

DUAL DIGITAL AUDIO AES / EBU SAMPLE RATE CONVERTER 22-bit AMPLITUDE RESOLUTION

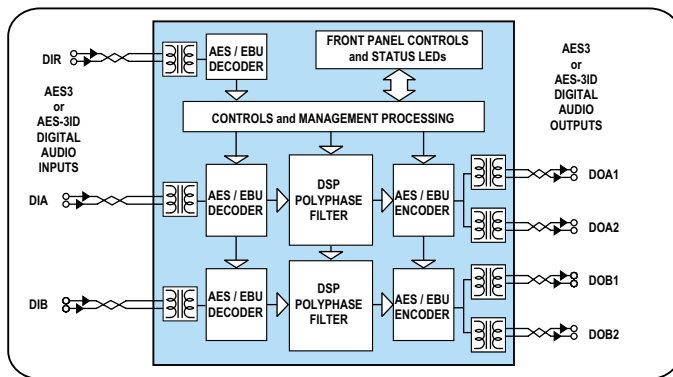
AFC 630

The **AFC 630** is a high-quality 22-bit amplitude resolution digital audio sample rate converter, which allows re-sampling two digital audio signals AES / EBU with an external AES reference signal.

The data rate is set by an internal clock when the reference is missing. Synchronization mode and internal frequency rate selections are controlled on the front side module.

The **AFC 630** is compatible with AES3 and AES-3ID.

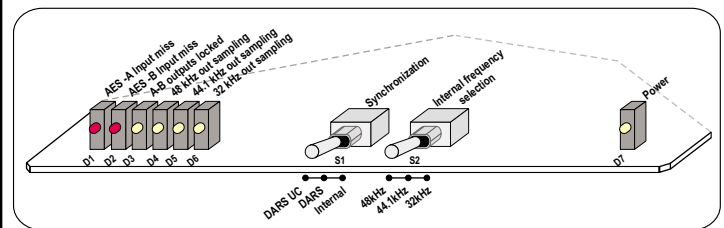
The **AFC 630** is designed on an "Europe" 3U electronic board.



Functional block diagram

Features

- 22-bit equivalent amplitude resolution
- All inputs accept 28 kHz to 54 kHz sampling frequency range
- 28 kHz to 54 kHz external synchronization mode
- Automatic internal sampling when DARS input is missing
- 48 kHz - 44.1 kHz - 32 kHz internal synchronization mode frequency selection
- AES3 / AES-3ID inputs and outputs supported, inputs with loop-through
- All AES3 / AES-3ID In_Out transformer isolated
- AES3 / AES-3ID external reference input with loop-through
- Controls and signalling on front side of the board
- Configurations by internal switchers



Front edge of the board

User Controls

FRONT PANEL SWITCHS

- S1 : Synchronization mode selection
DARS_UC / DARS / Internal
- S2 : Internal synchronization mode
frequency sampling selection

FRONT PANEL STATUS LEDs

- D1 : AES - A input is missing
- D2 : AES - B input is missing
- D3 : AES outputs locked on DARS
(input reference)
- D4 : A and B - AES outputs
sampled at 48 kHz
- D5 : A and B - AES outputs
sampled at 44.1 kHz
- D6 : A and B - AES outputs
sampled at 32 kHz
- D7 : Power supply presence

Technical Specifications

DIGITAL INPUTS

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

2 x AES3 (differential)
LEVEL : 200 mVpp to 7 Vpp
IMPEDANCE : 110 Ω
commutable 10 kΩ

or 2 x AES-3ID (asymmetrical)
LEVEL : 200 mVpp to 5 Vpp
IMPEDANCE : 75 Ω
commutable 10 kΩ

REFERENCE INPUT (DARS)

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

AES3 (differential)
LEVEL : 200 mVpp to 7 Vpp
IMPEDANCE : 110 Ω
commutable 10 kΩ

or AES-3ID (asymmetrical)
LEVEL : 200 mVpp to 5 Vpp
IMPEDANCE : 75 Ω
commutable 10 kΩ

SAMPLING : 28 to 54 kHz

DIGITAL OUTPUTS

SIGNALS : AES3-1992, AES-3ID, CCIR REC647-1, Spec. IEC 958-1
On transformer isolated
4 outputs 2 for each channel

AES3
LEVEL : 3.8 Vpp (differential)
IMPEDANCE : 110 Ω

or AES-3ID
LEVEL : 1 Vpp (asymmetrical)
IMPEDANCE : 75 Ω

PROCESSING PERFORMANCE

QUANTIZATION : 22 Bit equivalent

SAMPLING

Internal : 32, 44.1 or 48 kHz

External : 28 kHz to 54 kHz

POWER : 1.5 W

AFC 630

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Overall Performances

Digital audio performances

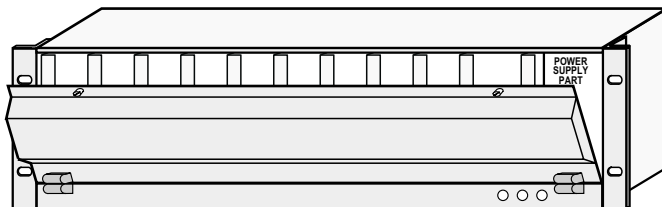
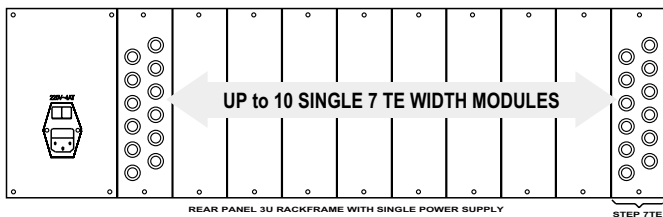
Dynamic (1) :	> 120 dB (unweighted)	Audio delay :	3 ms
THD+N (1) :	> 107 dB (unweighted) at 0 dBFS	Coincidence between outputs and AES frames reference :	< 100 ns
Diaphonie :	< -140 dB	(1) Sampling frequency 28 kHz to 54 kHz with ratio between 0.7 and 1.4 A and B channels in "Slow setting mode" configuration	
Bandwidth at -0.01 dB			
In/out sampling rate > 44.1 kHz :	0 Hz to 20 kHz		

Mounting Frames

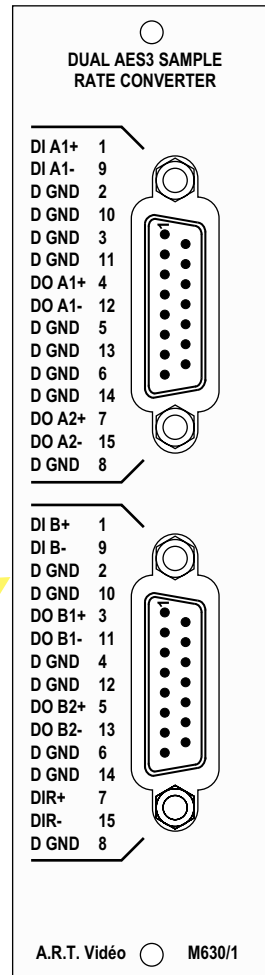
19" 3RU RACKFRAME

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.

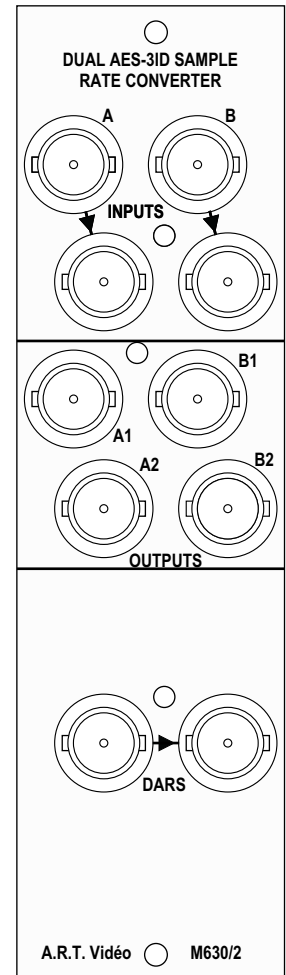
DIMENSION :	3RU x 410 mm deep
WEIGHT :	< 15 Kg
TEMPERATURE RANGE :	0 - 40°C
ELECTRONIC MODULES :	10 with single power supply 9 with redundant power supply
POWER INPUT :	88 - 135 V or 185 - 264 V (commutable) 50 / 60 Hz
POWER :	150 W max



3U MODULE REAR PANEL IN / OUT AES3 STANDARD



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



Ordering informations

19" 3RU rackframe

M-AFC630/1 :	dual digital audio AES / EBU sample rate converter AES3 standard 3U module for 19" 3RU rackframe (Electronic plug-in board and rear panel)	B-AFC630 :	dual digital audio AES / EBU sample rate converter AES3 and AES-3ID electronic plug-in board
M-AFC630/2 :	dual digital audio AES / EBU sample rate converter AES-3ID standard 3U module for 19" 3RU rackframe (Electronic plug-in board and rear panel)	MOD 3U :	rear panel for 19" 3RU 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