

## SCO-1421 – Upgrade Package 3.2.0

### Upgrade Package Release History

Release Version	Comprising:		Release Date	Version Details	User Manual for this release (Grass Valley document #)
	Firmware Version	Software Version			
3.2.0	3.2.0	3.2.0	2014.06.13	<a href="#">(go)</a>	M937-9900-104

**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: 3.2.0

Release date: [2014.06.13](#)

iControl compatibility: [5.00+](#)

iControl Solo compatibility: [6.00+](#)

RCP-200 compatibility: [N/A](#)

Custom software compatibility: [N/A](#)

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

### ENHANCEMENTS & NEW FEATURES

Ref#	Description
<a href="#">001-00-014509</a>	<p><b>Total bitrate granularity enhancement</b></p> <p>In this version, we add the possibility to configure the total TS bitrate probing with a precision of 10 kbps instead of the previous 1 Mbps</p>

## BUGS FIXED IN THIS RELEASE

Ref #	Description
<a href="#">SCO-227</a>	<p><b>Input 1 settings apply to input 2 functionality problem</b></p> <p>In the previous release, it could happen that input 2 probing parameters were used on input 2, even when the IN1 -&gt; IN2 checkbox was selected to force the use of input 1 parameters on input 2. In this release, the input 1 parameters are correctly applied to input 2 whenever the IN1 -&gt; IN2 checkbox is selected.</p>
<a href="#">SCO-228</a>	<p><b>DVB-ASI doesn't respect spec EN 50083-9</b></p> <p>Because of some internal delays, the packets output from the SCO card were split especially when fed in packet mode. This caused the card to be non-compliant with the EN 50083-9 standard in some situations. The current version has been fixed and guarantees to be compliant when fed with any type of compliant ASI stream.</p>

## KNOWN BUGS & LIMITATIONS

Ref #	Description
<a href="#">SCO-212</a>	<p><b>SCO-1421 PTS Alarm Report</b></p> <p>The PTS timeout measure of the TR101290 cannot be used on scrambled elementary streams even with the presence of the CAT table in the transport stream.</p>
<a href="#">SCO-215</a>	<p><b>SCO-1421 doesn't switch when a PID is lost</b></p> <p>In some streams, it happens that the PCR PID uses the same number as the elementary stream PID. In this situation, if the elementary stream is lost and the PCR still remains, the card won't switch because the PID number is still present in the transport stream. The SCO-1421 does not analyze the content of a PID and only checks for its presence in the stream. A good work-around for this situation is to use the newly-added PID bitrate probing and check for the payload bitrate.</p>
<a href="#">29317</a>	<p><b>Wrong Stream Type Detection</b></p> <p>It might happen that the stream type detection gives a DVB type when it should indicate ATSC. This is usually caused by the fact that DVB <b>and</b> ATSC specific tables are present at the same time in the stream. Specifically, this might happen if VCT or MGT tables (ATSC) are present at the same time as SDT, NIT or TDT tables (DVB). This will only affect the type reported by the card and the probing will</p>

	behave as expected.
<a href="#">29079</a>	<p><b>“TS_Sync_Loss” error count increment</b></p> <p>When the cable is unplugged from the SCO-1421 card, the “<b>TS_Sync_Loss</b>” measurement of the TR101290 will not increment its error count. However, the error will still be reported to the user with the “<b>TS Signal Presence</b>”</p>
<a href="#">29158</a>	<p><b>Video and Audio PID range</b></p> <p>The card will display a “<b>limitation error</b>” if a video or audio elementary stream uses a PID normally reserved for DVB or ATSC information table (ex : NIT, VCT, ...). If a “<b>limitation error</b>” occurs, the results given by the probing of the card will be unreliable.</p>
<a href="#">27948</a>	<p><b>Blinking of alarm statuses</b></p> <p>It is possible that some of the alarm statuses will blink red or green while configuring some of the card parameters. No switch decision should be made while the card is being configured.</p>
<a href="#">26295</a>	<p><b>Carrier at the output even when no input</b></p> <p>In some conditions, an invalid carrier will still be output by the card even when no input is present. This happen mainly when the selected input is missing in MANUAL mode.</p>
<a href="#">28035</a>	<p><b>Switch at power-on or from bypass mode</b></p> <p>When fed with the exact same ASI stream, it could happen that the card switches at power-on if in AUTO mode. This switch can also happen when changing from BYPASS mode to AUTO mode. This is caused by a race condition between input 1 and input 2 detection.</p>

## PREVIOUS RELEASES

### FIRMWARE VERSION: **310**

Release date: [2013-10-11](#)

iControl compatibility: [4.44 \(build 567\) and up](#)

iControl Solo compatibility: [4.44\(build 568\) and up](#)

RCP-200 compatibility: [NA](#)

Custom software compatibility: [NA](#)

Hardware incompatibility: [This firmware applies to all existing hardware assemblies.](#)

## ENHANCEMENTS & NEW FEATURES

Bug #	Description
<a href="#">SCO-213</a>	<p><b>PID Bitrate probing addition</b></p> <p>In this version, we add the possibility to probe the bitrate of up to 4 different PIDs among the probed services. The user can now configure the card to switch if the bitrate of one of the probed PIDs goes outside a predefined min and max range. The same functionality has also been added for the NULL PID bitrate specifically.</p>

## BUGFIXES

Bug #	Description
<a href="#">SCO-210</a>	<p><b>SCO-1421 does not respond to GPI triggers</b></p> <p>In previous versions, the card was not switching if a valid 5 volts external power was not provided to the card. This limitation has now been removed and the SCO-1421 will now switch even if no external power is provided.</p>
<a href="#">SCO-225</a>	<p><b>CAT Missing error not implemented correctly</b></p> <p>In previous versions, this measurement was reporting an error if no CAT table was present in the transport streams. However, the TR101290 specification states that an error occurs only if this table is not present while there's a scrambled elementary stream in the transport stream. Previous versions were not looking for scrambled ES and this has been fixed for this version.</p>
<a href="#">iCONTROL-16963</a>	<p><b>PTS Error Repetition Rate setting not taken into account for INPUT 2 (INPUT 1 is ok)</b></p> <p>When configured to use the same parameters for input 2 than the ones of input 1, the value displays in the TR 101 290 probing panel was the one originally set for input 2 and not the one taken into account for measurement. This has been fix in iControl version 4.44</p>
<a href="#">iCONTROL-16965</a>	<p><b>TR101 290 Alarm Control Interchange</b></p> <p>The mapping of alarms 1.3 a,b,c and 1.4 was not done correctly in the alarm config panel. This is now</p>

fix with version 4.44 of iControl.

## KNOWN BUGS & LIMITATIONS

Bug #	Description
<a href="#">SCO-212</a>	<p><b>SCO-1421 PTS Alarm Report</b></p> <p>The PTS timeout measure of the TR101290 cannot be used on scrambled elementary streams even with the presence of the CAT table in the transport stream.</p>
<a href="#">SCO-215</a>	<p><b>SCO-1421 doesn't switch when a PID is lost</b></p> <p>In some streams, it happens that the PCR PID uses the same number as the elementary stream PID. In this situation, if the elementary stream is lost and the PCR still remains, the card won't switch because the PID number is still present in the transport stream. The SCO-1421 does not analyze the content of a PID and only checks for its presence in the stream. A good work-around for this situation is to use the newly-added PID bitrate probing and check for the payload bitrate.</p>
<a href="#">29317</a>	<p><b>Wrong Stream Type Detection</b></p> <p>It might happen that the stream type detection gives a DVB type when it should indicate ATSC. This is usually caused by the fact that DVB <b>and</b> ATSC specific tables are present at the same time in the stream. Specifically, this might happen if VCT or MGT tables (ATSC) are present at the same time as SDT, NIT or TDT tables (DVB). This will only affect the type reported by the card and the probing will behave as expected.</p>
<a href="#">29079</a>	<p><b>"TS_Sync_Loss" error count increment</b></p> <p>When the cable is unplugged from the SCO-1421 card, the "<b>TS_Sync_Loss</b>" measurement of the TR101290 will not increment its error count. However, the error will still be reported to the user with the "<b>TS Signal Presence</b>"</p>
<a href="#">29158</a>	<p><b>Video and Audio PID range</b></p> <p>The card will display a "<b>limitation error</b>" if a video or audio elementary stream uses a PID normally reserved for DVB or ATSC information table (ex : NIT, VCT, ...). If a "<b>limitation error</b>" occurs, the results given by the probing of the card will be unreliable.</p>
<a href="#">27948</a>	<p><b>Blinking of alarm statuses</b></p>

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	<p>It is possible that some of the alarm statuses will blink red or green while configuring some of the card parameters. No switch decision should be made while the card is being configured.</p>
<a href="#">26295</a>	<p><b>Carrier at the output even when no input</b></p> <p>In some conditions, an invalid carrier will still be output by the card even when no input is present. This happens mainly when the selected input is missing in MANUAL mode.</p>
<a href="#">28035</a>	<p><b>Switch at power-on or from bypass mode</b></p> <p>When fed with the exact same ASI stream, it could happen that the card switches at power-on if in AUTO mode. This switch can also happen when changing from BYPASS mode to AUTO mode. This is caused by a race condition between input 1 and input 2 detection.</p>

## FIRMWARE VERSION: 302

Release date: [2011-04-04](#)

iControl compatibility: [4.0 \(build 0041\)](#)

iControl Solo compatibility: [3.71 \(build 0018\)](#)

RCP-200 compatibility: [NA](#)

Custom software compatibility: [NA](#)

Hardware incompatibility: [This firmware applies to all existing hardware assembly.](#)

## ENHANCEMENTS & NEW FEATURES

Bug #	Description

## BUGFIXES

Bug #	Description
<a href="#">001-00-004769</a>	<p><b>Bad TR101290 probing results, unstable bitrates and « unknown » service name.</b></p> <p>On some hardware and specifically with high bitrate feeds (50Mbps or higher...) some strange behavior might be experience with prior firmware version.</p> <p>The card gives TR101290 errors when there's not, the bitrates displayed by the card is not stable and keeps on changing when it should not. Furthermore, the service name that should be displayed in iControl keeps displaying "Unknown Name" even when present.</p> <p>There`s no workaround for this bug and the actual release resolve this issue completely.</p>

## KNOWN BUGS & LIMITATIONS

Bug #	Description

<a href="#">29317</a>	<p><b>Wrong Stream Type Detection</b></p> <p>It might happen that the stream type detection gives a DVB type when it should indicate ATSC. This is usually caused by the fact that DVB <b>and</b> ATSC specific tables are present at the same time in the stream. Specifically, this might happen if VCT or MGT tables (ATSC) are present at the same time as SDT, NIT or TDT tables (DVB). This will only affect the type reported by the card and the probing will behave as expected.</p>
<a href="#">29079</a>	<p><b>"TS_Sync_Loss" error count increment</b></p> <p>When the cable is unplugged from the SCO-1421 card, the "<b>TS_Sync_Loss</b>" measurement of the TR101290 will not increment its error count. However, the error will still be reported to the user with the "<b>TS Signal Presence</b>"</p>
<a href="#">29158</a>	<p><b>Video and Audio PID range</b></p> <p>The card will display a "<b>limitation error</b>" if a video or audio elementary stream uses a PID normally reserved for DVB or ATSC information table (ex : NIT, VCT, ...). If a "<b>limitation error</b>" occurs, the results given by the probing of the card will be unreliable.</p>
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<a href="#">26295</a>	<p><b>Carrier at the output even when no input</b></p> <p>In some conditions, an invalid carrier will still be output by the card even when no input is present. This happen mainly when the selected input is missing in MANUAL mode.</p>
<a href="#">28035</a>	<p><b>Switch at power-on or from bypass mode</b></p> <p>When fed with the exact same ASI stream, it could happen that the card switches at power-on if in AUTO mode. This switch can also happen when changing from BYPASS mode to AUTO mode. This is caused by a race condition between input 1 and input 2 detection.</p>



## FIRMWARE VERSION: 300

Release date: [2010-11-15](#)

iControl compatibility: [4.0 \(build 0041\)](#)

iControl Solo compatibility: [NA](#)

RCP-200 compatibility: [NA](#)

Custom software compatibility: [NA](#)

Hardware incompatibility: [This firmware applies to all existing hardware assembly.](#)

## ENHANCEMENTS & NEW FEATURES

Bug #	Description
<a href="#">5</a>	<p><b>Advanced probing option</b></p> <p>This option gives access to the whole set of priority 1 and 2 measures as defined by the TR101290 specification. Furthermore, the card now offers the possibility to display the bandwidth of the probed services, probe the system information tables and many others.</p>

## BUGFIXES

Bug #	Description
	NA

## KNOWN BUGS & LIMITATIONS

Bug #	Description
<a href="#">29317</a>	<p><b>Wrong Stream Type Detection</b></p> <p>It might happen that the stream type detection gives a DVB type when it should indicate ATSC. This is usually caused by the fact that DVB <b>and</b> ATSC specific tables are present at the same time in the stream. Specifically, this might happen if VCT or MGT tables (ATSC) are present at the same time than SDT, NIT or TDT tables (DVB). This will only affect the type reported by the card and the probing will behave as expected.</p>

<a href="#">29079</a>	<p><b>“TS_Sync_Loss” error count increment</b></p> <p>When the cable is unplugged from the SCO-1421 card, the “<b>TS_Sync_Loss</b>” measure of the TR101290 will not increment it’s error count. However, the error will still be reported to the user with the “<b>TS Signal Presence</b>”</p>
<a href="#">29158</a>	<p><b>Video and Audio PID range</b></p> <p>The card will display a “<b>limitation error</b>” if a video or audio elementary stream uses a PID normally reserved for DVB or ATSC information table (ex : NIT, VCT, ...). If a “<b>limitation error</b>” occurs, the results gives by the probing of the card will be unreliable.</p>
<a href="#">27948</a>	<p><b>Blinking of alarm statuses</b></p> <p>It is possible that some of the alarm statuses will blink to the red or green color while configuring some of the card parameters. No switch decision should be made while the card is being configured.</p>
<a href="#">26295</a>	<p><b>Carrier at the output even when no input</b></p> <p>In some conditions, an invalid carrier will still be output by the card even when no input is present. This happen mainly when in MANUAL mode, the selected input is missing.</p>
<a href="#">28035</a>	<p><b>Switch at power-on or from bypass mode</b></p> <p>When feed with the exact same ASI stream, it could happen that the card switch at power-on if in AUTO mode. This switch can also happen when passing from BYPASS mode to AUTO mode. This is caused by a race condition between input 1 and input 2 detection and will be address in the next version.</p>

## FIRMWARE VERSION: 200

Release date: 2010-07-05

iControl compatibility: 3.70 (build 00xx)

iControl Solo compatibility: 3.70 (build 0001)

RCP-200 compatibility: NA

Custom software compatibility: NA

Hardware incompatibility: This firmware applies to all existing hardware assembly.

## ENHANCEMENTS & NEW FEATURES

Bug #	Description
<a href="#">2</a>	<p><b>Support of the GPI</b></p> <p>The support of the GPI input and output have been add in this version and can be used to change the switch mode or the selected input using external GPI.</p>
<a href="#">3</a>	<p><b>Extraction of the program name</b></p> <p>Each program name are now extracted from the PSIP tables and displayed in the iControl panel</p>
<a href="#">4</a>	<p><b>Enhancement of some probing limitation</b></p> <p>With version 200, it is now possible to probe up to 12 services simultaneously and with a maximum of 64 services per transport stream.</p>

## BUGFIXES

Bug #	Description
	NA

## KNOWN BUGS & LIMITATIONS

Bug #	Description
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<a href="#">26295</a>	<b>Carrier at the output even when no input</b> In some conditions, an invalid carrier will still be output by the card even when no input is present. This happen mainly when in MANUAL mode, the selected input is missing.
<a href="#">28035</a>	<b>Switch at power-on or from bypass mode</b> When feed with the exact same ASI stream, it could happen that the card switch at power-on if in AUTO mode. This switch can also happen when passing from BYPASS mode to AUTO mode. This is caused by a race condition between input 1 and input 2 detection and will be address in the next version.

## FIRMWARE VERSION: 101

Release date: [2010-05-12](#)

iControl compatibility: [3.70 \(build 00xx\)](#)

iControl Solo compatibility: [3.70 \(build 0001\)](#)

RCP-200 compatibility: [NA](#)

Custom software compatibility: [NA](#)

Hardware incompatibility: [This firmware applies to all existing hardware assembly.](#)

## ENHANCEMENTS & NEW FEATURES

Bug#	Description
	NA

## BUGFIXES

Bug#	Description
	NA

## KNOWN BUGS & LIMITATIONS

Bug#	Description
<a href="#">26295</a>	<p><b>Carrier at the output even when no input</b></p> <p>In some conditions, an invalid carrier will still be output by the card even when no input is present. This happen mainly when in MANUAL mode, the selected input is missing.</p> <p>WORKAROUND: N.A</p>
<a href="#">1</a>	<p><b>Stream Type, System Information structure and Transport ID refresh</b></p> <p>The stream type, SI structure and transport ID will NOT be cleared in the iControl panel if the carrier is kept but with all the tables lost and the stream fulfill of NULL PIDs and sync word (47h). The SCO-1421</p>

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card will not see a sync loss while the sync word are still present but will not be able to update nor cleared the previously mention information as the tables disappeared. However, the table probing timeout will still works ok and will warn the user that the stream is empty.