SOUND TECHNOLOGY
Instrumentation and Automation

HI-PERFORMANCE PCSERIES DATA ACQUISITION/SOUND CARDS

SPECTRA SIGNAL ANALYSIS GROUP

SOUND TECHNOLOGY, INC., a spin-off from HP Labs and a world leader in test & measurement instrumentation for over 30 years is pleased to introduce a new advancing data acquisition hardware series to support our revolutionary Spectra pcSeries SofTest. The Model DAPCI-24AD-1 half size PCI add-in card is the ultimate solution for professional audio, recording, broadcast, film, live sound, or any professional - industrial PC-based test & measurement application. Ultra Hi-Speed (132Mb/s data transfer bursts); Ultra Hi-Resolution (24-bit precision); Data Acquisition (precision PC-based test & measurement: voltage -power - frequency - distortion meters). Advanced joint time-frequency analysis, gapless direct-disk data logging, fast 2D/3D transformations & processing.

Protect Your Investment - Flexible Architecture: The advanced FPGA-based engine delivers ultra-high speed data transfer rates up to 132Mbits/s and provides an unprecedented upgrade path to support our future "direct connect" breakout boxes, signal conditioning modules and other PC-based solutions under development.

Professional - Instrumentation Quality PC Interface: If your enterprise demands the latest advances in converter technology and professional performance -- ultra-high ADC-DAC bit precision/sampling resolution with superior noise rejection then our STI pcSeries plug-in card was designed for you.

Warning - this is truly not a toy! Designed for future growth -- hardware, firmware and software expansion, the latest generation converter technology was utilized for applications requiring ultra-high resolution, accuracy, speed and data integrity for mission critical seamless direct to disk recording - time capture, playback and precision test & measurement, advanced signal analysis & processing or integrated PC-based data acquisition applications.

SoundBLAZER 24/96

Technical Specs & Features . . .

Analog I/O

- Inputs: Two balanced XLR inputs (AC or DC coupled for low-frequency monitoring/analysis).
- Outputs: Two balanced XLR outputs.
- Rates: 8 kHz to 48 kHz sample rates.
- Bits: 24-bit ADC/DAC Pro converter technology.
- Level: +4 dBu or -10 dBV trim levels with 16 dB of headroom, level is software selectable.

Digital I/O

- Format: AES/EBU or S/PDIF XLR I/O format, software selectable.
- Isolation: Transformer coupled.
- DAM: Channel status, error reporting, and CRC generation supported for optional future DAM Monitor.
- Tx/Rx: 24-bit transmit and receive capable.
- Rates: 32, 44.1, 48, 64, 88.2 and 96 kHz sample rates.

Architecture

- Supports operation of up to 4 input channels and 4 output channels simultaneously and synchronized using both digital and analog I/O.
- Large 8 kByte sample buffers for each digital audio stream provide tolerance to extreme system latencies to maintain continuous audio.
- Re-configurable FPGA-based engine provides buffer management, data handling, and signal processing functions and an upgrade path to additional functionality via soft configuration over the PCI bus.
- On-board mixer provides the capability to mix either analog or digital input signals with both analog and digital outputs for record monitoring and "stand-alone" A/D and D/A conversion.
- Sample-accurate sample position reporting to host applications for precise synchronization and visual display.
- Multiple card synchronization capability.
- Multiple card resource sharing (one interrupt required for up to 4 audio adapters).

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Drivers

- Windows NT and Windows 95 drivers for Intel platforms.
- Windows NT for DEC Alpha platform - availability TBD.
- Multi-client MIDI capability allows synchronization of multiple applications to a single MIDI source (see MIDI option).

Software Utilities

- Mixer application provides access to trim level, digital I/O format plus status, clock source, rate settings, line level & volumes controls.
- Demo utility provides basic 24-bit recording and playback functionality.

Configuration

- One step Windows setup utility for driver installation and settings.
- Plug and play hardware installation.
- All hardware settings controlled through software-based mixer application - *NO JUMPERS OR DIP SWITCHES.*

Connections

- Bracket-mounted DB25 connector provides access to analog I/O and digital I/O.
- 2 meter break-out cable included with XLR's for analog and digital audio signals.
- Bracket-mounted DB15 connector provides access to dual MIDI I/O's and clock I/O signals (Optional).
- 5-pin female DIN connectors for MIDI signals, and 75-ohm BNC connectors for clock signals (Optional).
- Board mounted 2-pin headers for internal clock connections.

PCI Interface

- Supports burst transfers up 132 Mbytes / second.
- PCI revision 2.1 compliant.

General

- Form Factor: Half-size PCI add-in card.
- Shipping Weight: TBD.
- Delivery: 2-4 weeks A.R.O.

Add-on Options . . .

MIDI

- Dual independent MIDI I/O channel ports (Ch1/Ch2 Inputs & Ch1/Ch2 Outputs).
- Separate 64 byte buffers for receive and transmit on each port.
- Smart buffering/critical-message byte packing provide low-latency response, accurate MTC synchronization, and minimal system load.
- Support for up to 32 MIDI channels.

Sample Clock Generator

- Low-jitter, phase-locked loop design.
- High resolution tuning capability enables accurate generation of all standard frequencies and variable rates.

Synchronization

- Bracket mounted clock input and output for external connections.
- Board mounted clock input and output for internal connections and multiple card synchronization.
- Clock inputs support synchronization to word clock, word clock X 256, 13.5 MHz video clock, and 27 MHz video clock.
- Clock outputs provide word clock derived from selected clock source.
- AES/EBU or S/PDIF input and on-board oscillator provide additional clock sources.