grass valley
A BELDEN BRAND

GV NODE

IP AGGREGATION, PROCESSING AND EDGE ROUTING PLATFORM

Release Notes

M6103-9803-220

2018-07-31

www.grassvalley.com

Release Notes for GV Node

GV Node is formed of a number of subsystems, each one has its own version number, that when combined creates a GV Node release. This document contains the cumulative release notes for each component, up to the current release.

GV Node v2.2.0

The Release Notes for the GV Node v2.2.0 comprise individual release notes for these GV Node components:

GV Node Component	Current Release	Release Date
CPU-ETH3 Frame Controller	1.3.6.695	2018-03-08 See CPU-ETH 3 Release Notes
CPU-REF Frame Reference Module	2.0.2 Bundle 6	2018-05-10 See CPU-REF Release Notes
IFM-2T Fabric Module	2.2.7.616	2018-07-13
XIO-4901 SDI I/O Module	2.2.5 Bundle 2	2018-07-13

GV Node v1.2.5

The Release Notes for the GV Node v1.2.5 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

GV Node v1.1.1

The Release Notes for the GV Node v1.1.1 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	1.1.0	2016-09-12
XIO-4901 SDI I/O Module	1.1.1	2016-09-16

GV Node v1.1.0

The Release Notes for the GV Node v1.1.0 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	1.1.0	2016-09-12
XIO-4901 SDI I/O Module	1.1.1	2016-09-16

GV Node v1.0.0

The Release Notes for the GV Node v1.0.0 comprise individual release notes for these GV Node components:

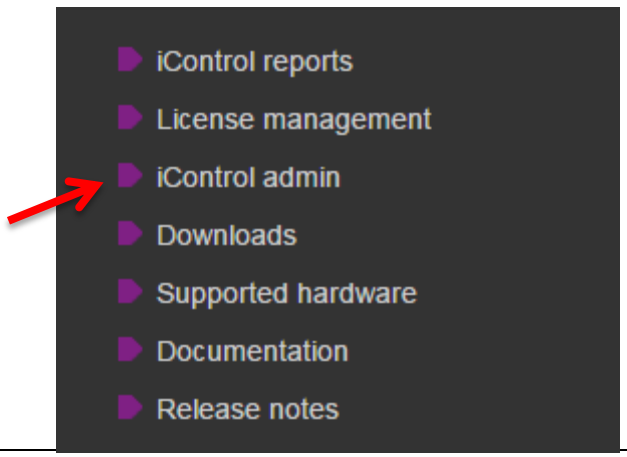
GV Node Component	Current Release	Release Date
CPU-ETH3 Frame Controller	1.0.4	2016-06-02
CPU-REF Frame Reference Module	1.0.3	2016-06-02
IFM-2T Fabric Module	1.0.0	2016-06-02
XIO-4901 SDI I/O Module	1.0.0	2016-06-02

Upgrading the iControl application server

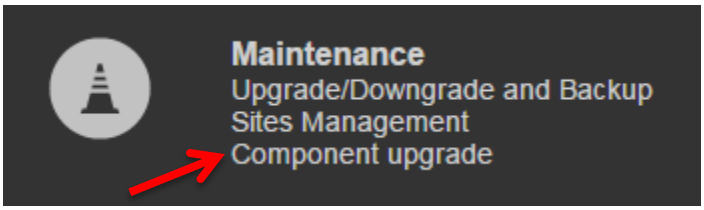
When running iControl 7.20 or 7.30, apply component upgrade "GV_Node_Manager-2.2.5-IC7.20_IC7.30.build_1.zip"

When running iControl 7.40, apply component upgrade ""GV_Node_Manager-2.2.5-IC7.4.build_1.zip""

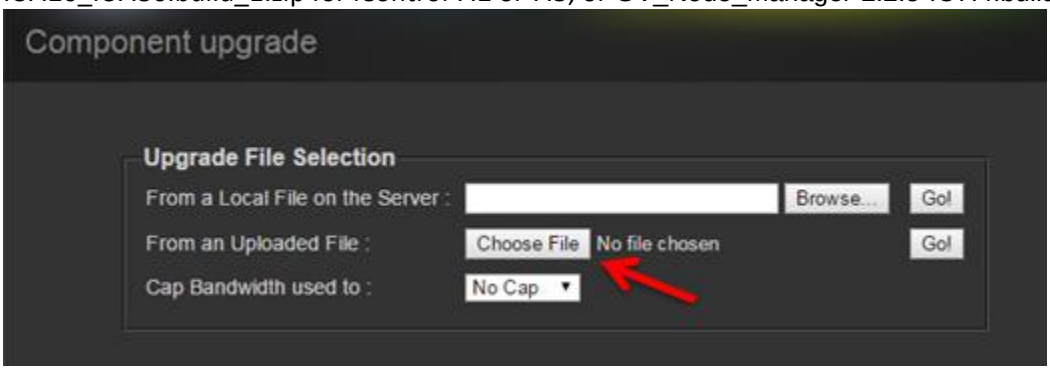
1. From the iControl home page, click on the "iControl admin" option



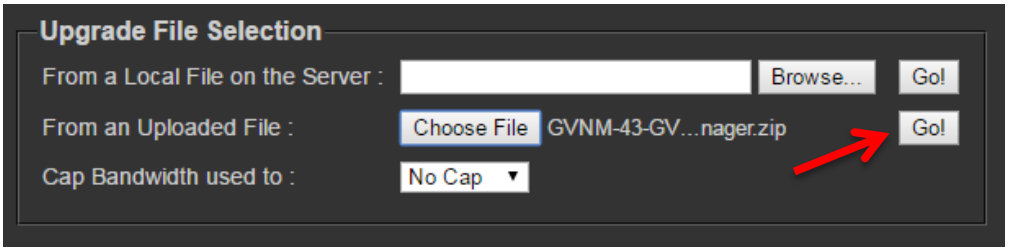
2. Enter username “admin”. The default password is “icontrol” if it was not changed. Click “Log In” to proceed.
3. Click the “Component upgrade” option in the Maintenance category



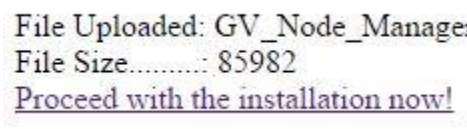
4. Click the “Choose File” option and select the first iControl component (file GV_Node_Manager-2.2.5-IC7.20_IC7.30.build_1.zip for iControl 7.2 or 7.3, or GV_Node_Manager-2.2.5-IC7.4.build_1.zip for iControl 7.4)



5. Click **Go!**



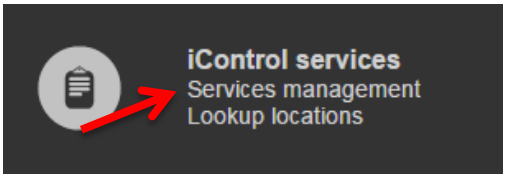
6. An upgrade page will appear, click on the “Proceed with the installation now!” link



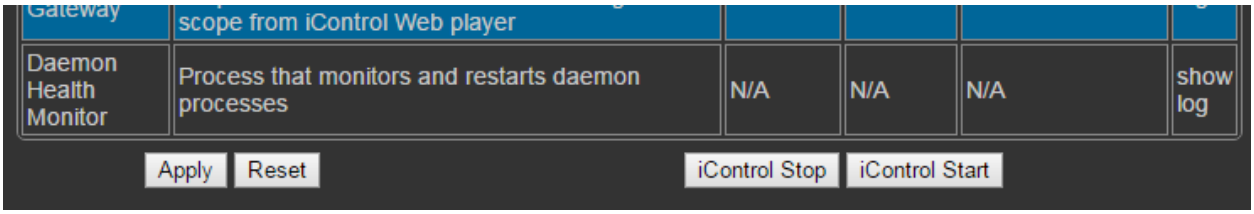
7. When the upgrade completes, click the “Return back to 'Manage Component' web page” link.

```
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
```

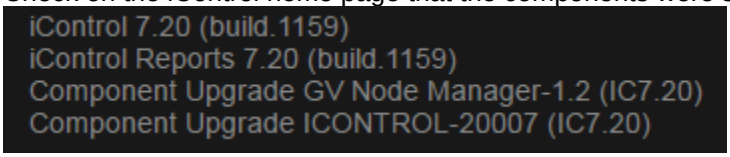
8. Click on the “Back to iControl admin page” option at the bottom left.
9. Click the “Service management” option from the “iControl services” category



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



11. Close the web page
12. Check on the iControl home page that the components were successfully installed



13. 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.

QSFP wiring for GV Node V2.2. Please note the ST2022-6 and TR-04 X6HD modes have a different wiring in non-redundant mode, as compared to GV Node V2.1 and earlier versions.

	ST2022-6					
3GB	Standard 2022-6/3GB. 3 streams per 10GB lane/12 per QSFP.					
	QSFP1 VID XPT 145-156	QSFP2 VID XPT 157-168	QSFP3 VID XPT 169-180	QSFP7 VID XPT 181-192	QSFP8 VID XPT 193-204	QSFP9 VID XPT 205-216
	QSFP4 VID XPT 217-228	QSFP5 VID XPT 229-240	QSFP6 VID XPT 241-252	QSFP10 VID XPT 253-264	QSFP11 VID XPT 265-276	QSFP12 VID XPT 277-288
	Redundant 2022-6- 2022-7. 3 Streams per 10GB lane/12 per QSFP.					
	QSFP1 VID XPT 145-156 A	QSFP2 VID XPT 157-168 A	QSFP3 VID XPT 169-180 A	QSFP7 VID XPT 181-192 A	QSFP8 VID XPT 193-204 A	QSFP9 VID XPT 205-216 A
	↕ VID 145-156	↕ VID 157-168	↕ VID 169-180	↕ VID 181-192	↕ VID 193-204	↕ VID 205-216
	QSFP4 VID XPT 145-156 B	QSFP5 VID XPT 157-168 B	QSFP6 VID XPT 169-180 B	QSFP10 VID XPT 181-192 B	QSFP11 VID XPT 193-204 B	QSFP12 VID XPT 205-216 B
1.5 GB	Standard 2022-6/6HD. 6 streams per 10GB lane/24 per QSFP.					
	QSFP1 VID XPT 145-168	QSFP2 VID XPT 169-192	QSFP3 VID XPT 193-216	QSFP7 VID XPT 217-240	QSFP8 VID XPT 241-264	QSFP9 VID XPT 265-288
	QSFP4	QSFP5	QSFP6	QSFP10	QSFP11	QSFP12
	Redundant 2022-7/6HD. 6 streams per 10GB lane/24 per QSFP.					
	QSFP1 VID XPT 145-168 A	QSFP2 VID XPT 169-192 A	QSFP3 VID XPT 193-216 A	QSFP7	QSFP8	QSFP9
	↕ VID 145-168	↕ VID 169-192	↕ VID 193-216			
	QSFP4 VID XPT 145-168 B	QSFP5 VID XPT 169-192 B	QSFP6 VID XPT 193-216 B	QSFP10	QSFP11	QSFP12

TR-04 (ST2022-6 +AES-67)						
3GB	Standard 2022-6+AES-67/3GB. 3 streams per 10GB lane/12 per QSFP.					
	QSFP1	QSFP2	QSFP3	QSFP7	QSFP8	QSFP9
	VID XPT 145-156	VID XPT 157-168	VID XPT 169-180	VID XPT 181-192	VID XPT 193-204	VID XPT 205-216
	AUD XPT 2305-2496	AUD XPT 2497-2688	AUD XPT 2689-2880	AUD XPT 2881-3072	AUD XPT 3073-3264	AUD XPT 3265-3456
	QSFP4	QSFP5	QSFP6	QSFP10	QSFP11	QSFP12
	VID XPT 217-228	VID XPT 229-240	VID XPT 241-252	VID XPT 253-264	VID XPT 265-276	VID XPT 277-288
	AUD XPT 3457-3648	AUD XPT 3649-3840	AUD XPT 3841-4032	AUD XPT 4033-4224	AUD XPT 4225-4416	AUD XPT 4417-4608
	Redundant 2022-7/ST2022-6+AES-67. 9 Streams per 10GB lane/36 per QSFP.					
	QSFP1	QSFP2	QSFP3	QSFP7	QSFP8	QSFP9
	VID XPT 145-156 A	VID XPT 157-168 A	VID XPT 169-180 A	VID XPT 181-192 A	VID XPT 193-204 A	VID XPT 205-216 A
	AUD XPT 2305-2496 A	AUD XPT 2497-2688 A	AUD XPT 2689-2880 A	AUD XPT 2881-3072 A	AUD XPT 3073-3264 A	AUD XPT 3265-3456 A
	↕ VID 145-156 AUD 2305-2496	↕ VID 157-168 AUD 2497-2688	↕ VID 169-180 AUD 2689-2880	↕ VID 181-192 AUD 2881-3072	↕ VID 193-204 AUD 3073-3264	↕ VID 205-216 AUD 3265-3456
	QSFP4	QSFP5	QSFP6	QSFP10	QSFP11	QSFP12
	VID XPT 145-156 B	VID XPT 157-168 B	VID XPT 169-180 B	VID XPT 181-192 B	VID XPT 193-204 B	VID XPT 205-216 B
	AUD XPT 2305-2496 B	AUD XPT 2497-2688 B	AUD XPT 2689-2880 B	AUD XPT 2881-3072 B	AUD XPT 3073-3264 B	AUD XPT 3265-3456 B
1.5GB	Standard 2022-6+AES-67/6HD. 6 streams per 10GB lane/24 per QSFP.					
	QSFP1	QSFP2	QSFP3	QSFP4	QSFP5	QSFP6
	VID XPT 145-168	VID XPT 169-192	VID XPT 193-216	VID XPT 217-240	VID XPT 241-264	VID XPT 265-288
	AUD XPT 2305-2496	AUD XPT 2497-2688	AUD XPT 2689-2880	AUD XPT 3457-3648	AUD XPT 3649-3840	AUD XPT 3841-4032
	QSFP4	QSFP5	QSFP6	QSFP10	QSFP11	QSFP12
	Redundant 2022-7/ST2022-6+AES-67/6HD. 6 streams per 10GB lane/24 per QSFP.					
	QSFP1	QSFP2	QSFP3	QSFP7	QSFP8	QSFP9
	VID XPT 145-168 A	VID XPT 169-192 A	VID XPT 193-216 A			
	AUD XPT 2305-2496 A	AUD XPT 2497-2688 A	AUD XPT 2689-2880 A			
	↕ VID 145-168 AUD 2305-2496	↕ VID 169-192 AUD 2497-2688	↕ VID 193-216 AUD 2689-2880			
	QSFP4	QSFP5	QSFP6	QSFP10	QSFP11	QSFP12
	VID XPT 145-168 B	VID XPT 169-192 B	VID XPT 193-216 B			
	AUD XPT 2305-2496 B	AUD XPT 2497-2688 B	AUD XPT 2689-2880 B			

	ST2110-20/30/40					
3GB	Redundant 2022-7/ST2110-20, 30, 40/ 3GB. 3 Streams per 10GB lane/12 per QSFP.					
	QSFP1	QSFP2	QSFP3	QSFP7	QSFP8	QSFP9
	VID XPT 145-156 A	VID XPT 157-168 A	VID XPT 169-180 A	VID XPT 181-192 A	VID XPT 193-204 A	VID XPT 205-216 A
	AUD XPT 2305-2496 A	AUD XPT 2497-2688 A	AUD XPT 2689-2880 A	AUD XPT 2881-3072 A	AUD XPT 3073-3264 A	AUD XPT 3265-3456 A
	ANC XPT 145-156 A	ANC XPT 157-168 A	ANC XPT 169-180 A	ANC XPT 181-192 A	ANC XPT 193-204 A	ANC XPT 205-216 A
	VID 145-156	VID 157-168	VID 169-180	VID 181-192	VID 193-204	VID 205-216
	AUD 2305-2496	AUD 2497-2688	AUD 2689-2880	AUD 2881-3072	AUD 3073-3264	AUD 3265-3456
	ANC 145-156	ANC 157-168	ANC 169-180	ANC 181-192	ANC 193-204	ANC 205-216
	QSFP4	QSFP5	QSFP6	QSFP10	QSFP11	QSFP12
	VID XPT 145-156 B	VID XPT 157-168 B	VID XPT 169-180 B	VID XPT 181-192 B	VID XPT 193-204 B	VID XPT 205-216 B
	AUD XPT 2305-2496 B	AUD XPT 2497-2688 B	AUD XPT 2689-2880 B	AUD XPT 2881-3072 B	AUD XPT 3073-3264 B	AUD XPT 3265-3456 B
	ANC XPT 145-156 B	ANC XPT 157-168 B	ANC XPT 169-180 B	ANC XPT 181-192 B	ANC XPT 193-204 B	ANC XPT 205-216 B
1.5GB	Redundant 2022-7/ST2110-20, 30, 40/ 6HD. 3 Streams per 10GB lane/12 per QSFP.					
	QSFP1	QSFP2	QSFP3	QSFP7	QSFP8	QSFP9
	VID XPT 145-168 A	VID XPT 169-192 A	VID XPT 193-216 A			
	AUD XPT 2305-2688 A	AUD XPT 2689-3072 A	AUD XPT 3073-3456 A			
	ANC XPT 145-168 A	ANC XPT 169-192 A	ANC XPT 193-216 A			
	VID 145-168	VID 169-192	VID 193-216			
	AUD 2305-2688	AUD 2689-3072	AUD 3073-3456			
	ANC 145-168	ANC 169-192	ANC 193-216			
	QSFP4	QSFP5	QSFP6	QSFP10	QSFP11	QSFP12
	VID XPT 145-168 B	VID XPT 169-192 B	VID XPT 193-216 B			
	AUD XPT 2305-2688 B	AUD XPT 2689-3072 B	AUD XPT 3073-3456 B			
	ANC XPT 145-168 B	ANC XPT 169-192 B	ANC XPT 193-216 B			

IFM-2T

Release History

Upgrade Package	Comprising:		Release Date	User Manual for this release (Grass Valley document #)
	Firmware Version	Software Version		
2.2.7-Bundle 2	**2.2.7.616**	**2.2.7**	**2018-07-13**[1]	**6103-98M00-220**
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.

[1] *** If upgrading from a v1.x.x version, the upgrade requires replacing the IFM-2T SD memory card. Replacement of the SD memory card will require re-entry of all parameters and settings on the IFM-2T card.
The new SD memory card part number is: 163847201.
Contact customer support to obtain a replacement SD memory card and installation assistance: (800) 547-8949.

UPGRADE PACKAGE: 2.2.7

Firmware version: 2.2.7.616

-Release date: 2018-07-13

iControl compatibility: 7.20 or higher with component upgrades

iControl Solo compatibility: 7.40 or higher

RCP-200 compatibility: N/A

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

ENHANCEMENTS & NEW FEATURES

Ref #	Description
IFM-4145	iControl features - Provisioning tab: Now separated into two sub-tabs; Module Inputs - Tx Streams and Module Outputs - Rx Streams - Access to the RX and TX Streams will be dependent on the GVNM 'Stream Format' selection: The settings will be accessible via the AGG FORMAT tab. Under AGG FORMAT, there will be 2 selections: RX streams and TX streams. - PTP status reporting

BUGS FIXED IN THIS RELEASE

Ref #	Description
IFM-4274	**1080p59 video output VPID issue.** When a 1080p59.94 signal is fed from aggregation to SDI output, VPID is not inserted.
IFM-4492	**Changing a Transmit Stream Address causes TX alarm in Tx Stream Configuration of IFM-2T iControl Panel to toggle between red and green.** This stops occurring after about 2 minutes.
IFM-4264	**Aggregation cannot lock to ref when switch alignment is set to moduleslot.** Behavior is by design; aggregation timing is required for video to be passed correctly.
IFM-4156	**Audio out of phase when new audio is routed to unused audio channel on an output.** Fixed with new FPGA built.

Ref #	Description
IFM-4573	**Closed caption loses characters.** Closed-Caption lost and shown with bigger spacing. Seen in formats: 1080i 59.94 and 525i.
IFM-4530	**Error on Audio Status Report TX 2305-2320-A.** Status is red, but audio is functional.
IFM-3447	**GV-NODE power cycle: Sometimes IFM-2T does not come back up in iControl.** New release of iControl fixes this behavior.
IFM-4529	**IFM-2T upgrades via iControl fail sometimes.** Old SD card images that were incorrectly upgraded before GVN V1 Alpha 5 had incorrect partition sizes. If this issue is experienced, it can be resolved by reimaging the SD card with a newer image.
IFM-4498	**After installing V2.1 LA, Densite panel takes up to 5 minutes to show.** New release of iControl fixes this behavior.
IFM-4222	**Loading a user profile does not work.** Fix in IFM-2T firmware.
IFM-4477	**Asynchronous status request registration error.** Register for Router Asynchronous Status Changes Request (Command Id: 0x0000 0080) returns error response.
IFM-4574	**Via iControl, RX will not join new flow unless 0.0.0.0 is entered first.** Fix in IFM-2T firmware.
IFM-4570	**PTP settings are easy to have set incorrectly with no status of the issue.** Fix in IFM-2T firmware.

KNOWN BUGS & LIMITATIONS

Ref #	Description
GVN-484	**In TR-04 mode audio stream does not join.** When receiving audio stream in TR-04 mode, the receiving GV Node will not be able to join the audio stream
IFM-5018	**Occasional offset of PTP timestamp on Audio flows.** Minor PTP timestamp offset of 20.834usec can sometimes be seen on some GV Node Audio TX flows.
IFM-4531	**Selecting "factory setting" in IFM-2T, does not return all settings to factory default.** After factory reset, Video Tx and Rx go to 0.0.0.0, but Audio, MetaData and Lane Config remain unchanged.
IFM-4267	**Aggregation port transmit streams may be impaired after full system reboot.** Workaround in V1.3.1 is to have an 'Aggregation Reset' button. This is not available in other versions. In V2.2.0, the issue has been very hard to replicate as it very rarely happens. If it does occur, an IFM-2T reboot is necessary.
IFM-3924	**Alarms in redundant mode can be misleading to a user.** When an alarm is triggered, the alarm numbering scheme does not match the scheme seen in iControl panel. This can cause confusion for some users.
IFM-4834	**Audio TX-RX Bulk addressing Output naming convention is not same as TX-RX Stream configuration panels.** Audio TX-RX Bulk addressing Output naming convention is not same as TX-RX Stream configuration panels.
IFM-5008	**IFM-2T very rarely loses all external communication.** Reboot of IFM-2T will resolve the issue.
IFM-4241	**Disabling Lanes does not disable multicast flows.** Disable Lanes or All Lanes, Rx Streams continue to operate.

Ref #	Description
IFM-4820	**Hot Swap of CPU-ETH3 causes long video disruption (~20seconds).** Pulling the CPU-ETH3 out causes a small disruption in video flows through aggregation of less than 1 second. However, on re-insertion, this causes a massive disruption of up to 20 seconds or more.
IFM-4810	**IFM has port 5194 disconnected.** All the QSFP lane interfaces have to be given an IP address, to restore port 5194.
IFM-4399	**IFM-2T boot times are slower than desired.** - Video (ST2022-6): 3 Minutes - Video +Audio (TR-04): 4 Minutes - Video+Audio+Metadata (ST2110): 7 Minutes
IFM-4369	**IGMP mode must be in V2 only.** In V1.X there was only 'Auto' mode for IGMP. The addition has been made to be able to select V2 or V3. 'Auto' mode currently does not work. Therefore it cannot be selected when migrating to GV Node V2.2. Customer upgrades require new SD card from factory with GV Node V2.2 preinstalled. Manual upgrades from V1.x to V2.2 should be avoided.
IFM-4831	**In TR03x3 Red, 1080p50, PTP locked, the secondary flows glitch.** In TR03x3 Red, 1080p50, PTP locked, the secondary flows glitch.
IFM-4944	**In ST2110 mode, changing RX format to 720p50 then back to 1080p50 may take time to stabilize.** It takes a long time for video to stabilize when changing RX format to 720p50 then back to 1080p50 (ST 2110 x3).
IFM-3538	**Output signal flashes after join** Signal may flash up to 2 seconds after join.
IFM-4870	**Redundancy does not work when modifying a Receive flow IP address.** The primary and secondary flows need to be treated as a pair. Hence, when changing one of the flows, its redundant pair must be changed as well. To bring the flows back: - Set both RX primary and secondary flows to 0.0.0.0. - Configure both flows to a valid IP address.

Ref #	Description
IFM-4225	**ST-2110 multipath resiliency should correct for jitter on 1 side.** When in ST 2022-7, and a single lane in a redundant pair has excessive jitter, and the lane bandwidth usage is close to its limit, the overall path can be affected.
IFM-4833	**ST2110 - Video does not pass when CPU-ETH3 is pulled.** When CPU-ETH3 is pulled, the clocks to derive the ST2110-20 clocks are lost. The result is a loss of video from RX.
IFM-4994	**Subscribing to incorrect mcast type on a receiver will cause the IP core to reboot.** For example, entering an ST2110-20 mcast IP on an ST2110-30 RX.
IFM-3840	**Unicast address for multicast flows does not work.** Unicast sources are not supported by GV Node.
IFM-4493	**Unlicensed IFM iControl Shows PTP options.** Only impact the user interface.
IFM-4507	**Video affected when receiving an unsupported audio profile over aggregation.** When joining an audio stream with an unsupported profile (anything other than 16Channels @ 125us), the video is affected. When the audio stream is removed, the video recovers. As a result, there is no audio.
IFM-3263	**Statistics don't reset when a QSFP is reseated.** Statistics in iControl don't reset when a QSFP is reseated.
IFM-5027	**Ref loss not reported in dashboard - iControl panel** The loss of URS (internal reference) is not reported in dashboard - iControl panel.
IFM-5026	**Fail over test fails in ASI (2022-7)** In ST 2022-7 the ASI failover might not occur or will take too long to be done.
IFM-5030	**Video flows take time to stabilize in stream duplication (ISOC to SYNC switch)** When stream duplication is in use, and the stream is move in and out of the synchronous windows, it might take longer to lock.

Ref #	Description
GVN-486	**ST 2110-20 SD Video has issues with 3rd party equipment** When stream is ST 2110-20 SD Video (525i and 625i) there are some issues when receiving the stream with 3rd party equipment.
IFM-4998	**IGMP V2 and IGMP V3 negotiation issue** This issue requires that you make sure that the GN Node and the switch need to be set in the same IGMP mode, so both devices should be set in the same operating mode either V2 or V3.
IFM-4980	**In iControl, if you delete the IP address in TX Stream Config, the Rx Statistic, the Video Lock State are wrong.** In iControl Panel, if you delete the IP address in TX Stream Config, in the Rx Statistic tab, the Video Lock State is wrong.

UPGRADE PACKAGE: 1.2.5

Firmware version: 1.2.5

Release date: 2016-12-23

iControl compatibility: 7.30 or higher and 7.20 with component upgrades

iControl Solo compatibility: 7.30 or higher

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 3 of these release notes.

ENHANCEMENTS & NEW FEATURES

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

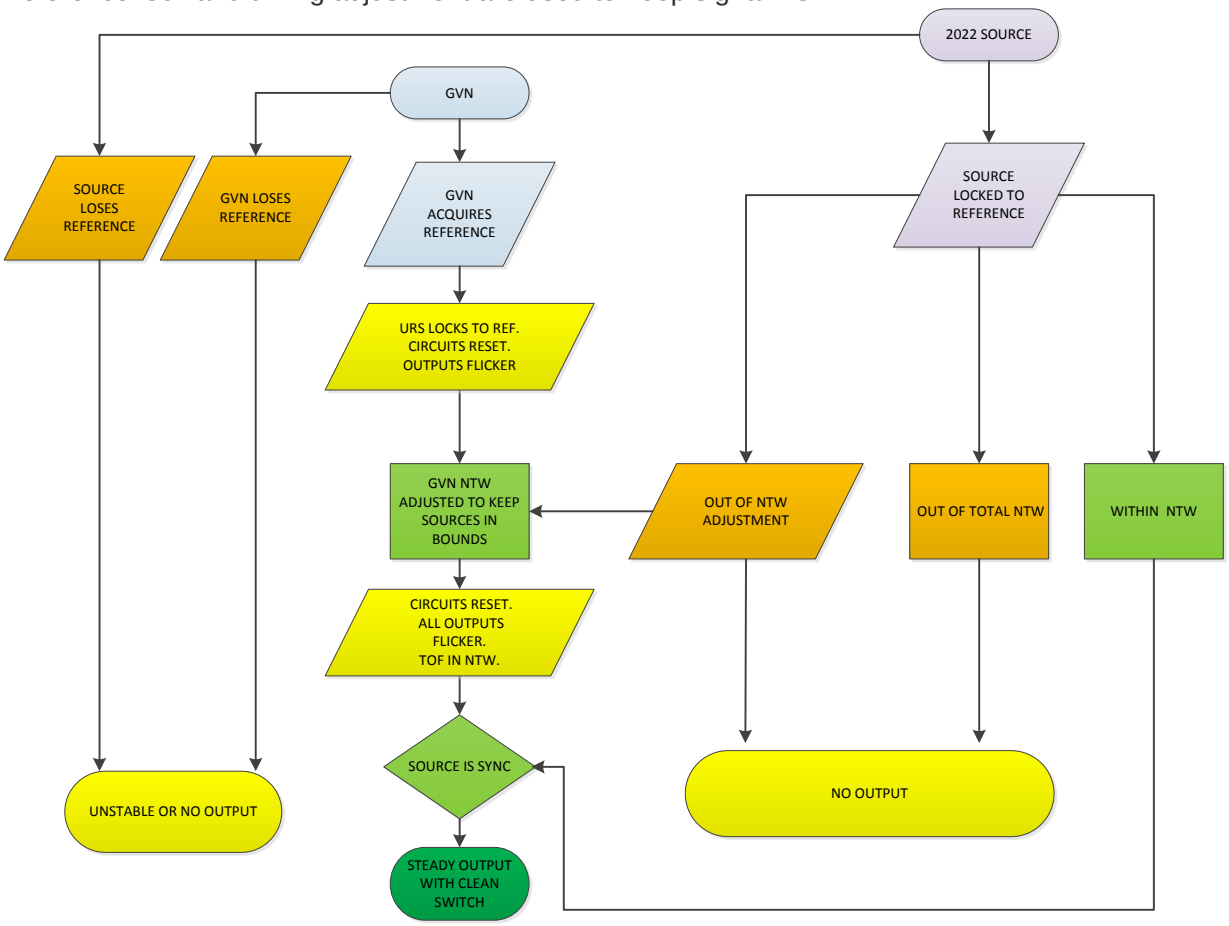
Ref #	Description
IFM-2T-RP1	New Rear Panel for IFM-2T. Model is IFM-2T-RP1. This backplane enables 2022-7 redundancy for all QSFPs and 6HD.

BUGS FIXED IN THIS RELEASE

Ref #	Description
IFM-3089	**Cannot set a TX stream unicast address to a different subnet** If a TX stream unicast address is not in the same subnet as the lane's address, the stream will not start.
IFM-2866	**Timing status icon not always reliable** 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".
IFM-3106	**MADI Channel Offset** MADI Channels offset when powering up GVN or enabling then disabling MDX mode

KNOWN BUGS & LIMITATIONS

Ref #	Description
IFM-2894	**Cannot receive two streams from the same address within a single lane** If two RX streams within a single frame are configured with the same address, all streams will stop working on this lane. WORKAROUND: use the internal router to duplicate the source instead.

Ref #	Description
IFM-3395	**Does not support Asynchronous sources** 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 free-running, it may pass at times, but will cause flashes, when the circuit needs to reset to relock. Reference lock and timing adjustment are used to keep signal TOF in NTW. 
	<u>GVNode has added 1 packet of delay variance.</u> • Due to the packet usage change from V1.1 to V1.2, it is recommended the Network Tolerance Window be verified.

UPGRADE PACKAGE: 1.1.1

Firmware version: 1.1.0

Release date: 2016-09-16

iControl compatibility: 7.20 or higher

iControl Solo compatibility: 7.20 or higher

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.

Ref #	Description
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	**Cannot receive two streams from the same address within a single lane** If two RX streams within a single frame are configured with the same address, all streams will stop working on this lane. WORKAROUND: use the internal router to duplicate the source instead.
IFM-3089	**Cannot set a TX stream unicast address to a different subnet** If a TX stream unicast address is not in the same subnet as the lane's address, the stream will not start.
IFM-2866	**Timing status icon not always reliable** 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". WORKAROUND: make sure the incoming stream is timed properly.

UPGRADE PACKAGE: 1.0.2

Firmware version: 1.0.2

Release date: 2016-08-01

iControl compatibility: 7.20 or higher

iControl Solo compatibility: 7.20 or higher

RCP-200 compatibility: N/A

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

ENHANCEMENTS & NEW FEATURES

Ref #	Description
	None

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: • None
DENX-2607	**iControl is NOT updating global aggregation timing settings to slider position.** WORKAROUND: • None

Ref #	Description
DENX-2572	**iControl IFM->Global Configuration->Enable ALL Lanes does NOT enable All.** WORKAROUND: • None
DENX-2490	**IFM: SMPT-2022-6, If multicast address is being used to stream, disabling lanes does NOT stop video.** WORKAROUND: • None
DENX-2337	**Hot swapping the IFM Aggregation rear causes glitches on output video.** WORKAROUND: • None

UPGRADE PACKAGE: 1.0.1

Firmware version: 1.0.1

Release date: 2016-06-30

iControl compatibility: 7.20 or higher

iControl Solo compatibility: 7.20 or higher

RCP-200 compatibility: N/A

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

IMPORTANT – 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
	None

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

UPGRADE PACKAGE: 1.0.0

Firmware version: 1.0.0

Release date: 2016-06-01

iControl compatibility: 7.20 or higher

iControl Solo compatibility: 7.20 or higher

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

Ref #	Description
DENX-2572	**iControl IFM->Global Configuration->Enable ALL Lanes does NOT enable All.** WORKAROUND: • None
DENX-2490	**IFM: SMPT-2022-6, If multicast address is being used to stream, disabling lanes does NOT stop video.** WORKAROUND: • None
DENX-2337	**Hot swapping the IFM Aggregation rear causes glitches on output video.** WORKAROUND: • None

XIO-4901

Release History

Upgrade Package	Comprising:		Release Date	User Manual for this release (Grass Valley document #)
	Firmware Version	Software Version		
2.2.5 Bundle 2	**2.2.5 Build 57**	2.2.5	**2018-07-13**	**6103-98M00-220**
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: 2.2.5 Bundle 2

Firmware version: 2.2.5 Bundle 2

Release date: 2018-07-13

iControl compatibility: 7.30 or higher and 7.20 with component upgrades

iControl Solo compatibility: 7.30 or higher

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 3 of these release notes.

ENHANCEMENTS & NEW FEATURES

Ref #	Description
	None

BUGS FIXED IN THIS RELEASE

Ref #	Description
XIO-785	**SSH connection does not work after power cycling CPU-ETH3** After power cycling GV Node the communication between XIO-4901 and iControl might not be restore.
XIO-786	**Ghost audio is heard on the input without feed when bootup XIO** Ghost audio is heard on the input without feed when bootup XIO, when some input are in 525i or 625i.

KNOWN BUGS & LIMITATIONS

Ref #	Description
	None

UPGRADE PACKAGE: 1.2.5

Firmware version: 1.2.4.34

Release date: 2016-12-16

iControl compatibility: 7.30 or higher and 7.20 with component upgrades

iControl Solo compatibility: 7.30 or higher

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 3 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	**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.
XIO-624	**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.
IFM-3106	**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 reseat both the IFM-2T and the affected XIO card.
XIO-627 XIO-632	**Enabling test tone on MADI input adds a test tone on undesired audio channels** 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. WORKAROUND: reboot or reseat the XIO card.
XIO-572	**XIO GUI does not report when a feed is outside the input spec (clean switch window)** 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.

UPGRADE PACKAGE: 1.1.1

Firmware version: 1.1.1.326

Release date: 2016-09-14

iControl compatibility: 7.20 or higher

iControl Solo compatibility: 7.20 or higher

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
	None

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	**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 reseat the card.
XIO-597	**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.
XIO-624	**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.
IFM-3106	**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 reseat both the IFM-2T and the affected XIO card.

UPGRADE PACKAGE: 1.1.0

Firmware version: 1.1.0.324

Release date: 2016-09-13

iControl compatibility: 7.20 or higher

iControl Solo compatibility: 7.20 or higher

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**

Ref #	Description
XIO-482	**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-443	**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.

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	**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 reseat the card.
XIO-597	**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.

UPGRADE PACKAGE: 1.0.1

Firmware version: 1.0.3.262

Release date: 2016-07-08

iControl compatibility: 7.20 or higher

iControl Solo compatibility: 7.20 or higher

RCP-200 compatibility:

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

ENHANCEMENTS & NEW FEATURES

Ref #	Description
	None

BUGS FIXED IN THIS RELEASE

Ref #	Description
XIO-326	**Output status not updated and low responsiveness of the card** When all inputs are changed simultaneously, the output status of the card might not be properly updated. Also, the card may have a sluggish responsiveness.
XIO-298	**On occasions, the card fails to boot** Frequency of occurrence varies with hardware. WORKAROUND: Reseat the card.
PHOENIX-373	**After a power cycle one or more of the XIO outputs status may not be accurate in iControl**
XIO-318	**It takes a long time for XIO outputs to be stable after boot-up** The video signal may disappear for a brief moment a few times during the 3 minutes that follow a power-up.

Ref #	Description
XIO-324	**Sometimes the error state (for example, colorbar) appears on a valid SD-525 signal** 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 times between other formats.

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**

Ref #	Description
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 or higher

iControl Solo compatibility: 7.20 or higher

RCP-200 compatibility:

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

ENHANCEMENTS & NEW FEATURES

Ref #	Description
	None

BUGS FIXED IN THIS RELEASE

Ref #	Description
	None

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.

Ref #	Description
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.
PHOENIX-373	**After a power cycle one or more of the XIO outputs status may not be accurate in iControl**
XIO-263	**On boot-up, there is a long delay before the video appears at the output (~2 minutes)**
XIO-298	**On occasions, the card fails to boot** Frequency of occurrence varies with hardware. WORKAROUND: Reseat the card.
XIO-225	**Input timing alignment to reference is off by - 1.3usec**