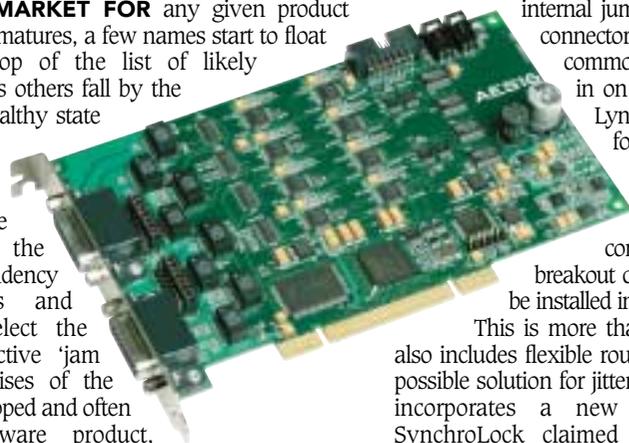# Lynx Studio Technology AES16

If you're using a computer for audio then you're spoilt for choice on ways to get the signals in and out of the box. ROB JAMES reports on a 192kHz multichannel AES-EBU audio interface from a manufacturer with very good form.

AS THE MARKET FOR any given product category matures, a few names start to float to the top of the list of likely candidates just as others fall by the wayside. This healthy state of affairs has finally arrived in the professional audio interface arena. Despite the lemming-like tendency of end users and specifiers to select the seemingly seductive 'jam tomorrow' promises of the latest, half-developed and often largely vapourware product, long-term survivors generally make a better offer. The downside is that it becomes increasingly difficult for promising newcomers to make their mark.

The older I get, the more I become inclined to let others experience the joys and frustrations of beta testing the latest, greatest, 'new kid on the block'. Lynx Studio Technology has paid its dues and established a not inconsiderable reputation for supplying classy audio interfaces for computers. The AES16 multichannel AES-EBU interface builds on the foundations laid by the Lynx 1 and 2, and others.

AES16 offers 16 channels of AES-EBU plus summing and routing flexibility in a single PCI card format at a reasonable UK£545 (plus VAT). Lynx has chosen to use an unusual 26-pin high-density female D-sub for the two connectors. For this reason, the AES16-XLR version with breakout cables to XLR for audio and BNC for Word clock is a good option at UK£615 (plus VAT). For DB25 cable applications, internal jumpers enable each of the two connectors to be set to either of the two common standards, 4 in, 4 out or 8 in on one and 8 out on the other. Lynx can supply optional cables for both.

A third variant, AES16-SRC adds eight channels of up to 3:1 sample rate conversion and comes with XLR breakout cables. Up to four AES16s can be installed in a single computer.

This is more than a simple interface card, it also includes flexible routing and mixing and offers a possible solution for jitter laden AES signals. The card incorporates a new Lynx technology called SynchroLock claimed to provide extreme jitter tolerance at all inputs.

Installation is simply a matter of identifying a suitable free PCI slot and, on a Windows machine, ignoring 'plug-and-play' and then launching the setup application. The drivers and application software are installed without even requiring a reboot. As with other Lynx cards the AES16 software is a simple application with three main windows.

Window One, Adapter, is where settings and status for the digital I-O and sample clock are made and viewed. Window Two, Record/Play Inputs and Routing, enables selection and level monitoring of the inputs to be sent to each of the AES16's recording and playback buses.

The third window, Mixer-Outputs, provides selection and level control of the 16 outputs. Up to four logical sources can be summed to each of the physical outputs using the four source selection buttons. Each source can be independently muted using the adjacent buttons.

Overall Mute and Dither are selected with the buttons below the faders. Levels can be digitally controlled by on-screen faders. To preserve maximum quality, leave the faders at the top, i.e. no attenuation. Meter range can be set globally at 70dB, 96dB or 114dB.

The software is essentially the same as that supplied with the Lynx 2 and this gives rise to the occasional anomaly both in the software and the manual. For example, it is possible to choose LTC as a valid time-code input although no physical connector exists. This aside, the software and drivers seem tidier and more solid than they were when I evaluated the Lynx 2.

Subjective performance is well up to expectation. With the introduction of this card Lynx now offers a comprehensive range of very high quality audio interfaces and a wide variety of cabling options to make installation relatively painless. Clever summing and routing add the icing to an already toothsome confection. ■

The ins and outs

Internal Word clock connectors enable sample accurate locking between cards or this can be achieved via the external connections. A single AES16 has on-board support for up to 16 channels of input and output at sample rates up to 192kHz. The AES16 supports the single-wire 192kHz 'standard' and is also compatible with existing two-wire AES-EBU devices, although two-wire mode reduces the channel count to 8. Drivers and supporting software is supplied for Windows 2000 and XP: MME, ASIO 2.0, WDM, DirectSound, Direct Kernel Streaming and GSIF. Mac support is currently limited to CoreAudio for OSX.

An expansion port called LStream enables daughter cards to be added to increase the number of inputs and outputs without using up PCI slots, although they do take up bracket space. These cards also work with the Lynx 2 and L22. LS-ADAT adds ADAT sync in and out ports and four Toslink ADAT lightpipe connectors for 16 channels of I-O at 48kHz.

S/MUX is supported and this offers 8 channels at 96kHz or four at 192kHz and supports format conversion between AES-EBU and ADAT. The LS-AES AES-EBU or SPDIF LStream interface module, adds four two-channel inputs and outputs supporting AES-EBU or SPDIF formats. Sample rate conversion is available on all inputs.

Like the AES16, the LS-AES is also compatible with Dolby Digital and DTS encoded formats and HDCD. At sample rates up to 96kHz, the LS-AES gives eight I-O channels in single-wire mode and four in dual-wire mode. At 192kHz, four channels of I-O are available in dual-wire mode and two channels in quad-wire mode. The LStream port can also be used for routing data to a second AES16, increasing the channel count to 32.

PROS Common features with other Lynx cards; high-quality audio and engineering; good balance of features.

CONS The three-window user interface can confuse at first; unusual choice of connectors.

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