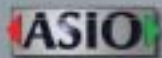


E-MU Digital Audio Systems

E-MU'S new Digital Audio Systems deliver everything you need to produce audio on a PC with professional results – 24-bit/192kHz converters, hardware-accelerated effects and mixing, comprehensive sync options and seamless compatibility with your favorite PC audio/sequencer software. E-MU Systems has teamed up with the Creative Advanced Technology Center, a world leader in ASIC and algorithm development for PC audio, to develop the new line of Creative Professional hardware interfaces that stand toe-to-toe with the most advanced and expensive audio systems in the world. E-MU offers three Digital Audio Systems: the E-MU 1820M, 1820 and 1212M, each matched with I/O and sync options to suit the specific needs of musicians, recording engineers and sound designers.

All three Digital Audio Systems ship with a PCI card that features ADAT, S/PDIF and FireWire® interfaces, as well as connectivity to a family of internal and external I/O and sync options. Whether you are recording full-blown productions or running virtual instruments on a dedicated computer, E-MU's Digital Audio Systems deliver everything needed to create professional-quality music on your PC at a price that will change your expectations of desktop recording forever.

- Features mastering-grade 24-bit, 192kHz converters – the same A/D converters used in Digidesign®'s flagship ProTools® HD I/O Interface
- E-DSP 32-bit Multi-effects Processor offers you over 20 hardware-accelerated effects (over 500 presets) with no CPU overhead – plug-in architecture allows you to add new effects as needed
- 32 channels of zero latency hardware mixing/monitoring with super-flexible virtual patchbay – no external mixer needed
- Compatibility with most popular audio/sequencer applications with ultra-low latency WDM, DirectSound® and ASIO™ 2.0 Drivers
- Powerful software studio package included



E-MU 1820™



24-bit/192kHz
160-pin PCI Connector

I/O Configuration:

- Two TFPro™ Mic/Line/Hi-Z preamps (w/48V phantom power)
- Six 1/4" Balanced Inputs
- Eight 1/4" Balanced Outputs
- Turntable Input (w/ground lug and hardware RIAA preamp)
- 24-bit/192kHz ADAT In/Out (switchable to S/PDIF)
- 24-bit/96kHz coaxial S/PDIF In/Out (switchable to AES/EBU)
- 24-bit/96kHz optical S/PDIF Out (switchable to AES/EBU)
- Two sets of MIDI In/Out
- Four stereo 1/8" Speaker Outputs (configurable from stereo to 7.1)
- Stereo Headphone Output
- FireWire® Interface

Sync Configuration:

- Word Clock In/Out
- SMPTE In/Out
- MTC Out

E-MU 1820



24-bit/192kHz

I/O Configuration:

- Two TFPro Mic/Line/Hi-Z preamps (w/48V phantom power)
- Six 1/4" Balanced Inputs
- Eight 1/4" Balanced Outputs
- Turntable Input (w/ground lug and hardware RIAA preamp)
- 24-bit/192kHz ADAT In/Out (switchable to S/PDIF)
- 24-bit/96kHz coaxial S/PDIF In/Out (switchable to AES/EBU)
- 24-bit/96kHz optical S/PDIF Out (switchable to AES/EBU)
- Two sets of MIDI In/Out
- Four stereo 1/8" Speaker Outputs (configurable from stereo to 7.1)
- Stereo Headphone Output
- FireWire® Interface

E-MU 1212™



24-bit/192kHz
160-pin PCI Connector

I/O Configuration:

- Two 1/4" Balanced Inputs
- Two 1/4" Balanced Outputs
- 24-bit/192kHz ADAT In/Out (switchable to S/PDIF)
- 24-bit/96kHz S/PDIF In/Out (switchable to AES/EBU)
- MIDI In/Out
- FireWire® Interface

Total Analog and Digital Connectivity

AudioDock M

Front

Two premium TFPro™ Mic Preamps with Neutrik® Connectors, 48V Phantom Power and 40dB of Input Gain control



MIDI, Sample Rate and Sync Source Indicators

MIDI In/Out 1 Optical S/PDIF Output Stereo Headphone Output

Back

Six balanced 1/4" Analog Inputs (24-bit/192kHz)



Stereo Turntable Input with RIAA Preamp and Ground

4 Stereo 1/8" Speaker Outputs (configurable from stereo to 7.1)

EDI Connector to E-MU 1010 PCI Card (no external power required)

Eight balanced 1/4" Analog Outputs (24-bit/192kHz)

MIDI In/Out 2

E-MU 1010 PCI Card

Sync Daughter Card

E-MU 0202 I/O Daughter Card

EDI Connector to E-MU AudioDock M

Coaxial S/PDIF In and Out

ADAT In and Out (192kHz compatible) - switchable to optical S/PDIF

FireWire® Port for Video Capture, connecting peripheral devices and/or additional hard drives



Word Clock Sync In and Out

SMPTE Sync In and Out

MTC Out



Two balanced 1/4" Analog Inputs (24-bit/192kHz)

Two balanced 1/4" Analog Outputs (24-bit/192kHz)

MIDI In/Out



Integrated Hardware-accelerated Effects, Mixing and Monitoring

E-MU PatchMix DSP

Toolbar

Quick access to your most-used functions (e.g. Show/Hide, Session and effects management, etc.)

Viewer Window (3 Modes)

- Effects Editor lets you view all effects parameters for quick editing
- Input/Output Patchbays give you an instant overview of your I/O configurations at a glance

Effects Presets

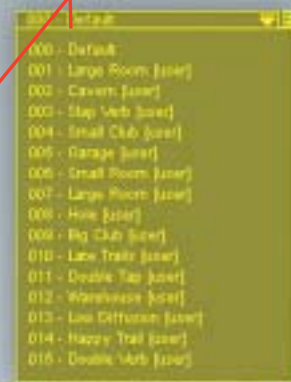
Save your favorite effects parameter settings as presets within the effects plug-in

Audio Source

A Patchstrip can be fed by any external analog or digital input, as well as internal host sources from your audio application via ASIO™ or DirectSound®

Insert Chain

The Insert Chain allows you to easily route a channel of audio to any effects plug-in, physical output, or virtual output (ASIO) in any order (i.e. monitor your recording with effects but record dry). You can also send and return audio to/from your outboard gear like a traditional insert



Main & Auxiliary Buses

Offer you the same flexibility as the Insert Chain above to route your Aux Buses and Main Bus to effects plug-ins, physical outputs and virtual outputs (ASIO)

Sync

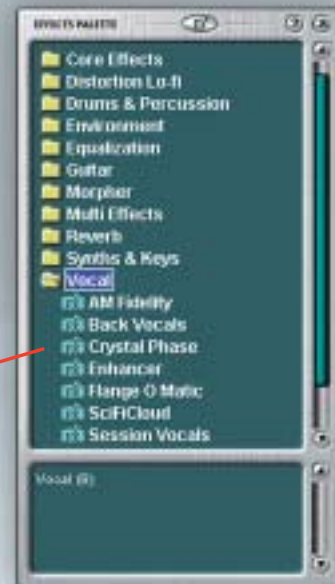
Choose from Internal Clock, External ADAT, or External S/PDIF sync to synchronize your entire digital studio

Aux Sends

The two Aux Sends let you patch your audio to Busses for effects processing or submixing before hitting your audio recorder (perfect for headphone cuemixes)

Effects Palette (over 500 Effects Presets)

Puts all your E-DSP effects plug-ins at your fingertips, letting you effortlessly drag-and-drop effects onto Patchstrip Inserts and Aux/Main Buses, as well as create and organize new effects presets and configurations – you can even chain multiple effects plug-ins and save them together to create specialized effects (e.g. vocal channel, guitar recording channel)





1820M Specifications

General

- Sample Rates: 44.1, 48, 96, 192kHz from internal crystal or externally supplied clock
- Bit Depth: 16 or 24 bits
- PCI Bus-Mastering DMA subsystem reduces CPU usage
- Zero-latency direct hardware monitoring w/effects

Analog Line Inputs (6)

- Type: servo-balanced, DC-coupled, low-noise input circuitry
- Level (software selectable):
 - Professional: +4dBu nominal, 20dBu maximum (balanced)
 - Consumer: -10dBV nominal, 6dBV maximum (unbalanced)
- Frequency Response: +/- .05dB, 20Hz - 20kHz
- THD+N (1kHz at -1dBFS): -110dB (.0003%)
- SNR (A-weighted): 120dB
- Dynamic Range (1kHz, A-weighted): 120dB
- Stereo Crosstalk (1kHz at -1dBFS): < -115dB
- Common-Mode Rejection (60Hz): > 40dB

Analog Line Outputs (8)

- Type: balanced, low-noise, 2-pole low-pass differential filter
- Level (software selectable):
 - Professional: +4dBu nominal, 20dBu maximum (balanced)
 - Consumer: -10dBV nominal, 6dBV maximum (unbalanced)
- Frequency Response: +0.0/-0.35dB, 20Hz - 20kHz
- THD+N (1kHz at -1dBFS): -105dB (.0006%)
- SNR (A-weighted): 120dB
- Dynamic Range (1kHz, A-weighted): 120dB
- Stereo Crosstalk (1kHz at -1dBFS): < -115dB

Combo Microphone Preamp/Line Inputs (2)

- Type: TFPro™ combination microphone preamp and line input
- Frequency Response: +0.8/-0.1dB, 20Hz - 20kHz
- Stereo Crosstalk (1kHz at min gain, -1dBFS): < -120dB
- Line Input:
 - Gain Range: -12 to +28dB
 - Max Level: +17dBV (19.2dBu)
 - THD+N (1kHz at -1dBFS, min gain): -100dB (.001%)
 - Dynamic Range (A-weighted, min gain): 107dB
 - SNR (A-weighted, min gain): 107dB
 - Input Impedance: 10k ohm
 - Common-mode Rejection Ratio (60Hz): > 40dB
- Microphone Preamp/Line Input
 - Gain Range: +10 to +50dB
 - Max Level: -12dBV (-9.8 dBu)
 - THD+N (1kHz at -1dBFS, min gain): -100dB (.001%)
 - SNR (A-weighted, min gain): 106dB
 - Input Impedance: 330 ohms
 - Common-mode Rejection Ratio (60Hz): > 80dB

Headphones (stereo)

- Frequency Response: +0.0/-0.35dB, 20Hz - 20kHz
- THD+N (1kHz, max gain)
 - 33 ohm load: -69dB (0.035%)
 - 600 ohm load: -94dB (0.002%)
- SNR (A-weighted): 117dB
- Dynamic Range (A-weighted): 117dB
- Stereo Crosstalk (1kHz at -1dBFS, 600 ohm load): < -100dB
- Maximum Output Power: 500 mW
- Output impedance: 22 ohms
- Gain Range: 85dB

Phono Input (stereo)

- RIAA Equalized phono input
- Frequency Response: +/-0.5dB, 50Hz - 20kHz
- THD+N (1kHz, 10mV RMS unbal input): -76dB (.015%)
- SNR (10mV RMS unbal input, A-weighted): 90dB
- Stereo Crosstalk (1kHz at -1dBFS): < -80dB
- Maximum level (1kHz)
 - Professional: 80 mV RMS
 - Consumer: 20 mV RMS
- Input capacitance: 220 pF
- Input impedance: 47K ohm

Digital I/O

- S/PDIF (stereo)
 - 2 in/2out coaxial (transformer coupled)
 - 2 in/3 out optical (software switched with ADAT)
 - AES/EBU or S/PDIF format (software controlled)
- ADAT
 - 8 channels, 24-bit @ 44.1/48kHz
 - 4 channels, 24-bit @ 96kHz (S-Mux compatible)
 - 2 channels, 24-bit @ 192kHz
- Firewire
 - 400 Mbps 1394a port (6-pin)
 - Compatible with DV cameras, storage peripherals, etc.)
- MIDI
 - 2 in, 2 out

Synchronization

- Internal crystal sync at 44.1, 48, 96, 192kHz
- External sample rate sync
 - ADAT
 - S/PDIF (opt. or coax)
 - Word clock (75 ohm termination, switchable)
- SMPTE LTC Timecode
 - Converts between longitudinal time code (LTC) to MIDI time code (MTC)
 - Regen, stripe, and conversion modes
 - 24, 25, 30 drop, 30 non-drop frames/sec
 - Compatible with 29.97 fps timecode
 - Input level: 0.5 - 4V p-p
 - Output levels: +4dBu, -10dBV (software selectable)
 - Input Impedance: 10K ohms

Package Includes

- E-MU® 1010 PCI card
- E-MU AudioDock M
- E-MU Sync daughter card
- EDI (E-MU Digital Interface) cable (3 meters)
- Sync cable
- Mini-DIN MIDI adapter cable
- Headphone splitter cable
- PC power cable
- Quick Start guide
- Operation Manual on CD-ROM
- Creative Professional software CD-ROM
 - Windows 2000 and XP Drivers
 - E-MU PatchMix DSP
 - E-MU E-DSP effects Library
- Audio software package on CD-ROM

Minimum System Requirements

- Genuine Intel® Pentium® III or AMD® K6® class processor or higher operating at 500MHz or faster
- Intel®, AMD® or 100% compatible motherboard & chipset
- 128MB System RAM
- 500MB of free hard disk space for full installation
- Windows® 2000 SP 4, Windows® XP SP 1 or greater
- PCI 2.1 compliant slot for E-MU® 1010 PCI card
- Adjacent PCI slot for E-MU® sync daughter card
- CD-ROM or DVD-ROM drive required for software installation
- X VGA Video (1024 X 768)



1820 Specifications

General

- Sample Rates: 44.1, 48, 96, 192kHz from internal crystal or externally supplied clock
- Bit Depth: 16 or 24 bits
- PCI Bus-Mastering DMA subsystem reduces CPU usage
- Zero-latency direct hardware monitoring w/effects

Analog Line Inputs (6)

- Type: servo-balanced, DC-coupled, low-noise input circuitry
- Level (software selectable):
 - Professional: +4dBu nominal, 20dBu maximum (balanced)
 - Consumer: -10dBV nominal, 6dBV maximum (unbalanced)
- Frequency Response: +0.0/-0.2dB, 20Hz - 20kHz
- THD+N (1kHz at -1dBFS): -102dB (.0008%)
- SNR (A-weighted): 111dB
- Dynamic Range (1kHz, A-weighted): 112dB
- Stereo Crosstalk (1kHz at -1dBFS): < -115dB
- Common-Mode Rejection (60Hz): > 40dB

Analog Line Outputs (8)

- Type: balanced, low-noise, 3-pole low-pass differential filter
- Level (software selectable):
 - Professional: +4dBu nominal, 20dBu maximum (balanced)
 - Consumer: -10dBV nominal, 6dBV maximum (unbalanced)
- Frequency Response: +0.0/-0.8dB, 20Hz - 20kHz
- THD+N (1kHz signal at -1dBFS): -98dB (.0013%)
- SNR (A-weighted): 112dB
- Dynamic Range (1kHz, A-weighted): 112dB
- Stereo Crosstalk (1kHz at -1dBFS): < -115dB

Combo Microphone Preamp/Line Inputs (2)

- Type: TFPro™ combination microphone preamp and line input
- Frequency Response: +0.8/-0.1dB, 20Hz - 20kHz
- Stereo Crosstalk (1kHz min gain, -1dBFS): < -120dB
- Line Input:
 - Gain Range: -12 to +28dB
 - Max Level: +17dBV (19.2dBu)
 - THD+N (1kHz at -1dBFS, min gain): -94dB (.002%)
 - Dynamic Range (A-weighted, 1kHz min gain): 100dB
 - SNR (A-weighted, min gain): 100dB
 - Input Impedance: 10K ohm
 - Common-mode Rejection Ratio (60Hz): > 40dB
- Microphone Preamp/Line Input
 - Gain Range: +10 to +50dB
 - Max Level: -12dBV (-9.8dBu)
 - THD+N (1kHz at -1dBFS, min gain): -95dB (.0018%)
 - SNR (A-weighted, min gain): 100dB
 - Input Impedance: 330 ohms
 - Common-mode Rejection Ratio (60Hz): > 80dB

Headphones (stereo)

- Type: linear power amplifier
- Frequency Response: +0.0/-0.35dB, 20Hz - 20kHz

- THD+N (1kHz, max gain)
 - 33 ohm load: -70dB (0.032%)
 - 600 ohm load: -85dB (0.006%)
- SNR (A-weighted): 112dB
- Dynamic Range (A-weighted): 112dB
- Stereo Crosstalk (1kHz at -1dBFS, 600 ohm load): < -100dB
- Maximum Output Power: 500mW
- Output impedance: 22 ohms
- Gain Range: 85dB

Phono Input (stereo)

- Type: RIAA equalized phono input
- Frequency Response: +/-0.5dB, 50Hz - 20kHz
- THD+N (1kHz, 10mV RMS unbal input): -76dB (.015%)
- SNR (10mV RMS unbal input, A-weighted): 90dB
- Stereo Crosstalk (1kHz at -1dBFS): < -80dB
- Maximum level:
 - Professional: 80mV RMS
 - Consumer: 20mV RMS
- Input capacitance: 220 pF
- Input impedance: 47K ohm

Digital I/O

- S/PDIF (stereo)
 - 2 in/2out coaxial (transformer coupled)
 - 2 in/3 out optical (software switched with ADAT)
 - AES/EBU or S/PDIF format (software controlled)
- ADAT
 - 8 channels, 24-bit @ 44.1/48kHz
 - 4 channels, 24-bit @ 96kHz (S-Mux compatible)
 - 2 channels, 24-bit @ 192kHz
- Firewire
 - 400 Mbps 1394a port (6-pin)
 - Compatible with DV cameras, storage peripherals, etc.)
- MIDI
 - 2 in, 2 out

Synchronization

- Internal crystal sync at 44.1, 48, 96, 192kHz
- External sample rate sync
 - ADAT
 - S/PDIF (opt. or coax)

Package Includes

- E-MU® 1010 PCI card
- E-MU AudioDock
- EDI (E-MU Digital Interface) cable (3 meters)
- Headphone splitter cable
- PC power cable
- Quick Start guide
- Operation Manual on CD-ROM
- Creative Professional software CD-ROM
 - Windows 2000 and XP Drivers
 - E-MU PatchMix DSP
 - E-MU E-DSP effects Library
- Audio software package on CD-ROM

Minimum System Requirements

- Genuine Intel® Pentium® III or AMD® K6® class processor or higher operating at 500MHz or faster
- Intel®, AMD® or 100% compatible motherboard & chipset
- 128MB System RAM
- 500MB of free hard disk space for full installation
- Windows® 2000 SP 4, Windows® XP SP 1 or greater
- PCI 2.1 compliant slot for E-MU® 1010 PCI card
- CD-ROM or DVD-ROM drive required for software installation
- X VGA Video (1024 X 768)



1212M Specifications

General

- Sample Rates: 44.1, 48, 96, 192kHz from internal crystal or externally supplied clock
- Bit Depth: 16 or 24 bits
- PCI Bus-Mastering DMA subsystem reduces CPU usage
- Zero-latency direct hardware monitoring w/effects

Analog Line Inputs

- Type: servo-balanced, DC-coupled, low-noise input circuitry
- Level (software selectable):
 - Professional: +4dBu nominal, 20dBu maximum (balanced)
 - Consumer: -10dBV nominal, 6dBV maximum (unbalanced)
- Frequency Response: +/- .05dB, 20Hz - 22kHz
- THD+N (1kHz signal at -1dBFS): -110dB
- SNR (1kHz signal at -1dBFS): 120.7dB, A-weighted
- Dynamic Range: 121dB, A-weighted
- Channel Crosstalk: < -125dB, 1kHz signal at -1dBFS

Analog Line Outputs

- Type: DC-coupled, low-noise, 2-pole low-pass differential filter
- Level (software selectable):
 - Professional: +4dBu nominal, 20dBu maximum (balanced)
 - Consumer: -10dBV nominal, 6dBV maximum (unbalanced)
- Frequency Response: + 0.0/-0.35dB, 20Hz - 22kHz
- THD+N (1kHz signal at -1dBFS): -105dB
- SNR (1kHz signal at -1dBFS): 121.8dB, A-weighted
- Dynamic Range: 123.6dB, A-weighted
- Channel Crosstalk: < -120dB, 1kHz signal at -1dBFS

Digital I/O

- S/PDIF:
 - 2 in/2 out coaxial (transformer coupled)
 - AES/EBU or S/PDIF format, switchable under software control
- ADAT:
 - 8 channels, 24-bit @ 44.1/48kHz
 - 4 channels, 24-bit @ 96kHz (S-MUX compatible)
 - 2 channels, 24-bit @ 192kHz
- Firewire:
 - 400 Mbps 1394a port (6-pin)
 - Compatible with DV cameras, storage peripherals, etc.

Package Includes

- E-MU® 1010 PCI card
- E-MU 0202 I/O daughter card
- I/O card cable
- Mini-DIN MIDI adapter cables
- Quick Start guide
- Operation Manual on CD-ROM
- Creative Professional Software CD-ROM
 - Windows 2000 and XP Drivers
 - E-MU PatchMix DSP
 - E-MU E-DSP FX Library
- Audio software package on CD-ROM

Minimum System Requirements

- Genuine Intel® Pentium® III or AMD® K6® class processor or higher operating at 500MHz or faster
- Intel®, AMD® or 100% compatible motherboard & chipset
- 128MB System RAM
- 500MB of free hard disk space for full installation
- Windows® 2000 SP 4, Windows® XP SP 1 or greater
- PCI 2.1 compliant slot for E-MU® 1010 PCI card
- Adjacent PCI slot for E-MU® 0202 I/O daughter card
- CD-ROM or DVD-ROM drive required for software installation
- X VGA Video (1024 X 768)