



HD24XR Product Overview



Applications

- **Hi definition multi-track recordings**
- **Professional recording studios**
- **Home/project recording studios**
- **TV/film/video post production**
- **Broadcast production**

The HD24XR provides 24 tracks of high-resolution 24-bit uncompressed linear recording at standard sample rates of 44.1kHz or 48 kHz. It supports 12 tracks at sample rates of 88.2kHz and 96kHz. The HD24XR comes complete with 24 channels of analog and digital inputs and outputs—there are no cards or extras to buy to get audio in or out of the recorder. An external BNC word clock input is provided for slaving to external clock sources. The HD24XR also provides powerful editing capabilities with CUT, COPY, PASTE and multiple UNDO functions across any or all tracks simultaneously.

The HD24XR can be used in a studio as a standalone recording/mastering system. Users can record directly into the HD24XR for live recording or studio applications. Archive your recordings onto the hard drive, then edit and

organize them into sessions. Use the HD24XR to record on any of a number of sample rates and bit depths.

ADAT HD24XR key features:

- 24 Track simultaneous recording at 44.1/48 kHz (12 tracks @ 88.2/96 kHz)
- Storage media: Standard IDE hard drive (minimum 5,400 RPM)
- Recording time per each 10 gigabytes @ 48kHz: 45 minutes x 24 tracks; @ 96kHz: 45 minutes x 12 tracks
- Number of drive bays: Two front-panel, hotswappable
- Recording Modes: 44.1/48 kHz 24 track, 16 track, 8 track, 4 track, 2 track
88.2/96 kHz 12 track, 8 track, 6 track, 2 track
- Resolution: 24 bit linear PCM encoding
- Internal clock Fs: 44.1kHz, 48kHz, 88.2kHz, 96kHz; External clock; Varispeed -16%/+6% @48kHz
- A/D converters: Twenty-four channels of 24 bit, 128x oversampling (standard)
- D/A converters: Twenty-four channels of 24-bit 128x oversampling (standard)
- 96 kHz-capable A/D/D/A board



HD24XR

Key Features (continued)

- Analog I/O spec: +4 dBu nominal level (for -15 dBFS digital level) on balanced 1/4" TRS connectors x 48 (standard)
- Digital I/O: 24 channels (3 each, 8 channels) -ADAT Optical format IN, 24 channels ADAT Optical OUT, on standard fiber-optic 1mm Toslink-style connectors
- Synchronization: ADAT Sync. Up to five HD24 units can be synchronized for up to 120 sample-accurate tracks. Control and slaving is possible from any ADAT Sync device.
- Remote control: Ships with ADAT LRC remote control. HD24 can be also be controlled via ADAT Sync port, or MIDI Machine Control.
- Editing: Cut, Copy, Paste, Move, Insert across any or all tracks. Multiple levels of undo
- MIDI: IN, OUT. MIDI Time Code transmit; MMC and SYSEX transmit and receive
- Software update method: Via MIDI or Ethernet Data transfer via Ethernet FTP, 10Base-T, using standard Cat 5 cable (RJ-45 connector)

AUDIO INPUT

- Input Connectors: 24 balanced 1/4" TRS jacks
- Nominal Input Level: +4 dBu (1.23 VRMS) = -15 dBFS
- Maximum Input Level: +19 dBu (6.9 VRMS) = -0 dBFS
- Input impedance: 10 k.
- A/D converter: AKM 5393
- Analog filter: 2nd-order Butterworth filter w. 96 kHz corner frequency
- Latency (analog in to digital out): Approximately 45 samples (<1 ms. @ 48 kHz)

AUDIO OUTPUT

- Output Connectors: 24 balanced 1/4" TRS jacks
- Nominal Output Level: +4 dBu (1.23 VRMS) = -15 dBFS -2 dBu when connected to unbalanced circuit
- Maximum Output Level: +19 dBu (6.9 VRMS) = -0 dBFS +13 dBu when connected to unbalanced circuit
- Output impedance: 220 ohms.
- D/A converter: AKM 4393

- Analog filter: 2nd-order Butterworth filter w. 96 kHz corner frequency
- Latency (digital in to analog out): Approximately 32 samples (<0.7 ms. @ 48 kHz)

AUDIO PERFORMANCE

- Signal to Noise Ratio: 112 dB A-Weighted, Analog In to Analog Out
- Dynamic Range: 144dB, digital IN to digital OUT; > 103 dB analog IN to analog OUT Aweighted
- THD+N: = 0.002%
- Frequency Response: 22-44 kHz ± 0.50 dB
- Throughput delay (analog in to analog out): Approximately 77 samples (0.8 milliseconds @ 96 kHz, 1.6 milliseconds @ 48 kHz)
- Sampling rates: 44.1, 48, 88.2, and 96 kHz (each variable $\pm 12\%$)
- Channel to Channel Gain Match ± 0.50 dB

All measurements done over a 22 Hz - 22 kHz range with 1 kHz sine wave at +18dBu (-1dBFS) input unless otherwise specified. Impedances are measured at 1 kHz.

Weight and Dimensions

W x H x D: 19"x 5.25" x 13.5"
21 lbs. (9.6kg)
Rackspaces-3 spaces