SRA-8901A User Guide

Thank You for Choosing Ross

You've made a great choice. We expect you will be very happy with your purchase of Ross Technology.

Our mission is to:

1. Provide a Superior Customer Experience
   - offer the best product quality and support
2. Make Cool Practical Technology
   - develop great products that customers love

Ross has become well known for the Ross Video Code of Ethics. It guides our interactions and empowers our employees. I hope you enjoy reading it below.

If anything at all with your Ross experience does not live up to your expectations be sure to reach out to us at *solutions@rossvideo.com*.

David Ross
CEO, Ross Video
dross@rossvideo.com

Ross Video Code of Ethics

Any company is the sum total of the people that make things happen. At Ross, our employees are a special group. Our employees truly care about doing a great job and delivering a high quality customer experience every day. This code of ethics hangs on the wall of all Ross Video locations to guide our behavior:

1. We will always act in our customers' best interest.
2. We will do our best to understand our customers' requirements.
3. We will not ship crap.
4. We will be great to work with.
5. We will do something extra for our customers, as an apology, when something big goes wrong and it's our fault.
6. We will keep our promises.
7. We will treat the competition with respect.
8. We will cooperate with and help other friendly companies.
9. We will go above and beyond in times of crisis. *If there's no one to authorize the required action in times of company or customer crisis - do what you know in your heart is right. (You may rent helicopters if necessary.)*

SRA-8901A · User Guide

- Ross Part Number: **8901DR-114-01**
- Revision: 1
- Release Date: January 6, 2026.
- Software Version: **1.0**

The information contained in this Guide is subject to change without notice or obligation.

Copyright

Patents

Patent numbers US 7,034,886; US 7,508,455; US 7,602,446; US 7,802,802 B2; US 7,834,886; US 7,914,332; US 8,307,284; US 8,407,374 B2; US 8,499,019 B2; US 8,519,949 B2; US 8,743,292 B2; GB 2,419,119 B; GB 2,447,380 B; and other patents pending.

Notices

The material in this manual is furnished for informational use only. It is subject to change without notice and should not be construed as commitment by Ross Video Limited. Ross Video Limited assumes no responsibility or liability for errors or inaccuracies that may appear in this manual.

Note: As required by the GNU General Public License, and the Lesser GNU Public License (LGPL), source code can be obtained from Ross Video for at least 3 years. Contact Ross Video Technical Support for more information. If you have any questions or comments regarding this License Agreement, please contact:

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Safety Notices

Refer to the "**Important Regulatory and Safety Notices**" document that accompanied your product.

Statement of Compliance

This product has been determined to be compliant with the applicable standards, regulations, and directives for the countries where the product is marketed.

Compliance documentation, such as certification or Declaration of Compliance for the product is available upon request by contacting techsupport@rossvideo.com. Please include the product; model number identifiers and serial number and country that compliance information is needed in request.

EMC Notices

US FCC Part 15

This equipment has been tested and found to comply with the limits for a class A Digital device, pursuant to part 15 of the FCC Rules.

These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a Commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Notice — *Changes or modifications to this equipment not expressly approved by Ross Video Ltd. could void the user's authority to operate this equipment.*

Canada

This Class "A" digital apparatus complies with Canadian ICES-003 and part 15 of the FCC Rules.

Cet appareil numerique de la classe "A" est conforme a la norme NMB-003 du Canada.

European Union

This equipment is in compliance with the essential requirements and other relevant provisions established under regulation (EC) No 765/2008 and Decision No 768/2008/EC referred to as the "New Legislative Framework".

Warning — *This equipment is compliant with Class A of CISPR 32. In a residential environment this equipment may cause radio interference.*

Australia/New Zealand

This equipment is in compliance with the provisions established under the Radiocommunications Act 1992 and Radiocommunications Labeling (Electromagnetic Compatibility) Notice 2008.

Korea

This equipment is in compliance with the provisions established under the Radio Waves Act.

Class A equipment (Broadcasting and communications service for business use)

This device is a business-use (Class A) EMC-compliant device. The seller and user are advised to be aware of this fact. This device is intended for use in areas outside home.

Type of Equipment	User's Guide
A급 기기 (업무용 방송통신기자재)	이 기기는 업무용(A급) 전자파적합기기로서 판매자 또는 사용자는 이 점을 주의하시기 바라며, 가정외의 지역에서 사용하는 것을 목적으로 합니다.
Class A Equipment (Industrial Broadcasting & Communication Equipment)	This equipment is **Industrial (Class A) electromagnetic wave suitability equipment** and seller or user should take notice of it, and this equipment is to be used in the places except for home.

International

This equipment has been tested under the requirements of CISPR 22:2008 or CISPR 32:2015 and found to comply with the limits for a Class A Digital device.

Notice — *This is a Class A product. In domestic environments, this product may cause radio interference, in which case the user may have to take adequate measures.*

Maintenance/User Serviceable Parts

Routine maintenance to this openGear product is not required. This product contains no user serviceable parts. If the module does not appear to be working properly, please contact Technical Support using the numbers listed in the "**Contact Us**" section of this manual. All openGear products are covered by a generous 5-year warranty and will be repaired without charge for materials or labor within this period. See the "**Warranty and Repair Policy**" section in this manual for details.

Environmental Information

The equipment may contain hazardous substances that could impact health and the environment.

To avoid the potential release of those substances into the environment and to diminish the need for the extraction of natural resources, Ross Video encourages you to use the appropriate take-back systems. These systems will reuse or recycle most of the materials from your end-of-life equipment in an environmentally friendly and health conscious manner.

The crossed-out wheeled bin symbol invites you to use these systems.

If you need more information on the collection, reuse, and recycling systems, please contact your local or regional waste administration. You can also contact Ross Video for more information on the environmental performances of our products.

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Contents

Introduction

This guide covers the installation, configuration, and use of the SRA-8901A Single Reclocking Distribution Amplifier. The following chapters are included:

- "**Introduction**" summarizes the guide and provides important terms, and conventions.
- "**Before You Begin**" provides general information to keep in mind before installing and configuring your card.
- "**Hardware Overview**" provides a basic introduction to the hardware features including the cabling and monitoring features of the rear module.
- "**Physical Installation**" provides instructions for the physical installation of the card and its rear module into an openGear frame.
- "**Cabling**" provides an overview of connecting input and output devices to the rear module of the SRA-8901A based on the rear module type.
- "**Getting Started**" provides instructions for launching DashBoard, and accessing the SRA-8901A interfaces in DashBoard.
- "**Configuration**" outlines how to set the reclocker data rate, mute an unused output, and configure the invalid signal alarms.
- "**Upgrading the Software**" provides instructions for upgrading the software for your SRA-8901A using DashBoard.
- "**DashBoard Menus**" summarizes the SRA-8901A menus, items, and parameters in DashBoard.
- "**Technical Specifications**" provides technical specification details on the SRA-8901A.
- "**Service Information**" provides information on the warranty and repair policy for your card.
- "**Software Licenses**" provides third-party software license information for your SRA-8901A.

Related Publications

It is recommended to consult the following Ross documentation before installing and configuring your SRA-8901A card:

- ***DashBoard User Guide***, Ross Part Number: 8351DR-004
- ***MFC-OG3-N and MFC-8322-S User Guide***, Ross Part Number: 8322DR-004
- ***OG3-FR Series User Guide***, Ross Part Number: 8322DR-005
- ***OGX-FR Series User Guide***, Ross Part Number: 8322DR-204

Documentation Conventions

Special text formats are used in this guide to identify parts of the user interface, text that a user must enter, or a sequence of menus and sub-menus that must be followed to reach a particular command.

Interface Elements

Bold text is used to identify a user interface element such as a dialog box, menu item, or button. For example:

In the **Network** tab, click **Apply**.

User Entered Text

Courier text is used to identify text that a user must enter. For example:

In the **Language** box, enter **`English`**.

Referenced Guides

Text set in bold and italic represent the titles of referenced guides, manuals, or documents. For example:

For more information, refer to the ***OGX-FR Series User Guide***.

Menu Sequences

Menu arrows are used in procedures to identify a sequence of menu items that you must follow. For example, if a step reads "**File** > **Save As**," you would click the **File** menu and then click **Save As**.

Important Instructions

Star icons are used to identify important instructions or features. For example:

✶ Contact your IT department before connecting to your facility network to ensure that there are no conflicts.

Contacting Technical Support

At Ross Video, we take pride in the quality of our products, but if problems occur, help is as close as the nearest telephone.

Our 24-hour Hot Line service ensures you have access to technical expertise around the clock. After-sales service and technical support is provided directly by Ross Video personnel. During business hours (Eastern Time), technical support personnel are available by telephone. After hours and on weekends, a direct emergency technical support phone line is available. If the technical support person who is on call does not answer this line immediately, a voice message can be left and the call will be returned shortly. This team of highly trained staff is available to react to any problem and to do whatever is necessary to ensure customer satisfaction.

- **Toll Free Technical Support (North America)**: 1-844-652-0645
- **Toll Free Technical Support (International)**: +800 1005 0100
- **Technical Support**: (+1) 844-652-0645
- **After Hours Emergency**: (+1) 613-349-0006
- **E-mail**: techsupport@rossvideo.com
- **Website**: http://www.rossvideo.com

Before You Begin

Each SRA-8901A is a 12G/6G/3G/HD/SD SDI Reclocking Distribution Amplifier, capable of equalizing and reclocking all common serial digital signals. The outputs are non-inverting making it an excellent ASI distribution amplifier. An LED indicator at the front of the card identifies the presence of incoming video, simplifying system troubleshooting.

Features

The SRA-8901A includes the following features:

- Equalizes and reclocks SDI signals of 270Mbps, 1.485Gbps, 2.97Gbps, 5.94Gbps, and 11.88Gbps
- Supports DVB-ASI (EN 50083-9), and MADI (AES10) signals
- Configure and monitor via DashBoard
- Automatic detection of incoming data rate
- Automatically mutes the channel output when a loss of input occurs
- LED indicator for signal presence
- Excellent input and output return loss
- Fits the OGX-FR series frames
- Fully compliant with openGear specifications
- 5 year transferable warranty

Functional Block Diagrams

Figure 1 describes the signal flow of the SRA-8901A when installed with the 8322AR-338 full rear module.

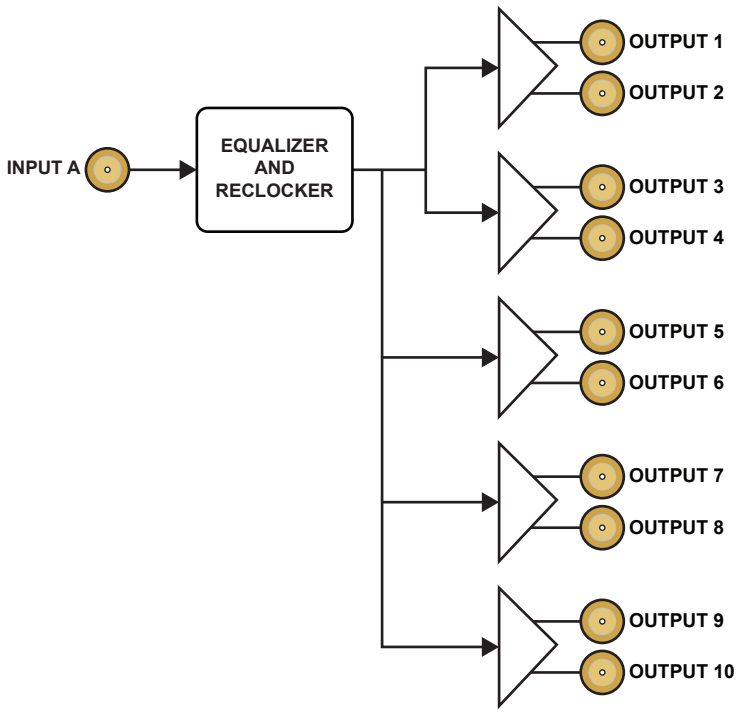


Figure 1 Simplified Diagram — SRA-8901A

Figure 2 describes the signal flow of the SRA-8901A when installed with the 8322AR-339 split rear module.

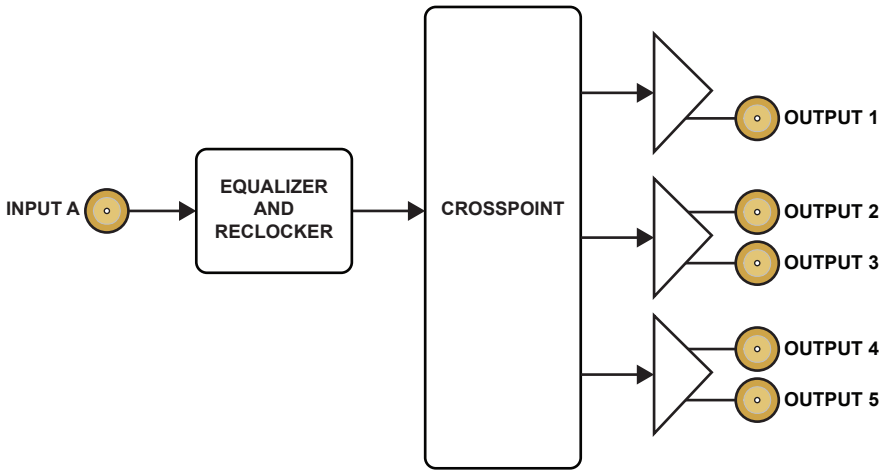


Figure 2 Simplified Diagram — SRA-8901A with the 8322AR-339

User Interfaces

The following interfaces are available for control and monitoring of your SRA-8901A.

DashBoard Control System

DashBoard enables you to monitor and control openGear frames and cards from a computer. DashBoard communicates with other cards in the openGear frame through the Network Controller card.

For More Information on...

- the menus in DashBoard, refer to "**DashBoard Menus**".
- installing and using DashBoard, refer to the ***DashBoard User Guide***.

Card-edge Monitoring

The card-edges provide LEDs for monitoring the status of the input signal.

For More Information on...

- the card-edge LEDs, refer to "**Card-edge Overview**".

SNMP Monitoring and Control

The Network Controller card in the openGear frame provides optional support for remote monitoring and control of your frame and openGear cards using Simple Network Management Protocol (SNMP), which is compatible with many third-party monitoring and control tools.

For More Information on...

- SNMP controls on your card, refer to your SRA-8901A Management Information Base (MIB) file.
- SNMP Monitoring and Control for the openGear frame, refer to the ***MFC-OG3-N and MFC-8322-S User Guide***.

Hardware Overview

This chapter outlines the SRA-8901A hardware components and features.

Supported Rear Modules

Notice — *Ensure that you install the SRA-8901A using one of the supported rear modules. Installing the SRA-8901A with an unsupported rear module can damage the card, the rear module, or both.*

✶ It is recommended to terminate unused outputs. You can also mute an unused output via DashBoard as described in "**Muting an Output**".

8322AR-338 Rear Module

The 8322AR-338 rear module is supported by the SRA-8901A. Each 8322AR-338 occupies two slots and accommodates one card. This rear module provides one SDI input, and ten SDI outputs. (**Figure 3**)

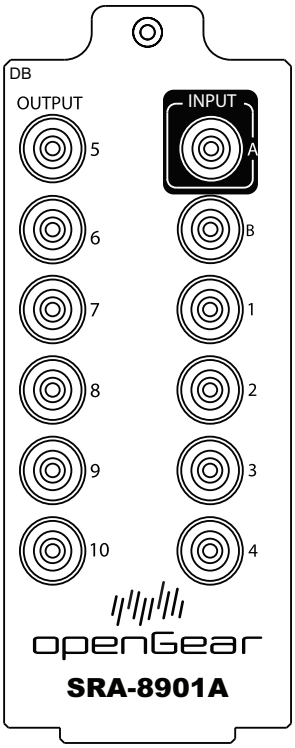


Figure 3 Rear Module Overview — 8322AR-338

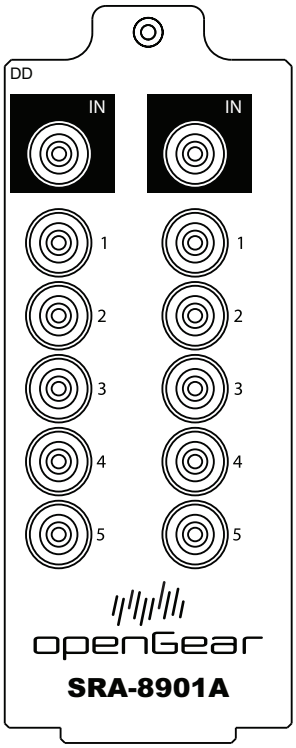


Figure 4 Rear Module Overview — 8322AR-339

8322AR-339 Rear Module

The 8322AR-339 split rear module is supported by the SRA-8901A. Each 8322AR-339 occupies two slots and accommodates two cards. This rear module provides one SDI input, and five SDI outputs per card. (**Figure 4**)

Card-edge Overview

This section describes major components of the card hardware. There are no card-edge controls as all configuration and setup is done using the menus in DashBoard.

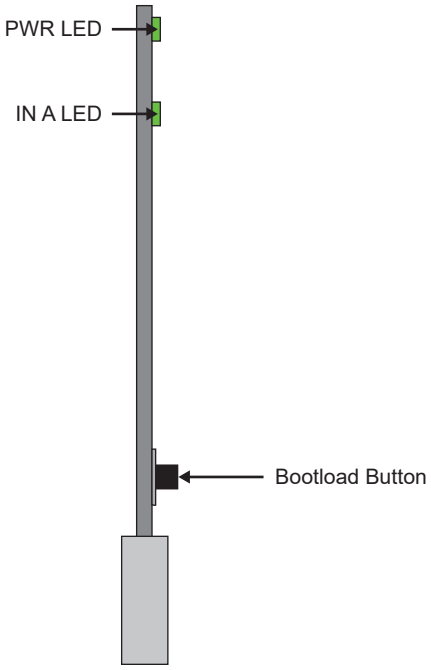


Figure 5 Locations — Bootload Button, Status LEDs

Bootload Button

This button is used for factory service in the unlikely event of a complete card failure. Do not use this button unless advised by Ross Technical Support.

For More Information on...

- the cabling designations for your card, refer to "**Supported Rear Modules**".
- the Bootload process, refer to "**Bootload Button**".

Status LEDs

Table 1 provides basic LED displays and descriptions.

Table 1 Status LEDs

LED	Color	Display and Description
PWR	Green	When lit green, this LED indicates that the card is functioning normally and that no anomalies have been detected.
	Flashing Green	When flashing green, this LED indicates that the Bootload button was pressed, and the card is receiving a new software load from the frame.
	Flashing Green/Orange	When lit green with flashing orange, this LED indicates a signal or configuration problem. Verify the signal status and settings.
	Amber	When lit amber, this LED indicates the card is running internal diagnostics while powering up.

Table 1 Status LEDs (Continued)

LED	Color	Display and Description
PWR	Red	When lit red or flashing red, this LED indicates the card is not operational. Re-seat card in frame, check the rear module type and connections, or call Ross Video Technical Support.
	Off	When off, this LED indicates there is no power to the card.
IN A	Green	When lit green, this LED indicates that a valid SDI input signal is present on the rear module.
	Red	When lit red, this LED indicates that the SDI input signal is missing or invalid on the rear module.

Physical Installation

The SRA-8901A can be installed in the OG3-FR series or OGX-FR series frames using one of the supported rear modules. This chapter provides instructions for installing the rear module for your SRA-8901A, and then installing the card in the frame.

If you have questions pertaining to the installation of the SRA-8901A, contact us at the numbers listed in "**Contacting Technical Support**". Our technical staff is always available for consultation, training, or service.

Before You Begin

Before proceeding with the instructions in this chapter, ensure that your openGear frame is properly installed according to the instructions in its manual.

Static Discharge

Throughout this chapter, heed the following cautionary note:

ESD Susceptibility — *Static discharge can cause serious damage to sensitive semiconductor devices. Avoid handling circuit boards in high static environments such as carpeted areas and when synthetic fiber clothing is worn. Always exercise proper grounding precautions when working on circuit boards and related equipment.*

Unpacking

Unpack each card you received from the shipping container and ensure that all items are included. If any items are missing or damaged, contact your sales representative or Ross Video directly.

Removing the Blank Plates from the Rear Panel

When a frame slot is not populated with an openGear card, a blank plate must be installed to ensure proper frame cooling and ventilation.

Notice — *Installing the rear modules in a frame other than an OG3-FR or OGX-FR series frame could damage the card, the rear module, or both.*

To remove a blank plate from the openGear frame

1. Locate the slots in the openGear frame you wish to install the SRA-8901A into.

   It is recommended to use the following slot combinations:

   - Slots 1, 2
   - Slots 3, 4
   - Slots 5, 6
   - Slots 7, 8
   - Slots 9, 10
   - Slots 11, 12
   - Slots 13, 14
   - Slots 15, 16
   - Slots 17, 18
   - Slots 19, 20

2. Use a Phillips screwdriver to unfasten each blank plate from the frame backplane.
3. Remove each blank plate from the chassis and set aside.

Installing the Rear Module

You must first install the rear module in the frame and then install the card in the appropriate slot within that frame. This section outlines how to install the rear module.

✶ If the rear module is already installed in the frame, proceed to "**To install the SRA-8901A into the openGear frame**".

To install the rear module in the openGear frame

1. Ensure that the openGear frame is properly installed.
2. On the rear of the frame, locate the card frame slot.
3. Remove the Blank Plate from the rear of the slot you have chosen for card installation.
4. Seat the bottom of the rear module in the seating slot at the base of the frame's back plane.
5. Align the top hole of the rear module with the screw hole on the top edge of the frame back plane.
6. Using a Phillips screwdriver and the supplied screw, fasten the rear module to the back plane. Do not over-tighten.
7. Ensure proper frame cooling and ventilation by having all rear frame slots covered with rear modules or blank metal plates.

Installing the SRA-8901A

The slot that the SRA-8901A installs into depends on the slot combination you installed the rear module in. This allows adequate spacing to avoid damaging the card, the cards installed in the neighboring slots, or both.

To install the SRA-8901A into the openGear frame

1. Locate the slot the SRA-8901A card will slide into.

   When using an 8322AR-338 rear module, refer to **Table 2** for valid slot combinations.

Table 2 Card Slot Combinations

Rear Module is Installed in	Card Installs into Slot
Slots 1, 2	2
Slots 3, 4	4
Slots 5, 6	6
Slots 7, 8	8
Slots 9, 10	10
Slots 11, 12	12
Slots 13, 14	14
Slots 15, 16	16
Slots 17, 18	18
Slots 19, 20	20

2. Verify that the SRA-8901A card aligns with the rear module.
3. Using a Phillips screwdriver fasten the rear module to the backplane using the provided screws.

✶ Do not over tighten the screws.

4. Hold the card by the edges and carefully align the card edges with the slot rails in the frame.
5. Fully insert the card into the frame until the card is properly seated in the rear module.

Cabling

This chapter provides an overview of connecting input and output devices to the rear module of the SRA-8901A based on the rear module type.

If you have questions pertaining to the cabling of the SRA-8901A, contact us at the numbers listed in "**Contacting Technical Support**". Our technical staff is always available for consultation, training, or service.

✶ All outputs are non-inverting. It is recommended to mute unused outputs via DashBoard as described in "**Muting an Output**". Or you may choose to terminate the unused outputs.

8322AR-338 Cabling

Refer to **Figure 6** when cabling the **SDI input** on the 8322AR-338 rear module.

✶ INPUT B is not implemented.

Refer to **Figure 7** when cabling the **SDI outputs** on the 8322AR-338 rear module.

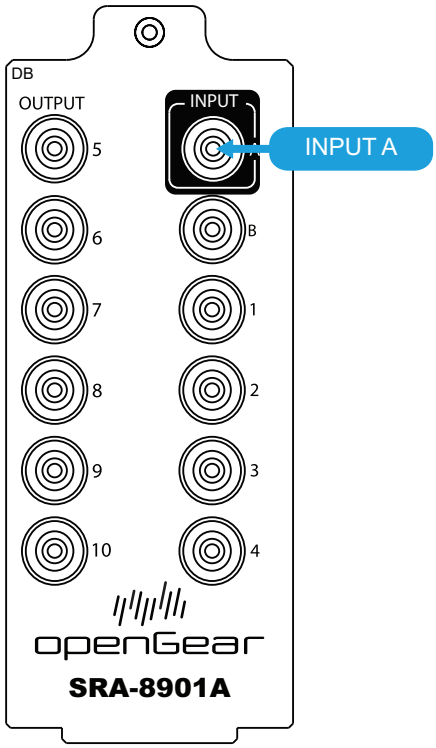


Figure 6 8322AR-338 — SDI Inputs

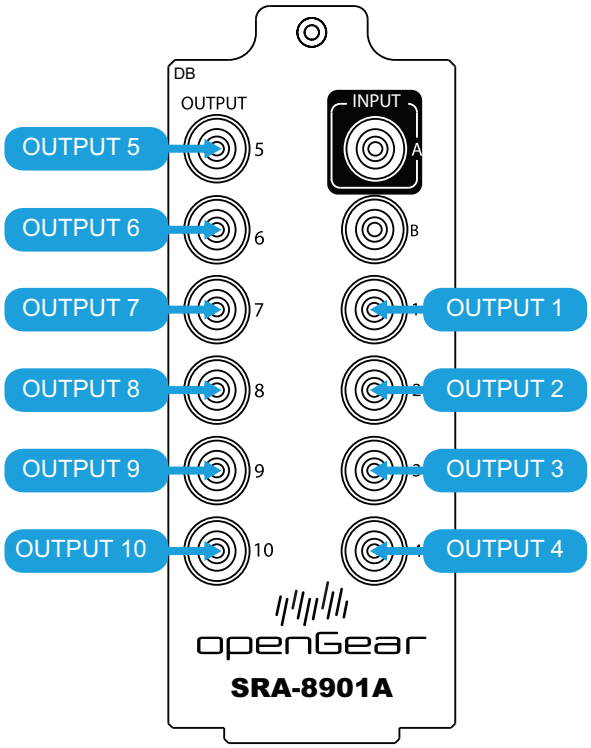


Figure 7 8322AR-338 — SDI Outputs

8322AR-339 Cabling

Refer to **Figure 8** when cabling the **SDI inputs** on the 8322AR-339 rear module.

Refer to **Figure 9** when cabling the **SDI outputs** on the 8322AR-339 rear module.

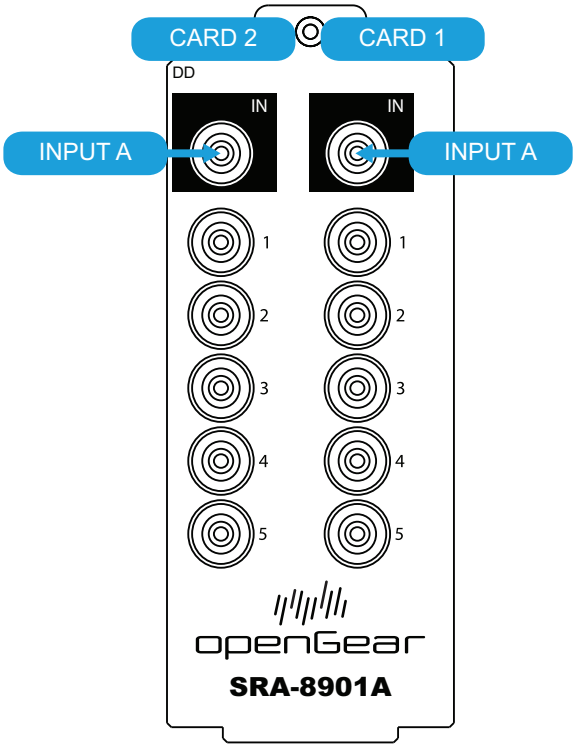


Figure 8 8322AR-339 — SDI Inputs

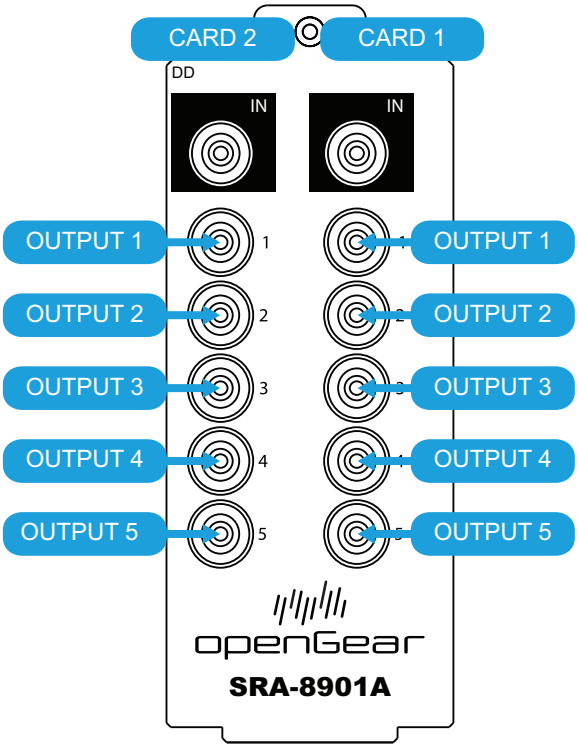


Figure 9 8322AR-339 — SDI Outputs

Getting Started

This chapter provides instructions for launching DashBoard, and accessing the SRA-8901A interfaces in DashBoard.

If you have questions pertaining to the operation of SRA-8901A, contact us at the numbers listed in "**Contacting Technical Support**". Our technical staff is always available for consultation, training, or service.

Before You Begin

Ensure that:

- An MFC-OG3-N or MFC-OGX-N Network Controller Card is installed in your OGX-FR frame.
- The openGear frame that houses the SRA-8901A displays in the Basic Tree View of DashBoard.
- DashBoard is running on a computer that has a physical wired ethernet connection. Wireless connections do not allow device discovery.

For More Information on...

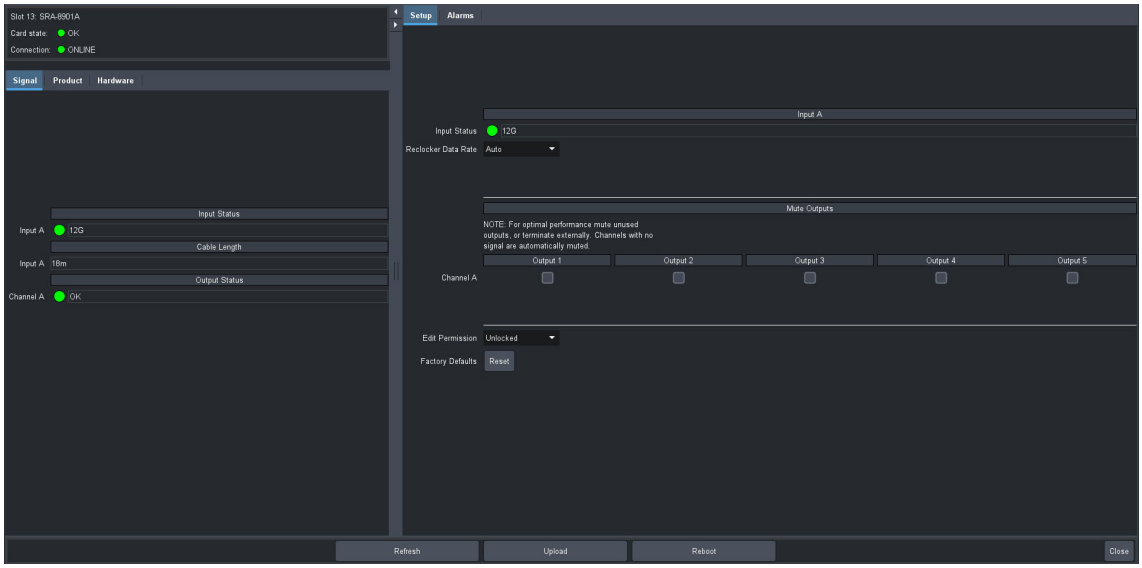
- downloading and installing the DashBoard client software, refer to the ***DashBoard User Guide***.

Accessing the SRA-8901A Interfaces in DashBoard

The interfaces are accessed by expanding the SRA-8901A sub-node in the DashBoard Tree View.

To display the SRA-8901A in DashBoard

1. Ensure that you are running DashBoard software version 9.15 or higher.
2. Launch DashBoard by double-clicking its icon on your computer desktop.
3. In the Basic Tree View of DashBoard, locate the openGear frame the SRA-8901A is installed in.
4. Expand the openGear frame node to display a list of sub-nodes.
5. Locate the SRA-8901A node in the openGear frame tree.
6. Double-click the SRA-8901A sub-node to display the interface in the right pane of the DashBoard window.



Configuration

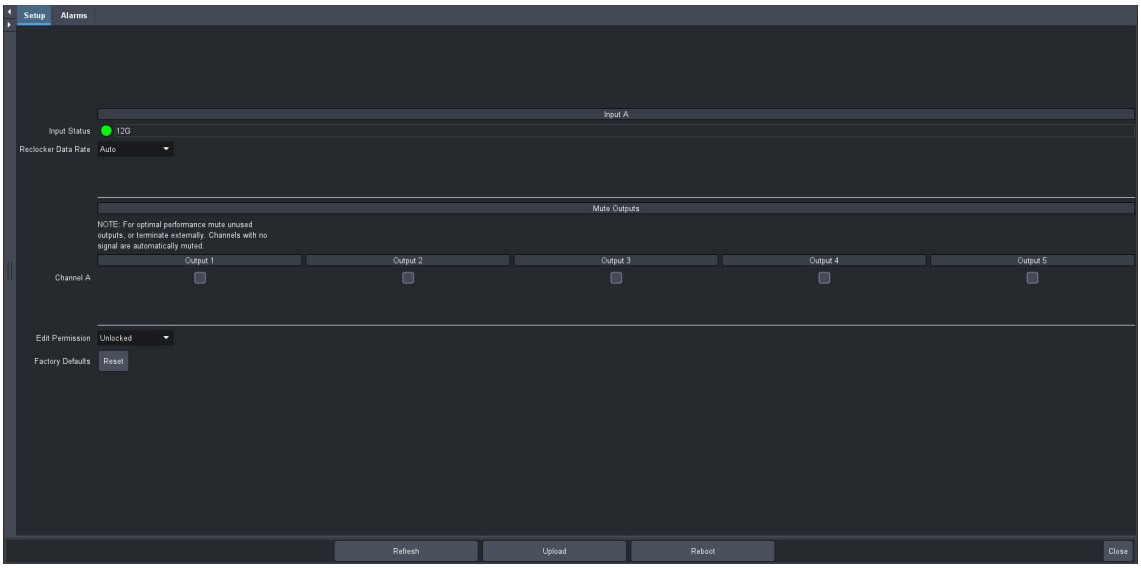
This chapter briefly outlines how to configure the SRA-8901A using the options available in DashBoard.

Configuring the Reclocker

This section summarizes how to select a data rate for the reclocker. This enables the card to reclock to a specific data rate or automatically detect and reclock the data rate. It also sets the input signal rate type that the SRA-8901A will process.

To set the reclocker data rate

1. Navigate to the SRA-8901A interface as outlined in "**To display the SRA-8901A in DashBoard**".
2. Select the **Setup** tab.



3. Use the **Reclocker Data Rate** menu to choose a data rate. Choose from the following:
   - **Auto** — The SRA-8901A reclocks at the detected rate automatically.
   - **125M (MADI)** — The SRA-8901A is set to reclock at MADI rate of 125Mbps only. This is the required setting when using MADI signals.
   - **270M (SD)** — The SRA-8901A is set to reclock at 270Mbps only.
   - **1.5G (HD)** — The SRA-8901A is set to reclock at 1.485Gbps only.
   - **3G** — The SRA-8901A is set to reclock at 2.97Gbps only.
   - **6G** — The SRA-8901A is set to reclock at 5.94Gbps only.
   - **12G** — The SRA-8901A is set to reclock at 11.88Gbps only.

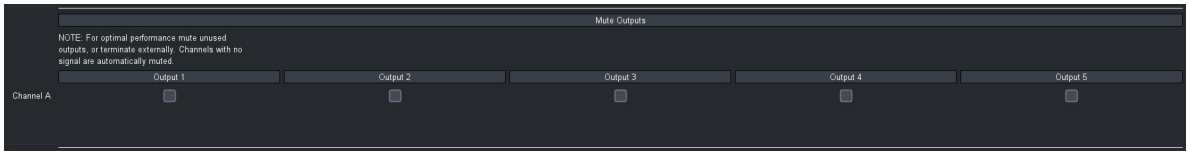
Muting an Output

If you have an unused output, it is recommended to either terminate the output or mute the output via the Mute Outputs options available in DashBoard.

To mute an unused output

1. Navigate to the SRA-8901A interface as outlined in "**To display the SRA-8901A in DashBoard**".
2. Select the **Setup** tab.

3. Locate the **Mute Outputs** area located near the bottom of the **Setup** tab.



4. Select the **Output** box for the output you wish to mute.

   The box displays a check-mark.

Configuring the Invalid Signal Alarms

When enabled, this feature will indicate an alarm condition (red) in the corresponding **Status** field of the **Signal** tab. This occurs if the SRA-8901A does not detect a valid input signal for that channel.

For More Information on...

- how to verify which BNC to troubleshoot, refer to "**Supported Rear Modules**" or "**Cabling**".

To enable the alarm for an invalid input signal

1. Navigate to the SRA-8901A interface as outlined in "**To display the SRA-8901A in DashBoard**".
2. Select the **Alarms** tab.
3. To report an alarm when an invalid input signal is detected, select the **Invalid Signal** box in the **Input A** area of the tab.

   The **Input Status** fields in the **Signal** tab and the **Status** tab report when an invalid input signal is detected.

To enable the alarm for an invalid output signal

1. Navigate to the SRA-8901A interface as outlined in "**To display the SRA-8901A in DashBoard**".
2. Select the **Alarms** tab.
3. To report an alarm when an invalid output signal is detected, select the **Invalid Signal** box in the **Channel** area of the tab for the output you wish to monitor.

   The corresponding **Output Status** field in the **Signal** tab reports when an invalid input signal is detected.

Upgrading the Software

The SRA-8901A can be upgraded in the field via DashBoard.

To upgrade the software on a card

1. Contact Ross Technical Support for the latest software version file.
2. Ensure the Ethernet cable is connected to the **Ethernet** port on the openGear frame.
3. From the **Tree View**, expand the node for the SRA-8901A you want to access.
4. Double-click the **Global** sub-node to display the interface in the right-half of DashBoard.
5. Select **Upload**, located near the bottom of the interface, to display the **Select file Upload** dialog.
6. Navigate to the ***.bin** file you want to upload.
7. Click **Open**.
8. If you are upgrading a single card:
   a. Click **Finish** to start the upgrade.
   b. Proceed to step 10.
9. If you are upgrading multiple cards:
   a. Click **Next >** to display the **Select Destination** menu. This menu provides a list of the compatible cards.
   b. Specify the card(s) to upload the file to by selecting the check box(es) for the cards you want to upload the file to.
   c. Verify the card(s) you want to upload the file to. The **Error/Warning** fields indicate any errors, such as incompatible software or card type mismatch.
   d. Click **Finish**.
10. Monitor the upgrade.
    - An **Upload Status** dialog enables you to monitor the upgrade process.
    - Notice that each card is listed in the dialog with a button. This button is replaced with a **Reboot** button once the software file is loaded to that card.

✶ Avoid clicking the individual Reboot buttons until all cards have successfully completed the file upload process and the OK button, located in the bottom right corner of the dialog, is enabled.

- Click **OK** to reboot all the cards listed in the **Uploading to Selected Devices** dialog.
- The **Reboot Confirm** dialog displays, indicating the number of cards that will reboot. Click **Yes** to continue the upgrade process. Note that clicking **Cancel** or **No** returns you to the **Uploading to Selected Devices** dialog without rebooting the card(s).
- The card(s) are temporarily taken off-line during the reboot process. The process is complete once the status indicators for the **Card State** and **Connection** return to their previous status.

DashBoard Menus

This chapter briefly summarizes the menus, items, and parameters available from DashBoard for your card. Default parameters are noted with an asterisk (*).

✶ Wait 30 seconds after the last setting change to ensure all changes are saved to the non-volatile memory of the card.

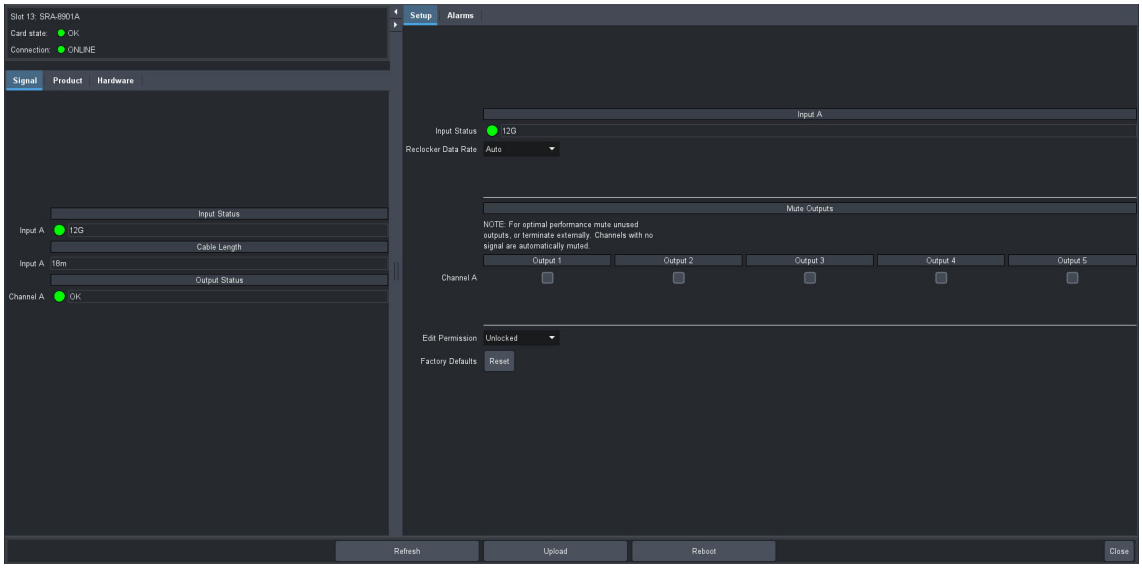


Figure 10 Example of the SRA-8901A in DashBoard

Signal Tab

The read-only fields in the **Signal** tab can vary in severity from green (valid), yellow (caution), to red (alarm). (**Figure 11**) DashBoard reports the most severe alarm for a single field. Alarm colors are noted within **Table 3** as text set in brackets next to the menu parameter name.

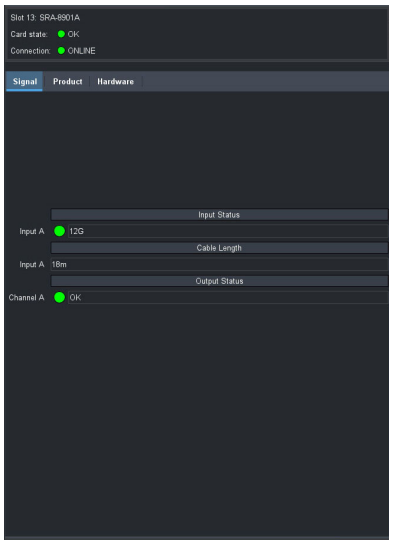


Figure 11 Example of the Signal Tab

Table 3 outlines the read-only information displayed in the **Signal** tab.

Table 3 Signal Tab Items

Item	Parameters	Description
Input Status		
Input A	125M (MADI) (Green)	A MADI signal detected at 125Mbps is present
	270M (SD) (Green)	A valid 270Mbps input signal is present
	1.5G (HD) (Green)	A valid 1.485Gbps input signal is present
	3G (Green)	A valid 2.97Gbps input signal is present
	6G (Green)	A valid 5.94Gbps input signal is present
	12G (Green)	A valid 11.88G input signal is present
	Signal Not Locked (Green)	An input signal is present, but not locked. The Alarms > Invalid Signal alarm is disabled.
	Signal Not Locked (Red)	An input signal is present, but not locked. The Alarms > Invalid Signal alarm is enabled.
	No signal (Green)	A valid input signal is not detected. The Alarms > Invalid Signal alarm is disabled.
	No signal (Red)	A valid input signal is not detected. The Alarms > Invalid Signal alarm is enabled.
Cable Length		
Input A	#	Indicates the approximate Belden 1694A cable length used for the input signal
	N/A	A valid input source was not detected on the IN BNC
	No input detected	Indicates that a valid signal clock is not present
Output Status		
Channel #	OK (Green)	A valid signal is detected on each output
	No Signal (Green)	An output signal is not present but the Alarms > Invalid Signal alarm is disabled
	No Signal (Red)	An output signal is not present. The Alarms > Invalid Signal alarm is enabled.
	Signal Not Locked (Green)	An output signal is present, but not locked. The Alarms > Invalid Signal alarm is disabled.
	Signal Not Locked (Red)	An output signal is present, but not locked. The Alarms > Invalid Signal alarm is enabled.

Product Tab

The Product tab provides read-only information about the SRA-8901A that helps identify it. (**Figure 12**)

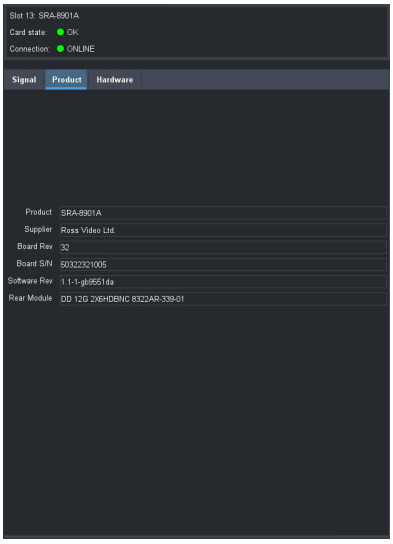


Figure 12 Example of the Product Tab

Table 4 outlines the read-only information displayed in the **Product** tab.

Table 4 Product Tab Items

Item	Parameters	Description
Product	SRA-8901A	Displays the card model
Supplier	Ross Video Ltd.	Indicates the manufacturer of your card
Board Rev	##	Indicates the version of the PCB
Board S/N	######	Indicates the card serial number
Software Rev	##.##	Indicates the software version
Rear Module	#	Describes the rear module installed with this card
	No Rear Module	The card does not detect a rear module
Rear Module Status	OK (Green)	The card is correctly installed with a supported rear module
	Incompatible Rear Module (Yellow)	A rear module is detected but it is not supported by the card. Refer to "**Supported Rear Modules**".
	No Rear Module (Red)	The card does not detect a valid connection to a rear module

Hardware Tab

The Hardware tab reports measured information about the physical card such as voltage, current, and available RAM. (**Figure 13**)

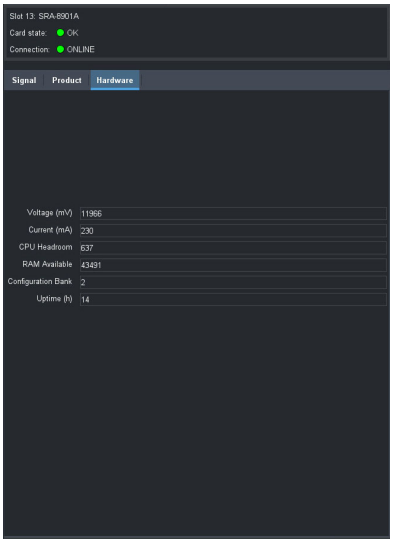


Figure 13 Example of the Hardware Tab

Table 5 outlines the read-only information displayed in the **Hardware** tab.

Table 5 Hardware Tab Items

Item	Parameters	Description
Voltage (mV)	#	Supply voltage
Current (mA)	#	Current consumption of card in milliamperes
CPU Headroom	#	Processing power available
RAM Available	#	On-board processing memory available
Configuration Bank	#	Storage count
Uptime (h)	#	Displays the number of hours since the last reboot of the card

Setup Tab

The **Setup** tab provides options for setting a reclocker rate, and muting unused outputs. (**Figure 14**)

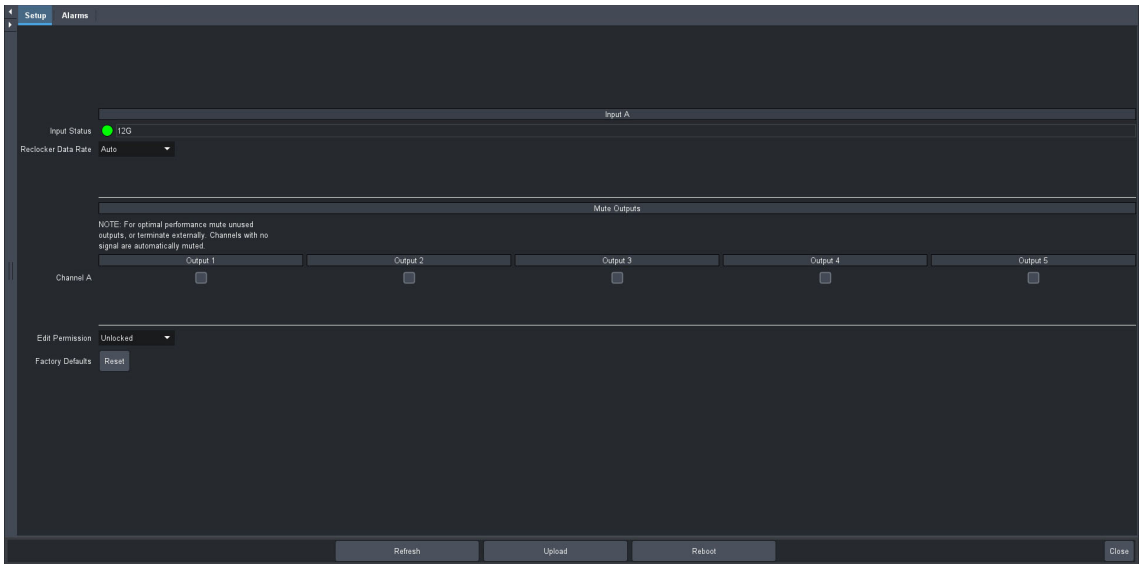


Figure 14 Example of the Setup Tab

Table 6 summarizes the **Setup** options available in DashBoard.

Table 6 Setup Tab Items

Item	Parameters	Description
Input A		
Input Status (read-only)	125M (MADI) (Green)	A MADI signal detected at 125Mbps is present
	270M (SD) (Green)	A valid 270Mbps input signal is present
	1.5G (HD) (Green)	A valid 1.485Gbps input signal is present
	3G (Green)	A valid 2.97Gbps input signal is present
	6G (Green)	A valid 5.94Gbps input signal is present
	12G (Green)	A valid 11.88Gbps input signal is present
Input Status (read-only)	Signal Not Locked (Green)	An input signal is present, but not locked. The Alarms > Invalid Signal alarm is disabled.
	Signal Not Locked (Red)	An input signal is present, but not locked
	No signal (Green)	A valid input signal is not present, but the Alarms > Invalid Signal alarm is disabled
	No signal (Red)	A valid signal is not present

Table 6 Setup Tab Items (Continued)

Item	Parameters	Description
Reclocker Data Rate[a]	Auto*	Card automatically detects the incoming data rate
	125M (MADI)	Reclocker is set to 125Mbps
	270M (SD)	Reclocker is set to 270Mbps
	1.5G (HD)	Reclocker is set to 1.485Gbps
	3G	Reclocker is set to 2.97Gbps
	6G	Reclocker is set to 5.94Gbps
	12G	Reclocker is set to 11.88Gbps
Mute Outputs		
Output #	Selected	Mutes the specified output for the channel. It is recommended to terminate or mute unused outputs.
	Cleared*	The output is not muted.
Edit Permission	Unlocked*	All configurable menu options are editable
	Locked	All configurable menu options, except this one, are locked and are read-only
Factory Defaults	Reset	Resets all editable parameters to the factory default values

a. When using MADI signals, you must set the Reclocker Data Rate to 125M (MADI) and not Auto.

Alarms Tab

The **Alarms** tab enables you to specify whether to monitor the input and/or output. **Table 7** summarizes the **Alarms** options available in DashBoard.

Table 7 Alarms Tab Items

Item	Parameters	Description
Input A		
Invalid Signal	Selected*	The Status field in the Signal tab reports the loss of the input as an error/alarm
	Cleared	The Status field in the Signal tab reports the loss of the input as information only (status indicator does not report an alarm condition)
Channel A		
Invalid Signal	Selected*	The Signal > Output Status area reports the detected invalid input as an error/alarm
	Cleared	The Signal > Output Status area reports if an invalid input is detected, but as information only (the status indicator does not report an alarm condition)

Technical Specifications

This chapter includes the technical specifications for the SRA-8901A.

✶ Specifications are subject to change without notice.

Supported Video Formats

Table 8 Technical Specifications — Supported Video Formats

Video Format
SD Formats
480i 59.94Hz
576i 50Hz
HD Formats
720p 50Hz
720p 59.94Hz
1080i 50Hz
1080i 59.94Hz
1080p 23.98Hz
1080p 24Hz
1080p 25Hz
1080p 29.97Hz
1080p 30Hz
1080p 50Hz
1080p 59.94Hz
1080p 60Hz
UHD Formats
2160p 23.98Hz
2160p 24Hz
2160p 25Hz
2160p 29.97Hz
2160p 30Hz
2160p 50Hz
2160p 59.94Hz
2160p 60Hz

SDI Inputs Specifications

Table 9 Technical Specifications — SDI Inputs

Item	Specifications	
Number of Inputs	8322AR-338	2
	8322AR-339	1
Connector Type	HD-BNC	
Data Rates and SMPTE Standards Accommodated	19.39Mbps, 38.78Mbps, SMPTE 310 MADI, AES10-2008 270Mbps, 525/625 Component, SMPTE 259M 270Mbps, DVB-ASI 1.485Gbps Component, SMPTE 292M 2.97Gbps Component, SMPTE 424M 5.94Gbps Component, SMPTE 2081 11.88Gbps Component, SMPTE 2082	
Impedance	75ohm	
Equalization (Belden 1694A cable)	>430m (1410ft) @ 270Mbps	
	>200m (656ft) @ 1.485Gbps	
	>150m (492ft) @ 2.97Gbps	
	>80m (262ft) @ 5.94Gbps	
	>60m (197ft) @ 11.88Gbps	
Return Loss (typical)	>15dB to 1.485Gbps	
	>10dB to 2.97Gbps	
	>7dB to 5.94Gbps	
	>4dB to 11.88Gbps	

SDI Outputs Specifications

✶ All outputs are non-inverting. It is recommended to mute unused outputs via the Mute Outputs options available in the Setup tab of DashBoard. Or you may choose to terminate the unused outputs.

Table 10 Technical Specifications — SDI Outputs

Item	Specifications	
Number of Outputs[a]	8322AR-338	10
	8322AR-339	5
Connector Type	HD-BNC	
Impedance	75ohm	
Return Loss (typical)	>15dB to 1.485Gbps	
	>10dB to 2.97Gbps	
	>7dB to 5.94Gbps	
	>4dB to 11.88Gbps	

Table 10 Technical Specifications — SDI Outputs (Continued)

Item	Specifications	
Rise & Fall Times	MADI:	1.0-3.0nS, <0.5nS difference
	270Mbps:	0.4-1.5nS, <0.5nS difference
	1.485Gbps:	<270ps, <100ps difference
	2.97Gbps:	<135ps, <50ps difference
	5.94Gbps:	<80ps, <30ps difference
	11.88Gbps:	<45ps, <18ps difference
Jitter	MADI:	<2.0UI (<4.0nS)
	270Mbps:	<0.2UI, jitter measured 10Hz-1kHz
	1.485Gbps:	<1.0UI jitter measured 10Hz-100kHz, <0.2UI above 100kHz
	2.97Gbps:	<1.0UI jitter measured 10Hz-100kHz, <0.3UI above 100kHz
	5.94Gbps:	<2.0UI jitter measured 10Hz-100kHz, <0.3UI above 100kHz, band limit @594MHz
	11.88Gbps:	<2.0UI jitter measured 10Hz-100kHz, <0.3UI above 100kHz, band limit @1188MHz
Signal Level	800mV ±10%	
DC Offset	0V ±50mV (MADI is 400mV +/- 10%)	
Overshoot	<10%	

a. All outputs are non-inverting when using DVB-ASI and 270Mbps signals.

Environment

Table 11 Technical Specifications — Environment

Item	Specifications
Maximum Ambient Temperature	40°C (104°F)

Power

Table 12 Technical Specifications — Power

Item	Specifications
Maximum Power Consumption	5.6W

Service Information

This chapter provides information on the warranty and repair policy for your SRA-8901A.

Troubleshooting Checklist

Routine maintenance to this openGear product is not required. In the event of problems with your card, the following basic troubleshooting checklist may help identify the source of the problem. If the frame still does not appear to be working properly after checking all possible causes, please contact your openGear products distributor, or the Technical Support department at the numbers listed in "**Contacting Technical Support**".

1. **Visual Review** — Performing a quick visual check may reveal many problems, such as connectors not properly seated or loose cables. Check the card, the frame, and any associated peripheral equipment for signs of trouble.
2. **Power Check** — Verify the power indicator LED on the distribution frame front panel for the presence of power. If the power LED is not illuminated, verify that the power cable is connected to a power source and that power is available at the power main. Confirm that the power supplies are fully seated in their slots. If the power LED is still not illuminated, replace the power supply with one that is verified to work.
3. **Input Signal Status** — Verify that source equipment is operating correctly and that a valid signal is being supplied.
4. **Output Signal Path** — Verify that destination equipment is operating correctly and receiving a valid signal.
5. **Card Exchange** — Exchanging a suspect card with a card that is known to be working correctly is an efficient method for localizing problems to individual cards.

Bootload Button

In the unlikely event of a complete card failure, you may be instructed by a Ross Technical Support specialist to perform a complete software reload on the card.

To perform a complete software reload on the card

1. Eject the card from the openGear frame.
2. Press and hold the **Bootload** button, while re-inserting the card into the frame.
3. Release the button.
   - The **PWR** LED will flash green while the card is waiting for a new software load.
   - If a new software load is not sent to the card within 60 seconds, the card will attempt to restart with its last operational software load.
   - Contact Ross Technical Support for the latest software load for your card.

Warranty and Repair Policy

The SRA-8901A is warranted to be free of any defect with respect to performance, quality, reliability, and workmanship for a period of FIVE (5) years from the date of shipment from our factory. In the event that your SRA-8901A proves to be defective in any way during this warranty period, Ross Video Limited reserves the right to repair or replace this piece of equipment with a unit of equal or superior performance characteristics.

Should you find that this SRA-8901A has failed after your warranty period has expired, we will repair your defective product should suitable replacement components be available. You, the owner, will

bear any labor and/or part costs incurred in the repair or refurbishment of said equipment beyond the FIVE (5) year warranty period.

In no event shall Ross Video Limited be liable for direct, indirect, special, incidental, or consequential damages (including loss of profits) incurred by the use of this product. Implied warranties are expressly limited to the duration of this warranty.

This User Manual provides all pertinent information for the safe installation and operation of your openGear Product. Ross Video policy dictates that all repairs to the SRA-8901A are to be conducted only by an authorized Ross Video Limited factory representative. Therefore, any unauthorized attempt to repair this product, by anyone other than an authorized Ross Video Limited factory representative, will automatically void the warranty. Please contact Ross Video Technical Support for more information.

In Case of Problems

Should any problem arise with your SRA-8901A, please contact the Ross Video Technical Support Department. (Contact information is supplied at the end of this publication.)

A Return Material Authorization number (RMA) will be issued to you, as well as specific shipping instructions, should you wish our factory to repair your SRA-8901A. If required, a temporary replacement frame will be made available at a nominal charge. Any shipping costs incurred will be the responsibility of you, the customer. All products shipped to you from Ross Video Limited will be shipped collect.

The Ross Video Technical Support Department will continue to provide advice on any product manufactured by Ross Video Limited, beyond the warranty period without charge, for the life of the equipment.

Software Licenses

This chapter provides third-party software license information for your SRA-8901A. This product includes multiple software components which are individually licensed under one or more of the following licenses included in this chapter.

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zlib

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