

# GEN7 Audio Amplifier Tester by Alfamation

## High-End Audio Amplifier Test Solution

Consumers demand innovative electronic devices with advanced features, and manufacturers need to deliver competitive products with short times to market and lower costs. For audio, customers require adaptive, low-noise surround sound. Engineers conducting more complex audio amplifier tests to meet these requirements need a flexible solution that can handle high channel counts, multiple microphone inputs, and a variety of digital audio multichannel interfaces like Automotive Audio Bus (A<sup>2</sup>B) and Ethernet Audio Video Bridging (eAVB).

### Application Challenges

- Simultaneous test over a high channel counts and multiple devices under test (DUTs)
- Multiple communication and digital audio interfaces including Automotive eAVB, A<sup>2</sup>B, Sony/Philips Digital Interface (SPDIF), and Media Oriented Systems Transport (MOST)
- High-mix, high-volume manufacturing test
- Modularity and expandability
- High-end performance within budget constraints

### NI + Alfamation Advantage

- PXI-based instruments with a modular architecture and up to 64 analog audio measurement channels that can be divided among four or fewer DUTs
- Alfamation Supernova software, based on NI TestStand, to rapidly develop complex test steps and sequences (self-diagnostic toolkit option available)
- Low-noise front-end electronics and programmable audio loads to meet a wide range of application needs; manual or roboticized load/unload capability; rugged, reliable design for 24/7 operations; reduction of test time due to parallel test

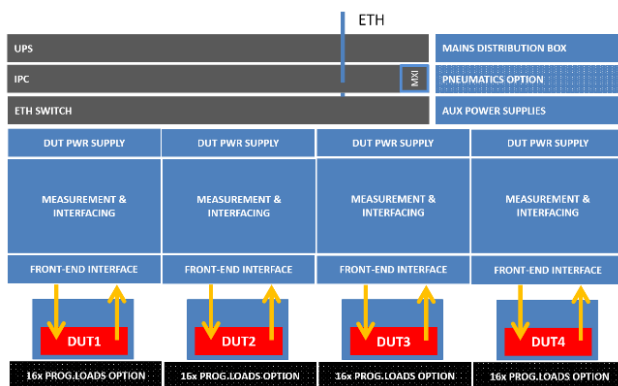


Figure 1. General High-End Audio Amplifier Tester Architecture Block Diagram

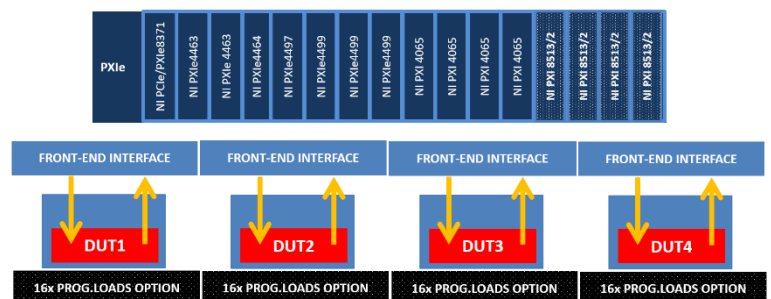


Figure 2. Analog Audio Section Block Diagram



Figure 3. GEN7 Audio Amplifier Tester Common Configuration

## NI + Alfamation Solution

The GEN7 Audio Amplifier Tester by Alfamation features high-speed test technology based on industry-standard PXI hardware and NI TestStand software to provide highly scalable and time-efficient solutions and unsurpassed signal integrity. It works for both manual and roboticized DUT loading/unloading and tests up to four amplifiers sharing the 64 audio measurement channels.

The GEN7 Audio Amplifier Tester integrates programmable audio loads and digital audio and communication interfaces including A<sup>2</sup>B and eAVB.

KEY SPECIFICATIONS	
Analog Input Channels	Up to 64 differential, simultaneous sampling, AC/DC coupled
Sampling Rate	204.8 kS/s
Dynamic Range	Up to 100 Vpp
Idle Noise	<10 $\mu$ Vrms (A-weighted)
Analog Audio Sources	Up to 4 independent
Analog Audio Output	12 per source (AC/DC coupled)
Programmable Audio Loads	4 x 16 channels (each channel: Off, 600, 8, 6, 4, 3, 2 $\Omega$ - 100 W)

## System Integration on Your Terms

NI offers a variety of solution integration options customized to your application-specific requirements. You can use your own internal integration teams for full system control or leverage the expertise of our worldwide network of NI Partners to obtain a turnkey system.

Contact Alfamation or your NI account manager to learn more about how the GEN7 Audio Amplifier Tester can increase your product quality and shorten your testing timelines.

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