

ANALOGUE AUDIO to SDC VIDEO INSERTER MULTIPLEXER/EMBEDDER

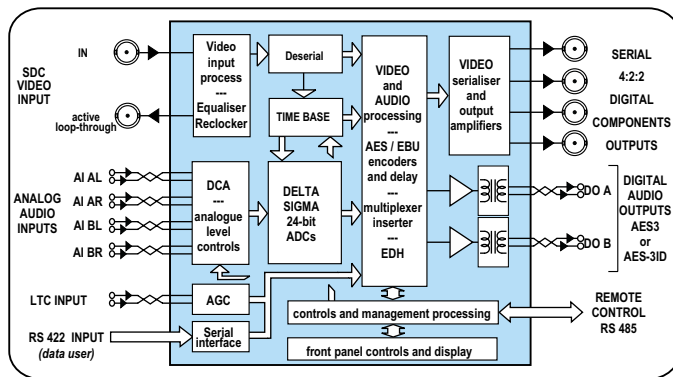
Inputs: 2 Stereo or 4 Monaural Analogue Audio Channels

AVI 603

The AVI 603 is a high-quality Audio/Video Inserter that inputs analogue audio, converts it to full broadcast signal quality 24-bit digital audio and inserts it into serial digital components video signal (270 Mbit/s or 360Mbit/s). The AVI 603 allows to insert one Longitudinal Time Code and one serial data user signals.

The AVI 603 can be cascaded to embed up to 8 stereo (16 monaural) analogue audio signals.

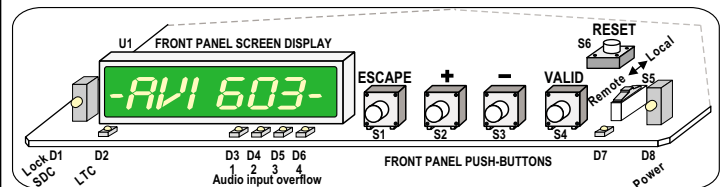
The AVI 603 is designed on an "Europe" 3U electronic board. Controls and screen display access from board's front side.



Functional block diagram

Features

- 1 SDC video input with reclocked active loop-through output
- 2 stereo / 4 monaural differential analogue audio inputs
- 1 differential Longitudinal Time Code (LTC) input
- 1 RS 422 serial data input
- 4 SDC video with Embedded AES/EBU outputs
- 2 AES outputs from the digital conversion of analogue audio inputs
- 270 Mbit/s or 360 Mbit/s operation
- 525/625-line video formats
- EDH monitoring and insertion
- 24-bit analogue to digital audio conversion
- 48 kHz audio sample rate frequency
- 0dBFS input level range +9 to +24 dBu
- 20-bit or 24-bit embedded AES
- Programmable audio delay
- Controls, adjustments and screen display on front side of the board
- RS 485 remote control



Front edge of the board

User Controls

FRONT PANEL PUSH-BUTTONS and STATUS LEDs

- | | | | |
|--|---|---|--|
| S1: ESCAPE returns to previous menu or submenu | S2: PLUS increases value of selected parameter or moves forward in parameters listing | S3: MINUS decreases value of selected parameter or moves backward in parameters listing | S4: VALID enables one of the parameters and stores the new value |
| D1: SDC video Input genlock | D2: LTC input | D3 to D6: Audio input overflow | S5: Remote / local selection |
| D7: Remote | D8: Power | U1: Screen display | S6: Micro controller RESET |

FRONT PANEL DISPLAY: MAIN MENU PARAMETERS

- | | | | |
|---|--|--|---|
| AUDIO CONTROLS:
inter & intra group insertion mode (automatic or forced) - duplicating - muting - tone - delay adjustment - global input level adjustment | AUDIO STATUS:
groups and channels occupied after insertion process | OTHERS CONTROLS:
LTC enable
user data enable
remote control LAN address set up | OTHERS STATUS:
SDC video input presence & main informations
EDH process reporting
LTC input presence
remote control activity |
|---|--|--|---|

All parameters are saved in NON-VOLATILE RAM

Technical Specifications

DIGITAL VIDEO INPUTS	ANALOGUE AUDIO INPUTS	DIGITAL VIDEO OUTPUTS	PROCESSING PERFORMANCE
SERIAL IN	SIGNALS: 2 stereo or 4 monaural balanced analogue audio	SIGNAL: 4:2:2 SMPTE 259M-C 270 Mbit/s or 360 Mbit/s	VIDEO
SIGNAL: 4:2:2 SMPTE 259M-C 270 Mbit/s or 360 Mbit/s	TERMINATION: 600 Ω or 24 kΩ (jumper selectable)	NUMBER: 4	QUANTIZATION : 10-bit
CABLE LENGTH: 250 m	LEVEL RANGE: 0dBFS +9 to +24 dBu	IMPEDANCE: 75 Ω	AUDIO
IMPEDANCE: 75 Ω		RETURN LOSS: >15 dB up to 270 MHz	QUANTIZATION : 24-bit
RETURN LOSS: >15 dB up to 270 MHz		JITTER: < 0.2 UI p-p	SAMPLING : 48 kHz
		AES/EBU EMBEDDED: 20 or 24-bit selectable	DELAY Up to 340 ms
SERIAL ACTIVE LOOP-THROUGH OUTPUT	LTC INPUT	DIGITAL AUDIO OUTPUTS	POWER : < 12,5 W
SIGNAL: 4:2:2 SMPTE 259M-C 270 Mbit/s or 360 Mbit/s	SIGNAL: Balanced analogue signal	SIGNAL: AES (48 KHz) locked to the video signal	
IMPEDANCE: 75 Ω	TERMINATION: 600 Ω or 24 kΩ (jumper selectable)	NUMBER: 2	
RETURN LOSS: >15 dB up to 270 MHz	LEVEL RANGE: 100 mVp-p up to 10 Vp-p	IMPEDANCE: 75 Ω (AES-3ID) or 110 Ω (AES3) selectable	

AVI 603

ANALOGUE AUDIO to SDC VIDEO INSERTER MULTIPLEXER/EMBEDDER Inputs: 2 Stereo or 4 Monaural Analogue Audio Channels

Overall Performances

Audio performances

Connector: Sub-D type
 inputs: 2 stereo or 4 monaural analogue audio
 Impedance: 600 Ω or 24 kΩ (balanced)
 0dBFS range: +9 to + 24 dBu
 Quantization: 24-bit
 Sample rate frequency: 48 kHz
 Dynamic range: >107 dB unweighted (AES17-1991)
 Signal to noise ratio: 108 dB typical, unweighted
 Crosstalk: < -100 dB (1 kHz)
 Pass band: -0.5 dB, 20 Hz to 22 kHz
 Processing delay: 730 μs

Audio performances

Audio delay: Up to 340 ms
 Jitter: < 2 ns p-p
 test signal: 1 kHz sine wave
 Digital audio outputs: 2 AES (48 kHz) locked to the video, from the digital conversion of analogue audio inputs. 75 Ω (AES-3ID) or 110 Ω (AES3) selectable, transformer isolated.

Video performances

Connector: BNC
 Inputs: Serial 4:2:2 with active loop-through
 Outputs: 4 Serial 4:2:2 with 2 AES/EBU embedded
 Input output impedances: 75 Ω
 Standard: 270 Mbit/s or 360 Mbits
 Processing delay: < 2 μs

Mounting Frames

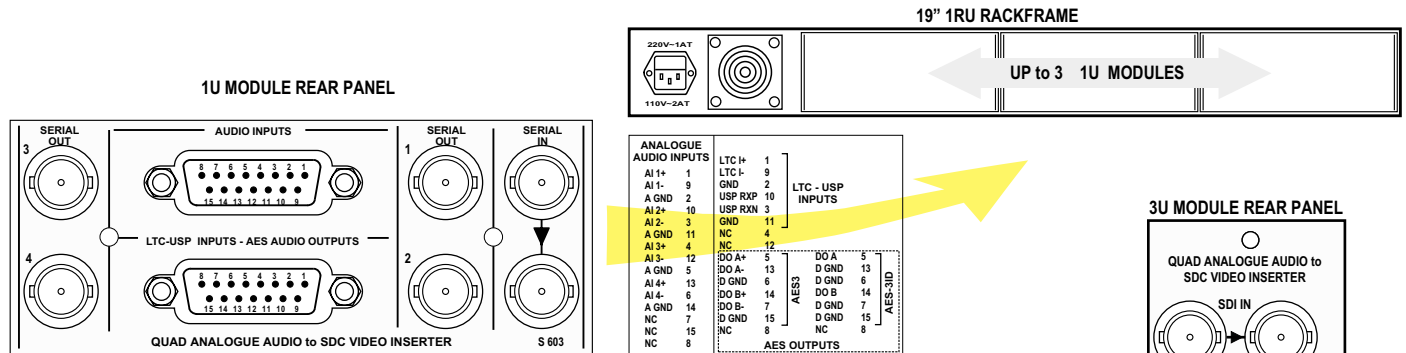
19" 1RU RACKFRAME

The 19" 1RU rackframe is divided into three identical parts meant to receive the electronic plug-in boards. Each part can hold two 3U Europe plug-in boards with modular rear panel and interconnection. The power supply is incorporated into the mechanical structure. Ventilation of the rack is performed by forced convection. Access is given to electronic plug-in boards by rocking down the front panel.

DIMENSIONS : 1RU x 380 mm deep
 WEIGHT : < 5kg

TEMPERATURE RANGE : 0-40°C
 ELECTRONIC PLUG-IN BOARDS : up to 6

POWER INPUT RANGE : 97-240 V/50-60 Hz
 POWER : 80 W max



19" 3RU RACKFRAME

The 19" 3RU rackframe holds up to 10 modules with single power supply unit and 9 modules with redundant power supply unit. Access is given to electronic modules by rocking down the front panel. Ventilation of the rack is performed by forced convection. Each module includes : electronic plug-in board, rear interconnection board, and rear mechanical support with the connectors.

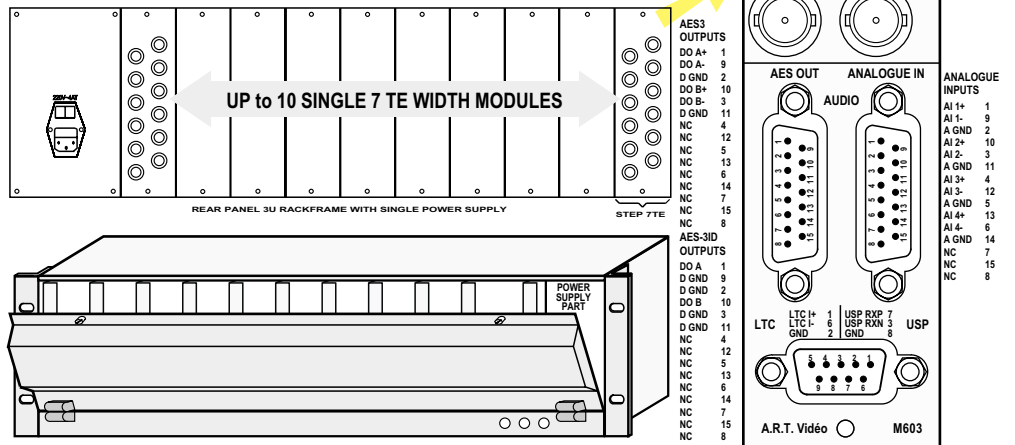
DIMENSION : 3RU x 410 mm deep
 WEIGHT : < 15 Kg

TEMPERATURE RANGE : 0 - 40°C

ELECTRONIC MODULES : 10 with single power supply
 9 with redundant power supply

POWER INPUT : 88 - 135 V or 185 - 264 V
 50 / 60 Hz (Switchable)

POWER : 150 W max



Ordering informations

B-AVI603 : Analogue audio to SDC video inserter multiplexer / embedder
 Electronic plug-in board

M-AVI603 : Analogue audio to SDC video inserter multiplexer / embedder
 3U module for 19" 3RU rackframe
 (B-AVI603 Electronic plug-in board and MOD 3U rear panel)

19" 1RU rackframe
 RACK1U : 19" 1RU rackframe with power supply
 INT-1U: interconnection unit for electronic board (S 603)

19" 3RU rackframe
 RACK3U-1 : 19" 3RU rackframe with single power supply
 RACK3U-2 : 19" 3RU rackframe with redundant power supply
 MOD 3U : rear panel for 19" 3RU rackframe (M603)
 BPM-1 : blank rear panel unit

Specifications and designs are subject to change without notice