



grass valley

A **BELDEN** BRAND

GV NODE

IP AGGREGATION, PROCESSING AND EDGE ROUTING PLATFORM

Release Notes

M6103-9803-125

2016-12-23

www.grassvalley.com

Release Notes for GV Node v1.2.5

The Release Notes for the GV Node comprise individual release notes for these GV Node components:

GV Node Component	Current Release	Release Date
CPU-ETH3 Frame Controller	1.0.5	2016-07-19
CPU-REF Frame Reference Module	1.0.4	2016-06-15
IFM-2T Fabric Module	1.2.5	2016-12-23
XIO-4901 SDI I/O Module	1.2.5	2016-12-23

This document contains the cumulative release notes for each component, up to the current release.

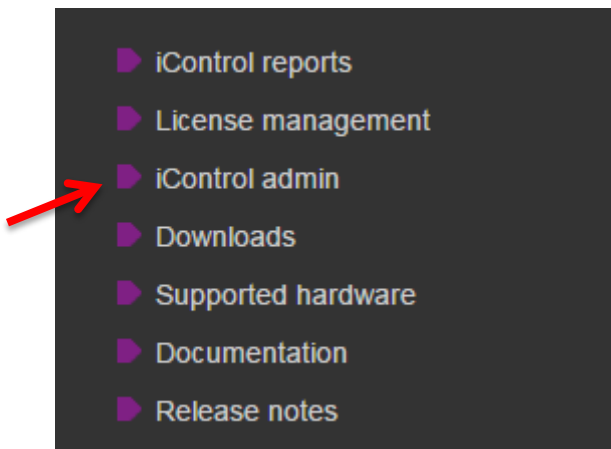
Upgrading GV Node Components

- If you are using iControl 7.30, these components can be upgraded separately.
- If you are using an iControl application server version 7.20, the server software must be upgraded **prior** to upgrading the individual GV Node components. Follow the procedure below.
- GV Node 1.2 is **not compatible** with iControl Solo 7.20.

Upgrading the iControl application server

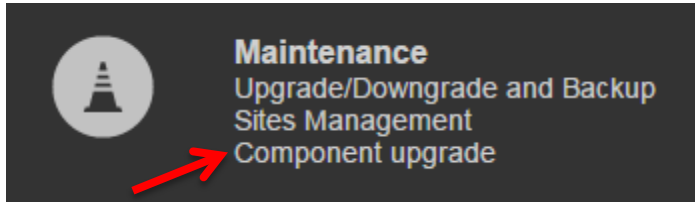
There are two Component upgrades to install, if iControl v7.2.0 is used to upgrade GV Node components to v1.2.5. They are both included in the upgrade package.

1. From the iControl home page, click on the "iControl admin" option

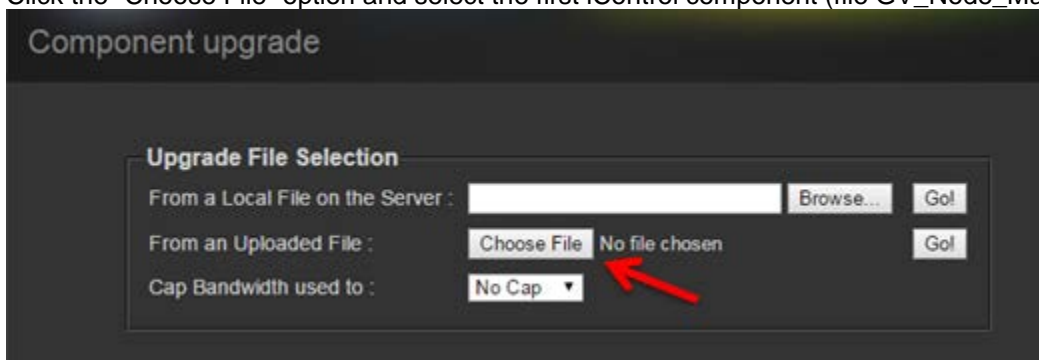


2. Enter username "admin". The default password is "icontrol" if it was not changed. Click "Log In" to proceed.

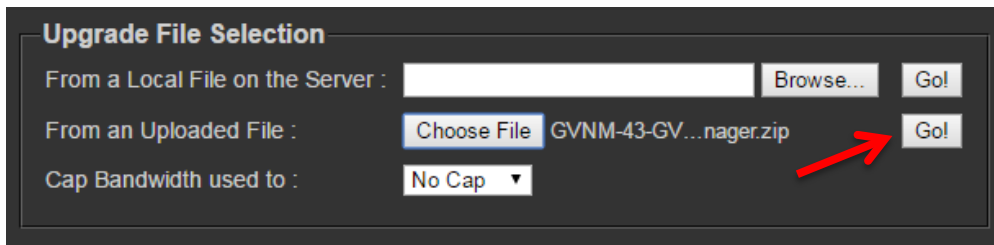
3. Click the "Component upgrade" option in the Maintenance category



4. Click the "Choose File" option and select the first iControl component (file GV_Node_Manager-1.2_IC7.20.zip)



5. Press the Go! Button



6. An upgrade page will appear, click on the "Proceed with the installation now!" link

File Uploaded: GV_Node_Manager-1.2_IC7.20.zip
File Size.....: 85982
[Proceed with the installation now!](#)

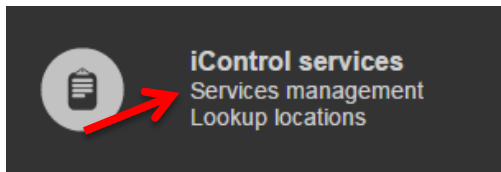
- When the upgrade completes, click the “Return back to 'Manage Component' web page” link.

```
Installing 'GV_Node_Manager-1.2_IC7.20.sh' now...
This will take a couple of minutes. Please wait...
----- START -----
Verifying archive integrity... All good.
Uncompressing GV_Node_Manager-1.2_IC7.20.....
Backing up old libraries to /usr/local/iControl/lib/platform/bak_GV_Node_Manager-1.2
Copying new files to /usr/local/iControl/lib/platform
Updating home page
Done.

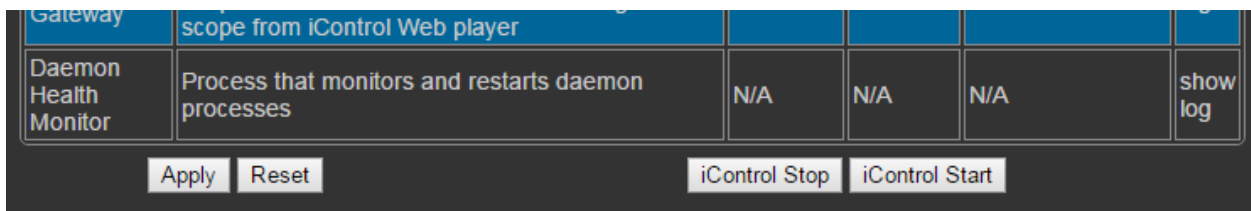
**** PLEASE RESTART ICONTROL ****

----- END -----
Return back to 'Manage Component' web page
```

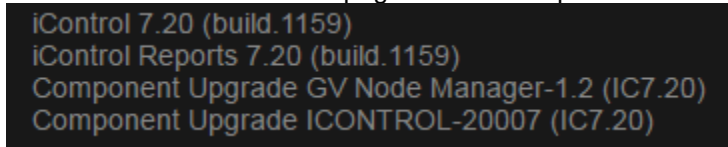
- Repeat steps 4-7, this time using file “ICONTROL-20007_IC7.20.zip”
- Click on the “Back to iControl admin page” option at the bottom left.
- Click the “Service management” option from the “iControl services” category



- At the bottom of the page, click iControl Stop”, wait until all services are blue (stopped), then click “iControl Start”.



- Close the web page
- Check on the iControl home page that the components were successfully installed



- Proceed with upgrading the individual GV Node components using the Densité Upgrade Manager. Please refer to the iControl manual for these instructions.

Supplementary Technical Notes



Caution

Using GV Node with QSFP Active Optical Cables or transceivers requires Router software Version 1.0.0.60 or later.

CPU-ETH3

Release History

Upgrade Package	Comprising:		Release Date	User Manual for this release (Grass Valley document #)
	Firmware Version	Software Version		
1.0.5	1.0.5.594	NA	2016-07-19	3007-99M00-101 6103-98M02-101
1.0.4	1.0.4.584	NA	2016-05-30	3007-99M00-101 6103-98M02-101
1.0.3	1.0.3.530	NA	2016-02-19	3007-99M00-101 6103-98M02-101
1.0.2	1.0.2.512	NA	2016-01-11	3007-99M00-101 6103-98M02-100

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: 1.0.5

Firmware version: 1.0.5.594

Release date: 2016-07-19

iControl compatibility: 7.10+

iControl Solo compatibility: 7.10+

RCP-200 compatibility: NA

Hardware compatibility: This upgrade package applies to all existing hardware assemblies.

ENHANCEMENTS & NEW FEATURES

Ref #	Description

BUGS FIXED IN THIS RELEASE

Ref #	Description
CPU3-511	<p>Broken compatibility with KMV-3911 and KMV-3901 NOTE: Fixed with update of KMV to version 8.00.</p> <p>These cards are incompatible with the new Densite controller (CPU-ETH3) found in the FR4 and the GV Node frames. The problem occurs only when the cards are inserted in slots 21 to 24 of the FR4 frame. In these cases, they are not displaying on the LCD screen once the attention button is pressed.</p> <p>VERSIONS AFFECTED: for both, version 7.91 and lower</p>
CPU3-516	<p>Broken compatibility with Kaleido-Modular-X series (KMX) NOTE: Fixed with update of KMX to version 8.00.</p> <p>The KMX Multiviewer cards are incompatible with the new Densite controller (CPU-ETH3).</p> <p>VERSIONS AFFECTED:</p> <ul style="list-style-type: none"> • The KMX-3901-IN cards (all flavors) running KXS version below 8.00 are not compatible. • The KMX-3901-OUT card is NOT affected.
CPU3-676	<p>"Reference Information" web page returns cryptic error message (ACK 4272)</p> <p>This issue can happen if the card is currently being upgraded or if it is stuck in its bootloader (failed</p>

	upgrade). The message displayed in the "Reference Information" web page is : ERROR: failed to received ACK 4272
CPU3-699	Cannot control a KMX-4911 using the NP0016 protocol Using the network port of the frame controller, the KMX-4911 cards should be controllable via the NP0016 protocol (routing protocol)
CPU3-718	Sometimes after a power cycle of the frame, cards are not accessible through the LCD screen

KNOWN BUGS & LIMITATIONS

Ref #	Description
CPU3-62	DHCP client not implemented
CPU3-510	Broken compatibility with RCP-10x0 The control Panel RCP-1010, RCP-1020, RCP-1030 and RCP-1040 are incompatible with the new Densite controller (CPU-ETH3).
CPU3-515	Broken compatibility with SSP-3801 The SSP-3801 is incompatible with the new Densite controller (CPU-ETH3). VERSIONS AFFECTED: versions earlier than 1.6.0 WORKAROUND: <ul style="list-style-type: none"> Get a firmware update on SSP-3801.

UPGRADE PACKAGE: 1.0.4

Firmware version: [1.0.4.584](#)

Release date: [2016-05-30](#)

iControl compatibility: [7.20+](#)

iControl Solo compatibility: [7.20+](#)

RCP-200 compatibility: [NA](#)

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

ENHANCEMENTS & NEW FEATURES

Ref #	Description
CPU3-339	Implement basic SNMP agent This is the same feature as for the Densite 3 frame.
CPU3-64	Implement network link redundancy option This is the same feature as for the Densite 3 frame.
CPU3-577	The "Connections" web page has an improved status description As described in the "Help" section of that web page, a new yellow widget was added to more accurately represent the status of Densite connections. The yellow status tells the user that certain types of data (either RAW or non-solicited) are not transferred because because the maximum number of legacy connections has been reached. A legacy connection from a Densite client (eg. iControl) is a connection that does NOT specifically ask for those particular type of data (RAW and/or non-solicited).
CPU3-499	Changed default IP addresses (for manufacturing purposes) ETH1 = 192.168.3.3 ETH2 = 192.168.4.3
CPU3-63	Implementation of the HOME screen on the LCD display The HOME screen of the LCD gives an overall status of the frame. This includes an overall status of each card in the frame. The menu of a particular card can be accessed by touching its associated button in the HOME screen.
CPU3-401	In GV Node frames, implement volatile backup of Router board routing The crosspoint configuration of the IFM board (Internal Fabric Module) is mirrored in the volatile memory of the controller (CPU-ETH3). So replacing the IFM board with a new one while the CPU-ETH3 is still powered would copy the crosspoint configuration to the new IFM board.

	<p>WARNING: if the CPU-ETH3 is powered down during the process, the backup/restoration operation will fail.</p>
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BUGS FIXED IN THIS RELEASE

Ref #	Description
CPU3-589	<p>Clicking on the "CTRL EXECUTION" card edge menu item locks up the card and reboot Once the user accesses this menu item, the card immediately locks up. It then eventually reboots without the user's confirmation to do so.</p>

KNOWN BUGS & LIMITATIONS

Ref #	Description
CPU3-693	<p>The card may boot with the wrong version of software The card has two partitions that it can boot from: the active partition and the fallback partition. The card is supposed to run on the fallback partition ONLY in cases where something goes horribly wrong during an upgrade and/or power-up. But in some cases the card will boot with the fallback partition for no good reason. When coming out of production, both partitions are identical so the problem is masked and can only be apparent after a software upgrade. WORKAROUND: reboot the card until the proper partition is selected.</p>
CPU3-62	<p>DHCP client not implemented</p>
CPU3-695	<p>Ethernet redundancy option activation/deactivation If the Ethernet redundancy activation is disabled, the actual key code disappears from the entry field. If the user disables the function he may not have the key code handy to re-enter it.</p>
CPU3-510	<p>Broken compatibility with RCP-10x0 The control Panel RCP-1010, RCP-1020, RCP-1030 and RCP-1040 are incompatible with the new Densite controller (CPU-ETH3) found in the FR4 and the GV Node frames.</p>
CPU3-515	<p>Broken compatibility with SSP-3801 The SSP-3801 is incompatible with the new Densite controller (CPU-ETH3) found in the FR4 and the GV Node frames.</p>

	<p>VERSIONS AFFECTED: versions earlier than 1.6.0</p> <p>WORKAROUND:</p> <ul style="list-style-type: none"> • Get a firmware update on SSP-3801.
CPU3-516	<p>Broken compatibility with Kaleido-Modular-X series (KMX)</p> <p>The KMX Multiviewer cards are incompatible with the new Densite controller (CPU-ETH3) found in the FR4 and the GV Node frames.</p> <p>VERSIONS AFFECTED:</p> <ul style="list-style-type: none"> • The KMX-3901-IN cards (all flavors) running KXS version below 8.00 are not compatible. • The KMX-3901-OUT card is NOT affected. <p>WORKAROUND:</p> <ul style="list-style-type: none"> • Upgrade to KXS 8.00 or newer.
CPU3-511	<p>Broken compatibility with KMV-3911 and KMV-3901</p> <p>These cards are incompatible with the new Densite controller (CPU-ETH3) found in the FR4 and the GV Node frames. The problem occurs only when the cards are inserted in slots 21 to 24 of the FR4 frame. In these cases, they are not displaying on the LCD screen once the attention button is pressed.</p> <p>VERSIONS AFFECTED: for both, version 7.91 and lower</p> <p>WORKAROUND:</p> <ul style="list-style-type: none"> • Upgrade firmware of those cards.

UPGRADE PACKAGE: 1.0.3

Firmware version: 1.0.3.530

Release date: 2016-02-19

iControl compatibility: 7.20+

iControl Solo compatibility: 7.20+

RCP-200 compatibility: NA

Hardware compatibility: This upgrade package applies to all existing hardware assemblies.

ENHANCEMENTS & NEW FEATURES

Ref #	Description
CPU3-251	Alpha support of GV Node frame

BUGS FIXED IN THIS RELEASE

Ref #	Description
CPU3-543	<p>A card 5 slots down from a card being initialized no longer communicates with CPU-ETH3</p> <p>If a card is re-initialized by simply re-inserting the card or by other means, it may prohibit another card, 5 slots down in the frame, from communicating with the CPU-ETH3.</p>
CPU3-518	<p>Detect and correct SD card corruption on power-up</p> <p>Occasional SD card errors on boot-up..</p>
CPU3-527	<p>Detect when file system is remounted read-only because of file system corruption</p> <p>Detect if the file system (/config and /data) gets remounted as read-only when a corruption occurs. When detecting the file system is now read-only, notify user as follows:</p> <ul style="list-style-type: none"> • Set LED red • Write event to Log • Display in local LCD menu (in status)

KNOWN BUGS & LIMITATIONS

Ref #	Description
CPU3-63	<p>Home screen : all board status summary Card status not shown on the LCD display.</p> <p>WORKAROUND: Open the frame door to see the card status on the card-edge LEDs.</p>
CPU3-64	<p>Optional full network link redundancy using channel bonding The network link will not automatically switch over the secondary physical port in case of failure of the primary port.</p>
CPU3-339	<p>SNMP agent not implemented</p>
CPU3-62	<p>DHCP client not implemented</p>
CPU3-510	<p>Broken compatibility with RCP-10x0 The RCP-1010, RCP-1020, RCP-1030 and RCP-1040 control panels are incompatible with the Densité CPU-ETH3 controller found in the GV Node frame.</p>
CPU3-515	<p>Broken compatibility with SSP-3801 The SSP-3801 is incompatible with the Densité CPU-ETH3 controller found in the GV Node frame.</p> <p>VERSIONS AFFECTED: versions earlier than 1.6.0</p> <p>WORKAROUND:</p> <ul style="list-style-type: none"> Get a firmware update on SSP-3801.
CPU3-516	<p>Broken compatibility with Kaleido-Modular-X series (KMX) The KMX Multiviewer cards are incompatible with the Densité CPU-ETH3 controller found in the GV Node frame.</p> <p>VERSIONS AFFECTED:</p> <ul style="list-style-type: none"> The KMX-3901-IN cards (all flavors) running KXS version below 8.00 are not compatible. The KMX-3901-OUT card is NOT affected. <p>WORKAROUND:</p> <ul style="list-style-type: none"> Upgrade to KXS 8.00 or newer.
CPU3-589	<p>Clicking on the "CTRL EXECUTION" card edge menu item locks up the card and reboot Once the user accesses this menu item, the card immediately locks up. It then eventually reboots without the user's confirmation to do so.</p>

CPU3-567	<p>After a reboot, sometimes the internal VLANs are not functional</p> <p>This issue does NOT affect the basic controller (DENSITE 3+ CPU-ETH3) because it does NOT include an internal VLAN.</p> <p>WORKAROUND:</p> <ul style="list-style-type: none">• Reboot the controller.
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UPGRADE PACKAGE: 1.0.2

Firmware version: 1.0.2.512

Release date: 2015-12-22

iControl compatibility: 7.10+

iControl Solo compatibility: 7.10+

RCP-200 compatibility: NA

Hardware compatibility: This upgrade package applies to all existing hardware assemblies.

ENHANCEMENTS & NEW FEATURES

Ref #	Description
CPU3-67	Initial release of the "basic" CPU-ETH3.

BUGS FIXED IN THIS RELEASE

Ref #	Description

KNOWN BUGS & LIMITATIONS

Ref #	Description
CPU3-63	<p>Home screen : all board status summary Missing status of all cards' LED on the LCD display. WORKAROUND: Open the frame door to see the card status.</p>
CPU3-64	<p>Optional full network link redundancy using channel bonding The network link will not automatically switch over the secondary physical port in case of failure of the primary port.</p>
CPU3-339	<p>SNMP agent not implemented</p>

CPU3-62	DHCP client not implemented
CPU3-510	<p>Broken compatibility with RCP-10x0</p> <p>The RCP-1010, RCP-1020, RCP-1030 and RCP-1040 control panels are incompatible with the Densité CPU-ETH3 controller found in the GV Node frame.</p>
CPU3-515	<p>Broken compatibility with SSP-3801</p> <p>The SSP-3801 is incompatible with the Densité CPU-ETH3 controller found in the GV Node frame.</p> <p>VERSIONS AFFECTED: versions earlier than 1.6.0</p> <p>WORKAROUND:</p> <ul style="list-style-type: none"> • Get a firmware update on SSP-3801.
CPU3-516	<p>Broken compatibility with Kaleido-Modular-X series (KMX)</p> <p>The KMX Multiviewer cards are incompatible with the Densité CPU-ETH3 controller found in the GV Node frame.</p> <p>VERSIONS AFFECTED:</p> <ul style="list-style-type: none"> • The KMX-3901-IN cards (all flavors) running KXS version below 8.00 are not compatible. • The KMX-3901-OUT card is NOT affected. <p>WORKAROUND:</p> <ul style="list-style-type: none"> • Upgrade to KXS 8.00 or newer.

ETH3-REF

Release History

Upgrade Package	Comprising:		Release Date	User Manual for this release (Grass Valley document #)
	Firmware Version	Software Version		
1.0.6	1.0.4.522	1.0.6	2016-06-15	3007-99M00-102 6103-98M02-102
1.0.3	1.0.3.501	1.0.3	2016-01-11	3007-99M00-101 6103-98M02-101

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: 1.0.6

Firmware version: [1.0.4.522](#)

Release date: [2016-06-15](#)

iControl compatibility: [7.10+](#)

iControl Solo compatibility: [7.10+](#)

RCP-200 compatibility: [NA](#)

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

ENHANCEMENTS & NEW FEATURES

Ref #	Description
CPU3-460	Support of tri-level reference inputs

BUGS FIXED IN THIS RELEASE

Ref #	Description
CPU-686	<p>Upgrade of the ETH3-REF can hang and then fail (rarely) NOTE: This fix can only be applied at the factory.</p> <p>The upgrade of the ETH3-REF (“Frame Reference”) with the iControl Densite Upgrade Manager (DUM) can fail.</p> <p>SYMPTOMS: The upgrade process initiates but hangs (usually at 0.0%) and ultimately times out and fails. At this point, the card is ignoring communications from certain software clients connected to the frame. If one of those software is iControl, its Navigator windows will permanently show the ETH3-REF as “Slot 25 : Empty”. The ETH3-REF looks broken but, in fact, it is not.</p> <p>WORKAROUND:</p> <ul style="list-style-type: none"> - Power cycle the card - Refrain from touching the front LCD touchscreen - On the “Status > Connections” web page of the frame, make sure to have less than 4 connections. If it is not the case, you may have to remove KMX cards from the frame and reboot again. - Restart the upgrade
CPU3-675	Upgrade of the ETH3-REF can render it unusable (very rarely)

	<p>NOTE: This fix can only be applied at the factory.</p> <p>The upgrade of the ETH3-REF (“Frame Reference”) with the iControl Densite Upgrade Manager (DUM) can fail and brick it (make it unusable).</p> <p>SYMPTOMS: The upgrade process initiates but hangs and becomes unresponsive. Power cycling the card does NOT solve the problem. The card needs to be sent to repair at the factory.</p>
CPU3-474	Audio synchronization in URS not aligned
CPU3-444	<p>Linear Time Code (LTC) pass-through function drops time code packets</p> <p>If the Linear Time Code (LTC) signal at the LTC input “LTC IN” is asynchronous with respect to the reference signal at the REF input “REF IN”, the time code pass-through mode should be activated. This ensures that the incoming time code data is sent in the intra-frame Universal Reference Signal (URS) exactly when received instead of at the beginning of the REF input’s frame. This function is buggy, thus time code packets are dropped.</p> <p>Presently, this function can only be activated using the frame’s local LCD menu: TIME CODE > PROCESSING MODE > PASS-THROUGH.</p>
CPU3-669	<p>The “No Time Code” alarm can be activated when “Time Code source” is set to OFF</p> <p>The “No Time Code” alarm can be activated even though the “Time Code source” is set to OFF and no Time Code signal is detected. This causes the chosen Alarm Level (LED color) to be set.</p>

KNOWN BUGS & LIMITATIONS

Ref #	Description
CPU3-472	<p>Time Code Logging may skip or repeat the Time Code frame count</p> <p>When Time Code Logging is enabled, there may be frames skipped or repeated in the Densite messages sent to the loggers like the General Status Manager (GSM). Fortunately, they ignore the frame count. The problem is amplified when multiple cards are streaming (thumbnails, H264) in the same frame. The Time Code sent in the URS signal is not affected.</p>
CPU3-514	<p>URS not cleanly disabled when Reference option is disabled</p> <p>When the Reference option is disabled, the URS signal distributed in the frame is still active but does not contain synchronization information. The cards will not lock onto the signal but some (mostly audio-only cards like the DAP-1781) still report it as being present in their iControl panel.</p>
DSERV-1750	“Option” tab is missing in the iControl Frame Reference panel

	<p>The iControl Frame Reference panel does not have an Option tab to enter the Reference Activation key used to enable the URS signal.</p>
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	<p>WORKAROUND: License key can be entered in the frame's local LCD menu. Press SEL when ACTIVATE NOW is displayed.</p>
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UPGRADE PACKAGE: 1.0.3

Firmware version: [1.0.3.501](#)

Release date: [2016-01-11](#)

iControl compatibility: [7.10+](#)

iControl Solo compatibility: [7.10+](#)

RCP-200 compatibility: [NA](#)

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

ENHANCEMENTS & NEW FEATURES

Ref #	Description
CPU3-67	Initial release of the "basic" CPU-ETH3.

BUGS FIXED IN THIS RELEASE

Ref #	Description

KNOWN BUGS & LIMITATIONS

Ref #	Description
CPU3-460	Support of tri-level reference inputs not implemented yet
CPU3-472	Problematic time code frame count Time code is dropping (or repeating) some frames. The problem is amplified when multiple cards are streaming (thumbnails, H264) in the same frame.
CPU3-514	URS not cleanly disabled when REF option is disabled When the REF option is disabled, the URS signal running within the frame is not properly disabled. The cards in the frame cannot lock onto that URS signal but some cards still report it as being present in their iControl panel. Those cards are mostly audio-only cards (e.g. DAP-1781).

DSERV-1750	<p>Missing option tab in the reference service panel</p> <p>Reference service panel is missing the option menu to activate the URS function</p> <p>WORKAROUND: License key can be entered from the local LCD menu of the frame.</p>
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IFM-2T

Release History

Upgrade Package	Comprising:		Release Date	User Manual for this release (Grass Valley document #)
	Firmware Version	Software Version		
1.2.5	1.2.5	1.2.5	2016-12-23	6103-98M00-125
1.1.1	1.1.0	1.1.1	2016-09-16	6103-98M00-110
1.0.2	1.0.2	N/A	2016-08-01	6103-98M00-100
1.0.1	1.0.1	N/A	2016-06-30	6103-98M00-100
1.0.0	1.0.0	N/A	2016-06-01	6103-98M05-100

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: 1.2.5

Firmware version: 1.2.5

Release date: 2016-12-23

iControl compatibility: 7.30+ or 7.20 with component upgrades

iControl Solo compatibility: 7.30+

RCP-200 compatibility: N/A

Hardware compatibility: This upgrade package applies to all existing hardware assemblies

NOTE: When using iControl 7.20 to upgrade the IFM-2T, two iControl components provided with this release must be installed beforehand. Please follow the instructions found on page 2 of these release notes.

ENHANCEMENTS & NEW FEATURES

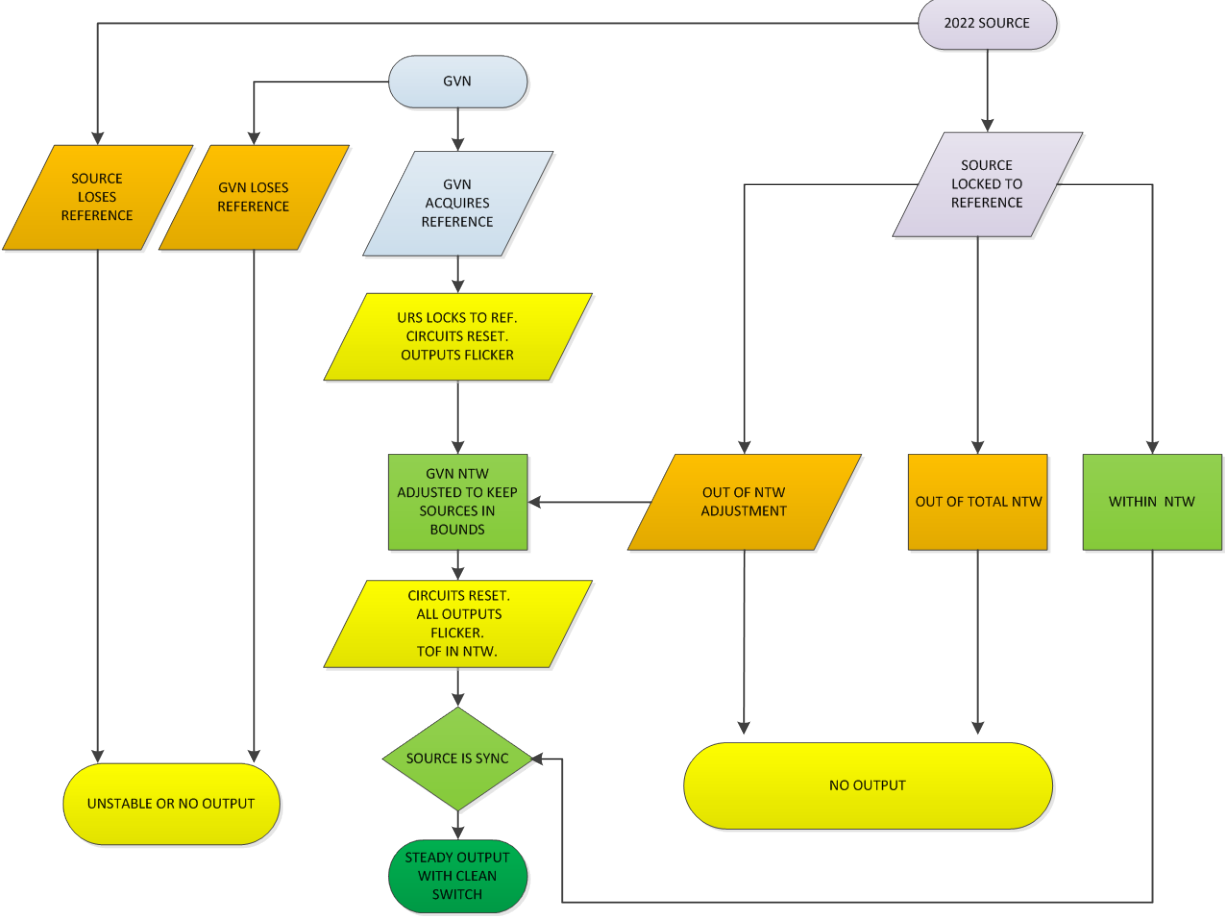
Ref #	Description
IFM-2697	<p>SMPTE 2022-7 redundancy is included in this release. This feature is available for all supported Aggregation feed formats [3G, HD, and ASI] and provides seamless redundancy.</p> <p>Application of the redundancy architecture will halve the available unique aggregation inputs.</p> <p>144+144 individual feeds migrates to 72+72 redundant feeds, using all QSFPs.</p> <p>Be aware that migrating from non-redundant to redundant may require rewiring the QSFPs for the redundant networks.</p> <p>Requires new IFM-2T-RP1 panel.</p>
IFM-2704	<p>Labeled as HD, addition to enable up to 6 1.5GB signals per QSFP lane.</p> <p>This results in 24 1.5GB signals per QSFP.</p> <p>The total Aggregation available video ports remains at 144. The 144 1.5GB signals can be achieved in 6 QSFPs.</p> <p>If redundancy is activated, it will be 72+72 signals in 6 QSFPs.</p> <p>Requires new IFM-2T-RP1 panel.</p>
GVN-65	<p>ASI is supported on XIO inputs/outputs, as well as aggregation.</p> <p>ASI will pass through GVN, as it entered. There is no stream modification or clean switching between ASI sources in GVN.</p>

IFM-2T-RP1	New Rear Panel for IFM-2T. Model is IFM-2T-RP1. This backplane enables 2022-7 redundancy for all QSFPs and 6HD.
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BUGS FIXED IN THIS RELEASE

Ref #	Description
IFM-3089	<p>Cannot set a TX stream unicast address to a different subnet</p> <p>If a TX stream unicast address is not in the same subnet as the lane's address, the stream will not start.</p>
IFM-2866	<p>Timing status icon not always reliable</p> <p>In the Network Timing Configuration panel, the timing status icon might inaccurately report that a stream is synchronous and properly phased for clean switching (green) where in fact it's not. For example a synchronous stream that is outside the clean switching window might on some occasions be reported as "green".</p>
IFM-3106	<p>MADI Channel Offset</p> <p>Madi Channels offset when powering up GVN or enabling then disabling MDX mode</p>

KNOWN BUGS & LIMITATIONS

Ref #	Description
IFM-2894	<p>Cannot receive two streams from the same address within a single lane</p> <p>If two RX streams within a single frame are configured with the same address, all streams will stop working on this lane.</p> <p>WORKAROUND: use the internal router to duplicate the source instead.</p>
IFM-3395	<p>Does not support Async sources</p> <p>GVN V1.2 will not pass any signal whose TOF(Top Of Frame) is outside of NTW (Network Tolerance Window). If it is within NTW, the signal will pass and can be clean switched. If the source is freerunning, it may pass at times, but will cause flashes, when the circuit needs to reset to relock.</p> <p>Reference lock and timing adjustment are used to keep signal TOF in NTW.</p>  <pre> graph TD 2022SOURCE([2022 SOURCE]) --> SOURCELOSEREF[/SOURCE LOSES REFERENCE/] 2022SOURCE --> GVNACQUIRESREF[/GVN ACQUIRES REFERENCE/] GVNACQUIRESREF --> URSLOCKS[URS LOCKS TO REF. CIRCUITS RESET. OUTPUTS FLICKER] URSLOCKS --> GVNNTW[GVN NTW ADJUSTED TO KEEP SOURCES IN BOUNDS] GVNNTW --> CIRCUITSRESET[CIRCUITS RESET. ALL OUTPUTS FLICKER. TOF IN NTW.] CIRCUITSRESET --> SOURCEISSYNC{SOURCE IS SYNC} SOURCEISSYNC --> STEADYOUTPUT([STEADY OUTPUT WITH CLEAN SWITCH]) SOURCELOSEREF --> UNSTABLE([UNSTABLE OR NO OUTPUT]) GVN --> GVNLOSESREF[/GVN LOSES REFERENCE/] GVNLOSESREF --> UNSTABLE GVN --> SOURCELOCKED[/SOURCE LOCKED TO REFERENCE/] SOURCELOCKED --> OUTOFNTWADJ[/OUT OF NTW ADJUSTMENT/] SOURCELOCKED --> OUTOFTOTALNTW[OUT OF TOTAL NTW] SOURCELOCKED --> WITHINNTW[WITHIN NTW] OUTOFNTWADJ --> NOOUTPUT([NO OUTPUT]) OUTOFTOTALNTW --> NOOUTPUT WITHINNTW --> STEADYOUTPUT </pre>

	<p><u>GVNode has added 1 packet of delay variance.</u></p> <ol style="list-style-type: none">1. Due to the packet usage change from V1.1 to V1.2, it is recommended the Network Tolerance Window be verified.
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UPGRADE PACKAGE: 1.1.1

Firmware version: 1.1.0

Release date: 2016-09-16

iControl compatibility: 7.20+

iControl Solo compatibility: 7.20+

RCP-200 compatibility: N/A

Hardware compatibility: This upgrade package applies to all existing hardware assemblies

NOTE: There is a known issue with iControl 7.20 which sometimes prevents upgrades from successfully completing. After an upgrade, the service panel might not be accessible, or an earlier version of the panel might launch.

The workaround is to upgrade **twice**. The Update Manager might report “Nothing to do” (in which case the first upgrade was successful) or it might perform an upgrade of the panel only, which will be completed immediately.

ENHANCEMENTS & NEW FEATURES

Ref #	Description
IFM-719	Support for discreet audio routing.

BUGS FIXED IN THIS RELEASE

Ref #	Description
IFM-2832	Loading a factory preset makes the service panel inaccessible.
IFM-2896	‘Reset Port Statistics’ button does not reset the error packets count.
IFM-2644	2022-6 network tolerance timing shows a limit of 28 instead of 27 packets.
IFM-2829	Loading factory card parameter clears network settings at the same time.
IFM-2695	NP0016 Partition Response command returns wrong size.
IFM-2297	Noticeable delay when making a route within a GV-Node frame.

IFM-2572	Enable ALL lanes does not enable all in Global Configuration pane in iControl
IFM-2490	If a multicast address is being used to stream, disabling lanes does not stop the video using SMPTE-2022-6

KNOWN BUGS & LIMITATIONS

Ref #	Description
IFM-2894	<p>Cannot receive two streams from the same address within a single lane</p> <p>If two RX streams within a single frame are configured with the same address, all streams will stop working on this lane.</p> <p>WORKAROUND: use the internal router to duplicate the source instead.</p>
IFM-3089	<p>Cannot set a TX stream unicast address to a different subnet</p> <p>If a TX stream unicast address is not in the same subnet as the lane's address, the stream will not start.</p>
IFM-2866	<p>Timing status icon not always reliable</p> <p>In the Network Timing Configuration panel, the timing status icon might inaccurately report that a stream is synchronous and properly phased for clean switching (green) where in fact it's not. For example a synchronous stream that is outside the clean switching window might on some occasions be reported as "green".</p> <p>WORKAROUND: make sure the incoming stream is timed properly.</p>

UPGRADE PACKAGE: 1.0.2

Firmware version: 1.0.2

Release date: 2016-08-01

iControl compatibility: 7.20+

iControl Solo compatibility: 7.20+

RCP-200 compatibility: N/A

Hardware compatibility: This upgrade package applies to all existing hardware assemblies

IMPORTANT NOTE – If you are running pre-release Alpha software, do not upgrade to v1.0.1 firmware, as there could be problems.

ENHANCEMENTS & NEW FEATURES

Ref #	Description

BUGS FIXED IN THIS RELEASE

Ref #	Description
IFM-2834	GV Node outputs flash.
IFM-2863	IFM 1.0.2.4 aggregation ports not clean-switching.

KNOWN BUGS & LIMITATIONS

Ref #	Description
DENX-2448	Reference (URS) alarms are not displayed correctly. WORKAROUND: <ul style="list-style-type: none"> None
DENX-	iControl is NOT updating global aggregation timing settings to slider position.

2607	<p>WORKAROUND:</p> <ul style="list-style-type: none"> • None
DENX-2572	<p>iControl IFM->Global Configuration->Enable ALL Lanes does NOT enable All.</p> <p>WORKAROUND:</p> <ul style="list-style-type: none"> • None
DENX-2490	<p>IFM: SMPT-2022-6, If multicast address is being used to stream, disabling lanes does NOT stop video.</p> <p>WORKAROUND:</p> <ul style="list-style-type: none"> • None
DENX-2337	<p>Hot swapping the IFM Aggregation rear caused glitches on output video.</p> <p>WORKAROUND:</p> <ul style="list-style-type: none"> • None

UPGRADE PACKAGE: 1.0.1

Firmware version: 1.0.1

Release date: 2016-06-30

iControl compatibility: 7.20+

iControl Solo compatibility: 7.20+

RCP-200 compatibility: N/A

Hardware compatibility: This upgrade package applies to all existing hardware assemblies

IMPORTANT NOTE – If you are running pre-release Alpha software, do not upgrade to v1.0.1 firmware, as there could be problems.

ENHANCEMENTS & NEW FEATURES

Ref #	Description

BUGS FIXED IN THIS RELEASE

Ref #	Description
PHOENIX-339	Fixed an issue with intermittent video problems when format is changed
IFM-2576 IFM-2757	Fixed an issue with startup where the device did not always come up properly.
IFM-2405	Fixed an issue where errors were being reported to the logs incorrectly.
IFM-2604	Fixed an issue where the IFM firmware upgrades would report error even though they were successful.

KNOWN BUGS & LIMITATIONS

Ref #	Description

DENX-2448	<p>Reference (URS) alarms are not displayed correctly.</p> <p>WORKAROUND:</p> <ul style="list-style-type: none"> • None
DENX-2607	<p>iControl is NOT updating global aggregation timing settings to slider position.</p> <p>WORKAROUND:</p> <ul style="list-style-type: none"> • None
DENX-2572	<p>iControl IFM->Global Configuration->Enable ALL Lanes does NOT enable All.</p> <p>WORKAROUND:</p> <ul style="list-style-type: none"> • None
DENX-2490	<p>IFM: SMPT-2022-6, If multicast address is being used to stream, disabling lanes does NOT stop video.</p> <p>WORKAROUND:</p> <ul style="list-style-type: none"> • None
DENX-2337	<p>Hot swapping the IFM Aggregation rear caused glitches on output video.</p> <p>WORKAROUND:</p> <ul style="list-style-type: none"> • None

UPGRADE PACKAGE: 1.0.0

Firmware version: 1.0.0

Release date: 2016-06-01

iControl compatibility: 7.20+

iControl Solo compatibility: 7.20+

RCP-200 compatibility: N/A

Hardware compatibility: This upgrade package applies to all existing hardware assemblies.

ENHANCEMENTS & NEW FEATURES

Ref #	Description
	This is the first public release of this product (1.0.0-RC-2).

KNOWN BUGS & LIMITATIONS

Ref #	Description
DENX-2604	<p>iControl reports DUM Upgrade reports “failed”, but the upgrade has actually completed successfully.</p> <p>WORKAROUND:</p> <ul style="list-style-type: none"> After the IFM reboots, login via telnet and verify that the correct version has been loaded. (Build 83, May 25, 2016).
DENX-2448	<p>Reference (URS) alarms are not displayed correctly.</p> <p>WORKAROUND:</p> <ul style="list-style-type: none"> None
DENX-2405	<p>After takes on the Aggregation ports, the system log falsely reports gvAsi errors.</p> <p>WORKAROUND:</p> <ul style="list-style-type: none"> Ignore the /var/log/starcross/starcross.log gvAsi error messages.
DENX-2607	<p>iControl is NOT updating global aggregation timing settings to slider position.</p> <p>WORKAROUND:</p> <ul style="list-style-type: none"> None

<p>DENX-2572</p>	<p>iControl IFM->Global Configuration->Enable ALL Lanes does NOT enable All. WORKAROUND:</p> <ul style="list-style-type: none"> • None
<p>DENX-2490</p>	<p>IFM: SMPT-2022-6, If multicast address is being used to stream, disabling lanes does NOT stop video. WORKAROUND:</p> <ul style="list-style-type: none"> • None
<p>DENX-2337</p>	<p>Hot swapping the IFM Aggregation rear caused glitches on output video. WORKAROUND:</p> <ul style="list-style-type: none"> • None

XIO-4901

Release History

Upgrade Package	Comprising:		Release Date	User Manual for this release (Grass Valley document #)
	Firmware Version	Software Version		
1.2.5	1.2.4.34	1.2.4	2016-12-16	6103-98M00-125
1.1.1	1.1.1.326	1.1.1	2016-09-14	6103-98M00-110
1.1.0	1.1.0.324	1.1.0	2016-09-13	6103-98M00-110
1.0.1	1.0.3.262	1.0.1	2016-07-08	6103-98M00-100
1.0.0	1.0.2.236	1.0.0	2016-05-30	6103-98M00-100

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: 1.2.5

Firmware version: 1.2.4.34

Release date: 2016-12-16

iControl compatibility: 7.30+ or 7.20 with component upgrades

iControl Solo compatibility: 7.30+

IFM-2T compatibility: 1.2.x

RCP-200 compatibility:

Hardware compatibility: This upgrade package applies to all existing hardware assemblies.

NOTE: When using iControl 7.20 to upgrade the XIO-4911, two iControl components provided with this release must be installed beforehand. Please follow the instructions found on page 2 of these release notes.

ENHANCEMENTS & NEW FEATURES

Ref #	Description
GVN-65	Support for ASI transport streams.

BUGS FIXED IN THIS RELEASE

Ref #	Description
XIO-600	Audio De-embedder stops working when switching mode from MADI audio to embedded audio When changing the audio mode to "MDX" using Node Manager, audio might be lost on some inputs.
XIO-642	Total delay value displayed in iControl "Output config" tab is inaccurate Output timing values shown in iControl "Output config" tabs is now accurate.

KNOWN BUGS & LIMITATIONS

Ref #	Description
GVNM-4	SDI selection should not be available when rear is missing In the "GV Node manager", the SDI selection should not be available when the rear panel is missing.

	Having the selection available is misleading for the user.
XIO-597	<p>XIO card reports a 60 Hz signal as 59.94Hz with input status "green/OK"</p> <p>Although 60 Hz signal frame rates are not supported by the XIO, a 60 Hz signal on the input or output will be reported by the XIO service panel as 59.94 and the status will be green/OK, but the output will be unstable.</p>
XIO-624	<p>Card upgrade may fail if asynchronous input mode is not properly set</p> <p>Not properly setting the asynchronous input mode checkbox for asynchronous inputs may result in a card upgrade failure when too many inputs are in this incorrect state.</p> <p>WORKAROUND: set the asynchronous input mode checkbox for all relevant signals and retry the upgrade.</p>
IFM-3106	<p>Enabling and then disabling the MDX mode will shift the MADI channels by one slot</p> <p>Toggling (enabling then disabling) the MDX mode on a card with an output configured for MADI will make the audio shift by one channel slot in the stream.</p> <p>WORKAROUND: reboot the frame or reseal both the IFM-2T and the affected XIO card.</p>
XIO-627 XIO-632	<p>Enabling test tone on MADI input adds a test tone on undesired audio channels</p> <p>Enabling test tone on MADI input will add test tone on other audio channels outside the selected MADI audio channels. Sometimes, some audio channels never recover and no audio is sent to the router.</p> <p>WORKAROUND: reboot or reseal the XIO card.</p>
XIO-572	<p>XIO GUI does not report when a feed is outside the input spec (clean switch window)</p> <p>When a feed is outside of input spec for clean switching, the UI does not show it. When a user has indicated an input to the XIO is synchronous (asynchronous box is not checked) and the feed is asynchronous the GUI provides no warning to the user. Inputs that are more than our +1/2 line delay are considered by the HW to be asynchronous and won't clean switch.</p>

UPGRADE PACKAGE: 1.1.1

Firmware version: 1.1.1.326

Release date: 2016-09-14

iControl compatibility: 7.20+

iControl Solo compatibility: 7.20+

IFM-2T compatibility : 1.1.x

RCP-200 compatibility:

Hardware compatibility: This upgrade package applies to all existing hardware assemblies.

NOTE: There is a known issue with iControl 7.20 which sometimes prevents upgrades from successfully completing. After an upgrade, the service panel might not be accessible, or an earlier version of the panel might launch.

The workaround is to upgrade **twice**. The Update Manager might report “Nothing to do” (in which case the first upgrade was successful) or it might perform an upgrade of the panel only, which will be completed immediately.

ENHANCEMENTS & NEW FEATURES

Ref #	Description

BUGS FIXED IN THIS RELEASE

Ref #	Description
XIO-619	BCH Errors reported with MDX option enabled with HD signal Pops and clicks can be heard when MDX option is enabled on output HD video signal.

KNOWN BUGS & LIMITATIONS

Ref #	Description
GVNM-4	SDI selection should not be available when rear is missing In the “GV Node manager”, the SDI selection should not be available when the rear panel is missing. Having the selection available is misleading for the user.

XIO-600	<p>Audio De-embedder stops working when switching mode from MADI audio to embedded audio When changing the audio mode to “MDX” using Node Manager, audio might be lost on some inputs. WORKAROUND: reboot or reseal the card.</p>
XIO-597	<p>XIO card reports a 60 Hz signal as 59.94Hz with input status "green/OK" Although 60 Hz signal frame rates are not supported by the XIO, a 60 Hz signal on the input or output will be reported by the XIO service panel as 59.94 and the status will be green/OK, but the output will be unstable.</p>
XIO-624	<p>Card upgrade may fail if asynchronous input mode is not properly set Not properly setting the asynchronous input mode checkbox for asynchronous inputs may result in a card upgrade failure when too many inputs are in this incorrect state. WORKAROUND: set the asynchronous input mode checkbox for all relevant signals and retry the upgrade.</p>
IFM-3106	<p>Enabling and then disabling the MDX mode will shift the MADI channels by one slot Toggling (enabling then disabling) the MDX mode on a card with an output configured for MADI will make the audio shift by one channel slot in the stream. WORKAROUND: reboot the frame or reseal both the IFM-2T and the affected XIO card.</p>

UPGRADE PACKAGE: 1.1.0

Firmware version: [1.1.0.324](#)

Release date: [2016-09-13](#)

iControl compatibility: [7.20+](#)

iControl Solo compatibility: [7.20+](#)

IFM-2T compatibility : [1.1.x](#)

RCP-200 compatibility:

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

ENHANCEMENTS & NEW FEATURES

Ref #	Description
XIO-14	Support for MADI I/Os and embedded audio extraction/embedding

BUGS FIXED IN THIS RELEASE

Ref #	Description
XIO-517	Horizontal timing range does not change according to video format Horizontal timing range in the iControl GUI should vary according to video format.
XIO-259	Deglitcher phase not working The "Timing to Reference" value reported in the GUI does not change when the actual timings are changed.
XIO-515	Reference status is green (ok) when REF is missing When the reference input is missing, the status in the GUI reports OK (green). But the status in the local menu shows the proper status.
XIO-504	The timing configuration of the "SDI output 9" has an invalid range For the timing adjustment of output 9, the "Vertical (lines)" parameter has a maximum value of 100 but it should be 10.
XIO-225	Input timing alignment to reference is off by - 1.3usec

XIO-482	<p>Factory - Card Parameters, Card Alarms no longer working</p> <p>Factory defaults – Resetting to factory defaults through iControl does not work.</p> <p>WORKAROUND: Use the local LCD menu of the frame to do a reset to factory defaults.</p>
XIO-443	<p>On rare occasions, firmware updates fail because of an internal LAN failure</p> <p>On rare occasions, the board powers-up with its internal network interface down. Because of this, firmware updates will fail. The alarm manager will report the error by turning the LED of the card to red.</p>

KNOWN BUGS & LIMITATIONS

Ref #	Description
GVNM-4	<p>SDI selection should not be available when rear is missing</p> <p>In the “GV Node manager”, the SDI selection should not be available when the rear panel is missing. Having the selection available is misleading for the user.</p>
XIO-600	<p>Audio De-embedder stops working when switching mode from MADI audio to embedded audio</p> <p>When changing the audio mode to “MDX” using Node Manager, audio might be lost on some inputs.</p> <p>WORKAROUND: reboot or reseal the card.</p>
XIO-597	<p>XIO card reports a 60 Hz signal as 59.94Hz with input status "green/OK"</p> <p>Although 60 Hz signal frame rates are not supported by the XIO, a 60 Hz signal on the input or output will be reported by the XIO service panel as 59.94 and the status will be green/OK, but the output will be unstable.</p>

UPGRADE PACKAGE: 1.0.1

Firmware version: 1.0.3.262

Release date: 2016-07-08

iControl compatibility: 7.20+

iControl Solo compatibility: 7.20+

RCP-200 compatibility:

Hardware compatibility: This upgrade package applies to all existing hardware assemblies.

ENHANCEMENTS & NEW FEATURES

Ref #	Description

BUGS FIXED IN THIS RELEASE

Ref #	Description
XIO-326	<p>Output status not updated and low responsiveness of the card</p> <p>When all inputs are changed simultaneously, the output status of the card might not be properly updated. Also, the the card may have a sluggish responsiveness.</p>
XIO-298	<p>On occasions, the card fails to boot</p> <p>Frequency of occurrence varies with hardware.</p> <p>WORKAROUND: Reseat the card.</p>
PHOENIX-373	<p>After a power cycle one or more of the XIO outputs status may not be accurate in iControl</p>
XIO-318	<p>It takes a long time for XIO outputs to be stable after boot-up</p> <p>The video signal may disappear for a brief moment a few times during the 3 minutes that follow a power-up.</p>
XIO-324	<p>Sometimes the error slate (eg colorbar) appears on a valid SD-525 signal</p> <p>The flywheel is activated on valid 525 video format. Other formats are detected with no problem (720p60/50, 1080i50/60, 1080p60/50). Flywheel was deactivated on 525 by itself after swapping a few</p>

	times between other formats.
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KNOWN BUGS & LIMITATIONS

Ref #	Description
DSERV-1865	Horizontal timing range does not change according to video format Horizontal timing range in the iControl GUI should vary according to video format.
XIO-259	Deglitcher phase not working The "Timing to Reference" value reported in the GUI does not change when the actual timings are changed.
DSERV-1856	Reference status is green (ok) when REF is missing When the reference input is missing, the status in the GUI reports OK (green). But the status in the local menu shows the proper status.
DSERV-1859	The timing configuration of the "SDI output 9" has an invalid range For the timing adjustment of output 9, the "Vertical (lines)" parameter has a maximum value of 100 but it should be 10.
ICONTROL-19416	SDI selection should not be available when rear is missing In the "GV Node manager", the SDI selection should not be available when the rear panel is missing. Having the selection available is misleading for the user.
DSERV-1864	Factory - Card Parameters, Card Alarms no longer working Factory defaults – Resetting to factory defaults through iControl does not work. WORKAROUND: Use the local LCD menu of the frame to do a reset to factory defaults.
XIO-225	Input timing alignment to reference is off by - 1.3usec
PHOENIX-404	On rare occasions, firmware updates fail because of an internal LAN failure On rare occasions, the board powers-up with its internal network interface down. Because of this, firmware updates will fail. The alarm manager will report the error by turning the LED of the card to red.

UPGRADE PACKAGE: 1.0.0

Firmware version: [1.0.1.236](#)

Release date: [2016-05-30](#)

iControl compatibility: [7.20+](#)

iControl Solo compatibility: [7.20+](#)

RCP-200 compatibility:

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

ENHANCEMENTS & NEW FEATURES

Ref #	Description

BUGS FIXED IN THIS RELEASE

Ref #	Description

KNOWN BUGS & LIMITATIONS

Ref #	Description
DSERV-1865	Horizontal timing range does not change according to video format Horizontal timing range in the iControl GUI should vary according to video format.
XIO-259	Deglitcher phase not working The "Timing to Reference" value reported in the GUI does not change when the actual timings are changed.
DSERV-1856	Reference status is green (ok) when REF is missing When the reference input is missing, the status in the GUI reports OK (green). But the status in the local menu shows the proper status.

DSERV-1859	<p>The timing configuration of the “SDI output 9” has an invalid range</p> <p>For the timing adjustment of output 9, the “Vertical (lines)” parameter has a maximum value of 100 but it should be 10.</p>
ICONTROL-19416	<p>SDI selection should not be available when rear is missing</p> <p>In the “GV Node manager”, the SDI selection should not be available when the rear panel is missing. Having the selection available is misleading for the user.</p>
DSERV-1864	<p>Factory - Card Parameters, Card Alarms no longer working</p> <p>Factory defaults – Resetting to factory defaults through iControl does not work.</p> <p>WORKAROUND: Use the local LCD menu of the frame to do a reset to factory defaults.</p>
PHOENIX-373	<p>After a power cycle one or more of the XIO outputs status may not be accurate in iControl</p>
XIO-263	<p>On boot-up, there is a long delay before the video appears at the output (~2 minutes)</p>
XIO-298	<p>On occasions, the card fails to boot</p> <p>Frequency of occurrence varies with hardware.</p> <p>WORKAROUND: Reseat the card.</p>
XIO-225	<p>Input timing alignment to reference is off by - 1.3usec</p>