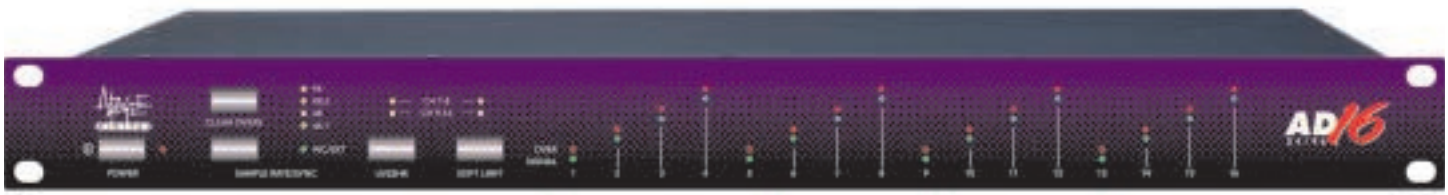
# PRELIMINARY DATA SHEET

## 16-channel 96 kHz A/D with ADAT and S/MUX, Dual Reclocking, UV22HR & SoftLimit

AD16 24/96



# Apogee Quality – Application-focused architecture

Apogee's new **AD-16** is a 16-channel 24-bit A/D converter, operating at sample rates up to 96 kHz. The system offers ADAT optical output for compatibility with a wide range of digital audio systems, and can sync to word clock (using the same powerful 2-stage reclocking system utilized in the DA-16 "IntelliDAC"), or its own internal high-stability clock. Word Clock output is also provided.

For the first time in an Apogee A/D conversion system, the AD-16 supports the Sonorus S/MUX specification for sample-splitting of high sample-rate audio data into multiple ADAT-style optical interfaces. Additional light-pipe outputs are provided to deliver up to 96 kHz digital audio from all 16 channels in this mode. A special port is also provided for future expansion.

An LED indicates signal status on each channel, with the intensity modulated by the signal level to give an "analog-like" display. A second LED per channel indicates "overs". The balanced analog inputs are configured in two groups of eight channels on 25-pin D connectors.

The AD-16 includes Apogee's industry-standard word-length reduction system, UV22HR, for reducing the word length from the native 24 bits to 16 for CD mastering, Internet audio and other applications, and SoftLimit to maximize digital output level without overs. The features are activated with a pair of buttons, and may be optionally applied to channels 1–8, 9–16 or all. The AD-16 features an elegant and effective user interface, including a power switch, sample rate/sync selector, clear "overs" button, and two buttons for Soft Limit and UV22HR respectively, and closely matches the companion DA-16 16-channel D/A in appearance.

With the AD-16, like the DA-16, Apogee offers an application-focused architecture with the features you really need. Without sacrificing quality, these products make high-quality conversion more accessible, and more available to a wider range of creative people.

## AD-16 Preliminary Specifications

| | |
|---|---|
| INPUTS: | 16 analog inputs, balanced<br>Word Clock |
| OUTPUTS: | Four TosLink interfaces delivering 2 x 8 channels in ADAT mode and 4 x 4 for S/MUX<br>Word Clock |
| RESOLUTION: | 24-bit |
| SAMPLE RATES: | 44.1, 48, 88.2, 96 KHZ ±10% |
| RELATIVE THD+N (S/(N+D): | –105 dB @ 1kHz, –0.5 dBFS input |
| DYNAMIC RANGE, –60 dB: | –117 dB A-weighted |
| PASSBAND RIPPLE: | 0.001 dB |
| STOPBAND ATTENUATION: | 110 dB |
| INTERCHANNEL CROSSTALK: | ≤ –120 dB |
| FREQUENCY RESPONSE: | 10 Hz–20 kHz, ±0.025 dB |
| INPUT LEVELS, MAXIMUM: | 24 dBu, 18 dBu and 4 dBV |
| CLOCK JITTER: | <22 pSec (ext WC input) |
| FUNCTIONALITY: | Lock indicator, sample rate indicators. Signal present and "over" indicators per channel.<br>Internal clock (4 sample rates) and External (word clock)<br>Soft Limit and UV22HR buttons<br>Power switch & indicator |
| CONNECTORS: | 1 IEC power connector chassis male<br>4 Toslink transmitters for ADAT-S/MUX output<br>2 BNC for Word Clock input and output<br>2 DB25 for analog input,<br>Tascam standard pinout |
| CASE: | 1U high |
| POWER SUPPLY: | Sample-rate synchronous switch-mode |
| INPUT VOLTAGE RANGE: | 100–240 Volt AC 50–60 Hz (Universal) |
| POWER CONSUMPTION: | TBD |



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