

### 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 and A320 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 and A320 Personal Mixers. The digital A-Net 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.

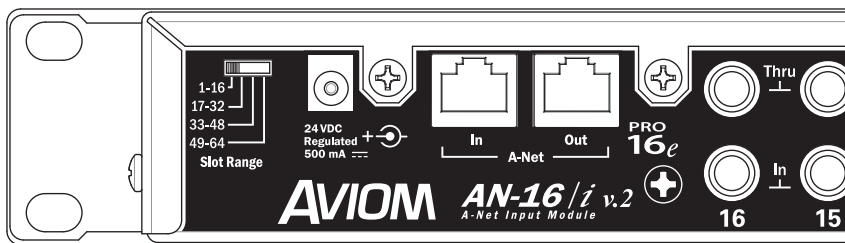
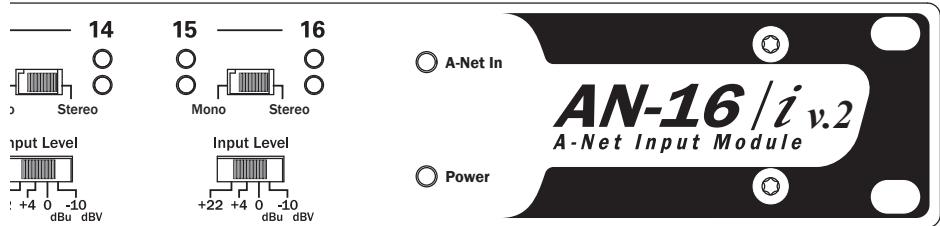
### AN-16/i v.2 INPUT MODULE SPECIFICATIONS

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

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

**FRONT PANEL FEATURES**

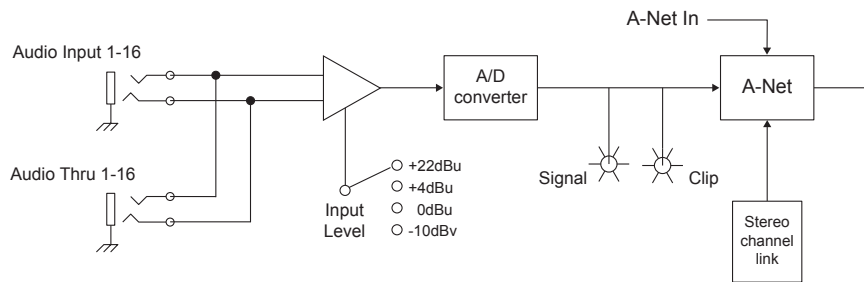
- LED Meters: Signal and Clip
- Stereo Link switch
- Input Level/Gain Sensitivity: +22dBu, +4dBu, 0dBu, -10dBV
- Power and A-Net In LEDs



**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 black. The unit shall be Aviom, Inc. model AN-16/i v.2.



D400-Dante Front Panel



D400 Front Panel

Aviom's series of D400 A-Net® Distributors provides support for parallel connections of up to eight Pro16® devices, including the A360 and A320 Personal Mixers, and legacy products such as the A-16II and A-16R Personal Mixers, along with additional network connectivity options.

The standard D400 includes a Pro16e™ A-Net input, compatible with all Pro16 Series and Pro16e-capable devices.

The D400-Dante A-Net Distributor adds connectivity for a Dante™ digital audio network, allowing up to 32 channels to be sent directly from a Dante audio network to A320 and A360 Personal Mixers. Any 32 Dante channels may be selected from the Dante network using the Dante Controller software.

Both the D400 and the D400-Dante include eight A-Net outputs designed for use with Aviom Personal Mixers. These eight outputs also include isolated (floating ground) DC power for providing remote power via Cat-5e to Aviom Personal Mixers. In addition, both the D400 and D400-Dante include an unpowered A-Net Out, which may be used to connect to additional A-Net Distributors, output modules, or other compatible devices.

The 2U D400 is powered by an internal power supply, with a detachable power cord and IEC power inlet on the rear panel. A rear-panel switch sets the unit for 115V or 230V operation. All network connections on the D400 use RJ45 connectors.

There is no limit practical to the number of D400, D400-Dante, D800, and D800-Dante A-Net Distributors that can be used in an A-Net network, and all versions of the D400 are compatible with all Pro16 Series devices.

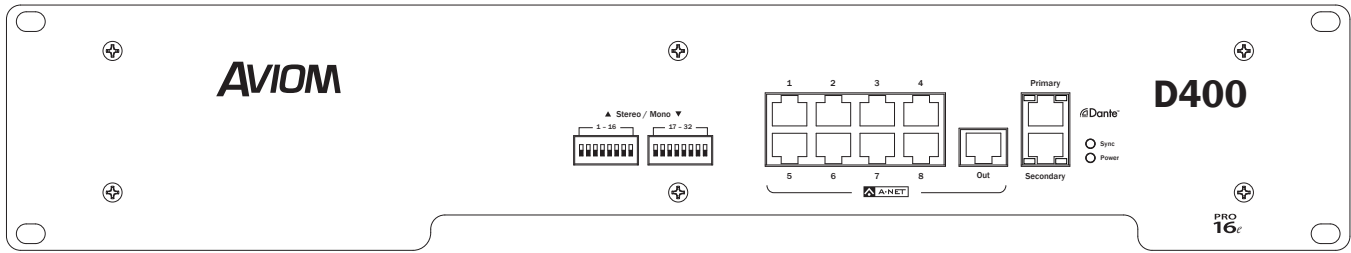
## PRODUCT HIGHLIGHTS

- Distributes power and audio to up to eight A320 and A360 Personal Mixers
- One unpowered Pro16e A-Net Out for thru connections
- A-Net Offset switches to set the range of Pro16e network slots to be sent to Personal Mixers (D400 only)
- Stereo Link DIP switches simplify stereo channel assignments
- Supports legacy A-16II and A-16R Personal Mixers

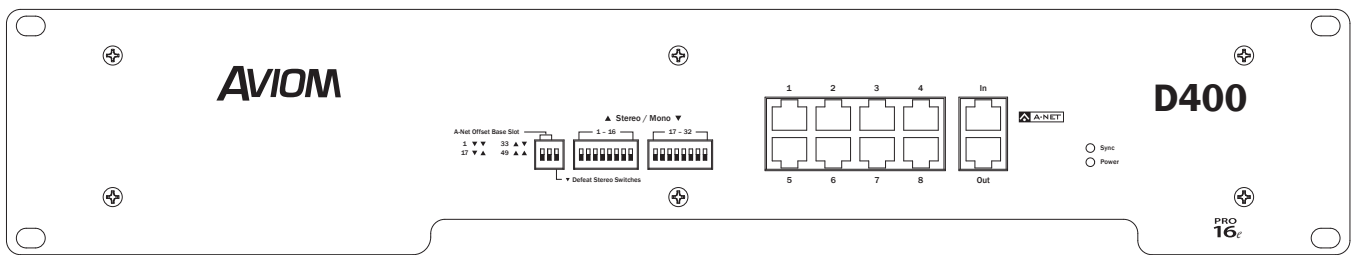
### The D400-Dante adds

- Direct connectivity to a Dante™ audio network
- Support for up to 32 Dante network channels

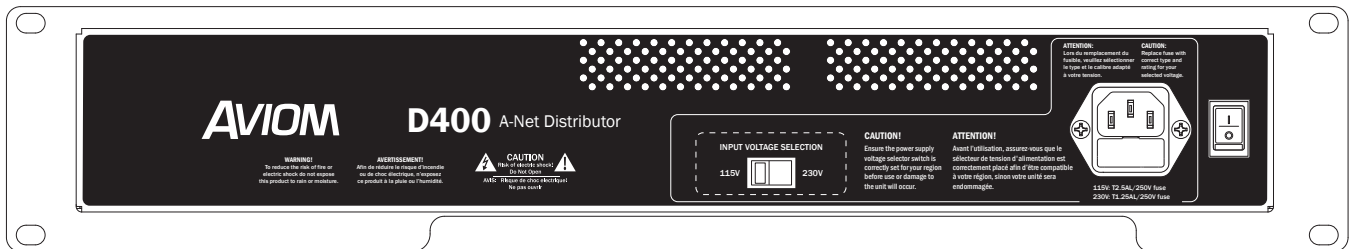
**D400-DANTE FRONT PANEL**



**D400 FRONT PANEL**



**D400-DANTE & D400 REAR PANEL**



**COMMON SPECIFICATIONS**

<b>A-Net Out</b>	Pro16e A-Net; RJ45 connector, unpowered
<b>A-Net Out to Personal Mixers</b>	Eight RJ45 connectors, powered
<b>LEDs</b>	Power On (red); Network Sync (green)
<b>Stereo Link</b>	Two 8-position DIP switch blocks (1-16, 17-32)
<b>Output Voltage for Personal Mixers</b>	24VDC, 0.5 amp Transmitted over the Cat-5e cable
<b>Power Supply</b>	Internal, IEC connector
<b>Input Voltage</b>	115V or 230V (with selector switch), both +15/-22% @ 220W max; 50-60Hz
<b>AC Fuse Types</b>	115V range: T2.5AL/250V 230V range: T1.25AL/250V
<b>Dimensions</b>	19" (482.6 mm) wide x 7.386" (187.6 mm) deep; 2U, 3.5" (88.9 mm) high
<b>Weight</b>	12.0 lbs (5.44 kg)

**D400 A-NET DISTRIBUTOR SPECIFICATIONS**

<b>A-Net Input</b>	Pro16 or Pro16e A-Net; RJ45 connector
<b>A-Net Offset Base Slot</b>	2-position DIP switch selects the starting channel that Personal Mixers will receive from the network (1, 17, 33, or 49)
<b>Defeat Stereo Switches</b>	Chooses between local (front panel) stereo links (up) or network stereo links (down)

**D400-DANTE A-NET DISTRIBUTOR SPECIFICATIONS**

<b>Dante Interface</b>	32 channels (44.1/48kHz)
<b>Dante Primary I/O</b>	RJ45 connector
<b>Dante Secondary I/O</b>	RJ45 connector
<b>Dante LEDs</b>	Network Activity (green); 1GB Active (yellow)



### PRODUCT HIGHLIGHTS

- Add A-Net Pro16 output to any Yamaha digital mixing console that uses the Yamaha mini-YGDAI expansion card format
- 44.1/48kHz SR, 24-bit uncompressed digital data
- Stereo Link per channel pair for stereo mixing with Aviom Pro16 Personal Mixers
- Unlimited splits and lossless digital copies
- Cat-5e cable runs up to 500 feet (150 meters)

The Aviom16/o-Y1 A-Net® Card is a 16-channel output expansion card for Yamaha® products supporting the mini-YGDAI (MY) format. The Y1 A-Net card provides seamless direct digital connectivity between Yamaha digital devices and Aviom Pro16® personal mixing system products, including the A360, A320, A-16II and A-16R Personal Mixers, the D800, D800-Dante, D400 and A-16D Pro A-Net Distributors, and the AN-16/o v.4 Output Module.

Y1 A-Net cards fit into any available MY expansion slot in the rear of Yamaha's digital consoles. The Y1 card is also compatible with Yamaha Digital Mixing Engine products, used to expand the audio processing and routing capabilities of digital consoles.

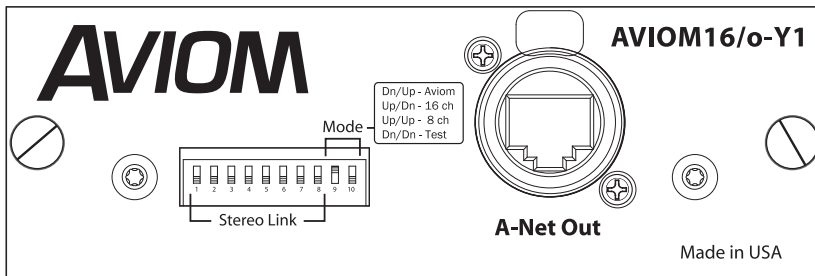
Multiple Y1 cards can be used simultaneously in a single console, extending the creative possibilities for both monitoring and signal distribution. Each Y1 card outputs up to 16 channels of 24-bit, 48kHz audio over a single Cat-5e cable. Up to 64 channels can be combined onto a single cable using Aviom's SB4 System Bridge.

Channel pairs can be linked for stereo mixing on Pro16 Personal Mixers using a set of eight external DIP switches. Additionally, mode switches are provided for selecting 16-channel (MY16) and 8-channel (MY8) operation as required by the slot specification of the Yamaha console.

### Y1 A-NET CARD SPECIFICATIONS

<b>A-Net Pro16 Output</b>	16 channels of A-Net digital data; * 8 channels on PM1D
<b>Interface Format</b>	Yamaha mini-YGDAI (MY) Expansion Card
<b>Maximum Expansion</b>	limited only by the number of available expansion slots in the digital mixer
<b>Sample Rate</b>	44.1kHz to 48kHz, +/-10%
<b>Digital Conversion</b>	24-bit
<b>Digital Connections</b>	A-Net Out: 1; EtherCon® RJ45 connector
<b>DIP Switch</b>	Switch 1-8: Stereo Link on/off Switch 9-10: A-Net mode A-Net Modes: 8-channel, 16-channel, Aviom, Test

<b>A-Net Pro16</b>	A-Net allows 16 channels of audio to be transmitted over one Cat-5e cable uses unshielded Cat-5e UTP (or better) cable; max. length 500ft (150m) between devices
<b>Latency</b>	<0.880 msec (measured from analog input to analog output)
<b>Power Supply</b>	none required; uses Yamaha device as source of power
<b>Dimensions</b>	4.75" (120.7 mm) wide x 6.25" (158.8 mm) deep; 1.5" (38.1 mm) high
<b>Weight</b>	0.8 lbs (0.36 kg)
<b>Options</b>	SB4 System Bridge; combines up to four A-Net streams for transmission over one Cat-5e cable
<i>All Aviom products are designed and manufactured in the USA.</i>	



### FRONT PANEL FEATURES

- DIP switch 1–8: Stereo Link
- DIP switch 9–10:
  - Down/Up - Aviom mode
  - Up/Down - 16-channel (*default*)
  - Up/Up - 8-channel (PM1D)
  - Down/Down - Test mode
- A-Net Out, EtherCon

### COMPATIBLE YAMAHA PRODUCTS

Product	Expansion Slots	Digital Channels Output via A-Net
<b>01V96 Digital Mixing Console</b>	1	16 channels per slot
<b>02R96 Digital Mixing Console</b>	4	16 channels per slot
<b>DM1000 Digital Production Console</b>	2	16 channels per slot
<b>DM2000 Digital Production Console</b>	6	16 channels per slot
<b>PM5D &amp; PM5D-RH Digital Mixing Console</b>	4	16 channels per slot
<b>PM1D Digital Audio Mixing System</b>	8	Each slot is limited to 8 channels
<b>M7CL Digital Mixing Console</b>	3	16 channels per slot
<b>LS9-16 Digital Mixing Console</b>	1	16 channels per slot
<b>LS9-32 Digital Mixing Console</b>	2	16 channels per slot
<b>CL1, CL3, CL5 Digital Mixing Console</b>	3	16 channels per slot
<b>QL1, QL5 Digital Mixing Console</b>	2	16 channels per slot
<b>DME24N Digital Mixing Engine</b>	1	16 channels per slot
<b>DME64N Digital Mixing Engine</b>	4	16 channels per slot

### ARCHITECTURAL SPECIFICATION

The Aviom16/o-Y1 shall provide sixteen channels of digital audio transmitted via an Aviom A-Net network over Cat-5e cable. It shall provide full-bandwidth, high-quality audio by employing the Aviom A-Net Pro16 audio transmission protocol. It shall operate at sampling rates from 44.1kHz to 48 kHz, +/-10%.

Its channel assignments shall be configured and routed from within a Yamaha digital mixing console, according to the limitations of the Yamaha product. The card shall meet the specifications of the Yamaha mini-YGDAI expansion card format.

Front panel features shall include one 10-position DIP switch. Stereo linking of channel pairs shall be set with DIP switches 1 through 8. Operational modes will be configured using DIP switches 9 and 10. Four operational modes will be provided.

The unit shall be powered from the Yamaha console's internal power supply. It shall be UL and CE listed.

The rear panel shall have a multipin connector to interface with the Yamaha digital mixing console expansion port connectors.

The Y1 card shall employ a Neutrik EtherCon RJ45 connection for the A-Net Pro16 digital audio output.

Its dimensions shall be 4.75 inches wide, 6.25 inches deep, and 1.5 inches high. Its net weight shall be 0.8 pounds, and its steel chassis shall be finished in black. The unit shall be Aviom, Inc. model Aviom16/o-Y1.



Aviom's A320 Personal Mixer brings new levels of control and customization to personal mixing and is the perfect solution for controlling musicians' monitors on stage or in the studio. Ideal for use with in-ear monitors and headphones, the A320 delivers breakthrough features for more precise mix control and more musical monitoring, while also preserving the simplicity required for use while performing.

All mixing features are instantly available—no menus to navigate, no complex programming, no computer required—so customizing and adjusting a mix is fast and intuitive, even in the middle of performing.

The A320 includes an advanced 32-channel mix engine which can be used to mix up to 16 mono or stereo channels. The innovative Stereo Placement™ pan-spread feature controls both sides of a stereo channel's image simultaneously, significantly improving the user experience with in-ear monitors and headphones.

Each A320 can store up to eight mix snapshots—saved in the first eight channel button locations.

The master output section includes Bass and Treble tone controls, plus the unique Enhance™ control designed to provide more presence for users of in-ear monitors.

Audio is delivered to the A320 using Aviom's A-Net® digital audio protocol. A-Net ensures that audio signals are delivered in real time and provides for simple plug-and-play setup without addressing.

## PRODUCT HIGHLIGHTS

- 16 mono or stereo mix channels
- 32-channel mix engine
- Enhanced Stereo Placement controls for improved sonic clarity
- Per-channel volume, mute, and pan-spread
- Three-band master tone controls optimized for in-ear monitors
- Eight mix presets
- 1/4" TRS Stereo Mix Out
- Seamless integration with existing Aviom personal mixing systems

The A320 is compatible with existing Pro16 Series devices and monitor systems. Additionally, the A320 can use an enhanced version of the protocol, Pro16e™, which supports expanded channel capacity in the Pro16 audio stream.

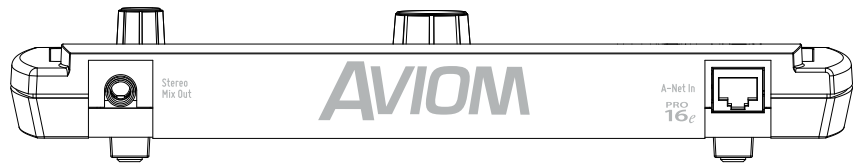


**TOP PANEL FEATURES**

- Channel Volume
- Channel Stereo Placement
- Channel Solo and Mute
- Trim All
- Mix Preset Save, Recall
- Master Bass, Treble, and Enhance
- Master Volume

**REAR PANEL FEATURES**

- Stereo Mix Out (headphone/line-level, 1/4" TRS)
- A-Net In



**A320 PERSONAL MIXER SPECIFICATIONS**

<b>Audio Output</b>	1/4" TRS stereo, headphone or line level	<b>Latency</b>	0.880 msec (measured from analog input to analog output)
<b>Stereo Mix Output, Headphone/Line</b>	Tip: Audio Left; Ring: Audio Right; Sleeve: Ground	<b>A-Net Pro16e</b>	Use Cat-5e (or better) cable; Maximum 400 ft (122 m) between devices; Supports Power Over A-Net
<b>A-Net I/O</b>	1 A-Net In, RJ45 connector; Supports Pro16 and Pro16e	<b>Cat-5 cable</b>	Use shielded Cat-5e (or better) cable to stay below the CISPR 22 Class B, ICES-003, and FCC 47 CFR Part 15 Class B emissions limits.
<b>D/A Conversion</b>	44.1/48kHz, 24-bit	<b>Power</b>	24 VDC, 0.5 amp; Power is supplied over the Cat-5 cable when connected to an Aviom A-Net Distributor
<b>Stereo Operation</b>	Stereo Link, per channel pair; Set at the input module; Variable pan per mono channel or pan/spread per stereo channel pair	<b>Dimensions</b>	10.26" (260.6 mm) wide x 6.14" (155.95 mm) deep; 1.91" (48.51 mm) high
<b>Headphone Output</b>	275 mW per side into 50 Ohms (both sides driven)	<b>Weight</b>	1.3 lb. (0.59 kg)
<b>Output Impedance</b>	5 Ohms	<b>Options</b>	MT-1a Mic Stand Mount
<b>Freq. Response</b>	3Hz-22kHz +0.2dB/-3dB at 50 Ohms		
<b>THD +N</b>	< 0.003%		
<b>Signal to Noise (unweighted)</b>	-106dB (measured with zero data into all channels)		