SC 32
DIGITAL MATRIX PROCESSOR

dbx®
PROFESSIONAL PRODUCTS

Product Overview

Based on the principles of the dbx Zone Processing products, the SC 32 Digital Matrix Processor is the new flagship product for Digital Matrix Processing. Wizard driven configuration using HiQnet System Architect makes unprecedented DSP power, incredible routing flexibility and a rich palette of processing tools accessible with the minimum of training. The SC 32 represents the professional choice of foundation on which to build even the most demanding integrated system.

The SC32 has a total analog I/O count of 32, configurable in banks of eight. Eight analog input cards and eight analog output cards facilitate five different fully loaded configurations. Analog input cards accommodate a wide range of sources with mic/line switching and phantom power per input. Two high-speed options slots provide facility for adding forthcoming high bandwidth audio transport I/O cards. All of these features are housed in a sleek 2U rack chassis.

With dedicated DSP for common processing functions and insert positions for specialized processing, the SC 32 offers many processing functions including Advanced Feedback Suppression (AFS), Ambient Noise Compensation (ANC), priority ducking, parametric equalization (PEQ), delay and dynamics. The SC 32 has a diverse range of control options including HiQnet™ System Architect custom control panels, Ethernet, serial, contact closure, the popular ZC wall controllers and even automatically scheduled events. With so many methods of control, an SC system can truly be tailored to suit the needs and technical expertise of even the scrutinizing contractor.

Features

- **32 channels of analog I/O configurable in banks of 8**
- **Mic / Line and Phantom Power per channel on Analog Input Cards**
- **Ethernet / Serial Control**
- **Logic I/O**
- **Rich Palette of Processing Tools**
- **Wizard configuration**

- **Selectable DSP inserts on all inputs and outputs including: Advanced Feedback Suppression (AFS), Automatic Gain Compensation (AGC), Compression, De-Essing and Notch Parametric Equalization**
- **Complete routing flexibility**

- **Comprehensive configuration, control and monitoring from HiQnet System Architect**
- **Events Scheduler**
- **Optional ZC wall panel control**
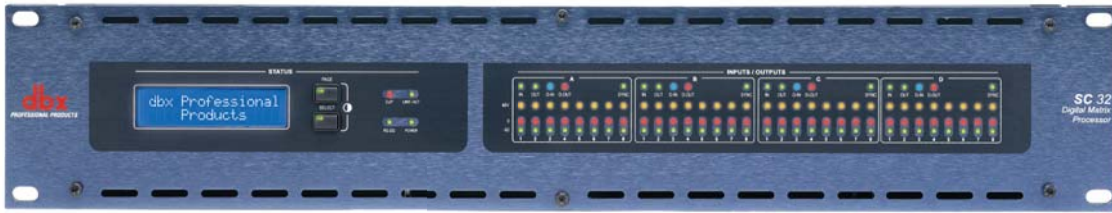- **Optional Media Engine**

Specifications

Analog Inputs: (8) per Input Card

Connectors:	Phoenix/Combicon
Mic/Line Inputs:	Nominal Gain 0 dB, electronically switchable up to +48 dB, in 6 dB steps
Type:	Electronically balanced, RF filtered
Impedance:	3.5 k ohm
Maximum Input Level:	+20 dBu
CMRR:	>40 dB typical, >55 dB at 1 kHz
Phantom Power:	+48 VDC, selectable per input

Analog Outputs: (8) per Output Card

Connectors:	Phoenix/Combicon
Type:	Electronically balanced, RF filtered
Impedance:	44 ohm
Max Output Level:	+20 dBu

System Performance

Dynamic Range:	108 dB unweighted, 111 dB A-weighted
Internal Processing:	32 bit floating point
THD + Noise:	0.004% typical at +4 dBu, 1 kHz, 0 dB input gain
Frequency Response:	20 Hz- 20 kHz, +/-0.50 dB
Sample Rate:	48 kHz

Control Ports
8 Inputs and 6 Outputs

Control Voltage Input:	0 to 4.5v
Control Line Impedance:	4.7 k ohm to +5V (2-wire mode), >1M ohm (3-wire mode)
Logic Output Voltage:	0 or +5V unloaded
Logic Output Impedance:	440 ohm
Logic Output Current:	10mA source, 60mA sink

Watchdog Output: Phoenix/Combicon for failsafe control Opto-isolated

Output Current:	14mA maximum
Withstanding voltage:	80V maximum (off)
Series Impedance:	220 ohm (isolated)

Input Signal Processing per Channel

EQ Type:	9 Band Parametric
Gate:	Downward Expander
Insert Processing:	Two selectable Input Processing blocks per input
Type:	Wire, Advanced Feedback Suppression, Automatic Gain Control, Compressor, De-Esser, Sub-Harmonic Synthesizer
Ducker:	Eight level priority ducker

Routing/Mixing: 32x1 mixer on every output zone

Output Signal Processing per Channel

Insert Processing:	One selectable Output Processing block per output.
Type:	Gain, Automatic Gain Control, Ambient Noise Compensation, Auto-Warmth
Bandpass Configurations:	1x1, 1x2, 1x3, 1x4, 2x2, 2x4, 2x6 and 2x8
Types:	Bessel 6, 12, 18 and 24 dB/Octave
	Butterworth 6, 12, 18 and 24 dB/Octave
	Linkwitz-Riley 12 and 24 dB/Octave
EQ Type:	6 Band Parametric
Limiter:	dbx PeakStopPlus™

Miscellaneous

Control:	Ethernet, RS-232, Optional dbx ZC Wall Panels
Power Requirements:	100V to 240V 50/60Hz, 75 Watts
Dimensions:	3.5'' x 19'' x 15''