IPG-3901

Release History

Release Version	Comprising:		Release Date	Version Details	User Manual for this release (Grass Valley document #)
	Firmware Version	Software Version			
1.3.6	1.3.6	1.3.6	2016-11-25	(go)	M3036-9900-134
1.3.4	1.3.4	1.3.4	2016-10-04	(go)	M3036-9900-134
1.3.3	1.3.3	1.3.3	2016-08-24	(go)	M3036-9900-132
1.3.2	1.3.2	1.3.2	2016-07-07	(go)	M3036-9900-132
1.2.0	1.2.0	1.2.0	2016-04-29	(go)	M3036-9900-120
1.1.0	1.1.0	1.1.0	2016-02-26	(go)	M3036-9900-110
1.0.3	1.0.3	1.0.0	2015-12-07	(go)	M3036-9900-100
1.0.2	1.0.2	1.0.0	2015-11-13	(go)	M3036-9900-100
1.0.1	1.0.1	1.0.0	2015-08-31	(go)	M3036-9900-100

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

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

UPGRADE PACKAGE: 1.3.6

Firmware version: 1.3.6 (CPU 40; FPGA ENC&ENC 176; FPGA DEC&DEC 181; FPGA ENC&DEC 185)

Release date: 2016-11-25

iControl compatibility: 7.10+

iControl Solo compatibility: 7.10+

RCP-200 compatibility: NA

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

BUGFIXES

Ref#	Description
STAR-2386	**Too much variability in SDI output timing when locked on external or URS reference** The timing latency varies much more when reference is applied to the IPG carrying out the IP-to-SDI output conversion
STAR-2088	**Duplicate Join and Leave in IGMPv2 may cause over subscription issues** Duplicate Join and leave messages were displayed in Redundancy mode for IGMPv2 only after a stream leaving which may caused over subscription issue.

KNOWN BUGS & LIMITATIONS

Ref#	Description
STAR-2438	**TICO not fully tested on 1.3.6 version** TICO was not fully tested on 1.3.5 Workaround : For TICO features, use IPG-3901 1.3.4 release
STAR-2396	**SDI output may glitch when IP Streams are enabled/disabled when the card is unreferenced** Unreferenced, SDI output may glitch if new IP Streams are enabled or existing IP streams are disabled/enabled Workaround : Lock the IPG-3901 on the external reference or URS
STAR-2442	**Source Specific Multicast not working in iGMPv3**

	The iGMPv3 Source Specific Multicast is not working Workaround : Use iGMPv3 any source
STAR-2097	**Rebooting/reconfiguring a network switch fails to cause the IPG to re-issue/respond to ARP** Reconfiguring a network router or repowering it will not cause the IPG to update the routers ARP cache. This requires the MAC address of the IPG to be programmed into the switch for fully multicast scenarios. Note that hot swapping an IPG with a replacement will require the MAC address to be manually updated in the switch at the same time.
STAR-1950	**4K output links take too much time to stabilize without a reference** When enabling TICO 1 - DEC or TICO 2 - DEC gateway without a reference the 4K output links will take over 5 minutes to get stable. Workaround : use a reference, black burst or URS
DSERV-2161	**Gateways missing on KMX-3901-IN-IP-D-3+TRP** With the KMX-3901-IN-IP-D-3+TRP rear, gateway MV IN 7 and MV IN 8 are missing
STAR-1749	**Factory default may not reset all parameters** Factory default is not resetting all the parameters and this is an issue only when "Card parameters" and "Network settings" are selected together for a factory default. Workaround : Apply the factory on the "Card parameters" first followed by "Network settings"
STAR-1703	**Loading a profile may take 5 seconds** When loading a previously saved profile from disk, it may take up to 5 seconds to bring certain parameters (including TICO gateway enable) to appear on the screen correctly.
STAR-1754	**DUM Upgrade works only from 1.2.0 to a newer version** Using Densite Upgrade Manager (DUM), we can upgrade from v1.2.0 to newer versions including 1.3.1. But we can't downgrade to older version including 1.2.0 after this upgrade. Workaround : Users looking to downgrade to version lesser than 1.2 can still use manually update the SD card to the required versions. To upgrade the SD card, refer to the manual
STAR-	**Firmware upgrade through iControl Densite Upgrade Manager (DUM) need iControl Solo and an**

1755	**FTP connection to IPG-3901 ETH1**
	The firmware upgrade using DUM requires FTP connection through IPG-3901 ETH1 and an iControl Solo. Users should have this iControl solo installed on a machine that is connected to the media switch. The upgrade will go through the switch from iControl solo to the IPG-3901 ETH1. Refer to Annex 1 at manual.
DSERV-2031	**IPG-3901 incompatibility problem with XIO-4901** Up to v1.2.0, IPG-3901 iControl service panel will not work simultaneously with XIO-4901 service panel. Workaround : Users should update the IPG-3901 to version 1.3.2 or higher & also should ensure that the latest XIO-4901 service is installed in the iControl platform to get IPG-3901 to work simultaneously with XIO-4901

UPGRADE PACKAGE: 1.3.4

Firmware version: 1.3.4 (CPU 33; FPGA ENC&ENC 176; FPGA DEC&DEC 181; FPGA ENC&DEC 175)

Release date: 2016-10-04

iControl compatibility: 7.10+

iControl Solo compatibility: 7.10+

RCP-200 compatibility: NA

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

BUGFIXES

Ref#	Description
STAR-2094	**IPG-3901 stops working properly after a couple of days** IPG-3901 stopped working because of memory leaks in the software application

KNOWN BUGS & LIMITATIONS

Ref#	Description
STAR-2097	**Rebooting/reconfiguring a network switch fails to cause the IPG to re-issue/respond to ARP** Reconfiguring a network router or repowering it will not cause the IPG to update the routers ARP

	cache. This requires the MAC address of the IPG to be programmed into the switch for fully multicast scenarios. Note that hot swapping an IPG with a replacement will require the MAC address to be manually updated in the switch at the same time.
STAR-1950	**4K output links take too much time to stabilize without a reference** When enabling TICO 1 - DEC or TICO 2 - DEC gateway without a reference the 4K output links will take over 5 minutes to get stable. Workaround : use a reference, black burst or URS
DSERV-2161	**Gateways missing on KMX-3901-IN-IP-D-3+TRP** With the KMX-3901-IN-IP-D-3+TRP rear, gateway MV IN 7 and MV IN 8 are missing

UPGRADE PACKAGE: 1.3.3

Firmware version: 1.3.3 (CPU 27; FPGA ENC&ENC 176; FPGA DEC&DEC 181; FPGA ENC&DEC 175)

Release date: 2016-08-24

iControl compatibility: 7.10+

iControl Solo compatibility: 7.10+

RCP-200 compatibility: NA

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

BUGFIXES

Ref#	Description
STAR-1979	**Assigning an IP stream to a gateway (IP-to-SDI) may cause glitches on another gateway** The problem happen when the IP stream is already used by another gateway, Trying to assign the same IP stream to another gateway may cause a glitch on the first gateway EX: Gateway SDI OUT 1 <- IP Stream A Gateway SDI OUT 2 <- IP Stream B If we try to assign IP Stream A to SDI OUT 2, SDI OUT 1 may lose momentarily IP Stream A

STAR-2036	**Glitches on the 4K outputs** Illegal words on the 4K outputs were causing equipment to unlock on the received 4K (TICO Decoder)

UPGRADE PACKAGE: 1.3.2

Firmware version: 1.3.2 (CPU 23; FPGA ENC&ENC 153; FPGA DEC&DEC 156; FPGA ENC&DEC 154)

Release date: 2016-07-07

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
STAR-1241	**TICO option** New TICO option has been added to IPG-3901. With this option, the users will have the possibility to encode TICO over IP and decode TICO from IP and the card now supports 4K links in 2SI and SDQS.
STAR-332	**Firmware upgrade through iControl Densite Upgrade Manager (DUM)** Starting from v1.3.2 release, the user can also upgrade the firmware using iControl Densite Upgrade Manager (DUM) in addition to the SD card upgrade through the IPG card. Please note that it is possible to upgrade from v 1.2.0 to a newer version but downgrade to v1.2.0 is not allowed from v1.3.2 and above.
STAR-918	**Test Pattern 1080p** Support for Test Pattern 1080p format is now available on the card

KNOWN BUGS & LIMITATIONS

Ref #	Description

STAR-1690	**TICO encoder 4K links status do not follow the scan rate settings** 4K links status will not trigger a problem if the incoming 4K is not on the same frame rate than the Scan rate setting For example, 4K links status will not trigger an error if the incoming 4K is 59Hz and the scan rate on the "Reference" panel is set to 50Hz. Any other invalid scenarios to the input signal status will be reported at the TICO "config." page.
STAR-1651	**No TICO Test pattern is offered for TICO gateways** Test pattern feature is not available for TICO gateways and is available for normal gateways in all supported format.
STAR-1761	**Test Pattern will disrupt TICO encoders and decoders** When using TICO, clicking "Force ALL" check box on the test pattern panel will put the TICO encoders and decoders on errors. Also enabling test pattern for SDI inputs and outputs used for the TICO before enabling TICO encoder or decoder will put the TICO encoder or decoders on errors Workaround: When using the TICO option, do no hit the "Force ALL" check box on the test pattern panel. Also disable test pattern checkbox from corresponding gateways before enabling TICO encoder or Decoder
STAR-1749	**Factory default may not reset all parameters** Factory default is not resetting all the parameters and this is an issue only when "Card parameters" and "Network settings" are selected together for a factory default. Workaround : Apply the factory on the "Card parameters" first followed by "Network settings"
STAR-1703	**Loading a profile may take 5 seconds** When loading a previously saved profile from disk, it may take up to 5 seconds to bring certain parameters (including TICO gateway enable) to appear on the screen correctly.
STAR-1754	**DUM Upgrade works only from 1.2.0 to a newer version** Using Densite Upgrade Manager (DUM), we can upgrade from v1.2.0 to newer versions including 1.3.1. But we can't downgrade to older version including 1.2.0 after this upgrade. Workaround : Users looking to downgrade to version lesser than 1.2 can still use manually update the SD card to the required versions. To upgrade the SD card, refer to the manual
STAR-1755	**Firmware upgrade through iControl Densite Upgrade Manager (DUM) need iControl Solo and an FTP connection to IPG-3901 ETH1**

	The firmware upgrade using DUM requires FTP connection through IPG-3901 ETH1 and an iControl Solo. Users should have this iControl solo installed on a machine that is connected to the media switch. The upgrade will go through the switch from iControl solo to the IPG-3901 ETH1. Refer to Annex 1 at manual.
DSERV-2031	**IPG-3901 incompatibility problem with XIO-4901** Up to v1.2.0, IPG-3901 iControl service panel will not work simultaneously with XIO-4901 service panel. Workaround : Users should update the IPG-3901 to version 1.3.2 or higher & also should ensure that the latest XIO-4901 service is installed in the iControl platform to get IPG-3901 to work simultaneously with XIO-4901

UPGRADE PACKAGE: 1.2.0

Firmware version: 1.2.0 (CPU 16, FPGA 33)

Release date: 2016-04-29

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
STAR-1222	**Added Ethernet port bandwidth aggregation** It is now possible to use the secondary Ethernet port for extending the amount of bandwidth available to 20 GigE
STAR-1393	**Default IP port for gateways is 1000 which can conflict with reserved port assignment** IANA reserved port assignments go up to 1023, so a default gateway port of 1000 can cause a conflict. This has been resolved by setting the default gateway IP port to 10,000.

BUGFIXES

Ref#	Description

STAR-1307	**MAC addresses generated for multicast streams may be incorrect** In previous versions the generated MAC address for a given multicast IP stream may have been incorrect. A fix was made to ensure the correct MAC addresses are generated.

KNOWN BUGS & LIMITATIONS

Ref #	Description
STAR-1391	**Card alarms and iControl alarms are not disabled one ETH2 Operation mode : OFF or Aggregation** Based on the chosen Operation mode (OFF & Aggregation) the ETH2 alarm or/and Backup alarms are not disabled
STAR-959	**We are missing Card alarms and iControl/GSM alarms for the reference** The support of the card alarm and the iControl/GSM alarm is not supported for the support of the reference
STAR-918	**Test pattern in 3G is not available** The test pattern is only available in SD and HD (720p and 1080i).
STAR-907	**Potential bandwidth problem** When an IGMP v3 Source is specified for multicast and the IPG-3901 is using about 90% of its IP bandwidth (e.g. 6 x HD or 3 x 3G), changing the input IP address/port settings on any of the active gateways might cause an overloading of the switch. This results in a brief (approximately 5 seconds) interruption of all multicast traffic on the switch. Workaround: To avoid the loss of all inputs, we recommend that you disable the gateway while its IP address or port is being changed.
STAR-888	**Densité Upgrade Manager not supported** Upgrading the card through the Densité Upgrade Manager (DUM) is not supported. To upgrade the card, follow the instructions provided with the upgrade package.
STAR-803	**SDI jitter may be outside specifications** In some situations, the SDI output jitter may be outside of the timing jitter specifications (10Hz). This may occur when the input streams have too much IP packet jitter or the Output on Error Mode is set to configurable color and activated. This issue can be resolved by ensuring the SDI output is locked to a reference.
STAR-720	**Output on Error over Test Pattern** The Output on Error will be activated when the test pattern is enabled for a gateway **and** the global test pattern format doesn't match the format specified for that gateway.

UPGRADE PACKAGE: 1.1.0

Firmware version: 1.1.0 (CPU 20, FPGA 33)

Release date: 2016-02-26

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
STAR-1288	**System-wide Scan Rate moved to Reference tab** The System-wide Scan Rate panel, which used to be on the Gateway Config tab, is now displayed on the Reference tab. This new location is consistent with other card configuration options and allows easier problem diagnosis of external reference and URS issues.
STAR-983	**Support for the IPG-3901-3+DRP rear connector panel** Support was added for the IPG-3901-3+DRP, which is the new rear connector panel used to install the IPG-3901 card in the new Densité 3+ FR1 and Densité 3+ FR4 frames
STAR-950	**SDI output locked to reference** Support was added to the IPG-3901 to allow genlocking of SDI outputs. The IPG-3901 can now lock its outputs to an external reference and/or URS. This functionality is configured using the new Reference tab in iControl. When the SDI outputs are locked to a reference, output jitter is significantly reduced and conforms to or exceeds the SDI output timing jitter specification. Please note that although SDI outputs can be locked to a common reference, the SDI outputs can not yet be phase aligned. This will be addressed in a future release.

BUGFIXES

Ref#	Description
STAR-1194	**IPG-3901 cards may lose their MAC address upon reboot** An issue was identified whereby IPG-3901 cards could lose their network MAC addresses if they

| | lost power or were removed from their frame during a reboot. This was corrected so that the cards are more resilient to power loss during reboot and the MAC addresses are no longer lost. |

KNOWN BUGS & LIMITATIONS

Ref #	Description
STAR-959	**We are missing Card alams and iControl/GSM alarms for the reference** The support of the card alarm and the iControl/GSM alarm is not supported for the support of the reference
STAR-918	**Test pattern in 3G is not available** The test pattern is only available in SD and HD (720p and 1080i).
STAR-907	**Potential bandwidth problem** When an IGMP v3 Source is specified for multicast and the IPG-3901 is using about 90% of its IP bandwidth (e.g. 6 x HD or 3 x 3G), changing the input IP address/port settings on any of the active gateways might cause an overloading of the switch. This results in a brief (approximately 5 seconds) interruption of all multicast traffic on the switch. Workaround: To avoid the loss of all inputs, we recommend that you disable the gateway while its IP address or port is being changed.
STAR-888	**Densité Upgrade Manager not supported** Upgrading the card through the Densité Upgrade Manager (DUM) is not supported. To upgrade the card, follow the instructions provided with the upgrade package.
STAR-803	**SDI jitter may be outside specifications** In some situations, the SDI output jitter may be outside of the timing jitter specifications (10Hz). This may occur when the input streams have too much IP packet jitter or the Output on Error Mode is set to configurable color and activated. This issue can be resolved by ensuring the SDI output is locked to a reference.
STAR-720	**Output on Error over Test Pattern** The Output on Error will be activated when the test pattern is enabled for a gateway **and** the global test pattern format doesn't match the format specified for that gateway.

UPGRADE PACKAGE: 1.0.3

Firmware version: 1.0.3 (CPU 244, FPGA 76)

Release date: 2015-12-07

iControl compatibility: 7.00+

iControl Solo compatibility: 7.00+

RCP-200 compatibility: NA

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

BUGFIXES

Ref#	Description
STAR-1094	**FPGA bin file can reduce chip lifetime on the long term** The vendor tool used to generate the binary file had a bug that causes a small leakage current that could damage the device in the long term. WORKAROUND: Update the code stored on the SD card with this version

KNOWN BUGS & LIMITATIONS

Ref #	Description
STAR-907	**Potential bandwidth problem** When an IGMP v3 Source is specified for multicast, and the IPG-3901 is using about 90% of its IP bandwidth (e.g. 6 x HD or 3 x 3G), changing the input IP address/port settings on any of the active gateways might cause an overloading of the switch, resulting in a brief (e.g. about 5 seconds) interruption of all multicast traffic on the switch. Workaround: To avoid the loss of all inputs, it's a good idea to disable the gateway while its IP address or port is being changed.
STAR-888	**Densité Upgrade Manager not supported** Upgrading the card through the Densité Upgrade Manager (DUM) is not supported. To upgrade the card, follow the instructions provided with the upgrade package.
STAR-803	**SDI jitter may be outside specifications** In some situations, the SDI output jitter may be outside of the specifications for the timing jitter (10Hz).

STAR-890	The situations are: - the input streams have too much IP packet jitter, - the Output on Error Mode is set to configurable color and activated.
STAR-918	**Test pattern in 3G is not available** The test pattern is only available in SD and HD (720p and 1080i).
STAR-720	**Output on Error over Test Pattern** The Output on Error will be activated when the test pattern is enabled for a gateway and the global test pattern format doesn't match the format specified for that gateway.

UPGRADE PACKAGE: 1.0.2

Firmware version: 1.0.2 (CPU 240, FPGA 76)

Release date: 2015-11-13

iControl compatibility: 7.00+

iControl Solo compatibility: 7.00+

RCP-200 compatibility: NA

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

BUGFIXES

Ref#	Description
STAR-1048	**iControl panel not opening on some IPG-3901 cards** Some SD cards have a corrupted data partition and prevent the iControl UI panel to open. WORKAROUND: Get a new a new SD card from the factory. Do not reuse the old SD card on an IPG-3901.

KNOWN BUGS & LIMITATIONS

Ref #	Description
STAR-907	**Potential bandwidth problem** When an IGMP v3 Source is specified for multicast, and the IPG-3901 is using about 90% of its IP bandwidth (e.g. 6 x HD or 3 x 3G), changing the input IP address/port settings on any of the active gateways might cause an overloading of the switch, resulting in a brief (e.g. about 5 seconds) interruption of all multicast traffic on the switch. Workaround: To avoid the loss of all inputs, it's a good idea to disable the gateway while its IP address or port is being changed.
STAR-888	**Densité Upgrade Manager not supported** Upgrading the card through the Densité Upgrade Manager (DUM) is not supported. To upgrade the card, follow the instructions provided with the upgrade package.
STAR-803 STAR-890	**SDI jitter may be outside specifications** In some situations, the SDI output jitter may be outside of the specifications for the timing jitter (10Hz). The situations are:

	- the input streams have too much IP packet jitter, - the Output on Error Mode is set to configurable color and activated.
STAR-918	**Test pattern in 3G is not available** The test pattern is only available in SD and HD (720p and 1080i).
STAR-720	**Output on Error over Test Pattern** The Output on Error will be activated when the test pattern is enabled for a gateway and the global test pattern format doesn't match the format specified for that gateway.

UPGRADE PACKAGE: 1.0.1

Firmware version: 1.0.1 (CPU 237, FPGA 76)

Release date: 2015-09-14

iControl compatibility: 7.00+

iControl Solo compatibility: 7.00+

RCP-200 compatibility: NA

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

KNOWN BUGS & LIMITATIONS

Ref #	Description
STAR-907	**Potential bandwidth problem** When an IGMP v3 Source is specified for multicast, and the IPG-3901 is using about 90% of its IP bandwidth (e.g. 6 x HD or 3 x 3G), changing the input IP address/port settings on any of the active gateways might cause an overloading of the switch, resulting in a brief (e.g. about 5 seconds) interruption of all multicast traffic on the switch. Workaround: To avoid the loss of all inputs, it's a good idea to disable the gateway while its IP address or port is being changed.
STAR-888	**Densité Upgrade Manager not supported** Upgrading the card through the Densité Upgrade Manager (DUM) is not supported. To upgrade the card, follow the instructions provided with the upgrade package.

STAR-803
 	
STAR-890
	SDI jitter may be outside specifications
	In some situations, the SDI output jitter may be outside of the specifications for the timing jitter (10Hz).
	The situations are:
	   - the input streams have too much IP packet jitter,
	   - the Output on Error Mode is set to configurable color and activated.

STAR-918	**Test pattern in 3G is not available** The test pattern is only available in SD and HD (720p and 1080i).

STAR-720	**Output on Error over Test Pattern** The Output on Error will be activated when the test pattern is enabled for a gateway and the global test pattern format doesn't match the format specified for that gateway.