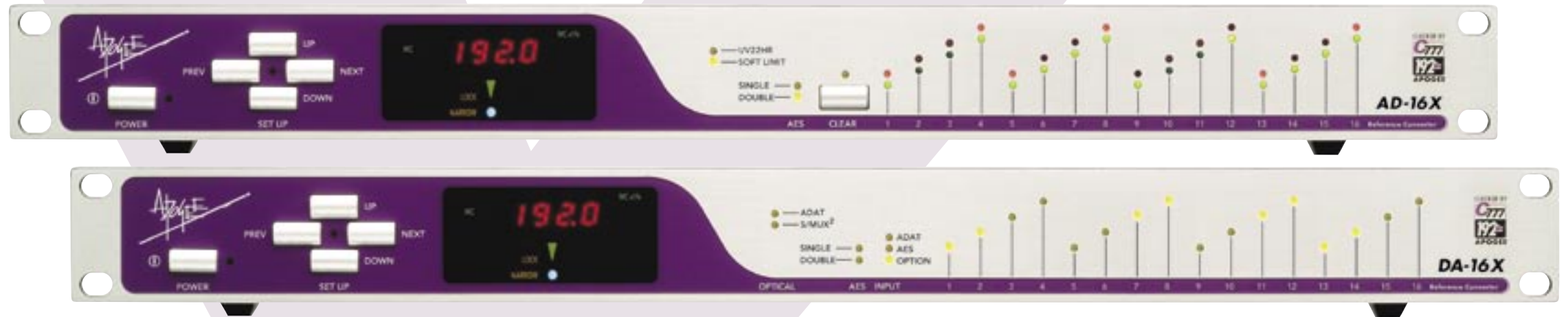


Introducing the Apogee X-Series. Simply the best converters ever made... bar none.

AD-16X

DA-16X



The AD-16X and the DA-16X, Apogee's latest and most advanced conversion systems, take the legendary quality of Apogee a huge step forward. Features such as a redesigned power supply, standard 192kHz sampling rates, the C777 clocking technology found in Big Ben, and optional Pro Tools HD and FireWire expansion cards, make the AD & DA-16X the most powerful and flexible conversion combination ever. And, not only does the X-Series hardware offer unequalled, groundbreaking technology but it makes it available at a fraction of the cost associated with previous, premium Apogee gear.

Advanced High-Definition Conversion

The most critical component in the digital recording environment is proper, high-quality conversion and since the dawn of digital recording the most desired converters have been made by Apogee. With up to 192k standard sample rates, the AD & DA-16X combine Apogee's legendary conversion quality with the very latest in high-definition digital to provide unrivaled flexibility and quality.

Redesigned Power Supply

Enabling optimum conversion requires a state of the art power supply. The fully redesigned power system of the AD & DA-16X incorporates a specially designed Synchronous Switching power supply that works in conjunction with Apogee's very stable low jitter clock and filtering technology to provide superior heat and noise performance and an improved transient response over our previous linear power supply. This creates a power system that delivers total efficiency and provides an ideal environment for premium conversion.

Redesigned Analog Section

Incorporated in the AD & DA-16X are the very latest developments in Apogee's groundbreaking analog circuit design. Through sophisticated implementation and optimal configuration, the selection of premium, contemporary opamps allows the X-Series to deliver conversion performance never before heard, while maintaining the signature Apogee sound: Clear, transparent, focused and punchy.

C777 Clocking used by Big Ben

The AD & DA 16-X use Apogee's C777 clocking technology. Famous for keeping Big Ben on time, the C777 utilizes an entirely digital process that Apogee has developed with the most advanced Direct Digital Synthesis (DDS) technology and DSP-based digital filtering. With a stable, crystal based digital PLL handling the clocking, AD-16X and DA-16X are able to intelligently manipulate incoming signals and adapt to them accordingly. The result? The most aggressive jitter reduction ever and an astonishing and noticeable difference in sound quality.

Connect Directly to Pro Tools HD or any FireWire Enabled Computer

Like their cousin the Rosetta 800, the AD & DA-16X offer an expansion card slot that greatly increases connectivity possibilities. Add an optional X-Series HD card and connect AD & DA-16X directly to your computer via your HD Core Card. Using Logic, Nuendo or any of the many native DAW's? Add an X-FireWire card to your X-Series hardware and enjoy a direct, extremely low latency connection that supports FireWire 800 standards and has backwards compatibility with 400 standards. And, if you are buying multiple units, you can daisy chain up to a whopping 120 channels with incredibly low latency.

SoftLimit: Maximize Levels, Minimize Overs

One of the greatest difficulties in digital recording is getting an adequate level without clipping and unwanted distortion. Soft Limit is an analog peak limiter that enables the capture of an additional 4-6 dB of level without going into an 'over' condition. Short of purchasing a very expensive stand-alone compressor/limiter, there is currently no product on the market that handles this process better than SoftLimit.

UV22HR: Dither Down with 24-bit Detail

UV22HR is Apogee's industry standard technology for reducing the word-length of a high-resolution digital signal to 16 bits for the CD mastering. UV22HR is also being employed to produce dramatically improved internet and computer audio content without increased file sizes or data rates. It is estimated that 8 out of 10 hit records are mastered using Apogee's UV22HR technology.

High Performance Output

The DA-16X uses Apogee's newly developed electronically balanced line drivers. Originally designed for the Mini-DAC, these line drivers are able to simulate true transformer behavior. The circuitry is an ultra low output impedance, high current driver, capable of running levels up to 26 dBu to the most complex or low impedance loads. Recording studios utilizing vintage audio-equipment will find this particularly valuable. Ultimately, the output performance of the DA-16X achieves perfect symmetry when used in balanced mode (even with an unsymmetrical load) and no increased distortion when used unbalanced.

AD-16X Features

- 16 channels of premium 24-bit A/D conversion
- Sample rates up to 192k
- 16 channels of AES, ADAT/SMUX Output
- Word Clock I/O
- Optional HD card for direct connection to ProTools HD
- Optional S800 FireWire card capable of sample rates up to 192k, compatible with OS X/Windows XP and all popular DAW's
- All option cards (X-FireWire and X-HD) facilitate connection of multiple units
- "Soft Limit" for maximum digital level without overs (can be applied to a single channel or all channels)
- "UV22HR" for superior dither of high resolution audio to 16-bit (can be applied to a channel pair or all channels)
- Direct Digital Synthesis (DDS) using Big Ben's C777 Clock Technology up to 192kHz
- Adaptive Loop Filtering (ALF) for optimum clock performance and minimum jitter
- Support for AES double wire and SMUX formats
- Post A/D conversion level monitoring
- Intuitive front panel calibration
- Word Clock termination switch

DA-16X Features

- 16 channels of premium 24-bit D/A conversion
- Sample rates up to 192k
- 16 channels of AES, ADAT/SMUX Input
- Word Clock I/O
- Optional HD card for direct connection to ProTools HD
- Optional S800 FireWire card capable of sample rates up to 192k, compatible with OS X, and Windows XP and all popular DAW's
- All option cards (X-FireWire and X-HD) facilitate connection of multiple units
- Direct Digital Synthesis (DDS) using Big Ben's C777 Clock Technology up to 192kHz
- Adaptive Loop Filtering (ALF) for optimum clock performance and minimum jitter
- Support for AES double wire and SMUX formats
- Intuitive front panel calibration
- Word Clock termination switch

16 Channel, 24bit/192kHz, A/D & D/A Conversion System

UV22
HIGH RESOLUTION

CLOCKED BY
C777
192k
APOGEE

Specifications

AD-16X

Inputs:

- Analog in 1-8 Balanced, DSUB 25pin connector
- Analog in 9-16 Balanced, DSUB 25pin connector
- WC in: BNC 75 ohm with switchable termination

Outputs:

- AES-EBU out x 8, transformer balanced, DSUB 25pin connector (192k single wide compatible)
- Optical: toslink x 4, supporting ADAT and SMUX protocol
- WC out: BNC 75 ohm

Expansion Slot:

- One x-type card can be installed, for FireWire, HD and or other future format connectivity.

Specs:

- Sample rates internal: 44.1/48/88.2/96/176.4/192k
- Sample rates external: 44.1/48/88.2/96/176.4/192k +/- 10%
- Frequency response at 44.1 k : 5 - 20.000 Hz (+/- .2 dB)
- Analog levels: 6 to 24dBu max through digital gain adjustment. (Compatible with -10dBV levels)
- THD+N: -110 dB
- Dynamic range: 120 dB A weighted
- Power: 100 -240 VAC, 50 - 60 Hz, 65 Watt

DA-16X

Inputs:

- AES-EBU in x 8, transformer balanced, DSUB 25pin connector (192k single wide compatible)
- Optical: toslink x 4, supporting ADAT and SMUX protocol
- WC in: BNC 75 ohm with switchable termination

Outputs:

- WC out: BNC 75 ohm
- Analog out 1-8 Balanced, DSUB 25pin connector.
- Analog out 9-16 Balanced, DSUB 25pin connector.

Expansion Slot:

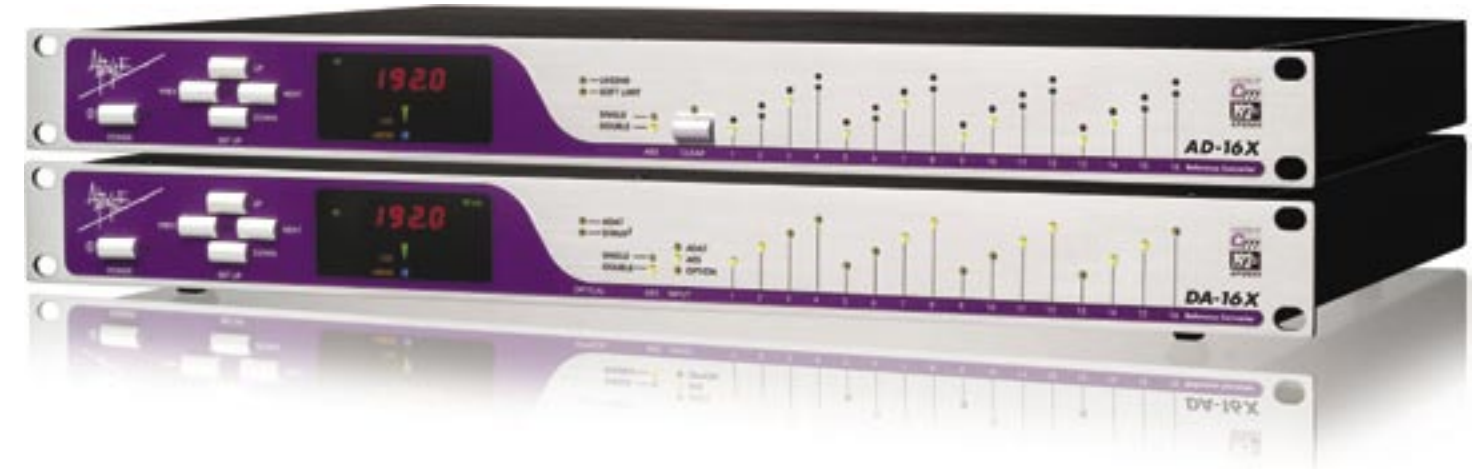
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Specs:

- Sample rates internal: 44.1/48/88.2/96/176.4/192k
- Sample rates external: 44.1/48/88.2/96/176.4/192k +/- 10%
- Frequency response at 44.1 k : 5 - 20.000 Hz (+/- 0.2 dB)
- Analog levels: 6 to 24dBu max through digital gain adjustment. (Compatible with -10dBV levels)
- THD+N: -107 dB
- Dynamic range: 118 dB A weighted
- Power: 100 -240 VAC, 50 - 60 Hz, 65 Watt

THE APOGEE X-SERIES

AD&DA-16X



16 Channel, 24bit/192kHz, A/D & D/A Conversion System

Featuring X-Series Expansion Cards for direct connectivity with:
ProTools | HD and all other popular DAW's via FireWire



AD-16X REAR PANEL



DA-16X REAR PANEL

Due to on-going development Apogee reserves the right to change all information and specifications without notice.

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