

DENSITÉ series

SDA-1402 ASI DA with EQ and Reclocking Guide to Installation and Operation

M826-2000-100

28 Feb 2011



Miranda

Technologies Inc.

3499 Douglas-B.-Floreani
St-Laurent, Québec, Canada H4S 2C6

Tel. 514-333-1772

Fax. 514-333-9828

www.miranda.com

© 2011 Miranda Technologies Inc.

Electromagnetic Compatibility



This equipment has been tested for verification of compliance with FCC Part 15, Subpart B requirements for Class A digital devices.

NOTE: 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.



This equipment has been tested and found to comply with the requirements of the EMC directive 2004/108/CE:

- EN 55022 Class A radiated and conducted emissions
- EN 55024
- EN 61000-3-2 Harmonic current emission limits
- EN 61000-3-3 Limitation of voltage changes, voltage fluctuations and flicker
- EN 61000-4-2 Electrostatic discharge immunity
- EN 61000-4-5 Surge transient immunity
- EN 61000-4-11 Voltage-dips, short-interruptions and voltage variations immunity

How to contact us:

For technical assistance, please contact the Miranda Technical support centre nearest you:

Americas

Telephone:

+1-800-224-7882

e-mail:

techsupp@miranda.com

Asia

Telephone:

+852-2539-6987

e-mail:

asiatech@miranda.com

Europe, Middle East, Africa, UK

Telephone:

+44 (0) 1491 820222

e-mail:

eurotech@miranda.com

China

Telephone:

+86-10-5873-1814

e-mail:

asiatech@miranda.com

France (only)

Telephone:

+33 (0) 1 55 86 87 88

e-mail:

eurotech@miranda.com

Visit our web site at www.miranda.com

Table of Contents

1	SDA-1402 ASI DA with EQ and Reclocking.....	1
1.1	Introduction	1
1.2	Features	1
1.3	Block Diagram.....	1
1.4	Front Card-edge Interface.....	2
2	Installation	3
2.1	Installation of Rear Connector Panels	3
2.2	Card Installation	4
2.3	Installing Densité-2 Cards and Rear Modules in a Densité-3 Frame	4
2.4	Signal Connections on Rear Connector Panels	6
2.5	Bypass Protection Relay.....	7
3	Operation	8
3.1	Control options.....	8
3.2	Card-Edge Status LED.....	8
3.3	Local control using the Densité frame control panel.....	8
3.3.1	Overview	8
3.3.2	Menu for local control.....	9
3.4	Remote control using iControl.....	9
3.4.1	The iControl graphic interface window.....	10
3.4.2	The <i>Factory</i> button	11
3.4.3	The <i>Status</i> tab.....	11
3.4.4	The <i>Reclocker</i> tab.....	11
3.4.5	The <i>Alarms</i> tab.....	12
3.4.6	The <i>Info</i> tab	14
4	Specifications	16
	ANNEX 1 – SDA-1402 Card Menu	17

GUIDE TO INSTALLATION AND OPERATION

1 SDA-1402 ASI DA with EQ and Reclocking

1.1 Introduction

The SDA-1402 is an ASI DA that provides up to 9 reclocked outputs with automatic equalization for up to 350 meters of cable (Belden 1694A). The amplifier also offers signal presence detection and remote reporting. The SDA-1402 includes reclocking, offering an extra level of signal integrity in long cable length applications. Rear panels with 4, 7 or 9 outputs are available to optimize frame real estate utilization.

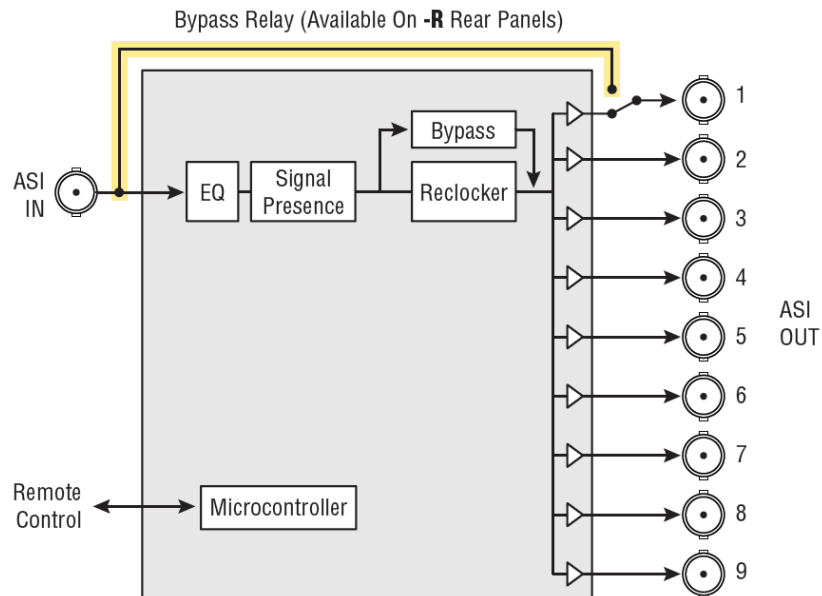
Additional protection for critical applications is provided by an optional protection bypass relay available on the 1x4, 1x7 and 1x9 rear panels.

The SDA-1402 supports DVB-ASI formats and can drive up to 9 DVB-ASI outputs. The SDA-1402 also supports other compressed formats such as SMPTE-310M/DVB-SSI.

1.2 Features

- One DVI-ASI input
- Up to 9 DVB-ASI outputs
- Maximum flexibility offered by 3 operation modes: single 1x4, single 1x7 and single 1x9
- Automatic format detection and cable equalization
- Optional bypass relay protection
- SDI, DVB-ASI and SMPTE-310M/DVB-SSI formats supported
- Bit rate up to 270 Mbps; reclocker operates only on 270 Mbps signals
- Status LED and alarm reporting

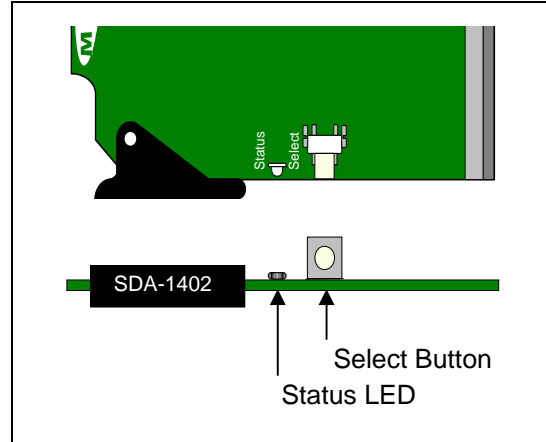
1.3 Block Diagram



1.4 Front Card-edge Interface

The front card-edge of the SDA-1402 incorporates two elements:

- Status LED (see section 3.2)
- Select Button (see section 3.3)



2 Installation

2.1 Installation of Rear Connector Panels

Miranda Densité-series cards are each associated with a rear connector panel, which must be installed in the Densité frame before the card can be inserted.

The SDA-1402 card is sized to fit into Miranda's Densité-2 frame. Four different rear connector panels are available to fit the Densité 2 frame:

- SDA-1402-SRP 1 input and 4 outputs
- SDA-1402-SRP-R 1 input and 4 outputs with bypass relay
- SDA-1402-DRP 1 input and 9 outputs
- SDA-1402-DRP-R 1 input and 9 outputs with bypass relay

With the use of an available adapter (Densité 3 – EXT A), the SDA-1402 can also be installed in a Densité-3 frame (see section 2.3 below). Two rear connector panels for this frame are available for the SDA-1402:

- SDA-1402-3SRP 1 input and 7 outputs
- SDA-1402-3SRP-R 1 input and 7 outputs with bypass relay

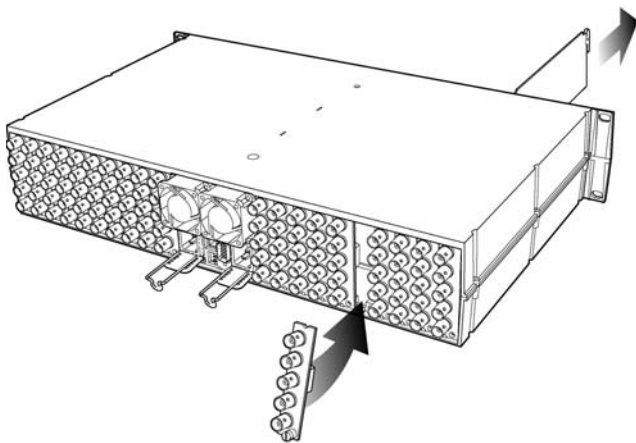
The four Densité-2 rear panels can also be used in a Densité-3 frame, with the addition of available adapters:

- SDA-1402-SRP + DENSITE SRP-3RU 1 input and 4 outputs
- SDA-1402-SRP-R + DENSITE SRP-3RU 1 input and 4 outputs with bypass relay
- SDA-1402-DRP + DENSITE DRP-3RU 1 input and 9 outputs
- SDA-1402-DRP-R + DENSITE DRP-3RU 1 input and 9 outputs with bypass relay

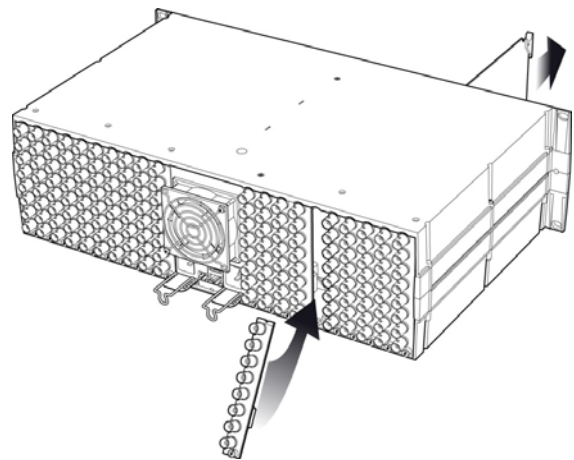
All cards and rear panels can be installed with the frame power on. The card has connectors which plug into a mid-frame mother board for distribution of power and for connection to the controller card, and a second connector which plugs directly into the rear connector panel for input and output.

The rear connector panel must be installed with the card out of the frame.

- To remove an existing 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.



Densité-2 frame – rear panel installation



Densité-3 frame – rear panel installation

To install the connector panel:

(NOTE - if you are installing a Densité-2 rear panel plus adapter in a Densité-3 frame, please go to section 2.3)

1. If a card is installed in the slot whose rear panel is being changed, remove it as described above.
2. Remove the existing panel (either blank or belonging to an existing card that is being changed) by releasing the captive screw(s) at the bottom.
3. Position the new panel and secure it in place with the captive screw(s) at the bottom.

2.2 Card Installation

Once a matching rear connector panel has been installed, install the SDA-1402 card as follows:

1. Open the front panel of the frame.
2. Slide the SDA-1402 card into the slot and push gently on the handle to seat the connectors.

If the card is used with a double-width rear panel (DRP), it should be inserted into the right-hand slot. Inserting the card into the wrong slot will not damage the card, and will be flagged by the on-card status LED flashing red to indicate that there is no connection to the rear panel.

3. Close the front panel of the frame.

2.3 Installing Densité-2 Cards and Rear Modules in a Densité-3 Frame

The Densité-3 frame supports many Miranda Densité-2 series cards, including the SDA-1402. Should you wish to install the SDA-1402 card in your Densité-3 frame, you will need an adapter for the card. You may use one of the two 3 RU rear panels that are available for the SDA-1402 (3SRP), or you may use one of the two 2 RU rear panels. In the latter case, an adapter will also be required for the rear panel, as described above. These adapters extend the height of the Densité-2 devices so that they will fit into the slots of the 3 RU Densité-3 frame.

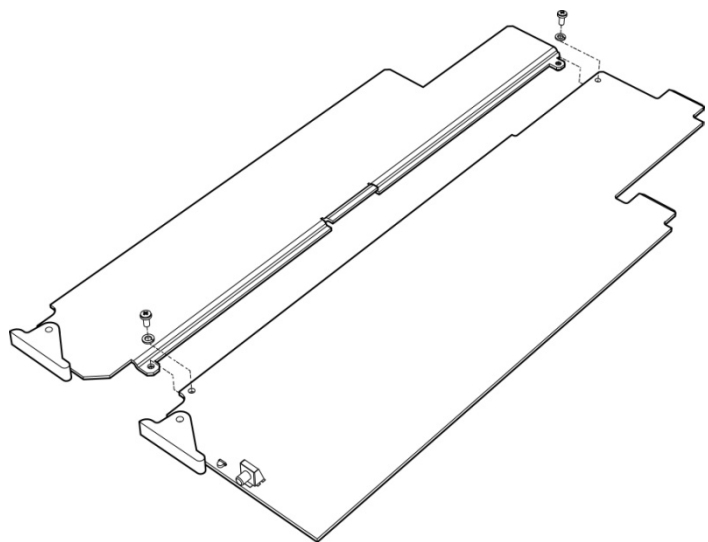
Card adapters:

There are 3 different types of adapters available, depending on the Densité 2 card geometry, so be sure to order the adapter designed to fit the SDA-1402 card.

Densité 3 – EXT A

Install the adapter on the SDA-1402 as follows:

1. Fit the top edge of the card into the holding slot along the bottom edge of the adapter.
2. Align the holes in the top of the card with the holes on the adapter, and secure them together with the two provided screws and lock washers, as shown in the figure.



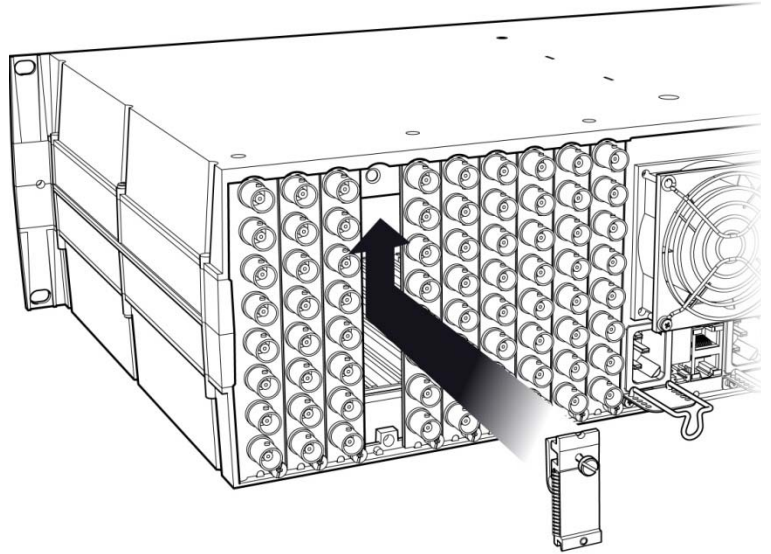
Rear adapters:

3-RU rear module adapters are available for Single and Double Densité-2 rear panels:

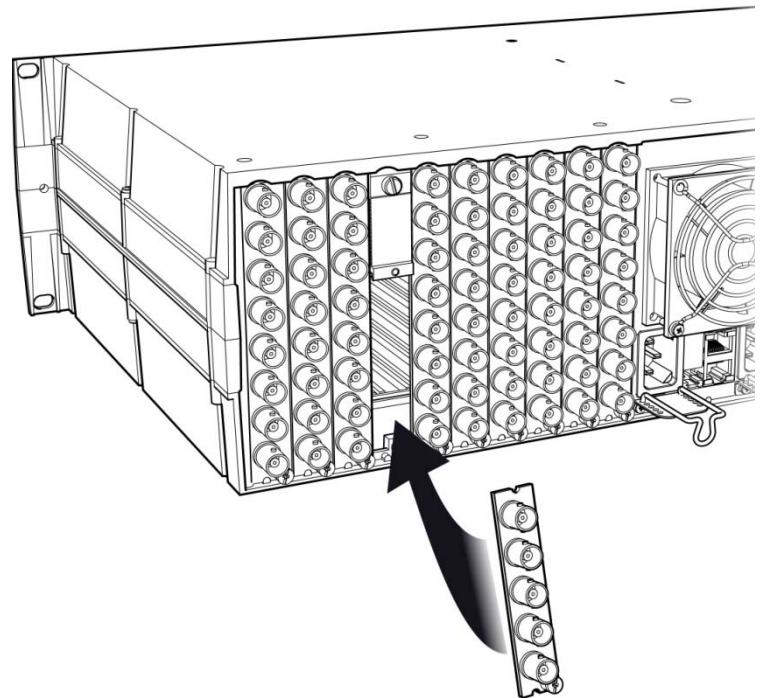
- DENSITE DRP-3RU
- DENSITE SRP-3RU

Install these as follows:

1. Position the adapter at the top of the empty slot(s) on the rear of the frame.
2. Use the captive screw in the adapter to fasten it securely in position.



3. Slip the top of the 2RU rear panel into the slot at the bottom of the adapter, and secure it to the frame using the captive screw at the bottom of the panel.



2.4 Signal Connections on Rear Connector Panels

Six rear panels are available for the SDA-1402. Panels are available for the Densité 2RU frame, and also for the Densité 3RU frame. The 3RU versions are identified by the number 3 in the size designator portion of the part number, e.g.

- SDA-1402-SRP is a 2RU version
- SDA-1402-3SRP is a 3RU version

See Figure 2.1 (2RU panels) and Figure 2.2 (3RU panels).



Figure 2.1 SDA-1402 2RU rear panels

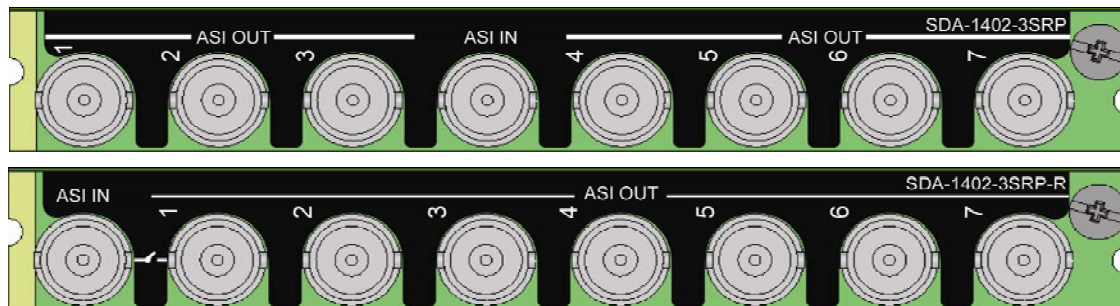


Figure 2.2 SDA-1402 3RU rear panels:

- Top: SDA-1402-3SRP
Bottom: SDA-1402-3SRP-R

Panels denoted by the suffix –R incorporate a bypass protection relay, as described in the next section.

2RU panels are available in a 1x4 configuration (single-width rear) and a 1x9 configuration (double-width rear)

3RU panels are available in a 1x7 configuration (single-width rear)

- 2RU panels can be mounted in the 3RU frame if required, using mounting adapter hardware as described in Section 2.3.

The SDA-1402 detects the type of rear that is installed, and configures itself accordingly.

In all cases, the rear panel includes:

- ASI IN – one input on a BNC connector
- ASI OUT – the appropriate number of outputs (4, 7 or 9) on BNC connectors

2.5 Bypass Protection Relay

A bypass protection relay is mounted on the SDA-1402-SRP-R, SDA-1402-DRP-R and SDA-1402-3SRP-R rear panels.

The 1st output BNC is tied to the input via the non-latching relay which receives its power from the SDA-1402 card. The relay will trip upon detection of loss of card power, either through supply failure or removal of the card from the Densité frame.

The relay enables the following functions

- Bypass the electronic circuit
- Protect the output when power is lost
- Protect the output when card is removed from the frame

3 Operation

3.1 Control options

The SDA-1402 can be controlled in two different ways:

- The local control panel and its push-buttons can be used to move through a menu of parameters and to adjust parameter values (see section 3.3)
- Miranda’s iControl system can be used to access the card’s operating parameters from a remote computer, using a convenient graphical user interface (GUI). (see section 3.4)

3.2 Card-Edge Status LED

The status monitor LED is located on the front card-edge of the SDA-1402, and is visible through the front access door of the DENSITÉ frame. This multi-color LED indicates the status of the SDA-1402 by color, and by flashing/steady illumination.

The chart shows how the various error conditions that can be flagged on the SDA-1402 affect the LED status.

- If a cell is gray, the error condition cannot cause the LED to assume that status
- If more than one LED status is possible for a particular error condition, the status is configurable. See Section 3.4.5 for details.
- The factory default status is shown by a ✪

The LED will always show the most severe detected error status that it is configured to display, and in the chart error severity increases from left to right, with green representing no error/disabled, and flashing red the most severe error.

Error Condition	LED Status			
	Green	Yellow	Red	Flashing Red
No errors	✪			
No signal			✪	
No lock (see note*)		✪		
No rear				✪

* Note: in this case, ASI/SDI is not detected, but a DVB-SSI signal may be present

If the LED is Flashing Yellow, it means that the card is selected for local control using the Densité frame’s control panel. See Section 3.3 for details.

3.3 Local control using the Densité frame control panel

3.3.1 Overview

Push the SELECT button on the SDA-1402 card edge (see Section 1.4) to assign the local control panel to operate the SDA-1402. Use the control panel buttons to navigate through the menu, as described below.

All of the cards installed in a Densité frame are connected to the frame’s controller card, which handles all interaction between the cards and the outside world. There are no operating controls located on the cards themselves. The controller supports remote operation via its Ethernet ports, and local operation using its integrated control panel.

The local control panel is fastened to the controller card by a hinged connector, and when installed is located in the front center of the frame, positioned in front of the power supplies. The panel consists of a display unit capable of displaying two lines of text, each 16 characters in length, and five pushbuttons.

The panel is assigned to operate any card in the frame by pushing the SELECT button on the front edge of that card.

- Pushing the CONTROLLER button on the control panel selects the Controller card itself.
- The STATUS LED on the selected card flashes yellow.

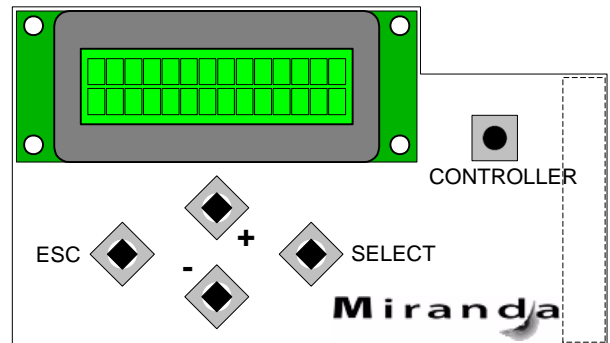


Figure 3.1 Densité Frame local control panel

The local control panel displays a menu that can be navigated using the four pushbuttons located beneath the display. The functionality of the pushbuttons is as follows:

[+] [-] Used for menu navigation and value modification

[SELECT] Gives access to the next menu level. When a parameter value is shown, 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.

If no controls are operated for 30 seconds, the controller reverts to its normal standby status, and the selected card's STATUS LED reverts to its normal operating mode.

3.3.2 Menu for local control

The SDA-1402 has operating parameters which may be adjusted locally at the controller card interface.

- Press the SELECT button on the SDA-1402 front card edge to assign the Densité frame's local control panel to the SDA-1402
- Use the keys on the local control panel to step through the displayed menu to configure and adjust the SDA-1402

The complete menu structure is shown in the Annex to this document, beginning on page 17.

3.4 Remote control using iControl

The operation of the SDA-1402 may be controlled using Miranda's iControl system.

- This manual describes the control panels associated with the SDA-1402 and their use.
- Please consult the iControl User's Guide for information about setting up and operating iControl.

In iControl Navigator or iControl Websites, double-click on the SDA-1402 icon to open the control panel.

3.4.1 The iControl graphic interface window

The basic window structure for the SDA-1402 is shown in figure 3.2. The window identification line gives the card type (*SDA-1402*) and the slot number where the card installed in its Densité frame. On the left is a card status icon ❶ showing the overall alarm status. Its color in response to detected alarms is programmable; see section 3.4.5 on page 12.

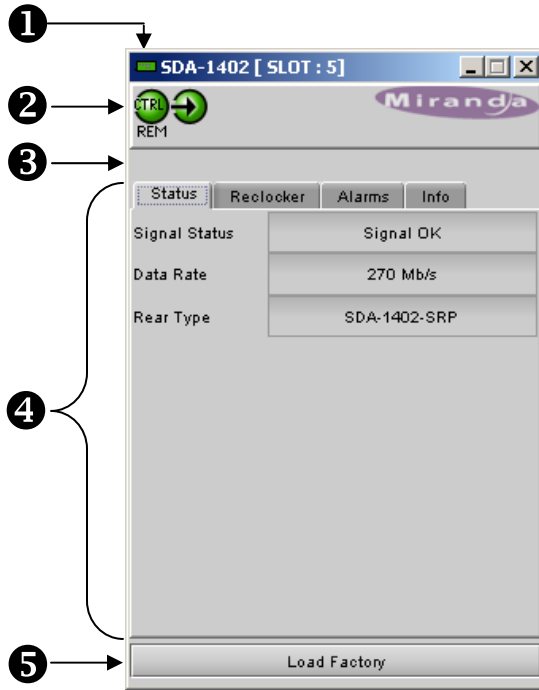


Figure 3.2 SDA-1402 iControl graphic interface window

The two Status Icons ❷ show the status of specific functions:

Icon 1 – Control status

- A: Green - Remote Control via iControl
- B: Yellow - Local control using the menu

Icon 2 – Input status

- A: Green – Signal OK [data rate reported in message area]
- B: Red – No signal

When an icon shows an error state, a message describing the error in more detail will appear beneath the icons in the message area ❸.

- If there are multiple errors, the error messages cycle so all can be seen
- The icon whose status or error message is shown is highlighted with a mauve background

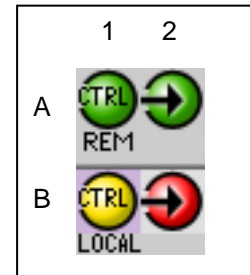


Figure 3.3 Status icons


In all cases, mousing over an icon will cause a more detailed description of its current status to appear in the message area. Error message cycling will resume when the cursor is no longer over an icon.

The main section of the panel ❹ contains four tabs which give access to the various operating and status monitoring features of the SDA-1402.

- Click on a tab to access its contents.

Each of the four tabs is described individually – see sections 3.4.3 to 3.4.6.

3.4.2 The **Factory** button

Click the *Load Factory* button  at the bottom of the window to reset all parameters on this SDA-1402 card to factory-defined default values.

3.4.3 The **Status** tab

The SDA-1402 can process the following signal formats:

- SMPTE 259M-C (270Mbps)
- DVB-ASI
- SMPTE-310M/DVB-SSI

This panel shows the status of the input signal and interface.

- Signal Status: Signal OK, or an error message
- When reclocker is ON, Signal OK indicates a 270 Mbps signal is present
 - When reclocker is Bypassed, Signal OK indicates a signal in the range 20 to 270 Mbps is present
- Data Rate: The data rate detected at the input.
- Only 270 Mbps with reclocker ON is specifically detected. In all other cases this window will show N/A.
- Rear type: Shows the type of rear panel installed in the Densité frame for this SDA-1402.

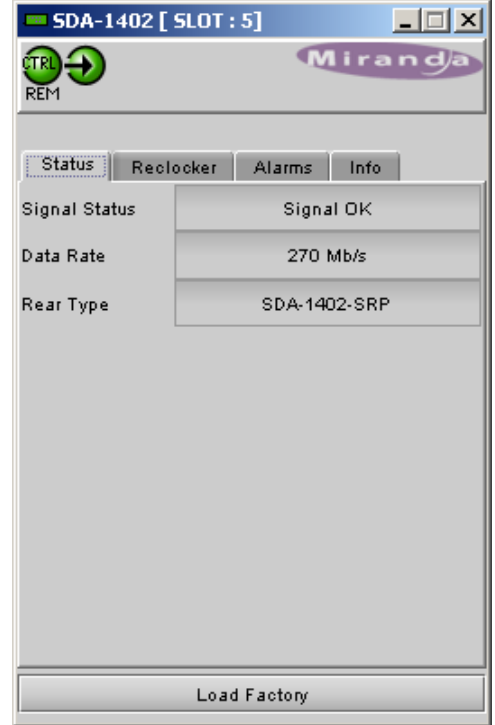


Figure 3.4 Status panel

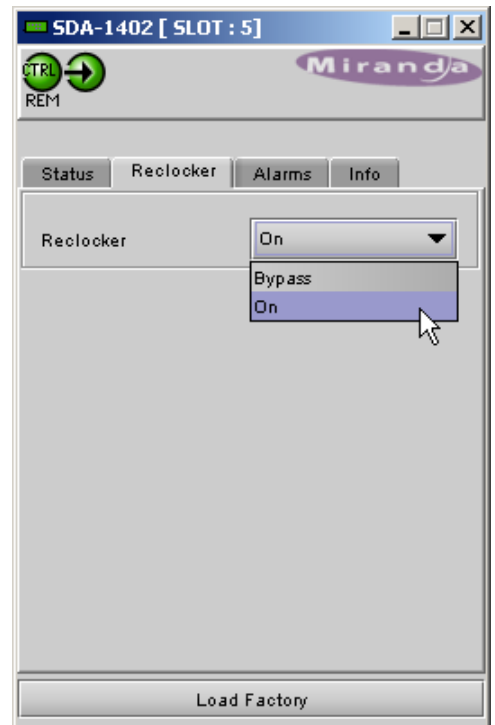
3.4.4 The **Reclocker** tab

Use the pulldown in this panel to set the SDA-1402's reclocker operating mode for DVB-ASI signals at 270 Mbps:

- Bypass – the input clock timing is passed through to the output
- On – the data stream is reclocked as it passes through the SDA-1402

Reclocking is automatically bypassed for SMPTE 310M/DVI-SSI signals.

The card automatically provides equalization for up to 350 m of Belden 1694A cable at 270 Mbps.



3.4.5 The Alarms tab

This panel allows the alarm reporting of the SDA-1402 to be configured. The *Alarm Configuration* panel opens in a new window when the *Alarm Config* button is clicked, and can be resized if needed.

The Alarm Configuration panel is organized in columns.

Status/Name

This contains an expandable tree listing all the alarms reported by this SDA-1402 card.

- Each alarm name includes an icon that shows its current status

The **Overall alarm** and **GSM contribution** columns contain pulldown lists that allow the level of contribution of each individual alarm to the alarm named in the column heading to be set.

- Click on the icon to see the pulldown showing the available levels

Overall Alarm

This column allows configuration of the contribution of each individual alarm to the Overall Alarm associated with this card. The Overall Alarm is shown in the upper left corner of the iControl panel, and also appears at the bottom of the Status/Name column.

GSM Contribution

This column allows configuration of the contribution of each individual alarm to the GSM Alarm Status associated with this card. GSM is a dynamic register of all iControl system alarms, and is also an alarm provider for external applications. The possible values for this contribution are related to the Overall alarm contribution:

- If the Overall alarm contribution is selected as Disabled, the GSM alarm contribution can be set to any available value
- If the Overall alarm contribution is selected as any level other than disabled, the GSM contribution is forced to follow the Overall Alarm.

Figure 3.5 Reclocker tab



Figure 3.6 Alarms tab

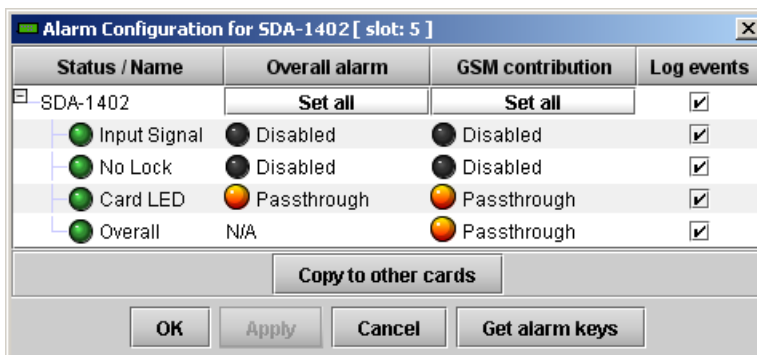







Figure 3.7 Alarm Configuration panel

Levels associated with these alarms:

The pulldown lists may contain some or all of the following options:

 Disabled	The alarm makes no contribution (black icon)
 Minor	The alarm is of minor importance (yellow icon)
 Major	The alarm is of major importance (orange icon)
 Critical	The alarm is of critical importance (red icon)
 Passthrough	The alarm exists but has no effect (used for text and composite alarms)

Shortcut: if you click on one of the “Set All” boxes in the Overall Alarm or GSM Contribution columns, you will open a pulldown that lets you assign a level to all alarms in that section of the column simultaneously.

Log Events

iControl maintains a log of alarm events associated with the card. The log is useful for troubleshooting and identifying event sequences. Click in the checkbox to enable logging of alarm events for each individual alarm.

At the bottom of the window are several other controls

Copy to other cards

Click this button to open a panel that allows the alarm configuration set for this card to be copied into another SDA-1402 card.

Get alarm keys

Click this button to open a save dialog where you can save a file containing a list of all alarms on this card and their current values, along with an Alarm Key for each. The alarm keys are useful for system integration and troubleshooting.

- The file is saved in .csv format

OK, Apply, Cancel

- **OK** accepts the settings and closes the window once the card confirms that there are no errors.
- **Apply** accepts the settings, but leaves the window open
- **Cancel** closes the window without applying any changes, and leaves the previous settings intact.

3.4.6 The Info tab

When the SDA-1402 is included in an iControl environment, certain information about the card should be available to the iControl system. The user can enter labels and comments that will make this card easy to identify in a complex setup. This information is entered via the Info control panel. This panel also shows other information about the card.

- Label: type the label that appear for this SDA-1402 when it appears in iControl applications
- Short Label type the short-form label that iControl uses in some cases (8 characters)
- Source ID type a descriptive name for this SDA-1402
- Comments: type any desired text



Figure 3.8 Info tab

The remaining data boxes show manufacturing information about this card.

- Details...: Reports the Firmware version, service version, and panel version for this card
- Advanced...: Shows the Miranda LongID for this card. The Miranda LongID is the address of this SDA-1402 in the iControl network.



Figure 3.9 Details window

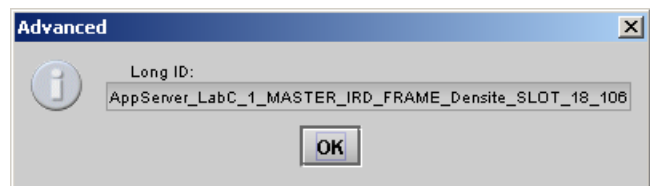


Figure 3.10 Advanced window

- Remote System Administration – opens the Joining Locators data box, which lists remote lookup services to which this SDA-1402 is registered.

Add: Force the iControl service for this SDA-1402 to register itself on a user-specified Jini lookup service, using the following syntax in the *Input* data box:

jini://<ip_address>

where <ip_address> is the ip address of the server running the lookup service, e.g.:

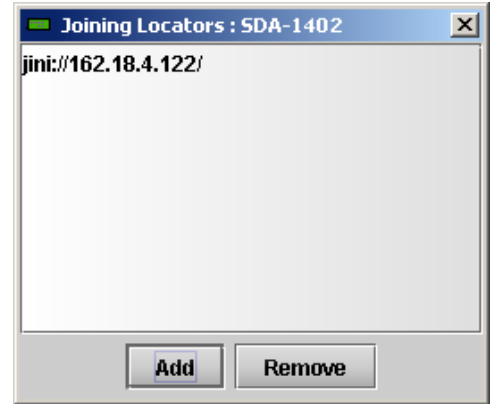
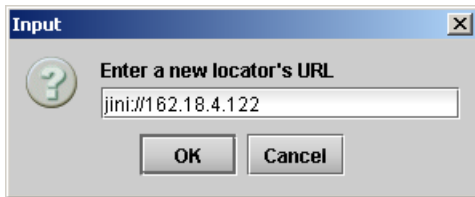


Figure 3.11 Joining Locators window

Remove: select one of the services listed in the window by clicking on it, and click *Remove* to delete it from the window.

4 Specifications

INPUT

Signal	SMPTE-259M-C (270Mbps) EN 50083-9 DVB-ASI (270Mbps) DVB-SSI/SMPTE-310M
Connector	BNC per IEC 60169-8 Amendment 2
Cable Length	350 m (1150') @ 270Mbps with Belden 1694A or equivalent
Return loss:	> 15 dB up to 270Mbps

OUTPUTS

Number of Outputs	Up to 9
Signal	SMPTE-259M-C (270Mbps) EN 50083-9 DVB-ASI (270Mbps) DVB-SSI/SMPTE-310M
Connector	BNC per IEC 60169-8 Amendment 2
Signal Level	800mV nominal
DC offset	0V +/-0.5V
Return Loss	> 15 dB up to 360Mbps
Jitter	< 0.2 UI p-p (Wideband)

PROCESSING PERFORMANCE

Signal path:	10 bits
Processing delay:	<10.5 ns (reclocking), <2.5 ns (bypass)
Power:	TBD

PHYSICAL SPECIFICATIONS

Height:	3" (76mm)
Length:	10" (254mm)
Connection:	5 (2RU single) or 7 (3RU single) or 10 (2RU double) BNC connectors

ANNEX 1 – SDA-1402 Card Menu

STATUS	<ul style="list-style-type: none"> — NO SIGNAL, NO LOCK, SIGNAL 270 Mbps, SIGNAL OK — NO REAR, SRP REAR, SRP-R REAR, DRP REAR, DRP-R REAR, 3SRP REAR, 3SRP-R REAR 	*						
RELOCKER	<ul style="list-style-type: none"> — <u>ON</u>, BYPASS 							
CONFIG ALARMS	<table border="0" style="width: 100%;"> <tr> <td style="vertical-align: top;"> <ul style="list-style-type: none"> — NO SIGNAL — NO LOCK </td> <td style="vertical-align: top;"> <ul style="list-style-type: none"> — ALARM LEVEL — ALARM REPORT </td> <td style="vertical-align: top;"> <ul style="list-style-type: none"> — [GREEN, YELLOW, <u>RED</u>, FLASH RED] — [<u>NONE</u>, GPI] </td> </tr> <tr> <td></td> <td style="vertical-align: top;"> <ul style="list-style-type: none"> — ALARM LEVEL — ALARM REPORT </td> <td style="vertical-align: top;"> <ul style="list-style-type: none"> — [GREEN, <u>YELLOW</u>, RED, FLASH RED] — [<u>NONE</u>, GPI] </td> </tr> </table>	<ul style="list-style-type: none"> — NO SIGNAL — NO LOCK 	<ul style="list-style-type: none"> — ALARM LEVEL — ALARM REPORT 	<ul style="list-style-type: none"> — [GREEN, YELLOW, <u>RED</u>, FLASH RED] — [<u>NONE</u>, GPI] 		<ul style="list-style-type: none"> — ALARM LEVEL — ALARM REPORT 	<ul style="list-style-type: none"> — [GREEN, <u>YELLOW</u>, RED, FLASH RED] — [<u>NONE</u>, GPI] 	**
<ul style="list-style-type: none"> — NO SIGNAL — NO LOCK 	<ul style="list-style-type: none"> — ALARM LEVEL — ALARM REPORT 	<ul style="list-style-type: none"> — [GREEN, YELLOW, <u>RED</u>, FLASH RED] — [<u>NONE</u>, GPI] 						
	<ul style="list-style-type: none"> — ALARM LEVEL — ALARM REPORT 	<ul style="list-style-type: none"> — [GREEN, <u>YELLOW</u>, RED, FLASH RED] — [<u>NONE</u>, GPI] 						
VERSION	<ul style="list-style-type: none"> — xxx 							
FACTORY DEFAULT	<ul style="list-style-type: none"> — [RESTORE] 							

Note:

- * SIGNAL OK is visible only when the DA is in a Reclocker bypass mode
- ** NO LOCK is visible only when the reclocker is ON.