

SGI™ Digital Audio Option

Features

- Professional digital media option for Silicon Graphics O2, Octane, and Onyx2 visual workstations and for SGI Origin servers
- Supports AES and ADAT standards
- 24-bit resolution

Professional Digital Audio I/O

The Digital Audio option provides eight channels of 24-bit digital audio I/O via ADAT optical connectors and two channels of 24-bit AES/EBU I/O, providing up to 10 simultaneous channels as well as a sync input for an external video signal. In addition, the sample rates are adjustable and can be locked to external time bases or to the internal video timing reference bus.

Reliable Synchronization

Each of the half-size PCI cards provides an industry-standard video timing reference loop-through. The PCI Digital Audio card derives professional-quality audio timing from the video reference and can propagate it externally as an AES11 audio timing reference signal; it can also drive the internal video timing reference bus for use by other option cards and the baseline audio system. Of course, each PCI Digital Audio card can also generate its own crystal-based sample rates or derive sample rates from its external audio inputs. Every input can also utilize professional interface clock jitter attenuation to ensure reliable and precise timing.

Digital Audio Option for the Silicon Graphics® O2® Visual Workstation

The Digital Audio option extends the baseline analog audio capabilities of the O2 visual workstation to include professional digital audio capabilities. One Digital Audio board may be installed into the O2 visual workstation PCI expansion slot.

Digital Audio Option for SGI™ Origin™ Servers

The board also adds digital audio features to SGI™ Origin 200, SGI™ Origin 200 GIGACHannel™, and SGI™ Origin 2000 servers. Up to three Digital Audio boards may be installed into an Origin 200, Origin 200 GIGACHannel, or Origin 2000 module.

Expanded Capabilities for Silicon Graphics® Octane® and Onyx2™

The built-in digital audio capabilities of Octane and Onyx2 can be extended by adding up to three PCI Digital Audio boards. The added PCI cards, together with the baseline, boost Octane and Onyx2 into an awesome audio machine with 32 channels of ADAT optical I/O and eight channels of AES-3id I/O.



Digital Audio Option Technical Specifications

System Compatibility

The Digital Audio Board is a half-length PCI32 and occupies one PCI32 slot. It is compatible with the following workstations and servers:

- All O2 systems
- All Octane systems with the PCI cardcage option [marketing code: PCI-CARDCAGE]
- All Onyx2 and Origin 2000 systems with the PCI cardcage option [marketing code: XT-INT-PCI]
- All Origin 200 systems

Sampling Rates

- Generalized support of sample rates, including the following rates:
 - 32 KHz [AES only]
 - 44.1 KHz, including high-quality VCXO jitter attenuation
 - 48 KHz, including high-quality VCXO jitter attenuation

Genlock

- Locks to video via external reference or internal video sync
- Locks to audio references via external AESII input

Digital Audio Input Connectors

- AES-3rd 75 ohm BNC connector
- AESII-1992 synchronization input [for audio clock rates]
- AES3-1997 professional 2-channel 24-bit digital
- Compatible with IEC958, S/PDIF consumer 2-channel digital

Master Timebases

- Internal crystal oscillators
- Video reference [internal or external]
- AESII input
- ADAT optical input

Digital Audio Output Connectors

- AESII-1992 synchronization output
- AES3-1997 professional 2-channel 24-bit digital
- Compatible with IEC958, S/PDIF consumer 2-channel digital

Video Reference Loop-Through

- 75 ohm BNC connectors
- Black burst NTSC or PAL
- Accepts video reference input and generates AESII-1992 grade 2 [10 ppm] clocks

ADAT Optical Digital

- 12.8Mb/sec EIAJ RCZ-6901 fiber-optic connector, PCI I/O panel 8-channel, 24-bit
- Compatible with IEC958, S/PDIF consumer 2-channel digital equipment

Regulatory Requirements

- FCC Class A

Marketing Code

- PCI-AUD-8C-ALL

Audio Capabilities by Platform

	O2	Octane	Onyx2	Origin 200	Origin 2000
Built-in Capabilities	Analog audio only	Analog and digital audio	Analog and digital audio	None	None
ADAT Channels	0	8	8	0	0
AES Channels	0	2	2	0	0
Expansion Capabilities					
Maximum Number of Boards	1	3	3 per module	3 per module	3 per module
ADAT Channels	8	32	24 per module	24 per module	24 per module
AES Channels	2	8	6 per module	6 per module	6 per module



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