

DUAL DIGITAL AES / EBU STEREO to ANALOG AUDIO CONVERTER 24-bit SAMPLING RESOLUTION - FREQUENCY RANGE 28.4 kHz to 108 kHz

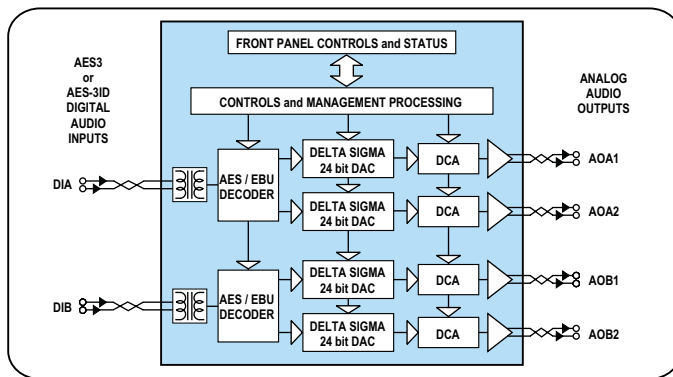
DAC 620

The **DAC 620** is a high-quality, 24-bit digital to analog audio converter which allows conversion of two AES / EBU type digital signals into two stereophonic analog audio signals.

Analog output levels may be adjusted from the front of the module.

The **DAC 620** is compatible with AES3 and AES-3ID.

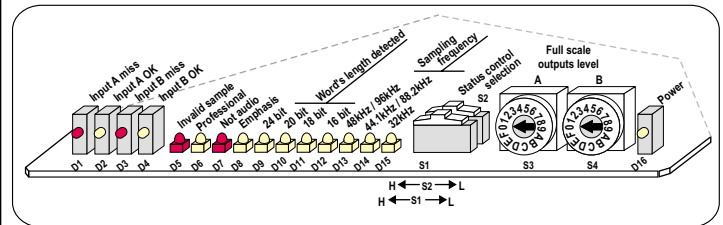
The **DAC 620** is designed on an "Europe" 3U electronic board.



Functional block diagram

Features

- 24-bit high-quality digital to analog audio conversion with "dither"
- AES3 and AES-3ID inputs supported, with loop-through
- Accepts 28.4 kHz to 108 kHz sampling frequency range
- +9 to +24 dBu output level range for each channel
- Automatic resolution 16 to 24 bit word's length
- 2 stereo channels or 4 mono outputs possibility
- Automatic digital de-emphasis 50 / 15 μ s process (44.1 kHz & 48 kHz)
- Controls, adjustments and signalling on front side of the board
- AES3 / AES-3ID inputs with transformer isolated
- Configurations by internal switches



Front edge of the board

User Controls

FRONT PANEL ADJUSTMENTS, SWITCHES and STATUS LEDs

CHANNEL A

S3 : A right and left full scale output level + 9 to + 24 dBu

D1 : AES-A input miss

D2 : AES-A input presence

CHANNEL STATUS SELECTION FOR MONITORING

S1 : D5 to D15 status LED, channel selection (combined with S2)

S2 : D5 to D15 status LED, channel selection (combined with S1)

CHANNEL STATUS MONITORING

D5 : Invalids samples

D8 : Pre-emphasis detected and de-emphasis activated (if 50/15 μ s)

D6 : Professional signal input

D8 : Blink mode, pre-emphasis detected but de-emphasis not activated (if J17)

D7 : Non-audio signal input

D9 : 24 bit word's length detected

COMMON STATUS LED

D16 : Power supply presence

CHANNEL B

S4 : B right and left full scale output level + 9 to + 24 dBu

D3 : AES-B input miss

D4 : AES-B input presence

S1=H, S2=H : channel A Left selected
S1=H, S2=L : channel A Right selected

S1=L, S2=H : channel B Left selected
S1=L, S2=L : channel B Right selected

D10 : 20 bit word's length detected

D13 : 48 / 96 kHz sampling frequency measured

D11 : 18 bit word's length detected

D14 : 44.1 / 88.2 kHz sampling frequency measured

D12 : 16 bit word's length detected

D15 : 32 kHz sampling frequency measured

Technical Specifications

DIGITAL INPUTS

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

2 x AES3 (differential)

LEVEL : 200 mVpp to 7Vpp

IMPEDANCE : 110 Ω commutable 10 k Ω

or 2 x AES-3ID (asymmetrical)

LEVEL : 200 mVpp to 5Vpp

IMPEDANCE : 75 Ω commutable 10 k Ω

SAMPLING : 28.4 kHz to 108 kHz

ANALOG OUTPUTS

SIGNALS : 4 symmetrical mono outputs (2 per channel) or 2 symmetrical stereophonic outputs A and B channels

FULL SCALE LEVEL: Commutable (1 dBu step) + 9 dBu to + 24 dBu

IMPEDANCE : < 10 Ω
minimum load 600 Ω

PROCESSING PERFORMANCE

QUANTIZATION : Automatic 16 to 24 Bit

SAMPLING : 28.4 kHz to 108 kHz

POWER : 7 W

DAC 620

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Overall Performances

Digital audio performances

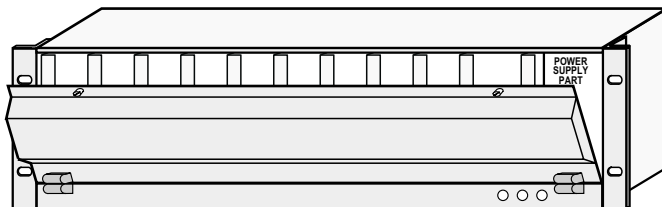
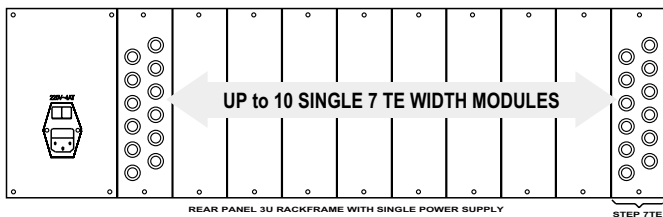
Dynamic (AES17-1991) :	110 dB typical (unweighted)	Passband ripple :	< ± 0.05 dB
Cross talk :	< -115 dB at 1kHz < -90 dB (@20Hz to 20KHz - 3 channels active)	Audio delay :	0.9 ms at 48 kHz 1.35 ms at 32 kHz
Typical bandwidth at - 0.5 dB sampling frequency 48 kHz :	20 Hz to 21.5 kHz	Automatic de-emphasis :	curve 50/15µs digital process for 44.1 and 48 kHz
sampling frequency 44.1 kHz :	20 Hz to 19.75 kHz	Interchannel phase deviation :	< 0.5°
sampling frequency 32 kHz :	20 Hz to 14.3 kHz		
sampling frequency 88.2 kHz :	20 Hz to 40 kHz		
sampling frequency 96 kHz :	20 Hz to 40 kHz		

Mounting Frames

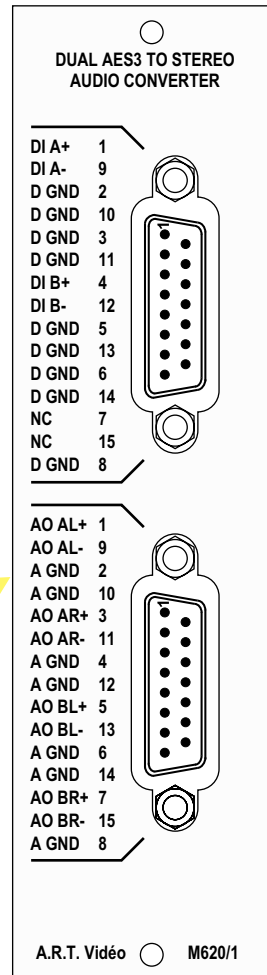
19" 3RU RACKFRAME

The 19" 3U 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.

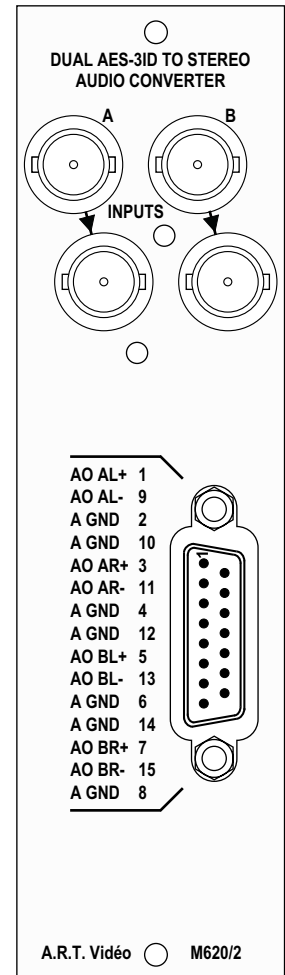
DIMENSION :	3RU x 410 mm deep
WEIGHT :	< 15 Kg
TEMPERATURE RANGE :	0 - 40°C
ELECTRONIC MODULES :	10 with single power supply 9 with redundant power supply
POWER INPUT :	88 - 135 V or 185 - 264 V (commutable) 50 / 60 Hz
POWER :	150 W max



3U MODULE REAR PANEL IN / OUT AES3 STANDARD



3U MODULE REAR PANEL IN / OUT AES-3ID STANDARD



Ordering informations

19" 3RU rackframe

M-DAC620/1 :	dual digital audio AES / EBU to analog stereo converter AES3 inputs standard 3U module for 19" 3RU rackframe (Electronic plug-in board and rear panel)	B-DAC620 :	dual digital audio AES / EBU to analog stereo converter AES3 and AES-3ID electronic plug-in board
M-DAC620/2 :	dual digital audio AES / EBU to analog stereo converter AES-3id inputs standard 3U module for 19" 3RU rackframe (Electronic plug-in board and rear panel)	MOD 3U :	rear panel for 19" 3U rackframe
		RACK3U-1 :	19" 3RU rackframe with single power supply
		RACK3U-2 :	19" 3RU rackframe with redundant power supply
		BPM-1 :	blank rear panel unit

Specifications and designs are subject to change without notice