## Product Highlights

- *Converts 16 line-level analog audio channels to a Pro16e A-Net digital stream*

- *A-Net In for generating Pro16e A-Net for A360 Personal Mixers*

- *16 balanced line-level inputs*

- *16 balanced line-level Thru jacks*

- *48kHz, 24-bit A/D converters*

- *Four-position gain sensitivity switch per channel pair*

- *Stereo Link per channel pair*

The AN-16/i v.2 Input Module provides sixteen channels of analog-to-digital conversion as the head end for Aviom's industry standard personal mixing system and modular digital snake products. The module converts sixteen line-level analog audio channels into uncompressed 24-bit, 48kHz digital audio data.

The AN-16/i v.2 includes an A-Net® Input jack for connecting up to three additional Pro16® Series input devices. The AN-16/i v.2 merges its analog inputs with the incoming A-Net stream, creating the expanded Pro16e digital audio stream utilized by Aviom's A360 Personal Mixer. The digital audio data is output on standard Cat-5e cables.

The AN-16/i v.2 front panel has eight four-position input level/gain sensitivity switches, stereo channel link switches for every channel pair, and per-channel

signal present and clip LEDs. Digital network connections on the rear panel include one A-Net In jack and one A-Net Out jack.

The rear panel of the AN-16/i v.2 also features 16 analog audio inputs with balanced ¼" TRS jacks. An audio Thru jack for each input allows the AN-16/i v.2 to be inserted seamlessly into an existing audio signal path. The AN-16/i v.2 can be used with any line-level analog audio signal such as console direct outs, inserts, or aux sends.

The AN-16/i v.2 is equally at home with Aviom's modular Pro16 digital snake and audio distribution system products, supporting a range of flexible configurations including: 16x0, 32x0, 48x0, 64x0, 16x16, 32x16, 32x32, and 48x16. All configurations support an unlimited number of digital splits, with no loss in audio quality.

## AN-16/i v.2 INPUT MODULE SPECIFICATIONS

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|---|---|
| **Audio Inputs** | 16, balanced line-level |
| **TRS Inputs** | Tip: Audio +;  Ring: Audio -;  Sleeve: Ground |
| **TRS Thru** | Tip: Audio +;  Ring: Audio -;  Sleeve: Ground |
| **A/D Conversion** | 48kHz, 24-bit |
| **Input Level / Gain Settings** | +22dBu, +4dBu, 0dBu, -10dBV<br>4-position gain switch, per channel pair |
| **Metering** | Two LEDs per channel;<br>green: Signal Present, red: Clip; |
| **Stereo Operation** | Stereo link, per channel pair;<br>Two-position switch (Mono, Stereo) |
| **Max.Input Level** | +22dBu |
| **Input Impedance** | 17.8k ohms |
| **Frequency Response** | 4Hz-22kHz +0.2dB/-3dB |
| **THD +N** | < 0.003% |
| **Crosstalk** | -90dB |
| **Signal to Noise (unweighted)** | 90dB typical, A/D to D/A;<br>Measured from AN-16/i v.2 to AN-16/o Output Module |
| **Bit Error Rate (BER)** | $10^{-12}$ |

| | |
|---|---|
| **Digital Output** | 1 A-Net Out; RJ45 connector |
| **Digital Input** | 1 A-Net In; RJ45 connector |
| **A-Net Pro16e Slots** | 4-position Slot Range switch assigns the A-Net output to occupy Slots 1-16, 17-32, 33-48, or 49-64 |
| **A-Net** | Uses unshielded Cat-5e UTP (or better) cable |
| **A-Net Cable Length** | 400 feet (122 m) |
| **Latency** | <0.880 msec (measured from analog input to analog output) |
| **Power Supply Input Voltage Output Voltage Plug Size** | External, DC, universal switching type<br>100-240 volts, 50/60Hz, 30VA<br>18-24 VDC, 0.5 amp<br>2 mm |
| **Dimensions** | 19" (482.6 mm) wide x 5.75" (146 mm) deep;<br>1U high |
| **Weight** | 6.8 lb. (3.08 kg) |
| **Options** | SB4 System Bridge; used to combine up to four A-Net streams for transmission over one Cat-5e cable |
| *All Aviom products are designed and manufactured in the USA.* | |

## FRONT PANEL FEATURES

- LED Meters: Signal and Clip
- Stereo Link switch
- Input Level/Gain Sensitivity: +22dBu, +4dBu, 0dBu, -10dBV
- Power and A-Net In LEDs
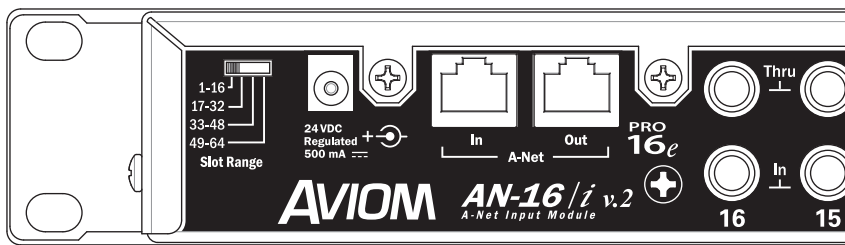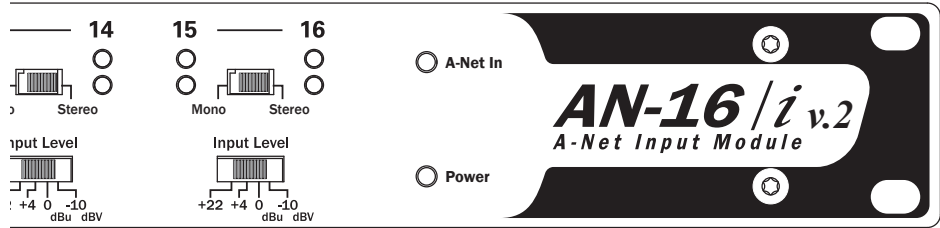


## REAR PANEL FEATURES

- Line-level input jacks, balanced TRS
- Line-level thru jacks
- A-Net In with 4-position Slot Range selector switch
- A-Net Out
- DC power



## AN-16/i v.2 BLOCK DIAGRAM
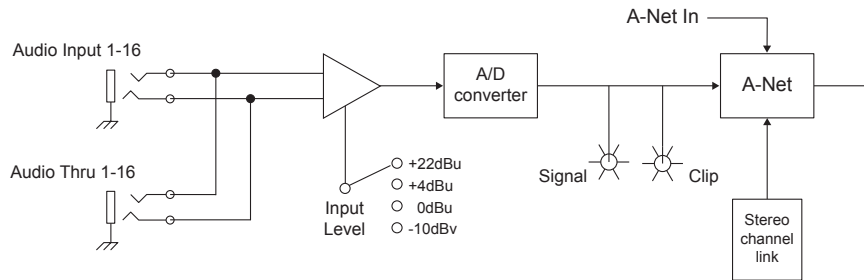


## ARCHITECTURAL SPECIFICATION

The Aviom AN-16/i v.2 shall provide sixteen channels of line-level audio A/D conversion. Channels shall be transmitted digitally onto an A-Net network. It shall provide full-bandwidth, high-quality audio by employing the Aviom A-Net Pro16e audio transmission protocol. It shall employ 24-bit A/D converters with a 48kHz sampling rate.

It shall have a frequency response from 4Hz to 22kHz, +0/-0.3dB or better, with total harmonic distortion no more than 0.003% at 1kHz with a +4dBu input signal. Maximum input level without clipping shall be +22dBu. Input sensitivity shall be selectable from a front-panel 4-position switch, with gain range settings of +22dBu, +4dBu, 0dBu, and -10dBV. Input impedance shall be 17.8k ohms.

Front panel features shall include LED indicators for Signal and Clip of each channel. Each pair of channels shall have a Stereo Link switch. Front-panel power and A-Net In LEDs shall be provided.

Rear panel features shall include a detachable DC power cord. The unit shall be powered from an external universal power supply (input voltage 100 to 240 VAC; output voltage 18-24 VDC, 0.5 amps). It shall be UL and CE listed.

The rear panel shall have RJ45 connectors for A-Net digital signal input and output connections.

The AN-16/i v.2 model shall employ TRS input jacks for the sixteen line-level inputs. Sixteen TRS jacks shall be provided for audio Thru connections.

Its dimensions shall be 19 inches wide, 9 inches deep, and 1U (1.75 inches) high. Its net weight shall be 6.8 pounds, and its steel chassis shall be finished in blue. The unit shall be Aviom, Inc. model AN-16/i v.2.