The E-coustic Systems AO-16 and AO-32 Analog Output Interface provide unparalleled sonic quality for the most critical and demanding Electronic Architecture applications. These systems provide analog conversion of 24 bit MADI digital audio signals (16 channels AO-16, or 32 channels AO-32) streamed from the E-coustic Systems Matrix Processor. Both utilize superior analog circuit designs that deliver reference quality conversion at output levels up to +24dBu, with dynamic range in excess of 114dB (unweighted). Font panel metering is provided for each channel, and both units feature two dedicated sets of outputs with isolated drivers and balancing circuits.

Rear panel mounted sub-D connectors conforming to TASCAM wiring standard provide 8 channels of audio that connect directly to the E-coustic Systems AT-32 Analog Output Terminator. The AT-32 incorporates rear panel parallel wiring interconnectivity for amplifier and loudspeakers, as well as front panel listen points for each output channel. Each unit provides zero latency MADI pass through, and selectable channel assignments. These units provide twice the channel capacity in half of the space of our previous generation hardware. They also draw less current and generate less heat which saves cost - both in fabrication, as well as every day operation.

**ANALOG OUTPUT INTERFACE**

**DIGITAL INPUTS**
- **MADI In**
  - Coaxial via BNC, 75 Ohm according to AES10-1991
  - High-sensitivity input stage (< 0.2 Vpp)
  - Optical via FDDI duplex SC connector
  - 62.5/125 and 50/125 compatible
  - Cable length optical up to 3000m
  - Single Wire: up to 64 channels 24 bit 48 kHz
  - Double Wire / 96k frame: up to 32 channels 24 bit 96 kHz
  - Lock range: 28 kHz - 54 kHz
  - Jitter when synced to input signal: < 1 ns
  - Jitter suppression: > 30 dB (2.4 kHz)
- **ADAT Optical**
  - 4 x TOSLINK, according to Alesis specification
  - Standard: 32 channels 24 bits, up to 48 kHz
  - S/MUX: 16 channels 24 bits 96 kHz
  - S/MUX4: 8 channels 24 bits 192 kHz
- **Word Clock In**
  - BNC, not terminated (10 kOhm)
  - Switch for internal termination 75 Ohm
  - Automatic Double/Quad Speed detection and internal conversion to Single Speed

**DIGITAL OUTPUTS**
- **MADI Out**
  - Coaxial via BNC, 75 Ohm according to AES10-1991
  - Output voltage 600 mVpp
  - Cable length coaxial: up to 100 m
  - Optical via FDDI duplex SC connector
  - 62.5/125 and 50/125 compatible
  - Lock range: 28 kHz - 54 kHz
  - Jitter when synced to input signal: < 1 ns
  - Jitter suppression: > 30 dB (2.4 kHz)
- **Word Clock Out**
  - BNC
  - Max. output voltage: 5 Vpp
  - Output voltage @ 75 Ohm: 4.0 Vpp
  - Impedance: 10 Ohm
  - Frequency range: 27 kHz - 200 kHz

**ANALOG**
- **DA-Conversion**
  - Resolution: 24 bit
  - Signal to Noise ratio (SNR) @ +24 dBu, 44.1 kHz: 115 dB RMS unweighted, 118 dBA
  - Frequency response @ 44.1 kHz:
    - 0.5 dB: 5 Hz - 22 kHz
  - Frequency response @ 96 kHz:
    - 0.5 dB: 5 Hz - 24 kHz
  - Frequency response @ 192 kHz:
    - 1 dB: 5 Hz - 50 kHz
  - THD: < -104 dB, < 0.00063 %
  - THD+N: < -100 dB, < 0.001 %
  - Channel separation: > 110 dB

**ELECTRONIC ARCHITECTURE**

**Specifications**
- **MIDI**
  - 16 channels MIDI
  - 5-pin DIN jacks
- **Power**
  - Power supply: Internal switching PSU, 100 - 240 V AC, 40 Watt
  - Dimensions including rack ears (WxHxD): 19” x 3.46” x 9.5” (483 x 88 x 242 mm)
  - Weight: 3 kg (6.6 lbs)
- **Dimensions**
  - Dimensions including rack ears (WxHxD): 19” x 3.46” x 9.5” (483 x 88 x 242 mm)
  - Weight: 3 kg (6.6 lbs)

E-coustic Systems • 83 Concord Ave • Belmont, MA 02478 • Tel (617) 484-9266 • Fax (617) 484-1550 • http://www.ecousticsystems.com