

## ALMA24/ALMACARD

### DIGITAL PROCESSORS

#### *Digital Loudspeaker Manager*



### PRODUCT OVERVIEW

ALMA24 and ALMAcard are digital loudspeaker managers including 2 audio inputs and 4 audio outputs, USB interface and 2 volume remote control ports (0-10VDC).

ALMA24 is a 1RU stand-alone processor, meanwhile ALMAcard is its card plug-in interface version, compatible with the DPA amplifier series (it is inserted into its rear panel interface card bay).

### KEY FEATURES

- 2 audio inputs x 4 audio outputs, all balanced
- 24 bits / 48 kHz DSP processing
- USB interface and EclerCOMM Manager compatibility
- DSP processing:
  - GAIN, MUTE, POLARITY, etc., per input or output
  - 8 parametric EQ filters per input / 8 parametric EQ filters per output
  - Butterworth, Linkwitz-Riley or Bessel Crossover filters at inputs and outputs (up to 48 dB / oct)
  - Inputs and outputs delay
  - Peak & RMS compressor / limiter at inputs & outputs, including make-up gain
  - 2 LINK groups (output channels link)
- System templates to create user configurations
- 20 user Presets
- Password protection system

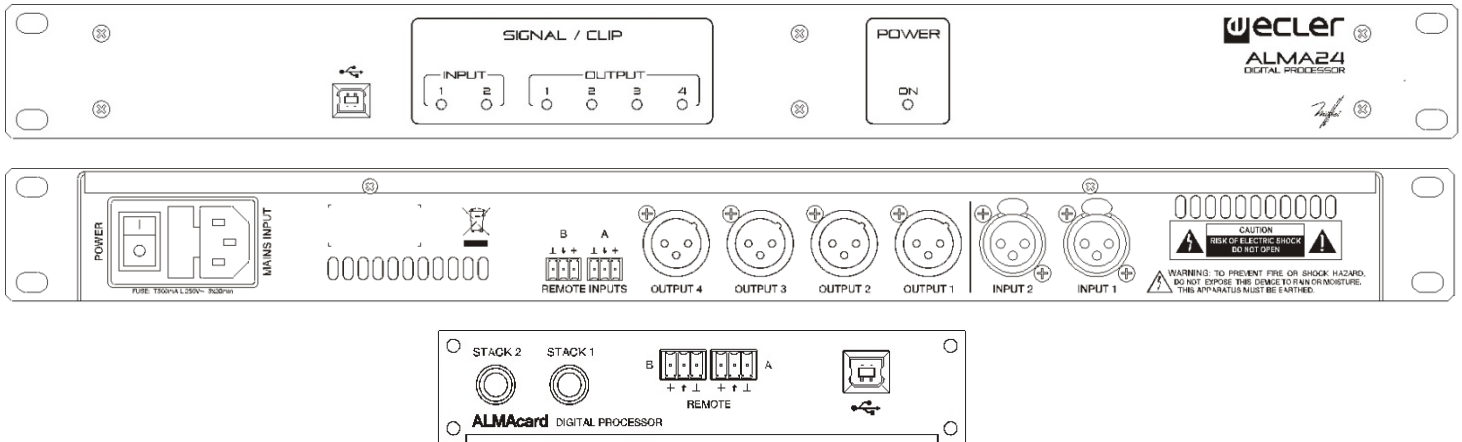
### APPLICATIONS

- Permanent installation management system
- Live sound. Monitor management
- Stereo bi-amped general applications

### CERTIFICATIONS

- EN60065:2014
- EN55103-1:2009
- EN55103-2:2009
- 2006/95/EC
- 2004/108/CE

MECHANICAL DIAGRAMS



TECHNICAL DATA

<b>Input section</b>	<b>ALMA24</b>
Sensitivity	0dBV
Input impedance	>20k electronically balanced
CMRR	>55dB (20Hz ÷ 20kHz)
Input connector	XLR3 female
<b>Output section</b>	
Nominal Output level	0dBV
Output impedance	300Ω electronically balanced
Output connector	XLR3 male
A/D & D/A	24bit / 48kHz
Frequency response	<10Hz ~ 20kHz
Output noise floor (FFT)	>115dB (from 20Hz to 20kHz)
THD + Noise	< 0.0028% (1kHz, 1Vrms)
Crosstalk	>95dB, 30Hz ÷ 20kHz
<b>Crossovers filters</b>	Inputs & Outputs
Slopes	6, 12, 18, 24 or 48dB/octave (Filter type dependant)
Type	Linkwitz-Riley, Butterworth or Bessel
<b>Delays</b>	
Input delay / step	1seg / 20,8µs
Output delay / step	1seg / 20,8µs
<b>EQ</b>	
Input EQ quantity	8 per channel
Output EQ quantity	8 per channel
<b>Parametric EQ</b>	
Type	Parametric EQ: Q:03 to 200 Low & High Shelf 6/12 dB/oct Low & High Pass 6/12 dB/oct All pass order 1 or 2
Gain	-60dB ~ +12dB step 0.1dB
Frequency	20Hz ÷ 20kHz
<b>Compressors</b>	
Input Compressor	Peak compressor / limiter
Output Compressor	Peak compressor / limiter RMS Compressor / limiter
Threshold	-36 / +12dBV
Attack time	0.1 ~ 500ms
Release time	1 ~ 5s
Ratio	1:1 to ∞ :1
<b>General</b>	
Mains	90÷264VAC 50/60Hz
Power consumption	16VA
Dimensions W x H x D	482.6 x 44 x 120mm
Weight	1.75kg

<b>Processing</b>		<b>ALMAcard</b>
	A/D & D/A	24 bit, 48kHz
	DSP	32/64 bits
	Latency	1ms
	Input / Output	2 Inputs (internal) / 4 outputs (2 internal & 2 external)
	Input Levels: Nominal / Maximum	0dBV / +12dBV
	Input attenuator	from $-\infty$ dB to 0dB
	Input Impedance	>20k $\Omega$ electronically balanced
	Stack Output impedance	300 $\Omega$ electronically balanced
	CMRR (20Hz - 20kHz)	>55dB
	THD + NOISE	<0.0028% (1KHz, 1Vrms)
	Output Noise Floor (FFT)	<-110dB (from 20Hz to 20KHz)
	Frequency Response (-0.3dB)	10Hz - 20kHz
	Crosstalk (20Hz-20kHz)	better than -60dB CH1 to CH2 & Stack1 to Stack2
	Maximum Input Delay	1s (343.4m) for each channel
	Maximum Output Delay	1s (343.4m) for each channel
	Delay resolution	20.83 $\mu$ s (7mm)
<b>Compressor / Limiter</b>		
	Threshold	from -36dBV to +12dBV
	Ratio	1:1 to $\infty$ :1 (limiter)
	Attack time	Auto or from 0.1ms to 500ms
	Release time	Auto or from 1ms to 5s
<b>High &amp; Low pass Crossover filters</b>		
	Butterworth	6 / 12 / 18 / 24 / 48 dB/oct
	Bessel	12 / 18 / 24 / 48 dB/oct
	Linkwitz-Riley	12 / 24 / 48 dB/oct
<b>Parametric EQ</b>		4 max. per input / 8 max. per output / Bypass
	Type	Parametric EQ: Q: 0.3 to 200 Low & High Shelf 6/12 dB/oct Low & High Pass 6/12 dB/oct
	Gain	-60dB ~ +12dB step 0.1dB
	Frequency	20Hz $\pm$ 20kHz
<b>Others</b>		
	Built In signal generator	Sine (20Hz to 20kHz) Polarity(20Hz to 20kHz) White Noise Pink Noise
	Signal Mute	Yes
	Signal Polarity Invert	Yes
	Analog Volume remote control (0-10VDC)	0V = no attenuation (0dB) +10V = full attenuation ( $-\infty$ )
	Connectivity	USB2.0 Full Speed compatible Can provide supply to the ALMAcard while programming software ECLERCOMM Manager
	Dimensions	143x75x30mm
	Weight	230g.