



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.

SOUND DEFINED.
sound refined.



DATASAT
DIGITAL ENTERTAINMENT

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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)
- Electrical Format: AES/EBU
- Coding 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)
- Electrical Format: S/PDIF

Analog Audio Inputs

- Channels: 8 unbalanced that are fully routable as to output
- Connector: DB25 (Female)
- Impedance: 10k ohms
- Sensitivity: 300mv rms

Other Analog Audio Inputs

- Channels: 4 (2 x 2 stereo) single ended and routable (non-sync) input pairs
- Connector: 4 RCA jacks
- Impedance: 10k ohms
- Sensitivity: -10dBv to -20dB Adjustable

Microphone Input

- Single channel -40dB input (XLR male connector) with switchable +48V phantom power

HDMI Audio & Video Inputs

- Audio Channels: Up to 8 (DTS-HD Master Audio)
- Connectors: 5 HDMI connectors (ie: 4 switched as inputs and 1 as output – Video passed thru)
- Connectors: HDMI(4), TOSLINK and RCA S/PDIF
- 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)
- Electrical Format: AES/EBU
- Coding Format: AES/EBU
- Sample Rates: 44.1kHz, 48kHz, 96 kHz and 192kHz

Analog Audio Outputs

- Balanced
 - Channels: 16 (fully routable as to input)
 - Connectors: Two DB25 (Male) (1-16) and (9-16)
 - Level is adjustable from -26dBu to +10dBu
- Single Ended (Unbalanced)
 - Channels: 16 (fully routable as to input – common mapping with balanced connector)
 - Connectors: Two DB25 (Male) (1-16) and (9-16) (Same connector as balanced)
 - Connector: 1 single ended RCA output, channel-selectable to drive an external monitor. - Fixed Level Out
 - Connector: 1 single ended RCA output, summed output for the hearing impaired. - Fixed Level Out
 - Gain is adjustable from -26dBu to +6dBu

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 100Hz, 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
- Hinged at 1kHz; adjustable +/- 6dB

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

Connectors

2 RS232 DB9s
DB25(GPIO)
10/100 Ethernet
USB

MANAGEMENT

Remote Control

- Updated, controlled, and monitored via TMS using Ethernet
- Remote control (option) that controls volume, channel mutes, formats and automation

Setup/Operation Profiles

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

E&OE

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