



# AP20 *audio processor*

**DATASAT DIGITAL ENTERTAINMENT** has combined its vast experience in conventional analog sound systems with state-of-the-art digital signal processing technology. The result: the AP20 Audio Processor. Offering an impressive collection of features packaged together in one box, the AP20 is one of the most flexible and powerful general-purpose audio processors available today.

**ENGINEERED TO DELIVER** precise reproduction of both analog and digital sources, the AP20 leverages the power of 6 Analog Devices 400MHz DSPs. The AP20 offers 16 channels of digital and 8 channels of analog inputs coupled to the 16 digital and 16 analog outputs. In addition to 1 S/PDIF and 2 TOSLINK inputs, the AP20 features 4 HDMI 1.3b inputs with Blu-Ray HD decoding and active loudspeaker crossovers.

#### **EACH OF THE 16 CHANNELS INCLUDE**

- 31 bands of 3rd octave equalization
- 3 bands of parametric equalization
- Channel gain & phase inversion control
- Individual Bass & Treble controls
- Variable delay line adjustable from 0ms to 1000ms

**ONE OF THE MOST COMPELLING FEATURES** of the AP20 is the inclusion of Dirac Live® room optimization technology. Dirac Live® is a state-of-the-art digital room correction technology that improves the listener experience by correcting for room modes and anomalies using high-resolution filter technology. Configure once and never touch again. The result - improved musical staging, clarity of dialogue and an enhanced listener experience.

**THE FUTURE OF SOUND IS HERE.**  
*hear it now.*

[www.datasatdigital.com](http://www.datasatdigital.com)

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## DIGITAL AUDIO DECODERS

### Dolby

- Dolby AC3

### DTS

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

## 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 single ended 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 1.3 compliant digital audio with video pass-thru

## SIGNAL OUTPUTS

### Digital Audio Outputs

- Channels: 16 (fully routable as to input)
- Connector: Two DB25 (Male) connectors (1-8) and (9-16)
- Digital Format: AES/EBU
- Sample Rates: 48kHz, 96 kHz and 192kHz

### Analog Audio Outputs

- Balanced (can be connected unbalanced or single ended)
  - Channels: 16 (fully routable as to input), common mapping with Digital Outputs
  - Connectors: Two DB25 (Male) (1-8) and (9-16)
  - 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

## POWER REQUIREMENTS

100-240 VAC, 50-60Hz, auto-switching  
60w power consumption

## HARDWARE DIMENSIONS

3U 19" rackmount standard  
Imperial - 5.25"(H) x 19.0"(W) x 15.0"(D) Shipping Weight: 20lbs  
Metric - 13.33 cm(H) x 48.25 cm(W) x 38.1 cm(D) Shipping Weight: 9kg

## 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 (ie: 0 to 1 second delay)

### Global Delay

- 0 - 250ms

Note: Total delay per channel not to exceed 1000ms (ie: 1 second)

## 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

All product specifications subject to change without notice. All trademarks are properties of their respective owners. Version 031512

8-Channel Version Also Available



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