

## UHD-3901

### RELEASE HISTORY

Upgrade Package	Comprising:		Release Date	User Manual for this release (Grass Valley document #)
	Firmware Version	Software Version		
<a href="#">1.2.0</a>	1.2.0.267	1.2.0	2018.06.22	M3064-9900-120
<a href="#">1.1.0</a>	1.1.0.258	1.1.0	2017.10.16	M3064-9900-100
<a href="#">1.0.2</a>	1.0.2.245	1.0.2	2017.08.08	M3064-9900-100
<a href="#">1.0.1</a>	1.0.1.244	1.0.1	2017.06.21	M3064-9900-100

**NOTES:** The iControl compatibilities shown below are officially supported by Grass Valley. Earlier versions may also work, with bugs or limited features.

The Reference number (Ref#) given for each feature or bug in these Release Notes refers to internal Grass Valley documentation.

## UPGRADE PACKAGE: 1.2.0

Firmware version: [1.2.0.267](#)

Release date: [2018-06-18](#)

iControl compatibility: [7.20+](#)

iControl Solo compatibility: [7.20+](#)

RCP-200 compatibility: [Not supported](#)

Hardware compatibility: [This upgrade package applies to all existing hardware assemblies.](#)

Release type: [Production](#)

## ENHANCEMENTS & NEW FEATURES

Ref #	Description
UHDPROC-746	<p><b>HDR Processing tables</b></p> <p>All HDR processing tables have been updated to the latest GV refinements derived from exhaustive field trials in HLG and PQ. These are the same tables as released on the XIP-3901. The terminology has also been changed to be in sync across GV products and industry standards.</p>

## BUGS FIXED IN THIS RELEASE

Ref #	Description
DSERV-2680	<p><b>UHD-3901 Horizontal Video Timing slider is not behaving as specified</b></p> <p>The Horizontal sliders in the Video Timing tab of both Channel 1 and Channel 2 were not working correctly where increments should have been in steps of microseconds instead of pixels.</p>

## KNOWN BUGS & LIMITATIONS

Ref #	Description
DSERV-2736	<p><b>No controls in Video Processing tab after downgrading from v1.2.0 to v1.1.0.</b></p> <p>To solve this problem, you have to downgrade the card to version 1.0.2 and then upgrade to version 1.1.0.</p>
UHDPROC-443	<p><b>No indication the HDR option is enabled after key entry in the local menu.</b></p> <p>After entering a valid HDR option key in the card's local menu and confirming the entry with the "SEL" navigation button, the display still indicates HDR OFF. The iControl user interface will show that the HDR option is enabled.</p> <p>To verify that the HDR option is enabled in the local menu when it displays HDR OFF after entering the key, press the "ESC" navigation button and then "SEL" to enter the OPTION menu again. If the key is valid, HDR ON will be displayed.</p>
UHDPROC-724	<p><b>With minimum delay enabled, the card cannot generate a test tone at the output.</b></p> <p>When the minimum delay mode is enabled, the audio frame sync is bypassed but it is responsible for generating the test tone. If the test pattern generator is enabled in minimum delay, there will be no test tone at the output.</p>
UHDPROC-714	<p><b>With minimum delay enabled, 3G/SDI Link Format must be the same as input.</b></p> <p>When the minimum delay mode is enabled, the card behaves like a wire. Therefore the 3G/SDI Link Format of the output should be set to that of the input format. For example if the 3G input is Level A then the output should be set to Level A too. Otherwise, the output video signal is not valid.</p>
UHDPROC-639	<p><b>Output metadata during 3G-B may contain packets on link B (this limitation does not include audio processing).</b></p> <p>Some incoming metadata packets, other than audio, may pass through to the output and may reside on Quad Link 3G-B link B. This may occur only during 720p/1080i/3G-A inputs.</p>
UHDPROC-640	<p><b>Output metadata during 3G-B may not reside on proper line in link A (this limitation does not include audio processing).</b></p> <p>Some incoming metadata packets, other than audio, may pass through to the output and may reside on an incorrect line within Quad Link 3G-B link A. This may occur only during 720p/1080i/3G-A inputs.</p>

UHDPROC-641	<p><b>Metadata conversion may not be properly processed.</b></p> <p>Incoming metadata is passed through to the output without any manipulations. This may result in a non-conforming conversion.</p> <p>Ex : CEA-708B packets during 1080i to 4K conversions.</p>
UHDPROC-576	<p><b>Output alignment to reference may vary slightly.</b></p> <p>When changing the reference source or unplugging/plugging the selected reference, the SDI output alignment to the reference may vary by a few pixels.</p>
UHDPROC-649	<p><b>High Dynamic Range (HDR) conversions from/to HLG or SLog3 standard.</b></p> <p>Any conversion from/to HLG or SLog3 dynamic range standard should be considered as a monitoring conversion since the "creative content" may not be guaranteed.</p>
UHDPROC-638	<p><b>No error detected for 3G-Level B DS sources.</b></p> <p>When inserting 3G-Level B Dual Stream sources, the card reads this as a Dual Link source. When this occurs, the card does not detect an error, and the output is corrupt.</p>
UHDPROC-643	<p><b>Cannot use only path #2 when the selected reference = Input 1</b></p> <p>Since the reference selection only offers "Input 1", the card needs to have a valid signal connected to input 1 when the reference selection = Input 1 in order to have a valid output 2.</p>
UHDPROC-633	<p><b>Glitches in the test pattern active video on input format changes</b></p> <p>When the test pattern is enabled, there are glitches in the active video only (no TRS errors) when the input format is changed.</p>

## UPGRADE PACKAGE: 1.1.0

Firmware version: [1.1.0.258](#)

Release date: [2017-10-16](#)

iControl compatibility: [7.20+](#)

iControl Solo compatibility: [7.20+](#)

RCP-200 compatibility: [Not supported](#)

Hardware compatibility: [This upgrade package applies to all existing hardware assemblies.](#)

Release type: [Production](#)

## ENHANCEMENTS & NEW FEATURES

Ref #	Description
UHDPROC-683	<p><b>3G Output Format</b></p> <p>The name of the UHD-4K Mapping parameter is changed to Output Format. In addition to UHD-4K 2-Sample Interleave and UHD-4K Quad Split, there is a third output format called 3G. In this operation mode, all supported input formats are converted to a 3G output format.</p>
UHDPROC-690	<p><b>Additional Dynamic Range Presets</b></p> <p>SDR to HLG (BT.2100), HLG (BT.2100) to SDR and PQ (BT.2100) to SDR presets are added.</p>
UHDPROC-691	<p><b>Minimum Delay in 3G to 3G operation mode</b></p> <p>The Minimum Delay allows a low latency signal path. This mode is available when the Output Format is set to 3G. Once enabled, the input signal format must be 3G.</p>

## BUGS FIXED IN THIS RELEASE

Ref #	Description
UHDPROC-703	<p><b>The 2-Sample Interleave output format does not conform to SMPTE 425-5:2015</b></p> <p>When the Output Format is set to 2-Sample Interleave and the VPID Standard is set to Auto, the VPID Colorimetry information does not indicate UHDTV (SMPTE 2036-1, equivalent to ITU-R BT.2020) when the Color Space Conversion is set to Rec.709 to BT.2020.</p>

## KNOWN BUGS & LIMITATIONS

Ref #	Description
UHDPROC-443	<p><b>No indication the HDR option is enabled after key entry in the local menu.</b></p> <p>After entering a valid HDR option key in the card's local menu and confirming the entry with the "SEL" navigation button, the display still indicates HDR OFF. The iControl user interface will show that the HDR option is enabled.</p> <p>To verify that the HDR option is enabled in the local menu when it displays HDR OFF after entering the key, press the "ESC" navigation button and then "SEL" to enter the OPTION menu again. If the key is valid, HDR ON will be displayed.</p>
UHDPROC-724	<p><b>With minimum delay enabled, the card cannot generate a test tone at the output.</b></p> <p>When the minimum delay mode is enabled, the audio frame sync is bypassed but it is responsible for generating the test tone. If the test pattern generator is enabled in minimum delay, there will be no test tone at the output.</p>
UHDPROC-714	<p><b>With minimum delay enabled, 3G/SDI Link Format must be the same as input.</b></p> <p>When the minimum delay mode is enabled, the card behaves like a wire. Therefore the 3G/SDI Link Format of the output should be set to that of the input format. For example if the 3G input is Level A then the output should be set to Level A too. Otherwise, the output video signal is not valid.</p>
UHDPROC-639	<p><b>Output metadata during 3G-B may contain packets on link B (this limitation does not include audio processing).</b></p> <p>Some incoming metadata packets, other than audio, may pass through to the output and may reside on 4K 3G-B link B. This may occur only during 720p/1080i/3G-A inputs.</p>
UHDPROC-640	<p><b>Output metadata during 3G-B may not reside on proper line in link A (this limitation does not include audio processing).</b></p> <p>Some incoming metadata packets, other than audio, may pass through to the output and may reside on an incorrect line within 4K 3G-B link A. This may occur only during 720p/1080i/3G-A inputs.</p>
UHDPROC-641	<p><b>Metadata conversion may not be properly processed.</b></p> <p>Incoming metadata is passed through to the output without any manipulations. This may result in a non-conforming conversion.</p>

	Ex : CEA-708B packets during 1080i to 4K conversions.
UHDPROC-576	<b>Output alignment to reference may vary slightly.</b> When changing the reference source or unplugging/plugging the selected reference, the SDI output alignment to the reference may vary by a few pixels.
UHDPROC-649	<b>High Dynamic Range (HDR) conversions from/to HLG or SLog3 standard.</b> Any conversion from/to HLG or SLog3 dynamic range standard should be considered as a monitoring conversion since the "creative content" may not be guaranteed.
UHDPROC-638	<b>No error detected for 3G-Level B DS sources.</b> When inserting 3G-Level B Dual Stream sources, the card reads this as a Dual Link source. When this occurs, the card does not detect an error, and the output is corrupt.
UHDPROC-643	<b>Cannot use only path #2 when the selected reference = Input 1</b> Since the reference selection only offers "Input 1", the card needs to have a valid signal connected to input 1 when the reference selection = Input 1 in order to have a valid output 2.
UHDPROC-633	<b>Glitches in the test pattern active video on input format changes</b> When the test pattern is enabled, there are glitches in the active video only (no TRS errors) when the input format is changed.

## UPGRADE PACKAGE: 1.0.2

Firmware version: [1.0.2.245](#)

Release date: [2017-08-08](#)

iControl compatibility: [7.20+](#)

iControl Solo compatibility: [7.20+](#)

RCP-200 compatibility: [Not supported](#)

Hardware compatibility: [This upgrade package applies to all existing hardware assemblies.](#)

Release type: [Production](#)

## BUGS FIXED IN THIS RELEASE

Ref #	Description
UHDPROC-678	<b>HDR tables not properly loaded</b> All HDR tables, except for bypass, were not properly loaded. This is due to different headers between the bypass table and the rest of the tables.
UHDPROC-677	<b>YCbCr wrap-around when using HDR processing</b> A wrap-around issue has been observed with several HDR tables and with a SMPTE color bars.
UHDPROC-676	<b>Incorrect VPID values on the chroma (C) channel with 4K mapping = 2-Sample Interleave and VPID Standard = Auto</b> Bit-6 in byte-4 of the VPID was not properly set on the chroma (C) channel causing the Phabrix QX to black the active picture.

## KNOWN BUGS & LIMITATIONS

Ref #	Description
UHDPROC-639	<b>Output metadata during 3G-B may contain packets on link B (this limitation does not include audio processing).</b> Some incoming metadata packets, other than audio, may pass through to the output and may reside on 4K 3G-B link B. This may occur only during 720p/1080i/3G-A inputs.



UHDPROC-640	<p><b>Output metadata during 3G-B may not reside on proper line in link A (this limitation does not include audio processing).</b></p> <p>Some incoming metadata packets, other than audio, may pass through to the output and may reside on an incorrect line within 4K 3G-B link A. This may occur only during 720p/1080i/3G-A inputs.</p>
UHDPROC-641	<p><b>Metadata conversion may not be properly processed.</b></p> <p>Incoming metadata is passed through to the output without any manipulations. This may result in a non-conforming conversion.</p> <p>Ex : CEA-708B packets during 1080i to 4K conversions.</p>
UHDPROC-576	<p><b>Output alignment to reference may vary slightly.</b></p> <p>When changing the reference source or unplugging/plugging the selected reference, the SDI output alignment to the reference may vary by a few pixels.</p>
UHDPROC-649	<p><b>High Dynamic Range (HDR) conversions from/to HLG or SLog3 standard.</b></p> <p>Any conversion from/to HLG or SLog3 dynamic range standard should be considered as a monitoring conversion since the "creative content" may not be guaranteed.</p>
UHDPROC-638	<p><b>No error detected for 3G-Level B DS sources.</b></p> <p>When inserting 3G-Level B Dual Stream sources, the card reads this as a Dual Link source. When this occurs, the card does not detect an error, and the output is corrupt.</p>
UHDPROC-643	<p><b>Cannot use only path #2 when the selected reference = Input 1</b></p> <p>Since the reference selection only offers "Input 1", the card needs to have a valid signal connected to input 1 when the reference selection = Input 1 in order to have a valid output 2.</p>
UHDPROC-633	<p><b>Glitches in the test pattern active video on input format changes</b></p> <p>When the test pattern is enabled, there are glitches in the active video only (no TRS errors) when the input format is changed.</p>

## UPGRADE PACKAGE: 1.0.1

Firmware version: [1.0.1.244](#)

Release date: [2017-06-21](#)

iControl compatibility: [7.20+](#)

iControl Solo compatibility: [7.20+](#)

RCP-200 compatibility: [Not supported](#)

Hardware compatibility: [This upgrade package applies to all existing hardware assemblies.](#)

Release type: [Production](#)

## KNOWN BUGS & LIMITATIONS

Ref #	Description
UHDPROC-639	<p><b>Output metadata during 3G-B may contain packets on link B (this limitation does not include audio processing).</b></p> <p>Some incoming metadata packets, other than audio, may pass through to the output and may reside on 4K 3G-B link B. This may occur only during 720p/1080i/3G-A inputs.</p>
UHDPROC-640	<p><b>Output metadata during 3G-B may not reside on proper line in link A (this limitation does not include audio processing).</b></p> <p>Some incoming metadata packets, other than audio, may pass through to the output and may reside on an incorrect line within 4K 3G-B link A. This may occur only during 720p/1080i/3G-A inputs.</p>
UHDPROC-641	<p><b>Metadata conversion may not be properly processed.</b></p> <p>Incoming metadata is passed through to the output without any manipulations. This may result in a non-conforming conversion.</p> <p>Ex : CEA-708B packets during 1080i to 4K conversions.</p>
UHDPROC-576	<p><b>Output alignment to reference may vary slightly.</b></p> <p>When changing the reference source or unplugging/plugging the selected reference, the SDI output alignment to the reference may vary by a few pixels.</p>
UHDPROC-649	<p><b>High Dynamic Range (HDR) conversions from/to HLG or SLog3 standard.</b></p> <p>Any conversion from/to HLG or SLog3 dynamic range standard should be considered as a</p>

	monitoring conversion since the “creative content” may not be guaranteed.
UHDPROC-638	<p><b>No error detected for 3G-Level B DS sources.</b></p> <p>When inserting 3G-Level B Dual Stream sources, the card reads this as a Dual Link source. When this occurs, the card does not detect an error, and the output is corrupt.</p>
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UHDPROC-633	<p><b>Glitches in the test pattern active video on input format changes</b></p> <p>When the test pattern is enabled, there are glitches in the active video only (no TRS errors) when the input format is changed.</p>