DATASAT
RS20i

Derived from the Datasat AP20, our groundbreaking audio processor engineered for the requirements of professional motion picture exhibition, the new RS20i is designed and tailored to the high-end consumer audio market.

Combining Datasat's vast experience in conventional analog sound systems with state-of-the-art digital signal processing technology, the RS20i features 16 channels, 20 memory presets, three expansion bays for future development and is built with the discerning audio consumer in mind.

- Dirac Live® Room Optimization
- 16 Channels
- 20 Memory Presets for All Settings
- 3rd Octave, Parametric & Shelving EQ's
  (on all channels)

- Power Switch Logo Panel and Hidden USB
- Individual Channel and Global Delays
- Low, High or Bandpass (on all channels)
- VNC (Virtual Network Control) from
  Smart Phones, Tablets and Laptops

- Bass Management
- HDMI v1.4a for 3D Video Pass Through
- Front Panel and Chassis Design by Neal Feay Company

RS20i PRODUCT SPECIFICATIONS

Digital Audio Decoders
Dolby
- Dolby AC3

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

Signal Inputs
HDMI Audio & Video Inputs
- Audio Channels: Up to 8 (LPCM, DTS-HD Master Audio & Dolby AC3)
- Connectors: 5 HDMI connectors (4 switched as inputs and 1 as output)
- HDMI V1.4a compliant digital audio with video pass-thru

Digital Audio Inputs
- Channels: 16
- Connectors: Two DB25 Female (Ch1-8 and Ch9-16)
- Digital Format: AES/EBU
- Sample Rates: 44.1kHz, 48kHz, 96kHz and 192kHz

Other Digital Audio Inputs
- Connectors: Two TOSLINK (optical S/PDIF) and 1 coaxial (S/PDIF)

Analog Audio Inputs
- Channels: 8 balanced, can be connected unbalanced
- Connector: DB25 (Female)
- Impedance: 10k ohms
- Reference level: 300mV RMS

Other Analog Audio Inputs
- Channels: 2 stereo single ended input pairs
- Connectors: 4 RCA jacks
- Impedance: 10k ohms
- Sensitivity Adjustable: -16dBv to -4dBv

Microphone Input
- Single channel -68dBv to -8dBv input with switchable +48V phantom power
- Connector: XLR female

Signal Outputs
Digital Audio Outputs
- Channels: 16, fully routable as to input
- Connectors: Two DB25 Male (Ch1-8 and Ch9-16)
- Digital Format: AES/EBU
- Sample Rates: 48kHz, 96kHz and 192kHz

Analog Audio Outputs
- Channels: 16 (fully routable as to input), common mapping with Digital Outputs
- Balanced (can be connected unbalanced or single ended)
- Connectors: Two DB25 Male (Ch1-8 and Ch9-16)
- Level: 300mV 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 the hearing impaired. Fixed Level Out, 300mV RMS

Audio EQ
Dirac Live® Room Optimization
- 12-Channel Dirac Live® room optimization (16-channel Dirac to be available in future release)
- Dirac Live® Installer kit sold separately

3rd Octave EQ
- 16 channels - 31 user-adjustable bandpass filters
- Gain +/-6dB adjustable in 0.5dB steps
- 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 (12 and 24dB filters are Linkwitz-Riley crossover)

Bass/Treble tone control
- Adjustable +/-6dB per channel
- Corner frequency for bass adjustable from 50Hz to 300Hz
- Corner frequency for treble adjustable from 1.5kHz to 12.0kHz

Bass Management
- Full or adjustable high pass settings for screen and surround speakers
- Adjustable low pass filter for sub woofers
- Support for 0 to 4 sub woofers
- Optional phantom center

Audio Delays
Individual Channel Delays
- 0 - 1000ms

Global Delay
- 0 – 1000ms
  Note: Total delay per channel not to exceed 1000ms

Automation Inputs/Outputs

- Connector: DB25
- 16 bi-directional GPIO's, optically isolated, mute and fader inputs
- External +5v@140mA

Management

Remote Control

- RS232 DB9
- 10/100Mbps Ethernet
- Can be controlled by smart phone, iPad, Android based devices via iRule or VNC
- Crestron Integrated Device

Setup/Operation Profiles

- Configurable for up to 20 user defined named input selections. Input selections include processing options along with a selected named set for EQ and output channel profile
- Configurable for up 20 user defined named EQ sets which include definitions for Dirac optimization, third octave EQ, parametric EQ, bass and treble controls
- Configurable for up to 20 user defined output channel profiles which include output channel names, output routing, crossover high/low pass filters
- User defined input selections controllable by Touchscreen, GPIO, or ethernet
- Export/Load of user configurations via USB

Power Requirements

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

Hardware Dimensions

- Imperial - 5.25"(H) x 17.50"(W) x 15.63"(D) Shipping Weight: 30lbs
- Metric - 13.33 cm(H) x 44.45 cm(W) x 39.70 cm(D) Shipping Weight: 13.6kg
- 3U 19" rackmount with optional ears

Regulatory Compliance

- UL CB Scheme
- FCC Part 15, subpart B Class A
- CE
- RoHS compliant

E&OE

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