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A **BELDEN** BRAND

NV8500 Series Router

Router Applications and Firmware

Release Notes

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Introducing NV8500 4.2.0.3492

This document releases NV8500 router applications and firmware which update control cards and IOXM* cards. This production release includes all patch releases fixes and updates since the previous production release version 3.9.8. Previous releases are listed in Appendix 1.

Use MRC Version 4.0.0.631 or higher to support and upgrade NV8500 Hybrid firmware V4.2.0. MRC version 4.0.0.631 now supports RF file versions of 4.0.0 and greater.

For this production release, use the upgrade/downgrade procedure TN0118-01.

This release addresses the following major issues:

Fixes

Major highlights of this release include fix or implementation of issues:

Jira Issue	Description	Type
NV8500-1784	MADI Output card channels 114-128 not reporting in MRC Module status. <i>In MRC Module Status; EM0815 MADI Output card falsely reports that MADI signals are not present for MADI output channels 114-128, when they actually are present.</i> <i>Note: This bug was confirmed on 8280 and 8576 frames only.</i>	Bug
NV8500-1786	MADI Output audio CH's 66-113 displaced by 15 increments. This issue required a change to Nv8500 MADI firmware for the 8500 16OUT 3GIG MADI COAX card.	Bug
NV8500-2094	EM0833-2 / Boot issue with reset button. This issue relates to NV8500-2129 above, The updated CPLD SV1055-02 addresses this issue and is included in this release of the NV8500 firmware.	Bug
NV8500-2129	New EM0833 control cards report a CPLD warning in MRC. This is related to NV8500-2121.	Bug

Known Issues

The following issues remain open:

Jira Issue	Description	Type
NV8500-1787	8576 Expansion Module Status not reporting MADI <i>In MRC Module Status, MADI status is not included in Reporting.</i>	Bug
NV8500-1991	Serial Asynchronous Command Destabilizes Router Serial Communications. <i>There is no workaround for this issue. Grass Valley recommends discontinuing use of this command.</i>	Bug

* IOXM is shorthand for Input, Output, Xpt (Cross Point), and Monitor and essentially means any NV8500 card that can be read by a control card, in other words any card but a control card. However, not all NV8500 cards support IOXM reporting.

Contact Us

For technical assistance, call our support center at 1-800-547-8949 (US and Canada) or +1 530 478 4148.

To obtain a local phone number for the support center nearest you, please consult the Contact Us section of Grass Valley's website (www.grassvalley.com). An online form for e-mail contact is also available from the website.

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Appendix 1: Previous Releases

NV8500 4.1.0.3476

This document releases NV8500 router applications and firmware which update control cards and IOXM* cards. Use MRC Version 4.0.0.631 or higher to support and upgrade NV8500 Hybrid firmware V4.1.0. This version of MRC addresses issue NV8500-2121. MRC version 4.0.0.631 now supports RF file versions of 4.0.0 and greater.

For this patch release, use the upgrade/downgrade procedure TN0118-01.

This release addresses the following major issues:

Fixes

Major highlights of this release include fix or implementation of issues:

Jira Issue	Description	Type
NV8500-2121	Versions of MRC prior to version 4.0.0 will display an error message when using RF Files versions later than version 4.0.0.	Bug
NV8500-2116	2048x1080p "2K Cinema" format support for NV8500 hybrid in out and ABI cards added.	Feature

Known Issues

The following issues remain open:

Jira Issue	Description	Type
NV8500-1991	Serial Asynchronous Command Destabilizes Router Serial Communications. <i>There is no workaround for this issue. Grass Valley recommends discontinuing use of this command.</i>	Bug
NV8500-1786	MADI Output audio CH's 66-113 displaced by 15 increments. <i>In MRC Module status, MADI output card, MADI CH status indicators 065-096 should be reporting status of Router Audio Channels 145-176. Instead, they actually report Router channels 145, and then skip to 161 – 191.</i> <i>IE: MADI 065 reports status of router audio matrix output 145. MADI 066 reports status of router audio matrix output 161.</i> <i>MADI 067 reports status of router audio matrix output 162, and this sequence continues sequentially up to MADI 113 / Router 208.</i>	Bug
NV8500-1785	MADI Output card shows 64 channels when set to 56 channel MADI. <i>In MRC Module Status, EM0815 MADI Output card shows 64 channels when set to 56 channel MADI. Only 56 channels are available.</i>	Bug

Jira Issue	Description	Type
NV8500-1784	<p>MADI Output card channels 114-128 not reporting in MRC Module status.</p> <p><i>In MRC Module Status; EM0815 MADI Output card falsely reports that MADI signals are not present for MADI output channels 114-128, when they actually are present.</i></p> <p><i>Note: This bug was confirmed on 8280 and 8576 frames only.</i></p>	Bug

NV8500 4.0.0.3476

This document releases NV8500 router applications and firmware which update control cards and IOXM* cards.

Use MRC Version 3.9.1.619 or higher to support and upgrade NV8500 Hybrid firmware V3.9.8. This version of MRC supports firmware updates for the new NV8900 MADI converter frames.

For this patch release, use the upgrade/downgrade procedure TN0118-01.

This release addresses the following major issues:

Fixes

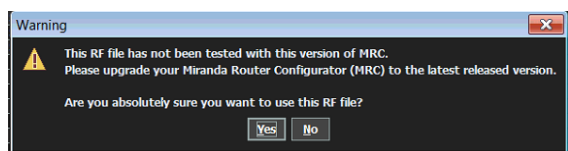
Major highlights of this release include fix or implementation of issues:

Jira Issue	Description	Type
NV8500-2069	The Embedder/Disembedder does not pass some audio channels from several problematic feeds. <i>Note: This patch release will address Jira issue NV8500-2069 for the Embedder/Disembedder output card.</i>	Bug

Known Issues

MRC Versions prior to Version 4.0.0

Versions of MRC prior to version 4.0.0 will display the following message when using this release of the RF file:



When this message is displayed, select “Yes” button to continue with the upgrade or use of this RF file. The message will be corrected in Version 4.0.0 of MRC.

The following issues remain open:

Jira Issue	Description	Type
NV8500-2121	Versions of MRC prior to version 4.0.0 will display an error message when using RF Files versions later than version 4.0.0. <i>See note “MRC Versions prior to Version 4.0.0” above.</i>	Bug
NV8500-1991	Serial Asynchronous Command Destabilizes Router Serial Communications. <i>There is no workaround for this issue. Grass Valley recommends discontinuing use of this command.</i>	Bug
NV8500-1786	MADI Output audio CH’s 66-113 displaced by 15 increments. <i>In MRC Module status, MADI output card, MADI CH status indicators 065-096 should be reporting status of Router Audio Channels 145-176. Instead, they actually report Router channels 145, and then skip to 161 – 191.</i> <i>IE: MADI 065 reports status of router audio matrix output 145. MADI 066 reports status of router audio matrix output 161.</i> <i>MADI 067 reports status of router audio matrix output 162, and this sequence continues sequentially up to MADI 113 / Router 208.</i>	Bug
NV8500-1785	MADI Output card shows 64 channels when set to 56 channel MADI. <i>In MRC Module Status, EM0815 MADI Output card shows 64 channels when set to 56 channel MADI. Only 56 channels are available.</i>	Bug

Jira Issue	Description	Type
NV8500-1784	<p>MADI Output card channels 114-128 not reporting in MRC Module status.</p> <p><i>In MRC Module Status; EM0815 MADI Output card falsely reports that MADI signals are not present for MADI output channels 114-128, when they actually are present.</i></p> <p><i>Note: This bug was confirmed on 8280 and 8576 frames only.</i></p>	Bug

NV8500 v3.9.9

This document releases NV8500 router applications and firmware that update control cards and IOXM* cards.

Use MRC Version 3.9.1.619 or higher to support and upgrade NV8500 Hybrid firmware V3.9.9. This version of MRC supports firmware updates for the new NV8900 MADI converter frames.

For this release, use the upgrade/downgrade procedure TN0118-01. Version 3.9.9 contains important changes to the Output Gateway Card.

This release addresses the following major issues:

Fixes

Major highlights of this release include fix or implementation of issues:

Jira Issue	Description	Type
NV8500-2085	<p>Summary of O-Rip FPGA changes included in version 3.9.9</p> <p>SV1213-0502 (NV8500 IP Output Gateway FPGA)</p> <p>Changes from SV1214-0401</p> <ul style="list-style-type: none"> Fix for SD: In the Line Sync, the video generator used for inserting TRSS was delayed relative to the video stream by ½ a pixel. This caused TRSSs to be muxed in incorrectly, resulting in an invalid video stream. Fix for (Monitor output not working): The FIFO module used in the IpOutputMonitor changed, but the module instantiation didn't. A signal was added to control the different latencies required for the different APC2 cards. Fix for (Audio output channels mapped incorrectly): Audio channels 0-7 copied to both embedders 0-7 and 8-15. Simple fix was to hook up embedders 8-15 to audio channels 8-15. The embedder bypass control signals for the upper 8 outputs were hooked up with an offset of -1 (e.g. Embedder 10 bypass signal hooked to Embedder 11, etc.). This would cause the channels to enter bypass mode if the channels below them were taken to inactive inputs. 	Bug

Known Issues

The following issues remain open.

Jira Issue	Description	Type
NV8500-1991	Serial Asynchronous Command Destabilizes Router Serial Communications. <i>There is no workaround for this issue. Grass Valley recommends discontinuing use of this command.</i>	Bug
NV8500-1786	MADI Output audio CH's 66-113 displaced by 15 increments. <i>In MRC Module status, MADI output card, MADI CH status indicators 065-096 should be reporting status of Router Audio Channels 145-176. Instead, they actually report Router channels 145, and then skip to 161 – 191.</i> <i>IE: MADI 065 reports status of router audio matrix output 145. MADI 066 reports status of router audio matrix output 161.</i> <i>MADI 067 reports status of router audio matrix output 162, and this sequence continues sequentially up to MADI 113 / Router 208.</i>	Bug
NV8500-1785	MADI Output card shows 64 channels when set to 56 channel MADI. <i>In MRC Module Status, EM0815 MADI Output card shows 64 channels when set to 56 channel MADI. Only 56 channels are available.</i>	Bug
NV8500-1784	MADI Output card channels 114-128 not reporting in MRC Module status. <i>In MRC Module Status; EM0815 MADI Output card falsely reports that MADI signals are not present for MADI output channels 114-128, when they actually are present.</i> <i>Note: This bug was confirmed on 8280 and 8576 frames only.</i>	Bug

NV8500 v3.9.8

This document releases NV8500 router applications and firmware that update control cards and IOXM* cards.

Use MRC Version 3.9.1.619 or higher to support and upgrade NV8500 Hybrid firmware V3.9.8. This version of MRC supports firmware updates for the new NV8900 MADI converter frames.

For this production release, use the upgrade/downgrade procedure TN0118-01. Version 3.9.8 contains important changes to the IOXM scanning and firmware update modules. To avoid stability, upgrade, and operational issues, the upgrade/downgrade procedure must be strictly followed.

This release addresses the following major issues:

Fixes

Major highlights of this release include fix or implementation of issues:

Jira Issue	Description	Type
CREN-9	Software support for new NV8900 STM microcontroller	Feature
NV8500-2064	EM0903-5 Jitter Cleaner card does not pass video after frame power cycle	Bug
NV8500-2062	Fix for PROD2036-5 (New flash memory non-functional on SM0524-x, the NV8900 MADI converter sub-module)	Bug

NV8500-2033	Control Card Application code does not correctly update IOXM cards with replacement flash chip.	Bug
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Known Issues

The following issues remain open.

Jira Issue	Description	Type
NV8500-1991	Serial Asynchronous Command Destabilizes Router Serial Communications. <i>There is no workaround for this issue. Grass Valley recommends discontinuing use of this command.</i>	Bug
NV8500-1786	MADI Output audio CH's 66-113 displaced by 15 increments. <i>In MRC Module status, MADI output card, MADI CH status indicators 065-096 should be reporting status of Router Audio Channels 145-176. Instead, they actually report Router channels 145, and then skip to 161 – 191.</i> <i>IE: MADI 065 reports status of router audio matrix output 145. MADI 066 reports status of router audio matrix output 161.</i> <i>MADI 067 reports status of router audio matrix output 162, and this sequence continues sequentially up to MADI 113 / Router 208.</i>	Bug
NV8500-1785	MADI Output card shows 64 channels when set to 56 channel MADI. <i>In MRC Module Status, EM0815 MADI Output card shows 64 channels when set to 56 channel MADI. Only 56 channels are available.</i>	Bug
NV8500-1784	MADI Output card channels 114-128 not reporting in MRC Module status. <i>In MRC Module Status; EM0815 MADI Output card falsely reports that MADI signals are not present for MADI output channels 114-128, when they actually are present.</i> <i>Note: This bug was confirmed on 8280 and 8576 frames only.</i>	Bug

NV8500 v 3.9.7

This document releases NV8500 router applications and firmware that update control cards and IOXM* cards.

Added filter enhancement to implement NV8500-2029, “Modify Redundant Crosspoint change over to ignore Reference Errors.” The filter will discard reference errors as a criteria to change over from a Main Crosspoint card to Redundant Crosspoint card. Reference errors continue to be reported through the alarm settings of the NV8500 Control Card.

This release addresses the following major issues:

Fixes

Major highlights of this release include fix or implementation of issues:

Jira Issue	Description	Type
NV8500-2049	EM0903-5 JC input has signal quality issues	Bug

Known Issues

The following issues remain open.

Jira Issue	Description	Type
NV8500-1991	Serial Asynchronous Command Destabilizes Router Serial Communications. <i>There is no workaround for this issue. Grass Valley recommends discontinuing use of this command.</i>	Bug
NV8500-1786	MADI Output audio CH's 66-113 displaced by 15 increments. <i>In MRC Module status, MADI output card, MADI CH status indicators 065-096 should be reporting status of Router Audio Channels 145-176. Instead, they actually report Router channels 145, and then skip to 161 – 191.</i> <i>IE: MADI 065 reports status of router audio matrix output 145. MADI 066 reports status of router audio matrix output 161.</i> <i>MADI 067 reports status of router audio matrix output 162, and this sequence continues sequentially up to MADI 113 / Router 208.</i>	Bug
NV8500-1785	MADI Output card shows 64 channels when set to 56 channel MADI. <i>In MRC Module Status, EM0815 MADI Output card shows 64 channels when set to 56 channel MADI. Only 56 channels are available.</i>	Bug
NV8500-1784	MADI Output card channels 114-128 not reporting in MRC Module status. <i>In MRC Module Status; EM0815 MADI Output card falsely reports that MADI signals are not present for MADI output channels 114-128, when they actually are present.</i> <i>Note: This bug was confirmed on 8280 and 8576 frames only.</i>	Bug

NV8500 v3.9.6

This document releases NV8500 router applications and firmware that update control cards and IOXM* cards.

Added filter enhancement to implement NV8500-2029, “Modify Redundant Crosspoint change-over to ignore Reference Errors.” The filter will discard reference errors as a criteria to change over from a Main Crosspoint card to Redundant Crosspoint card. Reference errors continue to be reported through the alarm settings of the NV8500 Control Card.

This release addresses the following major issues:

Fixes

Jira Issue	Description	Type
NV8500-2029	Modify Redundant Crosspoint change over to ignore Reference Errors	Feature

Known Issues

The following issues remain open.

Jira Issue	Description	Type
NV8500-1991	Serial Asynchronous Command Destabilizes Router Serial Communications. <i>There is no workaround for this issue. Grass Valley recommends discontinuing use of this command.</i>	Bug

Jira Issue	Description	Type
NV8500-1786	<p>MADI Output audio CH's 66-113 displaced by 15 increments.</p> <p><i>In MRC Module status, MADI output card, MADI CH status indicators 065-096 should be reporting status of Router Audio Channels 145-176. Instead, they actually report Router channels 145, and then skip to 161 – 191.</i></p> <p><i>IE: MADI 065 reports status of router audio matrix output 145. MADI 066 reports status of router audio matrix output 161.</i></p> <p><i>MADI 067 reports status of router audio matrix output 162, and this sequence continues sequentially up to MADI 113 / Router 208.</i></p>	Bug
NV8500-1785	<p>MADI Output card shows 64 channels when set to 56 channel MADI.</p> <p><i>In MRC Module Status, EM0815 MADI Output card shows 64 channels when set to 56 channel MADI. Only 56 channels are available.</i></p>	Bug
NV8500-1784	<p>MADI Output card channels 114-128 not reporting in MRC Module status.</p> <p><i>In MRC Module Status; EM0815 MADI Output card falsely reports that MADI signals are not present for MADI output channels 114-128, when they actually are present.</i></p> <p><i>Note: This bug was confirmed on 8280 and 8576 frames only.</i></p>	Bug

This document releases NV8500 router applications and firmware that update control cards and IOXM* cards.

Added filter to resolve issue NV8500-2015 where the RED-XPT card is taking over from the highest priority XPT card when the reference signal is removed/disconnected. The filter will discard up to 5 seconds of instability in the reference before determining to switch to the Redundant Crosspoint.

This release addresses the following major issues:

Fixes

Jira Issue	Description	Type
NV8500-2015	RED-XPT card is taking over from the highest priority XPT card when the reference signal is disconnected.	Bug
-	New code for EM0903-5 which allows use of jitter cleaner EQs	

Known Issues

The following issues remain open.

Jira Issue	Description	Type
NV8500-1991	Serial Asynchronous Command Destabilizes Router Serial Communications. <i>There is no workaround for this issue. Grass Valley recommends discontinuing use of this command.</i>	Bug
NV8500-1786	MADI Output audio CH's 66-113 displaced by 15 increments. <i>In MRC Module status, MADI output card, MADI CH status indicators 065-096 should be reporting status of Router Audio Channels 145-176. Instead, they actually report Router channels 145, and then skip to 161 – 191.</i> <i>IE: MADI 065 reports status of router audio matrix output 145. MADI 066 reports status of router audio matrix output 161.</i> <i>MADI 067 reports status of router audio matrix output 162, and this sequence continues sequentially up to MADI 113 / Router 208.</i>	Bug
NV8500-1785	MADI Output card shows 64 channels when set to 56 channel MADI. <i>In MRC Module Status, EM0815 MADI Output card shows 64 channels when set to 56 channel MADI. Only 56 channels are available.</i>	Bug
NV8500-1784	MADI Output card channels 114-128 not reporting in MRC Module status. <i>In MRC Module Status; EM0815 MADI Output card falsely reports that MADI signals are not present for MADI output channels 114-128, when they actually are present.</i> <i>Note: This bug was confirmed on 8280 and 8576 frames only.</i>	Bug

NV8500 v3.9.2

ECO 19627 releases NV8500 router applications and firmware that update control cards and IOXM* cards.

The version assigned to this release is v3.9.2 and its build number is 3387. This is a patch release intended for specific customers.

This release addresses the following major issues:

Fixes

Jira Issue	Description	Type
NV8500-1963, NV8500-1922, NV8500-1836	Redundant XPT card takes over randomly.	Bug
NV8500-1744	Unexpected change in the IOXM status.	Bug
NV8500-1982	EM0943 Monitor Output channel offset for EM0943.	Bug

Known Issues

The following issues remain open; however there has been notable improvement in the frequency of occurrence.

Jira Issue	Description	Type
NV8500-1993	Expansion RXPT fails over when Main frame controllers are toggled. Workaround: <i>In 8576 Expansion system, when main Frame controllers are toggled between Active and Standby: Approximately 75% of the time, the Expansion Frame RXPT will take over for a functioning crosspoint. The workaround is to keep the Expansion Frame RXPT Failover set to Manual. Software engineering has determined the cause, and expects to have the fix in a future release.</i>	Bug
NV8500-1991	Serial Asynchronous Command Destabilizes Router Serial Communications.	Bug
NV8500-1786	MADI Output audio CH's 66-113 displaced by 15 increments. <i>In MRC Module status, MADI output card, MADI CH status indicators 065-096 should be reporting status of Router Audio Channels 145-176. Instead, they actually report Router channels 145, and then skip to 161 – 191.</i> <i>IE: MADI 065 reports status of router audio matrix output 145. MADI 066 reports status of router audio matrix output 161.</i> <i>MADI 067 reports status of router audio matrix output 162, and this sequence continues sequentially up to MADI 113 / Router 208.</i>	Bug
NV8500-1785	MADI Output card shows 64 channels when set to 56 channel MADI. <i>In MRC Module Status, EM0815 MADI Output card shows 64 channels when set to 56 channel MADI. Only 56 channels are available.</i>	Bug
NV8500-1784	MADI Output card channels 114-128 not reporting in MRC Module status. <i>In MRC Module Status; EM0815 MADI Output card falsely reports that MADI signals are not present for MADI output channels 114-128, when they actually are present.</i> <i>Note: This bug was confirmed on 8280 and 8576 frames only.</i>	Bug
NV8500-1727	NV8576 Expansion system reporting EM0896 Crosspoint as EM0662.	Bug

NV8500 v3.9.1

ECO 19569 releases NV8500 router applications and firmware that update control cards and IOXM* cards.

The version assigned to this release is v3.9.1 and its build number is 3358

This release addresses the following major issues:

Fixes

NV8500-1776: Improve signal performance – EM0903-5 was created to address this issue.

NV8500-1972: Added support for proper version reporting of EM0902-10.

NV8500-1971: Add support for proper version reporting for EM0896-10.

NV8500-1982: EM0943 Monitor Output channel offset for EM0943

Known Issues

The following issues remain open; however there has been notable improvement in the frequency of occurrence.

NV8500-1963: NV8500-1922, NV8500-1836: Redundant XPT card takes over randomly.

NV8500-1744: unexpected change in the IOXM status.

Note: All issues below are reporting errors. Actual takes and sources are routed correctly.

NV8500-1786: MADI Output audio CH's 66-113 displaced by 15 increments

In MRC Module status, MADI output card, MADI CH status indicators 065-096 should be reporting status of Router Audio Channels 145-176. Instead, they actually report Router channels 145, and then skip to 161 – 191. IE: MADI 065 reports status of router audio matrix output 145. MADI 066 reports status of router audio matrix output 161 MADI 067 reports status of router audio matrix output 162, and this sequence continues sequentially up to MADI 113 / Router 208.

NV8500-1785: MADI Output card shows 64 channels when set to 56 channel MADI

In MRC Module Status, EM0815 MADI Output card shows 64 channels when set to 56 channel MADI. Only 56 channels are available.

NV8500-1784: MADI Output card channels 114-128 not reporting in MRC Module Status

In MRC Module Status; EM0815 MADI Output card falsely reports that MADI signals are not present for MADI output channels 114-128, when they actually are present.

Note : This bug was confirmed on 8280 and 8576 frames only.

NV8500-1727: 8576 Expansion system reporting EM0896 Crosspoint as EM0662.

NV8500 v3.9.0

ECO 19553 releases NV8500 router applications and firmware that update control cards and IOXM* cards.

The version assigned to this release is v3.9.0 and its build number is 3338. This is a patch release intended for specific customers.

This release addresses the following features and major issues:

Features and Fixes

Adds support for the NV8500 EM0903-50 Jitter Cleaner Input Card. It is recommended to use version 3.9.0 of MRC which adds support for this Input Card.

Issue	Description	Type
NV8500-1931	Add Support for new Card Type EM0903-50 to MRC and Control Card firmware	Feature
NV8500-1898	SV1212-02 and SV1213-02 did not make it into any RF file. These files support IP Gateway cards.	Bug

Known Issues

The following issues remain open; however the Retry Counter for both issues below has been reset to values from Version 3.7.0 for stability. Verification is proceeding on a solution that is expected to be available for next production release.

Issue	Description	Type
NV8500-1922	Redundant XPT automatic changeover function is taking over for XPT 1 when there is no fault on XPT 1.	Bug
NV8500-1744	unexpected change in the IOXM status under system status and also in module types	Bug