

SDC Video to AES and Analogue Audio Extractor De-Multiplexer/De-Embedder

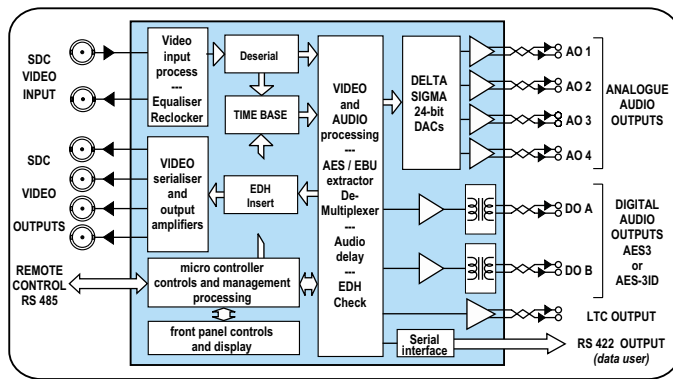
Outputs: 2 AES3 or 2 AES-3ID Digital Audio, 2 Stereo or 4 Monaural Analogue Audio

AVE 604

The **AVE 604** is a high-quality Video/Audio De-Multiplexer that inputs digital video, extracts the embedded audio and converts it to full broadcast signal quality 24-bit analogue and AES audio. The **AVE 604** allows to extract one Longitudinal Time Code and one serial data user signals inserted in the SDC video.

The **AVE 604** can be cascaded to de-embed up to 8 stereo (16 monaural) analogue audio signals.

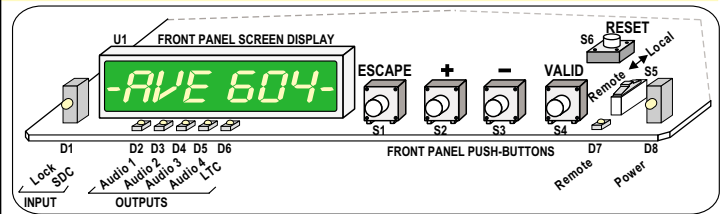
The **AVE 604** is designed on an "Europe" 3U electronic board. Controls and screen display access from board's front side.



Functional block diagram

Features

- 1 SDC video input with reclocked output
- 4 SDC video outputs
- 2 stereo / 4 monaural differential analogue audio outputs
- 2 AES audio outputs AES3 or AES-3ID format selectable
- 1 differential LTC output
- 1 RS 422 serial data output
- 525/625-line video formats
- 270 Mbit/s or 360 Mbit/s operation
- EDH monitoring and insertion
- 24-bit digital to analogue audio conversion
- 48 kHz audio sample rate frequency
- 20-bit / 24-bit embedded AES
- 0dBFS analogue outputs level range +9 to +24 dBu
- Programmable audio delay
- Controls, adjustments and screen display on front side of the board
- RS 485 remote control



Front end 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 |
| S5: Remote / local selection | S6: Micro controller RESET | D1: SDC video input genlock | D2: Audio 1 output |
| D3: Audio 2 output | D4: Audio 3 output | D5: Audio 4 output | D6: LTC output |
| D7: Remote | D8: Power | U1: Screen display | |

FRONT PANEL DISPLAY: MAIN MENU PARAMETERS

- | | | | |
|--|--|--|---|
| AUDIO CONTROLS:
inter & intra group selection for each channel - muting - tone - delay adjustment - global output level adjustment | AUDIO STATUS:
groups and channels used de-embedded AES channels presence and main informations | OTHERS CONTROLS:
LTC muting
user data muting
remote control LAN address set up | OTHERS STATUS:
SDC video input presence & main informations
EDH process reporting
LTC presence
user data presence
remote control activity |
|--|--|--|---|

All parameters are saved in NON-VOLATILE RAM

Technical Specifications

DIGITAL VIDEO INPUT / OUTPUTS

SERIAL INPUT
SIGNAL: 4:2:2 SMPTE 259M-C
270 Mbit/s or 360 Mbit/s

CABLE LENGTH: 250 m
IMPEDANCE: 75 Ω
RETURN LOSS: >15 dB up to 270 MHz

SERIAL OUTPUTS
SIGNAL: 4:2:2 SMPTE 259M-C
270 Mbit/s or 360 Mbit/s

IMPEDANCE: 75 Ω
RETURN LOSS: >15 dB up to 270 Mhz
JITTER: < 0.2 UI p-p
RELOCKED OUT: 1
PROCESSED OUT: 4

ANALOGUE AUDIO OUTPUTS

SIGNALS: 2 stereo or 4 monaural balanced analogue audio

IMPEDANCE: < 1 Ω
LEVEL RANGE: 0dBFS +9 to +24 dBu

LTC OUTPUT

SIGNAL: Balanced analogue signal

IMPEDANCE: 50 Ω
LEVEL: 3 Vp-p

DIGITAL AUDIO OUTPUTS

NUMBER: 2 AES

SIGNALS: AES3 110 Ω or AES-3ID 75 Ω impedance selectable

PROCESSING PERFORMANCE

VIDEO
QUANTIZATION: 10-bit

AUDIO
QUANTIZATION: 24-bit
SAMPLING: 48 kHz
DELAY: Up to 340 ms

POWER: < 13 W

AVE 604

SDC Video to AES and Analogue Audio Extractor De-Multiplexer Outputs: 2 AES Digital Audio, 2 Stereo or 4 Monaural Analogue Audio

Overall Performances

Audio performances

AES Connector: Sub-D type
 Analogue audio connector: Sub-D type
 Analogue outputs: 2 stereo or 4 monaural analogue audio
 Impedance: <math>< 1 \Omega</math> (balanced)
 0dBFS range: +9 to +24 dBu
 Quantization: 24-bit
 Sample rate frequency: 48 kHz
 Dynamic range: >107 dB unweighted (AES17-1991)
 Crosstalk: <math>< -110</math> dB (1 kHz)
 Pass band: -0.5 dB, 20 Hz to 21.5 kHz

Audio performances

Audio delay: Up to 340 ms
 test signal: 1 kHz sine wave

Video performances

Input: BNC
 Outputs: Serial 4:2:2 with reclocked active loop-through output
 4 Serial 4:2:2
 Input outputs impedances: 75 Ω
 Standard: 270 Mbit/s or 360 Mbits
 Processing delay: <math>< 2 \mu</math> s

Mounting Frames

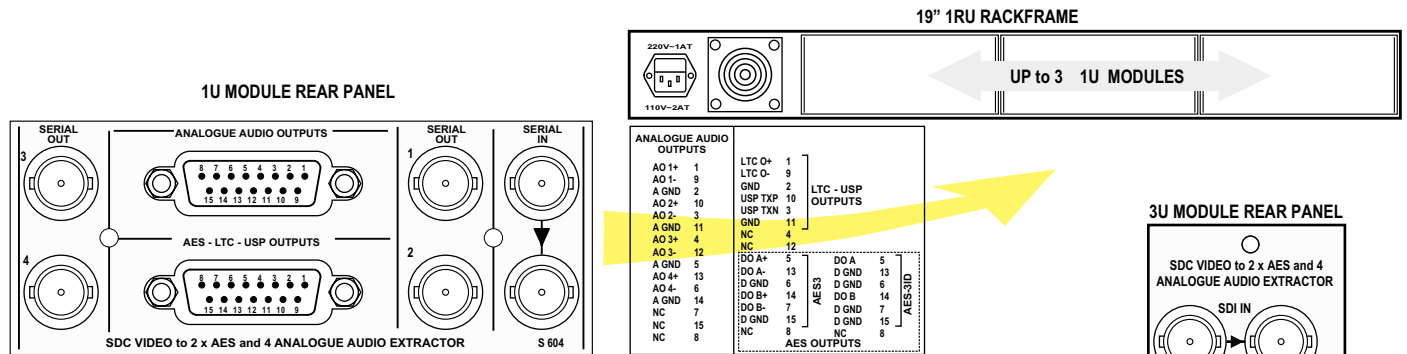
19" 1RU RACKFRAME

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 : <math>< 5</math> kg

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.

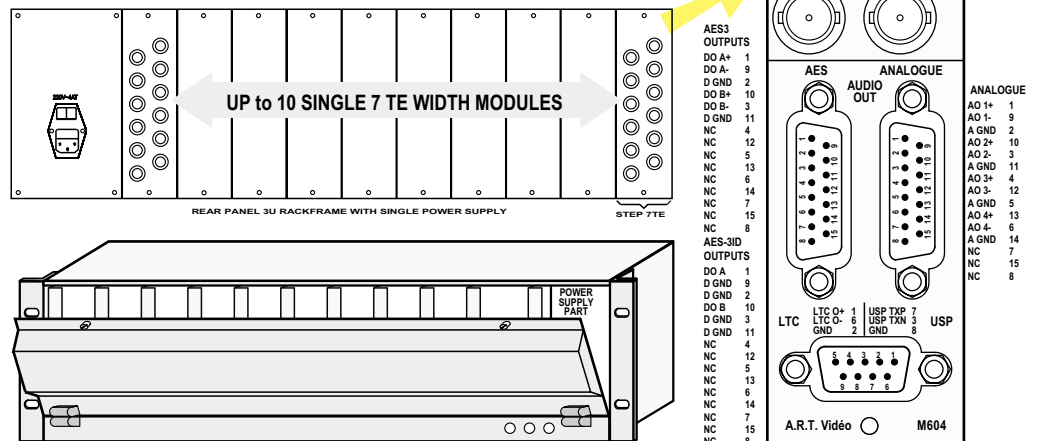
DIMENSION : 3RU x 410 mm deep
 WEIGHT : <math>< 15</math> Kg

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-AVE604 : SDC video to AES and analogue audio extractor de-multiplexer
 Electronic plug-in board

19" 1RU rackframe
 RACK1U : 19" 1RU rackframe with power supply
 INT-1U: interconnection unit for electronic board (S 604)

M-AVE604 : SDC video to AES and analogue audio extractor de-multiplexer
 3U module for 19" 3RU rackframe
 (B-AVE604 Electronic plug-in board and MOD 3U rear panel)

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" 3U rackframe (M604)
 BPM-1 : blank rear panel unit

Specifications and designs are subject to change without notice