

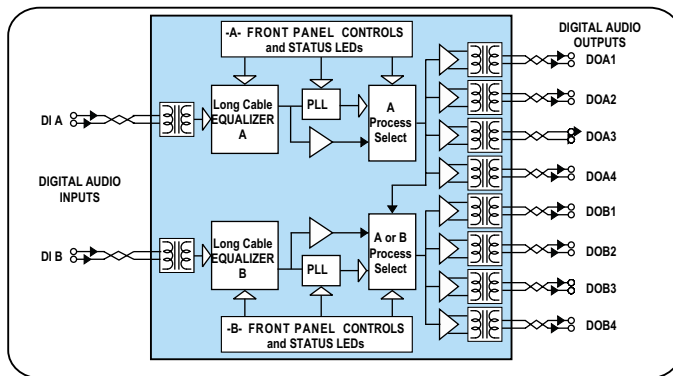
## DUAL AES / EBU RECLOCKED DISTRIBUTION AMPLIFIER DIFFERENTIAL INPUTS and OUTPUTS

# ARD 660

The **ARD 660** is designed to regenerate two AES / EBU digital audio signals for their distributions.

Two process are available : "Direct" or "Re-clock" with two distribution modes possibility and manual cable equalizer, both controlled in front of the board

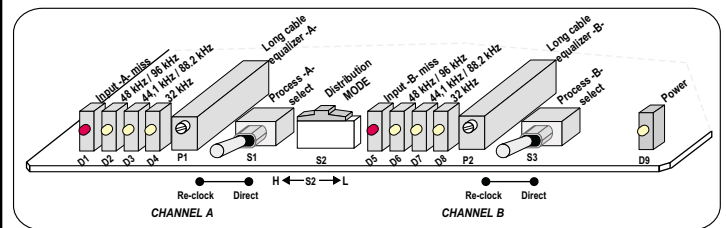
The **ARD 660** is designed on an "Europe" 3U electronic board.



Functional block diagram

### Features

- Differential digital audio inputs and outputs, all transformer isolated
- Manual and/or automatic cable equalizer controlled
- Accepts 28.4 kHz to 108 kHz sampling frequency range
- Two distribution modes  
- 2 x ( 1 to 4 )  
- 1 x ( 1 to 8 )
- AES3 / AES-3ID inputs and outputs supported
- Controls, adjustments and signalling on front side of the board
- Mixed possibility between AES3 and AES-3ID inputs and outputs
- Inputs and outputs configurations by internal switcher



Front edge of the board

## User Controls

### FRONT PANEL ADJUSTMENTS AND SWITCHES

#### CHANNEL A

P1 : HF pre-emphasis level control channel - A - (manual equalizer)      S1 : Process mode selection , "Direct" or "Re-clock"

#### FRONT PANEL STATUS LEDs

D1 : AES -A- input miss      D3 : 44.1 kHz or 88.2 kHz sampling frequency measured  
D2 : 48 kHz or 96 kHz sampling frequency measured      D4 : 32 kHz sampling frequency measured

#### COMMON SWITCH AND STATUS LED

S2 : Distribution mode select  
H = 2 x ( 1 to 4 )  
L = 1 x ( 1 to 8 )      D9 : Power supply presence

#### CHANNEL B

P2 : HF pre-emphasis level control channel - B - (manual equalizer)      S3 : Process mode selection , "Direct" or "Re-clock"

D5 : AES -B- input miss      D7 : 44.1 kHz or 88.2 kHz sampling frequency measured  
D6 : 48 kHz or 96 kHz sampling frequency measured      D8 : 32 kHz sampling frequency measured

## 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 7Vpp  
IMPEDANCE : 110 Ω commutable 10 kΩ

or

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

SAMPLING : 28.4 kHz to 108 kHz

### DIGITAL OUTPUTS

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

2 x 4 AES3  
LEVEL : 3.8 Vpp (differential)  
IMPEDANCE : 110 Ω

or

2 X 4 AES-3ID  
LEVEL : 1 Vpp (asymmetrical)  
IMPEDANCE : 75 Ω

### PROCESSING PERFORMANCE

SAMPLING : 28.4 kHz to 108 kHz

GPT : 40 ns " Direct " mode  
< 1 μs " Re-clock " mode

POWER : 2.4 W

# ARD 660

## DUAL AES / EBU RECLOCKED DISTRIBUTION AMPLIFIER DIFFERENTIAL INPUTS and OUTPUTS

### Overall Performances

#### Equalizer length correction "RE-clock" mode

AES-3ID on PSF1/3 type coaxial cable : 0 to 400 m ( trimmer set to minimum )  
extended to 1000 m ( trimmer set to maximum )

AES3 on GOTHAM-GAC2 type cable : 0 to 400 m ( trimmer set to minimum )  
extended to 900 m ( trimmer set to maximum )

AES3 on BELDEN 9180 type cable : 0 to 300 m ( trimmer set to minimum )  
extended to 600 m ( trimmer set to maximum )

#### Equalizer length correction "Direct" mode

AES-3ID on PSF1/3 coaxial cable : adjustable 0 to 1000 m

AES3 on GOTHAM-GAC2 type cable : adjustable 0 to 800 m

AES3 on BELDEN 9180 type cable : adjustable 0 to 500 m

GPT : 560 ns typical at 48 kHz "Re-clock" mode  
620 ns typical at 44.1 kHz "Re-clock" mode  
800 ns typical at 32 kHz "Re-clock" mode  
40 ns typical "Direct" mode

### 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

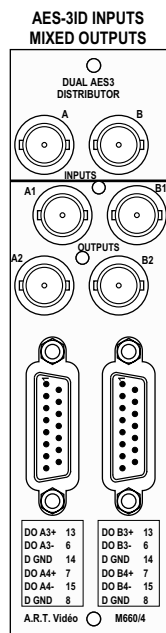
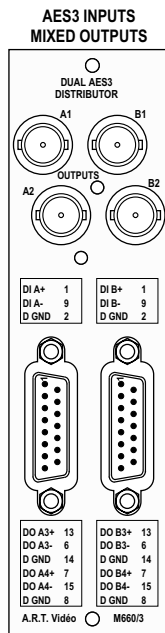
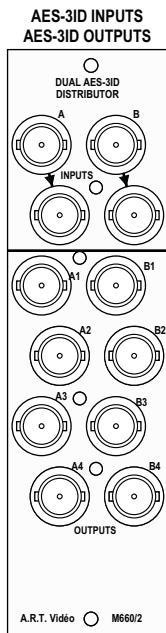
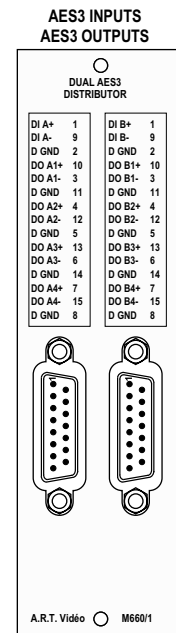
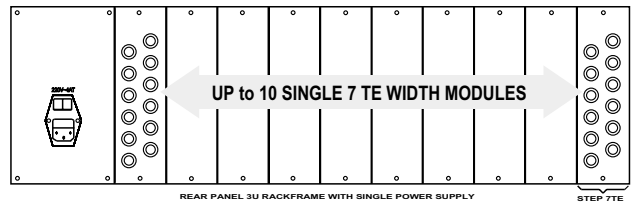
WEIGHT : < 15 Kg

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 PANELS

	INPUT(S)		OUTPUTS	
	AES3	AES-3ID	AES3	AES-3ID
M660/1	A		8xA	
	A - B		4xA - 4xB	
M660/2		A		8xA
		A - B		4xA - 4xB
M660/3	A		4xA	4xA
	A - B		2xA - 2xB	2xA - 2xB
M660/4		A	4xA	4xA
		A - B	2xA - 2xB	2xA - 2xB

### Ordering informations

#### 19" 3RU rackframe

M-ARD660/1 : dual digital reclocked distribution amplifier AES3 In and Out 3U module for 19" 3RU rackframe (Electronic plug-in board and rear panel)

M-ARD660/2 : dual digital reclocked distribution amplifier AES-3ID In and Out 3U module for 19" 3RU rackframe (Electronic plug-in board and rear panel)

M-ARD660/3 : dual digital reclocked distribution amplifier AES3 In and mixed Out 3U module for 19" 3RU rackframe (Electronic plug-in board and rear panel)

M-ARD660/4 : dual digital reclocked distribution amplifier AES-3ID In and mixed Out 3U module for 19" 3RU rackframe (Electronic plug-in board and rear panel)

B-ARD660 : dual digital reclocked distribution amplifier (Electronic plug-in board)

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