

4 in x 8 out Digital System Controller



DESCRIPTION

The DXP4800 Digital System Controller is a 4 in x 8 out Digital System Controller.

It provides all-digital signal processing for Community full-range and subwoofer loudspeaker systems. It can also be used as a generic DSP device for other loudspeaker products.

New system configurations are possible with the abundant number of audio channels. The 8 outputs allow Stereo 4-way, Stereo 3-way + Mono 2-way, 4 Bi-amp mixes and 8 channel zone capability. The DXP4800 enables the audio engineer to come up with creative system architectures via the 4 x 8 matrix feature. The matrix features allows any of the four inputs to be assigned or mixed to any output.

The audio converters are carefully selected for best performance in single reproduction, distortion and noise. Sampling rate is 96 kHz. Signal-to-Noise ratio is optimized at around 115dB (unweighted). The employed DSP is a true 32-bit (40-bit extended) floating point DSP (600MFLOPS peak). Floating point DSP prevents any induced noise introduced by the truncation error resulting from fixed point calculations. With the DSP word length of 40-bit, it further increases the dynamic range, hence preserving the original signal as much as possible. Its performance is far superior over the 24-bit fixed point DSPs which are widely used in the industry today.

The DXP4800 can be controlled remotely by a PC and/or a MIDI controller via the RS232 and/or MIDI interface. The firmware of the unit can be upgraded when new features become available. This eliminates frequent upgrade of the actual hardware for new software functions.

FEATURES:

- 4 Inputs and 8 Outputs Configurations
- Matrix Configurable
- 40-Bit Floating Point DSP
- High Performance 24-Bit Analog Converters
- 96kHz Sampling Rate
- Signal-to-Noise around 115dB
- Delay up to 0.5 second per channel
- DSP Algorithm Functions upgradeable
- CPU System Firmware upgradeable
- Remote control via PC and MIDI

BENEFITS:

- Floating-Point DSP preserves signal integrity without Fixed-Point truncations
- 40-Bit DSP results in higher dynamic range
- Lower system distortion and noise
- Easy software reconfiguration
- Abundant number of channels for different configurations
- Upgradeability prolongs product life
- Programs allow fast A/B comparison

Community Professional Loudspeakers
333 E. 5th Street, Chester, PA USA 19013
Tel: 610-876-3400 · Fax: 610-874-0190
www.loudspeakers.net



DXP4800

4 in x 8 out Digital System Controller



TECHNICAL SPECIFICATIONS

Inputs and Outputs

Input Impedance: >10k Ohm
 Output Impedance: 50 Ohms
 Maximum Level: +20dBu
 Type: Electronically balanced

Audio Performance

Frequency Response: +/- 0.1dB (20 to 20kHz)
 Dynamic Range: 115dB typ (unweighted)
 CMMR: >40dB (20 to 10kHz)
 Crosstalk: <-100dB
 Distortion: 0.001% (1kHz @ 18dBu)

Digital Audio Performance

Processor: 32-bit (40-bit extended)
 Sampling Rate: 96 kHz
 Analog Converters: High Performance 24-bit
 Propagation Delay: 3ms

Front Panel Controls

Display: 4 x 26 character Backlit LCD
 Level Meters: 5 Segment LED
 Buttons: 12 Mute Controls
 12 Gain / Menu Controls
 6 Menu controls
 Dial Encoder: Embedded Thumb Wheel

Connectors

Audio: 3-pin XLR
 RS232: Female DB-9
 Power: Standard IEC Socket

General

Power: 115/230VAC (50 / 60Hz)
 Dimensions: 19" x 1.75" x 8" (483 x 44 x 203mm)
 Weight: 10 lbs / 4.6 kg

Audio Controls Parameters

Gain: -40 to +15dB in 0.5dB steps
 Polarity: +/-
 Delay: Up to 500ms per I/O

Equalizers (6 per I/O)

Type: Parametric/Hi-shelf/Lo-shelf
 Gain: -30 to +15dB (0.5dB/step)
 Bandwidth: 0.02 to 2.50 octaves (Q = 0.5 to 72)

Crossover Filters (2 per Output)

Slopes: 6 to 24 dB/oct
 Filter Types: Butterworth/Bessel/Linkwitz-Riley

Limiters

Threshold: -20 to +20 dBu
 Attack: 03 – 100ms
 Release: 2 to 32X the attack time

System Parameters

No. of Programs: 30
 Configuration: Generic 2, 3, 4-Way
 Delay Units: ms, ft, m
 Frequency Modes: 36 steps/oct, 1Hz Resolution
 Security Locks: Any individual menu
 Channel Names: 6 characters

Community Professional Loudspeakers
 333 E. 5th Street, Chester, PA USA 19013
 Tel: 610-876-3400 · Fax: 610-874-0190
www.loudspeakers.net