

SDM-1151

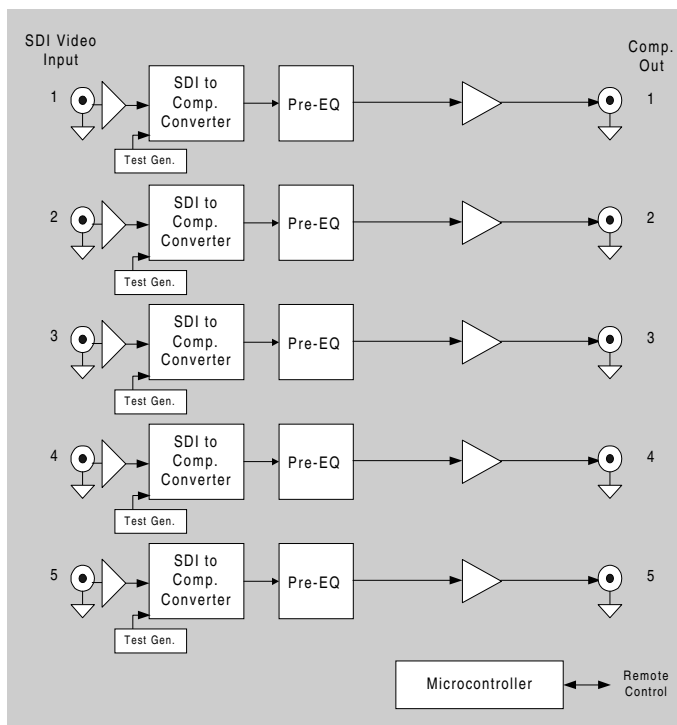
DESCRIPTION

The SDM-1151 provides 5 channels of SDI digital video to Composite analog video conversion. The SDM-1151 is a high-density, cost-effective solution for many monitoring applications; within a single DENSITÉ frame, up to 50 channels can be converted. Each channel includes a high-quality converter that can auto-detect 525 or 625 line formats. The Composite outputs can be pre-equalized for up to 100 m (330') to avoid chroma loss. A luminance-only mode is available for monochrome monitoring applications. Built-in test generators can provide a Color Bars signal to each Composite output. The SDM-1151 also provides input validity and error detection reporting. The SDM-1151 is housed in a DENSITÉ frame. A 'double' rear connector panel is required.

FEATURES

- (5) SDI digital video independent inputs
- (5) Composite analog video independent outputs
- Adjustable pre-emphasis (Pre-EQ up to 100m) on each Composite outputs
- Exceptional density of 25 channels per RU
- Internal Test Generators (Color Bars)
- Supports both 525 and 625 line formats
- VBI passed (Vbit handling)
- Luminance-only mode available on each output
- On loss of input: no video.
- Status LED and remote reporting

FUNCTIONAL BLOCK DIAGRAM



SPECIFICATIONS

INPUTS (5)

Signal: SDI 4:2:2 digital video (SMPTE 259M-C, 270 Mbps)
Cable length: 350 m (1200') of Belden 1694A
Return Loss: > 15 dB up to 270 MHz

OUTPUTS (5)

Signal: NTSC (525/60) SMPTE 170M or PAL (625/50) ITU-R BT.470-6 or PAL-M (525/60) ITU-R BT.470-6
Return loss: > 35 dB up to 5.75 MHz
Pre-EQ adjust.: Up to 100 m (330') of Belden 8281

PROCESSING PERFORMANCE

Signal path: 8 bits
Quantization: 10 bits
Sampling: 27 MHz (2X over-sampling)
Freq. response: ± 0.5dB to 4.2 MHz
Noise (Unweighted): < -59 dB to 5.75 MHz
Processing delay: 1.5 µs
Test generator: 525: 75% color bars w/ 75% white
625: 75% color bars w/ 100% white

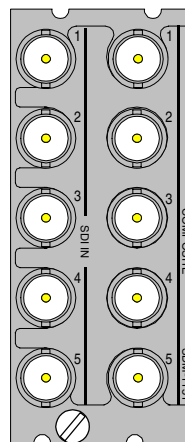
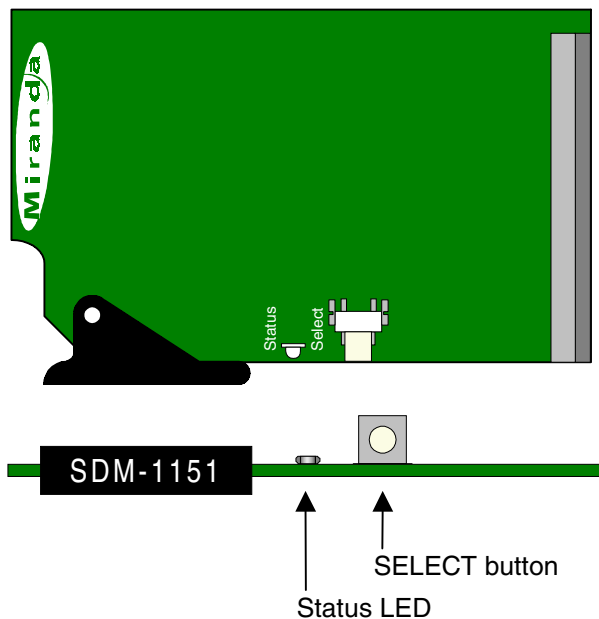
POWER: 10 W

PHYSICAL SPECIFICATIONS:

Height: 3" (76mm)
Length: 10" (254mm)
Connection: (10) BNC connectors
Weight: 110 g

SDM-1151 5-Channel SDI to Composite Monitoring Converter

Guide to Installation and Operation



SDM-1151-DRP
Double rear connector panel

UNPACKING

Make sure the following items have been shipped with your SDM-1151. If any are missing, contact your distributor or Miranda Technologies Inc.

- * SDM-1151 5-Channel SDI to Composite Monitoring Converter
- * SDM-1151-DRP double rear panel

INSTALLATION

The SDM-1151 must be mounted in a DENSITÉ frame. The installation includes both the SDM-1151 module, and the rear panel module. It is not necessary to switch off the power from these frames when installing or removing the SDM-1151.

Detailed instructions for installing cards and their associated rear panels in the Densité frame are given in the Densité Frame manual.

Rear panel notes

The SDM-1151 requires a double-width rear panel to provide space for its ten input and output connectors.

When a double-width 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 SDM-1151 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 SDM-1151 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 SDM-1151. Interfacing to the outside world is handled by the frame's controller 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 SDM-1151 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			✱			
Input Signal error (any channel)	✱				✱	
Chroma Off (any channel)				✱		
Test Pattern on (any channel)				✱		
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

Pushing the SELECT button on the front edge of the SDM-1151 will cause the on-card STATUS LED to flash yellow, and the card identification and the current status will be shown on the controller card's display. The STATUS LED will revert to its normal state upon a second push of the button, or after a short delay otherwise. See the menu chart on page 4 for a description of the SDM-1151 status messages.

Example :

SELECT button pushed when the status LED is green:

S	D	M	-	1	1	5	1	S	L	O	T	1	6
S	T	A	T	U	S	O	K						

SELECT button pushed when the input signal on channel 3 is faulty and the LED is steady red:

S	D	M	-	1	1	5	1	S	L	O	T	1	6
C	H	3	N	O	S	I	G	N	A	L			

Operating Parameter Adjustment

The SDM-1151 has operating parameters which may be adjusted at the controller card interface. After pressing the SELECT button on the SDM-1151 card, use the keys on the local control panel (described in the Controller card manual) to step through the displayed menu and adjust the parameters. The parameters can be adjusted separately for each of the five channels. The menus are shown on page 4.

CONFIG VIDEO menu

SETUP: enable or disable 7.5 IRE units set-up on the NTSC output (disabled for PAL-M)

FORMAT: Select the output format: NTSC or PAL-M

CHROMA: allows the monitoring output to be monochrome or color. Selecting OFF forces a warning message to be displayed.

PRE-EQ: select the length of cable for pre-equalization

UNITS: select whether the cable pre-equalization length is expressed in meters or feet.

TEST PATTERN: Turns the test pattern ON or OFF in the channel. Selecting ON forces a warning message to be displayed (Note: a valid SDI signal must be present at the channel input in order for a test pattern to be generated).

CONFIG ALARM menu – No Signal & Chroma Off

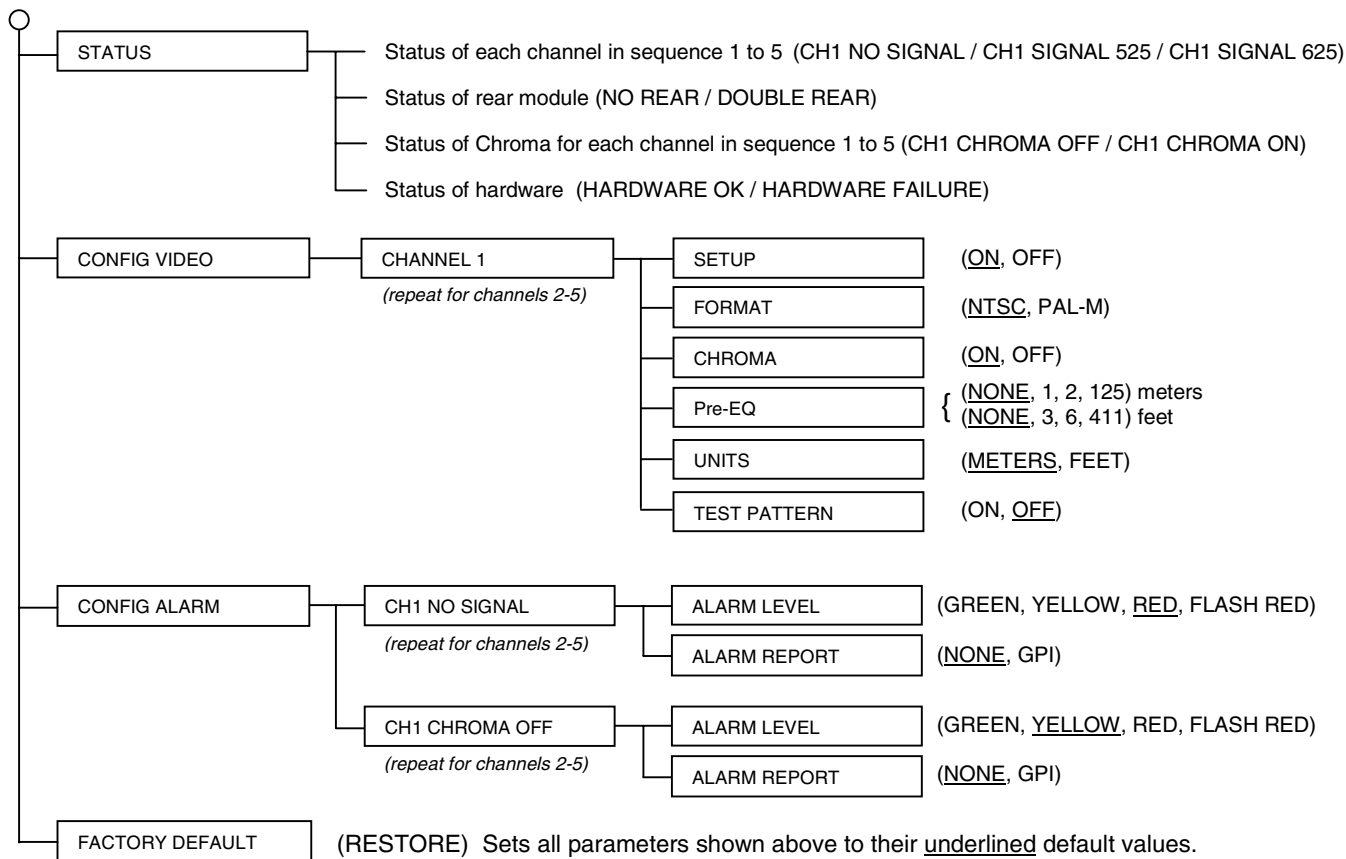
ALARM LEVEL: Configure the status LED state for the indicated error condition

ALARM REPORT: Enable or disable a GPI alarm for the indicated error condition

SDM-1151 5-Channel SDI to Composite Monitoring Converter

Guide to Installation and Operation

SDM-1151 Menus



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.

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