

# AP24<sup>3D</sup> Digital Cinema Audio Processor



The AP24<sup>3D</sup> is the most powerful cinema processor on the market specifically designed for an immersive cinema sound experience. The AP24<sup>3D</sup> receives and processes audio from multiple analog & digital audio sources and can be monitored and controlled from anywhere in the network. It supports the revolutionary Auro 11.1 sound format that offers moviegoers an immersive sound experience.

The AP24<sup>3D</sup> is one of the most flexible and powerful general-purpose audio processors available in the market. It was engineered to reproduce native content in Auro 11.1 immersive sound and also contains a unique upmixing feature for alternative content to be played in 11.1. The package of 24 digital and 24 analog outputs with full mapping towards the inputs channels makes it a very attractive audio processing solution. Each of these 24 channels include:

- 31 bands of third octave EQ
- Three bands of parametric EQ
- Channel gain & phase inversion control
- Individual bass & treble controls
- Variable delay line adjustable from 0 ms to 1000 ms

It also includes the Dirac Live<sup>®</sup> room optimization technology for correcting room modes and anomalies using high-resolution filter technology to further enhance the listening experience.

**BARCO**

Visibly yours

## Digital audio decoders

### Auro 11.1 for DC (future functionality)

- Auro 3D 11.1 / Auro 3D 13.1

### Dolby

- Dolby AC3

### DTS

- DTS Master Audio / DTS ES / DTS 5.1 / Neo:6

## Digital audio upmixing

### Auro 11.1 / Auro 13.1

- From stereo / 5.1 / 7.1 from any input source

## Signal inputs

### Digital audio inputs

- Channels: 16
- Connector: two DB25 (female) connectors (1-8) and (9-16)
- Digital format: AES/EBU
- Sample rates: 44.1kHz, 48kHz, 96 kHz and 192kHz

### Other digital audio inputs

- Connector: two TOSLINK (optical S/PDIF) and 1 coaxial (S/PDIF)

### Analog audio inputs

- Channels: 8 balanced that are fully routable as to output, can be connected unbalanced
- Connector: DB25 (female)
- Impedance: 10k ohms
- Sensitivity: 300mv rms

### Other analog audio inputs

- Channels: 2 stereo singleended and routable (non-sync) input pairs
- Connector: 4 RCA jacks
- Impedance: 10k ohms
- Sensitivity adjustable: -16dBv to -4dBv

### Microphone input

- Single channel -68dBv to -8dBv input (XLR female connector) with switchable +48V phantom power

### HDMI audio & video inputs

- Audio channels: up to 8 (PCM, DTS-HD Master Audio & Dolby AC3)
- Connectors: 5 HDMI connectors (ie: 4 switched as inputs and 1 as output video passed thru)
- HDMI 1.4a compliant digital audio with video pass-thru

## Signal outputs

### Digital audio outputs

- Channels: 24 (fully routable as to input)
- Connector: three DB25 (male) connectors (1-8), (9-16) and (17-24)
- Digital format: AES/EBU
- Sample rates: 48kHz, 96 kHz and 192kHz

## Analog audio outputs

- Balanced (can be connected unbalanced or single ended)
  - Channels: 24 (fully routable as to input), common mapping with digital outputs
  - Connectors: three DB25 (male) (1-8), (9-16) and (17-24)
  - Level: -10dBu with fader at 7, +26dBu max (balanced)
- Connector: 1 single ended RCA output, channel-selectable to drive an external monitor. Adjustable levels, to 300mv rms
- Connector: 1 single ended RCA output, summed output for assistive listening
  - Fixed level out, 300mv rms

### Expansion port

- Card slot for upgrade to object based immersive sound

## Audio EQ

### Dirac Live® room optimization

- 16-channel Dirac Live® room optimization
- Installer kit required to install Dirac Live®

### 3rd octave EQ

- 16 channels - 31 user-adjustable bandpass filters
- Adjustable in 0.5dB steps; total gain or loss of 6dB
- Frequencies range from 20Hz to 20kHz.

### Parametric

- 16 channels with 3 user-adjustable parametric filters for shaping subwoofer response.
- Adjustable from 20 to 200Hz, gain +/-6dB in 0.1dB steps
- Q range from 0.7 to 5.

## Hi/low/bandpass active crossovers

- Adjustable from 20Hz to 20kHz; adjustable slope of 6, 12, 18 or 24dB per octave

## Bass/treble tone control

- Adjustable +/-6dB at 150Hz and 5.5kHz

## Audio delays

### Individual channel delays

- 0 - 1000ms (0 - 120ms, provided the total for each 12 channel group does not exceed 353ms)

### Global delay

- 0 - 1000ms

## Automation inputs/outputs

### Connector

DB25(GPIO)

## Management

### Remote control

- 2 RS232 DB9s
- 10/100 ethernet
- Updated, controlled, and monitored via TMS using ethernet
- Smart phone remote control

## Setup/operation profiles

- Named profiles identifying inputs, output, filter and channel gain settings
- Touchscreen or automation format switching
- Export/load of user profile to additional cinema processors with identical room setups (via USB)

## E&OE (errors and omissions excepted)

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## Power requirements

100-240 VAC, 50-60Hz, auto-switching  
67W on 120V; 70W on 220V power consumption

## Hardware dimensions

3U 19" rack mount standard  
Imperial - 5.25"(H) x 19.0"(W) x 15.0"(D)  
Shipping weight: 31lbs  
Metric - 13,3 cm(H) x 48,3 cm(W) x 38,1 cm(D)  
Shipping weight: 14kg

