PRODUCT HIGHLIGHTS

- *Converts mic-level or line-level audio to A-Net*
- *48kHz, 24-bit A/D converters*
- *+48 volt phantom power per channel*
- *Phase invert and low-cut filter per channel*
- *Variable gain per channel*
- *Built-in mic splitter*
- *Insert send/return per channel*
- *Dual A-Net digital outputs*
- *Stereo Link for use with the Pro16 Personal Mixers*

The AN-16/i-M is a 3U mic- and line-level input module with sixteen high-quality microphone preamps and 24-bit, 48kHz analog-to-digital converters. Digital audio is output on standard Cat-5e cables, via Aviom's A-Net® Pro16® digital audio protocol.

The module can be used as the front end of Pro16 personal mixing systems, or with other AN-Series products to create modular digital snakes and audio distribution systems, with up to 64 channels on a single Cat-5e cable.

Each channel on the AN-16/i-M features a three-segment LED level meter, variable gain control, phase invert, 48-volt phantom power, and an 85Hz low-cut filter. In addition, each pair of channels can be stereo-linked for stereo mix control on Pro16 Personal Mixers.

On the rear panel, each channel has a combo input jack that accepts both XLR mic and ¼" balanced line-level inputs. Sixteen passive XLR Thru connectors provide a built-in microphone splitter. Balanced insert points with independent ¼" TRS Send and Return jacks provide an easy interface to external processing devices. Insert sends can also be used as post-gain line-level direct outputs.

Two parallel A-Net outputs allow the AN-16/i-M to send A-Net Pro16 data to multiple destinations simultaneously, such as a monitor console and a front-of-house console. Both A-Net outputs feature heavy duty locking connectors. An A-Net Expansion jack supports 32-channel systems (16x16 or 32x0), and the SB4 System Bridge can be used to combine up to 64 channels onto a single cable.

AN-16/i-M MIC INPUT MODULE SPECIFICATIONS

XLR Input (mic/line)	Pin 1: Ground; Pin 2: Audio +; Pin 3: Audio -
TRS Line Inputs, & Send/Return	Tip: Audio +; Ring: Audio -; Sleeve: Ground
A/D Conversion	48kHz, 24-bit; Latency is 0.880 msec (measured from analog input to analog output)
Operating Level	+4dBu
Insert Send	Impedance balanced; Nominal level: 0dBu; Peak Level (A/D clip point): +14dBu
	The Insert Send connector is a line output in the signal path post gain, post filter, and post phase controls.
Insert Return	TRS balanced; Nominal level: 0dBu; Peak Level (A/D clip point): +14dBu
	The Insert Return connector is a line input to the signal path that is pre A/D conversion.
Gain Range	Mic: +6dB to +60dB; Line: -15dB to +36dB
Max. Input Level	Mic: +14dBu; Line: +28dBu
Input Impedance	Mic: 2.4k ohms; Line (TRS): 33k ohms; Insert Return: 39k ohms
Freq. Response (Send jack)	-0.3dB @ 20kHz (all gain settings); 4Hz-22kHz
THD +N	< 0.003%

A/D Frequency Response	-0.1dB @ 20kHz (-0.4dB @ 20.0kHz, measured from Mic or Line in)
	-3dB @ 1.5Hz (-3dB @ 2.0Hz, measured from Mic or Line in)
Signal to Noise (unweighted)	Send jack: -113dB (Gain = minimum)
	A/D: -105dB Reference = +14dBu (A/D clip point)
Mic Input	EIN (Equivalent Input Noise): -128dBu
	(Rs = 150 ohms, 20kHz BW, Gain = +60dB)
	CMRR (Common Mode Rejection Ratio): 80dB @ 120Hz (Gain = +60dB)
Low Cut Filter	-3dB @ 85Hz, -18 dB per octave
Phantom Power	+48 volts, per channel, switch with LED
Splitter Output, Mic Thru	Direct coupled passive throughput
Digital Outputs	A-Net: 2 (Main and Aux); A-Net Expansion: 1
Power Supply	Internal, universal switching type; IEC jack
Voltage	100-240VAC, 50-60Hz, 60W; Fuse: 250VAC, F4AL
Dimensions	19 x 9.25 in. (482.6 x 234.95mm); 3U high
Weight	12 pounds (5.44 kg)

All Aviom products are designed and manufactured in the USA.
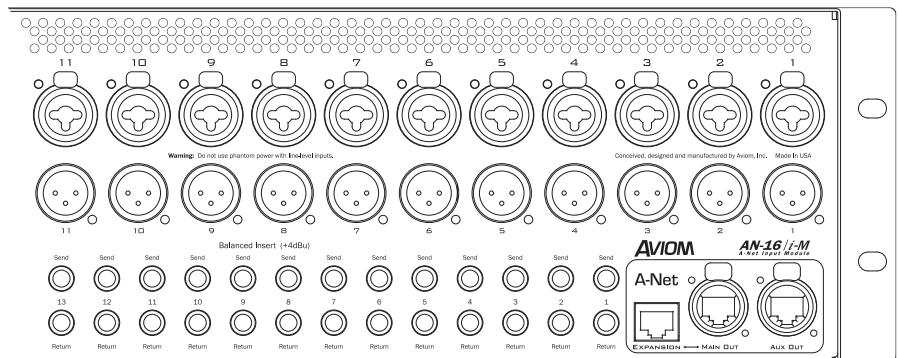
FRONT PANEL FEATURES

- LED Meters: Signal, -10dB, and Clip
- Phantom Power switch and LED
- Rotary Gain for Mic/Line inputs
- Low Cut Filter (85Hz)
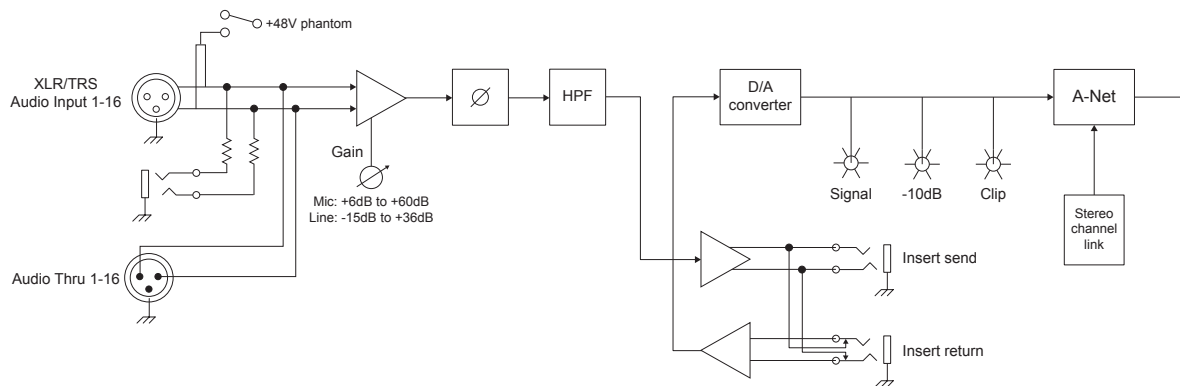- Phase Invert button
- Stereo Link switch
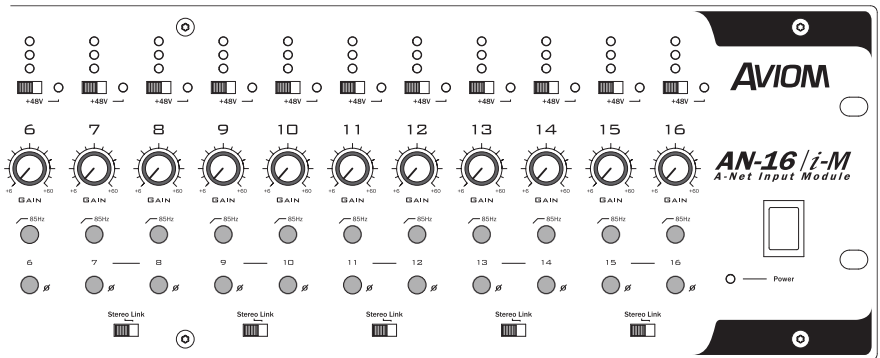
REAR PANEL FEATURES

- Input combo jacks, Mic/Line
- Mic splitter output
- Insert Send and Return
- A-Net Expansion
- A-Net Out: Main and Aux

AN-16/i-M BLOCK DIAGRAM

ARCHITECTURAL SPECIFICATION

The Aviom AN-16/i-M shall provide sixteen channels of mic- or line-level audio A/D conversion transmitted digitally onto an A-Net network. It shall provide full-bandwidth, high-quality audio by employing the Aviom A-Net Pro16 audio transmission protocol. It shall use 24-bit 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. It shall have a dynamic range of 105dBA and 93dB unweighted for line-level signals, and an equivalent input noise level of -128dB for microphone level signals. Maximum input level without clipping shall be +14dBu for mic-level and +28dBu for line-level signals. Input gain shall be variable from +6dB to +60dB for mic-level and -15dB to +36dB for line-level signals with a rotary gain control. Input impedance shall be 2.4k ohms at microphone level, and 33k ohms at line level.

Front panel per-channel features shall include +48 volt phantom power with on/off switch and red LED indicator; Low Cut filter (rolloff frequency fixed at 85Hz) with an on/off switch; Phase Invert function with on/off switch and 3-LED level meters.

Each pair of channels shall have a Stereo Link switch.

The unit shall be powered from an internal universal power supply (110 to 240 VAC). It shall be UL and CE listed. Rear panel features shall include an AC power receptacle with fuse. It shall be supplied with a detachable AC cable. The front panel shall include an AC power switch.

The rear panel shall have EtherCon RJ45 connectors for the A-Net digital signal outputs and a standard eight-conductor RJ45 jack for the A-Net Expansion connection.

It shall employ combo-style XLR/TRS input jacks for the sixteen microphone-level and line-level inputs. Sixteen XLR male jacks shall be provided for microphone Thru connections. Channel insert Send and Return shall use balanced ¼-inch TRS jacks.

Its dimensions shall be 19 inches wide, 9 inches deep, and 3U (5.25 inches) high. Its net weight shall be 12 pounds, and its steel chassis shall be finished in black. The unit shall be Aviom, Inc. model AN-16/i-M.