

The 6416i Input Module provides 16 balanced line-level analog inputs to a Pro64™ A-Net® network. Audio channels are converted to digital and inserted into the network.

Each channel includes a four-position gain switch and three-segment level metering. Adjacent channels can be linked as a stereo pair. Audio inputs use XLR jacks, while thru/alternate in connections are provided via DB25 multipin connectors on the rear panel.

Each 6416i can be configured to operate within a specified channel/slot range within the Pro64 network, making complex installations easy to configure and manage. Each input channel of a 6416i can be made active and inserted into the network as needed.

The Pro64 network supports three ranges of variable sample rates, all with

24-bit resolution: 44.1/48kHz±, 96kHz±, and 192kHz±. No matter the sample rate, all 16 input channels on the 6416i are available for use. No data compression is used at any time, ensuring the highest fidelity performance.

In addition to its audio capabilities, the 6416i also includes I/O for Aviom's innovative Virtual Data Cables™. The VDCs can be used for simultaneously distributing up to 14 channels of non-audio control data to any device on the Pro64 network. The 6416i provides VDC connectors for MIDI In, MIDI Out, RS-232, and GPIO.

The 6416i Input Module is ideally suited as a line-level input path for main FOH returns in a digital snake, for inputs into a Pro16™ Monitor Mixing System (Pro64 ASI module required), or for inputs in even the most complex audio distribution network.

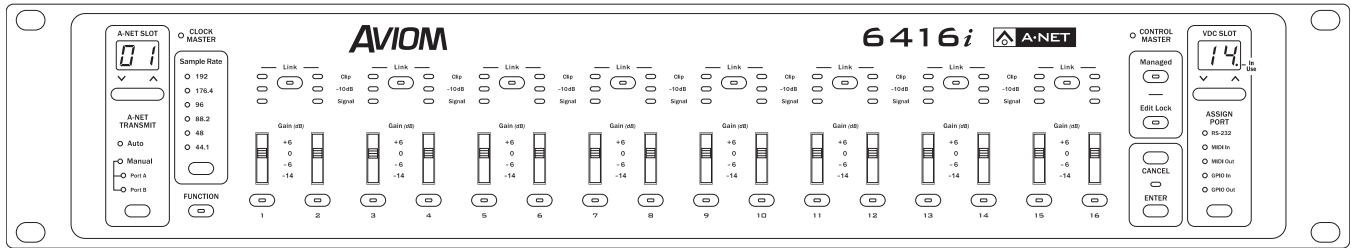
### PRODUCT HIGHLIGHTS

- 16 channels of line-level analog inputs
- Balanced XLR inputs
- DB25 audio thru/alt. inputs
- Four input gain settings per channel
- Three-segment level metering per channel
- Individual channel activation switches
- Variable sample rates: 48kHz±, 96kHz±, 192kHz±
- 24-bit A/D converters
- Virtual Data Cable connectivity for GPIO, MIDI, and RS-232

### TECHNICAL SPECIFICATIONS

<b>Channels</b>	16 inputs	Line level
<b>XLR Inputs</b>	Pin 1: Shield; Pin 2: Hot; Pin 3: Cold	
<b>Audio Thru/Alt. In</b>	DB25 multipin, x2; audio pinout	
<b>Input Impedance</b>	3k ohms	
<b>Input Gain Range</b>	+6, 0, -6, -14 (dB)	4-position switch
<b>Max. Input Level</b>	+18dBu	
<b>Sample Rates</b>	1x: 39.7–52kHz; 2x: 79.4–104kHz; 4x: 158.8–208kHz	24-bit resolution
<b>Frequency Response</b>	-3dB: 2Hz and 23kHz ±0.5dB: 3Hz–22kHz (at 1x sample rate)	
<b>THD +N</b>	< .002% at -10dBFS	
<b>Signal to Noise</b>	A/D: -111dB (unweighted)	
<b>Crosstalk</b>	<100dB at 1kHz	
<b>Maximum Ambient Temperature</b>	50°C	

<b>Virtual Data Cables</b>	MIDI In, MIDI Out 5-pin DIN	
	RS-232 DB9 connector; DIP switch configuration	
	GPIO In (x4), Out (x4); terminal block connectors; DIP switch configuration; TTL or isolated	
<b>A-Net</b>	2 EtherCon® RJ45 connectors	
<b>A-Net Cable Length</b>	400 feet (120 meters) between devices	
<b>Latency</b>	Analog input to analog output: <800µs	
<b>Power Supply</b>	100–240VAC	50–60Hz, 24W
	Internal switching type; IEC connector	
<b>Dimensions</b>	2U; 19" w x 8" d x 3.5" h (482.6 x 203 x 88 mm)	
<b>Weight</b>	9 pounds (4.1 kilos)	
<i>All Aviom products are designed and manufactured in the U.S.A.</i>		

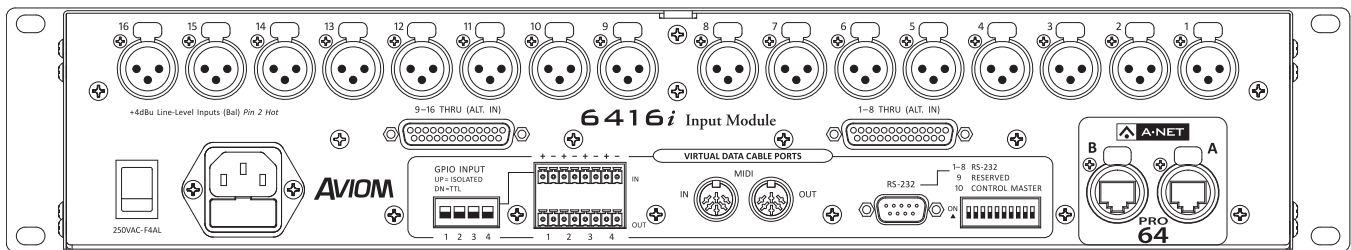


▲ FRONT PANEL FEATURES

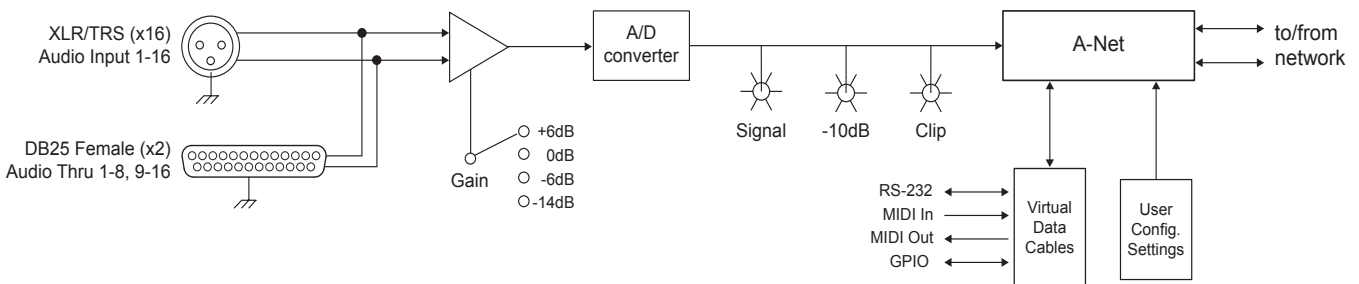
- Four-position gain switch per channel
- Three-segment level meter per channel
- Channel activation buttons with LEDs
- A-Net Slot and mode select
- Sample rate select
- VDC port assign
- Edit Lock

▼ REAR PANEL FEATURES

- XLR balanced inputs
- DB25 thru/alt. inputs
- Dual A-Net ports
- VDC I/O for MIDI, RS-232, and GPIO
- VDC port configuration switches



6416i BLOCK DIAGRAM



ARCHITECTURAL SPECIFICATION

The Aviom 6416i Input Module shall provide sixteen channels of balanced line-level audio A/D conversion transmitted digitally onto a Pro64™ A-Net® network. It shall provide full-bandwidth, high-quality audio by employing the A-Net audio transmission protocol. It shall employ 24-bit A/D converters with sample rates from 39.7kHz to 52kHz, 79.4kHz to 104kHz, and 158.8kHz to 208 kHz.

It shall have a frequency response from 3Hz to 22kHz, ±0.5dB or better, with total harmonic distortion no more than 0.002% at 1kHz with a -10dBFS input signal with 0dB gain. Maximum input level without clipping shall be +18dBu. Input gain shall be variable from -14dB to +6dB, with a four-position gain switch. Input impedance shall be 3k ohms.

Per-channel features shall include a network activation button with LED indicator, four-position gain switch, and three-segment peak-reading level meters. Each pair of channels shall have a lighted stereo link button. Network interface controls shall include A-Net transmission mode, sample

rate selection, Control Master, Managed Mode, Edit Lock, VDC I/O interface, and Cancel and Enter buttons.

It shall employ XLR jacks for the sixteen line-level inputs. Two DB25 jacks, wired per analog audio standards, shall be provided for audio thru or alternate input connections. It shall employ Virtual Data Cable™ technology with GPIO (terminal blocks x4) with isolated or TTL operation selectable via DIP switch, MIDI In and Out jacks, and RS-232 (DB9 connector) configured via DIP switch.

The unit shall be powered by an internal universal power supply (110 to 240VAC) with an AC power receptacle with fuse, and be supplied with a detachable AC cable. It shall be UL and CE listed. The unit shall have EtherCon® RJ45 connectors for the A-Net digital signal connections.

Its dimensions shall be 19 inches wide, 8 inches deep, and 2U (3.5") high. Its net weight shall be 9 pounds, and its front panel shall be finished in blue. The unit shall be Aviom Incorporated model 6416i.