

QUAD DIGITAL AES / EBU TO ANALOG STEREO AUDIO CONVERTER 24-bit SAMPLING RESOLUTION - FREQUENCY RANGE 28.4 kHz to 100 kHz

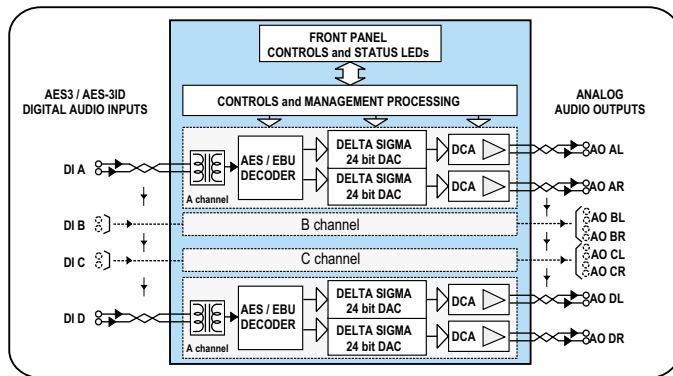
DAC 624

The **DAC 624** is a high-quality, 24-bit digital to analog audio converter which allows conversion of four AES/EBU digital signals into four stereophonic analog signals. Optimisation for audio conversion is provided through the use of digital interpolation filters and multibit sigma-delta modulators.

This converter detects all audio word lengths ranging from 16-bit to 24-bit. Unused LSBs are erased before conversion. Digital de emphasis is automatically processed when detected, according to the 50/15µs law.

The **DAC 624** is compatible with AES3 and AES-3ID.

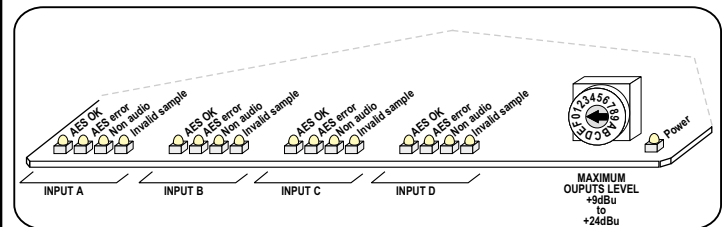
The **DAC 624** is designed on an "Europe" 3U electronic board.



Functional block diagram

Features

- 24-bit high-quality digital to analog audio conversion
- Automatic muting for non audio signals
- +9 to +24 dBu output level range
- AES3 and AES-3ID standards supported
- Automatic resolution from 16-bit to 24-bit word length
- Transformer isolated AES inputs with loop-through
- Automatic digital de-emphasis 50/15 µs process
- Controls and signalling on front side of the board
- Accepts 28.4 to 100 kHz sampling frequency range
- Configurations by internal switchers



Front edge of the board

User Controls

FRONT EDGE CONTROL

- Maximum audio level (Full scale) of all channels.

FRONT EDGE STATUS LED

INPUT A	INPUT A	INPUT A	INPUT A	COMMON
- AES OK	- AES OK	- AES OK	- AES OK	Power presence indication
- AES error	- AES error	- AES error	- AES error	
- Non audio	- Non audio	- Non audio	- Non audio	
- Invalid sample	- Invalid sample	- Invalid sample	- Invalid sample	

ON BOARD CONFIGURATION

- AES or AES-3ID standard selection
- Input terminations, loop-through / 110 Ω (75 Ω)
- Fine adjustment for audio levels

Technical Specifications

DIGITAL INPUTS

SIGNALS : Four AES3-1992, AES-3ID, CCIR REC647-1, Spec. IEC 958-1
Transformer isolated

AES3 (differential)

LEVEL : 200 mVpp to 7 Vpp
IMPEDANCE : 110 Ω
commutable 10 kΩ

AES-3ID (asymmetrical)

LEVEL : 200 mVpp to 5 Vpp
IMPEDANCE : 75 Ω
commutable 10 kΩ

SAMPLING : 28.4 kHz to 100 kHz

ANALOG OUTPUTS

SIGNALS : 8 symmetrical analog mono audio outputs (2 per channel) or 4 symmetrical stereophonic analog audio outputs

LEVEL : Maximum audio level (full scale) adjustable from + 9 dBu to + 24 dBu, by 1 dBu step

IMPEDANCE : < 1 Ω, minimum differential load impedance 600 Ω

PROCESSING PERFORMANCE

QUANTIZATION: Automatic 16-bit to 24-bit

SAMPLING: 28.4 kHz to 100 kHz

POWER : < 10 W

DAC 624

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Overall Performances

Audio performances

Dynamic range (AES17-1991): > 110 dB typical
 Interchannel crosstalk: < -115 dB (f = 1kHz)
 Typical bandwidth at -0.5 dB, sampling frequency (SF):
 32 kHz: 20 Hz to 14.3 kHz,
 48 kHz: 20 Hz to 21.5 kHz,
 96 kHz: 20 Hz to 40 kHz.

Passband ripple: < ± 0.1 dB
 Group delay: 0.9 ms for SF = 48kHz
 Audio de-emphasis: 50/15 µs law, digitally processed, optimized for standard sample rates.

Mounting Frames

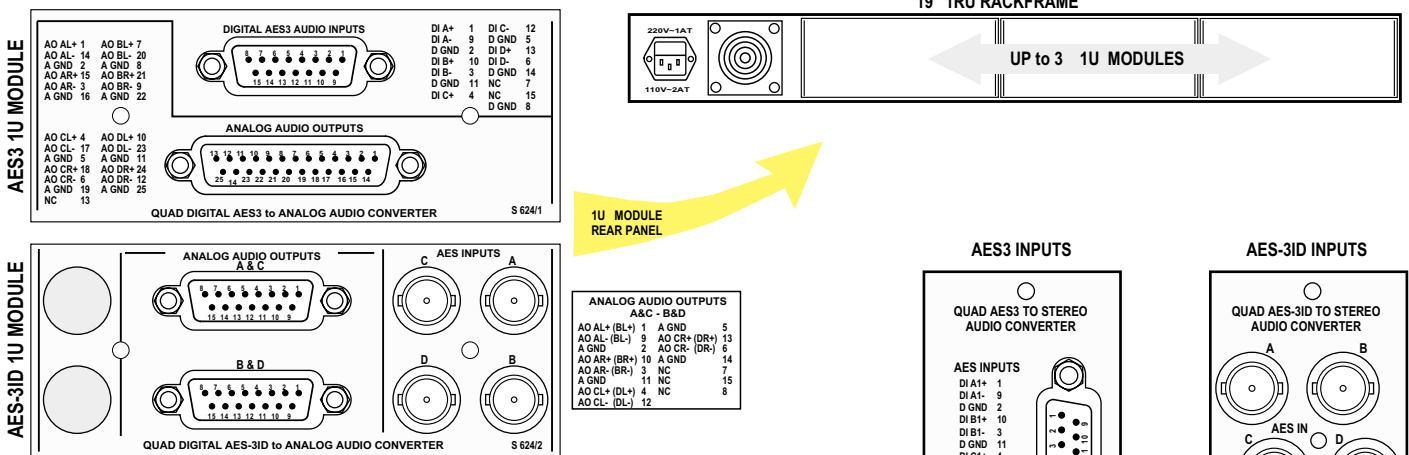
19" 1RU RACKFRAME

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.

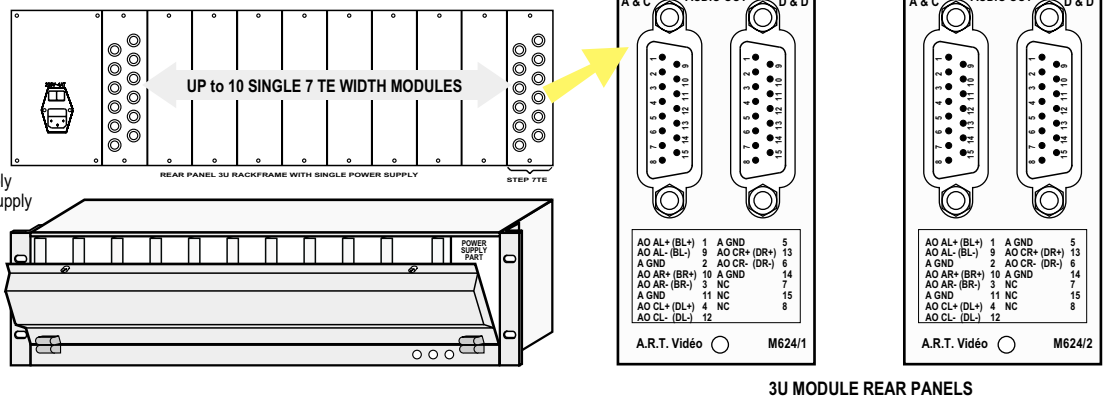
DIMENSION : 3RU x 410 mm deep
 WEIGHT : < 15 Kg

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

Electronic plug-in board

B-DAC624: Quad digital AES / EBU to analog audio converter

3U module for 19" 3RU rackframe (Electronic plug-in board and MOD 3U rear panel)

M-DAC624/1: Quad digital AES / EBU to analog audio converter

M-DAC624/2: Quad digital AES / EBU to analog audio converter

19" 1RU rackframe

RACK1U : 19" 1RU rackframe with power supply

INT-1U: interconnection unit for electronic board (AES3: S624/1 - AES-3ID: S624/2)

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 (AES3: M624/1 - AES-3ID: M624/2)

BPM-1 : blank rear panel unit

Specifications and designs are subject to change without notice