

Omnia Enterprise™ 9s

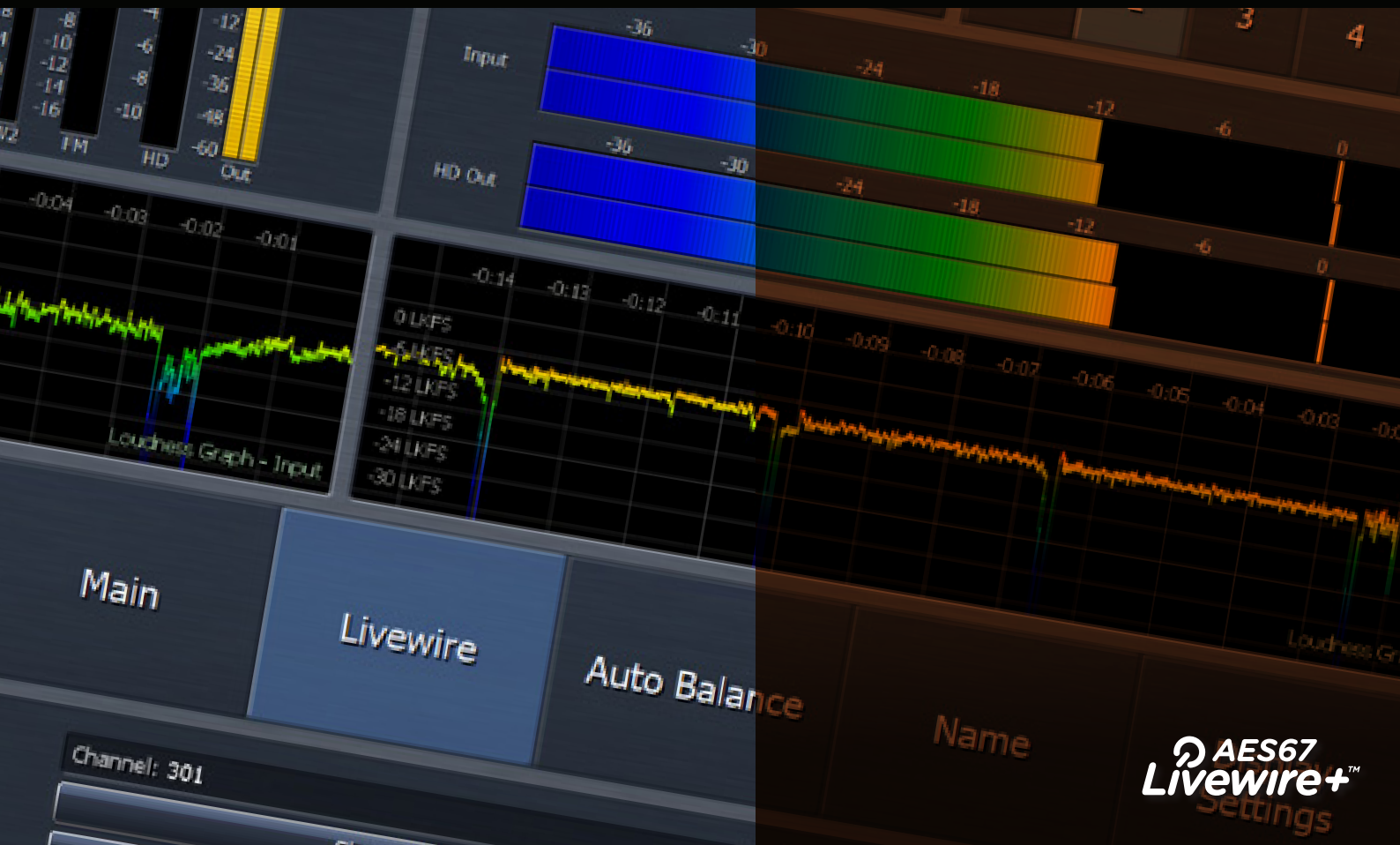
Omnia audio processors are the leading brand and first choice for terrestrial and streaming broadcasters around the world.

Omnia Enterprise 9s brings the proven sound and rich feature set of our Omnia.9 hardware processor to a flexible, scalable, and adaptable software solution.



Omnia Enterprise™ 9s

Audio Processing Software





Enterprise 9s – Virtual Processing for AM, FM, HD/DAB, and Streaming

Overview

Omnia Enterprise 9s Audio Processing Software Overview

Omnia Enterprise 9s is a software-based audio processing solution for Windows designed for broadcasters whose needs are best served by a server-based virtualized application. Whether for AM, FM, HD/DAB, streaming audio, or any combination thereof, customers with a large volume of signals and diverse audio processing needs - or those who can simply benefit from the advantages of a virtualized approach to processing - will find E9s an ideal approach.

Scalable, Customizable, Centralized

Enterprise 9s carries forward the proven features and sound of the legendary Omnia.9 hardware processor into a software-only, high-density solution valued by today's leading broadcasters. Each system can be configured for AM, FM, HD, and streaming endpoints to suit your needs today and scale up as you grow and your requirements change - including the ability to quickly add channels for special events or seasonal programming.

As an FM processor, E9s allows for centralized processing at your network operation center for distribution to one or more transmitter sites, outputting either a pre-emphasized, peak-limited L/R audio signal or a full complete composite signal using μ MPX, which can be decoded at the transmitter site by the Omnia MPX node.

Complete Control of Your Virtual Airchain

Each stereo program instance (referred to as a "station") is separately licensed and assigned its own audio processing engine. The base processing license comes in two different models.

The FM version includes a single audio input ("station"), one FM processing core (which includes a L/R peak-limited pre-emphasized output plus two μ MPX outputs, including RDS with UECP support), one AM processing core, and one stereo L/R processing core for HD, DAB, or streaming, including streaming encoders.

The HD/DAB/Streaming version includes a single audio input ("station") and one stereo processing core for HD-2/3/4, DAB, and other L/R outputs, plus streaming encoders. HD/DAB/Streaming versions can be field-upgraded to FM with a license key.

Everything You Love About Omnia.9, As Software



Processing for each station can be uniquely tailored to suit the program material, audience, and delivery method. Enterprise 9s includes a wide variety of factory presets, which can be used as-is or serve as starting points for custom user presets. The “Basic” adjustment mode greatly simplifies dialing in the desired sound by combining multiple processing parameters into a handful of controls, while “Intermediate” and “Expert” modes provide access to every available individual control where a high degree of customization is needed.

Nielsen and Fifty5Blue audience measurement watermarking are optionally available for each station.

Additional processing instances and options can be added at any time by purchasing the appropriate license key.

Features

Omnia Enterprise 9s Audio Processing Software Features

Both base processor types include:

- “Undo,” a two-stage process that consists of a declipper paired with a multiband expander. This unique combination removes distortion and restores dynamic range to source material damaged by clipping and excessive compression during mastering.
- Unrivaled control over processing, featuring basic, intermediate, and expert adjustment levels
- Input conditioner and input AGC
- 2 to 7 band processing, adjustable for each Station instance, including
 - Wideband AGC
 - Deep bass, Solar Plexus, and Stereo Enhancement
 - Multiband AGC, Expansion & look-ahead limiting
 - Dry Voice detection
- Proven, portable factory presets, created by some of the best ears in the business, and shareable between E9s, your Omnia.9 hardware unit, Z/IPStream instance, or Omnia Tools file-based processing
- Stream encoding, including MP2, MP3, AAC, HE-AAC, FLAC encoders
- Metadata support over HTTP
- Internal file recorder
- Flexible monitoring outputs to listen to any patch point in the air chain



Livewire+™ AES67 and SMPTE ST 2110

AM/FM processor licensing includes all the above, plus:

- Pre-emphasized final output with adjustable Low Pass filtering
- Stereo Generator with Auto Pilot
- L/R and MPX clipper
- Diversity delay to align FM & HD-1 outputs
- μ MPX Encoding
- Embedded RDS encoding with UECP support
- AM processing core with custom AM presets

In-Depth

Omnia Enterprise 9s Audio Processing Software In-Depth

Flexible AoIP Routing

Each LW+ AES67 source available on the AoIP network is selectable from a Channel List and can be routed to the input of any Station for processing. Processed instances can be output to multiple parallel endpoints.

Livewire+™ AES67 and SMPTE ST 2110

Telos created its original Livewire AoIP technology in 2001, then we drove the creation of the AES67 standard by initiating the proposal of the standards project to the Audio Engineering Society in 2008, and contributing our intellectual property to the effort.

Whereas AES67 strictly focuses on the audio stream format and clocking, Livewire+ can be thought of as a more complete network-based digital ecosystem for creating a “facility over IP” model that includes control, advertising, discovery, and GPIO contact closures.

Omnia Enterprise 9s implements SMPTE ST 2110 IS-04 and IS-05 protocols for discovery and control as well as ST2022-7 for redundant stream support.

Stream Receiver Support

Primary and Secondary Input streams can serve as backup or primary audio sources for any Station input.

Flexible Licensing Options



Customized Displays

The unique “NfRemote” software client runs on any Windows computer and provides access to all systems, I/O, and processing parameters anywhere a network connection is available. Multiple users can connect to the same processor at the same time, and a single user can connect to more than one processor simultaneously, making remote management of multiple program paths comprehensive and efficient.

NfRemote also features a highly customizable display to facilitate setup and processing adjustment, including I/O levels, processing activity, LUFS loudness readings and graphs, and signal-specific analysis from various patchpoints using tools such as a digital oscilloscope, FFT spectrum analyzer, and audio frequency RTA (real-time analyzer). Up to six unique display pages can be built for each processing engine.

The patchpoints in each display can also be aurally monitored. Whether you want to listen to a raw input, a mid-stage processed signal, or isolate the signal feeding the final limiter, these flexible monitor points provide unrivaled oversight, measurement, and monitoring of your signal chain.

Additional Configuration and Control

All functions included in the NfRemote app are also available through the HTTP-based API. E9s also supports Ember+ capability as well as IS-05.D and MIB II SNMP.

Watermarking Options

Omnia Enterprise 9s integrates watermarking SDKs from Fifty5Blue and Nielsen, the giants of the audience measurement world. Separate codes can be added to each Station instance, providing complete flexibility in watermarking management.

Flexible Licensing Support

Whether you run an air-gapped facility or have a persistent Internet connection, Omnia E9s has you covered with flexible methods for license validation



Meets Your Needs Today and In the Future

Preset Sharing

Custom presets, which are often painstakingly developed and curated over time, make up the “signature sound” of any processor. For the thousands of broadcasters who have invested in Omnia.9, these “crown jewels” are portable between the different deployments in the Omnia.9 family. For instance, presets developed on an Omnia.9 hardware unit can be copied and used in Enterprise 9s, utilized for file-based processing with OmniaTools, or employed by the Telos Z/IPStream X/20 and R/20 platforms using Omnia.9 processing. This portability and sonic consistency provide an unparalleled return on investment among different Omnia.9-based deployments.

Changes As Your Needs Change

With Enterprise 9s and the suite of Telos Alliance customized software solutions, installation, deployment, and software updates across your network have never been easier or faster, especially compared to making such changes in a traditional hardware-based ecosystem. As you outgrow your server’s capability or upgrade server units, licenses can be transferred to new hardware at a fraction of the cost of upgrading appliance hardware across your network.