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MOTU ANNOUNCES NEXT-GENERATION PCI AUDIO INTERFACE

MOTU 2408mk3 PCI AUDIO INTERFACE ADDS 96KHZ SUPPORT, DSP-DRIVEN MIXING AND MONITORING

CAMBRIDGE, MA – August 21, 2002. MOTU, Inc. ([www.motu.com](http://www.motu.com)) unveiled the 2408mk3, a single rack-space 96 kHz audio interface for Macintosh and Windows personal computers. This new expandable PCI card-based audio workstation represents a major upgrade to MOTU's popular 2408mkII interface, which the mk3 will replace at the same price (\$995 for a core system, \$695 for expansion I/Os). New features include 96 kHz analog and digital I/O, expansion up to 96 channels, DSP-driven mixing and monitoring, legacy I/O support, on-board SMPTE and video synchronization and software-switchable analog input levels.

### **96kHz recording in four different formats**

The rear panel of the 2408mk3 rack-mount interface provides the same connectors as previous models: 8 quarter-inch balanced TRS analog inputs and outputs, an extra pair of main analog outs (1/4-inch TRS), three banks of 8-channel ADAT optical "lightpipe", three banks of 8-channel Tascam TDIF, RCA S/PDIF (with an extra S/PDIF output), Audio Wire and BNC word clock I/O.

All four audio formats (analog, optical, TDIF and S/PDIF) support operation at 44.1, 48, 88.2 or 96 kHz. At high sample rates (88.2 or 96 kHz) the 2408mk3 provides up to 12 channels (three 4-channel banks) of digital input and output with Tascam TDIF devices, such as the Tascam DM-24 digital mixer, or any ADAT optical device that supports the S/MUX standard for 96 kHz lightpipe, such as Apogee Digital Inc.'s line of A/D and D/A converters.

### **Enhanced PCI-424 card offers expansion to 96 channels**

A 2408mk3 core system includes the PCI-424, an enhanced PCI audio interface card with a newly added fourth Audio Wire port that allows users to connect up to four MOTU audio interfaces to the computer. At 24 channels each, a fully expanded system provides 96 simultaneous input and output connections at 44.1 or 48 kHz. The PCI-424

is equipped with new FPGA (Field Programmable Gate Array) technology that is also capable of handling 96 channels (4 interfaces at 24 channels each) of 96 kHz audio. Four connected 2408mk3 audio interfaces provide a maximum of 64 simultaneous 96 kHz inputs and outputs (32 analog channels plus 32 digital channels).

Similar to previous models, the PCI-424 card also includes an 9-pin ADAT SYNC port, which allows sample-accurate transfers with other compatible digital devices or workstation software, such as Digital Performer.

### **DSP-driven mixing and monitoring**

The 2408mk3 is the ideal audio interface for computer-based studios where mixing is done entirely in the computer and for more advanced installations built around a digital mixer of any size. For the computer-based studio, the PCI-424 card features CueMix DSP™, a flexible DSP-driven mixing and monitoring matrix that provides the same near-zero monitoring latency as today's latest digital mixers. CueMix DSP™ allows 2408mk3 users to connect keyboards, synth modules, drum machines, and even effects processors and then monitor these live inputs with no audible delay and no processor drain on the host computer's CPU. The CueMix DSP engine resides on the PCI-424 card, so it works across all interfaces connected to the card. The included CueMix Console software provides an on-screen mixer that gives users hands-on control of their monitor mix, regardless of what audio software they prefer to use. Digital Performer users have the additional option of controlling CueMix DSP directly within Digital Performer's mixing environment.

For example, a user could connect the analog output of a synth module to a pair of 2408mk3 analog inputs, and then bus that signal via CueMix DSP to a pair of analog outputs connected to an effects processor – say a rack-mount reverb unit. The output from the effects processor could then be fed back into a second pair of 2408mk3 inputs (just like an aux return) and then routed to audio software running on the host computer, as well as the 2408mk3 main outputs. The result is that the user can apply hardware reverb to the live synth input, listen to it on their studio monitors with no audible delay while also recording it into their workstation software (either wet or dry), also with no delay. The performance of this signal path is the same as an aux send/return on a conventional digital mixer. CueMix DSP completely eliminates the buffer latency associated with host-based recording systems.

For users with fast computers, CueMix DSP can, of course, be combined with signals monitored through host-based effects as well. A fast computer allows users to drop their host buffer settings low enough to greatly reduce – and even eliminate – audible buffer latency. The combination of CueMix DSP and host-based monitoring with effects processing opens a new world of possibilities for MOTU workstation users.

### **Support for legacy MOTU PCI interfaces**

Users who already own a 2408mkII or other PCI-based MOTU recording system can connect their legacy MOTU hardware to the PCI-424 card of a new 2408mk3 system. All legacy PCI-based MOTU interfaces are supported, including the original 2408, 2408mkII, 1296,

1224, 24i and 308. Users can mix and match legacy interfaces with the new 2408mk3 as they please. Legacy interfaces can also take full advantage of the PCI-424's new CueMix DSP near-zero latency monitoring.

### **On-board SMPTE and video synchronization**

The 2408mk3 is the first audio interface to provide on-board video and SMPTE time code synchronization features. These features allow users to slave their 2408mk3 system to video, SMPTE time code or both, without a dedicated synchronizer. The PCI-424 card provides a DSP-driven phase-lock engine with sophisticated filtering that provides fast lockup times and sub-frame accuracy. Supported video formats include NTSC, PAL/SECAM or blackburst.

The pair of RCA S/PDIF jacks on the 2408mk3 rear panel can be switched via software to become a dedicated SMPTE time code (LTC) audio input and output. However, because the mk3's sync features are driven by the PCI-424 on-board DSP, any analog input can be chosen for SMPTE input, and any active channel, digital or analog, can be chosen as a SMPTE time code output.

The included software also provides a complete set of tools to generate SMPTE for striping, regenerating or slaving other devices to the computer. Like CueMix DSP, the synchronization features are cross-platform and compatible with all audio sequencer software.

### **Additional Feature highlights**

The MOTU 2408mk3 has the following additional features:

- Software switchable input levels – users can choose +4 or -10dB operation separately for each analog input pair via software.
- Cable length of up to 50 feet – The 2408mk3 audio interface connects to the PCI-424 card, installed in the computer, via a standard 6-pin IEEE 1394 cable. The PCI-424 supports cable lengths of up to 50 feet. Long cable runs such as this are often necessary in studios where the computer is housed in a separate room than the rack-mounted 2408mk3 audio interface.
- Five-segment metering for all analog inputs/outputs – The front-panel metering has been expanded in the mk3 to provide dedicated five-segment level meters for every analog input and output.
- Separate Volume knobs for headphones and main outs – Separate front-panel volume knobs provide independent volume control for the front-panel headphone jack and the rear-panel main outputs.
- Across-the-board software compatibility – the 2408mk3 ships with a complete set of drivers for Macintosh and Windows 98SE/Me/2K/XP and it is compatible with virtually all audio software on both platforms.

- AudioDesk software – A 2408mk3 core system includes AudioDesk, MOTU's sample-accurate workstation software for Mac OS with 24-bit recording/editing and 32-bit automated mixing, processing and mastering.

The MOTU 2408mk3 is expected to ship in the fourth quarter of 2002.

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