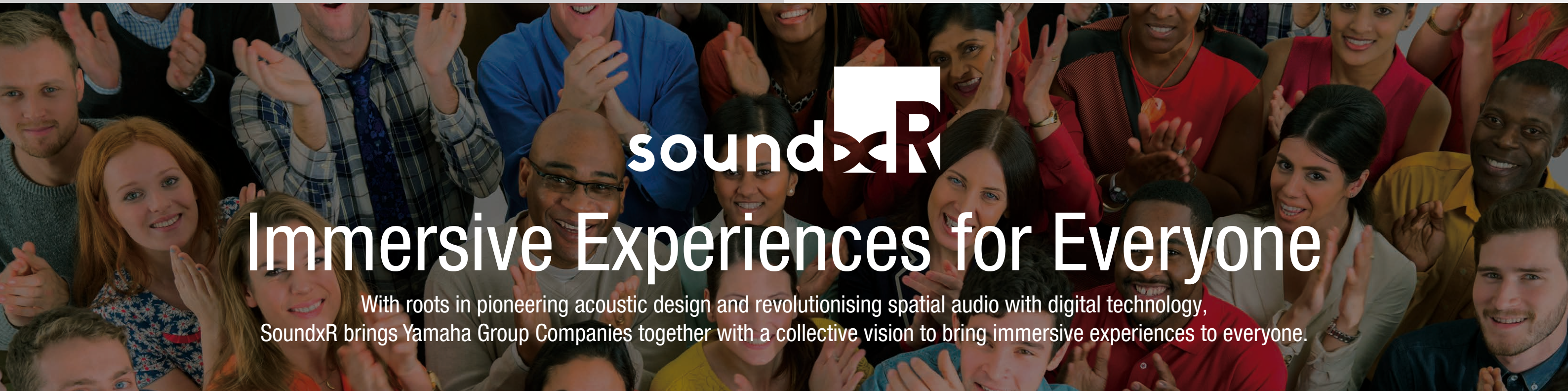# DME10

Immersive Audio Processor

Live Events Clubs Theatres Visitor Experiences

soundxR
Immersive Experiences for Everyone

With roots in pioneering acoustic design and revolutionising spatial audio with digital technology,
SoundxR brings Yamaha Group Companies together with a collective vision to bring immersive experiences to everyone.

soundxRCORE

In the virtual world, soundxR Core is a binaurilizer widely adopted in the gaming industry to enhance the sound experience using headphones.

AFC IMAGE

And in the real world, AFC or Active Field Control has already been adopted in over 150 venues worldwide.

The soundxR vision is to connect real with virtual environments. For example, using the real venue data to create 3D modelling for a virtual venue, and create a virtual event for an 'off-site' experience.
Then, audiences can join from other platforms such as VR devices or smartphones and experience immersive audio via headphones. Or the reverse, reproduce virtual content at an on-site venue. The potential is only limited by the creators' minds.

Transforming the impact of musical performances

It's time to free the audience from the mono mix. Where once the front of house sound engineer could pan a source left or right, now 128 objects can connect to mixer sizes of up to 128 channels providing far better localisation. Live music events are transformed for performers and audience alike.

Creating stunning visitor experiences

From a cavern to a cathedral, use sophisticated 3D reverb to create any number of acoustic environments and move or position sounds anywhere within that space. From immersive art tours and museum events to visitor attractions and rides, the ability to create acoustic environments and localise sounds within them brings the power to deliver visitor experiences and thrills on a whole new level.

Placing the audience at the heart of the drama

Dramas and musicals often rely on a simple LCR system to localise the sound of the performers. Compatible with external stage tracking devices, DME10 with 5 or 7 FOH speakers improves this drastically, so the audience hears better where the action is coming from. A new immersive audience experience is further enhanced by new possibilities in sound design and effects.

Engaging with worshippers on a whole new level

With speech and music at the heart of the celebration, the ability to create 3-dimensional soundscapes results in a more engaging experience for worshippers, while 3D reverbs transform the acoustics of small spaces into cathedrals.

DME10
Immersive Audio Processor

Powerful. Cost-effective.

Built on the tried and tested Yamaha DME platform, the NEXO DME10 goes a step further than any other immersive processor by unlocking its raw processing power to users and allowing near limitless customisation.

A 256 x 256 channel open architecture processor, DME10 ships with 32 object inputs / 16 speaker outputs included as standard, expandable in blocks of 32 x 16, 64 x 32 and 128 x 64 via a flexible licensing structure. Need the full channel count for a show today but two completely independent 64 channel immersive processors tomorrow? You can do that.

With superior musical expression and sound field design, DME10 features 96kHz processing and

is equipped with a wide range of DSP components that can be freely selected, connected, and configured, allowing for flexible system construction.

And such is the processing power of the DME10, separate speaker system and immersive processors are no longer required. It's all inside DME10.

Need more than the 8 channels of parametric EQ per channel or some more dynamics at a specific point in the signal chain of your immersive design? No problem. Running 128 x 64 immersive processing only uses around 50% of the DME10's processing resource.

Seamless Workflow from Creation to Delivery

Yamaha Group Companies have come together to deliver a complete immersive audio workflow from sound design and content creation through to scalable delivery solutions.
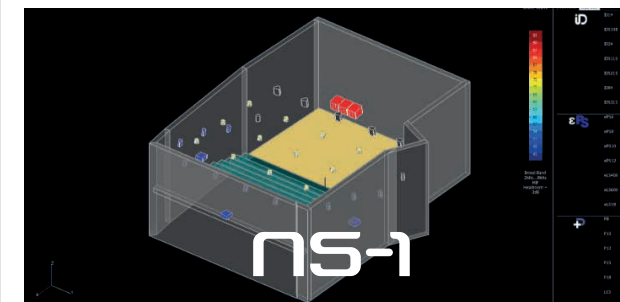
Powerful, Intuitive DAW

Renowned for its immersive mixing capabilities, it's easy to create stunning content for any small-to-large scale event using the acclaimed Nuendo sound-design tools. Nuendo comes with a complete feature set for capturing live and studio performances and captured or imported audio come together in one timeline for editing and assembly.

Nuendo's direct connection to the AFC Image Panner is the seamless gateway from pre-production to running the show.
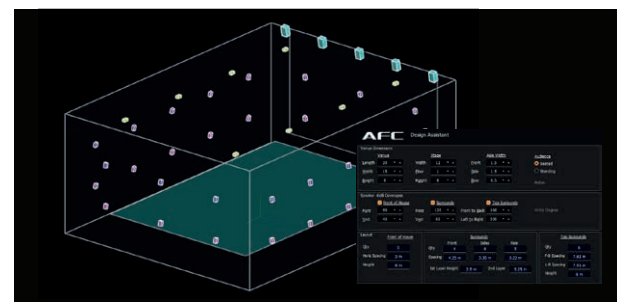
AFC Design Assistant

Immersive audio requires very precise speaker implementation to achieve its goal. When the user specifies parameters such as venue dimensions, stage dimensions and aisle width, AFC Design Assistant provides the necessary guidelines for the required number and placement of speakers to provide a full immersive audio experience for an entire audience.

System Simulation Software

AFC Design Assistant is part of NS-1, NEXO's intuitive drag-and-drop software tool for the configuration of any line source or point source system from NEXO's catalogue, thanks to intuitive yet powerful tools applied to your own geometry. NS-1 not only assists in achieving the best SPL coverage, but also certifies that mechanical constraints are satisfied.

Exporting Speaker Positions

When the system design is complete, the design file can be exported from NS-1 and imported to AFC Image Controller, making the whole process from studio design through to venue performance as quick, easy and accurate as possible.

Object-Based Mixing

Once the speaker positions have been exported to AFC Image Controller, it's time for the final playback.

AFC Image supports object-based mixing using a Distance-based amplitude panning (DBAP) algorithm. Objects can be moved smoothly and easily in any direction using the intuitive user interface of AFC Image Controller.
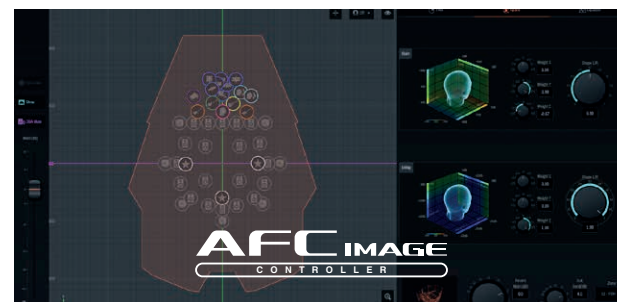
3D Reverb

Drawing on an expertise in architectural acoustic design and facilitated by the processing power of the DME10, AFC Image Controller includes a high-quality 3D reverb.

This can be used as a sound effect to add spacial atmosphere to the content and automatically calculates the reverb setting based on the object's position to ensure a natural sound.

Digital Consoles

To make operation easier for live mixing engineers, AFC Image will support both Rivage PM Series and DM7 Series mixing consoles as standard.

Object position can be controlled from the touchscreen of the console and the AFC Image main fader and 3D Reverb fader can also be controlled.

Enhanced Connectivity and Interoperability

Third party integrations via OSC and ADM-OSC protocols are also supported to enhance connectivity and interoperability across different platforms.

These include: Stagetracker, Zactrack, Naostage and Follow Me tracking systems, Q-Lab, Atlas and MAX show controllers and, of course, the Nuendo DAW from Steinberg.

Scalable Delivery Solutions

From industry standard point-source models to compact and powerful line arrays, NEXO provides a wide range of loudspeaker solutions for immersive applications of every type and scale.

iD14

Employing a single, 4-inch coaxial driver, the super-compact ID14 might be the smallest loudspeaker that NEXO has ever built, but it punches well beyond its size and weight with the signature NEXO performance of powerful and dynamic full range sound. Equally at home in a hospitality environment or as part of sophisticated, immersive sound system, the ID14 features a myriad of mounting and connecting options, and finishes, delivering uniform audience coverage with low visual impact, indoors or out.

Used as a standalone speaker, partnered with the IDS108 sub or as part of a larger system with other ID Series speakers, the ID14 delivers powerful, full range sound from an exceptionally compact form factor. To ensure perfect coverage in every application, the ID14 is available in two different HF coverage options: the standard 100°x100° horn, or an asymmetric version offering 90°x140° dispersion.

IDS110

iD24

The groundbreaking ID24 uses twin 4-inch drivers in a V formation in a robust Polyurethane cabinet and achieves a frequency range of 95Hz to 20kHz with a peak SPL of 126dB. The unique, user-rotatable horn can be used to quickly select a range of HF directivity options, ensuring that horizontal and vertically mounted cabinets can be matched precisely to the application, with a dedicated preset for each horn option in the nanoNXAMP and NXAMPMk2 powered controllers to ensure perfect coverage at any frequency. Multiple rigging options include threaded M10 on Install models and rigging points on touring versions, with dedicated 1x10" and 2x10" subs also available.

IDS210

P+series

Building on NEXO's acclaimed expertise in compact, high-output, point source loudspeakers, the P+ Series delivers pristine, full-range sound at even greater Sound Pressure Levels, along with unparalleled versatility, thanks to an ingenious system for varying HF coverage patterns.

An exciting synergy of sleek good looks and stunning performance, the P8, P10, P12, P15 and P18 loudspeakers employ custom 8, 10, 12, 15 and 18-inch LF/HF drivers in a coaxial configuration to deliver perfect phase alignment, exceptional clarity and a smooth response across the full frequency range. Available in mobile and install versions, the curved, low-profile cabinets can be deployed both vertically or horizontally, in Touring, Install and TIS versions and feature pole-mounting hardware and rigging points. Partner L15, L18 and L20 subs are also available.

P+ Series

Geo M

In larger immersive sound applications, the GEO M Series incorporates three powerful and flexible line array systems that share the same sonic characteristics, utilising unique and patented NEXO technologies to achieve extraordinary levels of performance from compact, lightweight cabinets.

Integral rigging and a comprehensive range of accessories make it easy to deploy GEO M systems in a wide variety of fixed and mobile applications, and versatility is further enhanced by variable horizontal and vertical coverage options and a range of partner sub bass modules.

Geo M Series

nanoNXAMP4 Powered TD Controller

Available in standard and Dante-equipped versions, the 4-channel nanoNXAMP4 Powered TD Controller provides a cost-efficient combined amplification and processing solution for NEXO immersive sound installations.

Compact yet feature-packed, ultra-low distortion and highly reliable Class D amplification delivers 4 x 250W, providing the same acclaimed sound quality and sonic signature as NEXO's larger NXAMPMK2 TD Controllers. Processing uses FIR filtering for precise system EQ and linear phase compatibility, with presets available for an edited range of speakers drawn exclusively from NEXO's popular ID and ePS Series.
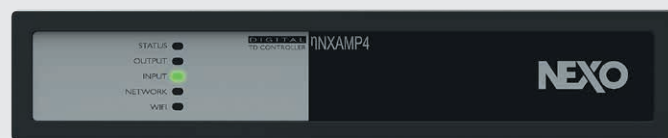
NXAMPMk2 Powered TD Controllers

NXAMPMK2 achieves exceptional sound quality, partnering with NEXO speakers to deliver a whole new level of audience experience. Available in 4 X 1300 Watts, 4 X 2500 Watts and 4 X 4500 Watts versions, the NXAMPMK2 combines advanced signal processing with four state-of-the-art Class D amplifiers to create a flexible, light-weight powering and control solution for NEXO loudspeaker systems.

Ideal for use in large-scale fixed installations and touring immersive sound applications, these powered controllers are easy to set up and quick to deploy, with all essential parameters readily accessible via a large colour touchscreen on the front panel and a comprehensive range of control and networking facilities on the rear panel.

Open Architecture Digital Signal Processing with Comprehensive Connectivity

DME10 ships with 256 channels of Dante I/O and 256 x256 Matrix Mixer at 96kHz as standard. An 8-channel USB audio interface (USB 2.0 Type C) is included along with an SD Card slot for playback of MP3/WAV audio files, 16In/8Out GPI ports and MIDI control for interfacing with legacy systems.

Built-in processing solutions include Dugan Automixer, Acoustic Echo Canceller, Delay Matrix, and FIR speaker processing. Control layer allows for programming complex series of custom logical sequences and network remote control is available via TCP/IP and OSC.

External Event function for control of 3rd party devices is provided via TCP/UDP and ProVisionaire Control software provides quick and powerful custom control panel design and deployment (see pages 12/13).

The DME10 includes Dual Redundant power supplies for mission critical applications.

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ProVisionaire

Integrated Software for the Design and Control of Sophisticated Sound Systems

In addition to DME10's role as an immersive audio processor, it's equally capable at the heart of a sophisticated conventional sound system. Supporting the entire DME10 workflow, ProVisionaire is a suite of software applications for the design, operation, and management of sound systems built around Yamaha Group Company products.

Equally suitable for both entertainment and Pro AV applications, Yamaha's ProVisionaire software is fully customisable, empowering users to create complex, fully scalable audio systems and operators to control them easily and intuitively.

The ProVisionaire Design application is ideal for creating DSP configurations and refining other aspects of system design. ProVisionaire Control PLUS provides comprehensive control of completed systems from tablets and other external devices. ProVisionaire Cloud allows efficient management of DME10 device licenses. These three applications give systems integrators the tools they need for smooth, efficient workflow when creating and managing sound systems of any scale.
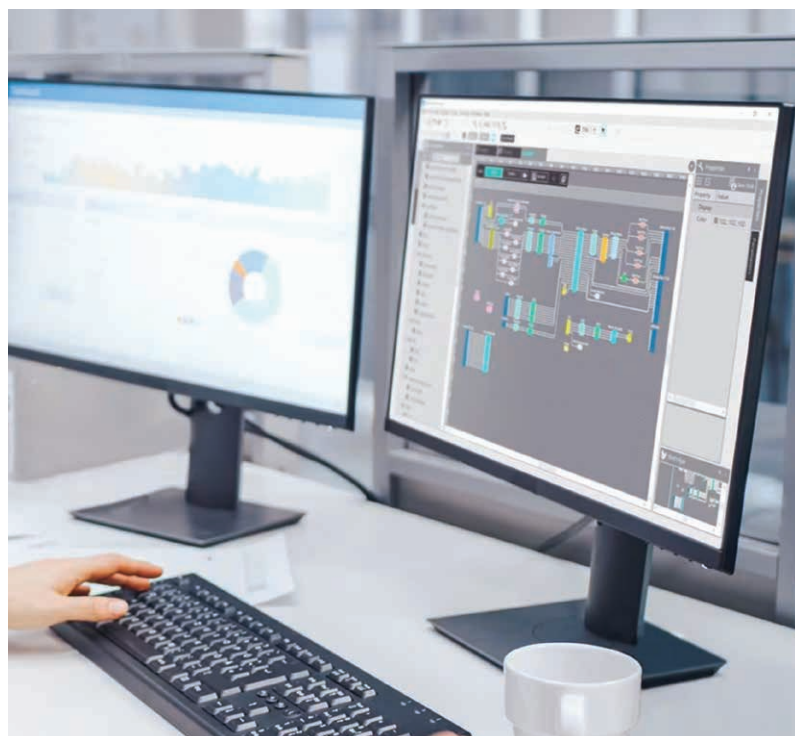
ProVisionaire Control PLUS

From a single panel, ProVisionaire Control PLUS is a Windows application that provides unified remote control and monitoring of the entire systems. Control panels created by ProVisionaire Control PLUS can be exported to ProVisionaire Kiosk, which support multiple platforms including Windows devices and the iPad/iPhone. A broad range of Yamaha processors, digital mixers and interfaces devices are supported, along with the NEXO DME10 and NXAMPMk2 Powered TD Controllers.

ProVisionaire Control PLUS includes the ProVisionaire Edge, making it easy to monitor the status of system devices while alerts and other log data can be recorded to a computer.

• Total system control assigning necessary parameters from supported devices
• Create Custom Control Panel depending on the needs
• Drag and drop parameters from ProVisionaire Design
• Windows and iPad support
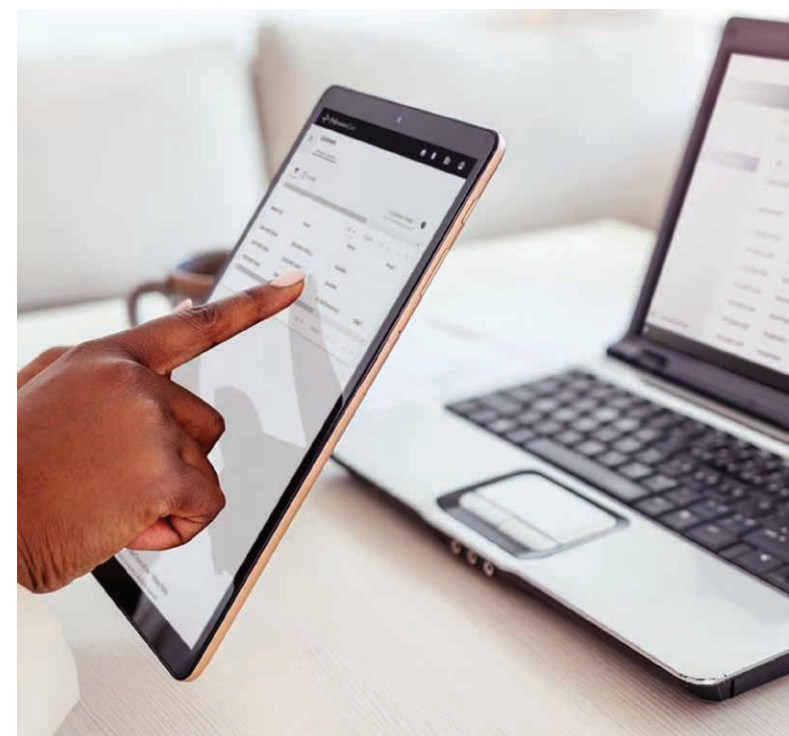
ProVisionaire Design

A software application for Windows operating systems that allows comprehensive, intuitive design of sound systems that use compatible Yamaha and NEXO products including the NEXO DME10 processor.

ProVisionaire Design facilitates sound system design and setup by allowing flexible component layout, signal routing, and parameter editing in the DME10.

A wide range of high-quality audio components is supported including REV-X for refined reverb, and the Dugan Auto Mixer for flawless automated mixing. It also supports logic components that can be used to create control sequences.

ProVisionaire Design can be used in conjunction with the ProVisionaire Control applications for comprehensive control of any project, from system design and setup to everyday operation and management.

• Flexible and intuitive system configuration
• Includes a variety of audio components for intended sound design
• Versatile logic control setup
• Probe monitoring

ProVisionaire Cloud

ProVisionaire Cloud is a cloud service that allows management of Yamaha pro and commercial audio device licenses and NEXO DME10's flexible licensing structure for configuration in NXAFCI blocks of 32x16, 64x32 and 128 x 64. Licenses can be freely activated and deactivated according to the user's needs.

• Flexible license management
• License activation/deactivation

iPad and iPhone are registered trademarks of Apple Inc.
Windows is a registered trademark of Microsoft Corporation.

NEXO Informs

Immersive Experience Centres

NEXO Immersive Sound Systems incorporating the DME10 are available for demonstration at a series of Experience Centres around the world, where visitors can discover the processor's power to create stunning three-dimensional soundscapes and reverbs as the heart of a soundxR AFC Image system. We're adding new Experience Centres regularly, so please check the NEXO website for the latest contact details.

NEXO Educates

Online and Onsite Courses

Approved by Avixa as an RU provider, NEXO's AudioVersity Training Courses already cover everything from general acoustic principles through system design and deployment to installation and operation. Now we're adding new courses for design and deployment of immersive audio systems using the DME10. For full details of AudioVersity courses, visit the NEXO website.
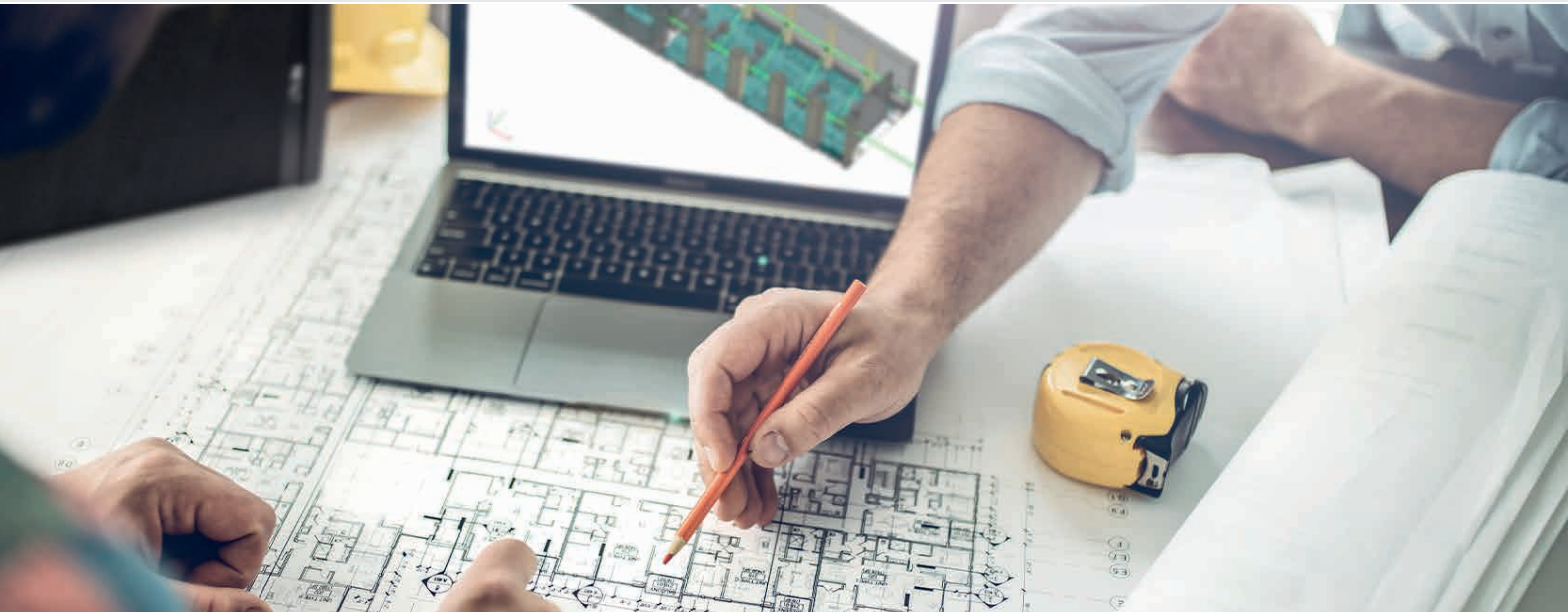
NEXO Supports

Engineering Support

Every day, the NEXO Engineering Support team is at work around the world assisting our customers at every stage of their projects from advice on system design and performance simulation through to deployment, final tuning and commissioning. Team members are experienced in supporting immersive audio applications at events and in fixed installations and are ready to discuss your project.

DME10 Specifications

Internal processing		44.1/48/88.2/96 kHz
Latency		2.7 msec (at Rio-D2 Analog In/Out with Dante latency at 0.25msec, Dante through out on DME10)
Memory		Parameter sets: 1000, Snapshots:10000
Cooling		Constant-speed fan x1
NC value		NC20 (1m from front panel)
Air flow		Front to Rear
Dante Interface	Channel count	256 input, 256 output, redundant
	Sampling frequency	44.1/48/88.2/96 kHz
	Bit depth	24/32 Bit
USB audio	Channel count	8 input, 8 output with SRC
	Sampling frequency	44.1/48/88.2/96 kHz
I/O Connectors	Dante	etherCON ×2 (PRIMARY / SECONDARY) 1000Base-T
	DCP	RJ45 x 1
	USB TO HOST	USB 2.0 Type-C connector for USB audio
	USB TO DEVICE	USB 2.0 Standard-A Connector for Save/Load
	Network	RJ45 x 1, 100Base-TX
	GPIO	Euroblock 16 terminals (mini) x2 (GPI x16, GPO x8, +5V power supply x4)
	MIDI	DIN 5 pin ×2 (IN, OUT)
	AC IN	AC inlet (IEC, V-Lock) x 2
Memory device specifications	Compatible formats	File format: FAT32, FAT16, FAT12
	Supported capacity	Maximum media capacity: SDHC: 32 GB, SD: 2 GB
	Maximum file size	FAT12: 32MB, FAT16: 2GB, FAT32:4GB
User Interface	Front panel	Rotary encoder and buttons for GUI control, Operation lock feature (Full lock or Lock except volume and mute)
	Display	224 × 48 pixels, mono color with brightness adjustment
Power requirements		100V-240V 50Hz/60Hz
Power consumption		100W
Heat dissipation		86.3kcal/h
Operating temperature		0°C to +40°C
Storage temperature		-20°C to +60°C
Dimensions (W x H x D)		480 x 132 x 363 mm (3U) (18.90 x 5.20 x 14.29 inch)
Weight		9.5 kg (20.94 lbs)
Packaged weight		13 kg (28.66 lbs)
Finish		Front panel: Aluminum (Silver and black) Munsell approximate value N9 (Silver), N2.5 (Black) Handle: Metal (black paint)
RAL approximate value		RAL 860-1 (Silver) + RAL790-4 (Black)
Battery		CR2450
Included accessories		Setup Guide, Two Euroblock plugs (16-pin, 3.50 mm pitch), Two power cords, One cable hook
Options		DCP1V4S-US/EU, DCP4S-US/EU, DCP4V4S-US/EU, DCH8
Expansion license		NX-AFC-I

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ISO 9001:2015
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Certification

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1828

WARRANTY
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★★
WARRANTY

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