



A Closer Look at A-Net®

Comparing Pro16® and Pro64®



A-Net® is Aviom’s proprietary audio distribution and networking technology. A-Net is based on the physical layer of Ethernet, so it uses familiar Cat-5e cables and RJ45 connectors. Unlike Ethernet, however, A-Net is a technology designed specifically for the unique demands of bandwidth-intensive streaming audio. As a result, A-Net offers several important benefits over Ethernet-based approaches to distributing audio digitally, including dramatically reduced latency, longer cable runs, and improved clock performance, without sample rate converters or restrictions on system layout.

Aviom supports two versions of A-Net and offers two product lines based on those technologies: the Pro16® Series and the Pro64® Series.

The Pro16 version of A-Net is optimized for distributing audio from point to point to point as quickly and as seamlessly as possible. System-wide latency in a Pro16 system—including analog-to-digital and digital-to-analog conversions—is well below a single millisecond, even when many devices are connected in a long daisy chain. This speed and efficiency make the Pro16 version of A-Net ideal for Aviom’s Pro16 Monitor Mixing System, the world standard for personal mixing on stage and in the studio.

All Pro16 Series products are designed to be fully plug-and-play, with no complicated set-up or configuration required at any time. Yet the technology still supports sophisticated and powerful system development, including bidirectional systems up to 32x32 and 48x16.

The Pro64 version of A-Net is a more sophisticated technology, designed for even the most complex audio networking applications. Pro64 A-Net maintains the speed and core simplicity of Pro16 A-Net but adds several important features essential for higher-end installations, including more flexible system architecture, higher channel counts (up to 64x64), support for higher sample rates, integrated control data for remote control of mic preamps and remote network management, and the innovative Virtual Data Cables™ for distributing user control data.

Pro16 Series output devices and Pro64 Series products may be used together in a single system using the ASI A-Net Systems Interface module as a link.

TECHNICAL SPECIFICATIONS

	Pro16	Pro64
Maximum number of channels	64, using AN-16SBR System Bridge 32, using A-Net® Expansion jacks	64 in Auto Mode 64x64 in Manual Mode (channels may be overwritten)
Sample rates	48kHz	44.1/48kHz± 88.2/96kHz± 176.4/192kHz±
Resolution	24 bits	24 bits
Supported audio formats	Analog Digital, from compatible consoles	Analog Digital, from compatible consoles AES3 digital
Integrated control data	Channel stereo links	Channel stereo links Virtual Data Cables™ for RS-232/422, MIDI, GPIO
Maximum Cat-5e cable length	500ft/150m	400ft/120m
Compatibility with fiber optics	Using certain third-party media converters (16 channels per fiber)	Using the MH10f Merger Hub (64 channels per fiber)
Connection topologies	Daisy chain, star, or combination	Daisy chain, star, or combination All connections are bidirectional at all times.
Compatibility with Aviom Personal Mixers	Yes	Requires ASI A-Net Systems Interface module
Minimum number of A-Net channels used at an input location	16; Pro16 systems are built in 16-channel blocks	1; Channels may be individually activated into the Pro64 network as needed
Latency	<800µs, analog input to analog output	<800µs, analog input to analog output

