

StudioCard® 2000

4 CHANNEL 20 BIT DIGITAL AUDIO



20 BIT MULTI-CHANNEL AUDIO FOR VIDEO EDITING



20 Bit Multi-channel studio quality audio with full video synchronization

The production tool that Non-Linear Video editing professionals are asking for.

The StudioCard® 2000 is the post-production sound card that does it all. Absolute audio/video lip sync makes synchronizing audio to video automatic. StudioCard 2000 is the only professional quality audio card to include NT drivers for both the Intel and Alpha platforms.

Add this card to your system and enter the next generation of audio for video..

StudioCard 2000 is the perfect buy for perfect sync.

Other key features for the Non-Linear Video editing professional include:

*Hardware locking to master video clocks
(54 MHz, 27 MHz or 13.5 MHz)*

Hardware genlock audio to composite video input

*Chase locking to SMPTE LTC timecode
for audio-follow-video. Ability to
generate and screen burn
SMPTE time code into video*

PCI Bus card - 32 bit data path

*Multimedia Windows NT drivers for
Intel and Alpha platforms ensure
software compatibility*

*4-channel digital audio on a single
card (4 in and 4 out)*

*Includes all cables to clock lock to common
video boards, including DPS, Matrox and others*

AES/EBU and S/PDIF digital I/O with XLR connectors

Supports 8 stereo tracks to/from hard disk

*Professional balanced inputs and
outputs, XLR connectors*

Dynamic range: 98 dB typical, 94 dB minimum

*Total Harmonic Distortion plus
Noise (THD+N) 0.003% typical, 0.005% max*

*Digital mixing of audio with 32-bit precision, powerful
multichannel digital mixer/patch bay software included
with StudioCard 2000*

*Multiple StudioCards can be clock
locked with sample accuracy*

Half size board for easy installation

CD-quality sound

MIDI Interface with 128 byte buffer

**ANTEX
ELECTRONICS**

StudioCard[®] 2000

4 CHANNEL 20 BIT DIGITAL AUDIO

Specifications

The StudioCard 2000 is compatible with a wide range of professional editing, special effects, and multimedia software and hardware. Now you can produce world class, award winning audio using your favorite applications and the StudioCard 2000.

System Requirements (minimum)

- IBM-compatible personal computer with PCI interface bus.
- Pentium 120 or equivalent.
- 16 MB of RAM—32 MB suggested.
- 1 G hard disk drive.
- SVGA display.
- Windows NT 4.0



Product ships with four cables, as follows:

SMB-to-2 pin cable. Connects PVR 27-MHz clock to the StudioCard AV Pro for AV sync internal to the PC
Cable assembly. 2 SMB-to-2 BNC to be mounted in an empty bracket at the back of the computer. Allows any video board's Hsync to be the clock reference for the audio, guaranteeing proper synchronization
Digital breakout cable. Digital I/O AES/EBU professional and S/PDIF consumer with XLR connectors; SMPTE Longitudinal Time Code (LTC) in and out with RCA connectors; both MIDI In and MIDI Out DIN connectors; and external clock input for 13.5-MHz, 27-MHz, 54-MHz or 24-48 kHz word clock and 256X word clock
Analog input/output cable. Four balanced in and four balanced out with XLR connections

Audio Input

Balanced Line (Qty=4)
 Recording Level +4 dBu nom./+24 dBu max. (20 dB headroom)
 24K ohms
 Input Impedance
 Connection 25-pin male D-connector or female XLR on supplied breakout cable

Unbalanced Line
 Recording Level -10 dBV nom./+10 dBV max.
 Input Impedance 12K ohms
 Connection 25-pin male D-connector or female XLR on supplied breakout cable

Digital (Qty=1)
 Pro Format AES/EBU: EIAJ CP-340
 Type I/IEC-958
 Consumer Format S/PDIF: EIAJ CP-340 Type II/IEC-958
 Connection Female XLR on breakout cable

Audio output

Balanced Line (Qty=4)
 Drive Level +4 dBu nom./+24 dBu max. (20 dB headroom)
 Output Impedance 100 ohms
 Load Impedance 600 ohms or greater
 Connection 25-pin male D-connector or male XLR on supplied breakout cable

Unbalanced Line
 Drive Level -10 dBV nom./+10 dBV max.
 Output Impedance 50 ohms
 Load Impedance 600 ohms or greater
 Connection Male XLR on supplied breakout cable

Digital (Qty=1)
 Pro Format AES/EBU/EIAJ CP-340 Type I/IEC-958
 Consumer Format S/PDIF: EIAJ CP-340 Type II/IEC-958
 Connection 15-pin female D-connector or male XLR on breakout cable

Analog Signal Quality

Measurement Conditions: 48 kHz sample rate, 0.5 dB full scale signal amplitude, 20 to 20 kHz using an Audio Precision
 A/D Conversion 20-bit, oversampling sigma delta
 D/A Conversion 20-bit, oversampling sigma delta
 Dynamic Range 98 dB typical/94 dB minimum from 20 to 20 kHz, input or output, A-weighted
 THD+N 0.003% typical, 0.005% maximum @ 1 kHz, input or output, A-weighted
 Frequency Response 20 to 20 kHz, ± 0.5 dB, input to output
 Crosstalk -88 dB @ 1 kHz, input to output

Sample Clock Generator

Type Low jitter phase-locked loop frequency synthesizer
 Reference Clock Sources On board oscillator, NTSC or PAL composite video, internal and external TTL clock from video capture board, digital audio input
 Host computer, SMPTE, MTC
 PLL Control Sources
 Sample Rates Variable from 6.25 kHz to 50 kHz
 External Clock Rates 24 kHz to 48 kHz word clocks, 24 kHz-54 MHz non-word clocks including 13.5 MHz, 27 MHz, and 54 MHz video pixel clocks

Signal Processor

Type 40MHz TMS320C31 32-bit floating-point DSP
 Tasks Real-time digital mixing and movement, PC messaging, system resource control (A/D, D/A, digital I/O, MIDI, and SMPTE)
 Options SPx[®] header provided
 DSP Program 16K x 32 zero wait state SRAM
 PC/DSP Shared 48K x 32 zero wait state SRAM
 Interface 32-bit PCI
 Data Path Memory-mapped buffers for audio data and messaging
 Tracks 8 stereo to/from disk

MIDI Interface

Type Buffered with hardware time stamping
 Input/Output Buffer Size 128 bytes
 Connections Optoisolated IN and OUT, 5-pin DIN

SMPTE Interface

Type LTC receiver and generator, VITC receiver and generator with screen burner, SMPTE to MTC converter, jam sync
 Frame Rates 30 Hz, 29.97 Hz (NTSC), 25 Hz (PAL), 24 Hz (film)
 Frame Modes Drop frame and non-drop frame
 Synchronization Rates 1/30 to 80 times normal rate

External Bracket Connections

25-pin Male D Audio inputs (4)/Female XLR on provided cable assembly
 Audio outputs (4)/Male XLR on provided cable assembly
 15-pin Female D AES/EBU and S/PDIF input/Female XLR on digital breakout cable (DIOC)
 AES/EBU and S/PDIF output/Male XLR on DIOC
 LTC I/O/ Female RCA (2) on DIOC
 MIDI I/O/ Female 5-pin DIN (2) on DIOC
 External TTL clock input/Female BNC on DIOC

Internal Connections

The following signals are available on board-mounted SMB connectors. A 75 ohm coaxial cable set is provided for connection to video in/video out, routing signals to BNC receptacles mounted in bracket punch out.

Internal Clock Input TTL compatible input used for synchronization to video capture clock and to synchronize multiple StudioCard AV Pro cards
 Internal Clock Output TTL compatible output used for synchronization of multiple StudioCard AV Pro cards as an external clock output
 Composite Video Input Input to VITC reader and horizontal sync extractor for genlocking, 75 ohm or 20 K ohm impedance
 Composite Video Output Output from VITC generator or loop through from video input with optional screen burn of SMPTE timecode, 75 ohm impedance

General

Size 7.2L x 3.74H inches
 Weight 7 oz.
 Operating Temp. 0 °C to 70 °C
 Power 1A @ +5V, 300 mA @ + 12V, 70 mA @ -12V

A board-to-board word clock cable is available for daisy chaining clocks in multiple board systems.



MADE IN U.S.A.

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