DME10

Immersive Audio Processor

Concerts | Scare Experiences | Interactive Theatre | Visitor Experiences | Hospitality | Theme Parks | Art Installations

nexo-sa.com

Thinking. Inside the box.

NEXO A Yamaha Group Company

DME10

Immersive Audio Processor

Powerful. Flexible. Cost-effective.

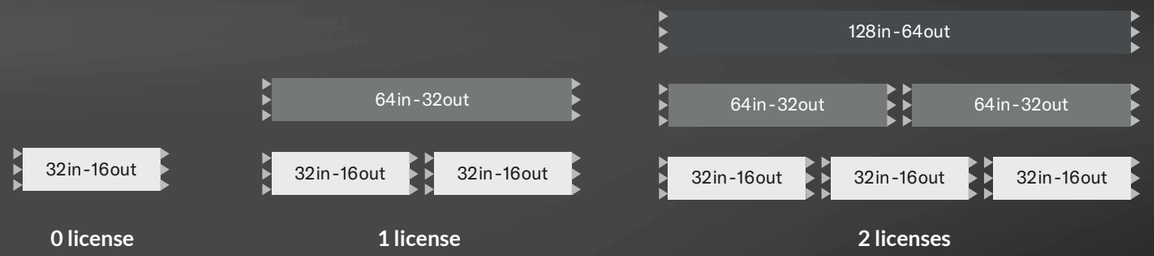
Built on the tried and tested Yamaha DME platform, the NEXO DME10 goes a step further than any other immersive processor by unlocking its raw processing power to users and allowing near limitless customisation.

A 256 x 256 channel open architecture processor, DME10 supports Sound xR Image object-based sound image control and ships with 32 object inputs / 16 speaker outputs included as standard, expandable to 128 / 64.

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.



Pay Only For The Processing Power You Need

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 (NXAFCI) via a flexible licensing structure. Need the full channel count for a show today but two completely independent 64 channel immersive processors tomorrow? With DME10, you can do that.

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.

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

soundxR

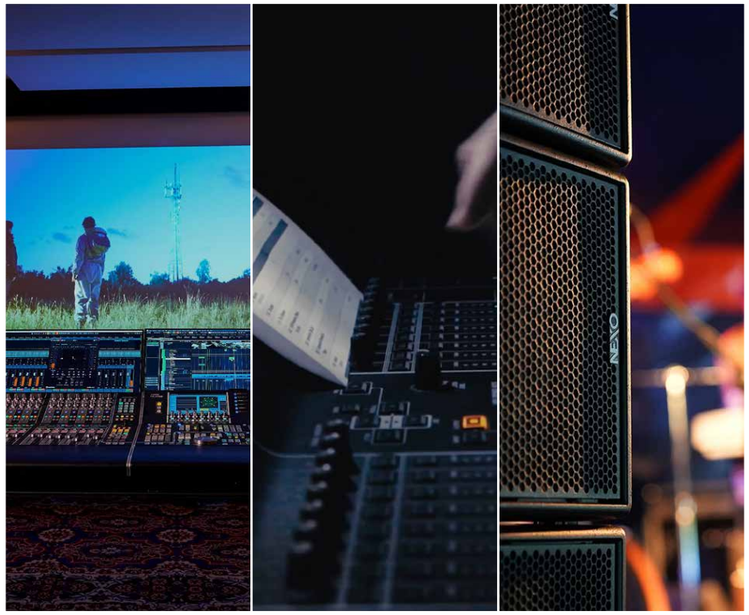
Immersive Experiences for Everyone

A Unique Collaboration Between Yamaha Group Companies

Sound xR is Yamaha group companies coming together to create a uniquely versatile immersive sound solution applicable to a wide range of applications.

Only Sound xR offers a single, seamless workflow from content creation through system configuration to production control and delivery, combined with scalable, flexible and cost-effective processing and output solutions to match every budget and advanced features for enhanced performance and easier operation, based on decades of experience in pioneering spatial audio technology.

Sound xR makes immersive experiences for everyone.



steinberg YAMAHA Make Waves NEXO

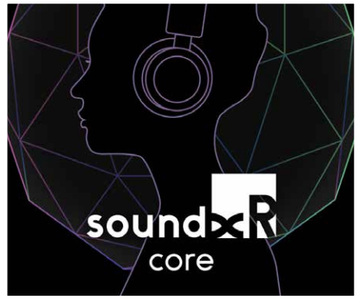
Three Immersive Sound Solutions In One

Sound xR Image

Sound xR Image is an object-based sound image control system that precisely controls the location and direction of sound images within a space to deliver immersive audio experiences across a wide range of applications, including theatre, opera, concerts, installations and events.

Sound xR Enhance

Sound xR Enhance is a sound field control system that enriches and optimises the resonance of sound by utilising the unique acoustic characteristics inherent to a building's space, preserving the natural sound of instruments and vocals while controlling the reverberation and perceived volume of sound within the space, providing an acoustic environment suited to its purpose.



Sound xR Core

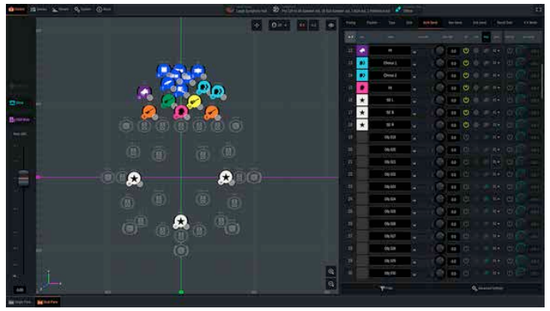
Sound xR Core is a virtual spatial audio processing engine for earphones/ headphones. Within the application domain of xReality – a collective term for VR/AR/MR/SR – it enables interactive, high-fidelity sound localisation and soundscape design.

sound xR image

Sound xR Image is an immersive system that allows users to control the perceived positions of acoustic images within a space. Sound xR Image provides broad content creation support for a wide range of installations and events with comprehensive functionality facilitating smooth, efficient workflow from content creation right through to playback at the final venue, giving creators a stress-free environment where they can concentrate fully on realising their vision without being hampered by technical details. The ability to use multiple external control devices chosen by the user enables flexible system design while providing an extraordinary degree of creative freedom.

Immersive Sound Made Easy

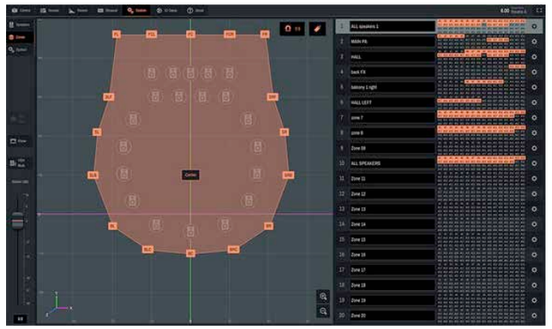
Content creators will love the seamless integration of Sound xR Image with Steinberg's Nuendo DAW while engineers benefit from being able to control sound movements and other parameters not only from an intuitive Sound xR Image controller GUI, but also directly from industry-standard Yamaha mixing consoles. And venue/project owners get exciting new ways to engage and entertain their audiences, delivered via systems that precisely meet the scale and performance of their requirements.



Object-Based Rendering

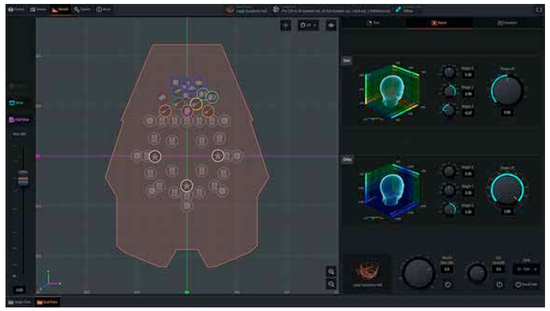
Sound xR Image employs an object-based audio system to enable flexible playback that adapts to different speaker configurations in studios or live venues and facilitates efficient mixing and production by allowing the same content to be reused across multiple venues. DBAP rendering techniques enable smooth sound image movement and the construction of highly flexible speaker systems.

For object-based rendering, the user can convert the DAW or console panning/rendering area to any configuration from a basic cube to a 16-sided polygon within which objects can be positioned. Three layers are available with heights that can be individually defined by the user. Speaker zoning allows audio objects to be assigned to specific sets of speakers within the system.



Advanced Features

Sound objects can be rendered through a specific Speaker Zone to sharpen localisation like Rendering Area Conversion, which also minimises remixing work from studio to live venue. The Sub Renderer function simultaneously renders a single sound object to two speaker zones and can be used to support low frequency sound localisation and movement, and also used for front fill speakers or stage monitoring.



3D Reverb

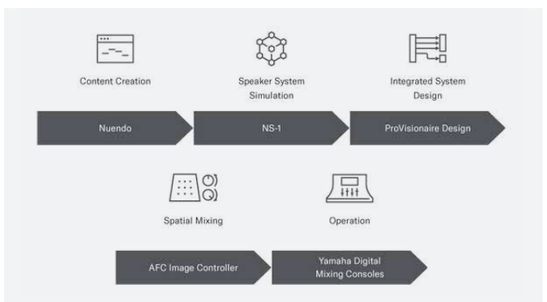
In a real acoustic space, perceived reverberation varies with the listening position. A knowledge base built up over years of designing theatres and halls has allowed Yamaha to develop original 3D reverberation technology that creates reverb optimised for the locations of individual objects, resulting in a deeper, more realistic sound field. The directionality and spread of the reverberation can be freely controlled via an intuitive graphical interface.

Third-Party Devices

Sound xR Image works with a comprehensive range of third-party devices such as DAWs, show controllers, tracking systems, and more. OSC commands are supported for broad compatibility as well as ongoing and expanding collaboration with third-party manufacturers. Supported devices include:

ADM OSC · Atlas · BLACKTRAX · nadstage · Stagetracker II · FOLLOW-ME · TiMax TRACKER d4 · zactrack

sound xR image

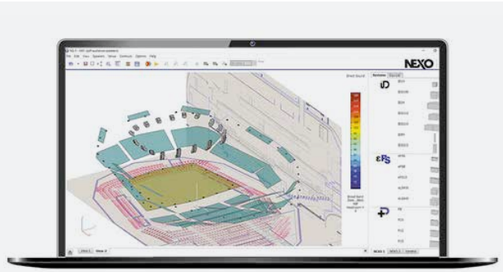


A Seamless Workflow From Content Creation To Operation

NEXO has come together with other Yamaha Group Companies to deliver a unique and complete immersive audio workflow from sound design and content creation through to scalable delivery solutions.

Content Creation

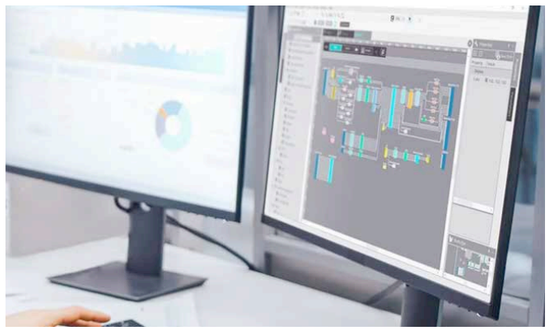
Steinberg's Nuendo DAW is the first choice for many professionals working in immersive sound, TV post-production, and game audio with powerful features to smoothly edit and assemble live or studio performances as well as imported audio sources on a single timeline. Its MultiPanner is a powerful, highly valued tool for object-based or channel-based 3D sound mixing and Nuendo natively supports Yamaha immersive systems so that content previously created using Nuendo can be reproduced with full impact in the latest Yamaha immersive environment.



Speaker System Simulation

NEXO NS-1 is an 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.

NS-1 Immersive system design files can be imported to Sound xR Image Controller, making the whole process from studio design through to venue performance as quick, easy and accurate as possible.

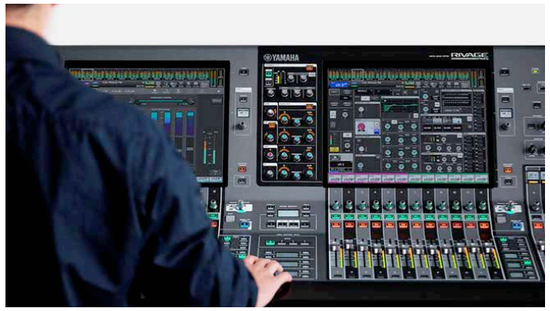


Integrated System Design

ProVisionaire is a suite of software applications for the design, operation, and management of sound systems built around Yamaha Pro Audio products. Equally suitable for both the entertainment and ProAV markets, Yamaha's fully customisable ProVisionaire software lets users create complex, fully scalable audio systems – from the smallest to the largest – using just one software suite. What's more, it delivers the ability for them to be operated very easily by anyone – from the most knowledgeable audio engineer to the most inexperienced user – using a tablet, laptop or desktop computer.

Spatial Mixing

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



Operation

Only the Yamaha Group offers this level of input-to-output functionality, performance, and universality for immersive audio. The comprehensive, granular control and operational efficiency provided by Yamaha's extensive lineup of acclaimed digital mixing consoles is second to none.

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.

IDS110

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.

IDS210

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.

P+ Series

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.

Geo M 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.

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.

microNXAMP4X1 Powered TD Controller

Positioned in power rating between NEXO's nanoNXAMP4 and NXAMPMk2 Powered TD Controllers, the new microNXAMP4X1 combines advanced signal processing for all NEXO speakers with state-of-the-art four channel Class-D amplifiers, a robust universal power supply with PFC and native Dante™ connectivity.

Available in both touring and fixed installation versions with appropriate connectivity for each, the 4 x 1000W microNXAMP4X1 is the ideal amplification and processing solution for the P+ Series, helping to make systems configured from NEXO's industry-standard point source speaker range even more cost-effective in a wide variety of applications.

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.

NEXO Informs

Sound xR Immersive Hubs

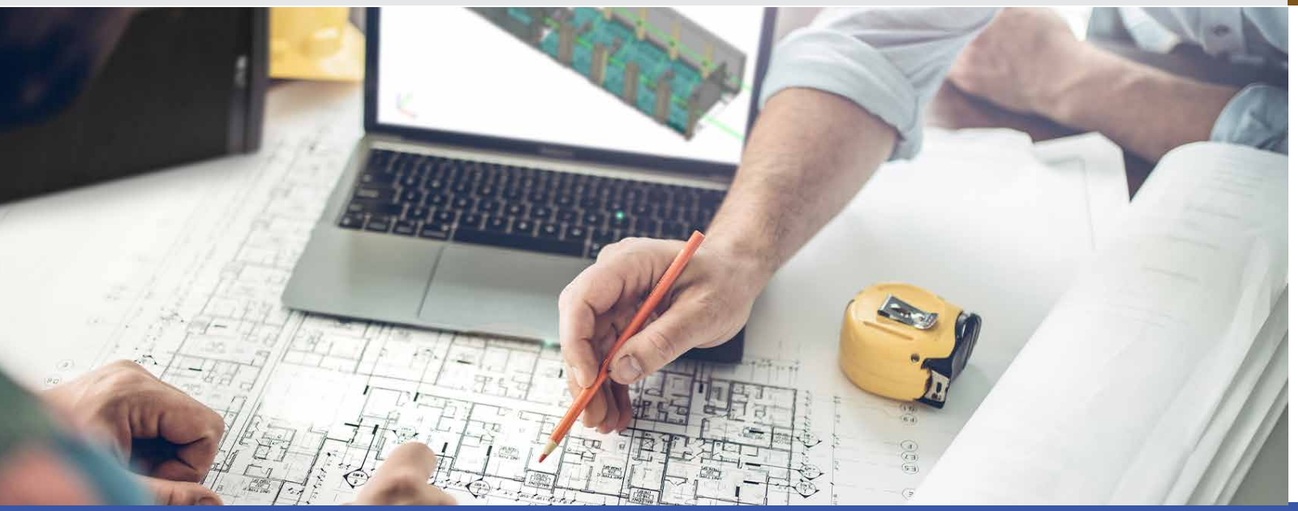
NEXO immersive sound systems incorporating the DME10 are available for demonstration at a series of Immersive Hubs around the world, where visitors can discover the processor's power to create stunning three-dimensional soundscapes and reverbs as the heart of a soundxR AFC Image system. We're adding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

NEXO Educates

Online and Onsite Courses

Audioversity

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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