SSP-3801

HD/SD Solid State Playout Card

Installation and Configuration Guide

M931-9905-130

18 November 2014

grass valley
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1 Introduction

This chapter provides an overview of what is included in your SSP-3801 package and as well as an overview of the features of the SSP-3801 card.

This chapter contains the following sections:

Product overview

The Densité SSP-3801is 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.

In addition to clip playback, the SSP-3801 card can display still and animated logos, high-quality, pre-rendered graphical sequences and incorporate the output of external graphics devices using a fill and key input.
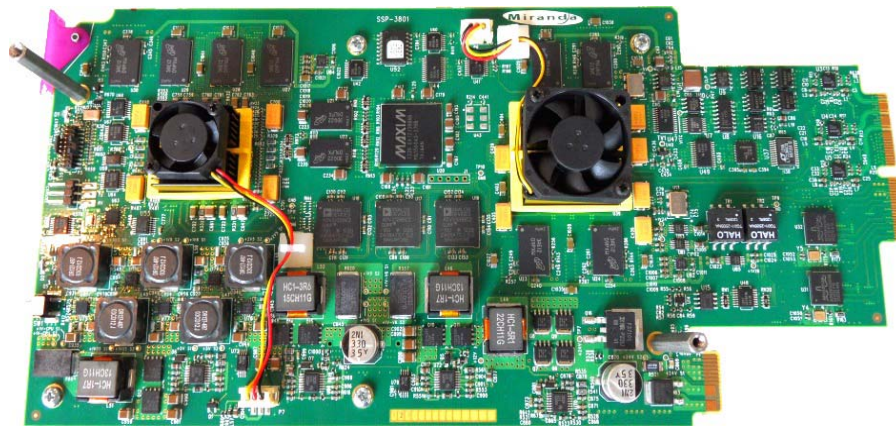
Fig. 1-1: HD/SD Solid-State Playout card (SSP-3801)

The card features media storage that uses a unified file format (MXF Op1A) which is compatible with an XDCAM HD or Sony IMX profile, and supports a bit rate of up to 100 Mbit/sec.

Key Hardware Features

The SSP-3801 is a "broadcast ready" playout solution, it has been designed to include all the functionality to create a rich featured broadcast channel within in single package.
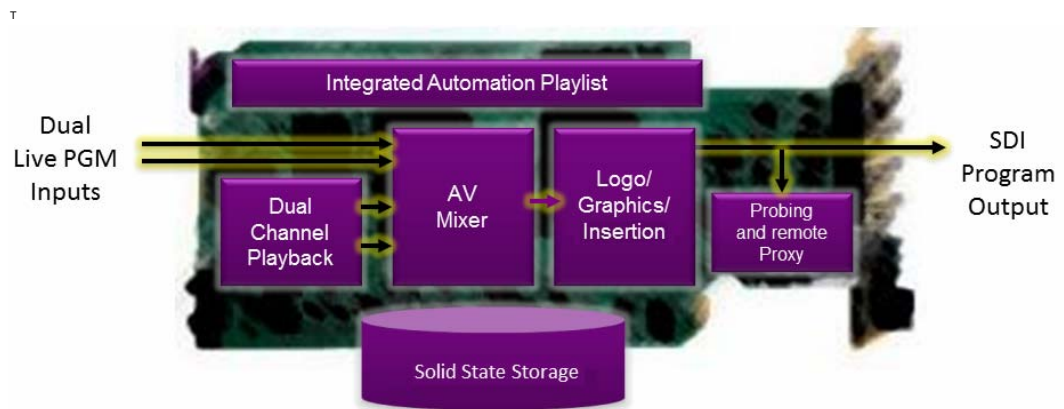
Fig. 1-2: Component layout of the SSP-3801 card

Its key hardware features include:

- All inputs and outputs support HD and SD (625, 525, 1080i and 720p at 50 and 59.94 frame rates)
- Frame accurate playback of clip media including video, multichannel audio and ancillary data
- Fully configurable over a network interface and supports backup of configuration data to Densité controller for hot swap functionality
- Solid State disks provide high performance, high reliability storage of HD material and are available in three sizes: 375 GB, 775 GB and 1550 GB
- With its advanced embedded operating system allows the device will boot and can be ready to take to air within 45 seconds

Key Software Features

The SSP-3801 card is designed to function as a part of the larger GV STRATUS Playout solution and can be deployed in a number of configurations. Its key software features are:

- Full integration with GV STRATUS Playout using secure, open-standard web service protocols to provide playlist input, status updates, thumbnails and alerts
- Provides full web interface for local control
- Supports live events including transitions and pass-through of video, audio and ancillary data
- J2K graphics support
- Built-in voice-over playback support
- Seamless integration with supporting Grass Valley products such as Densité HCO change-over card for main and backup playout applications, plus iControl

Key Operational Features

One of the design goals of this device was to lower operational costs and allow it to be deployed in remote sites where local support is at a premium. To achieve this goal the following features are available:

- All configuration and management can be provided by the network

- Configuring a new device can be as simple as inserting it into the Densité chassis with all setup information being loaded based on the device location, which can be useful for both new channels and replacing defective ones
- Provisioning and repair operations can be easily be performed with staff without broadcast specific training
- Device will robustly continue to operate during temporary loss of connection to GV STRATUS Playout using previously downloaded playlists or "evergreen" material
- SSP-3801 cards can pull broadcast media from a number of configured locations for maximum resilience and flexibility

Carriage of ancillary data in clips

The SSP-3801 card can insert vertical ancillary (VANC) data from clips so that data such as closed captions can be played out in sync with the video. VANC data can be carried in clips in one of three ways:

- As a SMPTE 436M data track within the MXF
- As VBI lines encoded in the MPEG2 data (SD only - all Sony IMX files carry 16 lines of VBI)
- As ATSC A/53 closed captions within the MPEG2 elementary stream

The card operates with an "outside-in" model for handling vertical ancillary data. All SD clips must be in the Sony IMX format and will therefore insert the first 16 lines of the MPEG picture into the VBI space on the output. If ATSC A/53 closed captions are present in the MPEG2 elementary stream, these will override 608 closed captions carried in the VBI lines in the MPEG2 picture. If VBI lines are present in SMPTE 436M, this will overwrite the entire line on the output and will consequently override both the MPEG A/53 closed captions and the VBI lines in the MPEG2 Picture.

Supported media file formats

The SSP-3801 card supports 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 and the GV STRATUS Playout Media Import Application to register the media files as assets in the GV STRATUS Playout service. For more information, see the "Managing Assets" chapter of the GV STRATUS Playout Operator Guide.

Type	Extension	Description
Off Air slide	OXT	Oxtel Still format
Still	OXT	Oxtel Still format
Voice-over	WAV	48kHz multi-channel WAV file (8, 16, 24 or 32 bit) Note: Floating point PCM data is not supported.
Graphic	GMJ	Transcoded by the GV STRATUS Playout File Processing Node
Logo	• OXT • OXA	• Oxtel Still format • Oxtel Animation format

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Type	Extension	Description
Clip	MXF	Op1A XDCAM HD or Sony IMX
VANC	VANC	Created by csvanccreate.exe tool. For more information, see VANC Packet Creation Tool in the SSP-3801 User Guide.

Clip formats

XDCAM HD and Sony IMX are the only officially supported clip formats. Formats outside of these profiles may function correctly; however, it is recommended that you validate the media you wish to use. The following are the encoding parameters supported by the SSP-3801 card.

Clip wrapper format

- OP1a MXF wrapper

Essence types

- Video - MPEG2
    - Any bit rate up to 100Mbits/sec
    - Long GOP or I-Frame only
    - Full frame (SD or HD)
    - Full frame plus 16 lines VBI (as per Sony IMX), SD only
    - Frame coded only (field coded essence is not supported)
    - A/53 MPEG closed captions
- Audio - PCM
    - Up to 16 channels of audio
    - Audio can be presented as any number of multi-channel tracks (1 track of 16 channels, 16 tracks of 1 channel, 8 tracks of 2 channels, and so on)
    - 8-, 16-, 24-, or 32-bit PCM (big endian and little endian supported)
    - Floating point PCM data is not supported
- Ancillary - SMPTE-436M
    - 8-bit VBI lines
        - In luma plane (HD)
        - In chroma plane (HD)
        - Across both luma and chroma (SD)
        - 1-bit and 10-bit VBI lines are not supported
    - 8-bit ancillary packets
        - In luma plane (HD)
        - In chroma plane (HD)
        - Across both luma and chroma (SD)
        - 10-bit ancillary packets are not supported
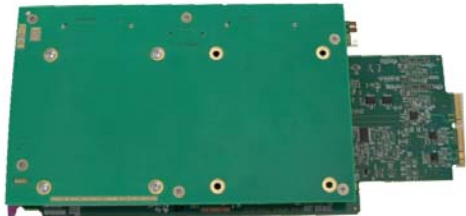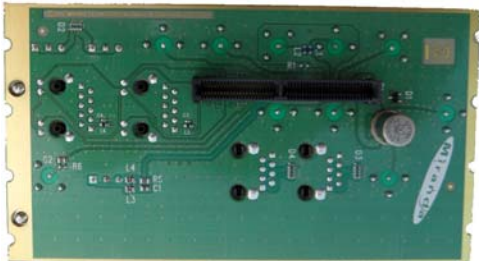
Supported clip frame sizes

Video Standard	Frame Width	Frame Height	Frame Rate	Notes
625	720	576	25	SD/Interlaced, no VBI in picture
625	720	608	25	SD/Interlaced, VBI encoded in first 16 lines of picture (per field)
525	720	480	29.97	SD/Interlaced, no VBI in picture
525	720	512	29.97	SD/Interlaced, VBI encoded in first 16 lines of picture (per field)
1080i/50	1920	1080	25	HD/Interlaced
1080i/59.94	1920	1080	29.97	HD/Interlaced
720p/50	1280	720	50	HD/Progressive
720p/59.94	1280	720	59.94	HD/Progressive

What's included with your product

Each SSP-3801 package consists of two separate hardware components:

- One HD/SD SSP-3801 card
- One SSP-3801 rear connector panel

Component	Front	Rear
HD/SD Solid-State Playout card		
SSP-3801 rear connector panel		

You can also access and download the complete SSP-3801 documentation by entering SSP-3801 in the **Search support files** field on the Support Portal:

http://www.miranda.com/support/software/index

Overview of the SSP-3801 card

This chapter provides an overview to the SSP-3801 hardware and software components, including functional descriptions.

This chapter contains the following sections:

About the SSP-3801 card

The SSP-3801 is a playout server card that consists of two circuit boards assembled together:

- The main board carries the bulk of the electronics with connectors that interface with the SSP-3801 rear connector and Densité 3 frame mid-plane.
- The second board is a solid state drive (SSD) carrier board, which features up to two SSDs for application and media storage.
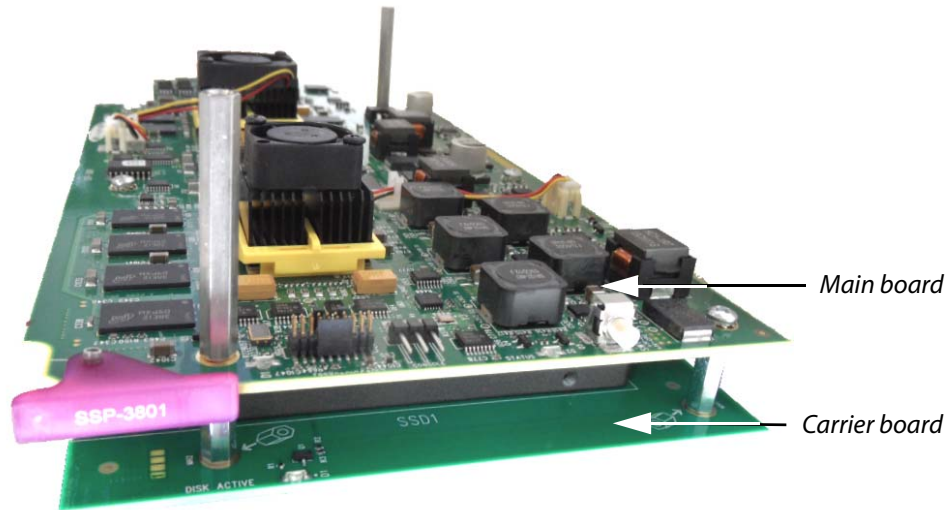
Figure 2-1. The SSP-3801 card consists of two circuit boards

The SSP-3801 card has a connector which plugs into a mid-frame motherboard for distribution of power and for connection to the controller card, with a second connector which plugs directly into the rear connector panel for input and output.
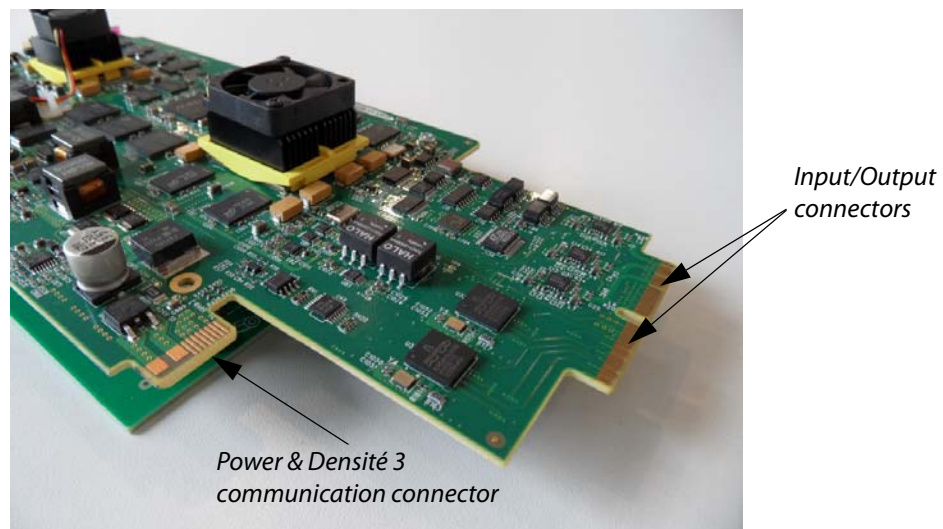
Figure 2-2. SSP-3801 card connectors
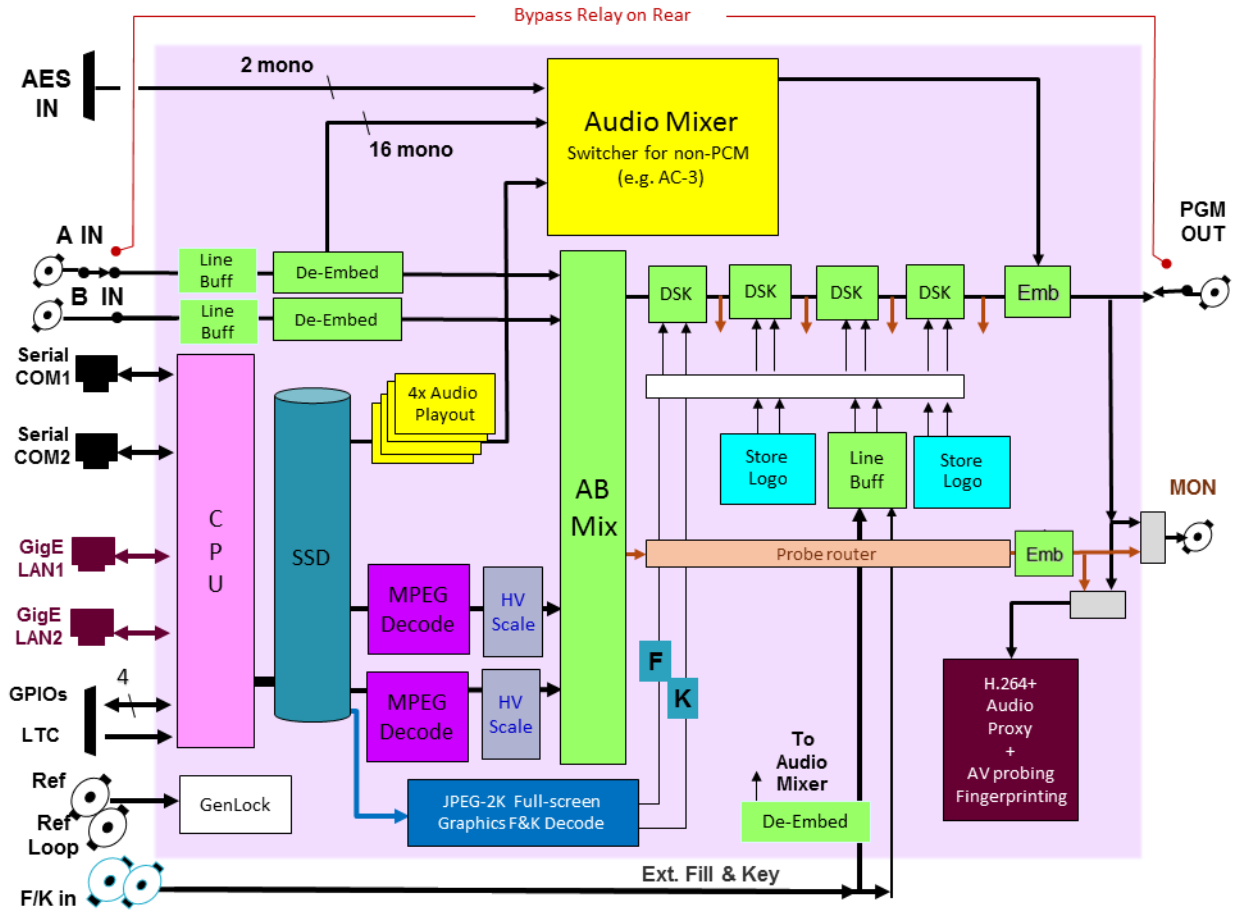
Figure 2-3. Functional block diagram of the SSP-3801

SSP-3801 front card-edge components

The front card-edge features a series of LEDs that indicate card status and operations, as well as provides an interface for testing and button to launch the control panel.
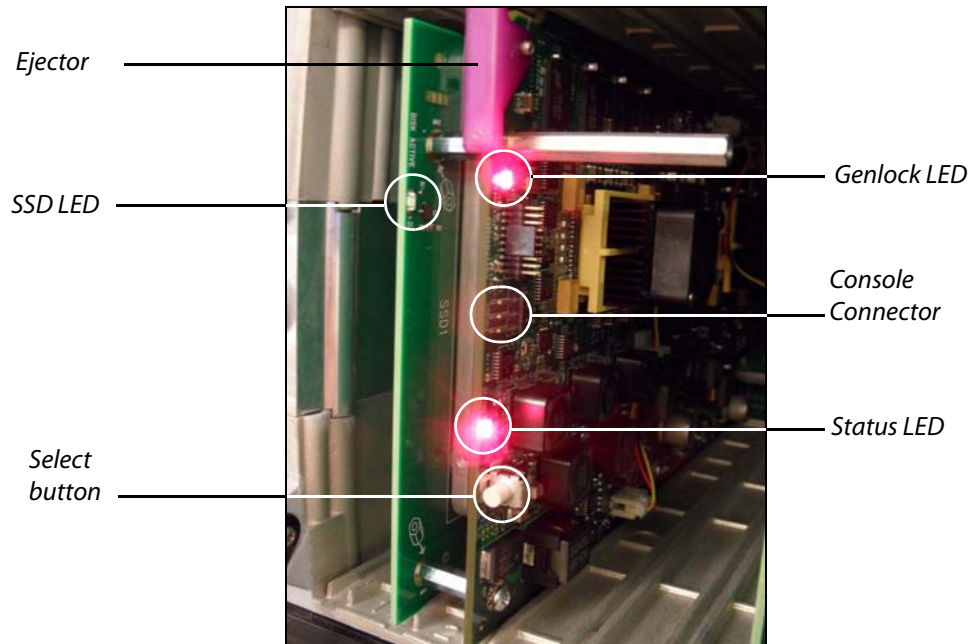
Figure 2-4. SSP-3801 card's front edge components

Select button	Pushing this button enables or disables the Densité 3 frame's local control panel to control the SSP-3801 card.
	When the local control panel has control of the card, the Status LED flashes yellow. See page 13 for more information.
Status LED	This multi-color LED indicates the status of the SSP-3801 by color, and by flashing or steady illumination.
	• **Green** indicates no errors are occurring. • **Steady red** indicates a major error. • **Flashing red** indicates a critical error. • **Steady yellow** indicates a minor error. • **Flashing yellow** indicates that the card is selected for local control using the Densité 3 frame's control panel.
SSD LED	This blue LED indicates SSD activity.
Genlock LED	This two-state LED indicates one of two states: • **Green** indicates the SSP-3801 has locked to its configured reference. • **Red** indicates that the reference could not be locked.
Console Connector	Features a three-pin connector reserved for testing.

SSP-3801 rear connector panel

Like other Densité 3 cards, the SSP-3801 card interfaces with a separate rear connector panel that must be fixed to the rear of the Densité 3 frame. Figure 2-5 lists the required input/output connectors featured on the rear connector panel.
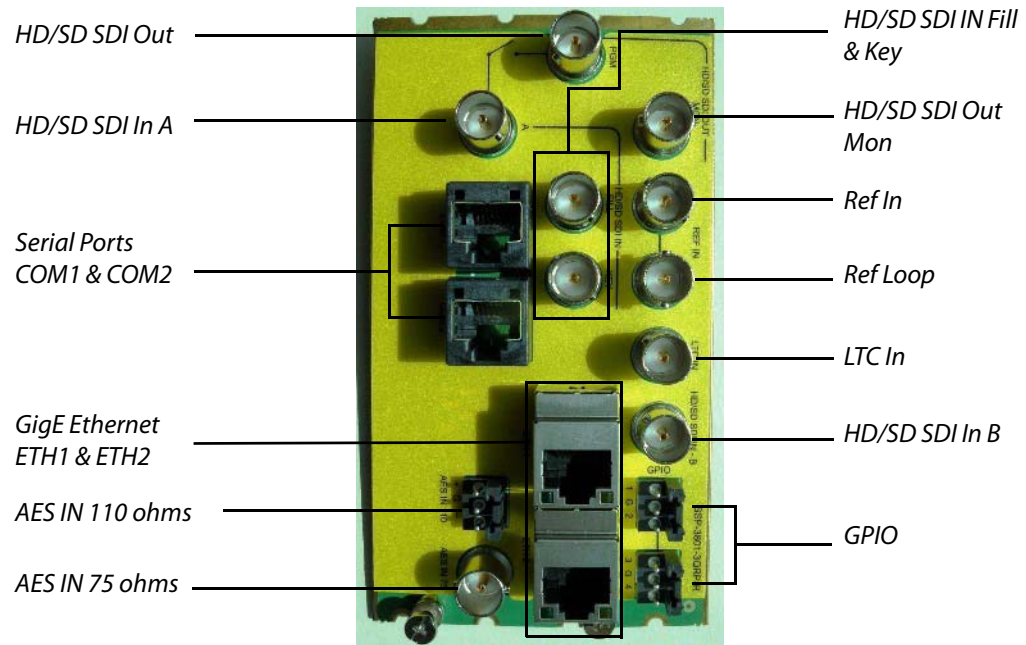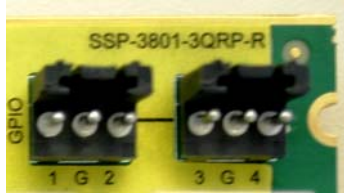
Figure 2-5. SSP-3801 rear connector panel

The following table provides a brief description of each input/output socket on the rear connector panel:

SDI Video I/O	Three video inputs:
	• **HD/SD SDI In A** (main program input)
	• **HD/SD SDI In B**
	• **HD/SD SDI In - Fill & Key**
	Two video outputs:
	• **HD/SD SDI Out (PGM)**
	• **HD/SD SDI Out - Mon** (video monitoring & configurable as clean feed)
	Note: The SSP-3801 is equipped with a mechanical bypass relay, which sends the SDI IN A signal directly to the SDI Out (PGM) in cases of power loss, card failure or a manual bypass command. The relay is not timed to the same reference as the card and, therefore, it may not be a clean switch. The timing of the switch and the time it takes to complete are not guaranteed, which may cause some disturbance on the PGM output.

Reference	Contains two reference connectors: **Ref In** and **Ref Loop**.
	The analog reference input can be a black burst or tri-level sync (in both 50Hz and 59.94Hz formats) signal.
	Note that the SSP-3801 also supports the internal Densité 3 digital reference (URS) provided by the REF-1801 card located in slot 10.
	The SSP-3801 can also be configured to lock to the SDI A input signal. The following chart identifies which reference format can be used with which video format:

Reference Types

Output Formats	625	525	1080i/50	1080i/59.94	720p/50	720p/59.94
625	X					
525		X				
1080i/50	X		X			
1080i/59.94		X		X		
720p/50	X				X	
720p/59.94		X				X

	The Reference should be connected to **Ref In**, while **Ref Loop** should be terminated if unused.
Audio I/O	One discrete AES input available through two connectors:
	• **AES 110 Ω** - balanced • **AES 75 Ω** - unbalanced
	The AES inputs are switchable and are mostly used for external audio or voice-over applications.
Ethernet Ports	Two 10/100/1000BASE-T Ethernet ports, which may be bonded to support network redundancy or used in a dual homed configuration:
	• **ETH 1** • **ETH 2**
Serial COM Ports	Two serial COM ports in the form of RJ-45 connectors:
	• **COM 1** • **COM 2**
	These serial ports can be configured as RS-232 or RS-422. Each port's parameters can be set from the Densité 3 frame local control panel.
	Note: Not in use.

GPIO	Two **GPIO** connectors offering up to four GPIOs, which can be configured as general purpose inputs or outputs. The pinouts are **1|G|2** and **3|G|4**. For more information, see Configuring the General Purpose Input/Output (GPIO) triggers in the SSP-3801 User Guide.
LTC	One Linear Timecode (**LTC In**) connector to support time synchronization.

Densité 3 frame's local control panel

Like all other cards installed in a Densité 3 frame, the SSP-3801 is connected to the frame's controller card, which handles all interaction between the cards and the outside world. The controller also supports remote operation via its Ethernet ports, and local operation using its integrated control panel (figure 2-6).
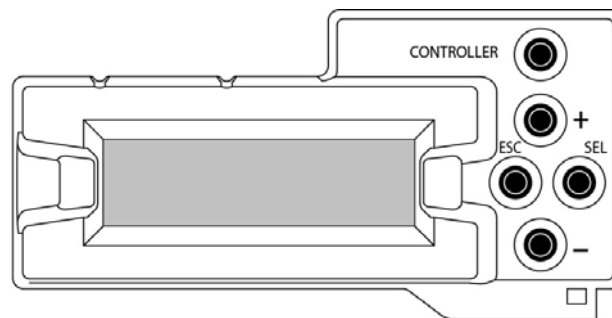
Figure 2-6. The Densité 3 frame local control panel

With no operating controls located on the SSP-3801 card itself, you can use the Densité 3 frame's local control panel to perform basic SSP-3801 configuration and control tasks. The local control panel and its push-buttons provide you with a menu of parameters and allows you to adjust parameter values. See Densité 3 Control Panel Menus on page 47 for a listing of all the available parameters.

To gain control of the SSP-3801 card and browse the available parameters:

1 Push the **Select** button on the SSP-3801 card edge (see figure 2-4) to assign the local control panel to operate the SSP-3801.

The SSP-3801 card's **Status LED** flashes yellow to indicated that it is the card currently being controlled by the frame's local control panel.

2 Use the following control panel buttons to navigate through the menu, as well as to configure and adjust the SSP-3801 parameters and settings:

[+] [–]	Used for menu navigation and value modification.
[SELECT]	Gives access to the next menu level. When a parameter value appears, pushing this button once enables modification of the value using the [+] and [–] buttons; a second push confirms the new value.
[ESC]	Cancels the effect of parameter value changes that have not been confirmed; pushing [ESC] causes the parameter to revert to its former value. Pushing [ESC] moves the user back up to the previous menu level. At the main menu, [ESC] does not exit the menu system. To exit, re-push the [SELECT] button for the card being controlled.
[CONTROLLER]	Pushing the Controller button on the control panel selects the Controller card itself.

SSP-3801 web interface

The SSP-3801 provides its own web-based user interface, which allows you to remotely perform configuration, maintenance and control tasks, as well as monitor the state and health of the card.

Some of the specific tasks that you may perform using the SSP-3801 web interface are:

- Device configuration
- Software upgrades
- Status monitoring
- Playlist view / emergency controls
- Advanced diagnostics / logging for in-field support
- H264 Confidence Monitor and audio meters
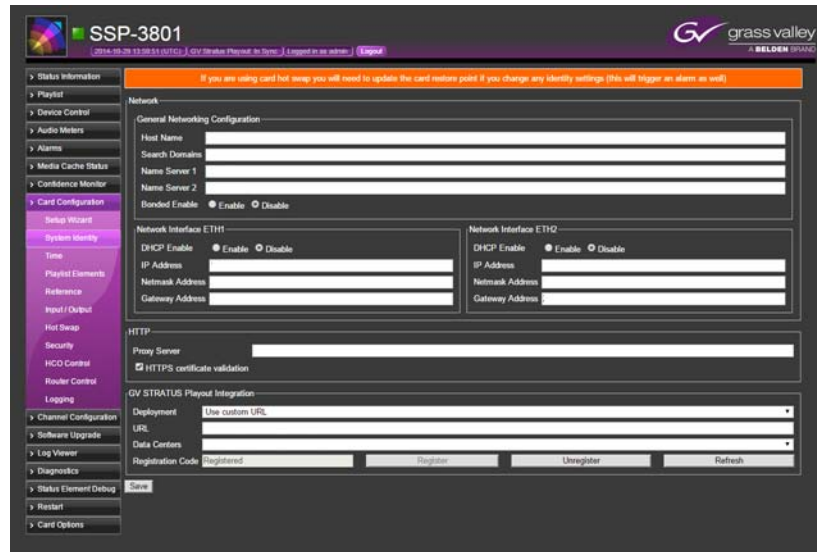
Fig. 2-7: The SSP-3801 web interface

For more information on configuring the SSP-3801 card, see Configuring the SSP-3801 card on page 25.

Installing the SSP-3801 card

This chapter explains how to install the SSP-3801 card in a Densité 3 frame, as well as how to attach the cables. It also explains how to start the card and read its start-up status LEDs.

This chapter has the following sections:

Installing the rear connector panel

The SSP-3801 rear connector panel must be installed in the Densité 3 frame before the card can be inserted.

> **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.
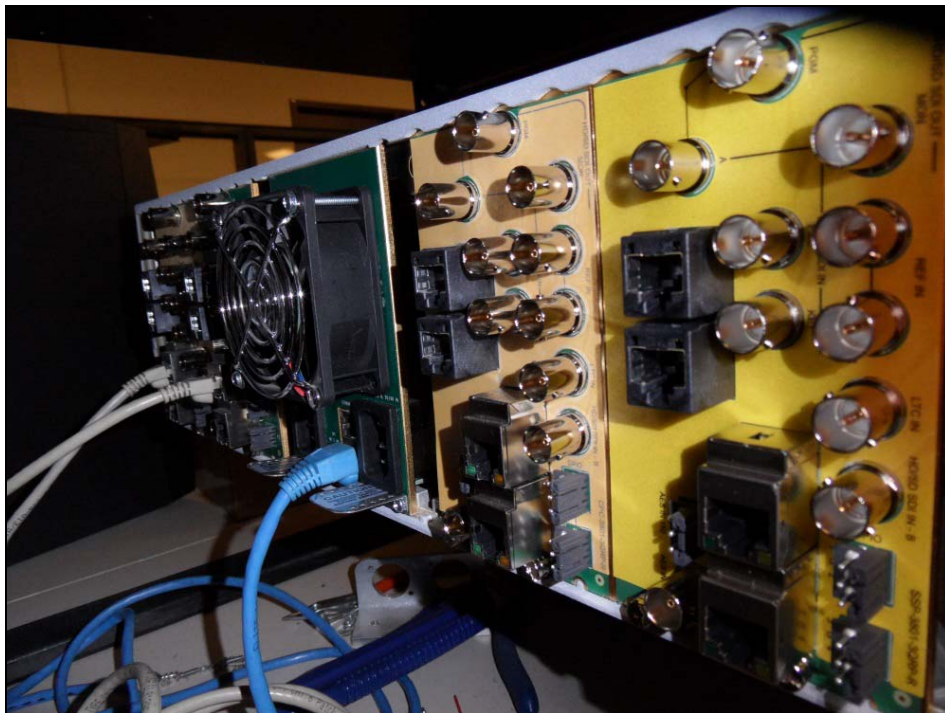
Figure 3-1. SSP-3801 rear connector panels installed in a Densité 3 frame

Installing the SSP-3801 card

Once a matching rear connector panel has been installed, you can install the SSP-3801 card.

To install the SSP-3801 card, follow these steps:

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 (figure 3-2).

   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.
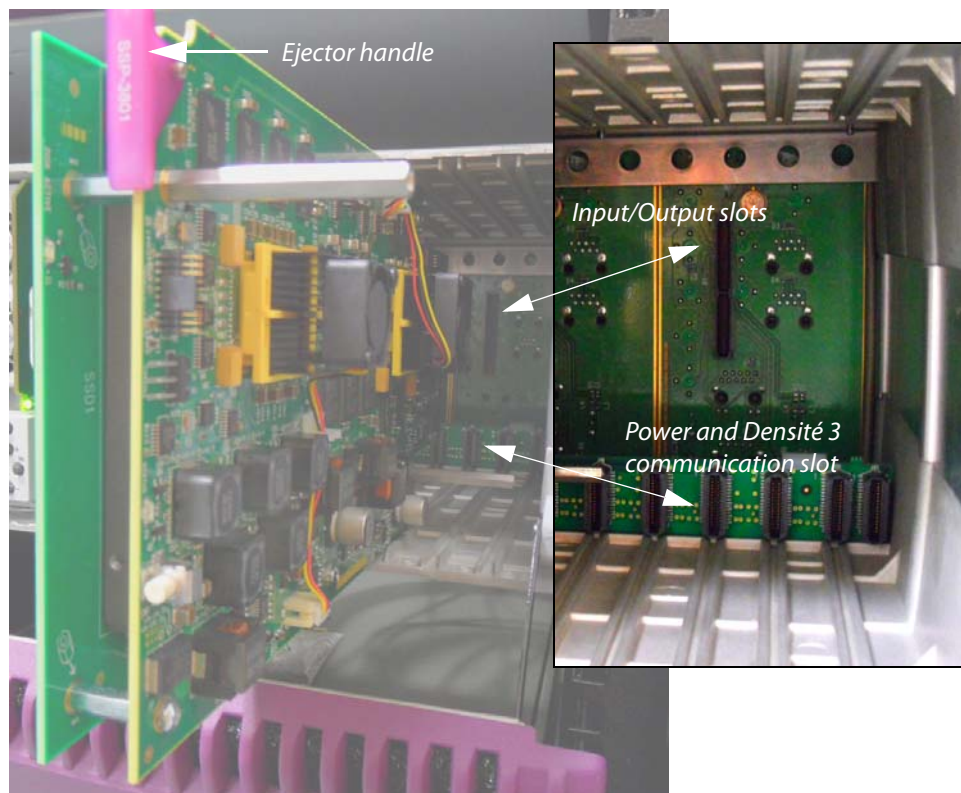
Figure 3-2. Inserting the SSP-3801 card into the Densité 3 frame

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.

Cabling the SSP-3801 card

Cabling the SSP-3801 depends upon your intended use. Note that the scope of this document is limited to setting up the SSP-3801 card for basic start-up functionality. As such, you should ensure that the following connections are made to the rear connector panel of the SSP-3801 card.

- Connect a network Ethernet cable to the **ETH1** Ethernet port. Note that the default configuration is to provide redundant bonded networking with ETH1 as primary and ETH2 for redundancy.
- Connect the **PGM** (SDI Output) to downstream equipment such as a broadcast monitor or a router input, for example.
- Optional - Connect an external reference source to **REF IN**
- Optional - Connect HD/SD SDI source input to **A (SDI IN A)**

Information about the remaining input-output connections are provided on .

PGM SDI Output

A SDI Input (optional)

REF IN (optional)

Ethernet Port ETH1
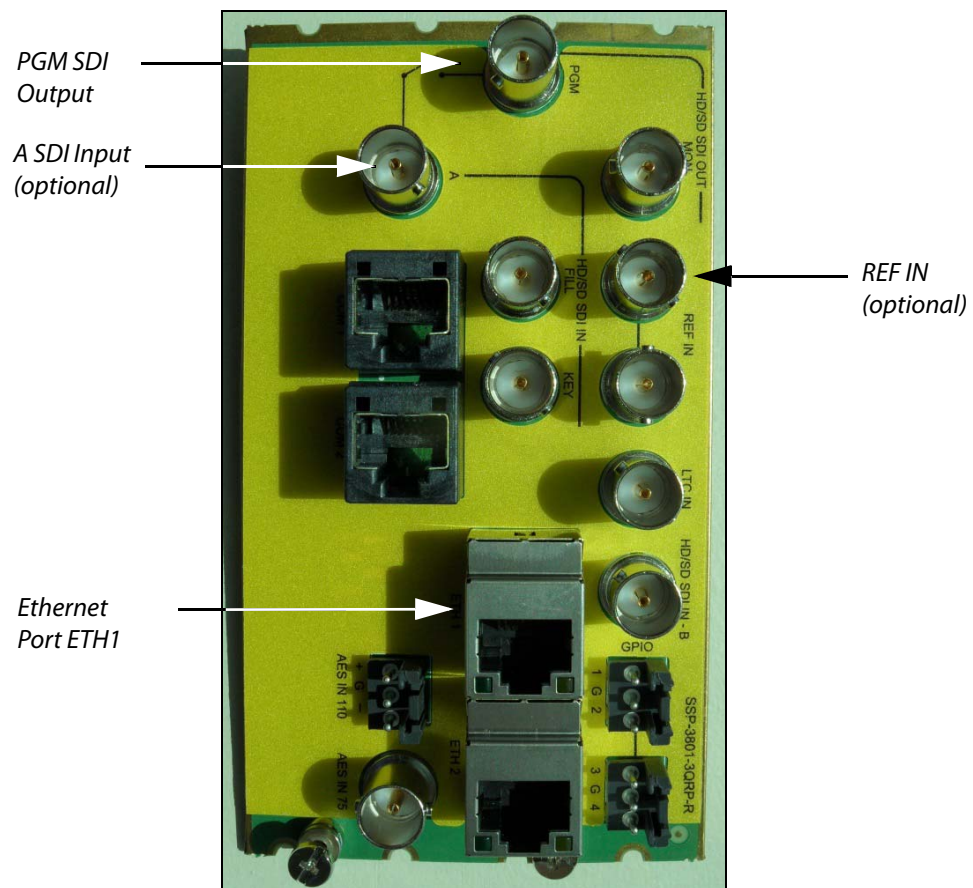
Figure 3-3. Basic SSP-3801cabling connections

Starting the SSP-3801 card

Once the SSP-3801 rear connector panel and card have been installed, power up the Densité 3 frame and ensure that the card is running properly.

To start the SSP-3801 card:

1 If it is not already done, power up the Densité 3 frame with the SSP-3801 card properly inserted.

   The card will run its start up procedure.

2 Once the card's start-up procedure is complete, ensure that the card's **Status** and **Genlock** LEDs are illuminated.

Genlock LED

Status LED
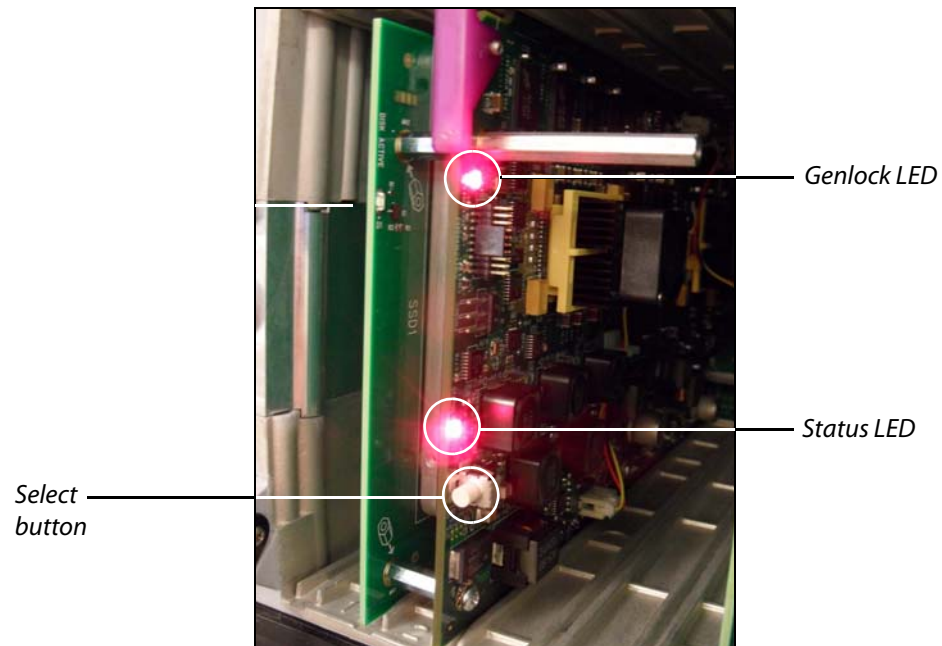
Select button

3 Press the SSP-3801's **Select** button on the card's front-edge. Ensure that the Densité 3 frame's local control panel properly displays **SSP-3801** and the slot number, followed by its **Status** menu item.

Installing a second on-board solid state storage drive

If you require additional storage space for media, you can order and install a second solid state storage drive (SSD) on the card.
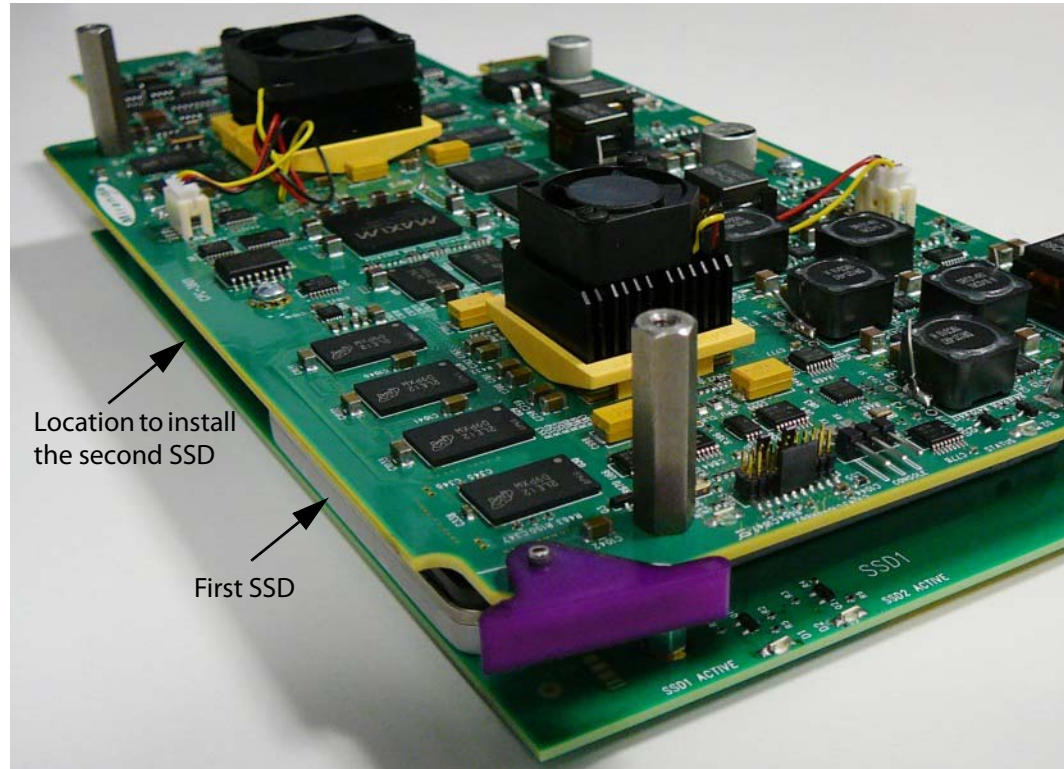
Figure 3-4. positions of the SSDs

To install the second SSD:

1   Log into the card's web interface. For more information see Logging into the SSP-3801 card's web interface on page 26.

2   Obtain and enable the OPT 2SSD license. For information about how to enable a license, see "Enabling or disabling a license option" in the User Guide.

3   From the menu, select **Restart** and click **Safe Shutdown**.

4   Once shutdown is complete, remove the SSP-3801 card from the Densité 3 frame.

5   Install the second SSD:

   • Locate the first SSD in between the front and rear of the card. The second SSD is installed next to the first SSD.

   • Hold the SSD so that the SATA connectors are in the correct position to align with the connectors on the rear of the card.

   • Carefully insert the second SSD into position beside the first SSD and slide it into the connectors ensuring that the connection is well made.

   • Screw the SSD into place with the screws provided.

6   Replace the SSP-3801 card into the Densité 3 frame.

7   When the card has rebooted, verify that the SSD was installed correctly. To verify:

   • Open and log into the SSP-3801 card's web interface (see page 26).

   • From the menu, select **Status Information** > **System** and click **Partitions**. In the **Media Cache Partition** section, the size should include the combined amounts of

the two SSDs. If it does not, verify that the license was enabled correctly and the SSD is well seated in the connectors.

Connecting a 110 ohm LTC signal to the card

A Linear Timecode (LTC) signal is an audio signal encoded with SMPTE timecode data with a preferred range 1 to 2V used to support time synchronization between devices. The SSP-3801 card provides one unbalanced input with a 75 ohm linear timecode BNC connector (**LTC In**) which can be connected to an LTC generator to provide the card with a time code source.

If your LTC generator generates a 110 ohm LTC signal, you must use a balun that converts a 110 ohm XLR connector to a 75 ohm BNC connector to connect your LTC generator to the card.

Configuring the SSP-3801 card

This chapter provides you with instructions for performing the initial configuration tasks required to get the SSP-3801 running so that you can verify for proper installation, as well as perform basic playout operations.

This chapter contains the following sections:

About the configuration process

The following summarizes the tasks that you must perform to configure a brand new, factory-configured SSP-3801 card.

1   Verify and set the SSP-3801 default settings.
2   Log into the SSP-3801 card's web interface.
3   Configure the System Identity settings.
4   Configure the Timing settings.
5   Configure the Reference settings.
6   Configure the Input / Output settings.
7   Manage the list of Users.
8   Verify the accuracy of the SSP-3801 card's settings.
9   Optional - Upgrading the SSP-3801 card's software.

Setting and verifying the SSP-3801 default settings

In preparation for other configuration tasks, we recommend that you verify and ensure some of the SSP-3801 settings are set to their default values, as well as taking note of the SSP-3801 card's current IP address.

To verify and set the default settings, follow these steps:

1   Press the SSP-3801's **Select** button on the card's front-edge.
2   Ensure that the Densité frame's local control panel properly displays **SSP-3801** and the slot number, followed by its **Status** menu item.
3   Using the **Select** button on the local control panel, navigate to **Status** > **Network Status** > **IP Status** > **ETH1** > **DHCP Enable** and set it to **Enable**.
4   Press the **Escape** button once, then the [-] button to display the current IP Address assigned to the SSP-3801 card.
5   Take note of the IP address, which you will need to provide in a later step of the configuration procedure.
6   If you connected two Ethernet cables with the intention to have them bonded for redundancy, navigate back up to **Status** > **Network Status** > **Bonded Enable** and verify that it is set to **Enabled**.

Logging into the SSP-3801 card's web interface

The SSP-3801 web interface provides you with remote access to all of the parameters and settings specific to a particular card. The following instructions demonstrate how to log into the SSP-3801 web interface from any client computer that is on the same network as the SSP-3801 card.

> **IMPORTANT**
>
> To access the Solid State Playout-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.

To log into an SSP-3801 card's web interface:

1 Type the IP address of the SSP-3801 card into the address bar of a web browser. By default cards are factory-configured and shipped with DHCP enabled. You can obtain the card's initial IP address using the Densité local control panel (see page 26).

> **IMPORTANT**
>
> Later in the initial configuration procedure we recommend that you disable the card's DHCP setting and that you assign the card an appropriate static IP address on your local network (see Configure the System Identity settings on page 28).

Figure 4-1. SSP-3801 Login page

2 Specify a valid username and password and click **OK**.

If this is the first time you are logging into the SSP-3801, you should log in as follows:

- **Username**: `admin`
- **Password**: `P1ayout` (the second character is the number 1)

> **IMPORTANT**
>
> If you are configuring the SSP-3801 card for the first time, we recommend that you change password for the "admin" account. You cannot delete the admin account. For more information, see Managing the user profiles on page 36.

The SSP-3801 web interface opens. All of the card's parameters and settings are available within the thematic menus on the left of the page.

Running the Setup wizard

The Setup Wizard makes configuring the SSP-3801 card easy and efficient. When you launch the Setup Wizard, it will prompt you with a series of dialog boxes to provide the information required.

The following are the types of information requested, followed by the menu command where you can manually view or edit the information in the **Card Configuration** menu:

- Network Settings (**System Identity**, see Configure the System Identity settings on page 28)
- Integration service settings (**System Identity**, see Configure the System Identity settings on page 28)
- HTTP proxy server (**System Identity**, see Configure the System Identity settings on page 28)
- Time sync settings (**Time**, see Configure the Time settings on page 31)
- NTP servers (**Time**, see Configure the Time settings on page 31)
- Time sync mode settings (**Time**, see Configure the Time settings on page 31)
- Reference settings (**Reference**, see Configure the Reference settings on page 33)
- Video standard settings (**Input/Output**, see Configure the Input / Output settings on page 34)

Once you finish the Setup Wizard, you can run a system check to verify that the settings you selected function with the SSP-3801 card.

To launch the Setup Wizard:

1 From the menu, select **Card Configuration** > **Setup Wizard**. The Setup sequence begins.

2 Complete the fields as required and click **Next** to continue.

If you wish to go back and change your values, click **Previous** to move back and click **Next** to move forward.

3 Click **Finish**. The settings you selected will be applied immediately.

4 The **System Health Checks** prompts you to check the settings you have selected are functional. You have two choices:

- **Run Checks**: runs a system check to ensure that there are no conflicts. All valid connections are listed, as well as any conflicts or failures.
- **Close**: closes the dialog box.

Configure the System Identity settings

Use the System Identity page to configure the SSP-3801 card's identity, network, GV STRATUS Playout service and HTTP settings. When a card is configured and a restore point is created, its identity settings are stored in the Densité frame's memory. If changes are made to the System Identity settings, you must create a new restore point otherwise old settings will be applied to the card upon insertion of a new card or a system restart.

When the card registers with the GV STRATUS Playout service, it stores a copy of its configuration on the service and obtains the security certificate required for authentication. You would only need to re-register the SSP-3801 card if:

- it was moved between deployments of the GV STRATUS Playout service
- it was deleted from the service
- it was disconnected for more than 6 months

As long as the card is connected to the service at least once every six months, the card will manage the security certificate renewals itself.

IMPORTANT

Take special care when configuring the System Identity and the Time settings. If there are inconsistencies in these parameters, the SSP-3801 card and the Playlist may not function properly.

To configure the system's identity:

1 Open and log into the SSP-3801 card's web interface (see).

2 From the menu, select **Card Configuration** > **System Identity.**

Figure 4-2. SSP-3801 web interface's System Identity page

3 In the **General Networking Configuration** section, complete the following settings:

- **Host Name**: Specify the network host name.
- **Search Domains**: Specify space-separated list of domains to search.
- **Name Server 1 and Name Server 2**: Specify the IP address or hostname of the Domain Name System Server for each.
- **Bonded Enable**: If you connected two Ethernet cables with the intention to have them bonded, select **Enable.** To disable Ethernet bonding, select **Disable**.

4 In the **Network Interface ETH** sections, disable DHCP and assign static IP addresses:

- **DHCP Enable**: Select **Disable**.
- Specify the static **IP Address**, **Netmask Address**, and **Gateway Address**.

5 In the **Proxy Server** field, type the HTTP Proxy server to use. If there is no proxy server used, leave this field empty.

6 Enable **HTTPS certificate validation** as required.

> **IMPORTANT**
>
> If you have made any changes to the network settings, the system will prompt you to restart the card. If you changed the IP address, you may need to update the SSP-3801 web interface's URL address before proceeding with registering with the GV STRATUS Playout service.

7 In the **GV STRATUS Playout Integration** section, configure the following:

- In the **Deployment** field, click the name of the deployment to which the SSP-3801 card will be registered. The URL of the selected deployment appears in the **URL** field. If you selected **Use custom URL**, type the URL address for your GV STRATUS Playout service in **URL** field.

- The deployment setting must be saved before the remaining settings can be configured. Click **Save**.

- In the **Data Centers** field, click the name of the data center serving your GV STRATUS Playout service.

- In the **Registration Code** field, type the key provided by the GV STRATUS Playout service and click **Register**.

8 Click **Save** to apply all changes on the page.

> **IMPORTANT**
>
> Once you have finished configuring all the settings on the card, make sure you create a restore point otherwise old settings will be applied upon insertion of a new card or a system restart.

Registering the card with GV STRATUS Playout service

If you did not register the card with the GV STRATUS Playout service when you configured the System Identity, you can do so separately. Once the card is registered to a device in the service, the Playlist and the Channel Configuration are managed by the service. The service will overwrite any changes in those pages as long as the card remains synced with it.

When the card registers with the service, it stores a copy of its configuration on the service and obtains the security certificate required for authentication. If you have already created a Densité Restore Point, you must create a new restore point after registering the card or old settings will be applied upon insertion of a new card or a system restart.

To register the card:

1 Open and log into the SSP-3801 card's web interface (see).

2 From the menu, select **Card Configuration** > **System Identity.**

3 In the **GV STRATUS Playout Integration** section, configure the following:

- In the **Deployment** field, click the name of the deployment to which the SSP-3801 card will be registered. The URL of the selected deployment appears in the **URL** field. If you selected **Use custom URL**, type the URL address for your GV STRATUS Playout service in **URL** field.

- The deployment setting must be saved before the remaining settings can be configured. Click **Save**.

- In the **Data Centers** field, click the name of the data center serving your GV STRATUS Playout service.

- In the **Registration Code** field, type the key provided by the GV STRATUS Playout service and click **Register**.

4 Click **Save**.

> IMPORTANT
>
> Once you have finished configuring the System Identity settings on the card, make sure you create a restore point otherwise old settings will be applied upon insertion of a new card or a system restart.

Configure the Time settings

Use the SSP-3801 web interface's **Time** page to configure the SSP-3801 card's time settings. The card uses and displays time in UTC. It obtains its time from the source selected as the Time Source:

- VITC: the time code is carried as part of the reference signal configured in Card Configuration > Reference.
- LTC: the card obtains its time from the LTC generator connected to the LTC In connector.
- URS: time is provided to the card by a reference card installed in the Densité frame.
- ATC_LTC, ATC_VITC1, ATC_VITC2: time is obtained from the embedded time code in the ancillary data coming from the SDI input.
- NTP: The card obtains its time from the NTP server listed in the NTP section.

As a best practice, you should choose a time source other than NTP since NTP is not accurate and tends to drift, which means time synchronization needs to be continuously performed to keep the NTP and the video clock in sync. Other time code sources are more accurate and stable sources of time. If there is no valid signal from the time source, however, the card will fail to set the time and will eventually free run. It will not default to using the NTP servers as a time source.

When the selected Time Source is in UTC, you do not need to configure the Time Zone or Daylight Saving sections. If the Time Source is Local, then you need to configure the Time Zone or Daylight Saving sections so the card can internally convert the time to UTC.

The card obtains the date from the NTP servers listed in the NTP section. The date and time provided by the NTP server must always be in UTC since it can also be used as a reference time to verify if the video time is in UTC. In addition to providing the NTP servers as the source for the date, it is important to configure the Densité frame with a valid date and time since it serves as a backup source for the date.

> IMPORTANT
>
> Take special care when configuring the System Identity and the Time settings. If there are inconsistencies in these parameters, the SSP-3801 card and the Playlist may not function properly.

To configure the Time settings:

1 Open and log into the SSP-3801 card's web interface (see page 26).

2 From the menu, select **Card Configuration** > **Time**.
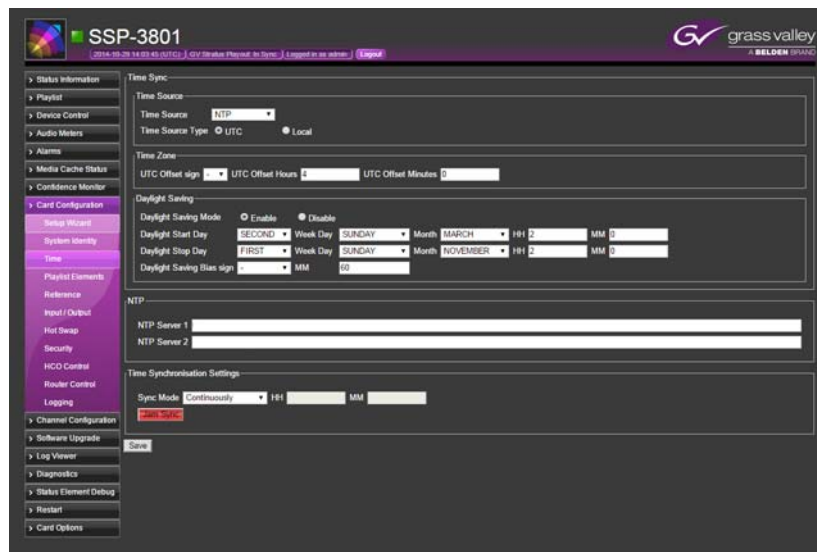
Figure 4-3. SSP-3801 web interface's Time page

3 In the **Time Source** list, select the time source from which the SSP-3801 card obtains its local time. If present, select **VITC**, **LTC**, **URS** or one of the **ATC** options, otherwise select **NTP**.

> **IMPORTANT**
>
> It is recommended that you use one of the other time sources instead of NTP since they are more stable. NTP is not accurate and is likely to drift from the video clock, which means it will likely require continuous time synchronization to keep the NTP and video clock in sync.

4 Set the **Time Source Type** setting to either **UTC** or **Local** to reflect which time zone the selected Time Source is using.

5 If you selected Local as the Time Source Type, you must set the UTC Offsets so the card can internally convert the time to UTC. In the **Time Zone** section, set the **UTC Offset sign**, **UTC Offset Hours**, and **UTC Offset Minutes** to specify the difference between Local and UTC time when Daylight Saving Time is not in effect.

6 If you selected Local as the Time Source Type, you must also set the Daylight Savings settings so the card can make the appropriate adjustments when the time changes. In the **Daylight Saving** section, specify the daylight saving time settings for the local time zone:

- Click **Enable**.
- To configure when Daylight Saving Time begins, click the week of the month in the **Daylight Start Day** list, click the day of the week in the **Week Day** list, click the month in the **Month** list, and specify the time when the clocks move forward by typing the hour in the **HH** field and the minutes in the **MM** field.
- To configure when Daylight Saving Time ends, click the week of the month in the **Daylight Stop Day** list, click the day of the week in the **Week Day** list, click the

month in the **Month** list, and specify the time when the clocks move backward by typing the hour in the **HH** field and the minutes in the **MM** field.

- To specify the difference between local and UTC time when Daylight Saving Time is in effect, select the plus or minus sign in the **Daylight Saving Bias sign** list and type the number of minutes in the **MM** field. The Daylight Saving Bias is the offset value when a clock is set to automatically change according to Daylight Saving Time, which means it is normally -60 (minus sixty minutes) in areas that practice Daylight Saving Time and 0 (zero) in areas that do not.

7 In the **NTP** section, specify the IP address or hostname in the **NTP Server 1** and **NTP Server 2** fields for the two network time servers that will be used for obtaining the date. The NTP date must be always in UTC.

8 In the **Time Synchronisation Settings** section, set the **Sync Mode** to determine how the SSP-3801 will synchronize its time to the time source:

- **Continuously**: Time adjustments are made continuously.
- **At Specified Time**: Time adjustments are scheduled for specific times. Type the hours in the **HH** field and minutes in the **MM** field.
- **Never**: Time adjustments are never applied.

The **Jam Sync** button can be used at anytime to manually force the time synchronization.

9 Click **Save** to apply all changes.

Configure the Reference settings

Use the SSP-3801 web interface's **Reference** page to configure the card's reference signal settings. The **Input Timing** section displays the current state of the timing between the reference signal and the SDI input signals. One of the following states is displayed for each input:

- **Locked**: a valid SDI input signal is present and locked to the selected reference signal.
- **Absent**: an SDI input signal is not detected. This may indicate that no signal is present or a problem with the cable is occurring.
- **Mismatch**: the SDI input standard does not match the configured output standard of the card.
- **Unlocked**: the SDI input and the reference signal are not matching in frequency and phase causing a vertical drift (the SDI input is free-running).

If the state is anything other than Locked, use the features in the **Output Timing Config** section to synchronize the signals.

To configure the card's reference settings:

1 Open and log into the SSP-3801 card's web interface (see).

2 From the menu, select **Card Configuration** > **Reference**.
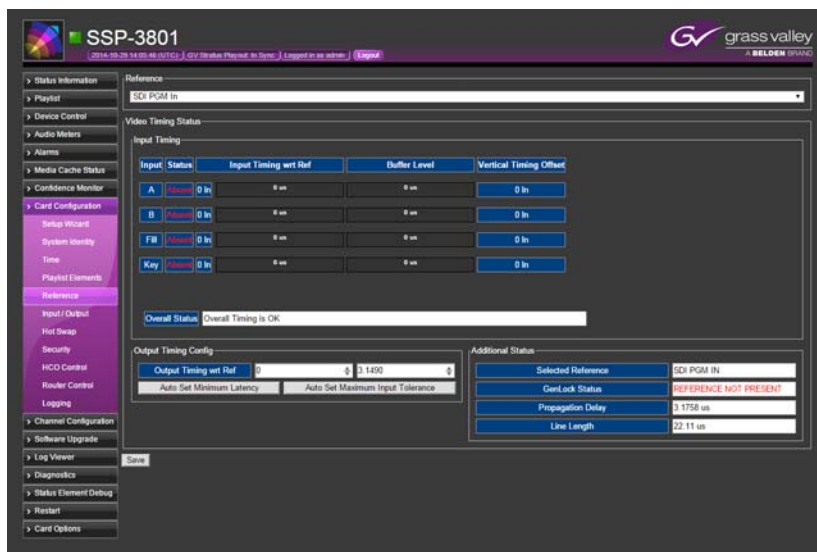
*Fig. 4-4: SSP-3801 web interface's Reference page*

3 Specify the source of the reference signal in the **Reference** field. You have the following choices:

- **External Ref**: Select if the source of the reference signal is an analog reference input such as a black burst or tri-level sync signal.

- **SDI PGM In**: Select if you want the source of the reference signal configured to lock to the **HD/SD SDI In A** input signal.

- **URS**: Select if the source of the reference signal is from an internal Densité digital reference (URS) provided by the REF-1801 card located in slot 10.

4 In the **Output Timing Config** section, you can manually set the output timing in lines and microseconds using the two up/down boxes, or you can use the following buttons to set the values based on input timings:

- **Auto Set Minimum Latency**: automatically calculates the minimum propagated delay.

- **Auto Set Maximum Input Tolerance**: automatically calculates the maximum tolerance for input timing or jitter changes.

As you adjust the output timing, the value in the **Overall Status** field changes. For the card to function adequately, it is recommended that Overall Status show as "Overall Timing is OK" and the GenLock Status to display "Reference Locked".

5 Click **Save** to apply all changes.

Configure the Input / Output settings

Use the SSP-3801 web interface's **Input/Output** page to configure the card's input/output settings and then optionally test the card's playout to ensure proper operation.

To configure the SSP-3801 card's input/output settings:

1 Open and log into the SSP-3801 card's web interface (see).

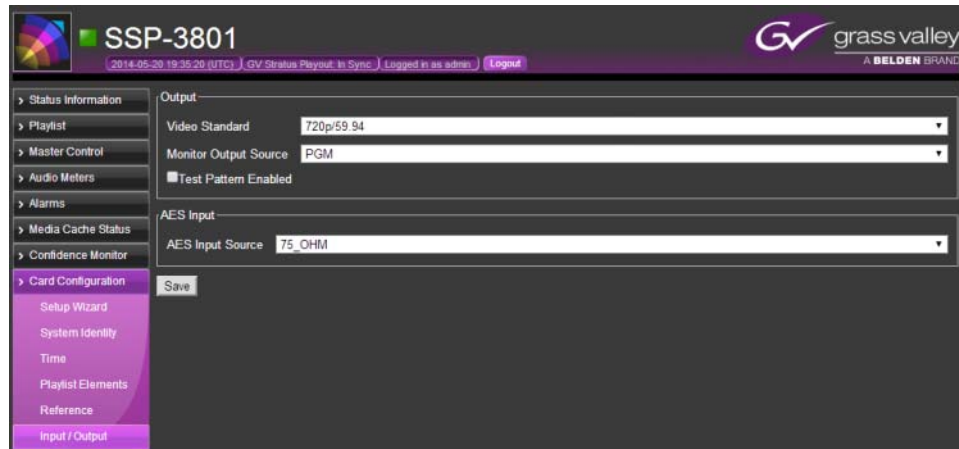2 From the menu, select **Card Configuration** > **Input/Output**.

Fig. 4-5: Input/Output page

3 In the **Video Standard** list, select the video standard that the card will output.

4 In the **Monitor Output Source** list, select the source to be sent to MON, which can be used as a troubleshooting aid, for sending a clean feed, or previewing a source event about to go to air when router control is enabled.

5 **Optional**: If you have cabled the card to a downstream broadcast monitor, you can verify if the card is operating properly by selecting the **Test Pattern Enabled** checkbox.

Once you have saved the changes, a test pattern from the SSP-3801 card will playout to the broadcast monitor. When you can confirm that the test pattern plays out, clear the **Test Pattern Enabled** checkbox, and click **Save** again.

6 If you selected an SD standard, you can choose whether line 23 in PAL (625 Line) or lines 20 and 21 in NTSC (525 Line) contain video or carry closed captioning or widescreen signaling (WSS). To carry closed captioning or widescreen signaling, select the **Pass Closed Captions/WSS** checkbox.

7 In the **AES Input Source** list, select which type of AES cable is connected to the card.

8 Click **Save** to apply the changes.

Creating a restore point for Hot Swap

Before a Hot Swap can be performed, a restore point must be created. A restore point is a copy of the SSP-3801 card's identity settings stored in the Densité frame's memory. The restore point includes all the settings configured on the Card Configuration > System Identity page, except for the Data Centers value.

If changes are made to the System Identity settings, you must create a new restore point otherwise old settings will be applied to the card during a system restart or upon insertion of a new card such as when you switch a card in a Densité frame without powering-down the system, which is known as a Hot Swap. For more information on Hot Swap, see "Switching SSP-3801 cards in a Densité frame (Hot Swap)" in the SSP-3801 User Guide.

A restore point can be created by using one of these methods:

• If the Densité controller and the SSP-3801 card are on the same network, you can generate the restore point from the SSP-3801 web interface.

• You can save the SSP-3801 card's identity via the Densité controller's web interface.

- You can save the SSP-3801 card's identity using the front panel of the Densité controller.

To create a restore point from the SSP-3801 card's web interface:

1 Open and log into the SSP-3801 card's web interface (see page 26).

2 From the menu, select **Card Configuration** > **Hot Swap**.

Fig. 4-6: Hot Swap page

3 In the **Controller IP Address** field, type the IP address of the Densité frame hosting the card.

4 Click **Save Identity**.

Managing the user profiles

To access the web interface for the SSP-3801 card, you need to login using a User Profile. Every SSP-3801 card had a default **admin** account, but you can create other user profiles for the other types of access. You can create two types of User Profiles:

- **Standard User**: has access to the following features:
  - Status Information
  - Playlist
  - Audio Meters
  - Alarms (view only)
  - Media Cache Status
  - Confidence Monitor
  - Log Viewer
  - Diagnostics
  - Restart
  - Card Options
- **Administrator**: has everything that a Standard User would have, plus
  - Card Configuration
  - Channel Configuration
  - Software Upgrade
  - Status Element Debug

> **IMPORTANT**
>
> If you are configuring the SSP-3801 card for the first time, we recommend that you change password for the "admin" account. Although you can change its password, you cannot rename or delete the admin account.

To manage the User Profiles:

1 Open and log into the SSP-3801 card's web interface (see).

2 From the menu, select **Card Configuration** > **Security**. The **Users** section contains the current list of user profiles.

3 To create a user profile, click **Add**. The **User Details** dialog box appears.
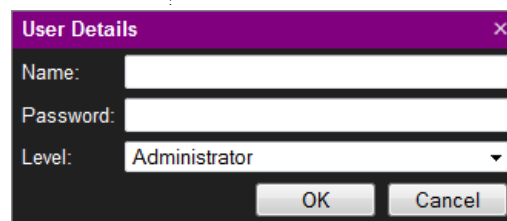
Fig. 4-7: User Details dialog box

4 Enter the following information about the new user profile:

- **Name**: enter the name to use when logging into the system (this field is case-sensitive).

- **Password**: enter the password for this user profile. The password is case-sensitive and should be a combination of letters and numbers.

- **Level**: select the level of access for this user. You have two choices:

    - **Standard User**: restricted access to manage media and add events to the Timeline

    - **Administrator**: full access to all the SSP-3801 features

5 Click **OK**.

To edit or delete a user profile:

1 In the **Users** section, select the user profile you want to modify.

2 Click one of the following:

- **Edit**: opens the **User Details** dialog box. Change the user profile fields and click **OK**.

- **Delete**: the user profile is removed from the list of profiles. This user will no longer be able to log into the system.

Managing the Device Access security settings

The SSP-3801 card is configured with the firewall enabled by default that only accepts connections using HTTPS and denies access to all other protocols. You can configure the firewall to grant access from other protocols; however, a security alarm will be triggered if access is enabled. You can change the severity of the alarm by changing its GSM Error Level to Normal (see "Managing card alarms" in the SSP-3801 User Guide).

To manage the security settings:

1 Open and log into the SSP-3801 card's web interface (see page 26).

2 From the menu, select **Card Configuration** > **Security**.

3 In the **Device Access Settings** section, you can select **Enable** to grant access to specific protocols or select **Disable** to deny access. *If the protocols disabled by default are enabled, an alarm is raised.*

- **FTP Access**: Allows incoming FTP connections. Default: disabled.
- **SSH Access**: Allows incoming SSH connections (secure shell). This protocol is usually only used by technical support. Default: disabled.
- **HTTP Access**: Allows incoming HTTP connections. No alarm is raised if it is enabled in conjunction with HTTPS Redirection otherwise an alarm is raised. Default: enabled.
- **RSTP Access**: Allows incoming RSTP connections in order to use the H.264 confidence monitor. IMPORTANT: When RTSP Access is enabled, all ports between 6970 and 65535 are opened for UDP access; therefore, this should only be done if the card is located on a secure network. Default: disabled.
- **HTTPS Redirection**: Redirects the user to use HTTPS (secure) when connections are made using HTTP. It must be enabled if HTTP Access is enabled otherwise an alarm is raised.

4 If you enabled FTP Access, type the password for the account in the **FTP Password** field.

5 Click **Save**.

Configuring HCO Control to support card redundancy

An HCO device can be used to set up automatic failover between two SSP-3801 cards. The HCO device can be installed in the same Densité frame as the cards or accessible on the network. The HCO Control page only appears when an HCO is available in the system and the OPT HCO license is enabled.

> Note: If you intend to configure the HCO device to automatically perform the failover to the backup card in the event of a failure on the main card, the Switch Mode on the HCO device must be set to the Toggle option.
> The Toggle option enables the HCO device to automatically switch from one input to the other when alarm conditions trigger the switch. It will stay on that input until you manually perform a switch back to the original input or alarm conditions on the input trigger a switch back to the original input. For more information on configuring the HCO device, see the HCO documentation.

To configure the HCO:

1 Open and log into the SSP-3801 card's web interface (see page 26).

2 From the menu, select **Card Configuration** > **HCO Control**.
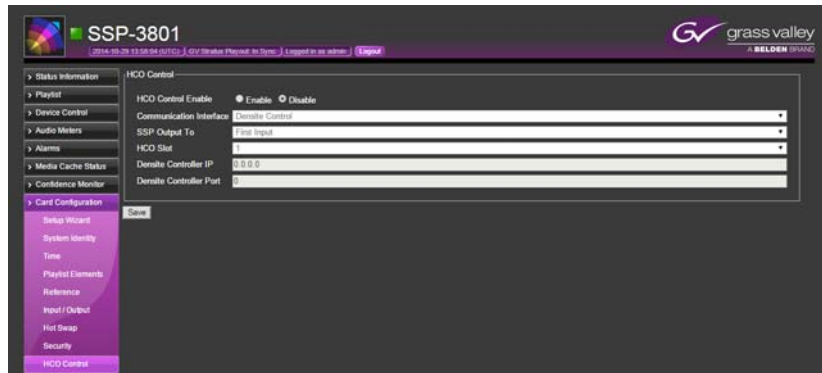
Fig. 4-8: HCO Control page

3 For **HCO Control Enable**, select **Enable** to allow the HCO device to automatically perform a failover to the backup card in the case of a failure on the main card. If you want to disable HCO Control, select **Disable**.

4 In the **Communication Interface** list, click the location of the HCO device:

• **Network**: select if the HCO device is installed in a Densité frame elsewhere in the network.

• **Densité Control**: select if the HCO device is installed in the same Densité frame as the SSP-3801 cards are installed.

5 In the **SSP Output To** list, click the HCO input to which the card is wired.

> Note: Only the first and second inputs are supported on HCO devices that offer three inputs. If the HCO device switches to an input other than the supported inputs (by using iControl or the front panel menu), both SSP-3801 cards will report their roles as Backup and could potentially cause an off-air situation.

6 In the **HCO Slot** list, click the slot number in the Densité frame where the HCO device is installed.

7 If Network was selected, enter the IP address and port where the HCO device is installed:

• In the **Densité Controller IP** field, type the Densité Controller's IP address.

• In the **Densité Controller Port** field, type the port number used by the Densité Controller to communicate with the cards.

8 Click **Save**.

To verify if you have selected the correct input, the correct Role should appear in the header when the input you selected matches the physical HCO input connected to the card.
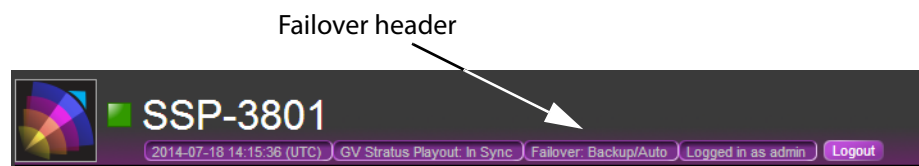
Failover header

Fig. 4-9: Failover header

Configuring an external router for switching between live events

To be able to switch between multiple live feeds, you must connect and configure an external video router. The router is connected to both the card's SDI A and SDI B inputs. Once router control is configured, the card manages which router source on which input is sent to PGM (SDI Out) output.

A router system is usually comprised of two components: the router controller and the router frame. The router frame connects the video sources to destinations, which is called making a crosspoint. The router controller controls when the router frame makes the crosspoint and to which destination the video source is sent.

The card communicates with the router controller through a network control connection to signal when to switch crosspoints. The switching between the sources can be made by source events in the playlist.

The expected flow of events between the card and the router is:

- The card sends a crosspoint (XPT) request to the router controller.
- The router controller receives the request from the card, triggers the router frame to make the crosspoint, and then checks that the router frame has made the crosspoint.
- The router controller sends a message to the card confirming that the crosspoint has been made.

In reality many router controllers send the crosspoint complete confirmation message before it checks if the crosspoint has been made or even before the router frame has actually made the crosspoint. To prevent unwanted effects in the playout, you can configure the Post Router Tally Delay to accommodate for the time between the confirmation message and the actual crosspoint being made by the router frame. It is important to determine the correct value to configure as the Post Router Tally Delay which is specific to your system.

As the card manages the selection of the SDI inputs, it biases the routing so the primary live feed is on the SDI A input. This enables the live feed from the router source to be automatically passed from the SDI A input to the PGM (SDI Out) output via the mechanical bypass relay in case of power loss or card failure, therefore ensuring that playout continues uninterrupted. It also prevents an operator from having to figure out which input is in use if the wrong source or a bad source is on the PGM output. By biasing the routing to the SDI A input, the operator can be sure that changing the source on the SDI A input will correct the feed on the PGM output.

To understand how the switch between inputs occurs, consider this example. Source event LIVE1 is on air and routed to input A. A second source event, LIVE2, enters the pre-roll window. LIVE2 is routed to input B and goes on air when LIVE1 is done. The card then sends a request to the router controller to also route LIVE2 to input A so both inputs are receiving the same feed. Once the card receives the confirmation message from the router controller and the Post Router Tally Delay has expired, the card switches its PGM output from SDI B to SDI A and the transition on air should be seamless. If the Post Router Tally Delay value is too short, a flash of LIVE1 may be seen on air when the switch is performed as the router will not have completed its route. For a seamless transition, the Post Router Tally Delay value must be correct.

> Note: The card only supports ASCII 7-bit printable characters for mnemonics, the asset IDs, and paths. For more information, see "About the supported characters for asset IDs, paths, and mnemonics" in the SSP-3801 User Guide.

To configure the router:
1 Open and log into the SSP-3801 card's web interface (see page 26).
2 From the menu, select **Card Configuration** > **Router Control**.
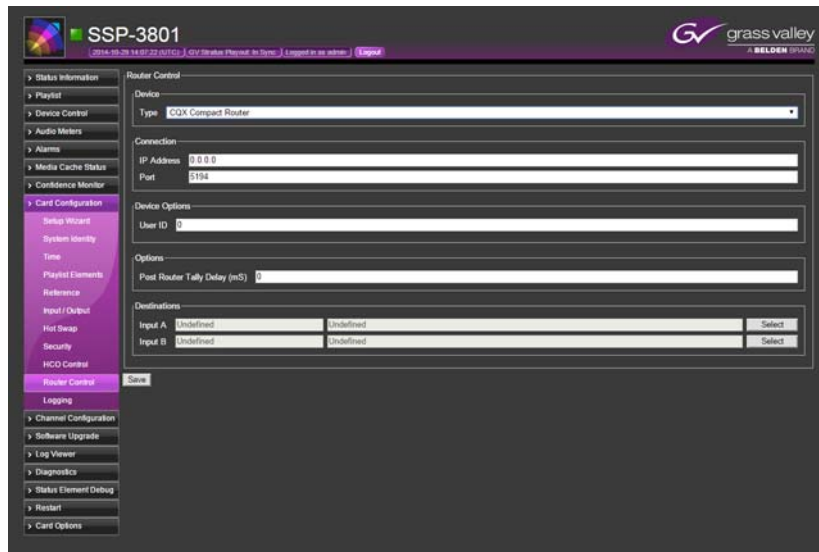
Fig. 4-10: Router Control page

3 In the **Type** list, select the type of router connected to the card. Click:
- **None**: to disable Router Control.
- **Virtual Router**: to enable a virtual test router. The virtual router does not perform video switches, but allows the card to act as though an actual router is connected so it can be used to test the behavior. For example, a Source primary event added to the playlist will act as though it played out and the Log Viewer will be updated, but no actual video switching is performed.
- **CQX Compact Router**: to enable control of an NVision Compact CQX router.
- **NV9000 Router Controller**: to enable control of an NV9000 router control system.

4 Depending on the type of device selected, the options on the page will differ. Configure the following as required by the selected type:

Type	Configuration
None	No configuration is required.
Virtual Router	**To configure the virtual router:** 1 In the **Router Size** field, type the number of sources and destinations (between 0 and 8,000) that you want available for the test. For example, if you type 64, the virtual router will support 64 sources and 64 destinations. 2 In the **Post Router Tally Delay** field, type the value in milliseconds (between 0 to 2000 ms) representing the delay between when the message is received from the router controller confirming that the switch has been made and when the actual switch is performed by the router frame. Since the virtual router does not actually perform video switches, any value can be used. 3 The router settings must be saved and the router must be online before the router destinations can be configured. Click **Save**. 4 In the **Destinations** section, define the router destinations for the inputs on the card. For each input: • Click the **Select** button. • Click **Refresh** to obtain a list of the available router sources. • Click the desired router source and click **Select**. To filter the list, type the name of the router source in the **Search** field. To order the list, click the arrows in the column headers.

Type	Configuration

CQX Compact Router	**To configure the CQX Compact router:**
	
	 1 In the **IP Address** field, type the IPv4 address in dotted quad format of the NVision Compact CQX router.
	
	 2 In the **Port** field, type the port number used for communication with the NVision Compact CQX router over the UDP protocol. Normally, the port number should be 5194 unless it was configured differently on the router itself. The card will automatically open the defined port in the SSP-3801's firewall.
	
	 3 In the **User ID** field, type the user ID configured in the NVision Compact CQX router. Normally, the user ID should be 61441 unless it was configured differently on the router itself.
	
	 4 In the **Post Router Tally Delay** field, type the value in milliseconds (between 0 to 2000 ms) representing the delay between when the message is received from the router controller confirming that the switch has been made and when the actual switch is performed by the router frame.
	
	 5 The router settings must be saved and the router must be online before the router destinations can be configured. Click **Save**.
	
	 6 In the **Destinations** section, define the router destinations for the inputs on the card. For each input:
	
	  • Click the **Select** button.
	
	  • Click **Refresh** to obtain a list of the available router sources.
	
	  • Click the desired router source and click **Select**. To filter the list, type the name of the router source in the **Search** field. To order the list, click the arrows in the column headers.

Type	Configuration
NV9000 Router Controller	**To configure the NV9000 router control system:** 1 In the **IP Address** field, type the IPv4 address in dotted quad format of the NV9000 router control system. 2 In the **Port** field, type the port number used for communication with the NV9000 router control system using a TCP network connection. Normally, the port number should be 9193 unless it was configured differently on the NV9000 router control system itself. 3 In the **User ID** field, choose one of the following: • To generate a default user ID, select **Automatic**. • To specify the user ID configured in the NV9000 router control system, select **Manual** and type the user ID in the field. A manually entered user ID is required when a specific user ID is configured in the NV9000 router control system using the SE Utilities tool for use with its access controls. In this case, the same user ID must be used by the SSP-3801 card. For more information, please refer to NV9000 router control system's documentation. 4 In the **Post Router Tally Delay** field, type the value in milliseconds (between 0 to 2000 ms) representing the delay between when the message is received from the router controller confirming that the switch has been made and when the actual switch is performed by the router frame. 5 The router settings must be saved and the router must be online before the router destinations can be configured. Click **Save**. 6 In the **Destinations** section, define the router destinations for the inputs on the card. For each input: • Click the **Select** button. • Click **Refresh** to obtain a list of the available router sources. • Click the desired router source and click **Select**. To filter the list, type the name of the router source in the **Search** field. To order the list, click the arrows in the column headers.

5 Click **Save** to save the changes and activate router control.

Resetting the configuration settings to factory defaults

If changes to the SSP-3801 card have resulted in a broken configuration or you wish to apply a factory defaults configuration, you can use the Reset Configuration button on the Software Upgrade page to reset all the configuration settings, except the following, to their default values:

- Card Configuration > System Identity settings
- Card Configuration > Security > Users entries
- Card Options

Once the reset is performed, the SSP-3801 card is restored to its factory defaults configuration while retaining the settings from the items listed above.

To reset the configuration settings:

1 Open and log into the SSP-3801 card's web interface (see page 26).

2 From the menu, click **Software Upgrade**.

3 Click **Reset Configuration**.

Recovering from a card failure

To recover from an SSP-3801 card that has fallen into an unresponsive state:

1 Remove the affected card from the Densité frame.

2 Reinsert the card into the Densité frame, while at the same time holding down the card's **Select** button until the card is acknowledged on the local control panel's display.

3 Take note of the new IP address that has been assigned to the card and is now displayed on the local control panel's display.

4 On a client computer on the same network as the SSP-3801 card, enter the card's new IP address in a web browser. This launches the card's **DFU mode** user interface, which allows you to perform a **software upgrade** or a **factory install** of the SSP-3801 software.

Verifying the accuracy of the SSP-3801 card's settings

Once you have completed the configuration procedure, we recommend that you verify the summary of the card's settings.

To view the SSP-3801 card's current settings:

1 Open and log into the card's web interface (see page 26).

2 From the menu, click **Status Information** and browse through its submenus.

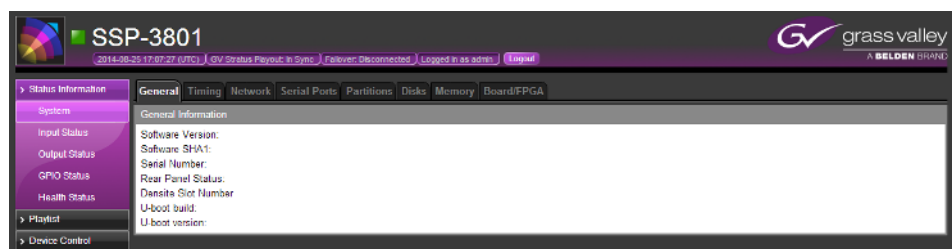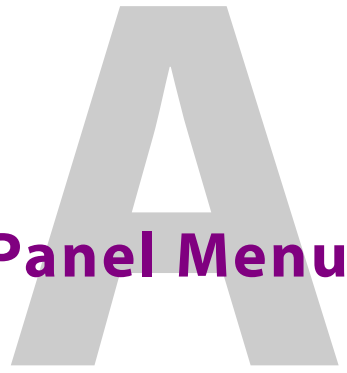Each submenu provides the current status of the various SSP-3801 card's settings.

Figure 4-11. System > General page

3 Browse through the settings listed to ensure they are correct. If you discover any erroneous settings, return to the appropriate page in the web interface to make the correction.
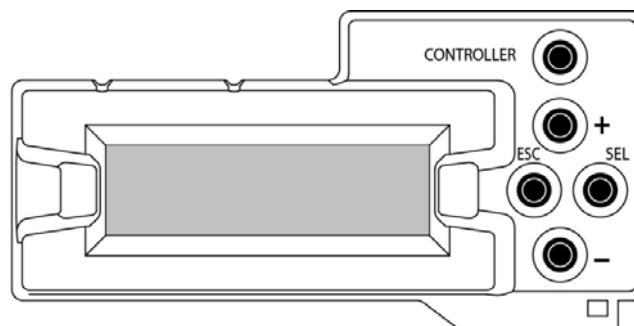
Densité 3 Control Panel Menus

This Appendix lists the menus and sub-menus on the Densité 3 frame's local control panel.

About the Densité 3 frame's local control panel

The following table identifies the menu items, parameters and settings that are displayed on the Densité 3 frame's local control panel when the SSP-3801 is selected.

Instructions for how to use the local control panel's buttons are provided on .

To select the commands on the card's control panel:

1 Press the **Select** button for the card you wish to modify. The name of the card and its slot number appear in the controller panel.

2 Press the +/- buttons to select the menu you wish to view and press **SEL**. The submenu appears in the panel. Press **ESC** to go back one menu.

3 Press the +/- buttons to select the submenu/command you wish to use and press **SEL**. Press **ESC** to go back one menu.

You have the following menus, submenus, and commands to choose from:

- **Status** menu (see Status menu on page 48)
- **Reference** menu (see Reference SRC menu on page 50)
- **Ethernet Options** menu (see Ethernet Options menu on page 50)
- **Version** menu (see Version menu on page 51)
- **Options** menu (see Options menu on page 51)
- **Serial Ports** menu (see Serial Ports menu on page 52)
- **Test Pattern** menu (see Test Pattern menu on page 52)
- **Setup** menu (see Setup menu on page 52)

Status menu

The **Status** menu displays the following options:

Submenus		
Ref Status	Ref Source	Free Run
	URS Mode	Not Present
	Ext Reference	• Ext Ref Status > Unlocked | Locked • Ext Standard

Submenus		
Network Status	IP Status	ETH1 • DHCP Enable > Disable | Enable • IP address • Net Mask • Gateway • MAC Address ETH2 • DHCP Enable > Disable | Enable • IP address • Net Mask • Gateway • MAC Address
	Bonded Enable	Disable | Enable
	Hostname	Displays the domain name for the card.
	Link Status	ETH1 • Link Status> Status Up | Down • Link Duplex> Full Duplex | Half • Link Speed > 10 | 100 | 1000 MBPS ETH2 • Link Status> Status Up | Down • Link Duplex> Full Duplex | Half • Link Speed > 10 | 100 | 1000 MBPS
Serial Status	COM 1	Port Counters • RX:0 • TX:0 • FE:0 • PE:0 • BRK:0 • OE:0
	COM2	Port Counters • RX:0 • TX:0 • FE:0 • PE:0 • BRK:0 • OE:0

Submenus		
Video Inputs	A Input	• Video Standard • Video Mismatch > False | True • Video Status > Unlocked | Locked
	B Input	• Video Standard • Video Mismatch > False | True • Video Status > Unlocked | Locked
	Fill-1 Input	• Video Standard • Video Mismatch > False | True • Video Status > Unlocked | Locked
	Key-1 Input	• Video Standard • Video Mismatch > False | True • Video Status > Unlocked | Locked
AES	• Pair 1 CH1 > Error Unlocked | Locked • Pair 1 CH2 > Error Unlocked | Locked	
Timecode	VITC	• BAD INT | GOOD INT • +00:00:00 ND
	LTC	• BAD INT | GOOD INT • +19:19:19 ND
	URS	• BAD INT | GOOD INT • +00:00:00 ND
	ATC_TLC	• BAD INT | GOOD INT • +00:00:00 ND
	ATC_VITC1	• BAD INT | GOOD INT • +00:00:00 ND
	ATC_VITC2	• BAD INT | GOOD INT • +00:00:00 ND
Serial Number	Displays the unique serial number for this card.	
Rear Panel Type	SSP-3801 3QRP	

Reference SRC menu

The **Reference SRC** menu displays the following options:

Submenus	
Reference SRC	External Ref
	SDI PGM IN
	URS

Ethernet Options menu

The **Ethernet Options** menu displays the following options:

Submenus		
Ethernet Options	Bonded Mode	• Enable • Disable
	Nameserver 1 > 000.000.000.000	
	Nameserver 2 > 000.000.000.000	
	Eth1	DHCP Status
		IP Address
		Network Address
		Gateway Address
	Eth2	DHCP Status
		IP Address
		Network Address
		Gateway Address
	Restart Network	

Version menu

The **Version** menu displays the current version of the control panel software.

For example: 1.3.0-0123

Options menu

The **Options** menu displays the active licenses on the card. The following lists the available licenses:

- OPT HCO: allows the card to drive a downstream HCO card
- OPT 2SSD: allows the use of a second SSD card
- OPT CLIP: allows you to play video clips in the events
- OPT PROXY: allows the use of a second confidence monitor
- OPT BR: allows you to display graphics in the events
- OPT RTR: allows you to configure an external video router

Serial Ports menu

The **Serial Ports** menu displays the following options:

Submenus		
COM 1	Baud Rate	• 1200 BPS • 1800 BPS • 2400 BPS • 4800 BPS • 9600 BPS • 19200 BPS • 38400 BPS • 57600 BPS • 115200 BPS
	Standard	• RS422 • RS232
COM 2	Baud Rate	• 1200 BPS • 1800 BPS • 2400 BPS • 4800 BPS • 9600 BPS • 19200 BPS • 38400 BPS • 57600 BPS • 115200 BPS
	Standard	• RS422 • RS232

Test Pattern menu

The **Test Pattern** menu displays the following options:
- Enable
- Disable

Setup menu

The **Setup** menu displays the following options:

Submenus	
Video Standard	• 625 Line • 525 Line • 1080I/59.94 • 1080I/50 • 720P/59.94 • 720P/50

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