Miranda

(DENSITÉ) SERIES

SDA-1102

DESCRIPTION

The SDA-1102 is a serial digital video distribution amplifier supporting a wide variety of compressed and uncompressed serial digital video signals. The SDA-1102 has one input, 9 amplified outputs, signal presence detection and remote reporting. The SDA-1102 provides automatic equalization for up to 350 meters (1148 ft) of Belden 1694A cable at 270Mbps. The SDA-1102 is a non-reclocked amplifier supporting any data rate up to 540 Mbps and is designed to be used in a *DENSITÉ* frame. A single (for 4 outputs) or double (for 9 outputs) rear connector panel is required.

This card operates with the MSB-1121 Monitoring Switching Bridge which allows the output of any module in the Densité frame to be monitored. Multiple MSB equipped frames may be cascaded to form a large monitoring bus, eliminating the need for dedicated monitoring routers.

FEATURES

- (1) 75 Ω isolated digital video input

- (9) 75 Ω digital video outputs

- Auto-detects 525 or 625-line format

- Compatible with DVB-SSI/SMPTE-310M (any rate), SMPTE-259M (143-360 Mbps) and SMPTE-344M (540 Mbps)

- Compatible with DVB-ASI (270 Mbps)

- Signal presence detection with remote reporting

- Automatic cable equalization

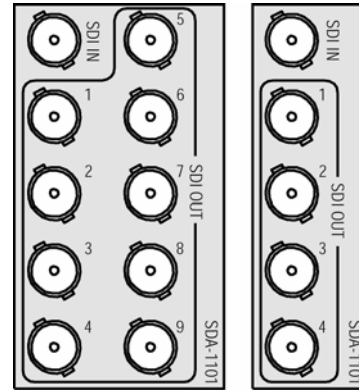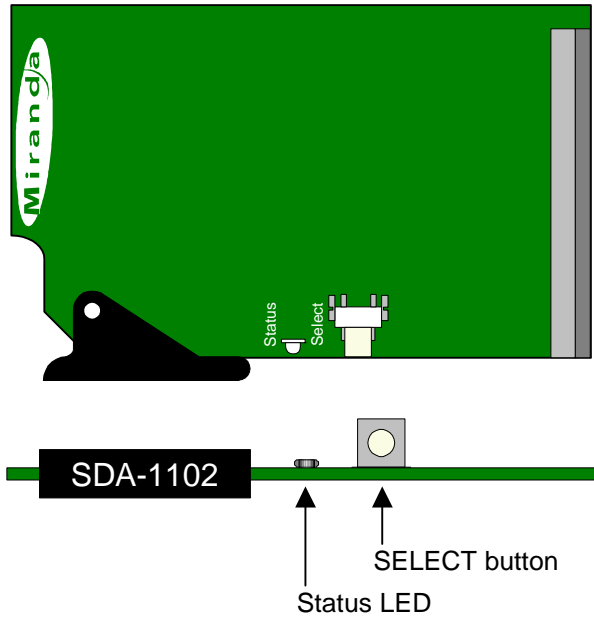- Provides output to Monitoring Switching Bridge option (MSB-1121)

FUNCTIONAL BLOCK DIAGRAM
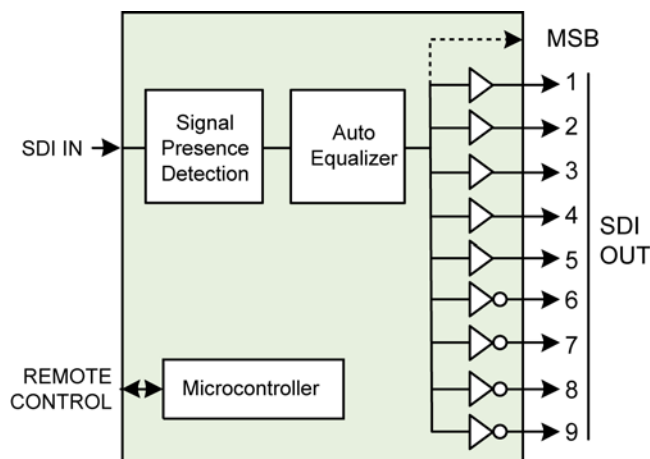
SPECIFICATIONS

INPUT
Signal:	SMPTE-259M (143, 177, 270, 360 Mbps) SMPTE-344M (540 Mbps) DVB-ASI (270Mbps) DVB-SSI/SMPTE-310M (Any rate)
Cable length:	350 m (1148') @ 270Mbps for Belden 1694A
Return loss:	> 15 dB up to 540Mbps

OUTPUTS (4 or 9)
Signal:	SMPTE-259M (143, 177, 270, 360 Mbps) SMPTE-344M (540 Mbps) DVB-SSI/SMPTE-310M (Any rate) DVB-ASI (270Mbps) for up to 5 outputs
Return loss:	> 15 dB for up to 540Mbps
Jitter (wideband):	< 0.2 UI p-p

PROCESSING PERFORMANCE
Signal path:	10 bits
Processing delay:	3 ns
Power:	1 W (single), 1.5 W (double)

SDA-1102 Rear Connector Panels

Double   Single

SELECT button

Status LED

SDA-1102

UNPACKING

Make sure the following items have been shipped with your SDA-1102. If any of the following items are missing, contact your distributor or Miranda Technologies Inc.

*   SDA-1102 Digital Video Distribution Amplifier
*   SDA-1102 rear panel (single or double)

INSTALLATION

The SDA-1102 must be mounted in a DENSITÉ frame. The installation includes both the SDA-1102 module, and the rear panel module. It is not necessary to switch off the power from these frames when installing or removing the SDA-1102.

Detailed instructions for installing cards and their associated rear panels in the Densité frame are given in the Densité Frame manual. Specific points to note for the SDA-1102 are the following.

Rear panel installation

The SDA-1102 has nine outputs, and making these available on BNC connectors at the rear of the frame requires a double-width rear panel. Should the intended use require a smaller number of outputs, a single-width rear panel with four BNC output connectors is also available.

When a double rear panel has been installed, the module must be installed in the right-most of the two slots covered by the panel in order to mate with the panel's connectors. If it is placed in the wrong slot, the front panel LED will flash red. Move the card to the other slot for correct operation. No damage will result to the card should this occur.

OPERATION

Overview

The SDA-1102 is equipped with an on-board LED status indicator, mounted on the front edge of the card so as to be visible from the front of the card frame, even when the frame door is closed. The functionality of this status monitor is described below.

The DENSITÉ frame incorporates a central controller card, located in the center of the frame, which is equipped with an LCD display. The card handles error reporting and remote control for all cards installed in the frame. The display shows the error status of any card in the frame whose SELECT button has been pushed.

The SDA-1102 is also equipped with the remote reporting and control capabilities of the DENSITÉ series. Fault reporting is carried out on a frame-wide basis. There is no individual rear-panel access to the fault and status reporting port of the SDA-1102. Interfacing to the outside world is handled by the frame's contoller card. The fault reporting protocol is standardized across the DENSITÉ series of modules.

Status Monitor LED

The status monitor LED is located on the front card-edge of the SDA-1102 module, and is visible through the front access door of the DENSITÉ frame.

This multi-color LED indicates module status by color, and by flashing/steady illumination, according to the following chart. The chart also indicates fault reporting for this card on the DENSITÉ frame's serial and GPI interfaces.

Status Indicator

	REPORT		COLOR (F=flashing)			
	SERIAL	GPI	G	Y	R	FR
No errors			✪			
No Input Signal	✪				✪	
No rear panel						✪

✪ : Factory default.

NOTE: A "Flashing Yellow" Status LED indicates that the SELECT button on the front panel has been pushed, and the card is being accessed via the communications protocol. The LED color assignments for the various error conditions can be reconfigured by the user.

User Interface

Push the SELECT button on the front edge of the SDA-1102 to see a report of the current error status on the DENSITÉ frame's controller card display. The SDA-1102 has three possible status messages, as indicated in the following figure:

STATUS —— OK

ERROR NO REAR

ERROR NO SIGNAL
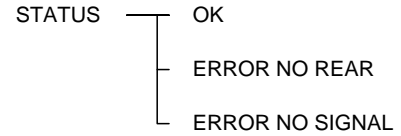
Pushing the SELECT button will cause the on-card STATUS LED to flash yellow, and the card identification and the current error message will be shown on the controller card's display. The STATUS LED will revert to it's normal state upon a second push of the button, or after a short delay otherwise.

Example :

SELECT button pushed when the status LED is green:

S	D	A	-	1	1	0	2								
S	T	A	T	U	S		O	K							

SELECT button pushed when there is no input signal connected to the rear panel and the LED is steady red:

S	D	A	-	1	1	0	2								
N	O		S	I	G	N	A	L							

WARRANTIES

Miranda's Warranty and Warranty Policy are explained in full detail in the Warranty Information Sheet.

COMPLIANCE

Radio Frequency Interference and Immunity

This unit generates, uses, and can radiate radio frequency energy. If the unit is not properly installed and used in accordance with this guide, it may cause interference with radio communications. Operation with non-certified peripheral devices is likely to result in interference with radio and television reception. This equipment has been tested and complies with the limits in accordance with the specifications in:

   -FCC Part 15, Subpart B;
   -CE EN50081-1:1992;
   -CE EN50082-1:1992.

CONTACT MIRANDA

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