

# Designed to Network



Genelec offers Smart Active Monitoring (SAM™) solutions for AES67 standard audio-over-IP applications

**GENELEC**

# 8430 IP Smart Active Monitor- (SAM™) with Audio-over-IP Connectivity

Today's most advanced and flexible monitoring solutions for today's most professional users

Genelec is the leading manufacturer of active loudspeaker solutions. Our commitment to offer state-of-the-art technology for all professional applications continues with the introduction of products for the modern IP networking environments. We are proud to release the 8430, an audio-over-IP enabled Smart Active Monitoring (SAM™) two-way system. This product is a high resolution audio monitoring solution using the power of Smart Active Monitoring and GLM™ AutoCal™ automated system calibration technologies for audio-over-IP applications.

Genelec has been active in audio-over-IP for many years. In 2010, during the ISE show Genelec demonstrated its first audio-over-IP showcase system. Since then, a lot has happened in the audio industry to establish better communication standards for audio-over-IP. This work has been actively pursued in several forums. The AES67 standard (Audio Engineering Society standard for audio applications of networks) about audio-over-IP interoperability, published in 2015, is now quickly gaining acceptance and is rapidly establishing audio-over-IP as the mainstream approach for implementing connectivity in the future broadcast environments.

At the same time, the world is experiencing a rapid increase in creation and distribution of media content over IP networks, resulting in significant changes in the way system solutions are implemented. Broadcast houses are moving towards audio and video over IP solutions with increasing speed. IP networking is quickly replacing the traditional cabling. Modern consumers are increasingly building media reproduction systems using IP streaming technology.

At Genelec we believe that audio-over-IP networking using systems that are fully compatible with open standards is the right, reliable and robust way to address the future needs of the audio market. We believe that international cooperation across the industry is the key to create open IP networking technology solutions for professional users. Widespread use of IP networking solutions will allow customers to benefit from the latest developments in IP technology and the power of continually improving services.





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## Impressive acoustic performance

While compact in size, the 8430 provides outstanding performance. Its floating point DSP engine enables precise signal processing. Genelec-designed Class D amplifiers have low noise level and excellent linearity. The 8430 is a low latency audio monitor. The latency from the IP audio stream to sound output is about 3 ms. The actual configuration of the audio-over-IP streaming may cause some additional latency. The signal processing is time equalized so that the 8430 has a latency that remains precisely constant at all frequencies above 200 Hz, ensuring excellent translation of time domain waveforms. The frequency response of the 8430 is flat in a 1.5 dB window on the acoustical axis while the product has controlled directivity characteristics, ensuring uncoloured neutral sound also in the off-axis directions. With its high performance, low noise and excellent linearity Class D amplifier technology, its universal mains voltage switched-mode power supply and long design lifetime, the 8430 fulfills all the stringent quality requirements of the modern broadcasting industry.

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## Small footprint

The 8430 Smart Active Monitor with IP connectivity comes in a compact die-cast aluminium enclosure. The system acoustic design features Genelec's Minimum Diffraction Enclosure (MDE™) technology and uses a computer optimized advanced Directivity Control Waveguide (DCW™). The 8430 offers high resolution audio output with professional performance and bandwidth. The 8430 offers uncompromising performance for IP streaming applications.

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## Audio-over-IP connectivity

With the inclusion of the 8430 IP SAM system into our portfolio, Genelec now offers an intelligently controlled, IP network-capable product solution. Ethernet audio streaming is compliant with AES67 and Ravenna industry standards and supports all the typical standard audio sample rates from 44.1 to 96 kHz and word lengths from 16 to 24 bits. The 8430 RJ45 Ethernet connector is housed in an XLR shell offering the highest reliability in physical connections. The audio channel(s) to be reproduced can be configured over the IP network. The 8430 time synchronizes in the IP network using the highly accurate PTP v2 (Precision Time Protocol) method, creating a solid and reliable sound image for audio monitoring, from stereo to 3D immersive audio setups. An unlimited number of 8430 monitors can be configured to reproduce a multichannel or 3D immersive audio presentation delivered over the low-latency IP stream. The GLM AutoCal automatic calibration method can support more than 30 monitors in one room.

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## Real solutions for room acoustic challenges

Genelec's SAM technology is an indispensable tool when dealing with the challenging reality of room acoustics. Smart Active Monitors can automatically optimize and align each monitor for level, time of flight related to the monitor distance to the listening position, as well as to compensates the influences of the room acoustics for every SAM monitor on the network. Using Genelec GLM 2.0 software, each system is individually calibrated using measurements at the listening location or over a listening area. When monitors and production projects must move between rooms, you can rely on Genelec SAM technology to guarantee the highest possible monitoring consistency and a reliable work flow, providing a neutral sound stage and precise audio imaging.

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## Features and benefits

- Intelligently controlled, IP network-capable product using AES67 standard for easy system integration
- Smart active monitors are easy to operate and can adapt to any acoustical environments
- GLM computer control allows repeatable, consistent performance
- Complete solution-oriented Smart Active Monitoring systems eliminate guesswork in system configuration and acoustic performance optimization
- GLM network flexibility allows set up and computer-control of more than 30 monitors
- Genelec GLM AutoCal measures the acoustic response in the listening area and applies relevant compensations to minimise the room's acoustical influence
- Reducing the perceived differences between listening environments or positions, SAM systems enable accurate transfer of audio productions between rooms
- In the factory, every single product is calibrated and 100 % evaluated for acoustic performance guaranteeing excellent similarity between units and consistent high performance
- Genelec quality and reliability ensure a long term investment and outstanding audio quality

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## Technical specifications

8430	
	Maximum sound pressure 104 dB <sup>1</sup>
	Frequency range 45 Hz – 23 kHz (-6 dB)
	Accuracy of the passband ± 1.5 dB (58 Hz – 20 kHz)
	Crossover frequency 3.0 kHz
	Drivers Woofer 130 mm (5 in) + Tweeter 19 mm (3/4 in) metal dome + DCW™
	Amplifier power Woofer 50 W + Tweeter 50 W
	Dimensions H 299 x W 189 x D 178 mm, H 11 7/8 x W 7 1/2 x D 7 1/16 in
	Weight 5.5 kg / 12.1 lb
	Connections 1 x XLR analogue input 1 x XLR-housed RJ45 for AES67 compatible digital audio-over-IP input 2 x RJ45 GLM control network

<sup>1</sup> Maximum short term sine wave sound pressure level averaged from 100 Hz to 3 kHz, measured in half space, on-axis, at 1 meter