SSP-3801

HD/SD SOLID STATE PLAYOUT CARD

Release Notes

M931-9903-140

11 June 2015

Introducing the SSP-3801 v1.4

The Densité SSP-3801 is a single card, solid state HD/SD playout server that is housed in the Densité 3RU frame. It is fully integrated with the GV STRATUS Playout cloud-based automation and schedule management service and is equally suitable for deployment at a regional site or within a network operation center. The SSP-3801 card uses solid state storage and broadcast hardware technology, with no reliance on external databases, resulting in low cost of ownership, rock solid reliability, total frame accuracy, simple installation and very low power consumption.

New Features

SSP-3008: Added new alarm and reminder when default password is in use

Use of the default administrative password is not recommended. To encourage changing of the default password, a dialog box appears when log in is performed using the default password to remind the administrator to go to Card Configuration > Security and change the password. If the default remains unchanged, an alarm is triggered.

SSP-2981: GPI triggers enhanced to support breakaway

New options have been added to the Channel Configuration > GPI Triggers page to allow the GPI pins to trigger a breakaway to a live feed from the SDI A or B input or from the specified default router source, if a router is configured.

SSP-2913: Added Manual Control mode and Manual Events page

The SSP-3801 now supports a new mode called Manual Control. Instead of being integrated with GV STRATUS Playout, Manual Control mode allows the playout to be controlled by an external automation system via SCTE-104 supporting up to five cued or two pre-roll clip events at a time. When Manual Control is enabled on the Card Configuration > System Identity page, the Playlist page is replaced by the Manual Events page, which displays the current status of the events in the queue.

SSP-2908: Added TFT911 EAS protocol support

The Emergency Alerting System (EAS) support has been enhanced to include support for the TFT911 EAS protocol. The SSP-3801 card can now be configured to receive EAS messages using the TFT911 EAS protocol from an external EAS receiver via the serial COM port and have an EAS event triggered via a GPI pin.

SSP-2829: Added Asrun log

The SSP-3801 card now provides an Asrun log to assist in the reconciliation of the events scheduled to play and what actually played on air. The Asrun log is rotated based on a configurable time period and also on a maximum file size. At each rotation, the hours of logs produced during the configured time period are saved as comma separated value (CSV) files and stored in the FTP /logs/asrun folder.

SSP-2825: Added support for filtering SCTE-104 messages

New settings have been added to offer filtering for SCTE-104 packets based on their digital program insertion (DPI) packet identifier (PID) index. The feature provides a mechanism to target SCTE-104 commands at specific devices so the device only acts upon commands with a matching DPI PID index. One set of settings allow the SSP-3801 card to specify the DPI PID index on which it will act upon and another specifies what DPI PID index to insert into SCTE-104 packets for SCTE-104 secondary events.

SSP-2821: Added support for handling idle channel behaviour

A new page called Channel Idle Setup has been added under Channel Configuration to define what the SSP-3801 card will do in situations when there is a planned period of time when it is considered normal for a channel to be off air. With this new feature, the behaviour can be set to activate the off-air behaviour configured on the Off Air Behaviour page or display the live feed from a source selected in the Live SDI Source list without triggering an alarm.

SSP-2738: Added support for the Emergency Alerting System (EAS)

The SSP-3801 card can now be configured to receive EAS messages using the Sage Generic (ENDEC) protocol from an external EAS receiver via the serial COM port and have an EAS event triggered via a GPI pin.

SSP-2700: Added support for Easytext external data source files

The SSP-3801 card now supports external data source files for Easytext templates. The external data source file is a simple, validated XML file containing the data source names and values defined in the Easytext template. It is hosted on a web, SMB, or FTP server from which the SSP-3801 card obtains the data source names and values when the Easytext event goes on air.

SSP-1381: Added support for basic text playout using Easytext

The SSP-3801 card can now optionally play out basic text (CG) using the Easytext feature. Easytext templates are created by using the Windows-based TextBuilder2 application included as part of the Media Conversion Suite (MCS). Templates can include text and images with support for rolls and crawls. Text objects can also include references to internal data sources (such as clocks) and external data sources.

SSP-994: Added alarm to show when the playlist duration runs low

A new alarm called "Schedule Low" has been added to the Alarms page under System > Playlist > Schedule Low. The alarm triggers when the remaining duration of events in the playlist falls below the specified time window, which is configured on the Channel Configuration > Schedule Alarms page.

SSP-706: SCTE-104 Keep-Alive alarm created

Support has been added for reading a SCTE-104 Keep-Alive packet, which notifies an SSP-3801 card that there is an upstream device able to insert SCTE-104 packets as ancilliary data. A timer is initialized to count the time since the last SCTE-104 Keep-Alive packet was received. If this timer exceeds a timeout value (60 seconds), an alarm is raised. Receiving a new Keep-Alive packet resets the timer to zero, and the alarm is reset.

SSP-705: Added ability for generating SCTE-104 Keep-Alive requests

An option called Generate SCTE-104 Keep-Alive packets has been added to the Channel Configuration > SCTE-104 page. This feature, when selected, causes the SSP-3801 card to generate and transmit a SCTE-104 Keep-Alive packet every 29 seconds.

SSP-704: SCTE-104 event type added to Playlist page

A new event type called SCTE-104 has been added to the Playlist page. The SCTE-104 event allows operators to add SCTE-104 splice requests to the playlist without needing to create a custom VANC payload. The video line into which the SCTE-104 messages is inserted is configurable on the Channel Configuration > SCTE-104 page.

Improvements

SSP-3039: Disabled fan speed control

A small number of SSP-3801 cards have exhibited an issue with their fan reliability. It has been recommended not to reduce the fan speed as it could affect the fan's reliability. A fix has been put in place to run the fans at full speed regardless of the temperature of the CPU and FPGA.

SSP-2663: GV Stratus Playout connection timeout increased to 11 hours 50 minutes

The connection timeout has been increased so the SSP-3801 card and the GV STRATUS Playout service can be resynchronized without a playout interruption up to 11 hours and 50 minutes after the connection has been lost.

SSP-2637: Allow Take Next for uncued events

It is now possible to trigger a Take Next for events that have not been cued. This allows users to advance a playlist to recover from inaccessible events at the on-air point.

Fixes

SSP-3135: Restore point creation fails when initiated from the Densité controller card's user interface

In previous versions, the creation of a restore point initiated from the Densité controller card's user interface could fail. A fix was made this release to allow restore points to be created correctly when initiated from the Densité controller card's user interface.

SSP-3107: CPU Fan speed is reported incorrectly

The CPU fan speed was being reported at 50% of the actual value at which it was running. A fix has been put in place to ensure the reported CPU fan speed matches the speed provided by the fan tachometer.

SSP-3075: Logos fail to join in progress at startup

An issue was found where logo events would not join in progress when the SSP-3801 card was restarted. The issue was caused by a race condition related to setting the video standard at startup. A fix has been made to ensure logos will now correctly join in progress at startup.

SSP-3074: Graphics fail to join in progress

An issue was found where graphic events would not join in progress if the event was started part-way through. The issue was caused by a seeking fault that resulted in the SSP-3801 card being unable to seek into GMJ files. A fix has been made to allow the card to correctly seek into GMJ files, which has subsequently fixed the join in progress issue for graphic events.

SSP-2986: Duration field is hidden when creating secondary events with "End plus" time mode

When a secondary event was created on the Playlist page, the Duration field was being incorrectly shown or hidden depending on the Time Mode. A fix has been made to hide the Duration field when the Automatic Time Mode is selected and to show it when any other Time Mode is selected.

SSP-2956: Identified OpenSSL FREAK security vulnerability (CVE-2015-0204)

A vulnerability to the OpenSSL FREAK flaw (CVE-2015-0204) was identified in the SSP-3801 card's copy of OpenSSL. The card has been upgraded to v1.0.2a to address this security vulnerability.

SSP-2954: Port numbers specified in URLs are not honored

An issue was discovered whereby the SSP-3801 card would not honor the port number specified in the HTTP or HTTPS URL and would instead always use either port 80 or 443 respectively. A fix has been put in place to ensure it always uses the port number specified in the URL and will only default back to port 80 or 443 when no port is specified.

SSP-2935: Recueing an event adjacent to a holding event does not work correctly

When an event preceding an event on hold was recued in the previous release, the recue would fail to execute correctly and would cause events to play out at incorrect times. A fix was made this release to correct the recue behavior.

SSP-2921: Clips with empty data in their 436M track fail to playout

Clips with an empty SMPTE 436M track were failing to play out. A fix has been put in place to ensure that clips with an empty SMPTE 436M track play out normally.

SSP-2920: MXF files with VBI data that do not contain a storedHeight reveal their VBI in the active picture area

D10 MXF files that do not contain a storedHeight in their descriptor were showing their VBI in the visible picture area. A fix has been put in place to fall back to the sampledHeight if the storedHeight is not set.

SSP-2919: MXF files without an Operational Pattern UL will not play out

An issue existed where MXF files without an operational pattern set in their header would cause the file loaders to crash. A fix has been put in place to prevent the file loaders from crashing and to allow the file to play normally.

SSP-2797: Content advisory status is repeated in the notifications log

An issue exists whereby the content advisory was being showed as changed in the notifications log even when no change occured. A fix has been put in place to ensure the notifications log does not contain entries for content advisory when there have been no changes.

SSP-2795: Suppressed secondary events complete with the wrong status

Events that were suppressed for their entirety would end with a Failed status even though the event never had an opportunity to go to air. A fix has been put in place to ensure that in these situations the status is reported as Skipped.

SSP-2758: NTP servers are reported unlocked when they are not

If an invalid DNS server was set, the NTP servers could sometimes be reported as unlocked even if they were locked and were set via an IP address rather than by a name. A fix has been put in place to ensure that NTP servers set via IP are not affected by DNS settings.

SSP-2751: Identified Network Time Protocol Vulnerabilities (ICSA-14-353-01)

The SSP-3801 card was subject to Network Time Protocol Vulnerabilities as described in advisory ICSA-14-353-01 (https://ics-cert.us-cert.gov/advisories/ICSA-14-353-01). The card has now been upgraded to use NTP 4.2.8 to resolve this vulnerability.

SSP-2742: The SSP-3801 card becomes unresponsive for about 20 seconds when the DNS server fails

The SSP-3801 card could occasionally become unresponsive for 15 to 20 seconds if DNS was to fail. This could manifest itself as a pause on the playlist and would affect transitions into new events. The bug was caused by networking issues that caused the logging to block. A fix was made to ensure that the logging is unaffected by DNS.

SSP-2704: Playout error with back to back logos

An issue could occur with back-to-back logos whereby on the transition to the second logo the first frame of the previous logo was sometimes displayed instead. This would result in the second logo not airing. A fix has been made to ensure that the second logo will air correctly provided that both logos can be fit into the hardware store or logo buffers.

SSP-2697: GV STRATUS Playout is not receiving correct Failover Connection status from the SSP-3801 card

The connection status of the HCO device was not being correctly communicated to GV STRATUS Playout. A fix has been made to ensure that the correct Failover Connection states are sent and displayed correctly in the GV STRATUS Playout web client.

SSP-2672: VANC suppression does not work

The VANC suppression events and VANC suppression manual controls available on the Playlist page were not functioning correctly. Whilst the events were shown as suppressed on the playlist, the VANC suppression did not suppress any secondary VANC events that were on air. A fix has been put in place to ensure that VANC and SCTE-104 events are suppressed when VANC suppression is enabled.

SSP-2665: System Health Checks always show 'A input Timing' and 'A Input Vertical Timing Offset' alarms as triggered

In previous releases the 'A Input Timing' and 'A Input Vertical Timing' alarms would always be triggered after a factory reset. A fix was made to make both of these alarms report correctly after a factory reset.

SSP-2664: Clicking Take Next to bring the next clip to air fails if next clip is on hold

In the previous release when a cued clip was on hold but not at the on-air threshold, clicking Take Next should have taken the event to air; however, clicking Take Next only canceled the hold. A fix has been made so clicking Take Next cancels the hold and takes the event to air.

SSP-2645: Board and CPU temperatures are being reported incorrectly

An lm83 device driver was returning incorrect values and triggering numerous false alarms. The device driver has been fixed to ensure that temperatures are reported correctly and false alarms are no longer generated.

SSP-2636: Problem with unbonding network interface when primary network interface is configured for DHCP

If the SSP-3801 card is configured for bonded mode with DHCP enabled and then bonded mode is subsequently disabled, the connectivity to the SSP-3801 card would be lost. As a result, logging into the web interface would no longer be possible and the card would need to be restarted to resume normal operation. The problem has now been fixed so if bonded mode is disabled while on DHCP the SSP-3801 card should retain its connectivity.

SSP-2607: Secondary events display incorrect status upon Recue

Secondary events were going to an incorrect status (Cued rather than Commit) upon clicking Recue. A fix has been made to resolve this issue so the secondary events display the correct status after a Recue.

SSP-2515: Unheld events are marked as Partial

When an event on hold is unheld, a one frame delay may naturally occur between the button click and the playing out of the event. This was leading to events being marked as 'Partial' upon completion as playout started one frame into the event. To remedy this, events are now held one frame in the future to avoid partial playout.

SSP-2192: Windows VANC create tool creates incorrect packets

The Windows VANC create tool (csvanccreate) was failing to create correct packets when specifying the payload manually using the "-p" command line option. A fault was found in the application and this has now been resolved.

SSP-2156: SSP-3801 card becomes unresponsive

Under certain conditions, the SSP-3801 card would become unresponsive due to a firmware bug that could cause a system lockup. A fix has been put in place to prevent the lockup.

SSP-1535: GSM error level naming is inconsistent with other products

The GSM Error Level "Normal" in the SSP-3801 was equivalent to the status "Disabled" in iControl. Since the difference in terminology may cause confusion, a fix has been made to rename the GSM Error Level to "Disabled" to conform with iControl.

Known Issues

SSP-3076: Using recue for overlapping events does not work

Currently if two events overlap (the start time of the second event is before the end time of the first event) and the second event is in hold if you attempt to perform a re-cue one of the two events will be marked as skipped. The event that is marked as skipped depends upon how long the event was on air before the re-cue was requested.

SSP-3063: Crawls going right flash up a static image of the template before starting

If you create an Easytext crawl that moves from left to right (eg for languages such as Arabic), then a brief flash of static text appears before the crawl starts running. A workaround is to use a fade in duration of at least one second so that the flash occurs when the Easytext layer is almost completely transparent.

SSP-3053: Dropping / undropping an event in hold does not transition the hold to the next event

Currently if an event which is due to go into hold is dropped the hold state appears to remain enabled (via the illumination of the "Hold Next" button) however, the next event to reach the on-air line will not hold.

SSP-2832: Events replaced with Evergreen have the wrong event status

Events that are substituted for Evergreen content have the wrong event status during playout. If Evergreen content is played out instead of the scheduled primary event, it should have an event status of "Evergreen"; however, this issue results in it having a status of "Off-Air" or "Failed" even though the Evergreen content did air correctly. The incorrect status is also reflected on all user interfaces.

Installing the SSP-3801 card

The SSP-3801 rear connector panel must be installed in the Densité 3 frame before the card can be inserted. Once a matching rear connector panel has been installed, you can install the SSP-3801 card. For more information, please refer to the SSP-3801 Installation and Configuration Guide.

Note: All Densité 3 cards and rear panels can be installed with the frame power on. As a safety precaution however, we recommend turning off power to the Densité 3 frame during the installation of the rear connector panel.

To install the rear connector panel:

1. If a card is installed in the slot whose rear panel is being changed, remove it or slide it over by releasing the captive screw(s) at the bottom and then moving or removing the card.
2. Position the SSP-3801 rear connector panel with the connectors facing outwards and the captive screws at the bottom.
3. Secure the rear connector panel in place by tightening the captive screws at the bottom.

To install the SSP-3801 card:

1. Open the front panel of the frame.
2. Slide the SSP-3801 card into the slot and push gently on the Ejector handle to seat the connectors. The card should be inserted into the far left slot associated with the SSP-3801's 4-slot rear panel. If you insert the card into the wrong slot, the on-card status LED will flash red to indicate that there is no connection to the rear panel. Ensure that the card is in the correct slot to prevent damage to itself or other hardware in the frame.
3. Close the front panel of the frame.

Note: To remove an existing SSP-3801 card from the slot, tilt up the swivel handle on the front of the card to lever the connectors apart, then use the handle to pull the card straight out of the slot.

Supported Devices and Software

To be able to test, monitor, and diagnose a specific SSP-3801 card, you need to access the card directly. To do this, you need to access the card on your network using its IP address and login to it.

To access the SSP-3801 web interface, we recommend that you use a display with a minimum screen resolution of 1920 x 1080 pixels and the latest version of Google Chrome at 100% zoom in full-screen (F11) mode.

Supported Formats

The SSP-3801 cards support the following formats. If the media files that you want to use are not in a supported format, you can use the GV STRATUS Playout File Processing Node to convert the files. For more information on the File Processing Node, see the GV STRATUS Playout documentation.

- Off Air slide: Oxtel Still format (OXT)
- Still: Oxtel Still format (OXT)
- Voice-over: 48kHz multi-channel WAV file (8, 16, 24 or 32 bit) (WAV) Note: Floating point PCM data is not supported.
- Graphic: Transcoded by the GV STRATUS Playout File Processing Node (GMJ)
- Logo: Oxtel Still format (OXT) and Oxtel Animation format (OXA)
- Clip: Op1A XDCAM HD or Sony IMX (MXF)
- VANC: Created by csvanccreate.exe tool (VANC). For more information, see the SSP-3801 User Guide.

Contact Us

For technical assistance, contact our international support center at 1-800-547-8949 (US and Canada) or +1 530 478 4148.

To obtain a local phone number for the support center nearest you, please consult the Contact Us section of Grass Valley's website (www.grassvalley.com).

An online form for e-mail contact is also available from the website.

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