**ECO Release Notes**

**ECO # - 19482**

**NV8500H Hybrid Router Platform Software**

**Version 3.8.0 (build 3306)  
Production Release**

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# Summary for Version 3.8.0.3306

**Major highlights of this release include:**

|  |  |  |
| --- | --- | --- |
| Jira Issue | Description | Type |
| NV8500-1750 | Rot-16 Heartbeat | Feature |
| NV8500-1746 | Effective status disable switch does not work | Bug |
| NV8500-1752 | Synchronous Audio tally is incremented by one when Effective Status is turned off | Bug |
| NV8500-1771 | 8500 router control card stops responding on Ethernet port. First found on V3.7.1 | Bug |
| NV8500-1773 | Embedder Bypassed is always on | Bug |
| NV8500-1814 | Allocation-Release error in Change Bit Flag manager for Get Output Changes command. | Bug |

## Known Issues

| Jira Issue | Description | Type |
| --- | --- | --- |
| NV8500-1726 | 'Get changes' not reporting change from pass-through shuffle source, or pass-through source, to regular embedded audio source. | Bug |
| NV8500-1727 | NV8576 expansion system reporting EM0896 crosspoint as EM0662. | Bug |
| NV8500-1784 | 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. | Bug |
| NV8500-1785 | In MRC Module Status, EM0815 MADI Output card shows 64 channels when set to 56 channel MADI. | Bug |
| NV8500-1786 | 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. MADI 067 reports status of router audio matrix output 162, and this sequence continues sequentially up to MADI 113 / Router 208. Note: Actual MADI audio Takes are routed correctly. | Bug |
| NV8500-1860 | ROT-16 driver recognizes that NVision products are connected. However, router does not provide a Grass Valley or NVision product code ID in response to a request of Device Type from the Sony R80. | Bug |

## Special Notes

***Use MRC Version 3.7.1 or higher to support and upgrade NV8500 Hybrid firmware V3.7.1.***

MRC Version 3.7.1 can be found on ECO 19398.

As of this release, there is no version MRC version 3.7.2 as referenced in TN0112-0 and TN0111-0.

For this patch release, use the upgrade/downgrade procedure TN0118-0.

# Reference Documents

The following technical notes provide additional detail to aid in the installation and support of this release:

**TN0117 and TN0118 - Technical Notes NV8500H Version 3.8.0.3306.**

Previous Tech Notes:

TN0111 and TN0112 - Technical Notes NV8500H Version 3.7.2.3242

TN0108 and TN0109 - Technical Notes NV8500H Version 3.7.1.3242

TN0106 and TN0107 - Technical Notes NV8500H Version 3.7.0.3165

TN0103 and TN0104 - Technical Notes NV8500H Version 3.6.2.3104

TN0101 and TN0102 - Technical Notes NV8500H Version 3.6.3.3038

TN0099 and TN0100 - Technical Notes NV8500H Version 3.6.1.2942

TN0095 and TN0096 - Technical Notes NV8500H Version 3.6.0

TN0093 and TN0094 - Technical Notes NV8500H Version 3.5.2

TN0091 and TN0092 - Technical Notes NV8500H Version 3.5.1

TN0089 and TN0090 - Technical Notes NV8500H Version 3.5.0

TN0078 and TN0079 - Technical Notes NV8500H Version 3.4.0

TN0074 and TN0075 - Technical Notes NV8500H Version 3.3.1

TN0063 and TN0064 - Technical Notes NV8500H Version 3.1.4

TN0061 and TN0062 - Technical Notes NV8500H Version 3.1.3

TN0057 and TN0058 - Technical Notes NV8500H Version 3.1.2

TN0051 and TN0052 - Technical Notes NV8500H Version 3.1.1

TN0048 and TN0049 - Technical Notes NV8500H Version 3.1.0

TN0045 and TN0046 - Technical Notes NV8500H Version 2.2.2

TN0043 and TN0044 - Technical Notes NV8500H Version 2.2.1

TN0071 and TN0072 - Technical Notes NV8500H Version 3.3.0

# Errata Defects and/or Features fixed or addressed for Version 3.8.0.3306

To see a full list defects and/or features fixed or addressed, please consult with Miranda GVD SQA department.

# Supported Hardware Matrix

The full Excel document is available from document control as Part Number RF0281-25

# Hybrid Router V3.8.0.3306 QA Test Summary

Please consult with Miranda GVD SQA department for the QA Test Summary.

# Appendix A - Previous Release History

## Summary for Version 3.7.2.3277 on ECO 19438

**Major highlights of this release include:**

* **Features and Enhancements**
  + 3.7.1 had significant changes which this build is based off of, see changes in Appendix A for details
* **Bug Fixes**
  + SD-SDI signals from Disembedder inputs lose audio when routed to Embedder outputs Fixed (NV8500-1742).
  + 3.7.1 had significant changes which this build is based off of, see changes in Appendix A for details

### Known Issues

|  |  |  |
| --- | --- | --- |
| **Key** | **CRM Defect ID** | **Summary** |
| NV8500-1727 |  | 8576 Expansion system reporting EM0896 Crosspoint as EM0662. |
| NV8500-1726 |  | “Get changes” not reporting change from Passthru shuffle source, or Passthru Source, to regular embedded audio source. |
| NV8500-1752 |  | Synchronous Audio tally is incremented by one when Effective Status is turned off. |

To see a full list of open issues, please consult with Miranda GVD SQA department.

### Special Notes

***Use MRC Version 3.7.1 or higher to support and upgrade NV8500 Hybrid firmware V3.7.1***

MRC Version 3.7.1 can be found on ECO 19398.

### Reference Documents

The following technical notes provide additional detail to aid in the installation and support of this release:

**TN0111 and TN0112 - Technical Notes NV8500H Version 3.7.2.3277**

Previous Tech Notes:

TN0108 and TN0109 - Technical Notes NV8500H Version 3.7.1.3242

TN0106 and TN0107 - Technical Notes NV8500H Version 3.7.0.3165

TN0103 and TN0104 - Technical Notes NV8500H Version 3.6.2.3104

TN0101 and TN0102 - Technical Notes NV8500H Version 3.6.3.3038

TN0099 and TN0100 - Technical Notes NV8500H Version 3.6.1.2942

TN0095 and TN0096 - Technical Notes NV8500H Version 3.6.0

TN0093 and TN0094 - Technical Notes NV8500H Version 3.5.2

TN0091 and TN0092 - Technical Notes NV8500H Version 3.5.1

TN0089 and TN0090 - Technical Notes NV8500H Version 3.5.0

TN0078 and TN0079 - Technical Notes NV8500H Version 3.4.0

TN0074 and TN0075 - Technical Notes NV8500H Version 3.3.1

TN0063 and TN0064 - Technical Notes NV8500H Version 3.1.4

TN0061 and TN0062 - Technical Notes NV8500H Version 3.1.3

TN0057 and TN0058 - Technical Notes NV8500H Version 3.1.2

TN0051 and TN0052 - Technical Notes NV8500H Version 3.1.1

TN0048 and TN0049 - Technical Notes NV8500H Version 3.1.0

TN0045 and TN0046 - Technical Notes NV8500H Version 2.2.2

TN0043 and TN0044 - Technical Notes NV8500H Version 2.2.1

TN0071 and TN0072 - Technical Notes NV8500H Version 3.3.0

### Errata Defects and/or Features fixed or addressed for Version 3.7.2

To see a full list defects and/or features fixed or addressed, please consult with Miranda GVD SQA department.

### Supported Hardware Matrix

The full Excel document is available from document control as Part Number RF0281-24

Please consult with Miranda GVD SQA department for the QA Test Summary.

## Summary for Version 3.7.1.3242

* **Features and Enhancements**
  + New 288x288 Hybrid Xpt – EM0938
  + Improve auto crosspoint changeover time (NV8500-1492)
  + DVB-ASI support on all hybrid output modules (EMB, DEM/EMB, TDM and expansion variants) (NV8500-1638)
  + Additional IOXM 2 support for hybrid output modules. (NV8500-1450)
  + Hybrid embedder output fix for location of Dolby E. (NV8500-1314)
  + Support for new SiLabs part on hybrid output cards which will speed up PLL lock times. (NV8500-1639)
* **Bug Fixes**
  + Automatic redundant XPT changeover fixed in NV8576-Plus. (NV8500-1629)
  + Fixes to the EM0903 to improve boot up reliability. (NV8500-1442)
  + Stereo level tally (NV8500-1621)
  + Passthru Shuffle Ports, "Get Changes" Zero Based Bug (NV8500-1666)
  + Audio pops/ticks on DEM/EMB card during video only routes (NV8500-1449)

### Known Issues

|  |  |  |
| --- | --- | --- |
| **Key** | **CRM Defect ID** | **Summary** |
| NV8500-1727 |  | 8576 Expansion system reporting EM0896 Crosspoint as EM0662. |
| NV8500-1726 |  | “Get changes” not reporting change from Passthru shuffle source, or Passthru Source, to regular embedded audio source. |
|  |  |  |
|  |  |  |

To see a full list of open issues, please consult with Miranda GVD SQA department.

### Special Notes

***Use MRC Version 3.7.1 or higher to support and upgrade NV8500 Hybrid firmware V3.7.1***

MRC Version 3.7.1 can be found on ECO 19398.

### Reference Documents

The following technical notes provide additional detail to aid in the installation and support of this release:

**TN0108 and TN0109 - Technical Notes NV8500H Version 3.7.1.3242**

Previous Tech Notes:

TN0106 and TN0107 - Technical Notes NV8500H Version 3.7.0.3165

TN0103 and TN0104 - Technical Notes NV8500H Version 3.6.2.3104

TN0101 and TN0102 - Technical Notes NV8500H Version 3.6.3.3038

TN0099 and TN0100 - Technical Notes NV8500H Version 3.6.1.2942

TN0095 and TN0096 - Technical Notes NV8500H Version 3.6.0

TN0093 and TN0094 - Technical Notes NV8500H Version 3.5.2

TN0091 and TN0092 - Technical Notes NV8500H Version 3.5.1

TN0089 and TN0090 - Technical Notes NV8500H Version 3.5.0

TN0078 and TN0079 - Technical Notes NV8500H Version 3.4.0

TN0074 and TN0075 - Technical Notes NV8500H Version 3.3.1

TN0063 and TN0064 - Technical Notes NV8500H Version 3.1.4

TN0061 and TN0062 - Technical Notes NV8500H Version 3.1.3

TN0057 and TN0058 - Technical Notes NV8500H Version 3.1.2

TN0051 and TN0052 - Technical Notes NV8500H Version 3.1.1

TN0048 and TN0049 - Technical Notes NV8500H Version 3.1.0

TN0045 and TN0046 - Technical Notes NV8500H Version 2.2.2

TN0043 and TN0044 - Technical Notes NV8500H Version 2.2.1

TN0071 and TN0072 - Technical Notes NV8500H Version 3.3.0

### Errata Defects and/or Features fixed or addressed for Version 3.7.1

To see a full list defects and/or features fixed or addressed, please consult with Miranda GVD SQA department.

### Supported Hardware Matrix

The full Excel document is available from document control as Part Number RF0281-23

### Hybrid Router V3.7.1 QA Test Summary

Please consult with Miranda GVD SQA department for the QA Test Summary.

## Summary for Version 3.7.0.3165

**Major highlights of this release include:**

* **Automatic Redundant Crosspoint Failover**
* **Remote Control of Redundant Crosspoint**
* **Frame Sync Phase 3**
* **3rd Party Serial Protocol Support**
* **Configurable Effective Status**
* **IP Gateway cards released**

### Known Issues

|  |  |  |
| --- | --- | --- |
| **Key** | **CRM Defect ID** | **Summary** |
| NV8500-1629 |  | Automatic RXPT takeover not working correctly in 8576PLUS Expanded frame. |
| NV8500-1621 | 001-00-015985 | NV8500 Hybrid V3.6.0 statuses Stereo routes in NP0016 as mono routes |
| NV8500-1666 | 001-00-016607 | Passthru Shuffle Ports, "Get Changes" Zero Based Bug |
| NV8500-1314 |  | Embedded Dolby E occasionally leaves router delayed by 8-15 lines |

To see a full list of open issues, please consult with Miranda GVD SQA department.

### Special Notes

***Use MRC Version 3.7.0 or higher to support and upgrade NV8500 Hybrid firmware V3.7.0***

MRC Version 3.7.0 can be found on ECO 19348.

### Reference Documents

The following technical notes provide additional detail to aid in the installation and support of this release:

**TN0106 and TN0107 - Technical Notes NV8500H Version 3.7.0.3165**

Previous Tech Notes:

TN0103 and TN0104 - Technical Notes NV8500H Version 3.6.2.3104

TN0101 and TN0102 - Technical Notes NV8500H Version 3.6.3.3038

TN0099 and TN0100 - Technical Notes NV8500H Version 3.6.1.2942

TN0095 and TN0096 - Technical Notes NV8500H Version 3.6.0

TN0093 and TN0094 - Technical Notes NV8500H Version 3.5.2

TN0091 and TN0092 - Technical Notes NV8500H Version 3.5.1

TN0089 and TN0090 - Technical Notes NV8500H Version 3.5.0

TN0078 and TN0079 - Technical Notes NV8500H Version 3.4.0

TN0074 and TN0075 - Technical Notes NV8500H Version 3.3.1

TN0063 and TN0064 - Technical Notes NV8500H Version 3.1.4

TN0061 and TN0062 - Technical Notes NV8500H Version 3.1.3

TN0057 and TN0058 - Technical Notes NV8500H Version 3.1.2

TN0051 and TN0052 - Technical Notes NV8500H Version 3.1.1

TN0048 and TN0049 - Technical Notes NV8500H Version 3.1.0

TN0045 and TN0046 - Technical Notes NV8500H Version 2.2.2

TN0043 and TN0044 - Technical Notes NV8500H Version 2.2.1

TN0071 and TN0072 - Technical Notes NV8500H Version 3.3.0

### Errata Defects and/or Features fixed or addressed for Version 3.7.0

To see a full list defects and/or features fixed or addressed, please consult with Miranda GVD SQA department.

### Supported Hardware Matrix

The full Excel document is available from document control as Part Number RF0281-22

### Hybrid Router V3.7.0 QA Test Summary

Please consult with Miranda GVD SQA department for the QA Test Summary.

## Summary for Version 3.6.2.3104

**major highlights of this release include:**

* **Resolved long recovery time for control card changeover with Frame Sync card.**
* **Added numerous features and formats to Frame Sync. See related drawing for SV1123-06.**

### Known Issues

To see a full list of open issues, please consult with Miranda GVD SQA department.

### Special Notes

***Use MRC Version 3.5.0 or higher to support and upgrade NV8500 Hybrid firmware V3.6.1.***

MRC Version 3.5.0 can be found on ECO 19094.

### Reference Documents

The following technical notes provide additional detail to aid in the installation and support of this release:

**TN0103 and TN0104 - Technical Notes NV8500H Version 3.6.2.3104**

Previous Tech Notes:

TN0101 and TN0102 - Technical Notes NV8500H Version 3.6.3.3038

TN0099 and TN0100 - Technical Notes NV8500H Version 3.6.1.2942

TN0095 and TN0096 - Technical Notes NV8500H Version 3.6.0

TN0093 and TN0094 - Technical Notes NV8500H Version 3.5.2

TN0091 and TN0092 - Technical Notes NV8500H Version 3.5.1

TN0089 and TN0090 - Technical Notes NV8500H Version 3.5.0

TN0078 and TN0079 - Technical Notes NV8500H Version 3.4.0

TN0074 and TN0075 - Technical Notes NV8500H Version 3.3.1

TN0063 and TN0064 - Technical Notes NV8500H Version 3.1.4

TN0061 and TN0062 - Technical Notes NV8500H Version 3.1.3

TN0057 and TN0058 - Technical Notes NV8500H Version 3.1.2

TN0051 and TN0052 - Technical Notes NV8500H Version 3.1.1

TN0048 and TN0049 - Technical Notes NV8500H Version 3.1.0

TN0045 and TN0046 - Technical Notes NV8500H Version 2.2.2

TN0043 and TN0044 - Technical Notes NV8500H Version 2.2.1

TN0071 and TN0072 - Technical Notes NV8500H Version 3.3.0

### Errata Defects and/or Features fixed or addressed for Version 3.6.2

To see a full list defects and/or features fixed or addressed, please consult with Miranda GVD SQA department.

### Supported Hardware Matrix

The full Excel document is available from document control as Part Number RF0281-21

### Hybrid Router V3.6.2 QA Test Summary

Please consult with Miranda GVD SQA department for the QA Test Summary.

## Summary for Version 3.6.3.3038

**These notes detail the production release of the NV8500 Platform Software Version 3.6.3.3038. The major highlights of this release include:**

* **Resolved NV8500-1449 - NV8500 Hybrid Router Needs to Support DVB-ASI.**
* **Untested for this build, fixes present for the following.**
  + **NV8500-1314- Embedded Dolby E occasionally leaves router delayed by 8-15 lines**
  + **NV8500-1429- Audio Pops when routing doing a video only switch**
  + **NV8500-1446-** **Si5324 Part Taking 15-20 seconds to lock due to component change.**

### Known Issues

The items below address the top open issues for this release. To see a full list of open issues, please consult with Miranda GVD SQA department.

|  |  |  |
| --- | --- | --- |
| **Key** | **CRM Defect ID** | **Summary** |
| NV8500-1346 | 001-00-012160 | 8144 / EM0833: input monitors not switching as directed by MRC |
| NV8500-1275 | 001-00-011972 | Serial protocols do not work in V3.3.0. |
| NV8500-1037 |  | Switching problem in a NV8576 expanded router when using a HRC288 |
| NV8500-1208 |  | There are video glitches when a take is done between the Main and Expansion frames |
| NV8500-1221 |  | Audio Break-in tally is incorrect is controller input start is not =1 |
| NV8500-1365 | 001-00-012160 | Input Monitors are not working properly on NV8144 |
| NV8500-1430 |  | In an NV8576+ expansion frame the EM0903 Card reports wrong in the Module Types |

### Special Notes

***Use MRC Version 3.5.0 or higher to support and upgrade NV8500 Hybrid firmware V3.6.1.***

MRC Version 3.5.0 can be found on ECO 19094.

## Summary for Version 3.6.1.2942

**These notes detail the production release of the NV8500 Platform Software Version 3.6.1.2942. The major highlights of this release include:**

* **Resolved NV8500-1550 - NV8500 Direct control by sony via ROT16- NV router sends repsonse when command is out of matrix boundaries.**
* **Resolved NV8500-1490 - Rot 16: If R80 is powered up after Router is active, the R80 will not receive full router XPT status**

### Known Issues

The items below address the top open issues for this release. To see a full list of open issues, please consult with Miranda GVD SQA department.

|  |  |  |
| --- | --- | --- |
| **Key** | **CRM Defect ID** | **Summary** |
| NV8500-1346 | 001-00-012160 | 8144 / EM0833: input monitors not switching as directed by MRC |
| NV8500-1275 | 001-00-011972 | Serial protocols do not work in V3.3.0. |
| NV8500-1037 |  | Switching problem in a NV8576 expanded router when using a HRC288 |
| NV8500-1208 |  | There are video glitches when a take is done between the Main and Expansion frames |
| NV8500-1221 |  | Audio Break-in tally is incorrect is controller input start is not =1 |
| NV8500-1314 |  | Embedded Dolby E occasionally leaves router delayed by 8-15 lines |
| NV8500-1365 | 001-00-012160 | Input Monitors are not working properly on NV8144 |
| NV8500-1430 |  | In an NV8576+ expansion frame the EM0903 Card reports wrong in the Module Types |

### Special Notes

***Use MRC Version 3.5.0 or higher to support and upgrade NV8500 Hybrid firmware V3.6.1.***

**MRC Version 3.5.0 can be found on ECO 19094.**

### Reference Documents

The following technical notes provide additional detail to aid in the installation and support of this release:

**TN0099 and TN0100 - Technical Notes NV8500H Version 3.6.1.2942**

Previous Tech Notes:

TN0095 and TN0096 - Technical Notes NV8500H Version 3.6.0

TN0093 and TN0094 - Technical Notes NV8500H Version 3.5.2

TN0091 and TN0092 - Technical Notes NV8500H Version 3.5.1

TN0089 and TN0090 - Technical Notes NV8500H Version 3.5.0

TN0078 and TN0079 - Technical Notes NV8500H Version 3.4.0

TN0074 and TN0075 - Technical Notes NV8500H Version 3.3.1

TN0063 and TN0064 - Technical Notes NV8500H Version 3.1.4

TN0061 and TN0062 - Technical Notes NV8500H Version 3.1.3

TN0057 and TN0058 - Technical Notes NV8500H Version 3.1.2

TN0051 and TN0052 - Technical Notes NV8500H Version 3.1.1

TN0048 and TN0049 - Technical Notes NV8500H Version 3.1.0

TN0045 and TN0046 - Technical Notes NV8500H Version 2.2.2

TN0043 and TN0044 - Technical Notes NV8500H Version 2.2.1

TN0071 and TN0072 - Technical Notes NV8500H Version 3.3.0

### Errata Defects and/or Features fixed or addressed for Version 3.6.1

To see a full list defects and/or features fixed or addressed, please consult with Miranda GVD SQA department.

### Supported Hardware Matrix

The full Excel document is available from document control as Part Number RF0281-18

### Hybrid Router V3.6.1 QA Test Summary

Please consult with Miranda GVD SQA department for the QA Test Summary.

## Summary for Version 3.6.0.2939

**These notes detail the production release of the NV8500 Platform Software Version 3.6.0.2939. The major highlights of this release include:**

* **Coherent Switching**
* **Redundant XPT Takeover logging**
* **Asynchronous Ethernet Notification**
  + **Four Client Registrations available**
* **M3 Output card support**

### Known Issues

The items below address the top open issues for this release. To see a full list of open issues, please consult with Miranda GVD SQA department.

|  |  |  |
| --- | --- | --- |
| **Key** | **CRM Defect ID** | **Summary** |
| NV8500-1346 | 001-00-012160 | 8144 / EM0833: input monitors not switching as directed by MRC |
| NV8500-1275 | 001-00-011972 | Serial protocols do not work in V3.3.0. |
| NV8500-1037 |  | Switching problem in a NV8576 expanded router when using a HRC288 |
| NV8500-1208 |  | There are video glitches when a take is done between the Main and Expansion frames |
| NV8500-1221 |  | Audio Break-in tally is incorrect is controller input start is not =1 |
| NV8500-1314 |  | Embedded Dolby E occasionally leaves router delayed by 8-15 lines |
| NV8500-1365 | 001-00-012160 | Input Monitors are not working properly on NV8144 |
| NV8500-1430 |  | In an NV8576+ expansion frame the EM0903 Card reports wrong in the Module Types |

### Special Notes

***Use MRC Version 3.5.0 or higher to support and upgrade NV8500 Hybrid firmware V3.6.0.***

MRC Version 3.5.0 can be found on ECO 19094.

### Reference Documents

The following technical notes provide additional detail to aid in the installation and support of this release:

**TN0095 and TN0096 - Technical Notes NV8500H Version 3.6.0.2939**

Previous Tech Notes:

TN0093 and TN0094 - Technical Notes NV8500H Version 3.5.2

TN0091 and TN0092 - Technical Notes NV8500H Version 3.5.1

TN0089 and TN0090 - Technical Notes NV8500H Version 3.5.0

TN0078 and TN0079 - Technical Notes NV8500H Version 3.4.0

TN0074 and TN0075 - Technical Notes NV8500H Version 3.3.1

TN0063 and TN0064 - Technical Notes NV8500H Version 3.1.4

TN0061 and TN0062 - Technical Notes NV8500H Version 3.1.3

TN0057 and TN0058 - Technical Notes NV8500H Version 3.1.2

TN0051 and TN0052 - Technical Notes NV8500H Version 3.1.1

TN0048 and TN0049 - Technical Notes NV8500H Version 3.1.0

TN0045 and TN0046 - Technical Notes NV8500H Version 2.2.2

TN0043 and TN0044 - Technical Notes NV8500H Version 2.2.1

TN0071 and TN0072 - Technical Notes NV8500H Version 3.3.0

### Errata Defects and/or Features fixed or addressed for Version 3.6.0

To see a full list defects and/or features fixed or addressed, please consult with Miranda GVD SQA department.

### Supported Hardware Matrix

The full Excel document is available from document control as Part Number RF0281-17

### Hybrid Router V3.6.0 QA Test Summary

Please consult with Miranda GVD SQA department for the QA Test Summary.

## Summary for Version 3.5.2.2870

**These notes detail the production release of the NV8500 Platform Software Version 3.5.2.2870. The major highlights of this release include:**

* **First general release of Rot-16 protocol support**
  + **Rot-16 requires use of one of the four GetChanges client registrations**
  + **Fixed Jira NV8500-1437: Control card unhealthy unless Rot-16 protocol is turned on**
* **Frame sync Bug Fix**
  + **Fixed Jira NV8500-1435: EM0886 No Signal from Inputs 7 & 8 through redundant XPT**

### Known Issues

The items below address the top open issues for this release. To see a full list of open issues, please consult with Miranda GVD SQA department.

|  |  |  |
| --- | --- | --- |
| **Key** | **CRM Defect ID** | **Summary** |
| NV8500-1284 |  | Destination Image structure change can cause destinations and locks to change during an update |
| NV8500-1346 | 001-00-012160 | 8144 / EM0833: input monitors not switching as directed by MRC |
| NV8500-1344 |  | Diagnostic tally fails on audio levels with garbage data in extended status |
| NV8500-1423 |  | APCII Frame Sync---When the reference is removed selecting Freeze frame in I-control has no effect |
| NV8500-1409 | 001-00-013482 | SDI Pass Through on Hybrid Input Modules |
| NV8500-1275 | 001-00-011972 | Serial protocols do not work in V3.3.0. |
| NV8500-1235 | 001-00-011612 | The STD RED XPT EM0676-0 Reports a comm Error (88) when there is no Com Error. |
| NV8500-1037 |  | Switching problem in a NV8576 expanded router when using a HRC288 |
| NV8500-1208 |  | There are video glitches when a take is done between the Main and Expansion frames |
| NV8500-1221 |  | Audio Break-in tally is incorrect is controller input start is not =1 |
| NV8500-1314 |  | Embedded Dolby E occasionally leaves router delayed by 8-15 lines |
| NV8500-1365 | 001-00-012160 | Input Monitors are not working properly on NV8144 |
| NV8500-1430 |  | In an NV8576+ expansion frame the EM0903 Card reports wrong in the Module Types |
| NV8500-1402 | 001-00-013660 | AES card does not work with new rear, EM0904 |

### Special Notes

***Use MRC Version 3.5.0 or higher to support and upgrade NV8500 Hybrid firmware V3.5.0.***

MRC Version 3.5.0 can be found on ECO 19094.

### Reference Documents

The following technical notes provide additional detail to aid in the installation and support of this release:

**TN0093 and TN0094 - Technical Notes NV8500H Version 3.5.2.2870**

Previous Tech Notes:

TN0091 and TN0092 - Technical Notes NV8500H Version 3.5.1

TN0089 and TN0090 - Technical Notes NV8500H Version 3.5.0

TN0078 and TN0079 - Technical Notes NV8500H Version 3.4.0

TN0074 and TN0075 - Technical Notes NV8500H Version 3.3.1

TN0063 and TN0064 - Technical Notes NV8500H Version 3.1.4

TN0061 and TN0062 - Technical Notes NV8500H Version 3.1.3

TN0057 and TN0058 - Technical Notes NV8500H Version 3.1.2

TN0051 and TN0052 - Technical Notes NV8500H Version 3.1.1

TN0048 and TN0049 - Technical Notes NV8500H Version 3.1.0

TN0045 and TN0046 - Technical Notes NV8500H Version 2.2.2

TN0043 and TN0044 - Technical Notes NV8500H Version 2.2.1

TN0071 and TN0072 - Technical Notes NV8500H Version 3.3.0

### Errata Defects and/or Features fixed or addressed for Version 3.5.1

To see a full list defects and/or features fixed or addressed, please consult with Miranda GVD SQA department.

### Supported Hardware Matrix

The full Excel document is available from document control as Part Number RF0281-15

### Hybrid Router V3.5.1 QA Test Summary

Please consult with Miranda GVD SQA department for the QA Test Summary.

## Summary for Version 3.5.1.2863

**These notes detail the production release of the NV8500 Platform Software Version 3.5.1.2863. The major highlights of this release include:**

* **Added ROT-16 protocol support**
  + **ROT-16 requires use of one of the four GetChanges client registrations**

### Known Issues

The items below address the top open issues for this release. To see a full list of open issues, please consult with Miranda GVD SQA department.

|  |  |  |
| --- | --- | --- |
| **Key** | **CRM Defect ID** | **Summary** |
| NV8500-1284 |  | Destination Image structure change can cause destinations and locks to change during an update |
| NV8500-1346 | 001-00-012160 | 8144 / EM0833: input monitors not switching as directed by MRC |
| NV8500-1344 |  | Diagnostic tally fails on audio levels with garbage data in extended status |
| NV8500-1423 |  | APCII Frame Sync---When the reference is removed selecting Freeze frame in I-control has no effect |
| NV8500-1409 | 001-00-013482 | SDI Pass Through on Hybrid Input Modules |
| NV8500-1275 | 001-00-011972 | Serial protocols do not work in V3.3.0. |
| NV8500-1235 | 001-00-011612 | The STD RED XPT EM0676-0 Reports a comm Error (88) when there is no Com Error. |
| NV8500-1037 |  | Switching problem in a NV8576 expanded router when using a HRC288 |
| NV8500-1208 |  | There are video glitches when a take is done between the Main and Expansion frames |
| NV8500-1221 |  | Audio Break-in tally is incorrect is controller input start is not =1 |
| NV8500-1314 |  | Embedded Dolby E occasionally leaves router delayed by 8-15 lines |
| NV8500-1365 | 001-00-012160 | Input Monitors are not working properly on NV8144 |
| NV8500-1430 |  | In an NV8576+ expansion frame the EM0903 Card reports wrong in the Module Types |
| NV8500-1402 | 001-00-013660 | AES card does not work with new rear, EM0904 |

### Special Notes

***Use MRC Version 3.5.0 or higher to support and upgrade NV8500 Hybrid firmware V3.5.0.***

MRC Version 3.5.0 can be found on ECO 19094.

### Reference Documents

The following technical notes provide additional detail to aid in the installation and support of this release:

**TN0091 and TN0092 - Technical Notes NV8500H Version 3.5.1.2863**

Previous Tech Notes:

TN0089 and TN0090 - Technical Notes NV8500H Version 3.5.0

TN0078 and TN0079 - Technical Notes NV8500H Version 3.4.0

TN0074 and TN0075 - Technical Notes NV8500H Version 3.3.1

TN0063 and TN0064 - Technical Notes NV8500H Version 3.1.4

TN0061 and TN0062 - Technical Notes NV8500H Version 3.1.3

TN0057 and TN0058 - Technical Notes NV8500H Version 3.1.2

TN0051 and TN0052 - Technical Notes NV8500H Version 3.1.1

TN0048 and TN0049 - Technical Notes NV8500H Version 3.1.0

TN0045 and TN0046 - Technical Notes NV8500H Version 2.2.2

TN0043 and TN0044 - Technical Notes NV8500H Version 2.2.1

TN0071 and TN0072 - Technical Notes NV8500H Version 3.3.0

### Errata Defects and/or Features fixed or addressed for Version 3.5.1

To see a full list defects and/or features fixed or addressed, please consult with Miranda GVD SQA department.

### Supported Hardware Matrix

The full Excel document is available from document control as Part Number RF0281-14

### Hybrid Router V3.5.1 QA Test Summary

Please consult with Miranda GVD SQA department for the QA Test Summary.

## Summary for Version 3.5.0.2846

**These notes detail the production release of the NV8500 Platform Software Version 3.5.0.2846. The major highlights of this release include:**

* **Support for EM0919 - 288x288 Std Red Xpt**
* **Support for EM0920 - 144x144 Std Red Xpt**
* **Support for Frame Sync Phase 2 (EM0886)**
* **Support for up to four clients using the Ethernet Get Output Status Changes Command (0x53)**
* **Support for Pass Through Shuffle sources and operations**
* **Support for Synchronous Stereo levels and switching**

### Known Issues

The items below address the top open issues for this release. To see a full list of open issues, please consult with Miranda GVD SQA department.

|  |  |  |
| --- | --- | --- |
| **Key** | **CRM Defect ID** | **Summary** |
| NV8500-1284 |  | Destination Image structure change can cause destinations and locks to change during an update |
| NV8500-1346 | 001-00-012160 | 8144 / EM0833: input monitors not switching as directed by MRC |
| NV8500-1344 |  | Diagnostic tally fails on audio levels with garbage data in extended status |
| NV8500-1423 |  | APCII Frame Sync---When the reference is removed selecting Freeze frame in I-control has no effect |
| NV8500-1409 | 001-00-013482 | SDI Pass Through on Hybrid Input Modules |
| NV8500-1275 | 001-00-011972 | Serial protocols do not work in V3.3.0. |
| NV8500-1235 | 001-00-011612 | The STD RED XPT EM0676-0 Reports a comm Error (88) when there is no Com Error. |
| NV8500-1037 |  | Switching problem in a NV8576 expanded router when using a HRC288 |
| NV8500-1208 |  | There are video glitches when a take is done between the Main and Expansion frames |
| NV8500-1221 |  | Audio Break-in tally is incorrect is controller input start is not =1 |
| NV8500-1314 |  | Embedded Dolby E occasionally leaves router delayed by 8-15 lines |
| NV8500-1365 | 001-00-012160 | Input Monitors are not working properly on NV8144 |
| NV8500-1430 |  | In an NV8576+ expansion frame the EM0903 Card reports wrong in the Module Types |
| NV8500-1402 | 001-00-013660 | AES card does not work with new rear, EM0904 |

### Special Notes

***Use MRC Version 3.5.0 or higher to support and upgrade NV8500 Hybrid firmware V3.5.0.***

MRC Version 3.5.0 can be found on ECO 19094.

### Reference Documents

The following technical notes provide additional detail to aid in the installation and support of this release:

**TN0089 and TN0090 - Technical Notes NV8500H Version 3.5.0.2846**

Previous Tech Notes:

TN0078 and TN0079 - Technical Notes NV8500H Version 3.4.0

TN0074 and TN0075 - Technical Notes NV8500H Version 3.3.1

TN0063 and TN0064 - Technical Notes NV8500H Version 3.1.4

TN0061 and TN0062 - Technical Notes NV8500H Version 3.1.3

TN0057 and TN0058 - Technical Notes NV8500H Version 3.1.2

TN0051 and TN0052 - Technical Notes NV8500H Version 3.1.1

TN0048 and TN0049 - Technical Notes NV8500H Version 3.1.0

TN0045 and TN0046 - Technical Notes NV8500H Version 2.2.2

TN0043 and TN0044 - Technical Notes NV8500H Version 2.2.1

TN0071 and TN0072 - Technical Notes NV8500H Version 3.3.0

### Errata Defects and/or Features fixed or addressed for Version 3.5.0

To see a full list defects and/or features fixed or addressed, please consult with Miranda GVD SQA department.

### Supported Hardware Matrix

The full Excel document is available from document control as Part Number RF0281-13

### Hybrid Router 3.5.0.2846 QA Test Summary

Please consult with Miranda GVD SQA department for the QA Test Summary.

## Summary for Version 3.4.0.2679

**These notes detail the patch release of the NV8500 Platform Software Version 3.4.0.2679. The major highlights of this release include:**

Added IOXM II extended status reporting for customer specific set of IOX cards. The cards supporting this extended status message are listed below:

8144-3GIG-IN-COAX

8500-3GIG-IN-COAX

8500-3GIG-OUT-COAX

8500-AES-ASYNC-IN

8500-AES-ASYNC-OUT

8500H-IP-3G-TDM-CX

8500H-OP-3G-EMB-CX

144-3GIG-XPT

288-3GIG-XPT

288-3GIG-XPT-RED

8500H-XPT-144

### Known Issues

The items below address the top open issues for this release. To see a full list of open issues, please consult with Miranda GVD SQA department.

Jira bug NV8500-1217: Input and output Monitors are not switching properly in a NV8576+ Expanded System.

### Special Notes

***Use MRC Version 3.4.0 or higher to support and upgrade NV8500 Hybrid firmware V3.4.0.***

MRC Version 3.4.0 can be found on ECO 18908.

This Patch build was made for Miranda customers France TV and Dutch Parliament.

### Reference Documents

The following technical notes provide additional detail to aid in the installation and support of this release:

**TN0078 and TN0079 - Technical Notes NV8500H Version 3.4.0.2679**

Previous Tech Notes:

TN0074 and TN0075 - Technical Notes NV8500H Version 3.3.1

TN0063 and TN0064 - Technical Notes NV8500H Version 3.1.4

TN0061 and TN0062 - Technical Notes NV8500H Version 3.1.3

TN0057 and TN0058 - Technical Notes NV8500H Version 3.1.2

TN0051 and TN0052 - Technical Notes NV8500H Version 3.1.1

TN0048 and TN0049 - Technical Notes NV8500H Version 3.1.0

TN0045 and TN0046 - Technical Notes NV8500H Version 2.2.2

TN0043 and TN0044 - Technical Notes NV8500H Version 2.2.1

TN0071 and TN0072 - Technical Notes NV8500H Version 3.3.0

### Errata Defects and/or Features fixed or addressed for Version 3.4.0

| **Tracking ID**  **(Test Track/Jira)** | **CRM**  **ID** | **Description** | **Type** | **Status** |
| --- | --- | --- | --- | --- |
| Jira NV8500-1130 |  | Added stereo switching but is not to be tested nor revealed to customers. | Feature | Implemented **Not Verified** |
| Jira NV8500-961 |  | Added gathering of IOXM extended status data. | Feature | Implemented and verified |
| Jira NV8500-653 |  | Added control of IOXM cards' Path Lights, resets, and self- testing. | Feature | Implemented and verified |
| Jira NV8500-1228 |  | *IOXM2 – Status reporting for key customer module types* | Feature | Implemented and verified |
| Jira NV8500-1275 |  | Serial Protocols do not work in V3.3.0 | Bug | Fixed and Verified |
| Jira NV8500-1196 |  | Changed so that card becomes ineligible if pre -05 ROM  version. | Bug | Fixed and Verified |
| Jira NV8500-1136 |  | 144x144 redundant xpt reset when input modules in slots 17-23 are installed | Bug | Fixed and Verified |

### Supported Hardware Matrix

***The full Excel document is available from document control as Part Number RF0281-09 . The Table below is a summary of the last four releases.***

| **Title:** | NV8500 Supported Hardware Matrix |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  |  |  |  |
| **Part Number:** | RF0281-09 | **Rev:** | A |  |  |  |  |  |
| **Date:** | 7/15/2013 |  |  |  | **ECO18907** | [ECO18797](http://nvweb/Doc_Control/Scanneddocuments/ECO's/18797.pdf) | [ECO18696](http://nvweb/Doc_Control/Scanneddocuments/ECO's/18696.pdf) | [ECO18567](http://nvweb/Doc_Control/Scanneddocuments/ECO's/18567.pdf) |
|  |  |  |  |  | **SP0165-21 SV1052-39** | **SP01650-20/SV1052-38** | **SP0180-06/SV1052-37** | **SP0180-05/SV1052-35** |
|  |  |  |  |  | **Ver 3.4.0.2679** | **Ver 3.3.1.2545** | **Ver 3.3.0.2537** | **Ver 3.2.0.2426** |
|  | **EM** | **SV1** | **SV2** | **Description** | **7/15/2013** | **3/26/2013** | **3/5/2013** | **10/24/2012** |
| **Control Cards** | EM0833 |  |  | Control Card Firmware | Jul 12 2013 15:18:48 | Mar 13 2013 09:38:29 | Mar 5 2013 08:58:30 | Oct 12 2012 13:47:55 |
|  | EM0833 | SV1033 |  | PLD, Board Revs: -00 | -14, REL 5/8/13 | -13, REL 2/1/13 | -13, REL 2/1/13 | -12, REL 09/13/12 |
|  | EM0833 | SV1072 |  | PLD, Board Revs: -10,-20 | -14, REL 5/8/13 | -13, REL 2/1/13 | -13, REL 2/1/13 | -12, REL 9/12/12 |
|  | EM0833 | SV1124 |  | PLD, Board Revs: -20,-10 |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  | **EM** | **SV1** | **SV2** | **Description** |  |  |  |  |
| **Input Cards** | EM0687 | SV0938 |  | NV8500 AES ASYNC 9 IN | -11, Build: 0 | -10, Build: 0 | -10, Build: 0 | -10, Build: 0 |
|  | EM0693 | SV0976 |  | NV8500 3Gig SDI 9 FIBER IN | -10, Build: 0 | -10, Build: 0 | -10, Build: 0 | -10, Build: 0 |
|  | EM0783 | SV0824 |  | NV8500 3Gig SDI 9 COAX IN | -14, Build: 1 | -13, Build: 0 | -13, Build: 0 | -12, Build: 0 |
|  | EM0783 | SV0960 |  | NV8144 3Gig SDI 9 COAX IN | -14, Build: 0 | -13, Build: 0 | -13, Build: 0 | -10, Build: 0 |
|  | EM0783 | SV1110 |  | NV8500 HD SDI 9 COAX IN | -14, Build: 0 | -13, Build: 0 | -13, Build: 0 | -11, Build: 0 |
|  | EM0783 | SV1111 |  | NV8144 HD SDI 9 COAX IN | -10, Build: 0 | -10, Build: 0 | -10, Build: 0 | -10, Build: 0 |
|  | EM0814 | SV0984 |  | NV8500 3Gig SDI DEM 8 COAX IN | -13, Build: 1 | -10, Build: 1 | -10, Build: 1 | -10, Build: 1 |
|  | EM0814 | SV1015 |  | NV8500 3Gig COAX 8 SDI / 1 TDM IN | -13, Build: 1 | -10, Build: 1 | -10, Build: 1 | -10, Build: 1 |
|  | EM0869 | SV1088 |  | NV8500 3Gig XR SDI DEM 8 COAX IN | -00, Build: 15 | -00, Build: 15 | -00, Build: 15 | -00, Build: 15 |
|  | EM0869 | SV1089 |  | NV8500 3Gig XR COAX 8 SDI / 1 TDM IN | -00, Build: 1 | -00, Build: 1 | -00, Build: 1 | -00, Build: 1 |
|  | EM0887 | SV1138 |  | NV8140 3Gig SDI 18 COAX IN | -01, Build: 1 | -01, Build: 1 | -01, Build: 1 | -01, Build: 1 |
|  | EM0887 | SV1159 |  | NV8140 HD SDI 18 COAX IN | -01, Build: 0 | -01, Build: 0 | -01, Build: 0 | -01, Build: 0 |
|  | EM0892 | SV1169 |  | NV8140 3Gig SDI 18 FIBER IN | -01, Build: 0 | -01, Build: 0 | -01, Build: 0 | -01, Build: 0 |
|  | EM0898 | SV1162 |  | NV8140 3Gig SDI DEM 18 COAX IN | -01, Build: 2 | -01, Build: 2 | -01, Build: 2 | -01, Build: 2 |
|  | EM0898 | SV1163 |  | NV8140 3Gig COAX 16 SDI / 2 TDM IN | -01, Build: 2 | -01, Build: 2 | -01, Build: 2 | -01, Build: 2 |
|  | EM0902 | SV0824 |  | NV8500 3Gig SDI 9 COAX IN | -14, Build: 1 | -13, Build: 0 | -13, Build: 0 |  |
|  | EM0902 | SV0960 |  | NV8144 3Gig SDI 9 COAX IN | -14, Build: 0 | -13, Build: 0 | -13, Build: 0 |  |
|  | EM0902 | SV1110 |  | NV8500 HD SDI 9 COAX IN | -14, Build: 0 | -13, Build: 0 | -13, Build: 0 |  |
|  | EM0903 | SV1172 |  | NV8500 3Gig SDI DEM 8 COAX IN | -04, Build: 1 | -02, Build: 2 | -02, Build: 2 |  |
|  | EM0903 | SV1173 |  | NV8500 3Gig COAX 8 SDI / 1 TDM IN | -04, Build: 1 | -02, Build: 2 | -02, Build: 2 |  |
|  |  |  |  |  |  |  |  |  |
|  | **EM** | **SV1** | **SV2** | **Description** |  |  |  |  |
| **Output Cards** | EM0688 | SV0939 |  | NV8500 AES ASYNC 18 OUT | -11, Build: 0 | -10, Build: 0 | -10, Build: 0 | -10, Build: 0 |
|  | EM0692 | SV1113 |  | NV8500 3Gig SDI EXP FILLER OUT | -10, Build: 0 | -10, Build: 0 | -10, Build: 0 | -10, Build: 0 |
|  | EM0695 | SV0978 |  | NV8500 3Gig SDI 9 FIBER OUT+EXP | -11, Build: 0 | -11, Build: 0 | -11, Build: 0 | -11, Build: 0 |
|  | EM0697 | SV0977 |  | NV8500 3Gig SDI 18 FIBER OUT | -12, Build: 0 | -12, Build: 0 | -12, Build: 0 | -12, Build: 0 |
|  | EM0785 | SV0825 |  | NV8500 3Gig SDI 18 COAX OUT | -14, Build: 0 | -13, Build: 2 | -13, Build: 2 | -13, Build: 2 |
|  | EM0785 | SV0961 |  | NV8144 3Gig SDI 18 COAX OUT | -10, Build: 0 | -10, Build: 0 | -10, Build: 0 | -10, Build: 0 |
|  | EM0785 | SV1108 |  | NV8500 HD SDI 18 COAX OUT | -11, Build: 1 | -11, Build: 1 | -11, Build: 1 | -11, Build: 0 |
|  | EM0785 | SV1109 |  | NV8144 HD SDI 18 COAX OUT | -10, Build: 0 | -10, Build: 0 | -10, Build: 0 | -10, Build: 0 |
|  | EM0787 | SV0826 |  | NV8500 3Gig SDI 9 COAX OUT+EXP | -12, Build: 0 | -12, Build: 0 | -12, Build: 0 | -10, Build: 0 |
|  | EM0787 | SV1112 |  | NV8500 HD SDI 9 COAX OUT+EXP | -10, Build: 0 | -10, Build: 0 | -10, Build: 0 | -10, Build: 0 |
|  | EM0815 | SV1036 | SV1037 | NV8500 3Gig SDI EMB 16 COAX OUT | -20, Build: 0 (-20) | -18, Build: 0 (-18) | -18, Build: 0 (-18) | -17, Build: 0 (-17) |
|  | EM0815 | SV1056 | SV1057 | NV8500 3Gig COAX 16 SDI / 2 TDM OUT | -18, Build: 0 (-18) | -18, Build: 0 (-18) | -18, Build: 0 (-18) | -17, Build: 0 (-17) |
|  | EM0816 | SV1082 |  | NV8500 3Gig SDI EMB 8 COAX OUT+EXP | -08, Build: 0 | -08, Build: 0 | -08, Build: 0 | -07, Build: 0 |
|  | EM0816 | SV1083 |  | NV8500 3Gig COAX 8 SDI / 1 TDM OUT+EXP | -08, Build: 0 | -08, Build: 0 | -08, Build: 0 | -07, Build: 0 |
|  | EM0816 | SV1095 |  | NV8500 3Gig HYBRID OUT+EXP FILLER | -07, Build: 0 | -07, Build: 0 | -07, Build: 0 | -07, Build: 0 |
|  | EM0816 | SV1174 |  | NV8500 3Gig SDI DEM/EMB 8 COAX OUT+EXP | -08, Build: 0 | -08, Build: 0 | -08, Build: 0 |  |
|  | EM0878 | SV1126 | SV1127 | NV8500 3Gig SDI DEM/EMB 16 COAX OUT | -19, Build: 2 (-19) | -19, Build: 2 (-19) | -18, Build: 0 (-18) |  |
|  |  |  |  |  |  |  |  |  |
|  | **EM** | **SV1** | **SV2** | **Description** |  |  |  |  |
| **Crosspoint Cards** | EM0662 | SV0854 |  | NV8500 288x288 3Gig XPT STD | -13, Build: 1 | -12, Build: 1 | -12, Build: 1 | -12, Build: 1 |
|  | EM0676 | SV0935 |  | NV8500 288x288 3Gig RED XPT STD | -11, Build: 0 | -10, Build: 1 | -10, Build: 1 | -10, Build: 1 |
|  | EM0678 | SV0975 |  | NV8500 144x144 3Gig RED XPT STD | -11, Build: 0 | -10, Build: 0 | -10, Build: 0 | -10, Build: 0 |
|  | EM0799 | SV0917 |  | NV8500 144X144 3Gig XPT STD | -22, Build: 0 | -21, Build: 1 | -21, Build: 1 | -21, Build: 1 |
|  | EM0817 | SV0985 |  | NV8500 288X288 3Gig XPT HYBRID | -06, Build: 0 | -06, Build: 0 | -06, Build: 0 | -06, Build: 0 |
|  | EM0818 | SV1092 | SV1093 | NV8500 288X288 3Gig RED XPT HYBRID | -01, Build: 0 (-01) | -01, Build: 0 (-01) | -01, Build: 0 (-01) | -01, Build: 0 (-01) |
|  | EM0818 | SV1094 |  | NV8500 288X288 3Gig RED XPT HYBRID | -02, Build: 0 | -02, Build: 0 | -02, Build: 0 | -02, Build: 0 |
|  | EM0819 | SV1004 |  | NV8500 144X144 3Gig XPT HYBRID | -07, Build: 0 | -06, Build: 0 | -06, Build: 0 | -06, Build: 0 |
|  | EM0820 | SV1114 |  | NV8500 144X144 3Gig RED XPT HYBRID | -03, Build: 1 | -03, Build: 1 | -03, Build: 1 | -03, Build: 1 |
|  | EM0820 | SV1115 |  | NV8500 144X144 3Gig RED XPT HYBRID | -03, Build: 2 | -03, Build: 2 | -03, Build: 2 | -03, Build: 2 |
|  | EM0894 | SV0917 |  | NV8500 144X144 3Gig XPT STD | -22, Build: 0 | -21, Build: 1 | -21, Build: 1 | -21, Build: 1 |
|  | EM0895 | SV0917 |  | NV8140 144x144 3Gig RED XPT STD | -22, Build: 0 | -21, Build: 1 | -21, Build: 1 | -21, Build: 1 |
|  | EM0896 | SV1149 |  | NV8500 288x288 3Gig XPT STD | -02, Build: 0 | -01, Build: 0 | -01, Build: 0 |  |
|  | EM0899 | SV1164 |  | NV8500 144X144 3Gig XPT HYBRID | -02, Build: 0 | -02, Build: 0 | -02, Build: 0 | -01, Build: 0 |
|  | EM0900 | SV1164 |  | NV8140 144X144 3Gig RED XPT HYBRID | -02, Build: 0 | -02, Build: 0 | -02, Build: 0 | -01, Build: 0 |
|  |  |  |  |  |  |  |  |  |
|  | **EM** | **SV1** | **SV2** | **Description** |  |  |  |  |
| **Monitor Cards** | EM0663 | SV0872 |  | NV8500 3Gig SDI 2 Monitor | -11, Build: 1 | -11, Build: 1 | -11, Build: 1 | -11, Build: 1 |
|  |  |  |  |  |  |  |  |  |
|  | **EM** | **SV1** | **SV2** | **Description** |  |  |  |  |
| **Other Devices** | MADI\_BOOT | SV0770 |  | Version 1.2.0.0 | -01 | -01 | -01 | -01 |
|  | MADI\_FROM\_AA | SV1066 |  | NV8900-AA->MADI | -04 | -04 | -04 | -04 |
|  | MADI\_FROM\_AES | SV1066 |  | NV8900-AES(Coax)->MADI, NV8900-AES(Bal)->MADI | -02 | -02 | -02 | -02 |
|  | MADI\_TO\_AA | SV1067 |  | NV8900-MADI->AA | -05 | -05 | -05 | -05 |
|  | MADI\_TO\_AES | SV1067 |  | NV8900-MADI->AES(Coax), NV8900-MADI->AES(Bal) | -02 | -02 | -02 | -02 |
|  | MADI\_APP | SV1073 |  | Version 6.1.0.58 | -06 | -06 | -06 | -06 |

## Summary for Version 3.3.1.2545

**These notes detail the patch release of the NV8500 Platform Software Version 3.3.1.2545. The major highlights of this release include:**

Added support for Audio Pass Through.

### Known Issues

The items below address the top open issues for this release. To see a full list of open issues, please consult with Miranda GVD SQA department.

* Test Track # 630: Input monitors on NV8576+ Expanded System do not work on expanded frame…more testing is needed.

### Special Notes

***Use MRC Version 3.1.3 or higher to support and upgrade NV8500 Hybrid firmware V3.3.1.***

MRC Version 3.3.1 can be found on ECO 18807.

This Patch build was made for Miranda’s customer Telegenics.

### Reference Documents

The following technical notes provide additional detail to aid in the installation and support of this release:

**TN0074 and TN0075 - Technical Notes NV8500H Version 3.3.1.2545**

Previous Tech Notes:

TN0063 and TN0064 - Technical Notes NV8500H Version 3.1.4

TN0061 and TN0062 - Technical Notes NV8500H Version 3.1.3

TN0057 and TN0058 - Technical Notes NV8500H Version 3.1.2

TN0051 and TN0052 - Technical Notes NV8500H Version 3.1.1

TN0048 and TN0049 - Technical Notes NV8500H Version 3.1.0

TN0045 and TN0046 - Technical Notes NV8500H Version 2.2.2

TN0043 and TN0044 - Technical Notes NV8500H Version 2.2.1

TN0071 and TN0072 - Technical Notes NV8500H Version 3.3.0

### Errata Defects and/or Features fixed or addressed for Version 3.3.1.2545

| **Tracking ID**  **(Test Track)** | **CRM**  **ID** | **Description** | **Type** | **Status** |
| --- | --- | --- | --- | --- |
| 631 |  | *EM0878 DISEMB-EMD card repeatedly embedding the same sample* | Defect | Fixed and verified |
| 633 |  | *Added Pass Thru Sources Configuration and switching.* | Feature | Implemented |
| 634 |  | *Corrected Audio Break-in tally when controller input start != 1.* | Defect | Fixed and verified |

### Supported Hardware Matrix

The full Excel document is available from document control as Part Number RF0281-08

### Hybrid Router 3.3.1.2545 QA Test Summary

**Product:** Hybrid Router RF

**Version:**  RF V3.3.1.2545

**ECO**: 18797

**Summary Date:** March 31, 2013

**Reported By:** Max Denton

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Test #** | **Test** | **Test Details** | **Expected Results** | **Concerns** | |
| **1** | Test zero-based control via VSM | Test takes and status. Confirm VSM properly receives initial status after disconnection. If "get changes" enabled version is to be used, confirm that a range take and individual takes from MRC are quickly reflected in VSM. If non-"get changes" version is used, confirm that round-robin polling is stable. | Creating zero-based levels in router control cards allows port numbers listed in VSM to align with port numbers of physical matrix. Initial status is aligned after connection. Changed made via external (or MRC) control to control cards are reflected in VSM. | Does returned status match requested routes? In the past, this has been broken (status returned is off by one) in some routing cases. |  |
| **2** | Test control card failover | Test that VSM follows a control card changeover initiated by the router, and that VSM can force the inactive control card active if it loses communication to the active control card. | VSM sends takes to the active control card. If a network path to the active control card is lost, VSM forces the other control card active | In the past, VSM has "flip-flopped" between control cards every 30 minutes. This would be disastrous in a hybrid router. Confirm that VSM only forces a control card changeover on network failure. |  |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **EMB/DEMB Output Control Tests** | | | | |  |
|  | **Note: Control tests tested using ABI out 722** |  |  |  |  |

| **Test #** | **CURRENT AUDIO SRC** | **NEW AUDIO SRC** | **CURRENT VID SRC** | **NEW VID SRC** | **Expected Output Result** | | **Expected Status Change** | | **Additional Comments** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **(Audio take tests)** | | | | | | | |  |
| **3** | DEMB AUDIO | PASSTHRU | STD VID IN | NO CHANGE | Audio switches to original embedded audio from STD VID source, matching channel | | Audio status matches requested route, no video status change | |  |
| **4** | DEMB AUDIO | PASSTHRU | DEMB VID IN | NO CHANGE | Audio switches to original embedded audio from DEMB VID source, matching channel | | Audio status matches requested route, no video status change | |  |
| **5** | DEMB AUDIO | PASSTHRU | TDM VID IN | NO CHANGE | Audio switches to original embedded audio from TDM VID source, matching channel | | Audio status matches requested route, no video status change | |  |
|  |  |  |  |  |  | |  | |  |
| **6** | MADI AUDIO | PASSTHRU | STD VID IN | NO CHANGE | Audio switches to original embedded audio from STD VID source, matching channel | | Audio status matches requested route, no video status change | |  |
| **7** | MADI AUDIO | PASSTHRU | DEMB VID IN | NO CHANGE | Audio switches to original embedded audio from DEMB VID source, matching channel | | Audio status matches requested route, no video status change | |  |
| **8** | MADI AUDIO | PASSTHRU | TDM VID IN | NO CHANGE | Audio switches to original embedded audio from TDM VID source, matching channel | | Audio status matches requested route, no video status change | |  |
|  |  |  |  |  |  | |  | |  |
| **9** | PASSTHRU | DEMB AUDIO | STD VID IN | NO CHANGE | Audio switches to selected dismbedded audio | | Audio status matches requested route, no video status change | |  |
| **10** | PASSTHRU | DEMB AUDIO | DEMB VID IN | NO CHANGE | Audio switches to selected dismbedded audio | | Audio status matches requested route, no video status change | |  |
| **11** | PASSTHRU | DEMB AUDIO | TDM VID IN | NO CHANGE | Audio switches to selected dismbedded audio | | Audio status matches requested route, no video status change | |  |
|  |  |  |  |  |  | |  | |  |
| **12** | MADI AUDIO | DEMB AUDIO | STD VID IN | NO CHANGE | Audio switches to selected dismbedded audio | | Audio status matches requested route, no video status change | |  |
| **13** | MADI AUDIO | DEMB AUDIO | DEMB VID IN | NO CHANGE | Audio switches to selected dismbedded audio | | Audio status matches requested route, no video status change | |  |
| **14** | MADI AUDIO | DEMB AUDIO | TDM VID IN | NO CHANGE | Audio switches to selected dismbedded audio | | Audio status matches requested route, no video status change | |  |
|  |  |  |  |  |  | |  | |  |
| **15** | PASSTHRU | MADI AUDIO | STD VID IN | NO CHANGE | Audio switches to selected MADI audio | | Audio status matches requested route, no video status change | | Found repeat sample issue here |
| **16** | PASSTHRU | MADI AUDIO | DEMB VID IN | NO CHANGE | Audio switches to selected MADI audio | | Audio status matches requested route, no video status change | |  |
| **17** | PASSTHRU | MADI AUDIO | TDM VID IN | NO CHANGE | Audio switches to selected MADI audio | | Audio status matches requested route, no video status change | |  |
|  |  |  |  |  |  | |  | |  |
| **18** | DEMB AUDIO | MADI AUDIO | STD VID IN | NO CHANGE | Audio switches to selected MADI audio | | Audio status matches requested route, no video status change | |  |
| **19** | DEMB AUDIO | MADI AUDIO | DEMB VID IN | NO CHANGE | Audio switches to selected MADI audio | | Audio status matches requested route, no video status change | |  |
| **20** | DEMB AUDIO | MADI AUDIO | TDM VID IN | NO CHANGE | Audio switches to selected MADI audio | | Audio status matches requested route, no video status change | |  |
|  |  |  |  |  |  | |  | |  |
|  | **(Video take tests)** | | | | | | | |  |
| **21** | PASSTHRU | NO CHANGE | STD VID IN | DEMB VID IN | Audio switches to original embedded audio from new DEMB VID source, matching channel | | Video status matches requested route, **no audio status change** | |  |
| **22** | PASSTHRU | NO CHANGE | TDM VID IN | DEMB VID IN | Audio switches to original embedded audio from new DEMB VID source, matching channel | | Video status matches requested route, **no audio status change** | |  |
| **23** | PASSTHRU | NO CHANGE | DEMB VID IN | NEW DEMB VID IN | Audio switches to original embedded audio from new DEMB VID source, matching channel | | Video status matches requested route, **no audio status change** | |  |
|  |  |  |  |  |  | |  | |  |
| **24** | PASSTHRU | NO CHANGE | STD VID IN | TDM VID IN | Audio switches to original embedded audio from new TDM VID source, matching channel | | Video status matches requested route, **no audio status change** | |  |
| **25** | PASSTHRU | NO CHANGE | TDM VID IN | NEW TDM VID IN | Audio switches to original embedded audio from new TDM VID source, matching channel | | Video status matches requested route, **no audio status change** | |  |
| **26** | PASSTHRU | NO CHANGE | DEMB VID IN | TDM VID IN | Audio switches to original embedded audio from new TDM VID source, matching channel | | Video status matches requested route, **no audio status change** | |  |
|  |  |  |  |  |  | |  | |  |
| **27** | PASSTHRU | NO CHANGE | STD VID IN | NEW STD VID IN | Audio switches to original embedded audio from new STD VID source, matching channel | | Video status matches requested route, **no audio status change** | |  |
| **28** | PASSTHRU | NO CHANGE | TDM VID IN | STD VID IN | Audio switches to original embedded audio from new STD VID source, matching channel | | Video status matches requested route, **no audio status change** | |  |
| **29** | PASSTHRU | NO CHANGE | DEMB VID IN | STD VID IN | Audio switches to original embedded audio from new STD VID source, matching channel | | Video status matches requested route, **no audio status change** | |  |
|  |  |  |  |  |  |  |  |  |  |
| **30** | DEMB AUDIO | NO CHANGE | STD VID IN | DEMB VID IN | DEMB audio remains | | Video status matches requested route, **no audio status change** | |  |
| **31** | DEMB AUDIO | NO CHANGE | TDM VID IN | DEMB VID IN | DEMB audio remains | | Video status matches requested route, **no audio status change** | |  |
| **32** | DEMB AUDIO | NO CHANGE | DEMB VID IN | NEW DEMB VID IN | DEMB audio remains | | Video status matches requested route, **no audio status change** | |  |
|  |  |  |  |  |  | |  | |  |
| **33** | DEMB AUDIO | NO CHANGE | STD VID IN | TDM VID IN | DEMB audio remains | | Video status matches requested route, **no audio status change** | |  |
| **34** | DEMB AUDIO | NO CHANGE | TDM VID IN | NEW TDM VID IN | DEMB audio remains | | Video status matches requested route, **no audio status change** | |  |
| **35** | DEMB AUDIO | NO CHANGE | DEMB VID IN | TDM VID IN | DEMB audio remains | | Video status matches requested route, **no audio status change** | |  |
|  |  |  |  |  |  | |  | |  |
| **36** | DEMB AUDIO | NO CHANGE | STD VID IN | NEW STD VID IN | DEMB audio remains | | Video status matches requested route, **no audio status change** | |  |
| **37** | DEMB AUDIO | NO CHANGE | TDM VID IN | STD VID IN | DEMB audio remains | | Video status matches requested route, **no audio status change** | |  |
| **38** | DEMB AUDIO | NO CHANGE | DEMB VID IN | STD VID IN | DEMB audio remains | | Video status matches requested route, **no audio status change** | |  |
|  |  |  |  |  |  |  |  |  |  |
| **39** | MADI AUDIO | NO CHANGE | STD VID IN | DEMB VID IN | MADI audio remains | | Video status matches requested route, **no audio status change** | |  |
| **40** | MADI AUDIO | NO CHANGE | TDM VID IN | DEMB VID IN | MADI audio remains | | Video status matches requested route, **no audio status change** | |  |
| **41** | MADI AUDIO | NO CHANGE | DEMB VID IN | NEW DEMB VID IN | MADI audio remains | | Video status matches requested route, **no audio status change** | |  |
|  |  |  |  |  |  | |  | |  |
| **42** | MADI AUDIO | NO CHANGE | STD VID IN | TDM VID IN | MADI audio remains | | Video status matches requested route, **no audio status change** | |  |
| **43** | MADI AUDIO | NO CHANGE | TDM VID IN | NEW TDM VID IN | MADI audio remains | | Video status matches requested route, **no audio status change** | |  |
| **44** | MADI AUDIO | NO CHANGE | DEMB VID IN | TDM VID IN | MADI audio remains | | Video status matches requested route, **no audio status change** | |  |
|  |  |  |  |  |  | |  | |  |
| **45** | MADI AUDIO | NO CHANGE | STD VID IN | NEW STD VID IN | MADI audio remains | | Video status matches requested route, **no audio status change** | |  |
| **46** | MADI AUDIO | NO CHANGE | TDM VID IN | STD VID IN | MADI audio remains | | Video status matches requested route, **no audio status change** | |  |
| **47** | MADI AUDIO | NO CHANGE | DEMB VID IN | STD VID IN | MADI audio remains | | Video status matches requested route, **no audio status change** | |  |

|  |  |
| --- | --- |
| **Audio Performance Tests** |  |
| ***Note: All video sources should be 50hz.*** | |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Test #** | **Audio Source** |  | **Source Sync** | **Audio Destination** | **Embedder Vid Source** | **Expected Result** | **Additional Comments** |
| **48** | Disembedded audio via DEMB input card | | Sync | Embedded audio via DEMB/EMB output | Sync VID | No Audio CRC Errors |  |
| **49** | Disembedded audio via DEMB input card | | A-Sync | Embedded audio via DEMB/EMB output | Sync VID | Low/Moderate Audio CRC Error Rate |  |
| **50** | Disembedded audio from STD input card, Disembedded by DEMB/EMB card | | Sync | Embedded audio via DEMB/EMB output | Sync VID | No Audio CRC Errors |  |
| **51** | AES audio, passed through NV8900, via TDM input card | | Sync | Embedded audio via DEMB/EMB output | Sync VID | No Audio CRC Errors |  |
| **52** | Disembedded audio via DEMB input card | | A-Sync | Embedded audio via DEMB/EMB output | Same A-Sync VID as SRC | No Audio CRC Errors |  |
| **53** | Disembedded audio via DEMB input card | | Sync | Embedded audio via DEMB/EMB output | A-Sync VID | Low/Moderate Audio CRC Error Rate |  |
| **54** | Disembedded audio from STD input card, Disembedded by DEMB/EMB card | | A-Sync | Embedded audio via DEMB/EMB output | Same A-Sync VID as SRC | No Audio CRC Errors |  |
| **55** | AES audio, passed through NV8900, via TDM input card | | Sync | Embedded audio via DEMB/EMB output | A-Sync VID | Low/Moderate Audio CRC Error Rate |  |
| **56** | Disembedded audio via DEMB input card | | Sync | AES audio, passed through NV8900, via TDM output card | N/A | No Audio CRC Errors |  |
| **57** | Disembedded audio via DEMB input card | | A-Sync | AES audio, passed through NV8900, via TDM output card | N/A | Low/Moderate Audio CRC Error Rate |  |
| **58** | AES audio, passed through NV8900, via TDM input card | | Sync | AES audio, passed through NV8900, via TDM output card | N/A | No Audio CRC Errors |  |

## Summary for Version 3.3.0.2537

**These notes detail the production release of the NV8500 Platform Software Version 3.3.0.2504. The major highlights of this release include:**

Support for EM0896 (288 3Gig XPT), EM0902/04 (3Gig input card), EM0903 (hybrid input card).

New features include selectable protocol on 2nd serial port, and improved SD recovery time and 3Gig performance.

Bug fixes include 8576-Plus hybrid expansion systems, Probel parity bit, and TDM test LED's.

### Known Issues

The items below address the top open issues for this release. To see a full list of open issues, please consult with Miranda GVD SQA department.

* Test Track # 630: Input monitors on NV8576+ Expanded System do not work on expanded frame…more testing is needed.

### Special Notes

***Use MRC Version 3.0.3 or higher to support and upgrade NV8500 Hybrid firmware V3.3.0.***

MRC Version 3.0.3 can be found on ECO 18763.

8500H-XPT-144 effective date is dependent on depletion of EM0819 and replacement by EM0899. Impacts ECO 18501.

SV1108-11 was changed from revision A0 to B0. The revision A0 firmware reports the incorrect part number that was corrected in the Version 3.3.0 release. Due to late detection of this problem, the part number has been changed to revision B0. Revision A0 should be marked “do not use".

8500H-IP-3GIG-DEM-CX and 8500H-IP-3GIG-TDM-CX will need updated when EM0903 is released to production. Support for the EM0903 firmware is included in this release.

### Reference Documents

The following technical notes provide additional detail to aid in the installation and support of this release:

**TN0071 and TN0072 - Technical Notes NV8500H Version 3.3.0**

Previous Tech Notes:

TN0063 and TN0064 - Technical Notes NV8500H Version 3.1.4

TN0061 and TN0062 - Technical Notes NV8500H Version 3.1.3

TN0057 and TN0058 - Technical Notes NV8500H Version 3.1.2

TN0051 and TN0052 - Technical Notes NV8500H Version 3.1.1

TN0048 and TN0049 - Technical Notes NV8500H Version 3.1.0

TN0045 and TN0046 - Technical Notes NV8500H Version 2.2.2

TN0043 and TN0044 - Technical Notes NV8500H Version 2.2.1

### Errata Defects and/or Features fixed or addressed for Version 3.3.0

| **Tracking ID** | **CRM**  **ID** | **Description** | **Type** | **Status** |
| --- | --- | --- | --- | --- |
| 523 |  | TDM Test - LEDs incorrect. Blue LED will not stay off, even when no errors, and XPT LED does not blink. The TDM lock LEDs are correct. | Defect | Fixed, assigned to Ward, Geoff |
| 539 |  | Attempts to take a null source to destination 2304 of an NV8144s audio matrix results in an invalid destination error. | Defect | Fixed, assigned to Smith, Teresa |
| 550 |  | 144x144 redundant xpt reset when input modules in slots 17-23 are installed | Defect | Closed |
| 572 |  | When configuring an 8576+ expanded router, setting the module types from MRC crashes the slave frame control card(s) | Defect | Closed (Verified) |
| 589 |  | Bit errors at 3Gig independent of input cable length on some outputs | Defect | Fixed, assigned to Smith, Teresa |
| 591 |  | Add support for EM0896 - new 288 XPT | Feature | Fixed, assigned to Smith, Teresa |
| 592 |  | Add support for EM0878 new DEM/EMB output and output expansion cards. | Feature | Fixed, assigned to Smith, Teresa |
| 593 |  | Add radio keying immunity and signal performance to EM0902/904 input cards. | Feature | Fixed, assigned to Smith, Teresa |
| 594 |  | Add support for EM0903 9 port hybrid input | Feature | Fixed, assigned to Smith, Teresa |
| 607 |  | During an Update of the EM0785-02 (HD SDI 18 Coax Out) card with SV1108-11, MRC reports failed. | Defect | Closed (Verified) |
| 617 |  | There is an intermittent Video reference alarm at the console and the Alarm Port | Defect | Closed (Verified) |

### Supported Hardware Matrix

The full Excel document is available from document control as Part Number RF0281-07

### Hybrid Router V3.3.0 QA Test Summary

**Product:** Hybrid Router RF

**Version:**  RF V3.3.0.2537

**ECO**: 18696

**Summary Date:** March 6, 2013

**Reported By:** Teresa Smith and Lisa Haennelt

**Purpose**

This is a general (AREL) release of the Entire NV8500 Hybrid Router Family. This is the first AREL release of the NV8576+ Expanded router since V1.5. This release also included several features and bug fixes needed by customers. Including: Radio keying immunity, Improved Output signal performance, new EM0878 DEM/EMB output card, new EM0896 standard 288 XPT, fix for NV8576+ Expanded System configuration, support for Probel Protocol, fix TDM test, Null source fix for NV8144.

**Tests Completed:**

* **Control Card Testing**
  + All Control Card Testing completed on NV8280 and NV8576+ Expanded System with EM0833-10 and EM0833-20
  + Update testing was completed on NV8280, NV8576, and NV8576+ Expanded System
  + From V1.5 to V3.3.0,
  + From V 3.1.3 to V3.3.0
  + From V3.2.0 to V3.3.0
  + From V3.3.0 to V1.5
  + From V3.3.0 to V3.1.3
  + From V3.3.0 to V3.2.0
  + V2.0 to V3.3.0 (Expanded only, this is the current deviation that has shipped))
* EE testing and BBRAM testing was completed on NV8576+ Expanded System
* Control card change over and Reset testing was completed on NV8280 and NV8576
* **IOXM card Testing**
* Completed in NV8280, NV8576, and NV8576+ Expanded System.
* Testing included the following IOXM card types (detailed description of IOXM testing can be obtained from QA).
  + INPUT-EM0814/SV0984
  + INPUT-EM0814/SV1015
  + INPUT-EM0783/SV0824
  + OUTPUT-EM0816/SV1082
  + OUTPUT-EM0787/SV0826
  + OUTPUT-EM0785/SV1109
  + OUTPUT-EM0815/SV1056
  + OUTPUT-EM0815/SV1036
  + OUTPUT-EM0816/SV1082
  + OUTPUT-EM0816/SV1174
  + OUTPUT-EM0695/SV0978
  + OUTPUT-EM0787/SV0826
  + MONITOR-EM0663/SV0872
  + XPT-EM0799/ SV0917
  + XPT-EM0819/ SV1004
  + XPT-EM0820/SV1115
  + XPT-EM0894/SV0917
  + XPT-EM0899/SV1164
  + XPT-EM0817/SV0985
  + XPT-EM0818/SV1092
  + XPT-EM0662/SV0854

**Signal path testing**

* NV828 The following formats were tested:
  + 525/50Hz
  + 625/59.94Hz
  + 1080i/50Hz
  + 1080i/59.94Hz
  + 720p/50Hz
  + 720p/59.94Hz
* NV8576+ Expanded System. The following formats were tested:
  + 525/50Hz
  + 625/59.94Hz
  + 1080i/50Hz
  + 1080i/59.94Hz
  + 720p/50Hz
  + 720p/59.94Hz
* Audio Shuffle was tested on NV8280 and NV8576+ Expanded System.
* **Status Alarm Testing**
* Completed on NV8280, NV8576, and NV8576+ Expanded System

**Not tested:** (Due to time constraints these tests are still in progress)

* Testing on NV8140 or NV8144
* Serial Protocol Testing
* MADI Testing
* Null Source (EGC)
* Input and Output Monitor on NV8144, NV8280, NV8576
* EM0903
* EM0878
* EM0896

**Concerns:**

* Input monitors on NV8576+ Expanded System do not work on expanded frame…more testing is needed.

**Summary:**

The V3.3.0 is a very stable release for all NV8500 routers.

Most of the IOXM issues have been fixed. SW updates and Router configuration work very well and no major bugs are known.

This is the first stable release of the NV8576+ Expanded System. SW updates. Configuration and Signal path testing went very well. There is an issue with input monitors (more testing is needed).

## Summary for Version 3.2.0.2426

**Production release of the NV8500 Platform Software Version 3.2.0.2426 includes the following new features:**

* + Added to support NV8140:
    - 8140 Disembedding input
    - 8140 TDM input
    - 8140 Fiber input and rear
    - 8140 HD Input
    - Adding hybrid functionality will require updates to Hybrid cross points
  + EM0833 support for 1080psf23.976 reference switching
  + 3rd party protocols

**The following bug fixes where addressed:**

* + Fix for proper status via NVSP from v3.1.4.
  + Add 8140 fiber input card SV
  + Add MADI video port bug fix from v3.1.4.
  + EM0833 PLD-8144 Null Channel Fix (fixed in v3.2.0 without approval )
  + Rolled back EM0787 from SV0826-11 code to the SV0826-10

### Special Notes

***Use MRC Version 3.0.1.196 or higher to support and upgrade NV8500 Hybrid firmware V3.2.0.***

MRC Version 3.0.1.196 can be found on ECO 18538.

### Reference Documents

The following technical notes provide additional detail to aid in the installation and support of this release:

**TN0065 and TN0066 - Technical Notes NV8500H Version 3.2.0**

Previous Tech Notes:

TN0063 and TN0064 - Technical Notes NV8500H Version 3.1.4

TN0061 and TN0062 - Technical Notes NV8500H Version 3.1.3

TN0057 and TN0058 - Technical Notes NV8500H Version 3.1.2

TN0051 and TN0052 - Technical Notes NV8500H Version 3.1.1

TN0048 and TN0049 - Technical Notes NV8500H Version 3.1.0

TN0045 and TN0046 - Technical Notes NV8500H Version 2.2.2

TN0043 and TN0044 - Technical Notes NV8500H Version 2.2.1

### Errata Defects and/or Features fixed or addressed for Version 3.2.0

| **Test Track Defect ID** | **CRM Defect ID** | **Defect/Feature Description** | **Additional Detail** | **Status of Defect/Feature** |
| --- | --- | --- | --- | --- |
| **537** |  | 288 HYB RED XPT appears to malfunction during IO updates on output cards | During output card code update initiated from MRC the hybrid redundant XPT acts odd - the replace XPT buttons blink in a random order actually causing the RED XPT to replace the momentarily selected main XPT card. No video passes to the output during this state.  The odd behavior only seems to occur during the "write file to card" portion of the update cycle.    Easily repeatable. Jeremy is looking into it.    **Jeremey's Notes** "Control card Verilog fix. Fix will be included in all control card FPGA builds after SV1072-12 and SV1033-10."    **TS-10/3/2012**---Note both of these PLDs will be released in the V3.2 Release | **Fixed** |
| **521** |  | Embedder Group Control feature is broken on the NV8144 | NV8144---The Embedder Group Control feature is broken on the NV8144 frame, but is working on the NV8576+ frame (standalone mode). When a take is done to a null source in MRC (crosspoint Page), MRC and the console show the current source on the outputs is a null source, but the audio does not mute. This appears to be in the control card FPGA.  This issue was fixed and verified by Engineering in Version 3.1.2 RF file. See Kevin Shuholm. Still needs verified by SQA.  Deferred in V3.1.3 in meeting on 8/15/2012 | **Closed (Verified)** |
| **538** |  | Errors, changes, and additions to supported cards lists | This is the list and description of known but undocumented Unicon3 bugs whose fixes are to be deferred until after V3.1.3 is released.    Errors, changes, and additions to supported cards lists   * The EM0783/SV0960 and EM0783/SV1111 input cards are included in the lists of supported cards for the NV8144, NV8280, NV8576 and NV8576Plus but should be included only in the NV8144. * The NV8140’s EM0898/SV984 input card should be changed to EM0898/SV1162. * The NV8140’s EM0898/SV1015 input card should be changed to EM0898/SV1163. * The EM0785/SV0961 and EM0785/SV1109 output cards are included in the lists of supported cards for the NV8144, NV8280, and NV576 but should be included only in the NV8144. * The EM0894/SV0917 crosspoint card is included only in the lists of supported cards for the NV8140 and NV8144 but should also be included in the NV8280. * The EM0895/SV0917 crosspoint card is included in the lists of supported cards for the NV8140 and NV8144 but should also be included only in the NV8140. * The NV8280’s SM0820/SV1114 crosspoint card should be changed to SM0820/SV1115. * The EM0663/SV0872 monitor card should not be included in the list of supported cards for the NV8140. * There are six new cards to be included. | **Closed (Verified)** |
| **565** |  | Tally response from control card incorrect when using serial interface | Tally response from control card is incorrect when using serial interface.  Mike Kesti has replicated the bug and fixed it...awaiting PM to decide what version the fix will be included in.  10/11/2012 Michael's email  "Corrected issue with takes to TDM (MADI) video outputs that resulted in overlapping tally of effective audio and MADI sources.  Corrected bug that resulted in inaccurate sources reported in response to NVSP (serial) tally requests." | **Closed (Verified)** |
| **569** |  | Add Hybrid Support and New Cards for NV8140 | **New features to support NV8140:**     |  |  |  | | --- | --- | --- | | 8140 Disembedding input | EM0898 | SV1162 | | 8140 TDM input | EM0898 | SV1163 | | 8140 Fiber input (board needs to spin) | EM0892 | SV1169 | | 144X144 Hybrid XPT | EM0899 | SV1164 | | 144X144 Hybrid Redundant XPT | EM0900 | SV1164 | | 8140 HD Input | EM0887 | SV1159 | | Fiber Out | EM0697 | SV0977 | | HD Out | EM0785 | SV1180 | | **Closed (Verified)** |
| **570** |  | Add Third Party Protocols to EM0833 | Add Third Party Protocols to EM0833   * Leitch Pass Through * Pesa * Jupiter ESBus | **Closed (Verified)** |
| **573** |  | Add support for 23.976 PsF reference type | Sony Japan requires the router function with 23.976 PsF reference signal. This change was implemented as a new feature by Engineering and included in the 3.2 build. | **Closed (Verified)** |
| **582** |  | Expansion output card does not properly execute monitor takes in the Master frame | Expansion output card does not properly execute monitor takes in the Master frame nor does it execute expansion takes (master frame to the slave frame or from slave frame to master frame).  The bug was introduced in V2.2.0.2132 (SV0826-11) and was in all builds from V2.2.0.2132 to V3.1.4.       (V2.2.0, V2.2.1, V2.2.2, V3.0.0, V3.1.0, V3.1.1, V3.1.2, V3.1.3, and  V3.1.4)  **The bug is fixed in V3.2 by moving back to SV0826-10  a code fix will be done in V3.3 ---- See linked bug #582  for fix in V3.3 release**  **10/25/2012  Jeremy's email**  "The issue is present on an EM0787 running SV0826-11 code:  Expansion output card does not properly execute monitor takes in the Master frame nor does it execute expansion takes (master frame to the slave frame or from slave frame to master frame).  This bug is present in any RF that contains the SV0826-11 code (V2.2 up to but excluding V3.2)." | **Closed (Verified)** |

### Supported Hardware Matrix

A summary of the last five releases is show in the table below. The full Excel document is available from document control as Part Number RF0286-06

Title: NV8500 Supported Hardware Matrix

Part Number: RF0286-06, Revision A

Date: 11/12/2012

|  |  |  |  |  | **ECO18450** | **ECO18487** | **ECO18455** | **ECO18586** | **ECO18576** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  |  | **SV1052-32** | **SV1052-33** | **SV1052-34** | **SV1052-36** | **SV1052-35** |
|  |  |  |  |  | **Ver 3.1.1.2314** | **Ver 3.1.2.2355** | **Ver 3.1.3.2388** | **Ver 3.1.4.2418** | **Ver 3.2.0.2426** |
|  | **EM** | **SV1** | **SV2** | **Description** | **12-Jul-12** | **12-Aug-12** | **30-Aug-12** | **11-Oct-12** | **24-Oct-12** |
| **Control Cards** | EM0833 |  |  | Control Card Firmware | Jun 25 2012 12:14:19 | Jun 25 2012 12:14:19 | Jun 25 2012 12:14:19 | Oct 10 2012 17:07:40 | Oct 12 2012 13:47:55 |
|  | EM0833 | SV1033 |  | PLD, Board Revs: -00 | -10, REL 04/26/12 | -10, REL 04/26/12 | -10, REL 04/26/12 | -10, REL 04/26/12 | -12, REL 09/13/12 |
|  | EM0833 | SV1072 |  | PLD, Board Revs: -10,-20 | -10, REL 5/29/12 | -10, REL 5/29/12 | -10, REL 5/29/12 | -10, REL 5/29/12 | -12, REL 9/12/12 |
|  | EM0833 | SV1124 |  | PLD, Board Revs: -20,-10 |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
|  | **EM** | **SV1** | **SV2** | **Description** |  |  |  |  |  |
| **Input Cards** | EM0687 | SV0938 |  | NV8500 AES ASYNC 9 IN | -10, Build: 0 | -10, Build: 0 | -10, Build: 0 | -10, Build: 0 | -10, Build: 0 |
|  | EM0693 | SV0976 |  | NV8500 3Gig SDI 9 FIBER IN | -10, Build: 0 | -10, Build: 0 | -10, Build: 0 | -10, Build: 0 | -10, Build: 0 |
|  | EM0783 | SV0824 |  | NV8500 3Gig SDI 9 COAX IN | -12, Build: 0 | -12, Build: 0 | -12, Build: 0 | -12, Build: 0 | -12, Build: 0 |
|  | EM0783 | SV0960 |  | NV8144 3Gig SDI 9 COAX IN | -10, Build: 0 | -10, Build: 0 | -10, Build: 0 | -10, Build: 0 | -10, Build: 0 |
|  | EM0783 | SV1110 |  | NV8500 HD SDI 9 COAX IN | -11, Build: 0 | -11, Build: 0 | -11, Build: 0 | -11, Build: 0 | -11, Build: 0 |
|  | EM0783 | SV1111 |  | NV8144 HD SDI 9 COAX IN | -10, Build: 0 | -10, Build: 0 | -10, Build: 0 | -10, Build: 0 | -10, Build: 0 |
|  | EM0814 | SV0984 |  | NV8500 3Gig SDI DEM 8 COAX IN | -10, Build: 1 | -10, Build: 1 | -10, Build: 1 | -10, Build: 1 | -10, Build: 1 |
|  | EM0814 | SV1015 |  | NV8500 3Gig COAX 8 SDI / 1 TDM IN | -10, Build: 1 | -10, Build: 1 | -10, Build: 1 | -10, Build: 1 | -10, Build: 1 |
|  | EM0869 | SV1088 |  | NV8500 3Gig LR SDI DEM 8 COAX IN | -00, Build: 15 | -00, Build: 15 | -00, Build: 15 | -00, Build: 15 | -00, Build: 15 |
|  | EM0869 | SV1089 |  | NV8500 3Gig LR COAX 8 SDI / 1 TDM IN | -00, Build: 1 | -00, Build: 1 | -00, Build: 1 | -00, Build: 1 | -00, Build: 1 |
|  | EM0887 | SV1138 |  | NV8140 3Gig SDI 18 COAX IN | -01, Build: 1 | -01, Build: 1 | -01, Build: 1 | -01, Build: 1 | -01, Build: 1 |
|  | EM0887 | SV1159 |  | NV8140 HD SDI 18 COAX IN |  |  |  |  | -01, Build: 0 |
|  | EM0892 | SV1169 |  | NV8140 3Gig SDI 18 FIBER IN |  |  |  |  | -01, Build: 0 |
|  | EM0898 | SV1162 |  | NV8140 3Gig SDI DEM 18 COAX IN |  |  |  |  | -01, Build: 2 |
|  | EM0898 | SV1163 |  | NV8140 3Gig COAX 16 SDI / 2 TDM IN |  |  |  |  | -01, Build: 2 |
|  |  |  |  |  |  |  |  |  |  |
|  | **EM** | **SV1** | **SV2** | **Description** |  |  |  |  |  |
| **Output Cards** | EM0688 | SV0939 |  | NV8500 AES ASYNC 18 OUT | -10, Build: 0 | -10, Build: 0 | -10, Build: 0 | -10, Build: 0 | -10, Build: 0 |
|  | EM0692 | SV1113 |  | NV8500 3Gig SDI EXP FILLER OUT | -10, Build: 0 | -10, Build: 0 | -10, Build: 0 | -10, Build: 0 | -10, Build: 0 |
|  | EM0695 | SV0978 |  | NV8500 3Gig SDI 9 FIBER OUT+EXP | -11, Build: 0 | -11, Build: 0 | -11, Build: 0 | -11, Build: 0 | -11, Build: 0 |
|  | EM0697 | SV0977 |  | NV8500 3Gig SDI 18 FIBER OUT | -11, Build: 0 | -11, Build: 0 | -11, Build: 0 | -11, Build: 0 | -12, Build: 0 |
|  | EM0785 | SV0825 |  | NV8500 3Gig SDI 18 COAX OUT | -13, Build: 2 | -13, Build: 2 | -13, Build: 2 | -13, Build: 2 | -13, Build: 2 |
|  | EM0785 | SV0961 |  | NV8144 3Gig SDI 18 COAX OUT | -10, Build: 0 | -10, Build: 0 | -10, Build: 0 | -10, Build: 0 | -10, Build: 0 |
|  | EM0785 | SV1108 |  | NV8500 HD SDI 18 COAX OUT | -10, Build: 1 | -10, Build: 1 | -10, Build: 1 | -10, Build: 1 | -11, Build: 0 |
|  | EM0785 | SV1109 |  | NV8144 HD SDI 18 COAX OUT | -10, Build: 0 | -10, Build: 0 | -10, Build: 0 | -10, Build: 0 | -10, Build: 0 |
|  | EM0787 | SV0826 |  | NV8500 3Gig SDI 9 COAX OUT+EXP | -11, Build: 0 | -11, Build: 0 | -11, Build: 0 | -11, Build: 0 | -10, Build: 0 |
|  | EM0787 | SV1112 |  | NV8500 HD SDI 9 COAX OUT+EXP | -10, Build: 0 | -10, Build: 0 | -10, Build: 0 | -10, Build: 0 | -10, Build: 0 |
|  | EM0815 | SV1036 | SV1037 | NV8500 3Gig SDI EMB 16 COAX OUT | -16, Build: 0 (-16) | -17, Build: 0 (-17) | -17, Build: 0 (-17) | -17, Build: 0 (-17) | -17, Build: 0 (-17) |
|  | EM0815 | SV1056 | SV1057 | NV8500 3Gig COAX 16 SDI / 2 TDM OUT | -16, Build: 0 (-16) | -17, Build: 0 (-17) | -17, Build: 0 (-17) | -17, Build: 0 (-17) | -17, Build: 0 (-17) |
|  | EM0816 | SV1082 |  | NV8500 3Gig SDI EMB 8 COAX OUT+EXP | -06, Build: 0 | -07, Build: 0 | -07, Build: 0 | -07, Build: 0 | -07, Build: 0 |
|  | EM0816 | SV1083 |  | NV8500 3Gig COAX 8 SDI / 1 TDM OUT+EXP | -06, Build: 0 | -07, Build: 0 | -07, Build: 0 | -07, Build: 0 | -07, Build: 0 |
|  | EM0816 | SV1095 |  | 8500 8OP HYBRID OUT+EXP FILLER | -06, Build: 0 | -07, Build: 0 | -07, Build: 0 | -07, Build: 0 | -07, Build: 0 |
|  |  |  |  |  |  |  |  |  |  |
|  | **EM** | **SV1** | **SV2** | **Description** |  |  |  |  |  |
| **Crosspoint Cards** | EM0662 | SV0854 |  | NV8500 288x288 3Gig XPT STD | -12, Build: 1 | -12, Build: 1 | -12, Build: 1 | -12, Build: 1 | -12, Build: 1 |
|  | EM0676 | SV0935 |  | NV8500 288x288 3Gig RED XPT STD | -10, Build: 1 | -10, Build: 1 | -10, Build: 1 | -10, Build: 1 | -10, Build: 1 |
|  | EM0678 | SV0975 |  | NV8500 144x144 3Gig RED XPT STD | -10, Build: 0 | -10, Build: 0 | -10, Build: 0 | -10, Build: 0 | -10, Build: 0 |
|  | EM0799 | SV0917 |  | NV8500 144X144 3Gig XPT STD | -20, Build: 1 | -20, Build: 1 | -21, Build: 1 | -21, Build: 1 | -21, Build: 1 |
|  | EM0817 | SV0985 |  | NV8500 288X288 3Gig XPT HYBRID | -06, Build: 0 | -06, Build: 0 | -06, Build: 0 | -06, Build: 0 | -06, Build: 0 |
|  | EM0818 | SV1092 | SV1093 | NV8500 288X288 3Gig RED XPT HYBRID | -01, Build: 0 (-01) | -01, Build: 0 (-01) | -01, Build: 0 (-01) | -01, Build: 0 (-01) | -01, Build: 0 (-01) |
|  | EM0818 | SV1094 |  | NV8500 288X288 3Gig RED XPT HYBRID | -02, Build: 0 | -02, Build: 0 | -02, Build: 0 | -02, Build: 0 | -02, Build: 0 |
|  | EM0819 | SV1004 |  | NV8500 144X144 3Gig XPT HYBRID | -06, Build: 0 | -06, Build: 0 | -06, Build: 0 | -06, Build: 0 | -06, Build: 0 |
|  | EM0820 | SV1114 |  | NV8500 144X144 3Gig RED XPT HYBRID | -03, Build: 1 | -03, Build: 1 | -03, Build: 1 | -03, Build: 1 | -03, Build: 1 |
|  | EM0820 | SV1115 |  | NV8500 144X144 3Gig RED XPT HYBRID | -03, Build: 2 | -03, Build: 2 | -03, Build: 2 | -03, Build: 2 | -03, Build: 2 |
|  | EM0894 | SV0917 |  | NV8500 144X144 3Gig XPT STD | -20, Build: 1 | -20, Build: 1 | -21, Build: 1 | -21, Build: 1 | -21, Build: 1 |
|  | EM0895 | SV0917 |  | NV8140 144x144 3Gig RED XPT STD | -20, Build: 1 | -20, Build: 1 | -21, Build: 1 | -21, Build: 1 | -21, Build: 1 |
|  | EM0899 | SV1164 |  | NV8500 144X144 3Gig XPT HYBRID |  |  |  |  | -01, Build: 0 |
|  | EM0900 | SV1164 |  | NV8140 144X144 3Gig RED XPT HYBRID |  |  |  |  | -01, Build: 0 |
|  |  |  |  |  |  |  |  |  |  |
|  | **EM** | **SV1** | **SV2** | **Description** |  |  |  |  |  |
| **Monitor Cards** | EM0663 | SV0872 |  | NV8500 3Gig SDI 2 Monitor | -11, Build: 1 | -11, Build: 1 | -11, Build: 1 | -11, Build: 1 | -11, Build: 1 |
|  |  |  |  |  |  |  |  |  |  |
|  | **EM** | **SV1** | **SV2** | **Description** |  |  |  |  |  |
| **Other Devices** | MADI\_BOOT | SV0770 |  | Version 1.2.0.0 | -01 | -01 | -01 | -01 | '-01 |
|  | MADI\_APP | SV1073 |  | Version 6.1.0.58 | -06 | -06 | -06 | -06 | '-06 |
|  | MADI\_FROM\_AA | SV1066 |  | NV8900-AA->MADI | -04 | -04 | -04 | -04 | '-04 |
|  | MADI\_FROM\_AES | SV1066 |  | NV8900-AES(Coax)->MADI, NV8900-AES(Bal)->MADI | -02 | -02 | -02 | -02 | '-02 |
|  | MADI\_TO\_AA | SV1067 |  | NV8900-MADI->AA | -05 | -05 | -05 | -05 | '-05 |
|  | MADI\_TO\_AES | SV1067 |  | NV8900-MADI->AES(Coax), NV8900-MADI->AES(Bal) | -02 | -02 | -02 | -02 | '-02 |
|  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |

## Version 3.1.4 Changes on ECO#18586

### Summary for Version 3.1.4.2418

This patch release fixes only two bugs in the EM0833 Control Card application firmware. The two bug fixes are TestTrack issue #556: video outputs on a MADI card (for DHP), and issue #565: inaccurate sources reported in response to NVSP (serial) tally requests.

*This release was created to support the DHP install the week of 10/14/2012 at the NBA and serial operation at Microsoft.*

### Known Issues

The table below addresses the top open issues for this release. To see a full list of open issues, please consult with Miranda GVD SQA department.

| **Open Issue** | **TestTrack Defect ID** |
| --- | --- |
| MRC reported EM0833 offline after running Pesa Protocol tests from 9/02 to 9/06. EM0833 diagnostic LEDs report healthy state. | **261** |
| When connected to the Pesa controller, if the EM0833 is reset it does not come out of the reset state but appears to be caught in a “reset loop” state. Disconnecting the Pesa Control system from the EM0833 when it is in this “reset loop” state allows the EM0833 to complete the reset cycle. | **262** |
| NV8144---The Embedder Group Control feature is not functioning on the NV8144 frame, but is working on the NV8576+ frame (standalone mode). When a take is done to a null source in MRC (crosspoint Page), MRC and the console show the current source on the outputs is a null source, but the audio does not mute. | **521** |
| In TDM Test mode, the front blue LED will not stay extinguished, even when there are no path errors. Also, the XPT LED does not blink as it should to indicate test mode is active. The green TDM lock LEDs DO functions correctly, so the code may be used as is with the understanding of the blue and XPT LEDs. | **523** |
| During output card code update initiated from MRC the hybrid redundant XPT acts odd - the replace XPT buttons blink in a random order actually causing the RED XPT to replace the momentarily selected main XPT card. No video passes to the output during this state. The odd behavior only seems to occur during the "write file to card" portion of the update cycle. Easily repeatable. Jeremy is looking into it. | **537** |
| List and description of known but undocumented NV8500H application bugs whose fixes are to be deferred until after NV8500H Platform Software Version 3.2 is released.    1) Errors, changes, and additions to supported cards lists:   * The EM0783/SV0960 and EM0783/SV1111 input cards are included in the lists of supported cards for the NV8144, NV8280, NV8576 and NV8576Plus but should be included only in the NV8144. * The NV8140’s EM0898/SV984 input card should be changed to EM0898/SV1162. * The NV8140’s EM0898/SV1015 input card should be changed to EM0898/SV1163. * The EM0785/SV0961 and EM0785/SV1109 output cards are included in the lists of supported cards for the NV8144, NV8280, and NV576 but should be included only in the NV8144. * The EM0894/SV0917 crosspoint card is included only in the lists of supported cards for the NV8140 and NV8144 but should also be included in the NV8280. * The EM0895/SV0917 crosspoint card is included in the lists of supported cards for the NV8140 and NV8144 but should also be included only in the NV8140. * The NV8280’s SM0820/SV1114 crosspoint card should be changed to SM0820/SV1115. * The EM0663/SV0872 monitor card should not be included in the list of supported cards for the NV8140. * There are six new cards to be included. | **538** |
| Attempts to take a null source to destination 2304 of an NV8144’s audio matrix results in an invalid destination error. It is probable that other models’ will exhibit this bug when the null source is taken to their highest ordered audio matrix destination. | **539** |
| Embedded Group Control could cause issues with DHP | **540** |
| EM0815-10, EM0815-11, and EM0815-12: These assemblies must be JTAG programmed due to power supply noise issues preventing proper programming via control card. 1. Subsequent versions may be programmed via control card if this or later version has already been loaded. This issue is listed as one of the known issues of the 3.1.1 release. This issue has been added so a defect number can be referenced for tracking | **541** |
| EM0894 Crosspoint Card does not fit into some slots of the NV8280 Frame. | **542** |

### Special Notes

***Use MRC Version 3.0.1.196 or higher to support and upgrade NV8500 Hybrid firmware V3.1.4***

MRC Version 3.0.1.196 can be found on ECO 18538.

### Errata Defects and/or Features fixed or addressed for Version 3.1.4

| **Test Track Defect ID** | **CRM Defect ID** | **Defect/Feature Description** | **Additional Detail** | **Status of Defect/Feature** |
| --- | --- | --- | --- | --- |
| **556** | 001-00-008980 | The control card should only report valid MADI destinations | MADI output card reports invalid destinations as valid. The MADI output card has 128 valid audio destinations that are valid and 128 audio destinations that are invalid. Currently the MADI output cards report all 256 destinations as valid. This seems to be creating a problem with DHP at NBA. Incorrect valid audio destinations have been duplicated in the TS lab and shown to Engineering. | Fixed – Needs final verification by Customer Service at NBA. |
| **565** |  | Tally response from control card incorrect when using serial interface |  | Fixed – Verified by QA |

### Supported Hardware Matrix



## Version 3.1.3 Changes on ECO#18455

### Summary

*Version 3.1.3 is a full production release.*

This general release brings forward all features and bug fixes that have been made since v1.5 that have been included in previous patch/beta releases. The feature list includes but is not limited to: IOXM status reporting, ANC Preservation, Effective Status, TDM muting on control card change over, Get Changes, and Embedder Group Control.

Version 3.1.3 is a full production release building on the fixes from version 1.5 to version 3.1.2 This version is nearly identical to version 3.1.2 patch release. Version 3.1.3 fixes and issue (536) with crosspoint cards powering up before the control card resulting in signals not being routed.

### Known Issues

There are currently about 60 known issues and feature requests for the NV8500 router. The table below addresses the top open issues for this release. To see a full list of open issues, please consult with Miranda GVD SQA department.

|  |  |
| --- | --- |
| **Open Issue** | **TestTrack Defect ID** |
| MRC reported EM0833 offline after running Pesa Protocol tests from 9/02 to 9/06. EM0833 diagnostic LEDs report healthy state. | **261** |
| When connected to the Pesa controller, if the EM0833 is reset it does not come out of the reset state but appears to be caught in a “reset loop” state. Disconnecting the Pesa Control system from the EM0833 when it is in this “reset loop” state allows the EM0833 to complete the reset cycle. | **262** |
| NV8144---The Embedder Group Control feature is not functioning on the NV8144 frame, but is working on the NV8576+ frame (standalone mode). When a take is done to a null source in MRC (crosspoint Page), MRC and the console show the current source on the outputs is a null source, but the audio does not mute. | **521** |
| In TDM Test mode, the front blue LED will not stay extinguished, even when there are no path errors. Also, the XPT LED does not blink as it should to indicate test mode is active. The green TDM lock LEDs DO functions correctly, so the code may be used as is with the understanding of the blue and XPT LEDs. | **523** |
| During output card code update initiated from MRC the hybrid redundant XPT acts odd - the replace XPT buttons blink in a random order actually causing the RED XPT to replace the momentarily selected main XPT card. No video passes to the output during this state. The odd behavior only seems to occur during the "write file to card" portion of the update cycle. Easily repeatable. Jeremy is looking into it. | **537** |

|  |  |
| --- | --- |
| **Open Issue** | **TestTrack Defect ID** |
| List and description of known but undocumented NV8500H application bugs whose fixes are to be deferred until after NV8500H Platform Software Version 3.2 is released.    1) Errors, changes, and additions to supported cards lists:   * The EM0783/SV0960 and EM0783/SV1111 input cards are included in the lists of supported cards for the NV8144, NV8280, NV8576 and NV8576Plus but should be included only in the NV8144. * The NV8140’s EM0898/SV984 input card should be changed to EM0898/SV1162. * The NV8140’s EM0898/SV1015 input card should be changed to EM0898/SV1163. * The EM0785/SV0961 and EM0785/SV1109 output cards are included in the lists of supported cards for the NV8144, NV8280, and NV576 but should be included only in the NV8144. * The EM0894/SV0917 crosspoint card is included only in the lists of supported cards for the NV8140 and NV8144 but should also be included in the NV8280. * The EM0895/SV0917 crosspoint card is included in the lists of supported cards for the NV8140 and NV8144 but should also be included only in the NV8140. * The NV8280’s SM0820/SV1114 crosspoint card should be changed to SM0820/SV1115. * The EM0663/SV0872 monitor card should not be included in the list of supported cards for the NV8140. * There are six new cards to be included. | **538** |
| Attempts to take a null source to destination 2304 of an NV8144’s audio matrix results in an invalid destination error. It is probable that other models’ will exhibit this bug when the null source is taken to their highest ordered audio matrix destination. | **539** |
| Embedded Group Control could cause issues with DHP | **540** |
| EM0815-10, EM0815-11, and EM0815-12: These assemblies must be JTAG programmed due to power supply noise issues preventing proper programming via control card. 1. Subsequent versions may be programmed via control card if this or later version has already been loaded. This issue is listed as one of the known issues of the 3.1.1 release. This issue has been added so a defect number can be referenced for tracking | **541** |
| EM0894 Crosspoint Card does not fit into some slots of the NV8280 Frame. | **542** |
| Tally response from control card is incorrect when using serial interface. The issue will be fixed in version 3.2. | **565** |

### Special Notes

***Use MRC Version 3.0.1.196 or higher to support and upgrade NV8500 Hybrid firmware V3.1.3***

MRC Version 3.0.1.196 can be found on ECO 18538.

This build a full production release and is intended for general distribution. This build includes all control card protocols which have not been tested by QA. Therefore, except for the Nvision Protocol all other Marketing Level protocol part numbers are marked at the BREL release status.

### Errata Defects and/or Features fixed or addressed for Version 3.1.3.2288

| **Test Track Defect ID** | **Defect/Feature Description** | **Additional Detail** | **Status of Defect/Feature** |
| --- | --- | --- | --- |
| **507** | NV8576+ frame---In MRC---on the module types page there is a error reported for non-expansion output cards ( NV8500 3Gig SDI EMB 8 COAX OUT+EXP (EM0816) & NV8500 3Gig COAX 8 SDI / 1 TDM OUT+EXP (EM08)16) . MRC "view Change Report", reports "The following module is not supported by the control card firmware: " |  | Closed. As designed. |
| **536** | The 144x144 std xpt board will not pass video if it is powered up before a control card is active. The bug was introduced is in v3.1.2. | EM0799-02, EM0894-00 and EM0895-00. | Closed. Fixed |

## Version 3.1.2 Changes on ECO# 18487

### Summary

*Version 3.1.2 is a patch release.*

Version 3.1.2 added MADI muting during control card failover.  It also fixes several issues that could cause audio artifacts on hybrid outputs that were introduced in v3.1.0.  All fixes changes made in this release are for hybrid output cards.

### Known Issues

There are currently about 60 known issues and feature requests for the NV8500 router. The table below addresses the top open issues for this release. To see a full list of open issues, please consult with Miranda GVD SQA department.

|  |  |
| --- | --- |
| **Open Issue** | **TestTrack Defect ID** |
| In the NV8576+ frame---In MRC---on the module types page there is a error reported for non-expansion output cards ( NV8500 3Gig SDI EMB 8 COAX OUT+EXP (EM0816) & NV8500 3Gig COAX 8 SDI / 1 TDM OUT+EXP (EM08)16) . MRC "view Change Report", reports "The following module is not supported by the control card firmware: ". Note: The issue is in the app. This only affects NV8576+ frames. | **507** |
| List and description of known but undocumented NV8500H application bugs whose fixes are to be deferred until after NV8500H Platform Software version 3.1.3 is released.    1)      Errors, changes, and additions to supported cards lists:   * The EM0783/SV0960 and EM0783/SV1111 input cards are included in the lists of supported cards for the NV8144, NV8280, NV8576 and NV8576Plus but should be included only in the NV8144. * The NV8140’s EM0898/SV984 input card should be changed to EM0898/SV1162. * The NV8140’s EM0898/SV1015 input card should be changed to EM0898/SV1163. * The EM0785/SV0961 and EM0785/SV1109 output cards are included in the lists of supported cards for the NV8144, NV8280, and NV576 but should be included only in the NV8144. * The EM0894/SV0917 crosspoint card is included only in the lists of supported cards for the NV8140 and NV8144 but should also be included in the NV8280. * The EM0895/SV0917 crosspoint card is included in the lists of supported cards for the NV8140 and NV8144 but should also be included only in the NV8140. * The NV8280’s SM0820/SV1114 crosspoint card should be changed to SM0820/SV1115. * The EM0663/SV0872 monitor card should not be included in the list of supported cards for the NV8140. * There are six new cards to be included. | **538** |
| Attempts to take a null source to destination 2304 of an NV8144’s audio matrix results in an invalid destination error. It is probable that other models’ will exhibit this bug when the null source is taken to their highest ordered audio matrix destination. | **539** |
| Embedded Group Control could cause issues with DHP | **540** |
| EM0815-10, EM0815-11, EM0815-12: These assemblies must be JTAG programmed due to power supply noise issues preventing proper programming via control card. Subsequent versions may be programmed via control card if this or later version has already been loaded. | **541** |
| EM0894 Crosspoint Card does not fit into some slots of the NV8280 Frame. | **542** |

### Special Notes

***Use MRC Version 3.0.1.184 or higher to support and upgrade NV8500 Hybrid firmware V3.1.2***

This is a C Release (Patch Release) and is not intended for general distribution.

### Customer Impact

* TVN – Germany
* VRT – Belgium
* TV3 – Spain
* LDS
* NOVA

### Errata Defects and/or Features fixed or addressed for Version 3.1.2.2255

The defects listed as “Fixed” in the “Status of Defect/Feature column” have been tested by Engineering but not fully qualified by SQA. Full verification by SQA is listed as “Verified”.

| **Test Track Defect ID** | **Defect/Feature Description** | **Additional Detail** | **Status of Defect/Feature** |
| --- | --- | --- | --- |
| **483** | When updating EM0833 control card from 1.x to 3.1 there is an error which says, ‘(Warning) setting of default value for "Module Types" failed’. |  | User MRC version 3.0.0.184 will fix this issue. |
| **534** | Added mute functions to MADI version of Hybrid Output | Introduced in Version 3.1.0.2282 release of RF file - see SP0165-16 | Added to Version 3.1.2 |
| **533** | IOXM reboot issue in RF version 3.1.0 and 3.1.1 | Introduced in Version 3.1.0.2282 release of RF file - see SP0165-16 | Fixed |
| **532** | Possible loss of output on Hybrid Output cards | Fixed a Transmitter PLL reset issue which could cause an output to go away. | Fixed |
| **531** | Noise in Audio | TDM Read counter did not always roll over properly, causing too few audio samples to be written to outputs | Fixed |
| **530** | Fixed bug that could cause ancillary data, particularly for SD, to not be properly preserved, and also cause bad data to be inserted into hanc | This could be noticed as occasional or constant random “pops” in the audio. | Fixed |
| **529** | Issue with the audio sample distribution | Fixed a bug in the audio sample distribution that would allow the embedders to make FIFO adjustments every video frame of NTSC, instead of once every 5 frames. This may have audible as a constant clicking sound in the audio. | Fixed |
| **528** | Lowered bandwidth of video pll’s, which reduces timing jitter | This can be seen when using video sources that have excessive timing (low-frequency) jitter. | Fixed |
| **527** | Shortens TDM lock time when control card (in a single control card system) is rebooted. | Previously it would take about 35 seconds from the time the control card finished booting. Now it takes about 2 seconds. | Fixed |
| **526** | Audio muting improved during Control Card change over |  | Fixed |

## Version 3.1.1 Changes on ECO# 18450

### Summary

**New:**

Included updated NV8900 Firmware from ECO 18255 into RF file:

*“Released new NV8900 MADI to AA software to change status LEDs. MADl status LED changes from Red-Orange to Amber and Channel status LEDs change to Green for present and off for not present. Software also changed to improve MADI input cable length by adding firmware deglitch of input”.*

**Fixes**

Corrected a bug in the Hybrid Embedder Control feature. A partition’s null source can be configured such that it is a source that appears to originate from a standard input card. If that source was taken in the audio matrix, subsequent tally reported the invalid source status flag.

### Known Issues

1. NV8576+ frame---In MRC---on the module types page there is a error reported for non-expansion output cards ( NV8500 3Gig SDI EMB 8 COAX OUT+EXP (EM0816) & NV8500 3Gig COAX 8 SDI / 1 TDM OUT+EXP (EM08)16) . MRC "view Change Report", reports "**The following module is not supported by the control card firmware:** ". *Note: The issue is in the app. This only affects NV8576+ frames.*
2. EGC could cause issues with DHP.
3. When updating EM0833 control card from 1.x to 3.1 there is an error which says, ‘(Warning) setting of default value for "Module Types" failed’, this is to be expected and will be fixed in a future release
4. EM0815-10, EM0815-11, EM0815-12: These assemblies must be JTAG programmed due to power supply noise issues preventing proper programming via control card. Subsequent versions may be programmed via control card if this or later version has already been loaded.

### Special Notes

***Use MRC Version 3.0 to support and upgrade NV8500 Hybrid firmware V3.1.1***

This is a C Release (Patch Release) and is not intended for general distribution.

### Customer Impact

This release address issues for the following customers:

*TVN*

### Errata Defects and/or Features fixed and/or addressed –– Version 3.1.1.2314

|  |  |  |  |
| --- | --- | --- | --- |
| **Test Track Defect ID** | **Defect/Feature Description** | **Additional Detail** | **Status of Defect/Feature** |
| **491** | A Null Source take may report as source="Out of Range" and Destination="Invalid Src" in MRC | The take is successful but the tally (getOutputStatus 0x0000052) reports an output status of invalid source.  MRC does no translation of the invalid source error.  What you see is directly from the Control Card. | Corrected a bug that resulted in improper tally of invalid source when a Null source that would otherwise map to a standard input card is taken in the audio matrix. |

## Version 3.1.0 changes released on ECO #18298

### Summary

**Version 3.1.0 is a patch release.**

**Features:**

Support for NV8140 standard IO using Hybrid control cards

Embedder Group Control (EGC) through use of a null source (TVN – Germany)

Muting of outputs during control card changeover (VRT – Belgium)

**Fixes:**

Hybrid embedder FIFO length has changed to try and address issue with SD embedder outputs intermittently dropping out (TV3 – Spain)

The errata list below details other issues or features which have been included in this release.

### Known Issues

1. Effective status is broken on MADI input cards.
2. EGC could cause issues with DHP.
3. When updating EM0833 control card from 1.x to 3.1 there is an error which says, ‘(Warning) setting of default value for "Module Types" failed’, this is to be expected and will be fixed in a future release
4. EM0815-10, EM0815-11, EM0815-12: These assemblies must be JTAG programmed due to power supply noise issues preventing proper programming via control card. Subsequent versions may be programmed via control card if this or later version has already been loaded.

### Special Notes

***Use MRC Version 3.0 to support and upgrade NV8500 Hybrid firmware V3.1.***

This is a C Release (Patch Release) and is not intended for general distribution.

### Customer Impact

This release address issues for the following customers:

* TVN – Germany
* VRT – Belgium
* TV3 – Spain

### Errata Defects and/or Features fixed and/or addressed –– Version 3.1.0.2282

| **Test Track Defect ID** | **Defect/Feature Description** | **Additional Detail** | **Status of Defect/Feature** |
| --- | --- | --- | --- |
| **206** | Short burst of audio noise upon CC reset | Kevin's latest round of improvements helped allot - but still get a short (maybe 1/2 second) burst of audio noise upon CC reset, especially when the reset is initiated from MRC (a soft reset).      TS 6/21/2012  The final fix for muting was added to release V3.1 This added muting to the input and XPT code. The previous release V2.2.2 added muting to only the output card code. | |  |  | | --- | --- | |  | Verified 6/21/02012 ---Fixed | |
| **428** | Audio noise on outputs during control card failover | During control card failover several seconds of audio noise is heard on the embedded (and probably MADI) outputs.  NV8576 and NV8576+ the noise is very audible and lasts several seconds  NV8144 and NV8280 the noise level is lower and not as noticeable...but still present...    Appears to be related to loss of and relock to the TDM clocks... | |  |  | | --- | --- | |  | Verified on a NV8280  Version 3.1..0.2266 | |
| **477** | A properly configured monitor card caused a IOXM Status alarm and a Major Alarm in MRC | A properly configured monitor card caused a IOXM Status alarm and a Major alarm in MRC. It also caused the "View Change Report" button to turn red.    At the console, an " ioxTypeErrShow" report the monitor cards as configured, but not present. | |  |  | | --- | --- | |  | Verified 6/19/2012....Fixed | |
| **481** | 144x144 redundant XPT reports an unhealthy status in MRC Module Status Page | In a NV8280, the 144x144 redundant XPT reports an unhealthy status in MRC Module Status Page. MRC report a 2F error.    This has been reproduced with a second Redxpt card in a second NV8280 frame. | Verified 6/19/2012....Fixed |
| **489** | When the HRC is made active for 7 or 8, the audio portion of the signal is lost | With the XPT cards in slots 7 & 8. with a valid audio and video signal routed through each of the XPTs (and observing the output on a video monitor), select the HRC to be active for either XPT #7 or #8. The video signal is ok, but the audio signal is gone. force the  the HRC back into standby mode and the audio returns.    **note**: signal testing on XPT slots 1 & 2 found no issues | |  |  | | --- | --- | |  | Verified 6/19/2012....Fixed | |
| **496** | Add the Audio Embedder Group Control (EGC) | Add the Audio Embedder Group Control (EGC) function----This function will allow the user to turn off an audio group by configuring a "Null Source" and routing the Null source to all four channels in a group. | |  |  | | --- | --- | |  | Verified 6/18/2012---Passed | |
| **497** | Add NV8140 Support with EM0833 Control card | Add NV8140 Support with EM0833 Control card.  ***No Hybrid support.*** |  |
| **498** | SD embedder outputs Intermittently dropped out | SD embedder outputs Intermittently dropped out---Reported at TV3-Spain    Note---Hardware Engineering was unable to recreate bug.  They have done a fix to the FIFO that may fix the issue.    Fix ECO #18298.......   SV1036.......   • New FIFOs for the video receivers (hopefully) fix the problem of SD outputs failing. Problem has been reported in the field but not duplicated in the lab, so no guarantee the problem is fixed. | Note---Hardware Engineering was unable to recreate bug. They have done a fix to the FIFO that may fix the issue.  Unable to test since we cannot reproduce the issue |