On first upgrade to v5.1.0 or newer, users must re-enable previously used external protocol servers (Services Setting).
- As of v5.2.0, the default SNMP community name for factory installation has been updated to *ultricore* from the less secure *public*. For stronger security, it is strongly recommended that users set their own community string.
- Ultrix SW Compatibility with SWR-SDPE blades.
  - Ultrix Carbonite v9.1.12
  - Ultrix Acuity v14.0i

- o HyperMax v11.0.2
- On ULTRIX-FR5, the cooling fans can remain at 100% even at lower temperatures. This will be fixed in an upcoming release.
- DashBoard v9.15.0 is required for the best user experience.
- Starting at v4.8.X, the upgrades should be done in the following order:
  - o Upgrade all cards (including switcher cards) but don't upgrade the ULTRIX-MODX modules (i.e NDI/DPT Modules) -- **DO NOT Reboot** when prompted by DashBoard in between card updates.
  - o Upgrade Frame -- **DO NOT Reboot** when prompted by DashBoard after frame update.
  - o After both FRAME and ALL CARDS have been successfully updated, power-cycle the frame.
  - o After the frame and cards are back on-line, upgrade the software on the ULTRIX-MODX module(s). No reboot is required after the module upgrade.
- In the rare occurrence of a failed card upgrade, the user should power-cycle the Ultrix and perform the upgrade again.
- To upgrade from versions prior to 4.0.0, contact Ross Technical Support for assistance

VERSION 6.6.0 (834AF56F) 07/29/25

EQUIPMENT
- ULTRIX-FR1/FR2 (including -NS)
- ULTRIX-FR5 (including -NS)
  - UCCI Upgrade Required?   YES ☐ NO☒
- ULTRIX-FR12
- ULTRICORE-CC
- ULTRICORE-BCS
- ULTRICORE-OE

FEATURES & ENHANCEMENTS
- Ultrix-IPX-IO / Added support for audio frame sync.
- Ultricore-IP / Users can manually add NMOS-capable devices not discovered via RDS.
- Ultriscape improvements:
  - The Layout Selection workflow was simplified. The Destination Follow PiP assignment is now located on the Destination Follow page under a new Multiviewer tab. Also, the Source mode operation was standardized to the Normal mode switching workflow using soft panels.
  - The option "AUX with loopback" was added to the Multiviewer output. This option internally routes the AUX output to the AUX input allowing the MV Head to be routed to other outputs without the use of a physical SFP in the AUX port. This new option is supported on the HDX, MODX, IP/IPX, SFP, HDBNC, and MIOB blades.
  - The precision of clock objects was improved.
- User interface and workflow improvements:
  - Progress indicators were added to provide feedback to users when a lengthy database operation is in progress.
  - For software upgrades from 6.6.0 and newer, a backup of the current database will be automatically saved as part of the upgrade process.
  - Re-introduced GOTO Matrix source navigation for the Salvos page previously available in versions prior to 6.0. Users can Alt+Click on the destination to navigate to the assigned source.

BUG FIXES
- UR-9467: Ultrix / Resolved an issue that caused imports of frame settings (.ufs) to fail.
- UR-9894: Improved the salvo capture process when destinations do not have a status.
- UR-9962: Ultrix-FR12 / Improved network connectivity robustness where on a rare occurrence, a frame could lose connectivity.
- UR-10257: Ultricore-BCS / Resolved an issue where the device name was incorrect post failover.
- UR-10324: Ultrix / Fixed an issue that could cause the loss of DashBoard connection.
- UR-10700: Ultrix-IPX-IO / Resolved an issue that could cause a loss of NMOS control.
- UR-11259: Resolved an issue where spreadsheet import/export did not work properly with channel aliases.

- UR-11440: Ultriscape / Fixed an issue where the Shared PiP table user selections did not persist in the Layout Editor.
- UR-11443: Ultricore-BCS / Improved the system robustness when restarting the standby node immediately after failover.
- UR-11513: Corrected the maximum packet length from 256 bytes to 2048 bytes as defined by the TSL UMD v5 protocol specification.
- UR-11555: Fixed an issue where the audio silence threshold did not persist on reboot.
- UR-11588: Ultricore-BCS / Improved the robustness of redundant node deployments.
- UR-11733: Fixed an issue where the desired routing device protocol could not be selected.
- UR-11771: Ultrix-FR5 / Corrected an issue that limited the minimum fan speed to 65%.
- UR-11895: Corrected an issue that prevented access to newly created panels.
- UR-11904: Ultricore-IP / Fixed an issue where the NMOS page was unresponsive after a slot restart.
- UR-12068: Ultrix-IPX-IO / Resolved an issue where the Ultrix-IP pages failed to load.
- UR-12086: Fixed an issue where the Audio Mixer panel input channel status could fail to update.
- UR-12097: Ultriscape / Resolved unintended destination follows caused by non-sequential PiP IDs in layouts.
- UR-12183: Ultriscape / Fixed an issue that could cause audio meters and captions to stop working.
- UR-12317: Resolved an issue where frequent RCP reconnections could lead to loss of DashBoard control

APPLICATION NOTES

- Before upgrading to v6.6.0:
  - Export a copy of the current system database in the rare occurrence that a recovery to a prior version is required.
  - Verify whether the Ultrix connection name in the Outgoing Connections section (refers to Connections page) is different from the Ultrix frame's name. If it is, rename the connection's name to match with the existing Ultrix frame name.
  - If the router was upgraded to v6.x and the user imported a v5.x database, check the Ultrix > Database > Configuration > Routing Devices page and fill any missing settings (e.g. the IP address may have defaulted to 0.0.0.0)
- Upgrading a redundant Ultricore-BCS system to v6.6.0 requires that the system be decoupled prior to upgrade. Also, the standby system must be upgraded first.
- On first upgrade to v5.1.0 or newer, users must re-enable previously used external protocol servers (Services Setting).
- As of v5.2.0, the default SNMP community name for factory installation has been updated to *ultricore* from the less secure *public*. For stronger security, it is strongly recommended that users set their own community string.
- Ultrix SW Compatibility with SWR-SDPE blades.
  - Ultrix Carbonite v9.1.10
  - Ultrix Acuity v14.0g

- On ULTRIX-FR5, the cooling fans can remain at 100% even at lower temperatures. This will be fixed in an upcoming release.
- DashBoard v9.15.0 is required for the best user experience.
- To upgrade ULTRIX-MOD-NDI modules, you must first upgrade Ultrix Frame and then the ULTRIX-MODX-IO blade as usual. You must then reboot the frame before upgrading the software on the ULTRIX-MOD-NDI module(s). No reboot is required after the module upgrade.
- Starting at v4.8.X, the upgrades should be done in the following order:
  - o Upgrade all cards (including switcher cards) -- **DO NOT Reboot** when prompted by DashBoard in between card updates.
  - o Upgrade Frame -- **DO NOT Reboot** when prompted by DashBoard after frame update.
  - o After both FRAME and ALL CARDS have been successfully updated, power-cycle the frame.
- In the rare occurrence of a failed card upgrade, the user should power-cycle the Ultrix and perform the upgrade again.
- To upgrade from versions prior to 4.0.0, contact Ross Technical Support for assistance

VERSION 6.5.2 (08D8260A) 06/10/25

EQUIPMENT
- ULTRIX-FR1/FR2 (including -NS)
- ULTRIX-FR5 (including -NS)
    - UCCI Upgrade Required?   YES ☐ NO☒
- ULTRIX-FR12
- ULTRICORE-CC
- ULTRICORE-BCS
- ULTRICORE-OE

FEATURES & ENHANCEMENTS
- This is a maintenance release only.

BUG FIXES

- UR-11734: Ultriscape / Resolved an issue where routed sources did not tally in Ultriscape when the routed tally is enabled on destinations.

APPLICATION NOTES
- Before upgrading to v6.5.2:
    - Export a copy of the current system database in the rare occurrence that a recovery to a prior version is required.
    - Verify whether the Ultrix connection name in the Outgoing Connections section (refers to Connections page) is different from the Ultrix frame's name. If it is, rename the connection's name to match with the existing Ultrix frame name.
    - If the router was upgraded to v6.x and the user imported a v5.x database, check the Ultrix > Database > Configuration > Routing Devices page and fill any missing settings (e.g. the IP address may have defaulted to 0.0.0.0)
    - Upgrading a redundant Ultricore-BCS system to 6.5.2 from a version prior to 6.x requires that the system be decoupled prior to upgrade. For redundant systems previously upgraded to 6.x, the standby system must be upgraded first.
- On first upgrade to v5.1.0 or newer, users must re-enable previously used external protocol servers (Services Setting).
- As of v5.2.0, the default SNMP community name for factory installation has been updated to *ultricore* from the less secure *public*. For stronger security, it is strongly recommended that users set their own community string.
- Ultrix SW Compatibility with SWR-SDPE blades.
    - Ultrix Carbonite v9.1.10
    - Ultrix Acuity v14.0g
- On ULTRIX-FR5, the cooling fans can remain at 100% even at lower temperatures. This will be fixed in an upcoming release.
- DashBoard v9.14.0 is required for the best user experience.

- To upgrade MODX sub-modules, you must first upgrade the Ultrix Frame and the ULTRIX-MODX-IO blade as usual. You must then reboot the frame before upgrading the software on the MODX sub module. No reboot is required after the module upgrade.
- Starting at v4.8.X, the upgrades should be done in the following order:
  - o Upgrade all cards (including switcher cards) -- **DO NOT Reboot** when prompted by DashBoard in between card updates.
  - o Upgrade Frame -- **DO NOT Reboot** when prompted by DashBoard after frame update.
  - o After both FRAME and ALL CARDS have been successfully updated, power-cycle the frame.
- In the rare occurrence of a failed card upgrade, the user should power-cycle the Ultrix and perform the upgrade again.
- To upgrade from versions prior to 4.0.0, contact Ross Technical Support for assistance

VERSION 6.5.1 (2AA161D5) LIMITED RELEASE FR12 ONLY 06/05/25

EQUIPMENT
- ULTRIX-FR1/FR2 (including -NS)
- ULTRIX-FR5 (including -NS)
    - UCCI Upgrade Required?   YES ☐ NO☒
- ULTRIX-FR12
- ULTRICORE-CC
- ULTRICORE-BCS
- ULTRICORE-OE

FEATURES & ENHANCEMENTS

- Ultrix-FR12 / Addresses a manufacturability issue. No other changes are included.

BUG FIXES

- Not Applicable

APPLICATION NOTES
- Before upgrading to v6.5.1:
    - Export a copy of the current system database in the rare occurrence that a recovery to a prior version is required.
    - Verify whether the Ultrix connection name in the Outgoing Connections section (refers to Connections page) is different from the Ultrix frame's name. If it is, rename the connection's name to match with the existing Ultrix frame name.
    - If the router was upgraded to v6.x and the user imported a v5.x database, check the Ultrix > Database > Configuration > Routing Devices page and fill any missing settings (e.g. the IP address may have defaulted to 0.0.0.0)
    - Upgrading a redundant Ultricore-BCS system to 6.5.1 from a version prior to 6.x requires that the system be decoupled prior to upgrade. For redundant systems previously upgraded to 6.x, the standby system must be upgraded first.
- On first upgrade to v5.1.0 or newer, users must re-enable previously used external protocol servers (Services Setting).
- As of v5.2.0, the default SNMP community name for factory installation has been updated to *ultricore* from the less secure *public*. For stronger security, it is strongly recommended that users set their own community string.
- Ultrix SW Compatibility with SWR-SDPE blades.
    - Ultrix Carbonite v9.1.10
    - Ultrix Acuity v14.0g
- On ULTRIX-FR5, the cooling fans can remain at 100% even at lower temperatures. This will be fixed in an upcoming release.

- DashBoard v9.14.0 is required for the best user experience.
- To upgrade ULTRIX-MOD-NDI modules, you must first upgrade Ultrix Frame and then the ULTRIX-MODX-IO blade as usual. You must then reboot the frame before upgrading the software on the ULTRIX-MOD-NDI module(s). No reboot is required after the module upgrade.
- Starting at v4.8.X, the upgrades should be done in the following order:
  - Upgrade all cards (including switcher cards) -- **DO NOT Reboot** when prompted by DashBoard in between card updates.
  - Upgrade Frame -- **DO NOT Reboot** when prompted by DashBoard after frame update.
  - After both FRAME and ALL CARDS have been successfully updated, power-cycle the frame.
- In the rare occurrence of a failed card upgrade, the user should power-cycle the Ultrix and perform the upgrade again.
- To upgrade from versions prior to 4.0.0, contact Ross Technical Support for assistance

VERSION 6.5.0 (62C60EDF) 05/20/25

EQUIPMENT

- ULTRIX-FR1/FR2 (including -NS)
- ULTRIX-FR5 (including -NS)
  - UCCI Upgrade Required?   YES ☐ NO☒
- ULTRIX-FR12
- ULTRICORE-CC
- ULTRICORE-BCS
- ULTRICORE-OE

FEATURES & ENHANCEMENTS

- ULTRIX-MODX-IO / Supports the introduction of the new ULTRIX-MOD-DPT sub-module featuring four DisplayPort 1.4 outputs on USB-C connectors in DisplayPort Alternate Mode. It provides extensive monitoring and configurable settings for color space conversion, bits per plane, maximum link rate, and more are managed via DashBoard.
- Ultrix-IPX-IO specific features and enhancements:
  - Now supports 25GbE ST 2110 IP streams.
  - Now supports the third input PiP Scaler previously made available on Ultrix-MODX-IO and Ultrix-HDX-IO in v6.1.0.
- Added Matte Gen, an internally generated test pattern to IPX AUX Port A/B inputs.
- Ultricore-BCS specific improvements:
  - Provides a refreshed UI for Ultricore-IP with an enhanced workflow for NMOS discovery and registration.
  - Added a screen dimming feature for screen protection.
- Ultrix Acuity / Now supports a virtual matrix for input assignments to enable integrated input monitoring and control for operational efficiency and improved tieline management (Requires Ultrix Acuity v14.0i or later software).
- Ultriscape / Increased the maximum number of layouts from 180 to 250.
- User interface and workflow improvements:
  - Added a setting for repeated message throttling for third-party clients and new configuration parameters for the GVG protocol.
  - Added keyboard navigation and tooltips for sources/destinations to the Salvos page.
  - Added multi-cell copy/paste to Microsoft Excel and within DashBoard.
  - Added the ability to rename sources using a user defined prefix or suffix.
  - Added a page up/down navigation to the Salvo editing page.
  - Added a control to move sources and destinations up/down/top/bottom of list.

BUG FIXES

- UR-7089: Ultrix-IP / Corrected an issue where HDR senders were reported as SDR in the Session Description Protocol (SDP).
- UR-8449: Ultriscape / Fixed an incorrect status for output audio presence on LoS.
- UR-9253: Ultricore-IP / Resolved an issue with incorrect IP matrix port mappings.
- UR-9315: Fixed an issue where the Clear button was unavailable for Tally IDs.
- UR-9758: Ultritouch / Resolved an issue that blocked routing PiP destinations from the Ultritouch MV soft panel.
- UR-9851: Channel aliases will now properly display in the Channel Search drop-down of the Sources/Destinations pages.
- UR-10026: Ultrix-FR12 / Resolved an issue that could cause the loss of DashBoard connection after a reboot.
- UR-10325: Ultricore BCS / Fixed an issue where a device was removed from RDS if the subscription was removed and re-added in less than 3s.
- UR-10386: The Sources/Destinations pages will no longer reload when the name/ description/tally fields are modified on a single row.
- UR-10464: Ultrix-IP / Fixed a rare issue where the NMOS process could crash on bootup.
- UR-10656: Resolved an issue where a Destination Follow would still trigger even if the followed destination was locked.
- UR-10662: Ultrix-IP & IPX / Addressed an issue where senders would occasionally not report their PTP GM ID in the SDP.
- UR-10700: Ultrix-IP & IPX / Resolved an issue that could cause a loss of NMOS control.
- UR-10772: Fixed an issue where a database import could fail between certain versions.
- UR-10797: Ultrix-FR12 / Addressed an issue where the PWR and CTRL slots may not display proper status in the UI.
- UR-10804: Ultricore-IP / Fixed an issue where the BCP002 Natural Group Tags setting was reversed.
- UR-10869: Ultrix-IPX / Improved 2110 sender robustness and added monitoring capabilities to reference and egress traffic.
- UR-10959: RCP / Addressed an issue where aliases were only working for destinations.
- UR-11039: Ultrix / Resolved an issue where SNMP alarms did not initialize unless toggled off/on for the first time.
- UR-11095: Fixed an issue with the exporting of Sources/Destinations as a spreadsheet.
- UR-11163: Fixed an Ultritouch PB soft panel loading issue introduced in v6.4.2.
- UR-11246: Addressed an issue where machine control mode would not perform the reciprocal switch.
- UR-11269: Ultricore-BCS / The Health Monitor > Outgoing Connections status is now reported correctly.
- UR-11346: Fixed an issue where the Output Monitor Destination would not be assigned correctly on the Ultritouch PB soft panel.
- ULTRDNT-504 / 505: Ultrimix-Dante / Addressed a clocking issue that could lead to a loss of audio.

APPLICATION NOTES

- Before upgrading to v6.5.0:
  - Export a copy of the current system database in the rare occurrence that a recovery to a prior version is required.
  - Verify whether the Ultrix connection name in the Outgoing Connections section (refers to Connections page) is different from the Ultrix frame's name. If it is, rename the connection's name to match with the existing Ultrix frame name.
  - If the router was upgraded to v6.x and the user imported a v5.x database, check the Ultrix > Database > Configuration > Routing Devices page and fill any missing settings (e.g. the IP address may have defaulted to 0.0.0.0)
  - Upgrading a redundant Ultricore-BCS system to 6.5.0 from a version prior to 6.x requires that the system be decoupled prior to upgrade. For redundant systems previously upgraded to 6.x, the standby system must be upgraded first.
- On first upgrade to v5.1.0 or newer, users must re-enable previously used external protocol servers (Services Setting).
- As of v5.2.0, the default SNMP community name for factory installation has been updated to *ultricore* from the less secure *public*. For stronger security, it is strongly recommended that users set their own community string.
- Ultrix SW Compatibility with SWR-SDPE blades.
  - Ultrix Carbonite v9.1.10
  - Ultrix Acuity v14.0g
- On ULTRIX-FR5, the cooling fans can remain at 100% even at lower temperatures. This will be fixed in an upcoming release.
- DashBoard v9.14.0 is required for the best user experience.
- To upgrade ULTRIX-MOD-NDI modules, you must first upgrade Ultrix Frame and then the ULTRIX-MODX-IO blade as usual. You must then reboot the frame before upgrading the software on the ULTRIX-MOD-NDI module(s). No reboot is required after the module upgrade.
- Starting at v4.8.X, the upgrades should be done in the following order:
  - Upgrade all cards (including switcher cards) -- **DO NOT Reboot** when prompted by DashBoard in between card updates.
  - Upgrade Frame -- **DO NOT Reboot** when prompted by DashBoard after frame update.
  - After both FRAME and ALL CARDS have been successfully updated, power-cycle the frame.
- In the rare occurrence of a failed card upgrade, the user should power-cycle the Ultrix and perform the upgrade again.
- To upgrade from versions prior to 4.0.0, contact Ross Technical Support for assistance

VERSION 6.4.3 (E09D5209) LIMITED RELEASE 05/09/25

EQUIPMENT
- ULTRIX-FR1/FR2 (including -NS)
- ULTRIX-FR5 (including -NS)
  - UCCI Upgrade Required?   YES ☐ NO☒
- ULTRIX-FR12
- ULTRICORE-CC
- ULTRICORE-BCS
- ULTRICORE-OE

FEATURES & ENHANCEMENTS

- This is a maintenance release only.

BUG FIXES

- UR-10205: Ultrix-IP / Fixed an issue where video senders could be shifted horizontally.
- UR-11413: Resolved an issue that could lead to a loss of DashBoard connection when activating an imported legacy database.

APPLICATION NOTES
- Before upgrading to v6.4.3:
  - Export a copy of the current system database.
  - Before upgrading to v6.x from previous versions, verify whether the Ultrix connection name in the Outgoing Connections section (refers to Connections page) is different from the Ultrix frame's name. If it is, rename the connection's name to match with the existing Ultrix frame name.
  - If the router was upgraded to v6.x and the user imported a v5.x database, check the Ultrix > Database > Configuration > Routing Devices page and fill any missing settings (e.g. the IP address may have defaulted to 0.0.0.0)
  - Upgrading a redundant Ultricore-BCS system to 6.4.3 from a version prior to 6.x requires that the system be decoupled prior to upgrade. For redundant systems previously upgraded to 6.x, the standby system must be upgraded first.
- On first upgrade to v5.1.0 or newer, users must re-enable previously used external protocol servers (Services Setting).
- As of v5.2.0, the default SNMP community name for factory installation has been updated to *ultricore* from the less secure *public*. For stronger security, it is strongly recommended that users set their own community string.
- Ultrix SW Compatibility with SWR-SDPE blades.
  - Ultrix Carbonite v9.1.10
  - Ultrix Acuity v14.0g

- On ULTRIX-FR5, the cooling fans can remain at 100% even at lower temperatures. This will be fixed in an upcoming release.
- DashBoard v9.14.0 is required for the best user experience.
- To upgrade ULTRIX-MOD-NDI modules, you must first upgrade Ultrix Frame and then the ULTRIX-MODX-IO blade as usual. You must then reboot the frame before upgrading the software on the ULTRIX-MOD-NDI module(s). No reboot is required after the module upgrade.
- Starting at v4.8.X, the upgrades should be done in the following order:
    - o Upgrade all cards (including switcher cards) -- **DO NOT Reboot** when prompted by DashBoard in between card updates.
    - o Upgrade Frame -- **DO NOT Reboot** when prompted by DashBoard after frame update.
    - o After both FRAME and ALL CARDS have been successfully updated, power-cycle the frame.
- In the rare occurrence of a failed card upgrade, the user should power-cycle the Ultrix and perform the upgrade again.
- To upgrade from versions prior to 4.0.0, contact Ross Technical Support for assistance

VERSION 6.4.2 (D90C9849) LIMITED RELEASE 05/02/25

EQUIPMENT
- ULTRIX-FR1/FR2 (including -NS)
- ULTRIX-FR5 (including -NS)
  - UCCI Upgrade Required?   YES ☐ NO☒
- ULTRIX-FR12
- ULTRICORE-CC
- ULTRICORE-BCS
- ULTRICORE-OE

FEATURES & ENHANCEMENTS

- This is a maintenance release only.

BUG FIXES

- UR-7567: Ultrix / Fixed a rare memory leak that could cause the Multiviewer to stop working.
- UR-8759: Ultrix-FR5 and Ultrix-FR12 / Resolved an issue where on a rare occurrence, a frame could become unresponsive.
- UR-9823: Ultriscape / Fixed an issue where shared PiP Destination Follow mode failed.
- UR-9889: The Ultricore Profiles admin user and profile are now correctly read-only.
- UR-10139: Clarified instructions in the Database Builder when adding Dante entries.
- UR-10162: Ultriscape / Resolved an issue where it was not possible to assign a source to a shared PiP.
- UR-10660: Ultricore-BCS / The Health Monitor > Outgoing Connections status is now reported correctly.
- UR-10683: Ultrix / Fixed a loss of DashBoard connection that could occur when interacting with the Panel Builder.
- UR-10691: Ultriscape / Resolved a panel configuration issue when using aliases with the Ultritouch MV panel.
- UR-10736: Ultricore-BCS / Resolved an issue where the standby BCS was not detected when redundancy was enabled in certain configurations.
- UR-10882: Ultrix / Resolved a loss of DashBoard connection that could occur when creating soft panels.
- UR-11003: Acuity / Fixed an issue where AUX bus switches were not working in 6.4.1.
- UR-11115: Corrected an issue where Salvo IDs could change after an upgrade from v5.x to 6.x.

VERSION 6.4.1 (4EE7E79E) LIMITED RELEASE 3/31/25

EQUIPMENT
- ULTRIX-FR1/FR2 (including -NS)
- ULTRIX-FR5 (including -NS)
  - UCCI Upgrade Required?   YES ☐ NO☒
- ULTRIX-FR12
- ULTRICORE-CC
- ULTRICORE-BCS
- ULTRICORE-OE

FEATURES & ENHANCEMENTS

- This is a maintenance release only.

BUG FIXES

- UR-7940: Ultrix-IP / Resolved an intermittent issue where audio could be missing from the receivers.
- UR-8347: Ultriscape / Fixed an issue where routing DISC source to PiP X caused the Multiviewer output to drop to no signal.
- UR-9101: Ultrix-FR2 and Ultrix-FR1 / Improved the robustness of the internal network communication.
- UR-9517: Ultrix-IP / Resolved an issue where senders and receivers could be missing on a power cycle.
- UR-9616: Ultritouch / Fixed an issue where Cat Index navigation arrows were unresponsive.
- UR-9769: Ultrix-IPX / Fixed an issue where the low latency mode would not be applied.
- UR-9806: Ultricore-BCS / Resolved an issue where Ultrix receiver SDPs could get changed on NMOS updates even though Ultricore-IP is not licensed.
- UR-10174: Ultricore-BCS / Improved synchronization between active and standby nodes.
- UR-10182: Ultrix-IP and Ultrix-IPX / Audio receivers are now correctly muted when disabled.
- UR-10268: Corrected an issue with legacy database imports.
- UR-10293: Ultrix-IP and Ultrix-IPX / Improved compatibility with SDPs from third-party NMOS control systems.
- UR-10295: Ultrix-IP / User interface will now block unsupported AUX SFP MADI configurations.
- UR-10362: Ultricool / Corrected an issue where the fans would be at maximum speed after a reboot
- UR-10451: Ultrix-IPX / Corrected a Video/ANC PTP offset that could occur on senders after a reboot.
- UR-10490: Ultrix-FR5 / Improved the frame behavior over power cycle when set to DHCP.

- UR-10551: Ultrix-IPX / Fixed an issue where routes to some receivers required a power cycle.
- UR-10582: Ultricore-BCS / Improved the robustness of the database syncing process.
- UR-10664: Fixed a memory leak that could cause the loss of Multiviewer control after a large number of source label changes.
- UR-10677: Corrected an issue with aliases that could cause loss of third-party control.
- UR-10733: Fixed an issue where resetting all IDs would cause an error.
- HYPCOD-1058: Ultristream / Resolved an issue where NDI traffic would not use the default gateway.

APPLICATION NOTES

- Before upgrading to v6.4.1:
    - It is STRONGLY recommended to export a copy of the current system database.
    - Before upgrading to v6.x from previous versions, verify whether the Ultrix connection name in the Outgoing Connections section (refers to Connections page) is different from the Ultrix frame's name. If it is, rename the connection's name to match with the existing Ultrix frame name.
    - If the router was upgraded to v6.x and the user imported a v5.x database, check the Ultrix > Database > Configuration > Routing Devices page and fill any missing settings (e.g. the IP address may have defaulted to 0.0.0.0)
    - Upgrading a redundant Ultricore-BCS system to 6.4.1 from a version prior to 6.x requires that the system be decoupled prior to upgrade. For redundant systems previously upgraded to 6.x, the standby system must be upgraded first.
- On first upgrade to v5.1.0 or newer, users must re-enable previously used external protocol servers (Services Setting).
- As of v5.2.0, the default SNMP community name for factory installation has been updated to *ultricore* from the less secure *public*. For stronger security, it is strongly recommended that users set their own community string.
- Ultrix SW Compatibility with SWR-SDPE blades.
    - Ultrix Carbonite v9.1.6
    - Ultrix Acuity v14.0h
- On ULTRIX-FR5, the cooling fans can remain at 100% even at lower temperatures. This will be fixed in an upcoming release.
- DashBoard v9.13.0 is required for the best user experience.
- To upgrade ULTRIX-MOD-NDI modules, you must first upgrade Ultrix Frame and then the ULTRIX-MODX-IO blade as usual. You must then reboot the frame before upgrading the software on the ULTRIX-MOD-NDI module(s). No reboot is required after the module upgrade.
- Starting at v4.8.X, the upgrades should be done in the following order:
    - Upgrade Frame -- **DO NOT Reboot** when prompted by DashBoard after frame update.
    - Upgrade all cards (including switcher cards) -- **DO NOT Reboot** when prompted by DashBoard in between card updates.

- o After both FRAME and ALL CARDS have been successfully updated, power-cycle the frame.
- In the rare occurrence of a failed card upgrade, the user should power-cycle the Ultrix and perform the upgrade again.
- To upgrade from versions prior to 4.0.0, contact Ross Technical Support for assistance

VERSION 6.4.0 (EBDDA019) 2/14/25

EQUIPMENT
- ULTRIX-FR1/FR2 (including -NS)
- ULTRIX-FR5 (including -NS)
  - UCCI Upgrade Required?   YES ☐ NO☒
- ULTRIX-FR12
- ULTRICORE-CC
- ULTRICORE-BCS
- ULTRICORE-OE

FEATURES & ENHANCEMENTS

- Improves UltriProc responsiveness when enabled concurrently with Ultrimix-Dante.
- ULTRIX-IPX-IO support for multiple audio streams (1, 2, or 4) per video stream is now also supported in systems controlled by an Ultricore-BCS (Previously supported in 6.2.x for stand-alone Ultrix).
- A new Group Push Button (PB) feature enables you to create a soft panel where the destinations and sources are determined by the Group Categories interface but organized into a vertical layout that is like the Ultritouch PB panel type.
- Improved the salvo creation workflow with line-by-line scrolling instead of page scrolling on the salvo page.
- Simplified the database configuration toolbar with an icon-only layout. The functionality of the icons is reported by hovering over the specific icon or in the navigation menu in the toolbar.
- Increased the number of concurrent GVG native protocol clients from 40 to 80.

BUG FIXES

- UR-6598: Improved management of user defined parameters when replacing an SD card.
- UR-7612: Ultrix / Frames will now fall back to static IP if no DHCP server is found.
- UR-8372: Acuity / Resolved an issue where on rare occasions, switching video would fail.
- UR-8802: Ultrix-FR12 / Made improvements to ensure licenses are retained seamlessly when swapping a crosspoint.
- UR-9111: Ultriscape / Resolved an issue where the default head label was used instead of the user specified custom label for the head UMD.
- UR-9420: Ultrix-FR12 / Fixed an issue where on a rare occasion, audio routing would fail.
- UR-9435: Improved workflow robustness when importing a database from a spreadsheet.
- UR-9490: Ultrix / Fixed a Rippaview panic that could occur when editing panels.
- UR-9494: Resolved an issue where tielines were not available after a reboot.
- UR-9678: Ultricore-TLX / Corrected the naming of the MODX destination ports.

- UR-9690: Utricore-TLX / Resolved an issue that could lead to an incorrect tieline status during an Ultricore-BCS failover.
- UR-9733: Ultriscape / Fixed an issue where the layout thumbnails were not displayed on the Ultritouch MV soft panels.
- UR-9758: Ultriscape / Resolved a PiP routing issue when using Ultritouch MV soft panels.
- UR-9796: Ultricore-BCS / Resolved an issue where a Dashboard connection could be interrupted.
- UR-9813: Ultrix-IP / Fixed an error condition when editing audio sender parameters.
- UR-9820: Ultrix-IP and Ultrix-IPX / Resolved an issue where the PTP status parameters did not update dynamically.
- UR-9844: Ultrix-IP / Resolved an issue where sender and receiver labels were not updating properly via NMOS.
- UR-9950: Improved workflow robustness of alias entry in DashBoard.
- UR-9972: Ultricore-TLX / Resolved an issue where the Refresh I/O function could alter paths defined in the IP matrix.
- UR-10004: Ultrix-IPX / Fixed an issue when enabling audio receivers one by one created distortion on audio streams.
- UR-10010: Ultricore-TLX / Improved the robustness of tieline routing.
- UR-10014: Ultricore-BCS / Ensure aliases are loaded correctly after boot-up.
- UR-10015: Ultricore-TLX / Improved robustness of tieline routing.
- UR-10016: Ultricore-TLX / Improved robustness when recalling large salvos.
- UR-10024: Ultricore-BCS / Fixed a loss of DashBoard connection issue.
- UR-10027: Ultriscape / Alias set will no longer load before pressing the apply button.
- UR-10095: Ultrix / Fixed an issue where the port status would not update immediately.
- UR-10100: Fixed an issue where presets were not visible on single level matrix panels.
- UR-10106: Ultricore-TLX / Improved robustness of tieline routing when a device is not present.
- UR-10108: Ultrix-IPX / The UI now restricts connections to supported audio streams only.
- UR-10118: Improved workflow robustness when importing aliases from a spreadsheet.
- UR-10126: Ultricore-TLX / Added support for multiple IP audio streams.
- UR-10138: Corrected an issue where routing status was offset on Multibus soft panels.
- UR-10196: Ultricore-TLX / Fixed an issue where a user could not map NK SDI audio channels.
- UR-10279: Corrected an issue related to repeated message throttling that could impact third party clients.
- HYPCOD-1054: MOD-NDI / Resolved an issue with NDI stream detection.

APPLICATION NOTES
- Before upgrading to v6.4.0:
  - It is STRONGLY recommended to export a copy of the current system database.
  - Before upgrading to v6.x from previous versions, verify whether the Ultrix connection name in the Outgoing Connections section (refers to Connections page) is different from the Ultrix frame's name. If it is, rename the connection's name to match with the existing Ultrix frame name.

- o If the router was upgraded to v6.x and the user imported a v5.x database, check the Ultrix > Database > Configuration > Routing Devices page and fill any missing settings (e.g. the IP address may have defaulted to 0.0.0.0)
  - o Upgrading a redundant Ultricore-BCS system to 6.4.0 from a version prior to 6.x requires that the system be decoupled prior to upgrade. For redundant systems previously upgraded to 6.x, the standby system must be upgraded first.
- After an upgrade from 5.6, active ULTRIPROC-3DLUT channels might not preserve colorimetry/transfer function settings for the LUT. Switching the LUT selection to none, waiting 3 seconds, and then reselecting the LUT will permanently solve the problem.
- On first upgrade to v5.1.0 or newer, users must re-enable previously used external protocol servers (Services Setting).
- As of v5.2.0, the default SNMP community name for factory installation has been updated to *ultricore* from the less secure *public*. For stronger security, it is strongly recommended that users set their own community string.
- Ultrix SW Compatibility with SWR-SDPE blades.
  - o Ultrix Carbonite v9.1.6
  - o Ultrix Acuity v14.0e
- On ULTRIX-FR5, the cooling fans can remain at 100% even at lower temperatures. This will be fixed in an upcoming release.
- DashBoard v9.13.0 is required for the best user experience.
- To upgrade ULTRIX-MOD-NDI modules, you must first upgrade Ultrix Frame and then the ULTRIX-MODX-IO blade as usual. You must then reboot the frame before upgrading the software on the ULTRIX-MOD-NDI module(s). No reboot is required after the module upgrade.
- Starting at v4.8.X, the upgrades should be done in the following order:
  - o Upgrade Frame -- **DO NOT Reboot** when prompted by DashBoard after frame update.
  - o Upgrade all cards (including switcher cards) -- **DO NOT Reboot** when prompted by DashBoard in between card updates.
  - o After both FRAME and ALL CARDS have been successfully updated, power-cycle the frame.
- In the rare occurrence of a failed card upgrade, the user should power-cycle the Ultrix and perform the upgrade again.
- To upgrade from versions prior to 4.0.0, contact Ross Technical Support for assistance.

VERSION 6.3.5 (776C3C1A) LIMITED RELEASE 4/03/25

EQUIPMENT
- ULTRIX-FR1/FR2 (including -NS)
- ULTRIX-FR5 (including -NS)
  - UCCI Upgrade Required?   YES ☐ NO☒
- ULTRIX-FR12
- ULTRICORE-CC
- ULTRICORE-BCS
- ULTRICORE-OE

FEATURES & ENHANCEMENTS

- This is a maintenance release only

BUG FIXES

- UR-9517: Ultrix-IP / Resolved an issue where senders and receivers could be missing on a power cycle.
- UR-10725: Ultrix-IPX / Fixed an issue where video receivers on the same data path could become unresponsive.

APPLICATION NOTES
- Before upgrading to v6.3.5:
  - It is STRONGLY recommended to export a copy of the current system database.
- Before upgrading to v6.x from previous versions, verify whether the Ultrix connection name in the Outgoing Connections section (refers to Connections page) is different from the Ultrix frame's name. If it is, rename the connection's name to match with the existing Ultrix frame.
  - If the router was upgraded to v6.x and the user imported a v5.x database, check the Ultrix > Database > Configuration > Routing Devices page and fill any missing settings (e.g. the IP address may have defaulted to 0.0.0.0)
- Upgrading a redundant Ultricore-BCS system to 6.3.5 from a version prior to 6.x requires that the system be decoupled prior to upgrade. For redundant systems previously upgraded to 6.x, the standby system must be upgraded first.
- On first upgrade to v5.1.0 or newer, users must re-enable previously used external protocol servers (Services Setting).
- As of v5.2.0, the default SNMP community name for factory installation has been updated to *ultricore* from the less secure *public*. For stronger security, it is strongly recommended that users set their own community string.
- Ultrix SW Compatibility with SWR-SDPE blades.
  - Ultrix Carbonite v9.1.6
  - Ultrix Acuity v14.0c

- On ULTRIX-FR5, the cooling fans can remain at 100% even at lower temperatures. This will be fixed in an upcoming release.
- DashBoard v9.13.0 is required for the best user experience.
- To upgrade ULTRIX-MOD-NDI modules, you must first upgrade the Ultrix Frame and then the ULTRIX-MODX-IO blade as usual. You must then reboot the frame before upgrading the software on the ULTRIX-MOD-NDI module(s). No reboot is required after the module upgrade.
- Starting at v4.8.X, the upgrades should be done in the following order:
  o Upgrade Frame -- **DO NOT Reboot** when prompted by DashBoard after frame update.
  o Upgrade all cards (including switcher cards) -- **DO NOT Reboot** when prompted by DashBoard in between card updates.
  o After both FRAME and ALL CARDS have been successfully updated, power-cycle the frame.
- In the rare occurrence of a failed card upgrade, the user should power-cycle the Ultrix and perform the upgrade again.
- To upgrade from versions prior to 4.0.0, contact Ross Technical Support for assistance.

VERSION 6.3.4 (C8E5FBC) LIMITED RELEASE 3/17/25

EQUIPMENT
- ULTRIX-FR1/FR2 (including -NS)
- ULTRIX-FR5 (including -NS)
    - UCCI Upgrade Required?   YES ☐ NO☒
- ULTRIX-FR12
- ULTRICORE-CC
- ULTRICORE-BCS
- ULTRICORE-OE

FEATURES & ENHANCEMENTS

- Ultrix-IP and Ultrix-IPX / Users can now define the IGMP preferred mode, either SSM (Source Specific Multicast) or ASM (Any Source Multicast). Also, it is now possible to disable IGMP.

BUG FIXES

- UR-9081: Ultrix-IPX / Resolved an issue where it was not possible to establish more than 180 SSM IGMP join.

APPLICATION NOTES
- Before upgrading to v6.3.4:
    - It is STRONGLY recommended to export a copy of the current system database.
- Before upgrading to v6.x from previous versions, verify whether the Ultrix connection name in the Outgoing Connections section (refers to Connections page) is different from the Ultrix frame's name. If it is, rename the connection's name to match with the existing Ultrix frame.
    - If the router was upgraded to v6.x and the user imported a v5.x database, check the Ultrix > Database > Configuration > Routing Devices page and fill any missing settings (e.g. the IP address may have defaulted to 0.0.0.0)
- Upgrading a redundant Ultricore-BCS system to 6.3.4 from a version prior to 6.x requires that the system be decoupled prior to upgrade. For redundant systems previously upgraded to 6.x, the standby system must be upgraded first.
- On first upgrade to v5.1.0 or newer, users must re-enable previously used external protocol servers (Services Setting).
- As of v5.2.0, the default SNMP community name for factory installation has been updated to *ultricore* from the less secure *public*. For stronger security, it is strongly recommended that users set their own community string.
- Ultrix SW Compatibility with SWR-SDPE blades.
    - Ultrix Carbonite v9.1.6
    - Ultrix Acuity v14.0c

- On ULTRIX-FR5, the cooling fans can remain at 100% even at lower temperatures. This will be fixed in an upcoming release.
- DashBoard v9.13.0 is required for the best user experience.
- To upgrade ULTRIX-MOD-NDI modules, you must first upgrade Ultrix Frame and then the ULTRIX-MODX-IO blade as usual. You must then reboot the frame before upgrading the software on the ULTRIX-MOD-NDI module(s). No reboot is required after the module upgrade.
- Starting at v4.8.X, the upgrades should be done in the following order:
  o Upgrade Frame -- **DO NOT Reboot** when prompted by DashBoard after frame update.
  o Upgrade all cards (including switcher cards) -- **DO NOT Reboot** when prompted by DashBoard in between card updates.
  o After both FRAME and ALL CARDS have been successfully updated, power-cycle the frame.
- In the rare occurrence of a failed card upgrade, the user should power-cycle the Ultrix and perform the upgrade again.
- To upgrade from versions prior to 4.0.0, contact Ross Technical Support for assistance.

VERSION 6.3.2 (9E6D9D2C) LIMITED RELEASE 1/17/25

EQUIPMENT
- ULTRIX-FR1/FR2 (including -NS)
- ULTRIX-FR5 (including -NS)
  - UCCI Upgrade Required?   YES ☐ NO☒
- ULTRIX-FR12
- ULTRICORE-CC
- ULTRICORE-BCS
- ULTRICORE-OE

FEATURES & ENHANCEMENTS
- This is a maintenance release only.

BUG FIXES
- UR-8988: Ultrix-IPX / Corrected an issue where the output status indicated "no signal" when Ultriscape was enabled.
- UR-9195: Ultrix-IPX / Resolved an issue where a video receiver was not working when it is the only receiver enabled in a data path at boot up.
- UR-9520: Ultricore-IP / Fixed audio take errors that would occur when refreshing the I/Os of an IP-matrix.
- UR-9581: Ultricore-BCS / Fixed an issue that could interrupt log downloading from DashBoard.
- UR-9633: Ultricore-BCS / Improved the coordination of active/standby node state in redundant configurations.
- UR-9673: Ultrix-IPX / Fixed a card to frame communication issue that occurred post upgrade.
- UR-9675: Resolved an issue with Ultritouch Push Button panels where the list of preset routes did not display when the View button was clicked.
- UR-9751: Ultrix-IP / Resolved an issue where the session description protocol (SDP) with BT.2020 was not accepted.
- UR-9761: Ultricore-TLX / Resolved an issue where routes could fail in a system with tielines when making many database changes.
- UR-9768: Resolved an issue where aliases did not work properly if the sources/ destinations were reordered on the panel.
- UR-9801: Fixed an issue where the active salvo status failed to update.
- UR-9802: Resolved an issue where Aliases applied to Source ID 100 or higher did not work when switched to PiPs.
- UR-9809: Improved the salvo source/destination filter options to no longer be case sensitive.
- UR-9810: The salvo should only capture the selected destination routes for levels that are assigned to the soft panel (which was the behavior in version 5.x).
- UR-9811: Resolved an issue where capture salvo status was not storing routes correctly when the database IDs were not sequential.

- UR-9824: Ultrix / Resolved an issue that could cause routes to fail after a database change.
- UR-9841: Ultriscape / Fixed an issue where newly assigned head aliases would not take effect until the layout was reloaded.
- UR-9842: Ultriscape / Fixed an issue where UMD aliases reverted to the default values after a frame power cycle or reboot.
- UR-9845: Resolved an issue during database import where the device grid was missing.
- UR-9848: Corrected an issue where the user was unable to use the Rename tool in the Description column.
- UR-9857: Resolved an issue where users were unable to update existing salvos when capturing destinations (new salvos were created).
- UR-9868: Fixed an issue where capture Salvo status stored routes for all levels even if the destination channel mapping was unassigned.
- UR-9888: Corrected an issue where database menus were not automatically refreshed in Manual Save operating mode.
- UR-9891: Fixed an issue where deleting source rows could shift the routing status and cause Take errors.
- UR-9929: Ultrix Acuity / Fixed an issue that could cause a transition glitch.

APPLICATION NOTES
- Before upgrading to v6.3.2:
    - It is STRONGLY recommended to export a copy of the current system database.
- Before upgrading to v6.x from previous versions, verify whether the Ultrix connection name in the Outgoing Connections section (refers to Connections page) is different from the Ultrix frame's name. If it is, rename the connection's name to match with the existing Ultrix frame.
    - If the router was upgraded to v6.x and the user imported a v5.x database, check the Ultrix > Database > Configuration > Routing Devices page and fill any missing settings (e.g. the IP address may have defaulted to 0.0.0.0)
- Upgrading a redundant Ultricore-BCS system to 6.3.2 from a version prior to 6.x requires that the system be decoupled prior to upgrade. For redundant systems previously upgraded to 6.x, the standby system must be upgraded first.
- After an upgrade from 5.6, active ULTRIPROC-3DLUT channels might not preserve colorimetry/transfer function settings for the LUT. Switching the LUT selection to none, waiting 3 seconds, and then reselecting the LUT will permanently solve the problem.
- On first upgrade to v5.1.0 or newer, users must re-enable previously used external protocol servers (Services Setting).
- As of v5.2.0, the default SNMP community name for factory installation has been updated to *ultricore* from the less secure *public*. For stronger security, it is strongly recommended that users set their own community string.
- Ultrix SW Compatibility with SWR-SDPE blades.
    - Ultrix Carbonite v9.1.4
    - Ultrix Acuity v14.0e

- On ULTRIX-FR5, the cooling fans can remain at 100% even at lower temperatures. This will be fixed in an upcoming release.
- DashBoard v9.12.0 is required for the best user experience.
- To upgrade ULTRIX-MOD-NDI modules, you must first upgrade Ultrix Frame and then the ULTRIX-MODX-IO blade as usual. You must then reboot the frame before upgrading the software on the ULTRIX-MOD-NDI module(s). No reboot is required after the module upgrade.
- Starting at v4.8.X, the upgrades should be done in the following order:
    o Upgrade Frame -- **DO NOT Reboot** when prompted by DashBoard after frame update.
    o Upgrade all cards (including switcher cards) -- **DO NOT Reboot** when prompted by DashBoard in between card updates.
    o After both FRAME and ALL CARDS have been successfully updated, power-cycle the frame.
- In the rare occurrence of a failed card upgrade, the user should power-cycle the Ultrix and perform the upgrade again.
- To upgrade from versions prior to 4.0.0, contact Ross Technical Support for assistance.

VERSION 6.3.1 (B48C30EC) LIMITED RELEASE 12/16/24

EQUIPMENT
- ULTRIX-FR1/FR2 (including -NS)
- ULTRIX-FR5 (including -NS)
  - UCCI Upgrade Required?   YES ☐ NO☒
- ULTRIX-FR12
- ULTRICORE-CC
- ULTRICORE-BCS
- ULTRICORE-OE

FEATURES & ENHANCEMENTS
- Ultrix / Improves the Ultrix frame security robustness with general security hardening enhancements.

BUG FIXES
- UR-8245: Ultrix-FR12 / Fixed an IO card communication issue after performing a crosspoint replacement.
- UR-8707: Ultrix / Resolved an issue where the Ultriscape tree was not shown in Dashboard.
- UR-8790: Ultrix Acuity / Fixed a transition glitch that could occur in 2160p 23.98/24 video formats.
- UR-8877: Ultricore-CC / Added the UTC offset selection on the frame information pane.
- UR-8896: Corrected an issue where it was not possible to add an NK routing device connection without an NK router present.
- UR-9095: Resolved a duplicate names failure when a spreadsheet with a re-ordered list was imported.
- UR-9115: Resolved an issue where the Destination Follow table did not update in manual save mode.
- UR-9158: Resolved an issue where new tally IDs were not used upon database update.
- UR-9162: Ultrix-IP / Resolved an issue where the frame was missing NMOS device data.
- UR-9163: Ultricore-IP / Resolved an issue where the Ultricore-BCS RDS could get stuck when discovering a device.
- UR-9211: The virtual keyboard is now accessible for login when using an Ultricore Profile on an Ultritouch.
- UR-9225: Ultricore-IP / Resolved an issue where the discovery process could encounter a segmentation fault.
- UR-9285: Resolved an issue where the AUX C/D port(s) were not present in the list of configurable AUX ports as well as the database port list.
- UR-9300: Ultrix-IP / Corrected an issue to allow logs to rotate.
- UR-9326: Ultrix-FR12 / Resolved an issue that could cause upgrade failure.
- UR-9335: Ultricore-BCS / Fixed an NMOS issue that could cause the RDS to lose Ultrix senders/receivers.

- UR-9339: Ultricore-BCS / Resolved an issue that could cause the third-party interface to restart.
- UR-9341: Ultricore-BCS / Resolved an issue where certain logs were inaccessible from the Web UI or DashBoard.
- UR-9342: Ultriscape / Fixed an issue where changing layout assignment could cause Tally UMD and tally state to clear.
- UR-9343: Ultriscape / Resolved an issue where a Tally UMD was replaced with the database source name when a PiP route was changed.
- UR-9354: Ultricore-BCS / Improved the service management robustness.
- UR-9366: Ultrix / Resolved a memory leak issue.
- UR-9368: Ultrix / Fixed a Rippaview panic that could occur when enabling NTP.
- UR-9373: Ultriscape / Changing the PiP route will no longer cause the PiP tally to clear and revert to the source's database label.
- UR-9388: Ultrix-IP and Ultrix-IPX / Resolved an issue where the senders/receivers UI did not show all the IP blade slots when a frame had more than 1 blade inserted in the frame.
- UR-9426: Ultrix-IP and Ultrix-IPX / Resolved an issue where the PTP settings could revert.
- UR-9432: Fixed an issue where periods were not supported in level names.
- UR-9468: Ultriscape / Resolved an issue that prevented saving PiP templates.
- UR-9479: Corrected the Probel SW-P-08 crosspoint tally messages handling when source number value exceeds ID 1023.
- UR-9521: Resolved an issue where deleted salvos could still appear on soft panels.
- UR-9568: Fixed an issue after importing IP Media Config where the status message could get cut off.
- UR-9616: Ultricore-BCS / Fixed an issue where the Cat Index navigation arrows did not work on the Ultritouch PB soft panel.

APPLICATION NOTES
- Before upgrading to v6.3.1:
  - It is STRONGLY recommended to export a copy of the current system database.
  - Before upgrading to v6.x from previous versions, verify whether the Ultrix connection name in the Outgoing Connections section (refers to Connections page) is different from the Ultrix frame's name. If it is, rename the connection's name to match with the existing Ultrix frame name.
  - If the router was upgraded to v6.x and the user imported a v5.x database, check the Ultrix > Database > Configuration > Routing Devices page and fill any missing settings (e.g. the IP address may have defaulted to 0.0.0.0)
  - Upgrading a redundant Ultricore-BCS system to 6.3.1 from a version prior to 6.x requires that the system be decoupled prior to upgrade. For redundant systems previously upgraded to 6.x, the standby system must be upgraded first.
- After an upgrade from 5.6, active ULTRIPROC-3DLUT channels might not preserve colorimetry/transfer function settings for the LUT. Switching the LUT selection to none waiting 3 second and reselecting the LUT will permanently solve the problem.

- On first upgrade to v5.1.0 or newer, users must re-enable previously used external protocol servers (Services Setting).
- As of v5.2.0, the default SNMP community name for factory installation has been updated to *ultricore* from the less secure *public*. For stronger security, it is strongly recommended that users set their own community string.
- Ultrix SW Compatibility with SWR-SDPE blades.
    - Ultrix Carbonite v9.1.0
    - Ultrix Acuity v14.0e
- On ULTRIX-FR5, the cooling fans can remain at 100% even at lower temperatures. This will be fixed in an upcoming release.
- DashBoard v9.12.0 is required for the best user experience.
- To upgrade ULTRIX-MOD-NDI modules, you must first upgrade Ultrix Frame and then the ULTRIX-MODX-IO blade as usual. You must then reboot the frame before upgrading the software on the ULTRIX-MOD-NDI module(s).
- No reboot is required after the module upgrade
- Starting at v4.8.X, the upgrades should be done in the following order:
    - Upgrade Frame -- **DO NOT Reboot** when prompted by DashBoard after frame update.
    - Upgrade all cards (including switcher cards) -- **DO NOT Reboot** when prompted by DashBoard in between card updates.
    - After both FRAME and ALL CARDS have been successfully updated, power-cycle the frame.
- In the rare occurrence of a failed card upgrade, the user should power-cycle the Ultrix and perform the upgrade again.
- To upgrade from versions prior to 4.0.0, contact Ross Technical Support for assistance.

VERSION 6.3.0 (90895D47) 11/19/24

EQUIPMENT
- ULTRIX-FR1/FR2 (including -NS)
- ULTRIX-FR5 (including -NS)
    - UCCI Upgrade Required?   YES ☐ NO☒
- ULTRIX-FR12
- ULTRICORE-CC
- ULTRICORE-BCS
- ULTRICORE-OE

FEATURES & ENHANCEMENTS

- ULTRIX-MODX-IO / Supports the introduction of the new ULTRIX-MOD-NDI module featuring NDI I/O of up to 4xNDI senders and 4xNDI receivers with resolution of up to 1080p60 via the 1GbE RJ45 interface.
- As a security enhancement, to protect against unauthorized access, a new user control has been added to temporarily enable upgrades and support access for Ultricore-BCS. After upgrading to v6.3.0, and any subsequent reboot, this setting will revert to the default of being disabled.
- Added a new OGP parameter to report the alarm states of the input signals used in Ultriscape Multiviewer Heads.
- Added an option to filter the license port assignments for installed I/O blades only. Also, a button was added to unassign all license port assignments from any removed I/O blades.
- The Ultrix > Incoming Connections tab now reports the connected Ultricore CC/BCS.

BUG FIXES

- UR-7890: Ultriscape / Resolved an issue where the upper captions were not displayed.
- UR-8369: Ultriscape / Fixed an issue that could report false video LoS/freeze alarms.
- UR-8826: Ultriscape / Fixed an issue where routing to the Multiviewer Head output would change the video in PiP C.
- UR-9102: Ultrix-IP and Ultrix-IPX / Corrected the legacy database import to include the child IP audio channels.
- UR-9121: Fixed the legacy database import to include outbound TSL UMD connections.
- UR-9139: Increased the length of the dropdown list for port channel assignment to make the AUX channels 50-64 more easily accessible.
- UR-9158: Ultriscape / Resolved an issue where a Tally ID change was not immediately recognized.
- UR-9194: Ultrix-IP and Ultrix-IPX / Corrected a legacy database import issue that created multiple IP matrix connections in the Routing Devices interface.

- UR-9207: Improved the tieline management to reuse existing virtual source instead of creating a new tieline.
- UR-9217: Corrected a legacy database import issue where destinations could be deleted if there were duplicate entries.
- UR-9237: Resolved an issue that could lead to DashBoard connection failures after upgrade.
- UR-9255: Resolved an issue where the lock/protect owner was not reported when hovering over the lock icon.

APPLICATION NOTES

- Before upgrading to v6.3.0:
    - It is STRONGLY recommended to export a copy of the current system database.
    - Before upgrading to v6.x from previous versions, verify whether the Ultrix connection name in the Outgoing Connections section (refers to Connections page) is different from the Ultrix frame's name. If it is, rename the connection's name to match with the existing Ultrix frame name.
    - If the router was upgraded to v6.x and the user imported a v5.x database, check the Ultrix > Database > Configuration > Routing Devices page and fill any missing settings (e.g. the IP address may have defaulted to 0.0.0.0)
    - Upgrading a redundant Ultricore-BCS system to 6.3.0 from a version prior to 6.x requires that the system be decoupled prior to upgrade. For redundant systems previously upgraded to 6.x, the standby system must be upgraded first.
- After an upgrade from 5.6, active ULTRIPROC-3DLUT channels might not preserve colorimetry/transfer function settings for the LUT. Switching the LUT selection to none waiting 3 second and reselecting the LUT will permanently solve the problem.
- On first upgrade to v5.1.0 or newer, users must re-enable previously used external protocol servers (Services Setting).
- As of v5.2.0, the default SNMP community name for factory installation has been updated to *ultricore* from the less secure *public*. For stronger security, it is strongly recommended that users set their own community string.
- Ultrix SW Compatibility with SWR-SDPE blades.
    - Ultrix Carbonite v9.1.0
    - Ultrix Acuity v14.0c
- On ULTRIX-FR5, the cooling fans can remain at 100% even at lower temperatures. This will be fixed in an upcoming release.
- DashBoard v9.10.0 is required for the best user experience.
- To upgrade ULTRIX-MOD-NDI modules, you must first upgrade Ultrix Frame and then the ULTRIX-MODX-IO blade as usual. You must then reboot the frame before upgrading the software on the ULTRIX-MOD-NDI module(s).
- No reboot is required after the module upgrade
- Starting in v4.8.X, the upgrades should be done in the following order:
    - Upgrade Frame -- **DO NOT Reboot** when prompted by DashBoard after frame update.

- o Upgrade all cards (including switcher cards) -- **DO NOT Reboot** when prompted by DashBoard in between card updates.
  - o After both FRAME and ALL CARDS have been successfully updated, power-cycle the frame.
- In the rare occurrence of a failed card upgrade, the user should power-cycle the Ultrix and perform the upgrade again.
- To upgrade from versions prior to 4.0.0, contact Ross Technical Support for assistance.

VERSION 6.2.0 (52AF1D5D) 10/25/24

EQUIPMENT
- ULTRIX-FR1/FR2 (including -NS)
- ULTRIX-FR5 (including -NS)
  - UCCI Upgrade Required?   YES ☐ NO☒
- ULTRIX-FR12
- ULTRICORE-CC
- ULTRICORE-BCS
- ULTRICORE-OE

FEATURES & ENHANCEMENTS

- The following enhancements are included for ULTRIX-IPX-IO:
  - Increases ST2110-20 support from 8 to 16 UHD Redundant Video Streams.
  - Now supports Network Timing Protocol (NTP) for system clock reference.
  - Now supports multiple audio streams (up to 4) per video stream when used with a stand-alone Ultrix. In an upcoming release, multiple audio streams will also be supported when controlled by an Ultricore-BCS.
- The following enhancements are included for ULTRIX-MODX-IO:
  - Module temperature information is now displayed in the DashBoard 'IO Module' view.
  - The Ultrix Fan Speed is now automatically adjusted based on module temperature for optimal operation.
- Provides the capability to define a soft panel with the ability to free/override a destination previously locked/protected by another panel.

BUG FIXES

- UR-6191: Ultrix-IPX / Fixed a video glitch that could occur when switching UHD streams.
- UR-8748: Ultrix-IPX / Resolved false "No packets being received" alarm for receivers.
- UR-9045: Ultrix-IPX / DNS setting changes are now correctly saved in the resolv.conf file.
- UR-9076: Ultrix / Fixed an issue that could cause the loss of DashBoard connection when connecting via third-party application to OGP.
- UR-9104: Ultricore BCS / Resolved an issue with imported legacy databases that could cause the system to be unable to route.
- UR-9105: Ultrix / Fixed a memory leak issue that could affect systems with 6.x or newer.

APPLICATION NOTES

- Before upgrading to v6.2.0:
    - It is STRONGLY recommended to export a copy of the current system database.
    - Before upgrading to v6.x from previous versions, verify whether the Ultrix connection name in the Outgoing Connections section (refers to Connections page) is different from the Ultrix frame's name. If it is, rename the connection's name to match with the existing Ultrix frame name.
    - If the router was upgraded to v6.x and the user imported a v5.x database, check the Ultrix > Database > Configuration > Routing Devices page and fill any missing settings (e.g. the IP address may have defaulted to 0.0.0.0)
    - Upgrading a redundant Ultricore-BCS system to 6.2.0 from a version prior to 6.x requires that the system be decoupled prior to upgrade. For redundant systems previously upgraded to 6.x, the standby system must be upgraded first.
- After an upgrade from 5.6, active ULTRIPROC-3DLUT channels might not preserve colorimetry/transfer function settings for the LUT. Switching the LUT selection to none waiting 3 second and reselecting the LUT will permanently solve the problem.
- On first upgrade to v5.1.0 or newer, users must re-enable previously used external protocol servers (Services Setting).
- As of v5.2.0, the default SNMP community name for factory installation has been updated to *ultricore* from the less secure *public*. For stronger security, it is strongly recommended that users set their own community string.
- Ultrix SW Compatibility with SWR-SDPE blades.
    - Ultrix Carbonite v9.1.0
    - Ultrix Acuity v14.0c
- On ULTRIX-FR5, the cooling fans can remain at 100% even at lower temperatures. This will be fixed in an upcoming release.
- DashBoard v9.10.3 is required for the best user experience.
- Starting in v4.8.X, the upgrades should be done in the following order:
    - Upgrade Frame -- **DO NOT Reboot** when prompted by DashBoard after frame update.
    - Upgrade all cards (including switcher cards) -- **DO NOT Reboot** when prompted by DashBoard in between card updates.
    - After both FRAME and ALL CARDS have been successfully updated, power-cycle the frame.
- In the rare occurrence of a failed card upgrade, the user should power-cycle the Ultrix and perform the upgrade again.
- To upgrade from versions prior to 4.0.0, contact Ross Technical Support for assistance.

VERSION 6.1.1 (0392D74C) LIMITED RELEASE 10/10/24

EQUIPMENT
- ULTRIX-FR1/FR2 (including -NS)
- ULTRIX-FR5 (including -NS)
    - UCCI Upgrade Required?   YES ☐ NO☒
- ULTRIX-FR12
- ULTRICORE-CC
- ULTRICORE-BCS
- ULTRICORE-OE

FEATURES & ENHANCEMENTS

- This is a maintenance release only.

BUG FIXES

- UR-4940: Ultriscape / Resolved an issue where changing ports in the Sources/Destinations table could cause Multiviewer PiPs to go black.
- UR-8984: Fixed an issue where the Ultritouch Push Button Operations window title bar did not display the source names.
- UR-8986: Ultricore-BCS / Resolved an issue where it was not possible to establish serial connection.
- UR-9008: In version 6.x and newer, TSL tally messages were using AUD1 as the tally level instead of VID.
- UR-9035: Ultricore-BCS / In version 6.x and newer, an issue could occur where redundant nodes were unable to synchronize changes.

APPLICATION NOTES
- Before upgrading to v6.1.1,
    - It is STRONGLY recommended to export a copy of the current system database.
    - Before upgrading to v6.x from previous versions, verify whether the Ultrix connection name in the Outgoing Connections section (refers to Connections page) is different from the Ultrix frame's name. If it is, rename the connection's name to match with the existing Ultrix frame name.
    - If the router was upgraded to v6.x and the user imported a v5.x database, check the Ultrix > Database > Configuration > Routing Devices page and fill any missing settings (e.g. the IP address may have defaulted to 0.0.0.0)
    - Upgrading a redundant Ultricore-BCS system to 6.1.1 from a version prior to 6.x requires that the system be decoupled prior to upgrade. For redundant systems previously upgraded to 6.x, the standby system must be upgraded first.
- After an upgrade from 5.6, active ULTRIPROC-3DLUT channels might not preserve colorimetry/transfer function settings for the LUT. Switching the LUT selection to none waiting 3 second and reselecting the LUT will permanently solve the problem.

- On first upgrade to v5.1.0 or newer, users must re-enable previously used external protocol servers (Services Setting).
- As of v5.2.0, the default SNMP community name for factory installation has been updated to *ultricore* from the less secure *public*. For stronger security, it is strongly recommended that users set their own community string.
- Ultrix SW Compatibility with SWR-SDPE blades.
    - Ultrix Carbonite v9.0.0
    - Ultrix Acuity v14.0b
- On ULTRIX-FR5, the cooling fans can remain at 100% even at lower temperatures. This will be fixed in an upcoming release.
- DashBoard v9.10.0 is required for the best user experience.
- Starting in v4.8.X, the upgrades should be done in the following order:
    - Upgrade Frame -- **DO NOT Reboot** when prompted by DashBoard after frame update.
    - Upgrade all cards (including switcher cards) -- **DO NOT Reboot** when prompted by DashBoard in between card updates.
    - After both FRAME and ALL CARDS have been successfully updated, power-cycle the frame.
- In the rare occurrence of a failed card upgrade, the user should power-cycle the Ultrix and perform the upgrade again.
- To upgrade from versions prior to 4.0.0, contact Ross Technical Support for assistance.

VERSION 6.1.0 (AC4A270A) 10/03/24

EQUIPMENT
- ULTRIX-FR1/FR2 (including -NS)
- ULTRIX-FR5 (including -NS)
    - UCCI Upgrade Required?   YES ☐ NO☒
- ULTRIX-FR12
- ULTRICORE-CC
- ULTRICORE-BCS
- ULTRICORE-OE

FEATURES & ENHANCEMENTS

- General availability of the improved workflow for database configuration and updated user interface design. See release notes for v6.0.0 for complete details.
- Initial launch of Ultricore-Tally, a full-featured and versatile tally control and management solution. Ultricore-Tally is a licensed software feature that is installed on Ultricore-BCS either as a standalone solution or integrated with other Ultricore functionalities to deliver a rich control experience.
- Initial launch of a third input PiP Scaler for Ultriscape. This additional PiP is supported on the ULTRIX-HDX-IO and ULTRIX-MODX-IO blades.
- The following ULTRIX-IP and ULTRIX-IPX-IO enhancements are included:
    - NMOS IS-10 hostname and port can now be configured by the user.
    - NMOS IS-10 config page now has an option to define if BCP002 natural grouping should be used on the device.
    - Multicast and unicast configurations can now be saved and exported from DashBoard.
    - The default Timing Mode is now set to Frame Sync. Also, the Link Offset will only be available when selecting the Low Latency option.
    - Removes the NMOS management port from the list of external access points when a slot has gateways set to the media interfaces.
    - The sender/receiver sessions configuration workflow was streamlined.
- Enhancements for ULTRIX-IPX-IO:
    - NMOS IS-10 config page now includes support for ACME automated certificates exchange.
    - Level A/AX 1 ms audio packet are now supported.
    - ~~Support for 100G QSFP28 Direct Attach Cable (DAC) is now available.~~(since ~~deprecated~~)
- ULTRIX-MODX-IO now provides an IO Module View in the DashBoard UI for configuring and monitoring MODX and its modules.
- ULTRIX-MODX-IO module SFP statistics are now provided to monitor MOD-SFP modules including voltage, temperature, wavelength, and vendor details.
- Added support for Role Based Access Control (RBAC) of devices (Ultrix or Ultricore) to manage who is allowed to open the user interface from a DashBoard client. Once RBAC is

enabled, the device is locked and its nodes in the DashBoard Tree View are hidden. A user must then enter a password before access is granted to the device and its nodes are displayed in the tree view. (Note: RBAC works independently of but can be used in conjunction with user profiles.)
- The following user interface and database configuration workflow improvements are included:
  - Panel editor "assigned" list (level, dest, src) allows alphabet/database sorting.
  - Source/destination editor allows show/hide table columns.
  - Soft panel page automatically selects the first assigned alias set (if available).
  - Source/destination editor allows cell to autocomplete for channel assignment.
  - Push button soft panels scroll by fixed row instead of by individual items.
- Alias support for source and destination names when used with third-party protocols is now supported.
- Adds an emulated cross point matrix to the routing device page to simulate physical devices for training and testing.

Bug Fixes

- UR-7518: Ultrix-IPX / Now compatible with 100G QSFP28 power classes 5 to 7.
- UR-7877: Ultrix-IP and Ultrix-IPX / Addressed an issue that could lead to the loss of RDS connection via DNS-SD.
- UR-8124: Ultrix-IP and Ultrix-IPX / Resolved an issue where the NMOS menu was not loading when selected.
- UR-8366: Ultrix-IP and Ultrix-IPX / For NMOS IS-10, IS-04 URL generation now correctly uses the hostname instead of the interface IP.
- UR-8670: Ultrix-IPX / Fixed a card to frame communication issue.
- UR-8779: Ultrix-IPX / Resolved an issue where the NMOS node stopped running.
- UR-8803: Ultrix / Addressed an issue where on rare occasions, an Ultrix router process crash could occur.

APPLICATION NOTES
- Before upgrading to v6.1.0,
  - It is STRONGLY recommended to export a copy of the current system database.
  - Before upgrading to v6.x from previous versions, verify whether the Ultrix connection name in the Outgoing Connections section (refers to Connections page) is different from the Ultrix frame's name. If it is, rename the connection's name to match with the existing Ultrix frame name.
  - If the router was upgraded to v6.x and the user imported a v5.x database, check the Ultrix > Database > Configuration > Routing Devices page and fill any missing settings (e.g. the IP address may have defaulted to 0.0.0.0)
  - Upgrading a redundant Ultricore-BCS system to 6.1.0 from a version prior to 6.x requires that the system be decoupled prior to upgrade. For redundant systems previously upgraded to 6.x, the standby system must be upgraded first.

- After an upgrade from 5.6, active ULTRIPROC-3DLUT channels might not preserve colorimetry/transfer function settings for the LUT. Switching the LUT selection to none waiting 3 second and reselecting the LUT will permanently solve the problem.
- On first upgrade to v5.1.0 or newer, users must re-enable previously used external protocol servers (Services Setting).
- As of v5.2.0, the default SNMP community name for factory installation has been updated to *ultricore* from the less secure *public*. For stronger security, it is strongly recommended that users set their own community string.
- Ultrix SW Compatibility with SWR-SDPE blades.
    - Ultrix Carbonite v9.0.0
    - Ultrix Acuity v14.0b
- On ULTRIX-FR5, the cooling fans can remain at 100% even at lower temperatures. This will be fixed in an upcoming release.
- DashBoard v9.10.0 is required for the best user experience.
- Starting in v4.8.X, the upgrades should be done in the following order:
    - Upgrade Frame -- **DO NOT Reboot** when prompted by DashBoard after frame update.
    - Upgrade all cards (including switcher cards) -- **DO NOT Reboot** when prompted by DashBoard in between card updates.
    - After both FRAME and ALL CARDS have been successfully updated, power-cycle the frame.
- In the rare occurrence of a failed card upgrade, the user should power-cycle the Ultrix and perform the upgrade again.
- To upgrade from versions prior to 4.0.0, contact Ross Technical Support for assistance.

VERSION 6.0.1 (37B654AB) LIMITED RELEASE 8/21/24

EQUIPMENT
- ULTRIX-FR1/FR2 (including -NS)
- ULTRIX-FR5 (including -NS)
  - UCCI Upgrade Required?   YES ☐ Recommended ☒ NO☐
- ULTRIX-FR12
- ULTRICORE-CC
- ULTRICORE-BCS
- ULTRICORE-OE

FEATURES & ENHANCEMENTS
- Ultricore BCS / Addressed a possible security vulnerability (CVE-2024-21147).

BUG FIXES
- General improvements related to the implementation of the new database configuration and management tools in 6.0.0.

APPLICATION NOTES
- Before upgrading to v6.0.1, it is STRONGLY recommended to export a copy of the current system database.
- **FOR ULTRIX-FR5, when upgrading from a version prior to v5.3.0, it is recommended that the UCCI also be upgraded to the latest version**:
  - The UCCI cards must be upgraded first, including any service spares.
  - UCCI cards must be running versions v4.10 or later prior to upgrade. To upgrade from a prior version, please contact Ross Technical Support for assistance.
  - For UCCI running UCCI v4.10 or greater, the web interface for UCCI cards uses ports 50120 for the primary card, and 50130 for the secondary card accessible via a browser as follows:
    - Primary UCCI: http://<Ultrix IP Address>:50120
    - Secondary UCCI: http://<Ultrix IP Address>:50130
- On first upgrade to v5.1.0 or newer, users must re-enable previously used external protocol servers (Services Setting).
- As of v5.2.0, the default SNMP community name for factory installation has been updated to *ultricore* from the less secure *public*. For stronger security, it is strongly recommended that users set their own community string.
- For systems with Ultrix Acuity, the *Restart Ultrix* control in the Acuity GUI may fail. Instead, the user should power-cycle the Ultrix from the Ultrix System Status menu in DashBoard.
- Ultrix SW Compatibility with SWR-SDPE blades.
  - Ultrix Carbonite v9.0.0
  - Ultrix Acuity v14.0a
- On ULTRIX-FR5, the cooling fans can remain at 100% even at lower temperatures. This will be fixed in an upcoming release.
- DashBoard v9.10 is required for the best user experience.

- Starting in v4.8.X, the I/O board firmware (IP, IPX, HDX, and MODX modules) is no longer included within the frame upgrade files. The frame and I/O modules must be upgraded independently of each other.
  - o Upgrade Frame -- **DO NOT Reboot** when prompted by DashBoard after frame update.
  - o Upgrade all cards (including switcher cards) -- **DO NOT Reboot** when prompted by DashBoard in between card updates.
  - o After both FRAME and ALL CARDS have been successfully updated, power-cycle the frame.
- In the rare occurrence of a failed card upgrade, the user should power-cycle the Ultrix and perform the upgrade again.
- To upgrade from versions prior to 4.0.0, contact Ross Technical Support for assistance.

VERSION 6.0.0 (418F2BB4) LIMITED RELEASE 6/27/24

EQUIPMENT
- ULTRIX-FR1/FR2 (including -NS)
- ULTRIX-FR5
  - UCCI Upgrade Required?   YES ☐ Recommended ☒ NO☐
- ULTRIX-FR12
- ULTRICORE-CC
- ULTRICORE-BCS
- ULTRICORE-OE

FEATURES & ENHANCEMENTS
- Improves the database configuration workflow with an updated user interface design.
- Adds alias support for source and destination names:
  - Allows up to 16 unique alias sets for use with RCPs and soft panels.
  - RCP panels require v1.76 firmware update to use alias name sets.
- Supports import from/export to Microsoft® Excel® spreadsheet files.
- Adds snapshots that facilitate state save/rollback/undo during configuration.
- Provides "Protected" editing mode for source and destination label updates.
- Supports direct frame-to-frame database transfers (export through the offline editor is not required).
- Improves handling of larger database configurations.
- Improves the table sorting, filtering, and fill tools.

BUG FIXES
- Improves the robustness of the database configuration and management tools.

APPLICATION NOTES
- Before upgrading to v6.0.0, it is STRONGLY recommended to export a copy of the current system database.
- **FOR ULTRIX-FR5, when upgrading from a version prior to v5.3.0, it is recommended that the UCCI also be upgraded to the latest version**:
  - The UCCI cards must be upgraded first, including any service spares.
  - UCCI cards must be running versions v4.10 or later prior to upgrade. To upgrade from a prior version, please contact Ross Technical Support for assistance.
  - For UCCI running UCCI v4.10 or greater, the web interface for UCCI cards uses ports 50120 for the primary card, and 50130 for the secondary card accessible via a browser as follows:
    - Primary UCCI: http://<Ultrix IP Address>:50120
    - Secondary UCCI: http://<Ultrix IP Address>:50130
- On first upgrade to v5.1.0 or newer, users must re-enable previously used external protocol servers (Services Setting).

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- As of v5.2.0, the default SNMP community name for factory installation has been updated to *ultricore* from the less secure *public*. For stronger security, it is strongly recommended that users set their own community string.
- For systems with Ultrix Acuity, the *Restart Ultrix* control in the Acuity GUI may fail. Instead, the user should power-cycle the Ultrix from the Ultrix System Status menu in DashBoard.
- Ultrix SW Compatibility with SWR-SDPE blades.
  - Ultrix Carbonite v7.1.13
  - Ultrix Acuity v13.0e
- On ULTRIX-FR5, the cooling fans can remain at 100% even at lower temperatures. This will be fixed in an upcoming release.
- DashBoard v9.10 is required for the best user experience.
- Starting in v4.8.X, the I/O board firmware (IP, IPX, HDX, and MODX modules) is no longer included within the frame upgrade files. The frame and I/O modules must be upgraded independently of each other.
  - Upgrade Frame -- **DO NOT Reboot** when prompted by DashBoard after frame update.
  - Upgrade all cards (including switcher cards) -- **DO NOT Reboot** when prompted by DashBoard in between card updates.
  - After both FRAME and ALL CARDS have been successfully updated, power-cycle the frame.
- In the rare occurrence of a failed card upgrade, the user should power-cycle the Ultrix and perform the upgrade again.
- To upgrade from versions prior to 4.0.0, contact Ross Technical Support for assistance.

VERSION 5.6.5 (8160E026, CBC02CB0 FOR FR12) LIMITED RELEASE 05/29/25

EQUIPMENT
- ULTRIX-FR1/FR2 (including -NS)
- ULTRIX-FR5 (including -NS)
- UCCI Upgrade Required?   YES ☐ NO☒
- ULTRIX-FR12
- ULTRICORE-CC
- ULTRICORE-BCS
- ULTRICORE-OE

FEATURES & ENHANCEMENTS

- Increased the number of concurrent GVG native protocol clients from 40 to 80.

BUG FIXES

- UR-6598: Improved management of user defined parameters when replacing an SD card.
- UR-7890: Ultriscape / Resolved an issue where the upper captions were not displayed.
- UR-8369: Ultriscape / Fixed an issue that could report false video LoS/freeze alarms.
- UR-8372: Acuity / Improves the robustness of the switcher crosspoint control.
- UR-8759: Ultrix-FR5 and Ultrix-FR12 / Resolved an issue where on a rare occurrence, a frame could become unresponsive.
- UR-9285: Resolved an issue where the AUX C/D port(s) were not present in the list of configurable AUX ports as well as the database port list.
- UR-9675: Resolved an issue with Ultritouch Push Button panels where the list of preset routes did not display when the View button was clicked.
- UR-11246: Addressed an issue where machine control mode would not perform the reciprocal switch.

APPLICATION NOTES
- On first upgrade to v5.1.0 or newer, users must re-enable previously used external protocol servers (Services Setting).
- As of v5.2.0, the default SNMP community name for factory installation has been updated to *ultricore* from the less secure *public*. For stronger security, it is strongly recommended that users set their own community string.
- For systems with Ultrix Acuity, the *Restart Ultrix* control in the Acuity GUI may fail. Instead, the user should power-cycle the Ultrix from the Ultrix > System Status tab in DashBoard.
- Ultrix SW Compatibility with SWR-SDPE blades.
    - Ultrix Carbonite v9.1.10
    - Ultrix Acuity v14.0g

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- On ULTRIX-FR5, the cooling fans can remain at 100% even at lower temperatures. This will be fixed in an upcoming release.
- DashBoard v9.14 is required for the best user experience.
- Starting in v4.8.X, the I/O board firmware (IP, IPX, HDX, and MODX modules) is no longer included within the frame upgrade files. The frame and I/O modules must be upgraded independently of each other.
  - Upgrade all cards (including switcher cards) -- **DO NOT Reboot** when prompted by DashBoard in between card updates.
  - Upgrade Frame -- **DO NOT Reboot** when prompted by DashBoard after frame update.
  - After both FRAME and ALL CARDS have been successfully updated, power-cycle the frame.
- In the rare occurrence of a failed card upgrade, the user should power-cycle the Ultrix and perform the upgrade again.
- To upgrade from versions prior to v4.0.0, contact Ross Technical Support for assistance.

VERSION 5.6.4 (FD41CC66, C7C5D228 FOR FR12) LIMITED RELEASE 11/06/24

EQUIPMENT
- ULTRIX-FR1/FR2 (including -NS)
- ULTRIX-FR5 (including -NS)
- UCCI Upgrade Required?   YES ☐ NO☒
- ULTRIX-FR12
- ULTRICORE-CC
- ULTRICORE-BCS
- ULTRICORE-OE

FEATURES & ENHANCEMENTS

- This is a maintenance release only.

BUG FIXES

- UR-4940: Ultriscape / Resolved an issue where changing ports in the Sources/Destinations table could cause Multiviewer PiPs to go black.
- UR-8585: Ultrix-IPX / Resolved an issue where closed caption errors could occur in low latency mode.
- UR-8785: Ultrix-IPX / Fixed an issue that could cause receivers to lock-up when the signal format was switched on the sender.
- UR-8986: Ultricore-BCS / Resolved an issue where it was not possible to establish serial connection.
- UR-9045: Ultrix-IPX / DNS setting changes are now correctly saved in the resolv.conf file.
- UR-9071: Ultricore IP / Resolved an issue where Ultricore IP was not properly reporting the device IP senders via NMOS on the Ultricore-BCS after a frame power cycle.

APPLICATION NOTES
- On first upgrade to v5.1.0 or newer, users must re-enable previously used external protocol servers (Services Setting).
- As of v5.2.0, the default SNMP community name for factory installation has been updated to *ultricore* from the less secure *public*. For stronger security, it is strongly recommended that users set their own community string.
- For systems with Ultrix Acuity, the *Restart Ultrix* control in the Acuity GUI may fail. Instead, the user should power-cycle the Ultrix from the Ultrix > System Status tab in DashBoard.
- Ultrix SW Compatibility with SWR-SDPE blades.
    - Ultrix Carbonite v9.1.0
    - Ultrix Acuity v14.0c
- On ULTRIX-FR5, the cooling fans can remain at 100% even at lower temperatures. This will be fixed in an upcoming release.

- DashBoard v9.10.3 is required for the best user experience.
- Starting in v4.8.X, the I/O board firmware (IP, IPX, HDX, and MODX modules) is no longer included within the frame upgrade files. The frame and I/O modules must be upgraded independently of each other.
  - Upgrade Frame -- **DO NOT Reboot** when prompted by DashBoard after frame update.
  - Upgrade all cards (including switcher cards) -- **DO NOT Reboot** when prompted by DashBoard in between card updates.
  - After both FRAME and ALL CARDS have been successfully updated, power-cycle the frame.
- In the rare occurrence of a failed card upgrade, the user should power-cycle the Ultrix and perform the upgrade again.
- To upgrade from versions prior to v4.0.0, contact Ross Technical Support for assistance.

VERSION 5.6.3 (0F537F66, F09DB424 FOR FR12) LIMITED RELEASE 09/18/24

EQUIPMENT
- ULTRIX-FR1/FR2 (including -NS)
- ULTRIX-FR5 (including -NS)
- UCCI Upgrade Required?   YES ☐ NO☒
- ULTRIX-FR12
- ULTRICORE-CC
- ULTRICORE-BCS
- ULTRICORE-OE

FEATURES & ENHANCEMENTS

- This is a maintenance release only.

BUG FIXES

- UR-7209: Ultrix / Fixed an issue that could occur after upgrading from older versions.
- UR-7983: Ultrix Acuity / Addressed an issue that could cause a transition glitch.
- UR-8441: Ultriscape / Resolved an issue where a layout assigned to a head could not be changed.
- UR-8454: Ultriscape / Fixed an issue where Tally UMD could be blank when using overwrite mode.
- UR-8507: Ultrix / Addressed an issue where on rare occasions, an Ultrix router process crash could occur.

APPLICATION NOTES
- On first upgrade to v5.1.0 or newer, users must re-enable previously used external protocol servers (Services Setting).
- As of v5.2.0, the default SNMP community name for factory installation has been updated to *ultricore* from the less secure *public*. For stronger security, it is strongly recommended that users set their own community string.
- For systems with Ultrix Acuity, the *Restart Ultrix* control in the Acuity GUI may fail. Instead, the user should power-cycle the Ultrix from the Ultrix > System Status tab in DashBoard.
- Ultrix SW Compatibility with SWR-SDPE blades.
  - Ultrix Carbonite v9.0.0
  - Ultrix Acuity v14.0b
- On ULTRIX-FR5, the cooling fans can remain at 100% even at lower temperatures. This will be fixed in an upcoming release.
- DashBoard v9.10.0 is required for the best user experience.

- Starting in v4.8.X, the I/O board firmware (IP, IPX, HDX, and MODX modules) is no longer included within the frame upgrade files. The frame and I/O modules must be upgraded independently of each other.
  - o Upgrade Frame -- **DO NOT Reboot** when prompted by DashBoard after frame update.
  - o Upgrade all cards (including switcher cards) -- **DO NOT Reboot** when prompted by DashBoard in between card updates.
  - o After both FRAME and ALL CARDS have been successfully updated, power-cycle the frame.
- In the rare occurrence of a failed card upgrade, the user should power-cycle the Ultrix and perform the upgrade again.
- To upgrade from versions prior to v4.0.0, contact Ross Technical Support for assistance.

VERSION 5.6.2 (B6EEEBEA, 9822B603 FOR FR12) LIMITED RELEASE 08/28/24

EQUIPMENT
- ULTRIX-FR1/FR2 (including -NS)
- ULTRIX-FR5 (including -NS)
- UCCI Upgrade Required?   YES ☐ NO☒
- ULTRIX-FR12
- ULTRICORE-CC
- ULTRICORE-BCS
- ULTRICORE-OE

FEATURES & ENHANCEMENTS

- This is a maintenance release only.

BUG FIXES

- UR-8388: Ultriscape / Corrected an issue introduced in v5.5.1 where in Append mode, UMDs would not maintain the "SRC:TSL" formatting when a route was made to a PiP.
- UR-8533: Ultrix-IPX / Fixed routing issues where the address routing protocol (ARP) could be resolved by any media interface.

APPLICATION NOTES
- On first upgrade to v5.1.0 or newer, users must re-enable previously used external protocol servers (Services Setting).
- As of v5.2.0, the default SNMP community name for factory installation has been updated to *ultricore* from the less secure *public*. For stronger security, it is strongly recommended that users set their own community string.
- For systems with Ultrix Acuity, the *Restart Ultrix* control in the Acuity GUI may fail. Instead, the user should power-cycle the Ultrix from the Ultrix > System Status tab in DashBoard.
- Ultrix SW Compatibility with SWR-SDPE blades.
    - Ultrix Carbonite v9.0.0
    - Ultrix Acuity v14.0a
- On ULTRIX-FR5, the cooling fans can remain at 100% even at lower temperatures. This will be fixed in an upcoming release.
- DashBoard v9.10.0 is required for the best user experience.
- Starting in v4.8.X, the I/O board firmware (IP, IPX, HDX, and MODX modules) is no longer included within the frame upgrade files. The frame and I/O modules must be upgraded independently of each other.
    - Upgrade Frame -- **DO NOT Reboot** when prompted by DashBoard after frame update.

- o Upgrade all cards (including switcher cards) -- **DO NOT Reboot** when prompted by DashBoard in between card updates.
  - o After both FRAME and ALL CARDS have been successfully updated, power-cycle the frame.
- In the rare occurrence of a failed card upgrade, the user should power-cycle the Ultrix and perform the upgrade again.
- To upgrade from versions prior to v4.0.0, contact Ross Technical Support for assistance.

VERSION 5.6.1 (5422CBAD, 134C645C FOR FR12) 08/15/24

EQUIPMENT
- ULTRIX-FR1/FR2 (including -NS)
- ULTRIX-FR5 (including -NS)
  - UCCI Upgrade Required?   YES ☐ Recommended ☒ NO☐
- ULTRIX-FR12
- ULTRICORE-CC
- ULTRICORE-BCS
- ULTRICORE-OE

FEATURES & ENHANCEMENTS

- Ultricore BCS / Addressed a possible security vulnerability (CVE-2024-21147).

BUG FIXES

- UR-7339: Ultrix-IPX / Addressed an intermittent audio distortion issue.

APPLICATION NOTES
- **FOR ULTRIX-FR5, when upgrading from a version prior to v5.3.0, it is recommended that the UCCI also be upgraded to the latest version**:
  - The UCCI cards must be upgraded first, including any service spares.
  - UCCI cards must be running versions v4.10 or later prior to upgrade. To upgrade from a prior version, please contact Ross Technical Support for assistance.
  - For UCCI running UCCI v4.10 or greater, the web interface for UCCI cards uses ports 50120 for the primary card, and 50130 for the secondary card accessible via a browser as follows:
    - Primary UCCI: http://<Ultrix IP Address>:50120
    - Secondary UCCI: http://<Ultrix IP Address>:50130
- On first upgrade to v5.1.0 or newer, users must re-enable previously used external protocol servers (Services Setting).
- As of v5.2.0, the default SNMP community name for factory installation has been updated to *ultricore* from the less secure *public*. For stronger security, it is strongly recommended that users set their own community string.
- For systems with Ultrix Acuity, the *Restart Ultrix* control in the Acuity GUI may fail. Instead, the user should power-cycle the Ultrix from the Ultrix System Status menu in DashBoard.
- Ultrix SW Compatibility with SWR-SDPE blades.
  - Ultrix Carbonite v9.0.0
  - Ultrix Acuity v14.0a
- On ULTRIX-FR5, the cooling fans can remain at 100% even at lower temperatures. This will be fixed in an upcoming release.

- DashBoard v9.10 is required for the best user experience.
- Starting in v4.8.X, the I/O board firmware (IP, IPX, HDX, and MODX modules) is no longer included within the frame upgrade files. The frame and I/O modules must be upgraded independently of each other.
  - Upgrade Frame -- **DO NOT Reboot** when prompted by DashBoard after frame update.
  - Upgrade all cards (including switcher cards) -- **DO NOT Reboot** when prompted by DashBoard in between card updates.
  - After both FRAME and ALL CARDS have been successfully updated, power-cycle the frame.
- In the rare occurrence of a failed card upgrade, the user should power-cycle the Ultrix and perform the upgrade again.
- To upgrade from versions prior to 4.0.0, contact Ross Technical Support for assistance.

VERSION 5.6.0 (F12A3057, 4EC88EF8 FOR FR12) 08/06/24

EQUIPMENT
- ULTRIX-FR1/FR2 (including -NS)
- ULTRIX-FR5 (including -NS)
  - UCCI Upgrade Required?   YES ☐ Recommended ☒ NO☐
- ULTRIX-FR12
- ULTRICORE-CC
- ULTRICORE-BCS
- ULTRICORE-OE

FEATURES & ENHANCEMENTS

- Introduction of Ultrimix-Dante. This feature enables 64-channel Dante® audio I/O with SRC on the AUX C port of an ULTRIX-HDX-IO or ULTRIX-MODX-IO blade.
- Introduction of CWDM SFP support on the ULTRIX-MODX-IO blade. This feature enables CWDM links between the Ultrix frames and the openGear SFC-6901 cards.
- Introduction of the new style FR5 frame, ULTRIX-NS-FR5, which offers all the features of the Ultrix-FR5 with 4 additional power inputs (2,400W total).
  - Requires ACUFRNS-CPU in applications with Ultrix Acuity.
- In DashBoard, a user prompt was added to enable FTP when needed to download logs.
- Ultrix-FR12 / Includes a preview of the new DashBoard Basic Tree View that will be available in a future release.
- Ultrix / Provides several security hardening enhancements.

BUG FIXES

- UR-7566: Ultrisync / Resolved an issue where there was a delay between audio and video.
- UR-7692: Ultricore BCS / For consistency with Ultrix, the default NTP UTC time is now UTC 0.
- UR-7815: Ultriscape / Added a new option for Red Tally only mode when using UMD with TSL v5.
- UR-8303: Fixed an issue where the Ultritouch Push Button (PB) operations window title bar may not update properly.

APPLICATION NOTES
- **<u>FOR ULTRIX-FR5, when upgrading from a version prior to v5.3.0, it is recommended that the UCCI also be upgraded to the latest version</u>**:
  - The UCCI cards must be upgraded first, including any service spares.
  - UCCI cards must be running versions v4.10 or later prior to upgrade. To upgrade from a prior version, please contact Ross Technical Support for assistance.
  - For UCCI running UCCI v4.10 or greater, the web interface for UCCI cards uses ports 50120 for the primary card, and 50130 for the secondary card accessible via a browser as follows:
    - Primary UCCI: http://<Ultrix IP Address>:50120

- ▪ Secondary UCCI: http://<Ultrix IP Address>:50130
- On first upgrade to v5.1.0 or newer, users must re-enable previously used external protocol servers (Services Setting).
- As of v5.2.0, the default SNMP community name for factory installation has been updated to *ultricore* from the less secure *public*. For stronger security, it is strongly recommended that users set their own community string.
- For systems with Ultrix Acuity, the *Restart Ultrix* control in the Acuity GUI may fail. Instead, the user should power-cycle the Ultrix from the Ultrix System Status menu in DashBoard.
- Ultrix SW Compatibility with SWR-SDPE blades.
    - o Ultrix Carbonite v9.0.0
    - o Ultrix Acuity v14.0a
- On ULTRIX-FR5, the cooling fans can remain at 100% even at lower temperatures. This will be fixed in an upcoming release.
- DashBoard v9.10 is required for the best user experience.
- Starting in v4.8.X, the I/O board firmware (IP, IPX, HDX, and MODX modules) is no longer included within the frame upgrade files. The frame and I/O modules must be upgraded independently of each other.
    - o Upgrade Frame -- **DO NOT Reboot** when prompted by DashBoard after frame update.
    - o Upgrade all cards (including switcher cards) -- **DO NOT Reboot** when prompted by DashBoard in between card updates.
    - o After both FRAME and ALL CARDS have been successfully updated, power-cycle the frame.
- In the rare occurrence of a failed card upgrade, the user should power-cycle the Ultrix and perform the upgrade again.
- To upgrade from versions prior to 4.0.0, contact Ross Technical Support for assistance.

VERSION 5.5.3 (60EE0DAB, 7C74972F FOR FR12) LIMITED RELEASE 11/27/24

EQUIPMENT
- ULTRIX-FR1/FR2 (including -NS)
- ULTRIX-FR5
  - UCCI Upgrade Required?   YES ☐ Recommended ☐ NO☒
- ULTRIX-FR12
- ULTRICORE-CC
- ULTRICORE-BCS
- ULTRICORE-OE

FEATURES & ENHANCEMENTS

- This is a maintenance release only.

BUG FIXES

- UR-7815: Ultriscape / Added a new option for Red Tally only mode when using UMD with TSL v5.
- UR-8372: Acuity / Improves the robustness of the switcher crosspoint control.

APPLICATION NOTES
- **FOR ULTRIX-FR5, when upgrading from a version prior to v5.3.0, it is recommended that the UCCI also be upgraded to the latest version**:
  - The UCCI cards must be upgraded first, including any service spares.
  - UCCI cards must be running versions v4.10 or later prior to upgrade. To upgrade from a prior version, please contact Ross Technical Support for assistance.
  - For UCCI running UCCI v4.10 or greater, the web interface for UCCI cards uses ports 50120 for the primary card, and 50130 for the secondary card accessible via a browser as follows:
    - Primary UCCI: http://<Ultrix IP Address>:50120
    - Secondary UCCI: http://<Ultrix IP Address>:50130
- On first upgrade to v5.1.0 or newer, users must re-enable previously used external protocol servers (Services Setting).
- As of v5.2.0, the default SNMP community name for factory installation has been updated to *ultricore* from the less secure *public*. For stronger security, it is strongly recommended that users set their own community string.
- For systems with Ultrix Acuity, the *Restart Ultrix* control in the Acuity GUI may fail. Instead, the user should power-cycle the Ultrix from the Ultrix System Status menu in DashBoard.
- Ultrix SW Compatibility with SWR-SDPE blades.
  - Ultrix Carbonite v9.1.0
  - Ultrix Acuity v14.0c

- On ULTRIX-FR5, the cooling fans can remain at 100% even at lower temperatures. This will be fixed in an upcoming release.
- DashBoard v9.10.0 is required for the best user experience.
- Starting in v4.8.X, the I/O board firmware (IP, IPX, HDX, and MODX modules) is no longer included within the frame upgrade files. The frame and I/O modules must be upgraded independently of each other.
    o Upgrade Frame -- **DO NOT Reboot** when prompted by DashBoard after frame update.
    o Upgrade all cards (including switcher cards) -- **DO NOT Reboot** when prompted by DashBoard in between card updates.
    o After both FRAME and ALL CARDS have been successfully updated, power-cycle the frame.
- In the rare occurrence of a failed card upgrade, the user should power-cycle the Ultrix and perform the upgrade again.
- To upgrade from versions prior to 4.0.0, contact Ross Technical Support for assistance.

VERSION 5.5.2 (BD216459, 2216B76D FOR FR12) 7/12/24

EQUIPMENT
- ULTRIX-FR1/FR2 (including -NS)
- ULTRIX-FR5
  - UCCI Upgrade Required?   YES ☐ Recommended ☒ NO☐
- ULTRIX-FR12
- ULTRICORE-CC
- ULTRICORE-BCS
- ULTRICORE-OE

FEATURES & ENHANCEMENTS

- This is a maintenance release only.

BUG FIXES

- UR-7687: Ultriscape / Fixed an issue where changing PiP assignments from Follow to Normal concurrently with a layout change would not save correctly.
- UR-7950: Resolved an issue that would not allow deleting all outgoing connections.
- UR-7952: Ultrisync UHD / Resolved a license assignment issue.
- UR-7994: ULTRIX-FR12 / Fixed an issue where the Ultrix-IP settings were not restored when swapping a crosspoint module.
- UR-8035: Ultriscape / Fixed an issue where the Ultritouch MV Head percentage configuration setting did not get applied.
- UR-8090: Ultriscape / Layout take requests from soft panels are now properly reported in the Head Selection interface.

APPLICATION NOTES
- <u>**FOR ULTRIX-FR5, when upgrading from a version prior to v5.3.0, it is recommended that the UCCI also be upgraded to the latest version**</u>:
  - The UCCI cards must be upgraded first, including any service spares.
  - UCCI cards must be running versions v4.10 or later prior to upgrade. To upgrade from a prior version, please contact Ross Technical Support for assistance.
  - For UCCI running UCCI v4.10 or greater, the web interface for UCCI cards uses ports 50120 for the primary card, and 50130 for the secondary card accessible via a browser as follows:
    - Primary UCCI: http://<Ultrix IP Address>:50120
    - Secondary UCCI: http://<Ultrix IP Address>:50130
- On first upgrade to v5.1.0 or newer, users must re-enable previously used external protocol servers (Services Setting).
- As of v5.2.0, the default SNMP community name for factory installation has been updated to *ultricore* from the less secure *public*. For stronger security, it is strongly recommended that users set their own community string.

- For systems with Ultrix Acuity, the *Restart Ultrix* control in the Acuity GUI may fail. Instead, the user should power-cycle the Ultrix from the Ultrix System Status menu in DashBoard.
- Ultrix SW Compatibility with SWR-SDPE blades.
    - o Ultrix Carbonite v7.1.13
    - o Ultrix Acuity v13.0c
- On ULTRIX-FR5, the cooling fans can remain at 100% even at lower temperatures. This will be fixed in an upcoming release.
- DashBoard v9.10 is required for the best user experience.
- Starting in v4.8.X, the I/O board firmware (IP, IPX, HDX, and MODX modules) is no longer included within the frame upgrade files. The frame and I/O modules must be upgraded independently of each other.
    - o Upgrade Frame -- **DO NOT Reboot** when prompted by DashBoard after frame update.
    - o Upgrade all cards (including switcher cards) -- **DO NOT Reboot** when prompted by DashBoard in between card updates.
    - o After both FRAME and ALL CARDS have been successfully updated, power-cycle the frame.
- In the rare occurrence of a failed card upgrade, the user should power-cycle the Ultrix and perform the upgrade again.
- To upgrade from versions prior to 4.0.0, contact Ross Technical Support for assistance.

VERSION 5.5.1 (30ECADA2, FF537BB7 FOR FR12) LIMITED RELEASE 6/18/24

EQUIPMENT
- ULTRIX-FR1/FR2 (including -NS)
- ULTRIX-FR5
  - UCCI Upgrade Required?   YES ☐ Recommended ☒ NO☐
- ULTRIX-FR12
- ULTRICORE-CC
- ULTRICORE-BCS
- ULTRICORE-OE

FEATURES & ENHANCEMENTS

- As a security enhancement, to protect against unauthorized access, a new user control has been added to temporarily enable upgrades and support access to Ultrix frames and Ultricore-CC. After upgrading to v5.5.1, and any subsequent reboot, the setting will revert to the default of being disabled.

BUG FIXES
- UR-7074: Ultrix Acuity and Carbonite / Fix a regression since 5.3.x where an Ultrix reboot was required on a switcher software upgrade or video mode change.
- UR-7482: Ultriscape / Resolved an issue where the PiP source assignments were automatically set to Normal mode after changing database labels when the Head Selection page is open.
- UR-7712: Ultriscape / Improved the Head Selection robustness when an invalid layout is present.
- UR-7821: Ultricore-IP / Improved the parsing of EVS NMOS grouping information.
- UR-7846: Ultriscape / Fixed an issue where the Ultritouch MV soft panel could not route PiPs originating from the FLEX slot.
- UR-7852: Ultriscape / Fixed an issue where Tally UMD label updates could fail when using multi-take operations to PiPs.
- UR-7966: Ultrix-IP and Ultrix-IPX / Resolved an issue where renaming IP senders/ receivers could fail.

APPLICATION NOTES
- **FOR ULTRIX-FR5, when upgrading from a version prior to v5.3.0, it is recommended that the UCCI also be upgraded to the latest version**:
  - The UCCI cards must be upgraded first, including any service spares.
  - UCCI cards must be running versions v4.10 or later prior to upgrade. To upgrade from a prior version, please contact Ross Technical Support for assistance.
  - For UCCI running UCCI v4.10 or greater, the web interface for UCCI cards uses ports 50120 for the primary card, and 50130 for the secondary card accessible via a browser as follows:

- Primary UCCI: http://<Ultrix IP Address>:50120
- Secondary UCCI: http://<Ultrix IP Address>:50130
- On first upgrade to v5.1.0 or newer, users must re-enable previously used external protocol servers (Services Setting).
- As of v5.2.0, the default SNMP community name for factory installation has been updated to *ultricore* from the less secure *public*. For stronger security, it is strongly recommended that users set their own community string.
- For systems with Ultrix Acuity, the *Restart Ultrix* control in the Acuity GUI may fail. Instead, the user should power-cycle the Ultrix from the Ultrix System Status menu in DashBoard.
- Ultrix SW Compatibility with SWR-SDPE blades.
    - Ultrix Carbonite v7.1.13
    - Ultrix Acuity v13.0c
- On ULTRIX-FR5, the cooling fans can remain at 100% even at lower temperatures. This will be fixed in an upcoming release.
- DashBoard v9.10 is required for the best user experience.
- Starting in v4.8.X, the I/O board firmware (IP, IPX, HDX, and MODX modules) is no longer included within the frame upgrade files. The frame and I/O modules must be upgraded independently of each other.
    - Upgrade Frame -- **DO NOT Reboot** when prompted by DashBoard after frame update.
    - Upgrade all cards (including switcher cards) -- **DO NOT Reboot** when prompted by DashBoard in between card updates.
    - After both FRAME and ALL CARDS have been successfully updated, power-cycle the frame.
- In the rare occurrence of a failed card upgrade, the user should power-cycle the Ultrix and perform the upgrade again.
- To upgrade from versions prior to 4.0.0, contact Ross Technical Support for assistance.

VERSION 5.5.0 (7CE7EA1B, 37C9B670 FOR FR12) 5/30/24

EQUIPMENT
- ULTRIX-FR1/FR2 (including -NS)
- ULTRIX-FR5
  - UCCI Upgrade Required?   YES ☐ Recommended ☒ NO☐
- ULTRIX-FR12
- ULTRICORE-CC
- ULTRICORE-BCS
- ULTRICORE-OE

FEATURES & ENHANCEMENTS
- UltriProc-3DLUT now allows users to load custom 3D-LUT RGB cube files. Ultriproc-3DLUT is supported on HDX and MODX IO cards.
- The SmartCore user interface now allows users to assign UltriProc input/output control parameters for quick access on custom Ultritouch soft panels. Ultriproc-3DLUT is supported on HDX and MODX IO cards.
- This release adds support for the new SDxE Software Defined xRossCompute Engine (requires Ultrix Acuity 14.0). SDxE is supported on Ultrix-FR5 and Ultrix-FR12.
- Ultrix-IP and Ultrix-IPX / Added support for the Media Ethernet interfaces to have configurable Gateways.

BUG FIXES
- UR-1575: Ultrix / Improved the robustness of the frames ethernet connectivity.
- UR-7472: Ultrix-FR5 / Improved the software upgrade process of the UCCI.
- UR-7546: Resolved an issue where sending labels with Ember+ could fail.
- UR-7704: Ultrix-FR12 / Addressed an issue where on rare occasions, audio distortion could occur.
- UR-7740: Resolved an issue where on first upgrade to 5.3.2 or newer, the "Use Tally Label" selection would not persist over firmware upgrade.
- UR-7766: Ultricore-BCS / Fixed an issue where Source / Destination mappings did not persist.
- UR-7817: Resolved an issue where the GOTO matrix source failed when configurations did not have a sequential source mapping.

APPLICATION NOTES
- **<u>FOR ULTRIX-FR5, when upgrading from a version prior to v5.3.0, it is recommended that the UCCI also be upgraded to the latest version</u>**:
  - The UCCI cards must be upgraded first, including any service spares.
  - UCCI cards must be running versions v4.10 or later prior to upgrade. To upgrade from a prior version, please contact Ross Technical Support for assistance.
  - For UCCI running UCCI v4.10 or greater, the web interface for UCCI cards uses ports 50120 for the primary card, and 50130 for the secondary card accessible via a browser as follows:

- ▪ Primary UCCI: http://<Ultrix IP Address>:50120
- ▪ Secondary UCCI: http://<Ultrix IP Address>:50130
- On first upgrade to v5.1.0 or newer, users must re-enable previously used external protocol servers (Services Setting).
- As of v5.2.0, the default SNMP community name for factory installation has been updated to *ultricore* from the less secure *public*. For stronger security, it is strongly recommended that users set their own community string.
- For systems with Ultrix Acuity, the *Restart Ultrix* control in the Acuity GUI may fail. Instead, the user should power-cycle the Ultrix from the Ultrix System Status menu in DashBoard.
- Ultrix SW Compatibility with SWR-SDPE blades.
    - o Ultrix Carbonite v7.1.13
    - o Ultrix Acuity v13.0c
- On ULTRIX-FR5, the cooling fans can remain at 100% even at lower temperatures. This will be fixed in an upcoming release.
- DashBoard v9.10 is required for the best user experience.
- Starting in v4.8.X, the I/O board firmware (IP, IPX, HDX, and MODX modules) is no longer included within the frame upgrade files. The frame and I/O modules must be upgraded independently of each other.
    - o Upgrade Frame -- **DO NOT Reboot** when prompted by DashBoard after frame update.
    - o Upgrade all cards (including switcher cards) -- **DO NOT Reboot** when prompted by DashBoard in between card updates.
    - o After both FRAME and ALL CARDS have been successfully updated, power-cycle the frame.
- In the rare occurrence of a failed card upgrade, the user should power-cycle the Ultrix and perform the upgrade again.
- To upgrade from versions prior to 4.0.0, contact Ross Technical Support for assistance.

VERSION 5.4.1 (EF24D14E, 0EA87E74 FOR FR12) LIMITED RELEASE 5/21/24

EQUIPMENT
- ULTRIX-FR1, ULTRIX-FR2 (Legacy)
- ULTRIX-NS-FR1, ULTRIX-NS-FR2
- ULTRIX-FR5 UCCI Upgrade Required?   YES ☐ Recommended ☒ NO☐
- ULTRIX-FR12
- ULTRICORE-CC
- ULTRICORE-BCS
- ULTRICORE-OE

FEATURES & ENHANCEMENTS
- This is a maintenance release only.

BUG FIXES
- UR-7045: Ultricore-CC / Resolved an issue where the control of NK-Routers was not possible in 5.3.0.
- UR-7061: Ultrix / Improved onboard SD media storage management.
- UR-7075: Ultrix-FR5 / Improved the software upgrade process of the UCCI.
- UR-7085: Ultrix-IPX and Ultrix-IP/ Improved the in-band discovery of IP devices using NMOS media port interfaces.
- UR-7150: Ultrix-HDB, SFP-IO and MIOB / Video signal from the AUX SFP ports are now correctly reported.
- UR-7294: Ultricore CC and Ultricore BCS / Corrected an issue where the UI Profiles enable/disable configuration selection was inverted.
- UR-7342: Resolved an issue where an Ember+ connection would fail in versions 5.1.6 or newer.
- UR-7569: Ultrix-FR12 / Improved the robustness of the crosspoint field replacement.
- UR-7574: Ultrix-IPX / Fixed an issue where the DNS-SD registration would fail.
- UR-7576: Resolved an issue where NTP on Ultrix would only work when under Ultricore BCS control in version 5.4.0.
- UR-7689: Ultriscape / A notification to the user is now displayed when the maximum number of save layouts has been attained (180 layouts).
- UR-7696: Resolved an issue where the GOTO matrix source failed when configurations did not have a sequential source mapping.
- UR-7705: Ultriscape / Corrected an issue where the Head Selection could show an incorrect layout assignment after power cycle.

APPLICATION NOTES
- **FOR ULTRIX-FR5, when upgrading from a version prior to v5.3.0, it is recommended that the UCCI also be upgraded to the latest version**:
  - The UCCI cards must be upgraded first, including any service spares.
  - UCCI cards must be running versions v4.10 or later prior to upgrade. To upgrade from a prior version, please contact Ross Technical Support for assistance.

- o For UCCI running UCCI v4.10 or greater, the web interface for UCCI cards uses ports 50120 for the primary card, and 50130 for the secondary card accessible via a browser as follows:
    - Primary UCCI: http://<Ultrix IP Address>:50120
    - Secondary UCCI: http://<Ultrix IP Address>:50130
- On first upgrade to v5.1.0 or newer, users must re-enable previously used external protocol servers (Services Setting).
- As of v5.2.0, the default SNMP community name for factory installation has been updated to *ultricore* from the less secure *public*. For stronger security, it is strongly recommended that users set their own community string.
- For systems with Ultrix Acuity, the *Restart Ultrix* control in the Acuity GUI may fail. Instead, the user should power-cycle the Ultrix from the Ultrix System Status menu in DashBoard.
- Ultrix SW Compatibility with SWR-SDPE blades.
    - o Ultrix Carbonite v7.1.13
    - o Ultrix Acuity v13.0b
- On ULTRIX-FR5, the cooling fans can remain at 100% even at lower temperatures. This will be fixed in an upcoming release.
- DashBoard v9.9.1 is required for the best user experience.
- Starting in v4.8.X, the I/O board firmware (IP, IPX, HDX, and MODX modules) is no longer included within the frame upgrade files. The frame and I/O modules must be upgraded independently of each other.
    - o Upgrade Frame -- **DO NOT Reboot** when prompted by DashBoard after frame update.
    - o Upgrade all cards (including switcher cards) -- **DO NOT Reboot** when prompted by DashBoard in between card updates.
    - o After both FRAME and ALL CARDS have been successfully updated, power-cycle the frame.
- In the rare occurrence of a failed card upgrade, the user should power-cycle the Ultrix and perform the upgrade again.
- To upgrade from versions prior to 4.0.0, contact Ross Technical Support for assistance

VERSION 5.4.0 (DC8130C8, 6694393B FOR FR12) 4/24/24

EQUIPMENT
- ULTRIX-FR1, ULTRIX-FR2 (Legacy)
- ULTRIX-NS-FR1, ULTRIX-NS-FR2
- ULTRIX-FR5 UCCI Upgrade Required?   YES ☐ Recommended ☒ NO☐
- ULTRIX-FR12
- ULTRICORE-BCS
- ULTRICORE-OE

FEATURES & ENHANCEMENTS
- ST2110 one-to-many multicast distribution has been added for Ultrix-IPX-IO.
- NMOS IS-10 Authentication and Authorization has been added.
- A user setting has been added to select if Probel SW-P-08 crosspoint tally responses are provided when there are no status changes resulting from the crosspoint connect message.

BUG FIXES
- UR-6077: Resuming a timer via RossTalk or Clock Control no longer restarts the timer.
- UR-6205: Ultrix / When fan speeds are unavailable, an error state is now reported instead of the last known value.
- UR-6256: Ultrix-IPX / Fixed an issue when configuring the PTP was not possible if the PTP Lock was unstable.
- UR-6274: Resolved an issue where salvo captures from a Matrix soft panel did not work.
- UR-6571: Ultriscape / Resolved an issue where Multiviewer layout elements could change on bootup.
- UR-6572: Ultirscape / Resolved a text corruption issue when using a DreamCatcher UMD.
- UR-6712: Ultricore BCS / The SNMP configuration is now retained on a failover operation.
- UR-6744: Ultriscape / Shared PiP UMDs will no longer change when modifying database labels.
- UR-6752: Resolved an issue where TSL v5 UMD messages did not support the "\" symbol.
- UR-6795: Ultriscape / The interface will now block invalid H/V values in the Layout Editor which would cause the system to become unresponsive.
- UR-6806: Ultrix-IP and Ultrix-IPX / Resolved an issue where DNS-SD was not able to register with the RDS.
- UR-6848: UltriMXR / Resolved an issue where soft panel route status were not updated.
- UR-6937: Resolved an issue where a system could become unresponsive when custom port label definitions were similar to the default format.
- UR-6994: Ultriscape / Resolved an issue where audio meters did not follow sources when using PiPs with Destination Follow.
- UR-7061: Ultrix / Improved the file management on the SD card.
- UR-7146: Ultriscape / Coordinates in the Layout Editor are now automatically rounded to the nearest integer.
- UR-7193: Ultrix-IPX / Corrected an NMOS interface binding issue after moving cards to different slots.

- UR-7208: Ultrix-IPX / Resolved a video receiver issue.
- UR-7217: Ultriscape / Layout take requests from panels will now succeed if the head doesn't have a layout assigned.
- UR-7218: Ultriscape / Take request for invalid layouts will now be rejected to ensure soft panel crosspoint status are not out of sync.
- UR-7225: Ultrisync / Resolved an issue where there was no video available when using Frame Sync combined the Gearbox functionality.
- UR-7268: Ultricore BCS / Changing network settings from the device menu will no longer cause a loss of DashBoard connection.
- UR-7296: Resolved an issue where routing the same source consecutively to destinations in the Group Category panel would fail.
- UR-7303: Ultricore BCS / The category tree is now properly limited to 6 levels.
- UR-7309: Ultrisync-UHD / Resolved a video quality issue that would occur when multiple Frame Syncs were enabled in certain formats.
- UR-7341: Ultrix-IPX / Resolved a NMOS configuration file corruption.
- UR-7346: Fixed a switching issue with NK-GPI affecting recent releases.
- UR-7347: Resolved an issue that caused slow switching from RCP devices affecting recent releases.

APPLICATION NOTES
- **<u>FOR ULTRIX-FR5, when upgrading from a version prior to v5.3.0, it is recommended that the UCCI also be upgraded to the latest version</u>**:
    - o The UCCI cards must be upgraded first, including any service spares.
    - o UCCI cards must be running versions v4.10 or later prior to upgrade. To upgrade from a prior version, please contact Ross Technical Support for assistance.
    - o For UCCI running UCCI v4.10 or greater, the web interface for UCCI cards uses ports 50120 for the primary card, and 50130 for the secondary card accessible via a browser as follows:
        - ▪ Primary UCCI: http://<Ultrix IP Address>:50120
        - ▪ Secondary UCCI: http://<Ultrix IP Address>:50130
- On first upgrade to v5.1.0 or newer, users must re-enable previously used external protocol servers (Services Setting).
- As of v5.2.0, the default SNMP community name for factory installation has been updated to *ultricore* from the less secure *public*. For stronger security, it is strongly recommended that users set their own community string.
- As of v5.3.0, the power supply status of FR5 displays 4 additional PSU statuses duplicating PSU 1-4 as PSU 5-8. This will be resolved in a future release.
- For systems with Ultrix Acuity, the *Restart Ultrix* control in the Acuity GUI may fail. Instead, the user should power-cycle the Ultrix from the Ultrix System Status menu in DashBoard.
- Ultrix SW Compatibility with SWR-SDPE blades.
    - o Ultrix Carbonite v7.1.12
    - o Ultrix Acuity v13.0a

- On ULTRIX-FR5, the cooling fans can remain at 100% even at lower temperatures. This will be fixed in an upcoming release.
- DashBoard v9.9.1 is required for the best user experience.
- For system with Ultricore-CC and NK, it is not advised to upgrade to v5.4.0.
- Starting in v4.8.X, the I/O board firmware (IP, IPX, HDX, and MODX modules) is no longer included within the frame upgrade files. The frame and I/O modules must be upgraded independently of each other.
    o Upgrade Frame -- **DO NOT Reboot** when prompted by DashBoard after frame update.
    o Upgrade all cards (including switcher cards) -- **DO NOT Reboot** when prompted by DashBoard in between card updates.
    o After both FRAME and ALL CARDS have been successfully updated, power-cycle the frame.
- In the rare occurrence of a failed card upgrade, the user should power-cycle the Ultrix and perform the upgrade again.
- To upgrade from versions prior to 4.0.0, contact Ross Technical Support for assistance.

VERSION 5.3.2 (CA35E2D5, 5B55A3BF FOR FR12) LIMITED RELEASE 3/27/24

EQUIPMENT
- ULTRIX-FR1, ULTRIX-FR2 (Legacy)
- ULTRIX-NS-FR1, ULTRIX-NS-FR2
- ULTRIX-FR5 UCCI Upgrade Required?   YES   ☐   NO ☒
- ULTRIX-FR12
- ULTRICORE-CC
- ULTRICORE-BCS
- ULTRICORE-OE

FEATURES & ENHANCEMENTS
- The Ultricore BCS now provides the option to allow unlocked destinations to switch on a Take operation instead of blocking the operation if some destinations are locked.

BUG FIXES
- UR-6174: ULTRIX-FR5 / Fixed an issue where fan alarms were incorrectly reported.
- UR-6256: ULTRIX-IPX / Fixed an issue when configuring the PTP was not possible if the PTP Lock was unstable.
- UR-6570: Ultriscape / Fixed an issue where static UMDs would display the source name on bootup instead of the corresponding label.
- UR-6727: Ultricore Profiles usernames are now case sensitive.
- UR-6761: Ultrix-IPX / Resolved an issue with Ember+ where SDP files were empty.
- UR-6873: Ultriscape / Single-level PiP meter destinations now reflect the correct status.
- UR-6888: Ultriscape / Improved support for special characters in the Head Name.
- UR-6900: Ultricore BCS / Corrected an issue where the ENET alarms could report a failure (red) even during correct operation.
- UR-7075: ULTRIX-FR5 / Improved the software upgrade process of the UCCI.
- UR-7192: Ultrix-IP and Ultrix-IPX / Resolved the SDI audio output issues when using fewer than 16 IP audio channels.
- UR-7200: Ultrix-IP and Ultrix-IPX / Resolved an intermittent audio distortion on the IP senders.
- UR-7202: Ultrix-IP and Ultrix-IPX / Fixed an issue where the IP receiver did not mute the correct audio channel.

APPLICATION NOTES

- **<u>FOR ULTRIX-FR5, when upgrading from a version prior to v5.3.0, it is recommended that the UCCI also be upgraded to the latest version</u>**:
    - o The UCCI cards must be upgraded first, including any service spares.
    - o UCCI cards must be running versions v4.10 or later prior to upgrade. To upgrade from a prior version, please contact Ross Technical Support for assistance.
    - o For UCCI running UCCI v4.10 or greater, the web interface for UCCI cards uses ports 50120 for the primary card, and 50130 for the secondary card accessible via a browser as follows:
        - ▪ Primary UCCI: http://<Ultrix IP Address>:50120
        - ▪ Secondary UCCI: http://<Ultrix IP Address>:50130
- On first upgrade to v5.1.0 or newer, users must re-enable previously used external protocol servers (Services Setting).
- As of v5.2.0, the default SNMP community name for factory installation has been updated to *ultricore* from the less secure *public*. For stronger security, it is strongly recommended that users set their own community string.
- As of v5.3.0, the power supply status of FR5 displays 4 additional PSU statuses duplicating PSU 1-4 as PSU 5-8. This will be resolved in a future release.
- For systems with Ultrix Acuity, the *Restart Ultrix* control in the Acuity GUI may fail. Instead, the user should power-cycle the Ultrix from the Ultrix System Status menu in DashBoard.
- Ultrix SW Compatibility with SWR-SDPE blades.
    - o Ultrix Carbonite v7.1.11
    - o Ultrix Acuity v13.0a
- On ULTRIX-FR5, the cooling fans can remain at 100% even at lower temperatures. This will be fixed in an upcoming release.
- DashBoard v9.8.1 is required for the best user experience.
- Starting in v4.8.X, the I/O board firmware (IP, IPX, HDX, and MODX modules) is no longer included within the frame upgrade files. The frame and I/O modules must be upgraded independently of each other.
    - o Upgrade Frame -- **DO NOT Reboot** when prompted by DashBoard after frame update.
    - o Upgrade all cards (including switcher cards) -- **DO NOT Reboot** when prompted by DashBoard in between card updates.
    - o After both FRAME and ALL CARDS have been successfully updated, power-cycle the frame.
- In the rare occurrence of a failed card upgrade, the user should power-cycle the Ultrix and perform the upgrade again.
- To upgrade from versions prior to 4.0.0, contact Ross Technical Support for assistance.

VERSION 5.3.1 (003A7C9C, EC0FBA9D FOR FR12) LIMITED RELEASE 3/14/24

EQUIPMENT
- ULTRIX-FR1, ULTRIX-FR2 (Legacy)
- ULTRIX-NS-FR1, ULTRIX-NS-FR2
- ULTRIX-FR5 UCCI Upgrade Required?   YES   ☐   NO ☒
- ULTRIX-FR12
- ULTRICORE-CC
- ULTRICORE-BCS
- ULTRICORE-OE

FEATURES & ENHANCEMENTS
- For Ultrix frames, an option has been added to allow unlocked destinations to switch on a Take operation instead of blocking the operation if some destinations are locked.

BUG FIXES
- UR-4436: Ultrix / Resolved an issue where Audio Bypass would not immediately enable when the box is selected.
- UR-5282: Ultricore BCS / Corrected the behavior where previous connections were not removed from the incoming connections list when a third-party controller was restarted.
- UR-6649: The "PBC in count" message field is now correctly supported with TSL v5.
- UR-6672: Ultrix IP-IO / Corrected an issue where the PTP settings did not persist over software upgrade.
- UR-6742: Acuity / The system will no longer block Take requests on a loss of reference.
- UR-6796: Fixed the configuration multi-select function to correctly show all the selected cards.
- UR-6797: Ultrix IP / Fixed an NMOS discovery issue where toggling the Frame control state could cause senders and receivers to be missed.
- UR-6806: Ultrix IP / Fixed an issue related to DNS-SD registering.
- UR-6807: Acuity / Resolved an issue where the Trigger mode could change on reboot of the system.
- UR-6836: Ultrix IP & IPX / Resolved an issue where configuration of the link offset for IP receivers in Low Latency mode was not saved.
- UR-6921: Ultrix IPX / Fixed an issue where default NMOS receivers were incorrectly reporting the number of reachable media ports.
- UR-6974: Ultrix FR5 / Improved the software upgrade process of the UCCI.
- UR-6975: Ultrix IP & IPX / Resolved an issue were the configuration of the audio channels on IP senders or receivers were not saved.
- UR-7012: Ultrix / Fixed an issue where loss of DashBoard control could occur when a lock is set without any destinations selected from a custom panel.
- UR-7016: Ultrix FR5 / Improved the software upgrade process of the UCCI.
- UR-7081: Ultrix FR12 / Improved the software upgrade process.

APPLICATION NOTES

- **<u>FOR ULTRIX-FR5, when upgrading from a version prior to v5.3.0, it is recommended that the UCCI also be upgraded to the latest version</u>**:
  - o The UCCI cards must be upgraded first, including any service spares.
  - o UCCI cards must be running versions v4.10 or later prior to upgrade. To upgrade from a prior version, please contact Ross Technical Support for assistance.
  - o For UCCI running UCCI v4.10 or greater, the web interface for UCCI cards uses ports 50120 for the primary card, and 50130 for the secondary card accessible via a browser as follows:
    - ▪ Primary UCCI: http://<Ultrix IP Address>:50120
    - ▪ Secondary UCCI: http://<Ultrix IP Address>:50130
- On first upgrade to v5.1.0 or newer, users must re-enable previously used external protocol servers (Services Setting).
- As of v5.2.0, the default SNMP community name for factory installation has been updated to *ultricore* from the less secure *public*. For stronger security, it is strongly recommended that users set their own community string.
- As of v5.3.0, the power supply status of FR5 displays 4 additional PSU statuses duplicating PSU 1-4 as PSU 5-8. This will be resolved in a future release.
- For systems with Ultrix Acuity, the *Restart Ultrix* control in the Acuity GUI may fail. Instead, the user should power-cycle the Ultrix from the Ultrix System Status menu in DashBoard.
- Ultrix SW Compatibility with SWR-SDPE blades.
  - o Ultrix Carbonite v7.1.11
  - o Ultrix Acuity v13.0a
- On ULTRIX-FR5, the cooling fans can remain at 100% even at lower temperatures. This will be fixed in an upcoming release.
- DashBoard v9.8.1 is required for the best user experience.
- Starting in v4.8.X, the I/O board firmware (IP, IPX, HDX, and MODX modules) is no longer included within the frame upgrade files. The frame and I/O modules must be upgraded independently of each other.
  - o Upgrade Frame -- **DO NOT Reboot** when prompted by DashBoard after frame update.
  - o Upgrade all cards (including switcher cards) -- **DO NOT Reboot** when prompted by DashBoard in between card updates.
  - o After both FRAME and ALL CARDS have been successfully updated, power-cycle the frame.
- In the rare occurrence of a failed card upgrade, the user should power-cycle the Ultrix and perform the upgrade again.
- To upgrade from versions prior to 4.0.0, contact Ross Technical Support for assistance.

VERSION 5.3.0 (6BE2F84E, EBAB423A FOR FR12) 2/27/24

EQUIPMENT
- ULTRIX-FR1, ULTRIX-FR2 (Legacy)
- ULTRIX-NS-FR1, ULTRIX-NS-FR2
- ULTRIX-FR5 UCCI Upgrade Required?   YES ☒   NO ☐
- ULTRIX-FR12
- ULTRICORE-CC
- ULTRICORE-BCS
- ULTRICORE-OE

FEATURES & ENHANCEMENTS
- ULTRIX-IPX / Adds support for QSFP28 DR modules, as well as any modules with built-in FEC (Must disable FEC on the UI).
- Ultrix / Provides several security hardening enhancements.

BUG FIXES
- UR-431: Ultrix FR5 / Improved the robustness of the frame ethernet connectivity.
- UR-1575: Ultrix NS / Improved the robustness of the frame Ethernet connectivity.
- UR-4972: Ultriscape / Corrected an issue where auto mode captions could sometimes miss characters.
- UR-5467: Ultrix / Corrected an issue where on rare occasion, a frame was not accessible following a reboot.
- UR-5618: Ultrix FR12 / Improved the robustness of the frame ethernet connectivity.
- UR-6037: Ultriscape / Corrected an issue where the custom multiviewer head name did not persist after a power-cycle or reboot.
- UR-6091: Resolved an issue where UMD labels association were not updated over TSL v5 after a configuration change.
- UR-6117: Ultriscape / Corrected an issue where the auto captioning mode did not generate an output.
- UR-6304: Ultrix / Improved the robustness of salvo recalls.
- UR-6412: Ultrix IPX / Resolved an issue where it was not possible to enable FEC.
- UR-6485: Corrected an issue where layouts could not be deleted if using custom multiviewer head names.
- UR-6571: Ultriscape / Resolved an issue where the configuration of UMD elements did not persist over a power-cycle.
- UR-6613: Ultrix / Fixed an alarm that could occur during network security scans.
- UR-6623: Ultrix / Improved system robustness during network security scans.
- UR-6667: Ultrix IP and IPX / Applied a correction to the UI to allow the user to set the Announce Receipt Timeout.
- UR-6678: Ultriscape-CA / Resolved an issue where the alarming configuration menu was not shown on ULTRIX-FR12.

- UR-6734: Ultrix / Corrected a DashBoard connection issue that could occur causing an alarm.
- UR-6805: Ultrix IPX / NMOS IS-05 frame connections are now correctly removed when configured as disabled.

APPLICATION NOTES

- <u>**IMPORTANT NOTE FOR UPGRADE TO V5.3.0 FOR ULTRIX-FR5**</u>:
    - o The UCCI cards must be upgraded first, including any service spares.
    - o UCCI cards must be running versions v4.10 or later prior to upgrade. To upgrade from a prior version, please contact Ross Technical Support for assistance.
    - o For UCCI running UCCI v4.10 or greater, the web interface for UCCI cards uses ports 50120 for the primary card, and 50130 for the secondary card accessible via a browser as follows:
        - ▪ Primary UCCI: http://<Ultrix IP Address>:50120
        - ▪ Secondary UCCI: http://<Ultrix IP Address>:50130
- On first upgrade to v5.1.0 or newer, users must re-enable previously used external protocol servers (Services Setting).
- As of v5.2.0, the default SNMP community name for factory installation has been updated to *ultricore* from the less secure *public*. For stronger security, it is strongly recommended that users set their own community string.
- For systems with Ultrix Acuity, the *Restart Ultrix* control in the Acuity GUI may fail. Instead, the user should power-cycle the Ultrix from the Ultrix System Status menu in DashBoard.
- Ultrix SW Compatibility with SWR-SDPE blades.
    - o Ultrix Carbonite v7.1.11
    - o Ultrix Acuity v13.0a
- On ULTRIX-FR5, the cooling fans can remain at 100% even at lower temperatures. This will be fixed in an upcoming release.
- DashBoard v9.8.1 is required for the best user experience.
- Starting in v4.8.X, the I/O board firmware (IP, IPX, HDX, and MODX modules) is no longer included within the frame upgrade files. The frame and I/O modules must be upgraded independently of each other.
    - o Upgrade Frame -- **DO NOT Reboot** when prompted by DashBoard after frame update.
    - o Upgrade all cards (including switcher cards) -- **DO NOT Reboot** when prompted by DashBoard in between card updates.
    - o After both FRAME and ALL CARDS have been successfully updated, power-cycle the frame.
- In the rare occurrence of a failed card upgrade, the user should power-cycle the Ultrix and perform the upgrade again.
- To upgrade from versions prior to 4.0.0, contact Ross Technical Support for assistance.

VERSION 5.2.0 (2F1A1D47, 62C4DA94 FOR FR12) 1/19/24

EQUIPMENT
- ULTRIX-FR1, ULTRIX-FR2 (Legacy)
- ULTRIX-NS-FR1, ULTRIX-NS-FR2
- ULTRIX-FR5
- UCCI Upgrade Required?   YES ☐   NO ☒
- ULTRIX-FR12
- ULTRICORE-CC
- ULTRICORE-BCS
- ULTRICORE-OE

FEATURES & ENHANCEMENTS
- Introduction of ULTRIPROC proc amp, color correction, and SDR/HDR conversion license. This license is supported on HDX and MODX IO cards.
- Introduction of ULTRIPROC-3DLUT proc amp, color correction, and SDR/HDR conversion license with 3D LUT support. This license is supported on HDX and MODX I/O cards.
- Introduces the new Ultristream License that enables Ultriscape multiviewer NDI streaming.
- ULTRIX-MODX-IO / Support the introduction of the new SDI sub-module with 4-IN, 4-OUT via HD-BNC connectors.
- ULTRIX-MODX-IO / Adds mixing of sub-modules (SFP, or SDI), hot-swapping of modules, and deploying configuration with empty sub-module slots.
- SMPTE424M 3G-SDI Level B-DS was added to the supported SDI formats for Ultrimix and Ultriscape. For this format, only the first stream is processed.
- Added 1080psf 25Hz to the supported video formats.
- Added the option to disable the debug mode and stop services from being forwarded at the frame management network.
- Added support for the user to choose Ethernet ports that the router will report on its NMOS registration.

BUG FIXES
- UR-5171: Ultrimix / Resolved an issue where slot assignments were inverted.
- UR-5282: Ultricore BCS / Corrected the behavior where previous connections were not removed from the incoming connections list when a third-party controller was restarted.
- UR-6150: Ultrix / Fixed a Rippaview panic that could occur when saving Destinations table.
- UR-6157: Ultricore BCS / Fixed a failed routing issue caused by third-party communication failure after a failover to the secondary node.
- UR-6183: Ultrix FR5, FR12 / Fixed network robustness issues specific to v5.1.6.
- UR-6206: Ultrix / Fixed an issue where the default reference setting reverted to NTSC from PAL on reboot or power cycle.
- UR-6209: Acuity / Fixed an issue where the incorrect Ultrix software version was reported.

- UR-6245: Ultrix IP / Improved the robustness of the upgrade process.
- UR-6274: Resolved an issue where the salvo captures from a Matrix soft panel did not work.
- UR-6304: Ultricore BCS / Improved the robustness of the crosspoint routing.

APPLICATION NOTES

- On first upgrade to 5.1.0 or newer, users must re-enable previously used external protocol servers (Services Setting).
- For systems with Ultrix Acuity, the *Restart Ultrix* control in the Acuity GUI may fail. Instead, the user should power-cycle the Ultrix from the Ultrix System Status menu in DashBoard.
- Ultrix SW Compatibility with SWR-SDPE blades.
    - o Ultrix Carbonite v7.1.8
    - o Ultrix Acuity v12.1h
- For ULTRIX-IPX-IO, prior to upgrading to v5.1.5, the board may not successfully boot when using an external power source directly to the card. Only internal frame power should be used until the upgrade is completed.
- For the initial launch of ULTRIX-IPX-IO, the software supports transceivers based on 4x25Gb NRZ multiple optical lanes either in a multifiber (MPO connector) or multi-lambda (WDM) configuration that require KR4 RS(528,514) FEC and that do not provide built-in FEC. The 4x25Gb NRZ multiple optical lane transceivers are available for both multimode or single-mode fibers and are identifiable by 100GBASE-SR4, 100GBASE-SWDM4, 100GBASE-PSM4, 100GBASE-CWDM4, 100GBASE-4WDM-10/20/40, and 100GBASE-CLR4.
    - o Contact Ross Technical Support for details on support for other transceiver types.
- On ULTRIX-FR5, the cooling fans can remain at 100% even at lower temperatures. This will be fixed in an upcoming release.
- DashBoard version 9.7.0 is required for the best user experience.
- Starting in V4.8.X, the I/O board firmware (IP, IPX, HDX, and MODX modules) is no longer included within the frame upgrade files. The frame and IO modules must be upgraded independently of each other.
    - o Upgrade Frame -- **DO NOT Reboot** when prompted by DashBoard after frame update.
    - o Upgrade all cards (including switcher cards) -- **DO NOT Reboot** when prompted by DashBoard in between card updates.
    - o After both FRAME and ALL CARDS have been successfully updated, power cycle the frame.
- In the rare occurrence of a failed card upgrade, the user should power-cycle the Ultrix and perform the upgrade again.
- To upgrade from versions prior to 4.0.0, contact Ross Technical Support for assistance.

VERSION 5.1.6 (BFF34C2F, 222DD530 FOR FR12) LIMITED RELEASE 12/11/23

EQUIPMENT
- ULTRIX-FR1, ULTRIX-FR2 (Legacy)
- ULTRIX-NS-FR1, ULTRIX-NS-FR2
- ULTRIX-FR5
- UCCI Upgrade Required?   YES ☐   NO ☒
- ULTRIX-FR12
- ULTRICORE-CC
- ULTRICORE-BCS
- ULTRICORE-OE

FEATURES & ENHANCEMENTS
- Added the ability to rename Multiviewer head tabs in the Head Selection menu.
- Added the ability to assign the same tally ID to multiple sources in the database.
- Added TCP keep-alive for incoming client connections from Ember+, NVision, and TSL.

BUG FIXES
- UR-431: Ultrix FR5 / Improved the robustness of the frame Ethernet connectivity.
- UR-1809: Ultrix IP and IPX / Reduced the PTP re-locking time after a Grandmaster change.
- UR-3828: Ultriscape / Fixed an issue where salvos would not recall correctly if they included layout changes and a high count of PiP routes.
- UR-5004: Ultrix FR5 / Resolved an issue with Ultrix Acuity systems that could cause loss of routes on reboot or power-cycle.
- UR-5011: Ultricore BCS / Resolved an issue where the Ultripower settings did not replicate to the standby node.
- UR-5505: Acuity / Resolved an issue where booting the system without an Acuity panel connected could cause Acuity to not properly switch external inputs on PGM/PVW.
- UR-5613: Ultrix FR12 / Resolved an issue where in some occurrences, the frame could not connect to DashBoard after booting up.
- UR-5618: Ultrix FR12 / Improved the robustness of the frame ethernet connectivity.
- UR-5634: Fixed an issue where Matrix GOTO Source would not work when using filters.
- UR-5640: Ultrix IP and IPX / Resolved an issue where a video receiver could output green lines if the network does not do clean switching.
- UR-5652: Ultrix IP and IPX / Resolved an issue where an ANC receiver could output green lines if the network does not do clean switching.
- UR-5755: Ultriscape / Fixed an issue where TAKE errors could occur when routing to audio meter channels that are not present on the active Multiviewer layout.
- UR-5759: Ultriscape / Audio meter mapping could be incorrect when channel assignments are non-sequential.
- UR-5760: Ultrix IP / Fixed a timing issue that could cause glitches in the image to occur.

- UR-5784: Acuity / Fixed an issue on bootup where an Acuity system could fail to switch external inputs on PGM/PVW.5
- UR-5799: Ultrix FR12 / Fixed an issue where the Ultritouch-4 MXR soft panel was unavailable.
- UR-5905: Ultrix FR12 / Improved the ethernet connection recovery when ENET is reconnected after a prolonged interruption.
- UR-5908: Ultricore BCS / Resolved an issue where the protocol server enabled/disabled state would not replicate to the standby node.
- UR-5927: Ultrix FR12 / Resolved an issue where fan control errors could cause the system to boot slower.
- UR-5981: Ultriscape / Resolved an issue where the PiP Follows did not clear without a frame reboot.
- UR-6005: Fixed an issue where opening the System Status menu could cause the protocol servers to restart.
- UR-6019: Ultriscape / Fixed an issue where captions were not rendered correctly.
- UR-6031: Ultricore BCS / Resolved an issue where the third-party protocol connections count was missing from the display.u
- UR-6041: Ultriscape / Resolved an issue where UMDs could stop responding to RossTalk requests in an environment with high volume of 3rd-party control messages.
- UR-6046: Ultriscape / Corrected a 1 second offset on the countdown and stopwatch timer.

APPLICATION NOTES

- On first upgrade to 5.1.0 or newer, users must re-enable previously used external protocol servers (Services Setting).
- For systems with Ultrix Acuity, the *Restart Ultrix* control in the Acuity GUI may fail. Instead, the user should power-cycle the Ultrix from the Ultrix System Status menu in DashBoard.
- Ultrix SW Compatibility with SWR-SDPE blades.
    - Ultrix Carbonite v7.1.8
    - Ultrix Acuity v12.1g
- For ULTRIX-IPX-IO, prior to upgrading to v5.1.5, the board may not successfully boot when using an external power source directly to the card. Only internal frame power should be used until the upgrade is completed.
- For the initial launch of ULTRIX-IPX-IO, the software supports transceivers based on 4x25Gb NRZ multiple optical lanes either in a multifiber (MPO connector) or multi-lambda (WDM) configuration that require KR4 RS(528,514) FEC and that do not provide built-in FEC. The 4x25Gb NRZ multiple optical lane transceivers are available for both multimode or single-mode fibers and are identifiable by 100GBASE-SR4, 100GBASE-SWDM4, 100GBASE-PSM4, 100GBASE-CWDM4, 100GBASE-4WDM-10/20/40, and 100GBASE-CLR4.
    - Contact Ross Technical Support for details on support for other transceiver types.
- On ULTRIX-FR5, the cooling fans can remain at 100% even at lower temperatures. This will be fixed in an upcoming release.
- DashBoard version 9.7.0 or higher is required for the best user experience.

- Starting in V4.8.X, the I/O board firmware (IP, IPX, HDX, and MODX modules) is no longer included within the frame upgrade files. The frame and IO modules must be upgraded independently of each other.
  - o Upgrade Frame -- **DO NOT Reboot** when prompted by DashBoard after frame update.
  - o Upgrade all cards (including switcher cards) -- **DO NOT Reboot** when prompted by DashBoard in between card updates.
  - o After both FRAME and ALL CARDS have been successfully updated, power cycle the frame.
- To upgrade from versions prior to 4.0.0, contact Ross Technical Support for assistance.

VERSION 5.1.5 (020C9C1A, 6C66D117 FOR FR12) LIMITED RELEASE 11/07/23

EQUIPMENT
- ULTRIX-FR1, ULTRIX- FR2 (Legacy)
- ULTRIX-NS-FR1, ULTRIX-NS-FR2
- ULTRIX-FR5
- UCCI Upgrade Required?   YES ☐   NO ☒
- ULTRIX-FR12
- ULTRICORE-CC
- ULTRICORE-BCS
- ULTRICORE-OE

FEATURES & ENHANCEMENTS
- Release of ULTRIX-IPX-IO module as an enhancement to ULTRIX-IP-IO.
  - ULTRIX-IPX-IO supports 8+8 redundant or 8 non-redundant UHD streams
  - With the release of ULTRIX-IPX-IO, the user interface for both IP cards has been refreshed.
- Static DHCP control address assignment is now supported.
- User can now define a DNS server address and default domain lookup to get devices to register into RDS when not discoverable via mDNS.
- Added an option to allow the user to choose which ethernet interfaces are listed as active connection points for NMOS.

BUG FIXES
- UR-2532: Ultricore BCS / Resolved an issue where DashBoard could unexpectedly lose connection during a database configuration change.
- UR-4610: ULTRIX-IP-IO / Updated UI allows the Ultrix-IP ANC multicast IP addresses to be modified from the summary view.
- UR-4697: ULTRIX-IP-IO / Updated UI fixes an issue where the audio senders and receivers could not be created on ports 2 and 4.
- UR-5657: Ultrix / Resolved an issue where DashBoard could unexpectedly lose connection during a database configuration change.
- UR-5515: Ultrix / Fixed an issue where rebooting SDPE cards could result in missing video on some inputs.
- UR-5528: Ultritouch / Missing source name in push button operation window.
- UR-5656: ULTRIX-IP-IO / Improved the robustness of NMOS communication.
- UR-5743: Ultrix / Fixed an issue where Ultriscape could fail to lock to REF-B.
- UR-5745: Ultricore-CC / Resolved an issue where DashBoard could unexpectedly lose connection when using the serial port.
- UR-5785: ULTRIX-IP-IO / Fixed an issue where Ultriscape licenses would be disabled after reboot.

APPLICATION NOTES

- On first upgrade to 5.1.0 or newer, users must re-enable previously used external protocol servers (Services Setting).
- For systems with Ultrix Acuity, the *Restart Ultrix* control in the Acuity GUI may fail. Instead, the user should power-cycle the Ultrix from the Ultrix system status menu in Dashboard.
- Ultrix SW Compatibility with SWR-SDPE blades.
    - Ultrix Carbonite v7.1.6.
    - Ultrix Acuity v12.1e.
- For UTRIX-IPX-IO, prior to upgrading to v5.1.5, the board may not successfully boot when using an external power source directly to the card. Only internal frame power should be used until the upgrade is completed.
- ULTRIX-IPX-IO supports transceivers based on multiple optical lanes either in a multi fiber (MPO connector) or multi-lambda (WDM) configuration supporting KR4 RS(528,514) FEC, and that do not have any FEC encoder/decoder enabled by default. The multiple optical lane transceivers are available for both multimode or single-mode fiber and are identifiable with suffix -SR4, -LR4, -WDM4, -CWDM4, -PSM4.
    - In an upcoming software release, ULTRIX-IPX-IO will support single optical lane transceivers (-DR, -FR, -LR) from the 100G Lambda MSA that have built-in KP4 RS-(544,514) FEC."
- On Ultrix FR5, the cooling fans can remain at 100% even at lower temperature. This will be fixed in an upcoming release.
- DashBoard version 9.5.3 or higher is required for the best user experience.
- Starting in V4.8.X, the IP-IO module is no longer included within the frame upgrade files. The frame and IO modules must be upgraded independently of each other.
    - Upgrade Frame -- **DO NOT Reboot** when prompted by DashBoard after frame update.
    - Upgrade all cards (including switcher cards) -- **DO NOT Reboot** when prompted by DashBoard in between card updates.
    - After both FRAME and ALL CARDS have been successfully updated, power cycle the frame.
- To Upgrade from versions prior to 4.0.0, please contact Ross Technical Support for assistance.

VERSION 5.1.4 (3C759863, E3F0432C FOR FR12) LIMITED RELEASE 10/31/23

EQUIPMENT
- ULTRIX-FR1, ULTRIX- FR2 (Legacy)
- ULTRIX-NS-FR1, ULTRIX-NS-FR2
- ULTRIX-FR5
  - UCCI Upgrade Required?   YES ☐   NO ☒
- ULTRIX-FR12
- ULTRICORE-CC
- ULTRICORE-BCS
- ULTRICORE-OE

FEATURES & ENHANCEMENTS

This is a maintenance release only.

BUG FIXES
- UR-3035: Ultriscape / Improved clock accuracy for time of day, countdown, and stopwatch.
- UR-3412: Ultrix Carbonite / Fixed an issue where the switcher outputs 17 and 18 would not embed audio.
- UR-4450: Ultrix Acuity / Fixed an issue that could cause a video glitch when a high volume of switch requests is requested.
- UR-4484: Ultrix FR12 / Improved the boot process when NTP is enabled.
- UR-5127: Fixed an issue where the matte generator would not output black.
- UR-5166: Ultriscape / Fixed an issue where Multiviewer output was black on bootup.
- UR-5211: Ultrix Acuity / Improved boot times for systems with large numbers of PiP destinations.
- UR-5383: Fixed an issue where changes to the protocol server options were not saving properly.
- UR-5550: Ultritouch / The soft panel group window scaling and layout have been improved.
- UR-5572: Ultriscape / Fixed an issue where the PiP audio meter did not reflect the correct audio source.
- UR-5595: Ultrix FR12 / Fixed an issue where the fan in slot 10 could get stuck at 100%.
- UR-5603: Ultrix / Fixed a Rippaview panic that could occur at start-up.
- UR-5618: Ultrix FR12 / Improved the robustness of the frame ethernet connectivity.

APPLICATION NOTES

- On first upgrade to 5.1.0 or newer, users must re-enable previously used external protocol servers (Services Setting).
- DashBoard version 9.5.3 or higher is required for the best user experience.
- On Ultrix FR5, the cooling fans can remain at 100% even at lower temperature. This will be fixed in an upcoming release.

- For systems with Ultrix Acuity, the *Restart Ultrix* control in the Acuity GUI may fail. Instead, the user should power-cycle the Ultrix from the Ultrix system status menu in Dashboard.
- Starting in V4.8.X, the IP-IO module is no longer included within the frame upgrade files. The frame and IO modules must be upgraded independently of each other.
  - Upgrade Frame -- **DO NOT Reboot** when prompted by DashBoard after frame update.
  - Upgrade all cards (including switcher cards) -- **DO NOT Reboot** when prompted by DashBoard in between card updates.
  - After both FRAME and ALL CARDS have been successfully updated, power cycle the frame.
- To Upgrade Ultrix FR5 from versions prior to 4.1.0:
  - Ultrix systems must be running on SW version 3.42 or higher to upgrade to version 4.1.x.
  - Systems operating on versions prior to 3.42 must perform an interim upgrade to 3.42 before fully upgrading to 4.1.x.
  - When upgrading to 3.42 or later, DashBoard may prompt users to reboot multiple times (6-8 times) to process all updates. This is normal and expected behavior for this update.*
    *Caution: When powering cycling the frame, users must wait approx. 10-15 seconds before repowering to allow the frame time to completely power down and reset.
- Ultrix-UCCI Card Support* See Ultrix-FR5 UCC 4v10 Upgrade Procedure Application Note for instructions. UCCI Control Cards Version 4.1.0 or earlier must **upgrade the UCCI card first** before upgrading the frame.

VERSION 5.1.3 (6DC7AF75, 3B0EB661 FOR FR12) LIMITED RELEASE 09/27/23

EQUIPMENT
- ULTRIX-FR1, ULTRIX- FR2 (Legacy)
- ULTRIX-NS-FR1, ULTRIX-NS-FR2
- ULTRIX-FR5
    - UCCI Upgrade Required?   YES ☐   NO ☒
- ULTRIX-FR12
- ULTRICORE-CC
- ULTRICORE-BCS
- ULTRICORE-OE

FEATURES & ENHANCEMENTS
- TCP/IP keepalives are enabled on Probel SW-P-08 and RossTalk protocol incoming connections.
- Ultrix-MXR now supports up to 16 partitions when configured with 8x2 mono or 4x2 stereo partitions.

BUG FIXES
- UR-3832: Ultrix FR12 / Implemented improvements to the fan control for better temperature management.
- UR-3911: Improved system logging related to ENET redundancy state messages.
- UR-4515: Ultriscape / Fixed an issue where PiPs in destination follow mode with Tallied UMD would incorrectly append the source label to the UMD label.
- UR-4866: Ultriscape / Fixed a layout editor issue where deleting a specific tally lamp affected other tally lamps in the layout.
- UR-5034: Ultriscape / Fixed an issue where PiPs could drop to black.
- UR-5177: Ultrix / Fixed a Rippaview panic that could occur when a default gateway is not assigned.
- UR-5253: Ultrix / Fixed an Ultrixrouter crash that could occur when a system is configured with Acuity.
- UR-5307: Ultrix FR12 / Improved the robustness of the frame ethernet connectivity. Previously, in rare occurrences, a loss of connection to the frame could be observed.
- UR-5322: Fixed an issue where deleting an outgoing connection would corrupt subsequent entries.
- UR-5333: Ultrix / Fixed a head control process crash that could occur when configuring Ultriscape.
- UR-5346: Improved system logging related to gearbox messages.

APPLICATION NOTES
- On first upgrade to 5.1.0 or newer, users must re-enable previously used external protocol servers (Services Setting).

- For systems with Ultrix Acuity, the *Restart Ultrix* control in the Acuity GUI is not reliable. Instead, the user should restart the Ultrix from the Ultrix system status menu in Dashboard.
- Ultrix FR12 requires an Ultricore-BCS controller running SW version 5.0.x or later firmware (v5.1.3 is the latest version).
- Ultrix SW Compatibility with SWR-SDPE blades.
  - Ultrix Carbonite v7.0.x requires Ultrix version 4.8.x or higher.
  - Ultrix Acuity (including ACUFR12-CPU) v12.1a or higher requires Ultrix version 5.0.1 or higher.
- DashBoard version 9.5.3 or higher is required for the best user experience.
- Known issue upgrading the Ultrix FR12 controller card. On the first attempt, the upgrade may fail. If this occurs, repeat the upgrade to clear the error.
- Known issue upgrading fully stuffed Ultrix FR5 frames from version 4.8.3. On first attempt, users may receive an "out of memory" message. If this occurs, repeat the upgrade to clear the error.
- Starting in V4.8.X, the IP-IO module is no longer included within the frame upgrade files. The frame and IO modules must be upgraded independently of each other.
  - Upgrade Frame -- **DO NOT Reboot** when prompted by DashBoard after frame update.
  - Upgrade all cards (including switcher cards) -- **DO NOT Reboot** when Prompted by DashBoard in between card updates.
  - After both FRAME and ALL CARDS have been successfully updated, Reboot frame.
  - Power cycle the frame after all updates are complete.
- To Upgrade Ultrix FR5 from versions prior to 4.1.0:
  - Ultrix systems must be running on SW version 3.42 or higher to upgrade to version 4.1.x.
  - Systems operating on versions prior to 3.42 must perform an interim upgrade to 3.42 before fully upgrading to 4.1.x.
  - When upgrading to 3.42 or later, DashBoard may prompt users to reboot multiple times (6-8 times) to process all updates. This is normal and expected behavior for this update.*
  - ***Caution**: When powering cycling the frame, users must wait approx. 10-15 seconds before repowering to allow the frame time to completely power down and reset.
- Ultrix-UCCI Card Support* See Ultrix-FR5 UCC 4v10 Upgrade Procedure Application Note for instructions. UCCI Control Cards Version 4.1.0 or earlier must **upgrade the UCCI card first** before upgrading the frame.

VERSION 5.1.2 (37BD68B2, 148C2870 FOR FR12) LIMITED RELEASE 09/05/23

EQUIPMENT
- ULTRIX-FR1, ULTRIX- FR2 (Legacy)
- ULTRIX-NS-FR1, ULTRIX-NS-FR2
- ULTRIX-FR5
- UCCI Upgrade Required?   YES ☐   NO ☒
- ULTRIX-FR12
- ULTRICORE-CC
- ULTRICORE-BCS
- ULTRICORE-OE

FEATURES & ENHANCEMENTS
- 16- and 32-character labels are now supported with the Probel SW-P-08 protocol.

BUG FIXES
- UR-3041: Fixed an issue during power-up where an unstable client connection would prevent the system from initializing properly.
- UR-4072: Fixed an issue where the ENET port status was not provided on the network information pane.
- UR-4874: Fixed the GVG-Native Qj command to send the status of all destinations when no destination is specified.
- UR-4916: Improved handling of Probel SW-P-08 crosspoint status messages on startup.
- UR-4971: Ultriscape / Fixed an issue where the EIA-608 captions could get corrupted.
- UR-5047: Ultriscape / Fixed a Multiviewer output rendering issue if layouts or heads are removed from database or IDs change
- UR-5122: Ultriscape / Fixed an issue where AUX inputs were black on PiPs A and B.
- UR-5125: Fixed an issue where the internal uapdb database was visible in the list of user databases.
- UR-5162: Ultriscape / Fixed an issue where setting a PiP to follow a destination could cause a loss of connection within DashBoard.
- UR-5172: Ultrix FR12 / Fixed an issue where the alarm configuration tab did not display.
- UR-5192: Ultriscape / Fixed an issue where audio meters only reflected sequential channel assignments.
- UR-5208: Ultriscape / Fixed an issue where the UMD Tally text did not display correctly on the Multiviewer output.
- UR-5210: Addressed false temperature alarms when Acuity system is rebooted or shutdown.

APPLICATION NOTES
- On first upgrade to 5.1.0 or newer, users must re-enable previously used external protocol servers (Services Setting).
- FR12 requires an Ultricore-BCS controller running SW version 5.0.x or later firmware (v5.1.2 is the latest version)
- Ultrix SW Compatibility with SWR-SDPE blades.

- o Ultrix Carbonite v7.0.x requires Ultrix version 4.8.x or higher.
  - o Ultrix Acuity (including ACUFR12-CPU) v12.1a or higher requires Ultrix version 5.0.1 or higher.
- Dashboard version 9.5.3 or higher is required for the best user experience.
- Known issue upgrading FR12 controller card. On first attempt users the upgrade may fail. If this occurs, repeat the upgrade to clear the error.
- Known issue upgrading fully stuffed FR5 frames from version 4.8.3. On first attempt users may receive an "out of memory" message. If this occurs, repeat the upgrade to clear the error.
- Starting in V4.8.X, the IP-IO module is no longer included within the frame upgrade files. The frame and IO modules must be upgraded independently of each other.
  - o Upgrade Frame -- **DO NOT Reboot** when prompted by DashBoard after frame update.
  - o Upgrade all cards (including switcher cards) -- **DO NOT Reboot** when Prompted by DashBoard in between card updates.
  - o After both FRAME and ALL CARDS have been successfully updated, Reboot frame.
  - o Power cycle the frame after all updates are complete.
- To Upgrade Ultrix FR5 from versions prior to 4.1.0:
  - o Ultrix systems must be running on SW version 3.42 or higher to upgrade to version 4.1.x.
  - o Systems operating on versions prior to 3.42 must perform an interim upgrade to 3.42 before fully upgrading to 4.1.x.
  - o When upgrading to 3.42 or later, DashBoard may prompt users to reboot multiple times (6-8 times) to process all updates. This is normal and expected behavior for this update.*
  - o ***Caution**: When powering cycling the frame, users must wait approx. 10-15 seconds before repowering to allow the frame time to completely power down and reset.
- Ultrix-UCCI Card Support* See Ultrix-FR5 UCC 4v10 Upgrade Procedure Application Note for instructions. UCCI Control Cards Version 4.1.0 or earlier must **upgrade the UCCI card first** before upgrading the frame.

VERSION 5.1.1 (42ED417A, 6BA9CB6D FOR FR12) 08/08/23

EQUIPMENT
- ULTRIX-FR1, ULTRIX- FR2 (Legacy)
- ULTRIX-NS-FR1, ULTRIX-NS-FR2
- ULTRIX-FR5
- UCCI Upgrade Required?   YES ☐   NO ☒
- ULTRIX-FR12
- ULTRICORE-CC
- ULTRICORE-BCS
- ULTRICORE-OE

FEATURES & ENHANCEMENTS
- N/A

BUG FIXES
- UR-3835: Ultrix / Resolved an issue to better handle input signals when disconnected.
- UR-4866: Ultriscape / Fixed a layout editor issue where deleting a specific tally lamp affected other tally lamps in the layout.
- UR-4892: Ultricore BCS / Increased the number of allowed concurrent GVG protocol client connections from 20 to 40.
- UR-4908: Ultrix / Fixed an issue where newly configured PiP follows would not follow the destination.

APPLICATION NOTES
- On first upgrade to 5.1.0 or newer, users must re-enable previously used external protocol servers (Services Settings).
- FR12 requires an Ultricore-BCS controller running SW version 5.0.x or later firmware (v5.1.1 is the latest version)
- Ultrix SW Compatibility with SWR-SDPE blades.
  - Ultrix Carbonite v7.0.x requires Ultrix version 4.8.x or higher.
  - Ultrix Acuity (including ACUFR12-CPU) v12.1a or higher requires Ultrix version 5.0.1 or higher.
- Dashboard version 9.5.3 or higher is required for the best user experience.
- Known issue upgrading FR12 controller card. On first attempt users the upgrade may fail. If this occurs, repeat the upgrade to clear the error.
- Known issue upgrading fully stuffed FR5 frames from version 4.8.3. On first attempt users may receive an "out of memory" message. If this occurs, repeat the upgrade to clear the error.
- Starting in V4.8.X, the IP-IO module is no longer included within the frame upgrade files. The frame and IO modules must be upgraded independently of each other.
  - Upgrade Frame -- **DO NOT Reboot** when prompted by DashBoard after frame update.
  - Upgrade all cards (including switcher cards) -- **DO NOT Reboot** when Prompted by DashBoard in between card updates.

- After both FRAME and ALL CARDS have been successfully updated, Reboot frame.
    - Power cycle the frame after all updates are complete.
- To Upgrade Ultrix FR5 from versions prior to 4.1.0:
    - Ultrix systems must be running on SW version 3.42 or higher to upgrade to version 4.1.x.
    - Systems operating on versions prior to 3.42 must perform an interim upgrade to 3.42 before fully upgrading to 4.1.x.
    - When upgrading to 3.42 or later, DashBoard may prompt users to reboot multiple times (6-8 times) to process all updates. This is normal and expected behavior for this update.*
    - ***Caution**: When powering cycling the frame, users must wait approx. 10-15 seconds before repowering to allow the frame time to completely power down and reset.
- Ultrix-UCCI Card Support* See Ultrix-FR5 UCC 4v10 Upgrade Procedure Application Note for instructions. UCCI Control Cards Version 4.1.0 or earlier must **upgrade the UCCI card first** before upgrading the frame.

VERSION 5.1.0 (B27D73E0, A45CC0EA FOR FR12) 07/26/23

EQUIPMENT
- ULTRIX-FR1, ULTRIX- FR2 (Legacy)
- ULTRIX-NS-FR1, ULTRIX-NS-FR2
- ULTRIX-FR5
- UCCI Upgrade Required?   YES ☐   NO ☒
- ULTRIX-FR12
- ULTRICORE-CC
- ULTRICORE-BCS
- ULTRICORE-OE

FEATURES & ENHANCEMENTS
- Support for the new ULTRIX-MODX-IO modular I/O card configured with 4 MOD-SFP sub-modules.
- Users can now configure Multiviewer heads with embedded status and alarm indicators including the presence of closed captions, audio silence or audio loss of signal (LOS), video loss of signal (LOS)/freeze/black, display the video format, or provide an alert in the case of an unexpected video format.
- With the new Smartcore user interface, users can now assign key input/output control parameters to Ultritouch panels for quick access. (Beta functionality)
- Users can now select upconverted 4K resolution for the Multiviewer head output format (Supported on HDB, HDX, SFP, MODX cards).
- Users can now select up to 16 Ultrisync-UHD channels, up from 8 (Supported on HDX and MODX cards).
- The real-time clock on the FR12 is now enabled to retain time when the system is powered off.

BUG FIXES
- UR-3569: Addressed an issue where the system would fail to route.
- UR-4539: HDX-IO and IP-IO upgrade image files can now be uploaded correctly during a system upgrade.
- UR-4620: Fixed an issue to correct Ultrix IP flex slot routing for local senders.
- UR-4827: Ultrix / Fixed a memory leak issue.

APPLICATION NOTES
- On first upgrade to 5.1.0 or newer, users must re-enable previously used external protocol servers (Services Settings).
- FR12 requires an Ultricore-BCS controller running SW version 5.0.x or later firmware (v5.1.0 is the latest version)
- Ultrix SW Compatibility with SWR-SDPE blades.
  - Ultrix Carbonite v7.0.x requires Ultrix version 4.8.x or higher.
  - Ultrix Acuity (including ACUFR12-CPU) v12.1a or higher requires Ultrix version 5.0.1 or higher.
- Dashboard version 9.5.3 or higher is required for the best user experience.

- Known issue upgrading FR12 controller card. On first attempt users the upgrade may fail. If this occurs, repeat the upgrade to clear the error.
- Known issue upgrading fully stuffed FR5 frames from version 4.8.3. On first attempt users may receive an "out of memory" message. If this occurs, repeat the upgrade to clear the error.
- Starting in V4.8.X, the IP-IO module is no longer included within the frame upgrade files. The frame and IO modules must be upgraded independently of each other.
  - o Upgrade Frame -- **DO NOT Reboot** when prompted by DashBoard after frame update.
  - o Upgrade all cards (including switcher cards) -- **DO NOT Reboot** when Prompted by DashBoard in between card updates.
  - o After both FRAME and ALL CARDS have been successfully updated, Reboot frame.
  - o Power cycle the frame after all updates are complete.
- To Upgrade Ultrix FR5 from versions prior to 4.1.0:
  - o Ultrix systems must be running on SW version 3.42 or higher to upgrade to version 4.1.x.
  - o Systems operating on versions prior to 3.42 must perform an interim upgrade to 3.42 before fully upgrading to 4.1.x.
  - o When upgrading to 3.42 or later, DashBoard may prompt users to reboot multiple times (6-8 times) to process all updates. This is normal and expected behavior for this update.*
  - o ***Caution**: When powering cycling the frame, users must wait approx. 10-15 seconds before repowering to allow the frame time to completely power down and reset.
- Ultrix-UCCI Card Support* See Ultrix-FR5 UCC 4v10 Upgrade Procedure Application Note for instructions. UCCI Control Cards Version 4.1.0 or earlier must **upgrade the UCCI card first** before upgrading the frame.

VERSION 5.0.5/4.9.5 (9AD1C719, ED165033 FOR FR12) LIMITED RELEASE 08/03/23

EQUIPMENT
- ULTRIX-FR1, ULTRIX- FR2 (Legacy)
- ULTRIX-NS-FR1, ULTRIX-NS-FR2
- ULTRIX-FR5
- UCCI Upgrade Required?   YES ☐   NO ☒
- ULTRIX-FR12
- ULTRICORE-CC
- ULTRICORE-BCS
- ULTRICORE-OE

FEATURES & ENHANCEMENTS
- N/A

BUG FIXES
- UR-3569: Addressed an issue where the system would fail to route.
- UR-4539: HDX-IO and IP-IO upgrade image files can now be uploaded correctly during a system upgrade.
- UR-4620: Fixed an issue to correct Ultrix IP flex slot routing for local senders.
- UR-4827: Ultrix / Optimized memory use in Ultrix.

APPLICATION NOTES
- Ultrix SW Compatibility with SWR-SDPE blades.
    - Ultrix Carbonite v7.0.x requires Ultrix version 4.8.x or higher.
    - Ultrix Acuity (including ACUFR12-CPU) v12.1a or higher requires Ultrix version 5.0.1 or higher.
- Dashboard version 9.5.3 or higher is required for the best user experience.
- Known issue upgrading FR12 controller card. On first attempt users the upgrade may fail. If this occurs, repeat the upgrade to clear the error.
- Known issue upgrading fully stuffed FR5 frames from version 4.8.3. On first attempt users may receive an "out of memory" message. If this occurs, repeat the upgrade to clear the error.
- Starting in V4.8.X, the IP-IO module is no longer included within the frame upgrade files. The frame and IO modules must be upgraded independently of each other.
    - Upgrade Frame -- **DO NOT Reboot** when prompted by DashBoard after frame update.
    - Upgrade all cards (including switcher cards) -- **DO NOT Reboot** when Prompted by DashBoard in between card updates.
    - After both FRAME and ALL CARDS have been successfully updated, Reboot frame.
    - Power cycle the frame after all updates are complete.
- To Upgrade Ultrix FR5 from versions prior to 4.1.0:

- o Ultrix systems must be running on SW version 3.42 or higher to upgrade to version 4.1.x.
- Systems operating on versions prior to 3.42 must perform an interim upgrade to 3.42 before fully upgrading to 4.1.x.
  - o When upgrading to 3.42 or later, DashBoard may prompt users to reboot multiple times (6-8 times) to process all updates. This is normal and expected behavior for this update.*
  - o ***Caution**: When powering cycling the frame, users must wait approx. 10-15 seconds before repowering to allow the frame time to completely power down and reset.
- Ultrix-UCCI Card Support* See Ultrix-FR5 UCC 4v10 Upgrade Procedure Application Note for instructions. UCCI Control Cards Version 4.1.0 or earlier must **upgrade the UCCI card first** before upgrading the frame.

VERSION 5.0.4 (7BDE0271) 07/18/23 - FOR ULTRICORE-BCS ONLY

EQUIPMENT
- ULTRICORE-BCS

FEATURES & ENHANCEMENTS
- N/A

BUG FIXES
- UR-3630: Ultricore BCS / Audit logs are now present in technical reports.
- UR-4582: Ultricore BCS / Fixed an issue where the UMD labels were not being updated after a power cycle.
- UR-4622: Ultricore BCS / Fixed an issue where a high-volume of log entries were generated.

APPLICATION NOTES
- Dashboard version 9.5.3 or higher is required for the best user experience.

VERSION 5.0.4 (7BDE0271) 07/18/23 - LIMITED RELEASE

EQUIPMENT
- ULTRIX-FR1, ULTRIX- FR2 (Legacy), ULTRIX-NS-FR1, ULTRIX-NS-FR2
- ULTRIX-FR5
- UCCI Upgrade Required?   YES ☐   NO ☒
- ULTRICORE-CC, ULTRICORE-OE

FEATURES & ENHANCEMENTS
- N/A

BUG FIXES
- UR-4070: Ultrix / Technical data reports have been corrected to include /tmp/connections directory.
- UR-4086: Ultrix / Fixed an issue where the multiviewer heads were black after a power cycle.
- UR-4472: Ultrix / Fixed a memory leak issue.
- UR-4605: Ultrix / Fixed a Rippaview panic issue seen after the auto generation of group categories.

APPLICATION NOTES
- Known issue upgrading fully stuffed FR5 frames from version 4.8.3. On first attempt users may receive an "out of memory" message. If this occurs, repeat the upgrade to clear the error.
- Starting in V4.8.X, the IP-IO module is no longer included within the frame upgrade files. The frame and IO modules must be upgraded independently of each other.
- Upgrade Frame -- **DO NOT Reboot** when prompted by DashBoard after frame update.
- Upgrade all cards (including switcher cards) -- **DO NOT Reboot** when Prompted by DashBoard in between card updates.
- After both FRAME and ALL CARDS have been successfully updated, Reboot frame.
- Power cycle the frame after all updates are complete.
- Ultrix SW Compatibility with SWR-SDPE blades.
    - Ultrix Carbonite v7.0.x requires Ultrix version 4.8.x or higher.
    - Ultrix Acuity (including ACUFR12-CPU) v12.1a or higher requires Ultrix version 5.0.1 or higher.
- Dashboard version 9.5.3 or higher is required for the best user experience.
- To Upgrade Ultrix FR5 from versions prior to 4.1.0:
    - Ultrix systems must be running on SW version 3.42 or higher to upgrade to version 4.1.x.
    - Systems operating on versions prior to 3.42 must perform an interim upgrade to 3.42 before fully upgrading to 4.1.x.
    - When upgrading to 3.42 or later, DashBoard may prompt users to reboot multiple times (6-8 times) to process all updates. This is normal and expected behavior for this update.*

- o ***Caution**: When powering cycling the frame, users must wait approx. 10-15 seconds before repowering to allow the frame time to completely power down and reset.
- Ultrix-UCCI Card Support* See Ultrix-FR5 UCC 4v10 Upgrade Procedure Application Note for instructions. UCCI Control Cards Version 4.1.0 or earlier must <u>upgrade the UCCI card first</u> before upgrading the frame.

VERSION 4.9.4 (CA66D1D3) 07/18/23 – ULTRIX-FR12 SYSTEMS ONLY

EQUIPMENT
- ULTRIX-FR12

FEATURES & ENHANCEMENTS
- This release supports the field replacements of FR12 crosspoints.

BUG FIXES
- UR-4070: Ultrix / Technical data reports have been corrected to include /tmp/connections directory.
- UR-4085: Ultrix FR12 / Fixed an issue where outputs were black after a power cycle.
- UR-4086: Ultrix FR12/ Fixed an issue where the Multiviewer heads were black after a power cycle.
- UR-4472: Ultrix / Fixed a memory leak issue.
- UR-4605: Ultrix / Fixed a Rippaview panic issue seen after the auto generation of group categories.
- UR-4632: Ultrix FR12 / Fixed an issue where a fan alarm was erroneously reported.

APPLICATION NOTES
- Version 4.9.4 targets FR12 Only.
- FR12 requires an Ultricore-BCS controller running SW version 5.0.4 or later firmware.
- Dashboard version 9.5.3 or higher is required for the best user experience.
- Ultrix SW compatibility with SWR-SDPE blades:
  - Ultrix Carbonite v7.1.0 requires ULTRIX-FR12 version 4.9.1 or higher.
  - Ultrix Acuity (including ACUFR12-CPU) v12.1a requires ULTRIX-FR12 version 4.9.1 or higher.

VERSION 5.0.3 (5805A7AC) 07/05/23

EQUIPMENT
- ULTRIX-FR1, ULTRIX- FR2 (Legacy)
- ULTRIX-NS-FR1, ULTRIX-NS-FR2
- ULTRIX-FR5
- UCCI Upgrade Required?   YES ☐   NO ☒
- ULTRICORE-CC
- ULTRICORE-BCS
- ULTRICORE-OE

FEATURES & ENHANCEMENTS
- N/A

BUG FIXES
- UR-4445: Ultrisync / Fixed a Dashboard high CPU consumption issue when frame syncs assignments are changed.
- UR-4492: Ultricore / The default T-BUS connection can no longer be deleted.

APPLICATION NOTES
- Known issue upgrading fully stuffed FR5 frames from version 4.8.3. On first attempt users may receive an "out of memory" message. If this occurs, repeat the upgrade to clear the error.
- Starting in V4.8.X, the IP-IO module is no longer included within the frame upgrade files. The frame and IO modules must be upgraded independently of each other.
- Upgrade Frame -- **DO NOT Reboot** when prompted by DashBoard after frame update.
- Upgrade all cards (including switcher cards) -- **DO NOT Reboot** when Prompted by DashBoard in between card updates.
- After both FRAME and ALL CARDS have been successfully updated, Reboot frame.
- Power cycle the frame after all updates are complete.
- Ultrix SW Compatibility with SWR-SDPE blades.
    - Ultrix Carbonite v7.0.x requires Ultrix version 4.8.x or higher.
    - Ultrix Acuity (including ACUFR12-CPU) v12.1a or higher requires Ultrix version 5.0.1 or higher.
- Dashboard version 9.3 or higher is required for the best user experience.
- To Upgrade Ultrix FR5 from versions prior to 4.1.0:
    - Ultrix systems must be running on SW version 3.42 or higher to upgrade to version 4.1.x.
    - Systems operating on versions prior to 3.42 must perform an interim upgrade to 3.42 before fully upgrading to 4.1.x.
    - When upgrading to 3.42 or later, DashBoard may prompt users to reboot multiple times (6-8 times) to process all updates. This is normal and expected behavior for this update.*

- o **<u>*Caution</u>**: When powering cycling the frame, users must wait approx. 10-15 seconds before repowering to allow the frame time to completely power down and reset.
- Ultrix-UCCI Card Support* See Ultrix-FR5 UCC 4v10 Upgrade Procedure Application Note for instructions. UCCI Control Cards Version 4.1.0 or earlier must **<u>upgrade the UCCI card first</u>** before upgrading the frame.

VERSION 4.9.3 (9B4BB1A4) 07/05/23 –FOR ULTRIX-FR12 SYSTEMS ONLY

EQUIPMENT
- ULTRIX-FR12

FEATURES & ENHANCEMENTS
- N/A

BUG FIXES
- UR-4445: Ultrisync / Fixed a Dashboard high CPU consumption issue when frame syncs assignments are changed.
- UR-4452: Ultrix / Fixed an issue where a temperature alarm was erroneously reported.
- UR-4455: Ultrix / Fixed an issue where a fan alarm was erroneously reported.
- UR-4461: Ultrix / Fixed an issue where the fan control was not working.

APPLICATION NOTES
- Version 4.9.3 targets FR12 Only.
- FR12 requires an Ultricore-BCS controller running SW version 5.0.3 or later firmware.
- Dashboard version 9.3 or higher is required for the best user experience.
- Ultrix SW compatibility with SWR-SDPE blades:
    - Ultrix Carbonite v7.1.0 requires ULTRIX-FR12 version 4.9.1 or higher.
    - Ultrix Acuity (including ACUFR12-CPU) v12.1a requires ULTRIX-FR12 version 4.9.1 or higher.

VERSION 5.0.2 (09F2E8FA) 06/26/23 – LIMITED RELEASE

EQUIPMENT
- ULTRIX-FR1, ULTRIX- FR2 (Legacy)
- ULTRIX-NS-FR1, ULTRIX-NS-FR2
- ULTRIX-FR5
- UCCI Upgrade Required?   YES ☐   NO ☒
- ULTRICORE-CC
- ULTRICORE-BCS
- ULTRICORE-OE

FEATURES & ENHANCEMENTS
- N/A

BUG FIXES
- UR-3245: Ultrix / Changing the source for a locked PiP on the Head Selection page no longer causes PiPs to go black.
- UR-3630: Ultricore-BCS / Audit log now present in the Ultricore BCS technical report.
- UR-3798: Ultrix / Improved robustness of Ember+ connection.
- UR-3861: Ultrix / Fixed an issue where the audio delay setting was ignored.
- UR-3889: Ultricore-BCS / Fixed an issue where logs were consuming excessive Ultricore BCS memory.
- UR-3894: Ultrix / Edits to Gearbox Sub-Image ID now correctly reflected in UI.
- UR-4088: Ultrix / Corrected a Rippaview panic condition.
- UR-4236: Ultrix / Fixed a head control process crash on bootup.
- UR-4379: Ultrix / PiP Destination follows not updating until MV Layout is changed.
- UR-4409: Ultrix / Fixed a head control process crash in clock cache.
- UR-4425: Ultrix / Device list is not written to database in 5.0.x.
- UR-4439: Ultricore-CC / Fixed an Issue where T-bus was not detected.

APPLICATION NOTES
- Known issue upgrading fully stuffed FR5 frames from version 4.8.3. On first attempt users may receive an "out of memory" message. If this occurs, repeat the upgrade to clear the error.
- Starting in V4.8.X, the IP-IO module is no longer included within the frame upgrade files. The frame and IO modules must be upgraded independently of each other.
- Upgrade Frame -- **DO NOT Reboot** when prompted by DashBoard after frame update.
- Upgrade all cards (including switcher cards) -- **DO NOT Reboot** when Prompted by DashBoard in between card updates.
- After both FRAME and ALL CARDS have been successfully updated, Reboot frame.
- Power cycle the frame after all updates are complete.
- Ultrix SW Compatibility with SWR-SDPE blades.

- o Ultrix Carbonite v7.0.x requires Ultrix version 4.8.x or higher.
  - o Ultrix Acuity (including ACUFR12-CPU) v12.1a or higher requires Ultrix version 5.0.1 or higher.
- Dashboard version 9.3 or higher is required for the best user experience.
- To Upgrade Ultrix FR5 from versions prior to 4.1.0:
- Ultrix systems must be running on SW version 3.42 or higher to upgrade to version 4.1.x.
- Systems operating on versions prior to 3.42 must perform an interim upgrade to 3.42 before fully upgrading to 4.1.x.
- When upgrading to 3.42 or later, DashBoard may prompt users to reboot multiple times (6-8 times) to process all updates. This is normal and expected behavior for this update.*
- ***Caution**: When powering cycling the frame, users must wait approx. 10-15 seconds before repowering to allow the frame time to completely power down and reset.
- Ultrix-UCCI Card Support* See Ultrix-FR5 UCC 4v10 Upgrade Procedure Application Note for instructions. UCCI Control Cards Version 4.1.0 or earlier must **upgrade the UCCI card first** before upgrading the frame.

VERSION 4.9.2 (60A7820E) 06/26/23 – LIMITED RELEASE FOR ULTRIX-FR12 ONLY

EQUIPMENT
- ULTRIX-FR12

FEATURES & ENHANCEMENTS
- N/A

BUG FIXES
- UR-3245: Ultrix / Changing the source for a locked PiP on the Head Selection page no longer causes PiPs to go black.
- UR-3798: Ultrix / Improved robustness of Ember+ connection.
- UR-3861: Ultrix / Fixed an issue where the audio delay setting was ignored.
- UR-3894: Ultrix / Edits to Gearbox Sub-Image ID now correctly reflected in UI.
- UR-4088: Ultrix / Corrected a Rippaview panic condition.
- UR-4229: Ultrix / Fixed an issue where video inputs are showing up as black on the FR12 with an Ultrix Acuity.
- UR-4236: Ultrix / Fixed a head control process crash on bootup.
- UR-4379: Ultrix / PiP Destination follows not updating until MV Layout is changed.
- UR-4409: Ultrix / Fixed a head control process crash in clock cache.
- UR-4425: Ultrix / Device list is not written to database in 5.0.x.

APPLICATION NOTES
- Version 4.9.2 targets FR12 Only.
- FR12 requires an Ultricore-BCS controller running SW version 5.0.2 or later firmware.
- Dashboard version 9.3 or higher is required for the best user experience.
- Ultrix SW compatibility with SWR-SDPE blades:
    - Ultrix Carbonite v7.1.0 requires ULTRIX-FR12 version 4.9.1 or higher.
    - Ultrix Acuity (including ACUFR12-CPU) v12.1a requires ULTRIX-FR12 version 4.9.1 or higher.

VERSION 5.0.1 (C54C46AE) 05/18/23

EQUIPMENT
- ULTRIX-FR1, ULTRIX- FR2 (Legacy)
- ULTRIX-NS-FR1, ULTRIX-NS-FR2
- ULTRIX-FR5
- UCCI Upgrade Required?   YES ☐   NO ☒
- ULTRICORE
- ULTRICORE-BCS
- ULTRICORE-OE

FEATURES & ENHANCEMENTS
- Ultrix support for the latest updates to Ultrix Acuity Version 12.0a and Ultrix Carbonite 7.1.0
- Users now have the ability to disable third-party protocol servers
- Users now have the ability to re-order soft panels

BUG FIXES
- UR-3036 : Ultrix / Validate audio mixer OGP requests
- UR-3125 : Ultricore-BCS / Take errors on frame reboot
- UR-3245 : Ultrix / PiPs Go Black If Route Changed Via Head Selection When Locked
- UR-3338 : Ultritouch-PB Panel - Button Labels Truncated
- UR-3598 : Ultricore-BCS / Rippaview Panic When Saving Destinations
- UR-3727 : Ultricore-BCS / Probel SW-P-08 Sending 4 Char Labels Only
- UR-3889 : Ultricore-IP / Log Messages Filling Up Storage
- UR-3894 : Ultrix / 2SI Selection Bug
- UR-3978 : Ultrix / Clean Switch Not Working With HDX-IO

APPLICATION NOTES
- Known issue upgrading fully stuffed FR5 frames from version 4.8.3. On first attempt users may receive an "out of memory" message. If this occurs, repeat the upgrade to clear the error.
- Starting in V4.8.X, IO modules (HDX-IO and IP-IO) are no longer included within the frame upgrade files. The frame and IO modules must be upgraded independent of each other.
- Upgrade Frame -- **DO NOT Reboot** when prompted by DashBoard after frame update
- Upgrade all cards (including switcher cards) -- **DO NOT Reboot** when Prompted by DashBoard in between card updates
- After both FRAME and ALL CARDS have been successfully updated, Reboot frame
- Power cycle the frame after all loads are complete.
- Ultrix SW Compatibility with SWR-SDPE blades
    - Ultrix Carbonite v7.0.x requires Ultrix version 4.8.x or higher

- o Ultrix Acuity (including ACUFR12-CPU) v12.1a or higher requires Ultrix version 5.0.1
- Dashboard version 9.3 or higher is recommended for the best user experience.
- To Upgrade Ultrix FR5 from versions prior to 4.1.0:
- Ultrix systems must be running on SW version 3.42 or higher to upgrade to version 4.1.x.
- Systems operating on versions prior to 3.42 must perform an interim upgrade to 3.42 before fully upgrading to 4.1.x.
- DashBoard may prompt users to reboot multiple times (6-8 times) to process all updates. This is normal and expected behavior for this update.*
- ***Caution**: When powering cycling the frame, users must wait approx. 10-15 seconds before repowering to allow the frame time to completely power down and reset.
- Ultrix-UCCI Card Support* See Ultrix-FR5 UCC 4v10 Upgrade Procedure Application Note for instructions. UCCI Control Cards Version 4.1.0 or earlier must **upgrade the UCCI card first** before upgrading the frame

VERSION 4.9.1 (85F40480) 05/18/23 - ULTRIX-FR12 SYSTEMS ONLY

EQUIPMENT
- ULTRIX-FR12

FEATURES & ENHANCEMENTS
- Support for SWR-SDPE blades in Ultrix-FR12 - Carbonite v7.1.0 and Acuity v12.0a

BUG FIXES
- UR-3036 : Ultrix / Validate audio mixer OGP requests
- UR-3245 : Ultrix / PiPs Go Black If Route Changed Via Head Selection When Locked
- UR-3832 : Ultrix-FR12 / Slot 16 Runs Higehr Temp
- UR-3889 : Ultricore-IP / Log Messages Filling Up Storage
- UR-3894 : Ultrix / 2SI Selection Bug
- UR-3978 : Ultrix / Clean Switch Not Working With HDX-IO

APPLICATION NOTES
- Version 4.9.x Targets FR12 Only
- FR12 requires an Ultricore-BCS controller running SW version 5.0.1 or later firmware
- Dashboard version 9.3 or higher is recommended for the best user experience
- Ultrix SW compatibility with SWR-SDPE blades
  - Ultrix Carbonite v7.1.0 requires Ultrix-FR12 version 4.9.1
  - Ultrix Acuity (including ACUFR12-CPU) v12.1a requires Ultrix- FR12 version 4.9.1

VERSION 5.0.0 (3FDB97AB) 03/03/23 – LIMITED RELEASE FOR ULTRIX-FR12 ONLY

EQUIPMENT
- ULTRICORE-BCS

FEATURES & ENHANCEMENTS
- Ultricore-BCS Version 5.0.0 Companion release for FR12 Systems
- Includes Integrated Ultripower control page for synchronizing Ultripowers

BUG FIXES
- N/A

APPLICATION NOTES
- 5.0.0 for use with ULTRIX-FR12 systems only
- Ultrix Systems in the field or new systems that do not include FR-12 continue to use ver. 4.8.X

VERSION 4.9.0 (DCE4E91) 03/03/23 – ULTRIX-FR12 FIRST RELEASE

EQUIPMENT
- ULTRIX-FR12

FEATURES & ENHANCEMENTS
- First Release of the Ultrix-FR12 Hyperconverged Routing Platform
- Includes Ultricore-BCS Version 5.0.0 Companion release for FR12 Systems only
- Includes Integrated Ultripower control page for synchronizing Ultripowers

BUG FIXES
- First Release

APPLICATION NOTES
- 4.9.0 Targets FR12 Only
- FR12 requires an Ultricore-BCS controller running SW version 5.0.0 or later firmware
- Ultrix Systems in the field or new systems that do not include FR-12 continue to use ver. 4.8.X

VERSION 4.8.7 (D0C31875) 04/18/23

EQUIPMENT
- ULTRIX-FR1, ULTRIX- FR2 (Legacy)
- ULTRIX-NS-FR1, ULTRIX-NS-FR2
- ULTRIX-FR5
- UCCI Upgrade Required?   YES ☐   NO ☒
- ULTRICORE
- ULTRICORE-BCS
- ULTRICORE-OE

FEATURES & ENHANCEMENTS
- Maintenance release and bug fixes.

BUG FIXES
- UR-3033 Ultritouch-PB Display Icons setting defaults to enabled on reboot
- UR-3316 CEA-708 caption rendering improvements
- UR-3346 Rippaview panic caused by concurrent map access when saving salvos
- UR-3396 Ultrimix-MXR Gain Reduction Meter update to reflect proper status
- UR-3428 Corrected Source Tallies not working on PiPs
- UR-3429 Corrected Destination salvo capture for destinations not matching the start of the database
- UR-3510 Added option for PiP UMD to display source name in follow mode
- UR-3619 Corrected Rippaview panic in User Profile Manager after BCS failover
- UR-3625 Audio mixer soft panel unable to scroll through all channel strips for 8 partitions when using a combination of mono and stereo
- UR-3640 Ultricore-IP Incorrect handling of devices that don't support IS-05 v1.1

APPLICATION NOTES
- Known issue upgrading fully stuffed FR5 frames from version 4.8.3. On first attempt users may receive an "out of memory" message. If this occurs, repeat the upgrade to clear the error.
- Starting in V4.8.X, IO modules (HDX-IO and IP-IO) are no longer included within the frame upgrade files. The frame and IO modules must be upgraded independent of each other.
- To upgrade from 4.1.x or later to the current version:
- Upgrade Frame -- **DO NOT Reboot** when prompted by DashBoard after frame update
- Upgrade all cards (including switcher cards) -- **DO NOT Reboot** when Prompted by DashBoard in between card updates
- After both FRAME and ALL CARDS have been successfully updated, Reboot frame
- Power cycle the frame after all loads are complete.

- SWR-SDPE blades require a FW upgrade to v7.0 Carbonite or v11.1 Acuity to be compatible with Ultrix version 4.8.x
- Subscriptions require Dashboard version 9.2 or higher to leverage optimization advantages.
- To Upgrade Ultrix FR5 from versions prior to 4.1.0:
- Ultrix systems must be running on SW version 3.42 or higher to upgrade to version 4.1.x.
- Systems operating on versions prior to 3.42 must perform an interim upgrade to 3.42 before fully upgrading to 4.1.x.
- DashBoard may prompt users to reboot multiple times (6-8 times) to process all updates. This is normal and expected behavior for this update.*
- **<u>*Caution</u>**: When powering cycling the frame, users must wait approx. 10-15 seconds before repowering to allow the frame time to completely power down and reset.
- Ultrix-UCCI Card Support* See Ultrix-FR5 UCC 4v10 Upgrade Procedure Application Note for instructions. UCCI Control Cards Version 4.1.0 or earlier must **<u>upgrade the UCCI card first</u>** before upgrading the frame

VERSION 4.8.6 (36F1FD4D) 02/03/23

EQUIPMENT
- ULTRIX-FR1, ULTRIX- FR2 (Legacy)
- ULTRIX-NS-FR1, ULTRIX-NS-FR2
- ULTRIX-FR5
- UCCI Upgrade Required?   YES ☐   NO ☒
- ULTRICORE
- ULTRICORE-BCS
- ULTRICORE-OE

FEATURES & ENHANCEMENTS
- Maintenance Release and bug fixes.

BUG FIXES
- UR-863: NTP connection update needs reboot for NS frames
- UR-1047 Inconsistent behavior with third party matrix control after BCS failovers
- UR-2199: Slow Ultrix behavior with routed Tally & Salvos
- UR-3040: SW-P-08 command byte 21 returning unexpected results
- UR-3045: Unable to apply ports with custom port labels into database tables
- UR-3052: CEA-708 captions not rendering consistently
- UR-3129: Ultrisync-UHD port selection limiting to 6 licenses
- UR-3152: BCS redundancy pop up typo
- UR-3171: DB builder creates extra breakaway channels
- UR-3231: Listen for Acuity connections internal only
- UR-3258: Incorrect addressing of MV head license table

APPLICATION NOTES

- Known issue upgrading fully stuffed FR5 frames from version 4.8.3. On first attempt users may receive an "out of memory" message. If this occurs, repeat the upgrade to clear the error.
- Starting in V4.8.X, IO modules (HDX-IO and IP-IO) are no longer included within the frame upgrade files. The frame and IO modules must be upgraded independent of each other.
- To upgrade from 4.1.x or later to the current version:
- Upgrade Frame -- **DO NOT Reboot** when prompted by DashBoard after frame update
- Upgrade all cards (including switcher cards) -- **DO NOT Reboot** when Prompted by DashBoard in between card updates
- After both FRAME and ALL CARDS have been successfully updated, Reboot frame
- Power cycle the frame after all loads are complete.
- SWR-SDPE blades require a FW upgrade to v7.0 Carbonite or v11.1 Acuity to be compatible with Ultrix version 4.8.x
- Subscriptions require Dashboard version 9.2 or higher to leverage optimization advantages.
- To Upgrade Ultrix FR5 from versions prior to 4.1.0:
- Ultrix systems must be running on SW version 3.42 or higher to upgrade to version 4.1.x.
- Systems operating on versions prior to 3.42 must perform an interim upgrade to 3.42 before fully upgrading to 4.1.x.
- DashBoard may prompt users to reboot multiple times (6-8 times) to process all updates. This is normal and expected behavior for this update.*
- ***Caution**: When powering cycling the frame, users must wait approx. 10-15 seconds before repowering to allow the frame time to completely power down and reset.
- Ultrix-UCCI Card Support* See Ultrix-FR5 UCC 4v10 Upgrade Procedure Application Note for instructions. UCCI Control Cards Version 4.1.0 or earlier must **upgrade the UCCI card first** before upgrading the frame.

VERSION 4.8.5 (8F2CC79F) 1/04/23

EQUIPMENT
- ULTRIX-FR1, ULTRIX- FR2 (Legacy)
- ULTRIX-NS-FR1, ULTRIX-NS-FR2
- ULTRIX-FR5
- UCCI Upgrade Required?   YES ☐   NO ☒
- ULTRICORE
- ULTRICORE-BCS
- ULTRICORE-OE

FEATURES & ENHANCEMENTS
- Improved Ultricore-BCS Redundancy support
- Maintenance Release and bug fixes.

BUG FIXES
- **UR-1317**: Rename "Clear" button name and update position
- **UR-2215**: Frame backend parameter change notification is partially handled (params.frame)
- **UR-2440**: Sorting of destinations within Tieline Runtime tab
- **UR-2653**: Destination ports used as Tielines not showing as used in Matrix Output list
- **UR-2667**: Routecontroller seg faults on boot when fetching protect status
- **UR-2745**: BCS connections menu not displaying newest incoming connection
- **UR-2910**: UI IP senders status does not show the signal format when we create the IP senders with signal format in blank
- **UR-2916**: Fix for User Profiles Flag Persistence
- **UR-2924**: [Ultrix IP] - Enable or disable "redundant" mode the card stays in "no response"
- **UR-2945**: Refreshing IO ports defaults custom port labels
- **UR-2967**: Closed captions incorrectly decoding field 2 data
- **UR-2977**: Source/destination level without physical assignment is shown with invalid channel
- **UR-3009**: Ultrisync/SRC assignments change when upgrading from 4.7.9 to 4.8.x
- **UR-3010**: Ultritouch-MV panel doesn't allow the user to select active heads
- **UR-3011**: TSL UMD v5 router labels not sending with tally IDs above 128
- **UR-3013**: IP senders with less than 16 channels have audio distortion
- **UR-3019**: Sender SDP reporting TTL 0 while stream is configured as 64

APPLICATION NOTES

- Known issue upgrading fully stuffed FR5 frames from version 4.8.3. On first attempt users may receive an "out of memory" message. If this occurs, repeat the upgrade to clear the error.
- Starting in V4.8.X, IO modules (HDX-IO and IP-IO) are no longer included within the frame upgrade files. The frame and IO modules must be upgraded independent of each other.

- To upgrade:
- Upgrade Frame -- **DO NOT Reboot** when prompted by DashBoard after frame update
- Upgrade all cards (including switcher cards) -- **DO NOT Reboot** when Prompted by DashBoard in between card updates
- After both FRAME and ALL CARDS have been successfully updated, Reboot frame
- Power cycle the frame after all loads are complete.
- SWR-SDPE blades require a FW upgrade to v7.0 Carbonite or v11.1 Acuity to be compatible with Ultrix version 4.8.x
- Subscriptions require Dashboard version 9.2 or higher to leverage optimization advantages.
- Ultrix systems must be running on SW version 3.42 or higher to upgrade to version 4.x.x. Systems operating on versions prior to 3.42 must perform an interim upgrade to 3.42 before fully upgrading to 4.x.x.
- Ultrix-FR5 Upgrades from version prior to 4.1.0:
- DashBoard may prompt users to reboot multiple times (6-8 times) to process all updates. This is normal and expected behavior for this update.*
- ***Caution**: When powering cycling the frame, users must wait approx. 10-15 seconds before repowering to allow the frame time to completely power down and reset.
- Ultrix-UCCI Card Support* See Ultrix-FR5 UCC 4v10 Upgrade Procedure Application Note for instructions.

VERSION 4.8.4 (61DE88BB) 12/02/22

EQUIPMENT
- ULTRIX-FR1, ULTRIX- FR2 (Legacy)
- ULTRIX-NS-FR1, ULTRIX-NS-FR2
- ULTRIX-FR5
- UCCI Upgrade Required?   YES ☐   NO ☒
- ULTRICORE
- ULTRICORE-BCS
- ULTRICORE-OE

FEATURES & ENHANCEMENTS
- Maintenance Release and bug fixes.

BUG FIXES
- **UR-2386**: Fix HDCTRL/RRTI errors
- **UR-2411**: UltrixRouter runs out of memory
- **UR-2501**: Invalid port label causing panic when applied in sources and destinations
- **UR-2510**: Ultricore-BCS repeatedly logging 'RDS Service Exit Status
- **UR-2511**: Ultricore-BCS - Frame type not represented in UI correctly
- **UR-2615**: Ultricore-BCS – routes changing on BCS reboot
- **UR-2573**: User able to open and use Tieline Builder and Tieline Runtime on BCS without TLX enabled
- **UR-2687**: Error restoring sender/receiver audio channels after reboot
- **UR-2679**: MADI SFP not working after Ultrix reboot if using HDX-IO
- **UR-2700**: Changing MV head format causes panic
- **UR-2704**: Caprica SW cannot connect to Ultrix 4.8, adds logs to identify OGP message format mismatch
- **UR-2735**: Add rippaview error to archived logs
- **UR-2742**: When toggling Ultrix-IP redundancy, popup menu to remove ports not removing ports
- **UR-2763**: [Ultrix-IP] When mixing static & DHCP interfaces, port config does not persist on reboot
- **UR-2781**: UltriScape background image cannot upload/delete in Dashboard version 9.5
- **UR-2783**: On boot, NS-FR2 frame fans 4-6 detected at 50% speed instead of 65%
- **UR-2880**: User can enter invalid IP addresses when creating senders/receivers

APPLICATION NOTES
- Starting in V4.8.X, IO modules (HDX-IO and IP-IO) are no longer included within the frame upgrade files. The frame and IO modules must be upgraded independent of each other.

- To upgrade:
- Upgrade Frame -- **DO NOT Reboot** when prompted by DashBoard after frame update
- Upgrade all cards (including switcher cards) -- **DO NOT Reboot** when Prompted by DashBoard in between card updates
- After both FRAME and ALL CARDS have been successfully updated, Reboot frame
- Power cycle the frame after all loads are complete.
- SWR-SDPE blades require a FW upgrade to v7.0 Carbonite or v11.1 Acuity to be compatible with Ultrix version 4.8.x
- Subscriptions require Dashboard version 9.2 or higher to leverage optimization advantages.
- Ultrix systems must be running on SW version 3.42 or higher to upgrade to version 4.x.x. Systems operating on versions prior to 3.42 must perform an interim upgrade to 3.42 before fully upgrading to 4.x.x.
- Ultrix-FR5 Upgrades from version prior to 4.1.0:
- DashBoard may prompt users to reboot multiple times (6-8 times) to process all updates. This is normal and expected behavior for this update.*
- ***Caution**: When powering cycling the frame, users must wait approx. 10-15 seconds before repowering to allow the frame time to completely power down and reset.
- Ultrix-UCCI Card Support* See Ultrix-FR5 UCC 4v10 Upgrade Procedure Application Note for instructions. UCCI Control Cards Version 4.1.0 or earlier must **upgrade the UCCI card first** before upgrading the frame.

VERSION 4.8.3 (B6CF8977) 10/31/22

EQUIPMENT
- ULTRIX-FR1, ULTRIX- FR2 (Legacy)
- ULTRIX-NS-FR1, ULTRIX-NS-FR2
- ULTRIX-FR5
- UCCI Upgrade Required?   YES ☐   NO ☒
- ULTRICORE
- ULTRICORE-BCS
- ULTRICORE-OE

FEATURES & ENHANCEMENTS
- Maintenance Release and bug fixes.

BUG FIXES
- **UR-285**: Apply overlap error check in "Save to Local" Operation in Layout Editor
- **UR-1461**: Fixed Follow Dest in PIP has no audio when Ultrimix disabled
- **UR-2046**: Fix Take Error on routing audio ch to pips
- **UR-2071**: Opened pages fail to access OGP subscribed parameters on frame reboot
- **UR-2249**: Audio Mixer partition data not persisting after system reboot
- **UR-2251**: Enable/disable Ultricool control server
- **UR-2288**: Sources/Destinations menu, port drop-down blank after manually entering value in search field
- **UR-2305**: Add automatic default name for Ultricore credentials and Ultricore profiles
- **UR-2362**: User should not be able to select Ultritouch MV style panel on BCS
- **UR-2379**: Ultrix-IP fix sender audio noise
- **UR-2381**: Remove FS and slot reference functions from Ultrix-IP, SWR-SDPE, and HDX Modules
- **UR-2383**: Third-party interface generating core dump with Ember+
- **UR-2389**: Head selection not routing audio to PiPs when source has MADI audio
- **UR-2390**: Add confirmation dialog before applying network changes
- **UR-2435**: Ultrix-IP streams RTP payload on sender side are being updated to other values on board reboot
- **UR-2490**: RDS avoid double restart when assuming the master role
- **UR-2502**: Group Categories on RCP not showing all sources / destinations
- **UR-2508**: Unlimited count Ultrimix-MXR license causes system to not be able to open MXR soft panel
- **UR-2519**: Ultrix-IP SW is requesting a frame drop when the buffer has more than 1 field of packets in interlaced video formats
- **UR-2523**: Audio Mixer - fader control slow responsiveness from OGP interface
- **UR-2525**: CEA-608 upper-case U showing as lower-case u in MV

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- **UR-2542**: Audit.log not logging on BCS or standalone frames
- **UR-2564**: Renaming Audio Mixer channel strip titles causes rippaview panic
- **UR-2569**: Group category window page-bar width resize not staying fixed using border layout center-anchor
- **UR-2583**: Allow larger numbers of sources/destinations for single level database
- **UR-2588**: Better handling of switching invalid layouts, and Take Error details
- **UR-2591**: Ultriscape-CA not displaying captions
- **UR-2595**: Changing source names breaks audio routing
- **UR-2596**: Custom port label not persistent in OE
- **UR-2605**: Unable to assign Ultrisync-UHD license to SFP-IO input
- **UR-2608**: Invalid selection display in Audio Mixer Edit Title option
- **UR-2609**: Add delay to refreshIO so that multiple UltriSRC selections can be made
- **UR-2613**: MADI output audio dropping on HDX-IO when routed video signal is non-integer format
- **UR-2639**: Add Apply button to the Device Identification section
- **UR-2640**: Fixed frame column being cut off
- **UR-2643**: Ultricore-IP - ip given by Avahi is invalid (ipv6) retry discovery for ipv4
- **UR-2664**: Ultrix-IP no audio when receiver is redundant
- **UR-2692**: Salvo crosspoints are filtered out when parse from salvo file

APPLICATION NOTES
- Starting in V4.8.X, IO modules (HDX-IO and IP-IO) are no longer included within the frame upgrade files. The frame and IO modules must be upgraded independent of each other.
- To upgrade:
- Upgrade Frame -- **DO NOT Reboot** when prompted by DashBoard after frame update
- Upgrade all cards (including switcher cards) -- **DO NOT Reboot** when Prompted by DashBoard in between card updates
- After both FRAME and ALL CARDS have been successfully updated, Reboot frame
- Power cycle the frame after all loads are complete.
- SWR-SDPE blades require a FW upgrade to v7.0 Carbonite or v11.1 Acuity to be compatible with Ultrix version 4.8.x
- Subscriptions require Dashboard version 9.2 or higher to leverage optimization advantages.
- Ultrix systems must be running on SW version 3.42 or higher to upgrade to version 4.x.x. Systems operating on versions prior to 3.42 must perform an interim upgrade to 3.42 before fully upgrading to 4.x.x.
- Ultrix-FR5 Upgrades from version prior to 4.1.0:
- DashBoard may prompt users to reboot multiple times (6-8 times) to process all updates. This is normal and expected behavior for this update.*

- ***Caution**: When powering cycling the frame, users must wait approx. 10-15 seconds before repowering to allow the frame time to completely power down and reset.
- Ultrix-UCCI Card Support* See Ultrix-FR5 UCC 4v10 Upgrade Procedure Application Note for instructions. UCCI Control Cards Version 4.1.0 or earlier must **upgrade the UCCI card first** before upgrading the frame.

VERSION 4.8.2 (5AC0F9FB) 09/30/22

EQUIPMENT
- ULTRIX-FR1, ULTRIX- FR2 (Legacy)
- ULTRIX-NS-FR1, ULTRIX-NS-FR2
- ULTRIX-FR5

UCCI Upgrade Required?   YES ☐   NO ☒

- ULTRICORE
- ULTRICORE-BCS
- ULTRICORE-OE

FEATURES & ENHANCEMENTS
- Maintenance Release and bug fixes.
- Additional Configuration options for Probel SWP-08 Protocol support
- Updated driver module to address issues with missing switcher outputs

BUG FIXES
- **UR-1047** Inconsistent Behavior with Third Party Matrix Control after BCS Failovers
- **UR-2066**: Incoming connections list shows error message when single local Dashboard connection
- **UR-2279**: Ultritouch PB panels improperly displayed when sources assigned to drawer
- **UR-2320**: Frame UI - network settings Ultricore mode value not updating for FR5 frames
- **UR-2345**: Destinations using Tielines table not showing routed source in source column
- **UR-2374**: Heartbeat module check not working
- **UR-2378**: IP audio streams update from Dashboard is sending invalid channel list
- **UR-2394** Database changes can cause loss of routing
- **UR-2401**: Category-based level selection broken in Group Category panels
- **UR-2403**: Change registry version text field to use radio buttons or dropdown
- **UR-2408**: [Ultrix-ip] RDS registration fails to process device update request
- **UR-2414**: [Ultrix-ip] Flex UI navigation does not behave on the same way as other slots
- **UR-2423**: [Ultrix-ip] DHCP when a new IP is detected with receivers enable, avmgr crashes

APPLICATION NOTES

- Starting in V4.8.X, IO modules (HDX-IO and IP-IO) are no longer included within the frame upgrade files. The frame and IO modules must be upgraded independent of each other. To upgrade:
- Upgrade Frame -- DO NOT Reboot when prompted by DashBoard after frame update
- Upgrade all cards (including switcher cards) -- DO NOT Reboot when Prompted by DashBoard in between card updates
- After both FRAME and ALL CARDS have been successfully updated, Reboot frame
- Power cycle the frame after all loads are complete.
- SWR-SDPE blades require a FW upgrade to v7.0 Carbonite or v11.1 Acuity to be compatible with Ultrix version 4.8.x
- Low Latency – A known issues (UR-2136) exist with the Low Latency feature in 4.8.x.
- Subscriptions require Dashboard version 9.2 or higher to leverage optimization advantages.
- When performing a recovery of the HDX, due to the inconsistent performance of USB sticks it is recommended to use a Verbatim Clip-it USB 2.0 stick for size and consistent communication.
- Ultrix systems must be running on SW version 3.42 or higher to upgrade to version 4.x.x. Systems operating on versions prior to 3.42 must perform an interim upgrade to 3.42 before fully upgrading to 4.x.x.
- Ultrix-FR5 Upgrades:

Users upgrading from version prior to 4.1.0 may be prompted by DashBoard to reboot multiple times (6-8 times) to process all updates. This is normal and expected behavior for this update.*

*Caution: When powering cycling the frame, users must wait approx. 15 seconds before repowering to allow the frame time to completely power down and reset.

- Ultrix-UCCI Card Support* Users with older UCCI Control Cards (cards loaded with a version prior to 4.1.0 must **upgrade the UCCI card first** before upgrading the Ultrix-FR5 frame.
  - ▪See Ultrix-FR5 UCC 4v10 Upgrade Procedure Application Note for instructions.

Dual/Redundant UCCI Cards must be upgraded one at a time. Only one UCCI card should be connected to the frame during the upgrade.

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VERSION 4.8.1 (0C8E8B9D) 08/08/22

EQUIPMENT
- ULTRIX-FR1, ULTRIX- FR2 (Legacy)
- ULTRIX-NS-FR1, ULTRIX-NS-FR2
- ULTRIX-FR5

UCCI Upgrade Required?   YES ☐   NO ☒
- ULTRICORE
- ULTRICORE-BCS
- ULTRICORE-OE

FEATURES & ENHANCEMENTS
- Maintenance Release and bug fixes.
- Support for multiple Acuity systems controlled by BCS

BUG FIXES
- **UR-1925**: Ultrix IP Tielines - Take errors with IP tielines due to routing issues
- **UR-2236**: Fix UltrixRouter crash due to incorrect initialization of FCL arrays
- **UR-2237**: Rippaview logging - reduce repeating log messages
- **UR-2297**: No reason.txt being written to /tmp when processes are halting
- **UR-2306**: UltrixRouter process crash on Rippaview restart
- **UR-2387**: Frame UI - the redundant UCCI card is not shown when installed in FR5 frame

APPLICATION NOTES
- Starting in V4.8.X, IO modules (HDX-IO and IP-IO) are no longer included within the frame upgrade files. The frame and IO modules must be upgraded independent of each other. To upgrade:
- Upgrade Frame -- DO NOT Reboot when prompted by DashBoard after frame update
- Upgrade all cards (including switcher cards) -- DO NOT Reboot when Prompted by DashBoard in between card updates
- After both FRAME and ALL CARDS have been successfully updated, Reboot frame
- Power cycle the frame after all loads are complete.
- SWR-SDPE blades require a FW upgrade to v7.0 Carbonite or v11.01a Acuity to be compatible with Ultrix version 4.8.0
- Low Latency– A known issues (UR-2136) exist with the Low Latency feature in 4.8.0.
- Subscriptions require Dashboard version 9.2 or higher to leverage optimization advantages.
- When performing a recovery of the HDX, due to the inconsistent performance of USB sticks it is recommended to use a Verbatim Clip-it USB 2.0 stick for size and consistent communication.

- Ultrix systems must be running on SW version 3.42 or higher to upgrade to version 4.x.x. Systems operating on versions prior to 3.42 must perform an interim upgrade to 3.42 before fully upgrading to 4.x.x.
- Ultrix-FR5 Upgrades:

Users upgrading from version prior to 4.1.0 may be prompted by DashBoard to reboot multiple times (6-8 times) to process all updates. This is normal and expected behavior for this update.*

*Caution: When powering cycling the frame, users must wait approx. 15 seconds before repowering to allow the frame time to completely power down and reset.

- Ultrix-UCCI Card Support* Users with older UCCI Control Cards (cards loaded with a version prior to 4.1.0 must **upgrade the UCCI card first** before upgrading the Ultrix-FR5 frame.
  - ▪See Ultrix-FR5 UCC 4v10 Upgrade Procedure Application Note for instructions.

Dual/Redundant UCCI Cards must be upgraded one at a time. Only one UCCI card should be connected to the frame during the upgrade.

VERSION 4.8.0 (D6627ADF) 07/22/22

EQUIPMENT
- ULTRIX-FR1, ULTRIX- FR2 (Legacy)
- ULTRIX-NS-FR1, ULTRIX-NS-FR2
- ULTRIX-FR5

UCCI Upgrade Required?   YES ☐   NO ☒

- ULTRICORE
- ULTRICORE-BCS
- ULTRICORE-OE

FEATURES & ENHANCEMENTS
- ULTRIX-HDX-IO Module Release
- MV Labels for Ross Talk Support.
- New Dashboard UI Look and Feel
- DashBoard Subscription Full Support
- Security Enhancements
- Improved Ultrix / Ultricore-IP Configuration Options
- In Band NMOS Control and Additional NMOS Configuration Options for Ultrix-IP/Ultricore-IP
- Updated UI/system management code to GO

BUG FIXES
- **UR-1877**: Ultriscape background images not importing with a space in the name
- **UR-1707** Source names not updating in head selection PiP source dropdown list
- **UR-1594**: TSL 5.0 (Wrapped) issues with ID 254
- **UR-1523** source names and making additions / subtractions to source table causing MV PIPs to lose video
- **UR-1520**: Acuity showing Ultrix router is disconnected
- **UR-1400**: BCS generating core dumps / reports for IP Matrix on every reboot
- **UR-1391**: - Ultrix credentials.json file empty
- **UR-1381**: Filter / search function search improvement (currently locked to start of string)
- **UR-1349**: Ultricore-BCS / Intermittent High Memory Utilization
- **UR-1338**: Add 12-char Support for Source/Destination Names
- **UR-1321**: Incoming TSL 5 connections not showing correct wrapping value in details column
- **UR-1282**: Database Not Loading with Custom Port Labels
- **UR-1188**: Network.conf not consistently being read properly on SD boots
- **UR-1112**: Ultrix failing to generate technical data report
- **UR-1090**: Add the Ability to reorder panels under Soft Panels tree node

- **UR-1087**: Ultrix - When creating Panels, the value of "Viewable Levels", /Destinations/Sources" dynamically change as the user changes "Assigned"
- **UR-969**: Ultritouch PB panel not firing salvos from favorite section unless salvos built into drawers
- **UR-806**: Inconsistent behavior with redundant BCS systems when BCS rebooted or failover initiated
- **UR-685** Ultrix Set to PC Time, Timezone Issues
- **UR-605**: User should not be able to create 65 level database
- **UR-529**: BCS system monitor tab information not consistent from Dashboard to BCS display
- **UR-474**: BCS units being rebooted coming back with black display
- **UR-473**: 3rd Party Protocol control of routers not working if BCS has TLX license enabled
- **UR-402**: Ultrix disconnects DashBoard Clients repeatedly - backlog exceeded
- **UR-359**: Ultritouch-PB panels lock and protect buttons sizes not changing with different sizing options
- **UR-172**: Matrix panel GOTO Active source
- **UR-171**: Add Matrix Panel Filter

APPLICATION NOTES
- Starting in V4.8.0, IO modules (HDX-IO and IP-IO) are no longer included within the frame upgrade files. The frame and IO modules must be upgraded independent of each other. To upgrade:
- First upload the frame upgrade file and upgrade the frame.
- Second upload upgrade files for each IO type (HDX-IO or IP-IO) and upgrade card types individually.
- Note - older modules such as HDB-IO and SFP-IO are still included with the frame upgrade file. Separate upgrade files are not required for these modules.
- Power cycle the frame after all loads are complete.
- SWR-SDPE blades require a FW upgrade to v7.0 Carbonite or v11.01a Acuity to be compatible with Ultrix version 4.8.0
- Low Latency– A known issues (UR-2136) exist with the Low Latency feature in 4.8.0.
- Subscriptions require Dashboard version 9.2 or higher to leverage optimization advantages.
- Ultrix systems must be running on SW version 3.42 or higher to upgrade to version 4.x.x. Systems operating on versions prior to 3.42 must perform an interim upgrade to 3.42 before fully upgrading to 4.x.x.
- Ultrix-FR5 Upgrades:

Users upgrading from version prior to 4.1.0 may be prompted by DashBoard to reboot multiple times (6-8 times) to process all updates. This is normal and expected behavior for this update.*

*Caution: When powering cycling the frame, users must wait approx. 15 seconds before repowering to allow the frame time to completely power down and reset.

- Ultrix-UCCI Card Support* Users with older UCCI Control Cards (cards loaded with a version prior to 4.1.0 must **upgrade the UCCI card first** before upgrading the Ultrix-FR5 frame.
  - ▪See Ultrix-FR5 UCC 4v10 Upgrade Procedure Application Note for instructions.

Dual/Redundant UCCI Cards must be upgraded one at a time. Only one UCCI card should be connected to the frame during the upgrade.

VERSION 4.7.9 (3119A48B) 05/01/22

EQUIPMENT
- ULTRIX-FR1, ULTRIX- FR2 (Legacy)
- ULTRIX-NS-FR1, ULTRIX-NS-FR2
- ULTRIX-FR5

UCCI Upgrade Required?   YES ☐   NO ☒

- ULTRICORE
- ULTRICORE-BCS
- ULTRICORE-OE

FEATURES & ENHANCEMENTS
- All Soft panels displayed for admin and default user profiles

BUG FIXES
- **UR-290**: Ultrix-IP improving ptp4l response to gmid spikes
- **UR-474**: BCS - Add systemd script to restart display 20 seconds after boot
- **UR-1002**: Ultrix frames fails to boot, unable to ping - filesystem corruption
- **UR-1319**: IP card shows wrong video when switching to input 8 with Acuity
- **UR-1331**: Ultrix-IP error while updating stream from non-red to red
- **UR-1384**: Intermittent failure routing audio with salvo recalls
- **UR-1400**: BCS generating core dump reports for ipMatrix process on every reboot
- **UR-1456**: Scan & log AUX MADI status info
- **UR-1478**: Use Dashboard table view's sort instead of UI page own sort logic
- **UR-1608**: Use detected i/o board type for setting up Flex slot UI

APPLICATION NOTES
- Caution SD Recovery: Known issue with version 4.7.X SD recovery images. For SD recovery files use version 4.6.2 or earlier then upgrade to the 4.7.0 version.
- Subscriptions require Dashboard version 9.2 or higher to leverage optimization advantages.
- Ultrix systems must be running on SW version 3.42 or higher to upgrade to version 4.x.x. Systems operating on versions prior to 3.42 must perform an interim upgrade to 3.42 before fully upgrading to 4.x.x.
- Ultrix-FR5 Upgrades:

Users upgrading from version prior to 4.1.0 may be prompted by DashBoard to reboot multiple times (6-8 times) to process all updates. This is normal and expected behavior for this update.*

*Caution: When powering cycling the frame, users must wait approx. 30 seconds before repowering to allow the frame time to completely power down and reset.

- Ultrix-UCCI Card Support* Users with older UCCI Control Cards (cards loaded with a version prior to 4.1.0 must **upgrade the UCCI card first** before upgrading the Ultrix-FR5 frame.

- See Ultrix-FR5 UCC 4v10 Upgrade Procedure Application Note for instructions.

Dual/Redundant UCCI Cards must be upgraded one at a time. Only one UCCI card should be connected to the frame during the upgrade.

VERSION 4.7.8 (8756DD8F) 03/08/22

EQUIPMENT
- ULTRIX-FR1, ULTRIX- FR2 (Legacy)
- ULTRIX-NS-FR1, ULTRIX-NS-FR2
- ULTRIX-FR5

UCCI Upgrade Required?   YES ☐   NO ☒
- ULTRICORE
- ULTRICORE-BCS
- ULTRICORE-OE

FEATURES & ENHANCEMENTS
- Improved Salvo Support
- Improved Tieline support
- Improved IP Stream Management

BUG FIXES
- **UR-391**: BCS System Monitor page not reflecting active RCP connections
- **UR-565**: Salvos switches over 200 not recalling
- **UR-845**: Unintended MADI delay on FR5 slots 5 & 6
- **UR-916**: Unable to route to MADI destination channels above 17 through tielines
- **UR-969**: Ultritouch PB not firing salvos from favorite menu unless built into drawers
- **UR-1005**: Recalling salvos causes switcher AUX PiPs to not update
- **UR-1033**: When enabling Ultriscape UMD to utilize tally on multiple PIPs user must toggle tally on then off **UR-1124**: Clear button on Ultritouch-PB panel showing false clear of last selected route

APPLICATION NOTES
- Caution SD Recovery: Known issue with version 4.7.X SD recovery images. For SD recovery files use version 4.6.2 or earlier then upgrade to the 4.7.0 version.
- Subscriptions require Dashboard version 9.2 or higher to leverage optimization advantages.
- Ultrix systems must be running on SW version 3.42 or higher to upgrade to version 4.x.x. Systems operating on versions prior to 3.42 must perform an interim upgrade to 3.42 before fully upgrading to 4.x.x.
- Ultrix-FR5 Upgrades:

Users upgrading from version prior to 4.1.0 may be prompted by DashBoard to reboot multiple times (6-8 times) to process all updates. This is normal and expected behavior for this update.*
*Caution: When powering cycling the frame, users must wait approx. 30 seconds before repowering to allow the frame time to completely power down and reset.

- Ultrix-UCCI Card Support* Users with older UCCI Control Cards (cards loaded with a version prior to 4.1.0) must **upgrade the UCCI card first** before upgrading the Ultrix-FR5 frame.

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▪See Ultrix-FR5 UCC 4v10 Upgrade Procedure Application Note for instructions.

Dual/Redundant UCCI Cards must be upgraded one at a time. Only one UCCI card should be connected to the frame during the upgrade.

VERSION 4.7.7 (5E472479) 01/14/22

EQUIPMENT
- ULTRIX-FR1, ULTRIX- FR2 (Legacy)
- ULTRIX-NS-FR1, ULTRIX-NS-FR2
- ULTRIX-FR5

UCCI Upgrade Required?   YES ☐   NO ☒
- ULTRICORE
- ULTRICORE-BCS
- ULTRICORE-OE

FEATURES & ENHANCEMENTS
- Maintenance update for log4j security threat
- Fan control improvements

BUG FIXES
- **UR-873**: Additional log4j library update (2.17.1)
- **UR-804**: Reduced excessive Ultricore-IP logging
- **UR-808**: Improved Ultricore-IP socket connection handling
- **UR-778**: Improved handling for large switch requests
- **UR-139** BCS-Ultrix setup, MV PIPs losing video when source name is changed

APPLICATION NOTES
- Caution SD Recovery: Known issue with version 4.7.X SD recovery images. For SD recovery files use version 4.6.2 or earlier then upgrade to the 4.7.0 version.
- Subscriptions require Dashboard version 9.2 or higher to leverage optimization advantages.
- Ultriscape Multiviewer head selections and PIP scalers are not included with Ultricore Profiles controls.
- Ultrix systems must be running on SW version 3.42 or higher to upgrade to version 4.x.x. Systems operating on versions prior to 3.42 must perform an interim upgrade to 3.42 before fully upgrading to 4.x.x.
- Ultrix-FR5 Upgrades:

Users upgrading from version prior to 4.1.0 may be prompted by DashBoard to reboot multiple times (6-8 times) to process all updates. This is normal and expected behavior for this update.*

*Caution: When powering cycling the frame, users must wait approx. 30 seconds before repowering to allow the frame time to completely power down and reset.

- Ultrix-UCCI Card Support* Users with older UCCI Control Cards (cards loaded with a version prior to 4.1.0) must **upgrade the UCCI card first** before upgrading the Ultrix-FR5 frame.
  - See Ultrix-FR5 UCC 4v10 Upgrade Procedure Application Note for instructions.

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Dual/Redundant UCCI Cards must be upgraded one at a time. Only one UCCI card should be connected to the frame during the upgrade.

VERSION 4.7.6 (BC4B1944) 12/16/21

EQUIPMENT
- ULTRIX-FR1, ULTRIX- FR2 (Legacy)
- ULTRIX-NS-FR1, ULTRIX-NS-FR2
- ULTRIX-FR5

UCCI Upgrade Required?   YES ☐   NO ☒
- ULTRICORE
- ULTRICORE-BCS
- ULTRICORE-OE

FEATURES & ENHANCEMENTS
- Maintenance update to address log4j security threat

BUG FIXES
- **UR-769**: Updated log4j version used by Ultricore-TLX from from 2.11.2 to 2.15.0 to address **CVE-2021-44228**

APPLICATION NOTES
- Caution SD Recovery: Known issue with version 4.7.X SD recovery images. For SD recovery files use version 4.6.2 or earlier then upgrade to the 4.7.0 version.
- Subscriptions require Dashboard version 9.2 or higher to leverage optimization advantages.
- Ultriscape Multiviewer head selections and PIP scalers are not included with Ultricore Profiles controls.
- Ultrix systems must be running on SW version 3.42 or higher to upgrade to version 4.x.x. Systems operating on SW versions prior to 3.42 must perform an interim upgrade to 3.42 before fully upgrading to 4.x.x.
- Ultrix-FR5 Upgrades:

Users upgrading from version prior to 4.1.0 may be prompted by DashBoard to reboot multiple times (6-8 times) to process all updates. This is normal and expected behavior for this update.*
*Caution: When powering cycling the frame, users must wait approx. 30 seconds before repowering to allow the frame time to completely power down and reset.

- Ultrix-UCCI Card Support* Users with older UCCI Controls Cards (cards loaded with a version prior to 4.1.0) must **upgrade the UCCI card first** before upgrading the Ultrix-FR5 frame.
    - See Ultrix-FR5 UCC 4v10 Upgrade Procedure Application Note for instructions.

Dual/Redundant UCCI Cards must be upgraded one at a time. Only one UCCI card should be connected to the frame during the upgrade.
FR-5 units at version 4.1.0 and newer, dual UCCI cards now use single IP address

VERSION 4.7.5 (651F34F5) 12/08/21

EQUIPMENT
- ULTRIX-FR1, ULTRIX- FR2 (Legacy)
- ULTRIX-NS-FR1, ULTRIX-NS-FR2
- ULTRIX-FR5

UCCI Upgrade Required?   YES ☐   NO ☒

- ULTRICORE
- ULTRICORE-BCS
- ULTRICORE-OE

FEATURES & ENHANCEMENTS
- Updated the NMOS service to announce both the node and connection information on the same IP port (is04 and is05)
- Maintenance updates

BUG FIXES
- **UR-76**:   Rapid route requests via third party protocols leading to incorrect route status
- **UR-431**: Sporadic FR-5 Ethernet disconnection
- **UR-459**: Rebooting Ultrix causes RCP panel to lose its status
- **UR-465**: Rebooting Ultrix with RCP connected causes RCP connection to be lost in connections tab of Ultrix
- **UR-502**: Ultrix-Acuity Source configuration page does not show 2SI (2160p) Ultrix Signal on setup page
- **UR-503**: Ultrix-IP - all senders stop working with some receivers when one sender is 720p
- **UR-529**: BCS system monitor tab information not consistent from Dashboard to BCS display
- **UR-565**: Salvo switches over 200 not working
- **UR-598**: No Video detected on Destination after 2SI-QL 3G A 2-SI 1080p 50
- **UR-644**: Probel Command 229 "Extended Single Source Name Request" not returning values over 1024

APPLICATION NOTES
- Caution SD Recovery: Known issue with version 4.7.X SD recovery images. For SD recovery files use version 4.6.2 or earlier then upgrade to the 4.7.0 version.
- Subscriptions require Dashboard version 9.2 or higher to leverage optimization advantages.
- Ultriscape Multiviewer head selections and PIP scalers are not included with Ultricore Profiles controls.
- Ultrix systems must be running on SW version 3.42 or higher to upgrade to version 4.x.x. Systems operating on SW versions prior to 3.42 must perform an interim upgrade to 3.42 before fully upgrading to 4.x.x.

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- **Ultrix-FR5 Upgrades:**

Users upgrading from version prior to 4.1.0 may be prompted by DashBoard to reboot multiple times (6-8 times) to process all updates. This is normal and expected behavior for this update.*

*Caution: When powering cycling the frame, users must wait approx. 30 seconds before repowering to allow the frame time to completely power down and reset.

- **Ultrix-UCCI Card Support* Users with older UCCI Controls Cards (cards loaded with a version prior to 4.1.0) must <ins>upgrade the UCCI card first</ins> before upgrading the Ultrix-FR5 frame.**

    See Ultrix-FR5 UCC 4v10 Upgrade Procedure Application Note for instructions.

Dual/Redundant UCCI Cards must be upgraded one at a time. Only one UCCI card should be connected to the frame during the upgrade.
FR-5 units at version 4.1.0 and newer, dual UCCI cards now use single IP address

VERSION 4.7.3 (5809644A) 11/18/21—LIMITED RELEASE

EQUIPMENT
- ULTRIX-NS-FR1, ULTRIX-NS-FR2 WITH CARBONITE
- ULTRIX-FR5 WITH ACUITY

UCCI Upgrade Required?   YES ☐   NO ☒

FEATURES & ENHANCEMENTS
- Updates to PMA tuning values for to improve MFG test yield

BUG FIXES
- N/A

APPLICATION NOTES
- Caution SD Recovery: Known issue with version 4.7.X SD recovery images. For SD recovery files use version 4.6.2 or earlier then upgrade to the 4.7.0 version.
- Subscriptions require Dashboard version 9.2 or higher to leverage optimization advantages.
- Ultriscape Multiviewer head selections and PIP scalers are not included with Ultricore Profiles controls.
- Ultrix systems must be running on SW version 3.42 or higher to upgrade to version 4.x.x. Systems operating on SW versions prior to 3.42 must perform an interim upgrade to 3.42 before fully upgrading to 4.x.x.
- Ultrix-FR5 Upgrades:

Users upgrading from version prior to 4.1.0 may be prompted by DashBoard to reboot multiple times (6-8 times) to process all updates. This is normal and expected behavior for this update.*

*Caution: When powering cycling the frame, users must wait approx. 30 seconds before repowering to allow the frame time to completely power down and reset.

- Ultrix-UCCI Card Support* Users with older UCCI Controls Cards (cards loaded with a version prior to 4.1.0) must **upgrade the UCCI card first** before upgrading the Ultrix-FR5 frame.
    - See Ultrix-FR5 UCC 4v10 Upgrade Procedure Application Note for instructions.

Dual/Redundant UCCI Cards must be upgraded one at a time. Only one UCCI card should be connected to the frame during the upgrade.
FR-5 units at version 4.1.0 and newer, dual UCCI cards now use single IP address

VERSION 4.7.2 (5E8CC3F5) 11/12/21

EQUIPMENT
- ULTRIX-FR1, ULTRIX- FR2 (Legacy)
- ULTRIX-NS-FR1, ULTRIX-NS-FR2
- ULTRIX-FR5

UCCI Upgrade Required?   YES ☐   NO ☒

- ULTRICORE
- ULTRICORE-BCS
- ULTRICORE-OE

FEATURES & ENHANCEMENTS
- Updates Ultrix-IP-IO FPGA bitfiles to resolve customer issue with video freeze.

BUG FIXES
- **UR-503**: Ultrix-IP-IO all senders stop working with certain receivers, when one sender is 720p

APPLICATION NOTES
- Caution SD Recovery: Known issue with version 4.7.X SD recovery images. For SD recovery files use version 4.6.2 or earlier then upgrade to the 4.7.0 version.
- Subscriptions require Dashboard version 9.2 or higher to leverage optimization advantages.
- Ultriscape Multiviewer head selections and PIP scalers are not included with Ultricore Profiles controls.
- Ultrix systems must be running on SW version 3.42 or higher to upgrade to version 4.x.x. Systems operating on SW versions prior to 3.42 must perform an interim upgrade to 3.42 before fully upgrading to 4.x.x.
- Ultrix-FR5 Upgrades:

Users upgrading from version prior to 4.1.0 may be prompted by DashBoard to reboot multiple times (6-8 times) to process all updates. This is normal and expected behavior for this update.*
*Caution: When powering cycling the frame, users must wait approx. 30 seconds before repowering to allow the frame time to completely power down and reset.

- Ultrix-UCCI Card Support* Users with older UCCI Controls Cards (cards loaded with a version prior to 4.1.0) must **upgrade the UCCI card first** before upgrading the Ultrix-FR5 frame.
    - See Ultrix-FR5 UCC 4v10 Upgrade Procedure Application Note for instructions.

Dual/Redundant UCCI Cards must be upgraded one at a time. Only one UCCI card should be connected to the frame during the upgrade.
FR-5 units at version 4.1.0 and newer, dual UCCI cards now use single IP address

VERSION 4.7.1 (7F3026D6) 11/01/21 LIMITED RELEASE

EQUIPMENT
- ULTRIX-NS-FR1, ULTRIX-NS-FR2 with Ultrix Carbonite

FEATURES & ENHANCEMENTS
- Improved PMA tuning values for increased MFG yield on New Style Frames with Ultrix Carbonite

BUG FIXES
- N/A

APPLICATION NOTES
- Caution SD Recovery: Known issue with version 4.7.0.X SD recovery images. For SD recovery files use version 4.6.2 or earlier then upgrade to the 4.7.0 version.
- Subscriptions require Dashboard version 9.2 or higher to leverage optimization advantages.
- Ultriscape Multiviewer head selections and PIP scalers are not included with Ultricore Profiles controls.
- Ultrix systems must be running on SW version 3.42 or higher to upgrade to version 4.x.x. Systems operating on SW versions prior to 3.42 must perform an interim upgrade to 3.42 before fully upgrading to 4.x.x.
- Ultrix-FR5 Upgrades:

Users upgrading from version prior to 4.1.0 may be prompted by DashBoard to reboot multiple times (6-8 times) to process all updates. This is normal and expected behavior for this update.*

*Caution: When powering cycling the frame, users must wait approx. 30 seconds before repowering to allow the frame time to completely power down and reset.

- Ultrix-UCCI Card Support* Users with older UCCI Controls Cards (cards loaded with a version prior to 4.1.0) must **upgrade the UCCI card first** before upgrading the Ultrix-FR5 frame.
    - See Ultrix-FR5 UCC 4v10 Upgrade Procedure Application Note for instructions.

Dual/Redundant UCCI Cards must be upgraded one at a time. Only one UCCI card should be connected to the frame during the upgrade.
FR-5 units at version 4.1.0 and newer, dual UCCI cards now use single IP address

VERSION 4.7.0 (BB31E6E9) 10/25/21

EQUIPMENT
- ULTRIX-FR1, ULTRIX- FR2 (Legacy)
- ULTRIX-NS-FR1, ULTRIX-NS-FR2
- ULTRIX-FR5

UCCI Upgrade Required?   YES ☐   NO ☒

- ULTRICORE
- ULTRICORE-BCS
- ULTRICORE-OE

FEATURES & ENHANCEMENTS
- Ultricore Profiles - Creates basic static user profiles and controls Ultrix/Ultricore components shown by DashBoard device tree.
- Ultricore-PRO - License enables support of customizable user profiles for Ultricore control system. User profile creation and rights configurations. The license upgrades the basic, non configurable Profiles on Ultrix chassis to full, customizable configurations. The Ultricore-PRO full version is included on Ultricore-BCS as standard.
- Adaptive Network Support - Manages video format control and changes on 2110 streams within an Ultrix/Ultricore-BCS 2110 system.
- Clip Data - MV Dreamcatcher Clip Metadata display support.
- DashBoard subscriptions - Improves system scale and end user experience with DashBoard.
- Improved PMA tuning values for increased MFG yield.

BUG FIXES
- UR-70: Allow setting matrix and id field in Probel SWP-08
- **UR-85**: Invalid checksum when using Probel-SW-P-08 (routing SRC ID 4 to DST ID 145)
- **UR-133**: Destination labels not updating in Destination Follow menu
- **UR-151**: Remove jQuery where not needed, update to latest for MV editor
- **UR-153**: Improve routed tally switch response time
- **UR-291**: Improve Ultrix-IP stream sorting order
- **UR-330**: Cannot connect more than10 DashBoard clients to BCS
- **UR-358**: Ultrix-IP Extend range of allowed IP to go from 225-239
- **UR-381**: IGMP not answering group specific query
- **UR-414**: High CPU when Ultrix-Acuity installed
- **UR-424**: Ultrix Acuity startup issues

APPLICATION NOTES
- Caution SD Recovery: Known issue with version 4.7.0 SD recovery images. For SD recovery files use version 4.6.2 or earlier then upgrade to the 4.7.0 version.

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- Subscriptions require Dashboard version 9.2 or higher to leverage optimization advantages.
- Ultriscape Multiviewer head selections and PIP scalers are not included with Ultricore Profiles controls.
- Ultrix systems must be running on SW version 3.42 or higher to upgrade to version 4.x.x. Systems operating on SW versions prior to 3.42 must perform an interim upgrade to 3.42 before fully upgrading to 4.x.x.
- Ultrix-FR5 Upgrades:

Users upgrading from version prior to 4.1.0 may be prompted by DashBoard to reboot multiple times (6-8 times) to process all updates. This is normal and expected behavior for this update.*

*Caution: When powering cycling the frame, users must wait approx. 30 seconds before repowering to allow the frame time to completely power down and reset.

- Ultrix-UCCI Card Support* Users with older UCCI Controls Cards (cards loaded with a version prior to 4.1.0) must **upgrade the UCCI card first** before upgrading the Ultrix-FR5 frame.
     See Ultrix-FR5 UCC 4v10 Upgrade Procedure Application Note for instructions.

Dual/Redundant UCCI Cards must be upgraded one at a time. Only one UCCI card should be connected to the frame during the upgrade.

FR-5 units at version 4.1.0 and newer, dual UCCI cards now use single IP address

VERSION 4.6.3 (03FE9F12) 9/22/21-- LIMITED RELEASE

EQUIPMENT
- ULTRIX-FR5

UCCI Upgrade Required?   YES ☐   NO ☒

FEATURES & ENHANCEMENTS
- Updated PMA tuning values for improved MFG test yield on Ultrix-Acuity systems with Ultrix IP-IO

BUG FIXES
- N/A

APPLICATION NOTES
- Ultrix systems must be running on SW version 3.42 or higher to upgrade to version 4.x.x. Systems operating on SW versions prior to 3.42 must perform an interim upgrade to 3.42 before fully upgrading to 4.x.x.
- Ultrix-FR5 Upgrades:

Users upgrading from version prior to 4.1.0 may be prompted by Dashboard to reboot multiple times (6-8 times) to process all updates. This is normal and expected behavior for this update.*

Caution: When powering cycling the frame, users must wait approx. 30 seconds before repowering to allow the frame time to completely power down and reset.

- Ultrix-UCCI Card Support* ○ Users with older UCCI Controls Cards (cards loaded with a version prior to 4.1.0) must **upgrade the UCCI card first** before upgrading the Ultrix-FR5 frame.

    🗋 See Ultrix-FR5 UCC 4v10 Upgrade Procedure Application Note for instructions.

Dual/Redundant UCCI Cards must be upgraded one at a time. Only one UCCI card should be connected to the frame during the upgrade.
FR-5 units at version 4.1.0 and newer, dual UCCI cards now use single IP address

VERSION 4.6.2(9E7700CB) 8/24/21

EQUIPMENT
- ULTRIX-FR1, ULTRIX- FR2 (Legacy)
- ULTRIX-NS-FR1, ULTRIX-NS-FR2
- ULTRIX-FR5

UCCI Upgrade Required?   YES ☐   NO ☒

- ULTRICORE
- ULTRICORE-BCS
- ULTRICORE-OE

FEATURES & ENHANCEMENTS
- Updated PMA tuning values to increase MFG yield

BUG FIXES
- **UR-142** Video errors on Flex-Src–>Slot2 (Dest2)
- **PF-290** Problems editing senders ip addresses on redundant mode
- **PF-294** Timing Mode issues on IP Receiver streams

APPLICATION NOTES
- Ultrix systems must be running on SW version 3.42 or higher to upgrade to version 4.x.x. Systems operating on SW versions prior to 3.42 must perform an interim upgrade to 3.42 before fully upgrading to 4.x.x.
- Ultrix-FR5 Upgrades:

Users upgrading from version prior to 4.1.0 may be prompted by Dashboard to reboot multiple times (6-8 times) to process all updates. This is normal and expected behavior for this update.*

*Caution: When powering cycling the frame, users must wait approx. 30 seconds before repowering to allow the frame time to completely power down and reset.

- Ultrix-UCCI Card Support* ○ Users with older UCCI Controls Cards (cards loaded with a version prior to 4.1.0) must **upgrade the UCCI card first** before upgrading the Ultrix-FR5 frame.
  - See Ultrix-FR5 UCC 4v10 Upgrade Procedure Application Note for instructions.

Dual/Redundant UCCI Cards must be upgraded one at a time. Only one UCCI card should be connected to the frame during the upgrade.

FR-5 units at version 4.1.0 and newer, dual UCCI cards now use single IP address

VERSION 4.6.1 (70A60E1C) 8/06/21

EQUIPMENT
- ULTRIX-FR1, ULTRIX- FR2 (Legacy)
- ULTRIX-NS-FR1, ULTRIX-NS-FR2
- ULTRIX-FR5

UCCI Upgrade Required?   YES ☐   NO ☒
- ULTRICORE
- ULTRICORE-BCS
- ULTRICORE-OE

FEATURES & ENHANCEMENTS
- ULTRISCAPE-CA new license to enable closed captions for the Ultrix Multiviewer
- 2110-40 Pass through support of ancillary data in Ultrix-IP and Ultricore-IP
- Switcher tally mode
- ULTRIMIX-MXR mono channel support

BUG FIXES
- UR-57: Failed to route mixer outputs to FR5 regular outputs.
- UR-64: Deleting IP Senders/Receivers from Dashboard not working as expected
- UR-68 - Ultrix-Acuity panel is showing Ultrix router disconnect alarm
- UR-69: SNMP does not work on BCS
- UR-71: Get functions fail to retrieve status
- UR-80: No IP Receivers showing if NMOS panels are used to make connections
- UR-106: Mixer partition name is not propagated
- UR-109: Cannot set BCS to PC time
- UR-111: Ultricore-OE audio mixer's soft panel warning dialog improperly formatted
- UR-114: Panel with all drawers on one side doesn't load properly
- UR-120 - MADI audio distortion on 5RU if Src video is removed from 2,3
- PF-230: Ultrix-IP PTP "Apply" and "Cancel" buttons are inconsistent sizes
- Bug 69445: Ultrix-IP green MV output
- Bug 71129: Ultriscape updating destination names does not get reflected in head selection or in MultiViewer
- Bug 72527: Audio mixer partition drop down should be agnostic
- Bug 72582: Unable to route first assigned source to mixer strip via mixer panel
- Bug 72689 - Video Format 1080p 29.97 requires Ultrix 4.5.6
- Fix for 8K quad link and custom payload IDs
- Ember+ fix to audio receivers for UltrixIP with the 32kB buffer increase

APPLICATION NOTES

- Ultrix systems must be running on SW version 3.42 or higher to upgrade to version 4.x.x. Systems operating on SW versions prior to 3.42 must perform an interim upgrade to 3.42 before fully upgrading to 4.x.x.
- Ultrix-FR5 Upgrades:

Users upgrading from version prior to 4.1.0 may be prompted by Dashboard to reboot multiple times (6-8 times) to process all updates. This is normal and expected behavior for this update.*

*Caution: When powering cycling the frame, users must wait approx. 30 seconds before repowering to allow the frame time to completely power down and reset.

- Ultrix-UCCI Card Support* ○ Users with older UCCI Controls Cards (cards loaded with a version prior to 4.1.0) must **upgrade the UCCI card first** before upgrading the Ultrix-FR5 frame.
   - See Ultrix-FR5 UCC 4v10 Upgrade Procedure Application Note for instructions.

Dual/Redundant UCCI Cards must be upgraded one at a time. Only one UCCI card should be connected to the frame during the upgrade.

FR-5 units at version 4.1.0 and newer, dual UCCI cards now use single IP address

VERSION 4.5.8 (0398A757) 7/09/21 – LIMITED RELEASE

EQUIPMENT
- ULTRIX-FR5 + Acuity

UCCI Upgrade Required?   YES ☐   NO ☒

- ULTRIX-NS-FR1
- ULTRIX-NS-FR2

FEATURES & ENHANCEMENTS
- N/A

BUG FIXES
- Fix for 8K quad link and custom payload IDs
- **Bug 69445** – Ultrix-IP under BCS control displays black video on Multi Viewers

APPLICATION NOTES
- **Limited Release** This is an informal release targeted to specific customers to address specific issues identified in the bug fixes. Distribution to be controlled by CS and/or Solution's Architects. Files distributed through SharePoint only and NOT intended for general release.

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VERSION 4.5.7 (C629AB28) 6/09/21 – LIMITED RELEASE

EQUIPMENT
- ULTRIX-FR5 + Acuity

UCCI Upgrade Required?   YES ☐   NO ☒

FEATURES & ENHANCEMENTS
- N/A

BUG FIXES
- **UR-68** - Ultrix-Acuity panel is showing Ultrix router disconnect alarm

APPLICATION NOTES
- **Limited Release for Ultrix FR5 with Acuity** This is an informal release targeted to specific customers to address specific issues identified in the bug fixes. Distribution to be controlled by CS and/or Solution's Architects. Files distributed through SharePoint only and NOT intended for general release.
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VERSION 4.5.6 (198041E3) 6/03/21 – LIMITED RELEASE

EQUIPMENT
- ULTRIX-FR5 + Acuity

UCCI Upgrade Required?   YES ☐   NO ☒

- ULTRIX-NS-FR1 Using Ember+
- ULTRIX-NS-FR2 Using Ember+

FEATURES & ENHANCEMENTS
- N/A

BUG FIXES
- **Bug 72689** - Video Format 1080p 29.97 requires Ultrix 4.5.6
- Ember+ fix to audio receivers for UltrixIP with the 32kB buffer increase

APPLICATION NOTES
- **Limited Release for Ultrix FR5 with Acuity or Ultrix New Style FR1/FR2 with Ember+**. This is an informal release targeted to specific customers to address specifically addressed problems. Distributed through SharePoint only. NOT for general distribution. Distribution to be controlled by CS and Solution's Architects and only issued to customers seeking resolution to the issues addressed by the Limited Release.

VERSION 4.5.5 (3223616) 5/21/21

EQUIPMENT
- ULTRIX-FR1, ULTRIX-NS-FR1
- ULTRIX-FR2, ULTRIX-NS-FR2
- ULTRIX-FR5

UCCI Upgrade Required?   YES ☐   NO ☒

- ULTRICORE
- ULTRICORE-BCS
- ULTRICORE-OE

FEATURES & ENHANCEMENTS
- Maintenance Updates for ○ Large Distributed System Enhancements
- Flex slot corrected routing
- IP-IO MicroBlaze re-mapping (Ultrix Acuity support)
- NMOS enumerations
- Ember + Fixes
- Clean Quiet (Line Sync) updates

BUG FIXES
- Bug 12285   "Stuck" output on flex slot
- Bug 72370   Ultrix-IP input switching to Ultrix-Acuity
- Bug 69885   CR/LF use in SDP files.
- Bug 72277   Improved handling for startup in slower-frame rate reference signals
- Bug 72292   Ultrix-IP - Proper bandwidth calculation for redundant streams
- Other Misc Improvements:

GVG qi queries for destination over 4096

Improved Ultrix-IP compatibility with Evertz Magnum control ○ Improved Avahi advertisement compatibility ○ Improved Probel & GVG protocol option configuration ○ Improved Line Sync (Clean-Quiet) switch behavior

KNOWN ISSUES
- Databases created under Ultrix 4.2.x fail to import into the Offline Editor. To generate a portable database for use in the Offline Editor users must first upgrade the Ultrix system to 4.4.0. Once upgraded the user can export the database to generate a new .uda file and then import into the Offline Editor.

APPLICATION NOTES
- Acuity in Ultrix – Ultrix-FR5 frames shipped prior to October 2020 are recommended to have a factory hardware upgrade to facilitate Acuity blades.
- Ultrix systems must be running on SW version 3.42 or higher to upgrade to version 4.x.x. Systems operating on SW versions prior to 3.42 must perform an interim upgrade to 3.42 before fully upgrading to 4.x.x.

- **Ultrix-FR5 Upgrades:**

Users upgrading from version prior to 4.1.0 may be prompted by Dashboard to reboot up to 6-8 times to process all updates. This is normal and expected behavior for this update.*

*Caution: When powering cycling the frame, users must wait approx. 30 seconds before repowering to allow the frame time to completely power down and reset.

- **Ultrix-UCCI Card Support*** ○ **Users with older UCCI Controls Cards (cards loaded with a version prior to 4.1.0) must upgrade the UCCI card first before upgrading the Ultrix-FR5 frame.**

    See Ultrix-FR5 UCC 4v10 Upgrade Procedure Application Note for instructions.

Dual/Redundant UCCI Cards must be upgraded one at a time. Only one UCCI card should be connected to the frame during the upgrade.

FR-5 units at version 4.1.0 and newer, dual UCCI cards now use single IP address

VERSION 4.5.2 (AA6D63F6) 4/21

EQUIPMENT
- ULTRIX-FR1, ULTRIX-NS-FR1
- ULTRIX-FR2, ULTRIX-NS-FR2
- ULTRIX-FR5 & UCCI

UCCI Upgrade Required?   YES ☐ NO ☒

- ULTRICORE
- ULTRICORE-BCS
- ULTRICORE-OE

FEATURES & ENHANCEMENTS
- Large system performance updates and bug fixes
- Improved logging for ethernet troubleshooting

BUG FIXES
- **Bug 69438** - Nvision UDP not working as expected - Switches from GV not updating on Matrix panels
- **Bug 69669** – Loss of Signal state black not working as expected if frame sync is enabled
- **Bug 69722** - Audio breakaway not working on Follow Destination after reboot
- **Bug 69829** –Ultritouch panel menu buttons update. Allows more/less buttons in menu
- **Bug 70457** – Ultrix IP - ingress video lockup after switching senders from progressive to interlaced formats through NMOS
- **Bug 71158** - Ultriscape - When importing a new layout, the list of layouts to export goes blank
- **Bug 71296** - FR-5 showing INT CONN ERROR and alarm
- **Bug 71325** - Ultrixrouter memory leak leads to abnormal termination
- **Bug 71787** - UltrixIP - video lockup after applying big salvos through tie-lines
- **Bug 71853** - UltrixIP - rolling green horizontal bars
- **Bug 71885** - Cannot make MV layout switches with soft panels on BCS- take errors when making layout changes
- **Bug 71974** - SFP card in Ultrix frames not work under BCS control

KNOWN ISSUES
- Databases created under Ultrix 4.2.x fail to import into the Offline Editor. To generate a portable database for use in the Offline Editor users must first upgrade the Ultrix system to 4.4.0. Once upgraded the user can export the database to generate a new .uda file and then import into the Offline Editor.

APPLICATION NOTES
- Acuity in Ultrix – Ultrix-FR5 frames shipped prior to October 2020 are recommended to have a factory hardware upgrade to facilitate Acuity blades.

- Ultrix systems must be running on SW version 3.42 or higher to upgrade to version 4.x.x. Systems operating on SW versions prior to 3.42 must perform an interim upgrade to 3.42 before fully upgrading to 4.x.x.
- Ultrix-FR5 Upgrades:

Users upgrading from version prior to 4.1.0 may be prompted by Dashboard to reboot up to 6-8 times to process all updates. This is normal and expected behavior for this update.*

*Caution: When powering cycling the frame, users must wait approx. 30 seconds before repowering to allow the frame time to completely power down and reset.

- Ultrix-UCCI Card Support* ○ Users with older UCCI Controls Cards (cards loaded with a version prior to 4.1.0) must upgrade the UCCI card first before upgrading the Ultrix-FR5 frame.
  See Ultrix-FR5 UCC 4v10 Upgrade Procedure Application Note for instructions.

Dual/Redundant UCCI Cards must be upgraded one at a time. Only one UCCI card should be connected to the frame during the upgrade.
FR-5 units at version 4.1.0 and newer, dual UCCI cards now use single IP address.

VERSION 4.5.1 (6CBD28AD) 3/21

EQUIPMENT
- ULTRIX-FR5 with Acuity Only

FEATURES & ENHANCEMENTS
- Version 4.5.0 with updated tuning values to support Endor Rev 6 hardware.

BUG FIXES
- N/A

KNOWN ISSUES
- Databases created under Ultrix 4.2.x fails to import into the Offline Editor. To generate a portable database for use in the Offline Editor users must first upgrade the Ultrix system to 4.4.0. Once upgraded the user can export the database to generate a new .uda file and then import into the Offline Editor.

APPLICATION NOTES
- Version 4.5.1 for controlled distribution only and not targeted for general release. Version 4.5.1 distribution to be limited to Ultrix FR5 systems with Ultrix Acuity only.
- Acuity in Ultrix – Ultrix-FR5 frames shipped prior to October 2020 are recommended to have a factory hardware upgrade to facilitate Acuity blades.
- Ultrix systems must be running on SW version 3.42 or higher to upgrade to version 4.x.x. Systems operating on SW versions prior to 3.42 must perform an interim upgrade to 3.42 before fully upgrading to 4.x.x.
- Ultrix-FR5 Upgrades:

Users upgrading from version prior to 4.1.0 may be prompted by Dashboard to reboot up to 6-8 times to process all updates. This is normal and expected behavior for this update.*

*Caution: When powering cycling the frame, users must wait approx. 30 seconds before repowering to allow the frame time to completely power down and reset.

- Ultrix-UCCI Card Support* ○ Users with older UCCI Controls Cards (cards loaded with a version prior to 4.1.0) must upgrade the UCCI card first before upgrading the Ultrix-FR5 frame.

  See Ultrix-FR5 UCC 4v10 Upgrade Procedure Application Note for instructions.

Dual/Redundant UCCI Cards must be upgraded one at a time. Only one UCCI card should be connected to the frame during the upgrade.

FR-5 units at version 4.1.0 and newer, dual UCCI cards now use single IP address.

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VERSION 4.5.0 (3E2F7572) 3/21

EQUIPMENT
- ULTRIX-FR1, ULTRIX-NS-FR1
- ULTRIX-FR2, ULTRIX-NS-FR2
- ULTRIX-FR5 & UCCI

UCCI Upgrade Required?   YES ☐ NO ☒

- ULTRICORE
- ULTRICORE-BCS
- ULTRICORE-OE

FEATURES & ENHANCEMENTS
- Acuity in Ultrix
- ULTRIMIX-MXR (Ultrix Audio Mixer, EQ, & Compression)
- Low Latency Mode (Ultrix IP)
- ULTRICORE-EMBER+ Logical/Physical
- Support of Rosstalk crosspoint commands

BUG FIXES
- **Bug 71541** - Multi level Third Party Matrices (GVG) return single level
- **Bug 71449** - Customer issues with Ultricore SNMP MIB
- **Bug 71152** - Database builder creating 16 audio Ch. expect 8 Ch.
- **Bug 71103** - Loss of MV head UMD update
- **Bug 71084** - Cannot get any audio IP Streams passing on any system in 4.4.0 release
- **Bug 71076** - Cannot make routes on Flex slot with BCS
- **Bug 71028** - TSL sending blank data after reboot
- **Bug 70964** - Cannot remove license on Ultrix - Dashboard always shows count of 1
- **Bug 70892** - Unable to import UltricoreOE proxied database into secondary Ultrix.
- **Bug 70844** - Offline and numeric frame IDs visible after database import
- **Bug 70126** - Group Category Editor - name sorting does not work.
- **Bug 69280** - Ultritouch MV panel not showing thumbnails.

KNOWN ISSUES
- Databases created under Ultrix 4.2.x fail to import into the Offline Editor. To generate a portable database for use in the Offline Editor users must first upgrade the Ultrix system to 4.4.0. Once upgraded the user can export the database to generate a new .uda file and then import into the Offline Editor.

APPLICATION NOTES
- Version 4.5.0 optimized for small non-distributed systems. Version 4.5.1 will address further big distributed systems fixes and enhancements.

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- Acuity in Ultrix – Ultrix-FR5 frames shipped prior to October 2020 are recommended to have a factory hardware upgrade to facilitate Acuity blades.
- Ultrix systems must be running on SW version 3.42 or higher to upgrade to version 4.x.x. Systems operating on SW versions prior to 3.42 must perform an interim upgrade to 3.42 before fully upgrading to 4.x.x.
- Ultrix-FR5 Upgrades:

Users upgrading from version prior to 4.1.0 may be prompted by Dashboard to reboot up to 6-8 times to process all updates. This is normal and expected behavior for this update.*

*Caution: When powering cycling the frame, users must wait approx. 30 seconds before repowering to allow the frame time to completely power down and reset.

- Ultrix-UCCI Card Support* ○ Users with older UCCI Controls Cards (cards loaded with a version prior to 4.1.0) must upgrade the UCCI card first before upgrading the Ultrix-FR5 frame.
  See Ultrix-FR5 UCC 4v10 Upgrade Procedure Application Note for instructions.

Dual/Redundant UCCI Cards must be upgraded one at a time. Only one UCCI card should be connected to the frame during the upgrade.
FR-5 units at version 4.1.0 and newer, dual UCCI cards now use single IP address.

VERSION 4.2.5 (CBE5E81) 11/20

EQUIPMENT
- ULTRIX-NS-FR1, ULTRIX-NS-FR1
- ULTRIX-NS-FR2, ULTRIX-NS-FR2
- ULTRIX-FR5 & UCCI

UCCI Upgrade Required?   YES ☐ NO ☒

- ULTRICORE
- ULTRICORE-BCS
- ULTRICORE-OE

FEATURES & ENHANCEMENTS
- Ultrix users can now reboot the frame using front panel controls.
- General improvements and bug fixes to support large distributed system performance.

BUG FIXES
- **Bug 70314** - Layout editor - When creating a PIP with UMD set to Static, issues arise of static text is removed.
- **Bug 70698** – FR1/FR2 only. Cannot create Video/Audio sender on 2RU-ns Ultrix IP card from Dashboard.

KNOWN ISSUES
- Offline Editor – 4.2.5 does not support downloading a database from one Ultrix frame into the Offline Editor then uploading the same database to a different Ultrix frame.

APPLICATION NOTES
- Systems must be running on SW version 3.42 or higher to upgrade to version 4.1.0 (or 4.1.1). Systems operating on SW versions prior to 3.42 must perform an interim upgrade to 3.42 before fully upgrading to 4.1.0 (or 4.1.1).
- ULTRIX-FR5 Upgrades:

UCCI Controls Cards must be upgraded before upgrading the Ultrix-FR5 frame. See *Ultrix-FR5 UCC 4v10 Upgrade Procedure Application Note* for instructions.

During the version 4.1.0 (or 4.1.1) upgrade process, users may be prompted by Dashboard to reboot up to 6-8 times. This is normal and expected behavior for this update.*

*Caution: When powering cycling the frame, users must wait approx. 30 seconds before repowering to allow the frame time to completely power down and reset.

- UCCI Card Support

Dual UCCI Cards must be upgraded one at a time. Only one UCCI card should be connected to the frame during the upgrade. See FR5 Dual Controller Migration Application Note for instructions.

Note: FR-5 units with dual UCCIs will use single IP address

UCCI presence/status is reported in the frame UI.

VERSION 4.2.1 (098EF2C)

EQUIPMENT
- ULTRIX-FR1, ULTRIX-NS-FR1
- ULTRIX-FR2, ULTRIX-NS-FR2
- ULTRIX-FR5 & UCCI

UCCI Upgrade Required?   YES ☐ NO ☒

- ULTRICORE
- ULTRICORE-BCS
- ULTRICORE-OE

FEATURES
- Bug fixes and improvements to the customer experience

BUG FIXES
- **Bug 69399** -- UHD from non-Ross devices/SDP redundancy improvements. When creating redundant UHD session, both streams are added to the same eth interface.
- **Bug 69358** -- UHD from non-Ross devices/SDP redundancy improvements. Video receiver not playing out UHD video from Xpression.
- **Bug 69450** -- Ultrix-IP - Remove and recreate when sender not defined.
- **Bug 69637** – Ultrix-IP - Fix issue with Marvell gearbox driver
- **Bug 69702** -- Extend allowed Ultrix-IP range
- **Bug 69885** -- Fix to SDP parsing of group info
- **Bug 69746** -- Strip unprintable chars from UMD Labels
- **Bug 52883** -- Changing fan speeds on the HW Configuration Dashboard page indicates failed.
- **Bug 69736** – Trap and log malformed OGP-JSON causes unhanded exception in node.js
- **Bug 69254** -- Require frame-frame database import through Offline Editor.
- **Bug 69455** – Ultricore-BCS - System utilization at 97%
- **Bug 69796** -- Add missing JDK installer component for TLX feature.
- **Bug 68470** -- Fix for reboot vs power cycle issue
- **Bug 69810** -- Fix for Frame Sync / audio off by 1 or 2 frames

APPLICATION NOTES
- Systems must be running on SW version 3.42 or higher to upgrade to version 4.1.0 (or 4.1.1). Systems operating on SW versions prior to 3.42 must perform an interim upgrade to 3.42 before fully upgrading to 4.1.0 (or 4.1.1).
- ULTRIX-FR5 Upgrades:

UCCI Controls Cards must be upgraded before upgrading the Ultrix-FR5 frame. See *Ultrix-FR5 UCC 4v10 Upgrade Procedure Application Note* for instructions.

During the version 4.1.0 (or 4.1.1) upgrade process, users may be prompted by Dashboard to reboot up to 6-8 times. This is normal and expected behavior for this update.*

*Caution: When powering cycling the frame, users must wait approx. 30 seconds before repowering to allow the frame time to completely power down and reset.

- UCCI Card Support*

Dual UCCI Cards must be upgraded one at a time. Only one UCCI card should be connected to the frame during the upgrade. See FR5 Dual Controller Migration Application Note for instructions.
Note: FR-5 units with dual UCCIs will use single IP address
UCCI presence/status is reported in the frame UI.

VERSION 4.2.0 (AF2F977)

EQUIPMENT
- ULTRIX-FR1, ULTRIX-NS-FR1
- ULTRIX-FR2, ULTRIX-NS-FR2
- ULTRIX-FR5 & UCCI

UCCI Upgrade Required?   YES ☐ NO ☒

- ULTRICORE
- ULTRICORE-BCS

FEATURES
- Release of the Ultrix-SFP-IO module support in Ultrix routers
- Release of Ultrisync-UHD 12G frame sync license for Ultrix I/O modules
- Release of the Ultricore-TLX Tielines software license for Ultricore-BCS

ENHANCEMENTS
- Includes menu option to request logs be generated.
- Logs now saved on reboot.
- Additional logging of network port states

BUG FIXES
- **Bug 69280**   Ultritouch MV softpanel fails to show MV head and thumbnail selection.
- **Bug 61105**   Fiber SFPs listed HDBNC as connector in status.
- **Bug 62203**   Audio bypass on SFP input does not work.
- **Bug 62572**   Inconsistent Ultriscape font size
- **Bug 65179**   Audio delay stops updating in Dashboard GUI
- **Bug 66599** - Sending wrong 352 packet in 2160p 29.97
- **Bug 68025**   Ultricore-BCS - NMOS not working as expected (Video and Audio streams not sending)
- **Bug 68081**   1RU New Style Import database not working
- **Bug 68202**   Ultrix IP - Gateway configuration not working
- **Bug 68308**   Ultriscape - Dragging items (audio bars) slowly in layout editor causes mouse pointer to get out of sync with audio bars
- **Bug 68554**   FR-5 Upgrade failures - Increases drive strength of CPLD communication lines to improve upgrade experience
- **Bug 68555**   Label change notifications not sent to third party module
- **Bug 68556**   Ultriscape - Layout/Head Selection PIP Source is showing incorrect source
- **Bug 68662**   Intermittent ENET loss (FR-5)
- **Bug 68809**   Ultriscape - Changing SRC in Matrix panel for PIPs affects a different PIP
- **Bug 69280** - Ultritouch MV panel not showing thumbnails and source/destination level with unassigned I/O port is inaccessible.
- **Bug 69387** - Group/Category/Pushbutton soft panels failed to display salvo list UI

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KNOWN ISSUES

- Systems with Ultrix IP cards require power cycle after upgrade
- Ultriscape Audio Metering

Ultriscape "Logical Audio Meter mode" must be used to enable pip audio meters to the monitor audio levels of sources arriving via IP Video and Audio streams

When an Ultriscape multiviewer pip set to follow a destination that is not local to the Ultrix frame on which the multiviewer head is hosted (i.e. the followed output is on a different frame), pip audio meter levels for the followed output are not available.

APPLICATION NOTES

- Systems running SW version 3.42 or higher can upgrade to version 4.X.X.
- Systems operating on SW versions older than 3.42 must first upgrade to 3.42 before upgrading to 4.X.X.
- ULTRIX-FR5 Upgrades:

IMPORTANT: UCCI Control Cards running a SW version less than 4.1.0 must be upgraded **before upgrading the Ultrix-FR5 frame**.

See Ultrix-FR5 UCC 4v10 Upgrade Procedure Application Note for instructions.

During upgrades from version 3.42 to version 4.X.X users may be prompted by Dashboard to reboot 6-8 times. This is normal and expected behavior for this update.*

*Caution: When power cycling the frame, allow time for the frame to completely power down (approx. 30 seconds) before re-powering. This will ensure the system has completely reset.

- Dual UCCI Card Support*

Dual UCCI Cards must be upgraded one at a time.

Only one UCCI card should be connected to the frame during the upgrade.

See FR5 Dual Controller Migration Application Note for instructions.

VERSION 4.1.0 (5883)

Ross Connectivity group is transitioning to a Semantic version naming scheme with this release. The version number will indicate Major, Minor and Patch in the numbering scheme.

EQUIPMENT
- ULTRIX-FR1, ULTRIX-NS-FR1
- ULTRIX-FR2, ULTRIX-NS-FR2
- ULTRIX-FR5 & UCCI (See app notes for proper upgrade procedure)

UCCI Upgrade Required?   YES ☒ NO ☐

- ULTRICORE
- ULTRICORE-BCS

FEATURES
- UCCI and UCCI redundancy support in the ULTRIX-FR5
- ULTRICORE-BCS redundancy
- Ultrix IP-IO support in ULTRIX-NS-FR1 and ULTRIX-NS-FR2

BUG FIXES
- Version 4v10 is now universal for both Ultrix Legacy and New Style frames.
- ULTRIX-FR5 Flex slot support
- Expanded protocol connection options

KNOWN ISSUES
- Current Ultricore-OE build is broken

APPLICATION NOTES
- Systems must be running on SW version 3.42 or higher to upgrade to version 4.1.0. Systems operating on SW versions prior to 3.42 must perform an interim upgrade to 3.42 before fully upgrading to 4.1.0.
- ULTRIX-FR5 Upgrades:

UCCI Controls Cards must be upgraded before upgrading the Ultrix-FR5 frame. See *Ultrix-FR5 UCC 4v10 Upgrade Procedure Application Note* for instructions.

During the version 4.10 upgrade process, users may be prompted by Dashboard to reboot up to 6-8 times. This is normal and expected behavior for this update.*

***Caution**: When powering cycling the frame, users must wait approx. 60 seconds before repowering to allow the frame time to completely power down and reset.

- UCCI Card Support* ○ Dual UCCI Cards must be upgraded one at a time. Only one UCCI card should be connected to the frame during the upgrade. See FR5 Dual Controller Migration Application Note for instructions.

Note: FR-5 units with dual UCCIs will use single IP address
UCCI presence/status is reported in the frame UI.

- ULTRICORE-BCS: Redundant Controller Support

Two BCS units can be "paired" to provide redundancy support

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Paired units are assigned separate shared "system" IP address which is used for client control ○ Redundant units synchronize via private network link over ENET2
Each BCS unit remains visible to Dashboard at its IP address for configuration and status monitoring

VERSION 4V06 (5656)

FEATURES
- First release for Ultrix New Style firmware. New Style replaces the Legacy Ultrix FR1 and FR2 routers.
- Supports Ultrix HDB-IO module in the New Style frame.
- Supports New Style fan module and increased cooling capacity.
- Provides an upgrade path for future integration of Ultrix I/O formats in FR1 and FR-2 Frames.

BUG FIXES
- Updated tuning values to improve test margins through MFG test .

APPLICATION NOTES
- 4v05 is not compatible for legacy FR1 and FR2 routers.
- 4v05 supports Ultrix HDB-IO only.

VERSION 4V05 (5473)

FEATURES
- First release for Ultrix New Style firmware. New Style replaces the Legacy Ultrix FR1 and FR2 routers.
- Supports Ultrix HDB-IO module in the New Style frame.
- Supports New Style fan module and increased cooling capacity.
- Provides an upgrade path for future integration of Ultrix I/O formats in FR1 and FR-2 Frames.

BUG FIXES
- First Release.

APPLICATION NOTES
- 4v05 is not compatible for legacy FR1 and FR2 routers.
- 4v05 supports Ultrix HDB-IO only.