

# Monsalvat

PRO-6



## PRELIMINARY DATASHEET

Verity Audio's Pro-6 Digital Processor is a unique device combining the functions of a preamplifier, a DAC, a digital crossover and a time alignment device. Its design gives no ground to compromise, as per Verity's traditional philosophy. The processor's architecture features state-of-the-art ADC/DAC circuitry and total galvanic isolation between the analog and digital domains, ensuring they remain perfectly isolated. The Pro-6 reaches the highest performance a "pure analog" preamplifier can attain while still offering the best you could expect of a reference digital signal processor.

The Pro-6 includes both analog and digital inputs. Analog inputs are digitized at a very high sampling rate and fed into the digital domain for processing, while digital inputs are processed directly. The results of digital processing are then transferred to the analog domain to be reproduced with perfect integrity. All filtering and delays are executed in the digital domain for absolute precision.

The Pro-6 has three parts: the processor chassis, an external power supply chassis and a massive Verity anti-vibration platform. The chassis are built of thick anodized and machined aluminum plates.

The Pro-6 truly is a state of the art sound-processing device. It comes bundled with the Monsalvat loudspeaker system, offering an amazing sound performance that respects the natural scale of each instrument and preserves their respective coherence, fluidity and musicality throughout their entire dynamic scale. In short, this new and unique processor unquestionably sets the new standard of superior performance in loudspeaker systems.

## ANALOG DOMAIN

- Each analog output channel is completely independent and is driven by 8 parallel 32-bit DACs powered by 6 dedicated ultra-low-noise power supplies.
- Each analog input pair features a dedicated 32-bit ADC running at 384k samples per second and is powered by 5 dedicated ultra-low-noise power supplies.
- The analog and digital domains are separated through high-performance, high-speed galvanic digital isolators.
- A total of 48 ultra-low-noise power supplies power the analog domain.

## DIGITAL DOMAIN

- The digital domain is centered on a powerful high-speed FPGA capable of 800+ billion multiply-accumulate operations per second (800+ GMAC/s).
- The Pro-6 also includes a 400 MHz SHARC processor for enhanced DSP capability.
- The 32-bit processing architecture (up to 72 bits internal calculations @ 98 MHz), enables compromise-free digital signal processing and superb digital filters featuring perfect characteristics and an ultra-low noise floor.
- The digital domain supports additional digital crossover and digital delay capabilities.
- 3 ultra-low-noise power supplies power the digital domain.

## EXTERNAL POWER SUPPLIES

- In order to improve noise immunity, the Monsalvat Processor's main power supplies are located in a separate external stackable chassis. This chassis contains yet another 5 low-noise power supplies.

## INTERFACES

### ANALOG OUTPUTS

- Balanced outputs: 3 stereo pairs of male XLR connectors.
- Unbalanced outputs: 3 stereo pairs of RCA phono connectors.

### ANALOG INPUTS

- Balanced inputs: 1 stereo pair of female XLR connectors.
- Unbalanced inputs: 1 stereo pair of RCA phono connectors.

### DIGITAL INPUTS

- 1 USB 2.0 input accepts PCM data up to 32 bits at 44.1, 48, 88.2, 96, 176.4, 192, 352.8 and 384 kS/s and DSD at 2.822 MHz, 3.072 MHz, 5.644 MHz and 6.144 MHz.
- 2 AES/EBU on female XLR connector accept up to 24-bit PCM at 44.1, 48, 88.2, 96, 176.4 and 192 kS/s.
- 2 SPDIF on RCA phono connectors accept up to 24-bit PCM at 32, 44.1, 48, 88.2, 96, 176.4 and 192 kS/s.
- 1 I<sup>2</sup>S proprietary digital interface.

## CHASSIS

- The power supply requires 100-120 or 220-240VAC (set at the factory). Maximum power consumption is 160 watts.
- Processor:  
Dimensions: (W x D x H) 430 mm x 360 mm x 150 mm.  
Weight: 15 kg.
- Power supply:  
Dimensions: (W x D x H) 430 mm x 360 mm x 80 mm.  
Weight: 22 kg.