



# NXAMP<sub>MK2</sub>

Powered TDControllers



# Formidable power. Precision control. Flexible networking.

## The perfect compact, light-weight power solution for NEXO systems

NEXO and Yamaha collaborate to set new performance standards in power amplification

NEXO's expertise in DSP control for high-performance loudspeakers is unparalleled in the sound reinforcement industry. And Yamaha has an unrivalled heritage in developing highly efficient and reliable power amplification devices. So when the two collaborate to create a new range of powered controllers, the result is sure to be something special.



Available in 4 X 1300 Watts and 4 X 2500 Watts versions, the NXAMP<sub>Mk2</sub> 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 fixed installations and touring, these powered controllers are easy to set up and quick to deploy, with all essential parameters readily accessible via a large colour touch-screen on the front panel and a comprehensive range of control and networking facilities on the rear panel.

Most importantly, the new NXAMP<sub>Mk2</sub> achieves a whole new level of sound quality, partnering with NEXO speakers to deliver a whole new level of audience experience.



### Joseph Carcopino

R&D Director, NEXO



*A new version is always a challenge, especially when the original has been successful! But our Yamaha/NEXO mixed team of passionate engineers accepted this challenge, merging their know-how, culture, sensitivity, and finally delivering this NXAMP<sub>Mk2</sub> that, when coupled with our acclaimed NeMo software, offers one of the top powering and processing solution worldwide.*



### Ken Iwayama

Group Manager, PA Development Department, Yamaha

*Our engineering team worked with NEXO R&D, implementing many new ideas to make this new generation of NXAMP deliver a significant improvement and upgrade on sound quality, power capability, efficiency, compactness, functionality, and reliability. We believe that the NXAMP<sub>Mk2</sub> superbly supports the NEXO sound, consistent with our passion for music.*





# 4 X 1300 / 2500 Watts from a 2U rack



The Nexo NXAMP<sub>Mk2</sub> ultra-low distortion Class D amplifiers combine 32-bit/96KHz converters and 64-bit signal processing to deliver significant advances in sound quality over the already highly regarded previous generation of NXAMPs. Bass is solid and high-end definition is particularly impressive in a sonic performance that is both articulate and rich with detail. Even at low volumes, the sound is noticeably transparent and pure. The amplifiers integrate three new multi

core DSPs providing a future-proofed hardware platform, equipped to host new algorithms and run next-generation firmware updates for years to come.

With a mains voltage range of 100 to 240 Volts it means the amplifiers can be used anywhere in the world and run on all types of power generators. Robust power supplies use PFC (Power Factor Correction) technology to ensure

maximum power conversion efficiency and that the current drawn is smoothed and free of spikes to limit the stress on the mains network at all times. A flexible audio input system encompasses four, high end analogue inputs using cascaded converters for low output noise. Four digital inputs are also available through the rear panel expansion card slot offering optional AES/EBU, EtherSound™, Dante™ or AES67 inputs, all with automatic analogue fall-back. A native dual

Ethernet card facilitates remote control and daisy-chaining of amplifiers, and seamless integration with Nexo's NeMo amplifier management software. In addition to the expansion card slot, other rear panel connectivity includes RS232 serial and GPIO ports along with Speakon outputs for each of the four channels. Occupying only 2U of rack space, the NXAMP4X1<sub>Mk2</sub> and NXAMP4X2<sub>Mk2</sub> weigh in at just 15.7kg and 16.1kg respectively.



# Fingertip control

A large colour touchscreen makes set-up easy

With ease of use central to the NXAMP<sub>Mk2</sub> design philosophy, a large colour 4.3" LCD touch-screen provides access to all main functions directly from the amplifier front panel.



**Array EQ**  
Two settings of Array-EQ allow for a better compensation of ground, stacking and line array effect, on Low and High frequencies.



**User EQ**  
In addition to cabinet-related EQ and Array EQ, User EQ provides up to 8 bands per channel, editable on one or several channels at once.



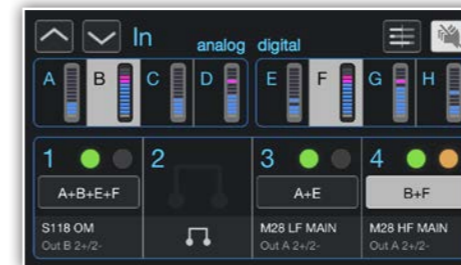
**Mute and Meters**  
NXAMP<sub>Mk2</sub> has two layers of mute: per-channel and overmute. Voltage and Protection Meters give relevant information on System Headroom.



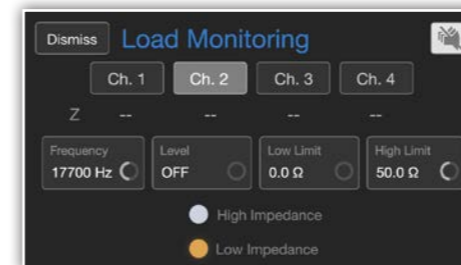
**EQ Detail**  
User EQ is drawn in full screen for a better experience. The band type, frequency, gain, Q and on/off status can be easily edited.



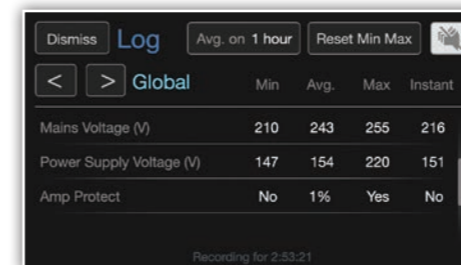
**Inactive Screen**  
Displayed after a time interval of inactivity, this screen can be customised with a user image configured with NeMo.



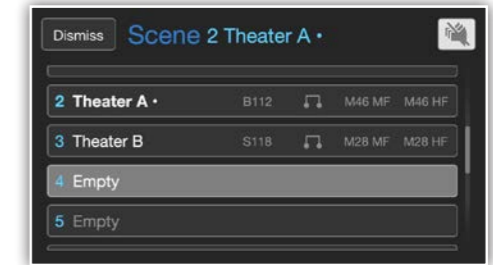
**Inputs**  
The inputs view displays input levels and offers input alignment options. The input patch can be intuitively edited.



**Load Monitoring**  
Load Monitoring can be enabled and configured on every channel, to ensure speakers are monitored in real time and ready to use.



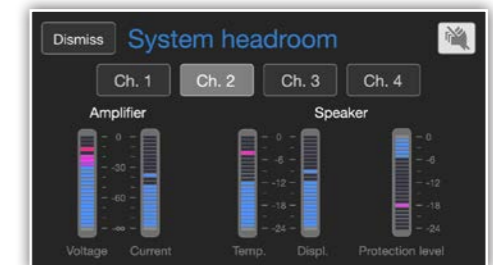
**Log**  
Many parameters and alerts are always recorded into the log, providing valuable information on the NXAMP<sub>Mk2</sub> usage.



**Scene**  
Parameters (volume, delay, gain, EQ, input patch, setup...) can be saved in one of the 32 scene slots, and can be copied and pasted.



**Setup**  
NEXO or Custom Setup can be edited on one or several channels. The cabinet name, its cross-over and output patch are always visible.



**System Headroom**  
The System Headroom page gives real time information on amplifier levels and speaker temperature, displacement and protection levels.



**Volume, Gain and Delay**  
Navigate through menus and edit volume, gain (-18 to +18 dB) and delay (up to 1 second) on one or several channels at once.



**NeMo**

# Total system management control

## For MacOS and iOS devices

A large number of NXAMP<sub>Mk2</sub> amplifiers can be conveniently controlled via a wired or WiFi network from a Mac or iOS device using NEXO's system management software NeMo. Following the automatic 'discovery' of available amplifiers, sessions can be easily prepared by arranging devices on a map over a background image, and groups of devices and zones of channels can be created. Sessions can be prepared both online and offline.

NeMo enables editing of parameters of several devices or channels simultaneously, using groups and zones. A library of presets makes set-up quick and easy, and settings like Volume and Delay can be changed absolutely or relatively. EQ can also be edited on several

channels, enabling different layers of EQ, and parameters can be copied and pasted, and changes undone and redone, even online. A Quick Mute / Solo page makes it easy to check the system by soloing every channel and is perfect for checking settings and monitoring levels. Finally, a powerful Logging and Alerting system covers levels, protections, temperatures, currents, voltages and errors.

NeMo can be used via the optional network cards, or via the included Remote Control card.

# Firmware Updates

Firmware updates can be downloaded from the NEXO website and installed via the RJ45 port on the Remote Control card. Firmware update software can run on both Windows and Mac and can download both first generation and Mk2 NXAMP firmware simultaneously, its multithread architecture allowing downloading to multiple amplifiers to save time. There's a dedicated Firmware Update screen in the user interface which also displays the current Firmware version.



# Network cards

## Dante™ NXDT104<sub>Mk2</sub>

The optional Dante card enables seamless integration of NXAMP<sub>Mk2</sub> into Dante audio networks. It receives 4 audio streams (24-bits / 48kHz) in the Dante or AES67 formats and allows remote control from any computer on a LAN using TCP/IP commands. Its unique 3-port design can be used as an integrated 3 port gigabit switch or as two Dante redundant ports plus an optional third port for additional remote control.



## EtherSound NXES104

The optional EtherSound card extracts 4 audio streams (24-bits / 48kHz) from the 2 X 64 channels of an ES100 EtherSound stream and features In and Out ports for easy daisy-chaining without an external switch and a third port for remote control and ASIO streaming.



## AES/EBU NXAE104

The optional AES/EBU card receives 4 audio channels (24-bits / 44.1 - 96kHz) in AES/EBU format and features 2 X AES/EBU stereo XLR inputs; one with an AES/EBU buffered output on XLR with fail-safe relay. 2 X switched RJ45 ports enable remote control and easy daisy-chaining.



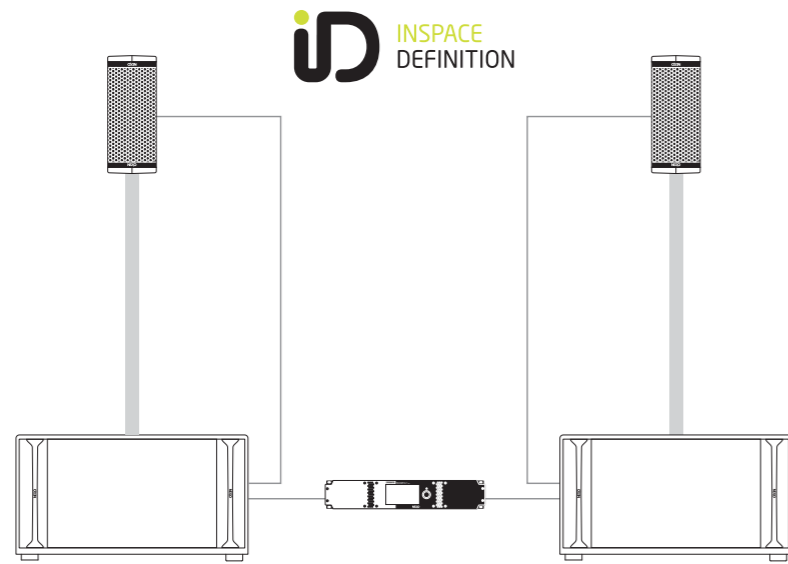
## Remote Control NXRM104

Supplied as standard with the NXAMP<sub>Mk2</sub>, the Remote Control card features 2 X RJ45 ports for remote control and easy daisy-chaining of amplifiers, while also facilitating firmware updates.

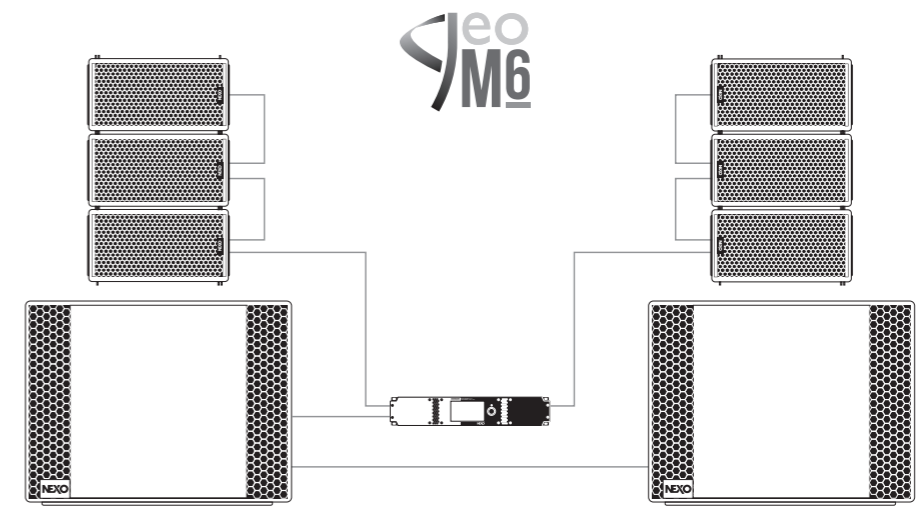


# Typical Systems

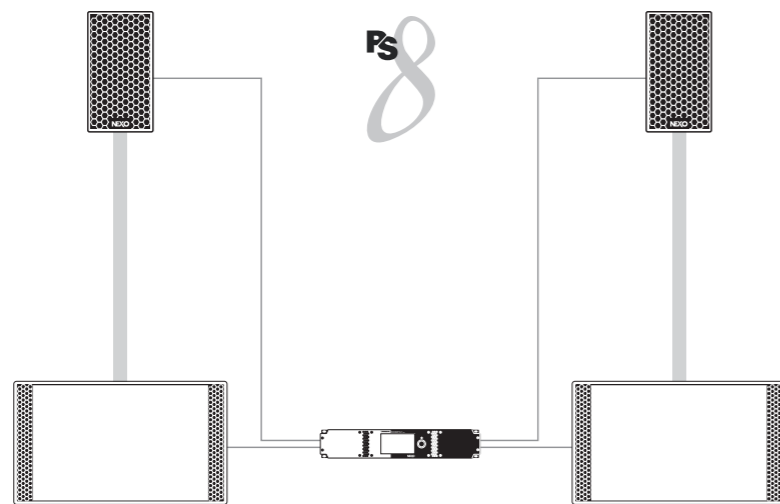
ID Series, PS8 and GEOM6 systems powered by a single NXAMP4X1<sub>MK2</sub>



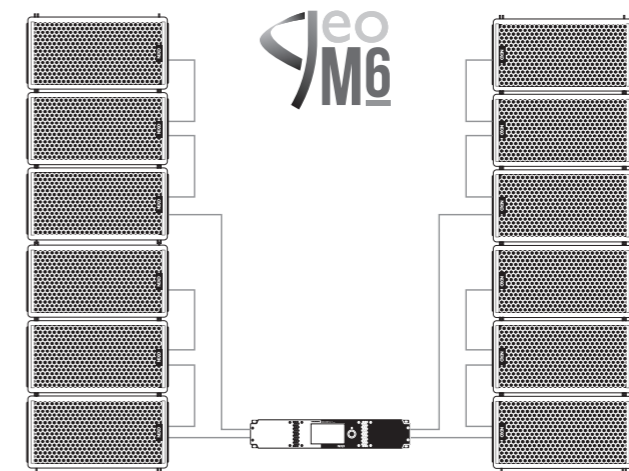
NXAMP4X1<sub>MK2</sub> powering 1 X ID24 and 1 X IDS110 Sub per side



NXAMP4X1<sub>MK2</sub> powering 3 X GEOM6 per side and 2 X LS18 in mono bridge



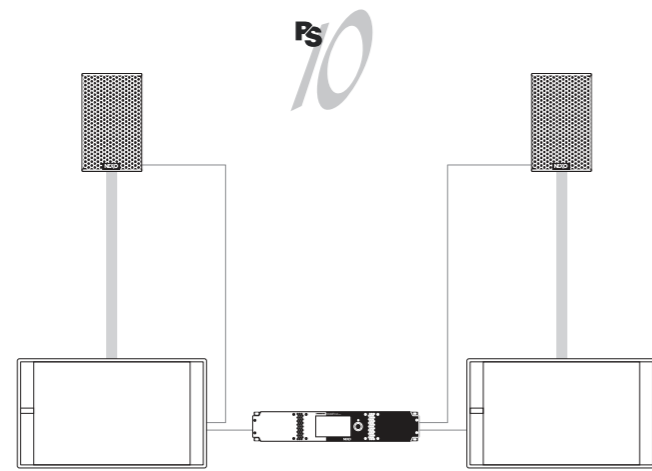
NXAMP4X1<sub>MK2</sub> powering 1 X PS8 and 1 X LS400 Sub per side



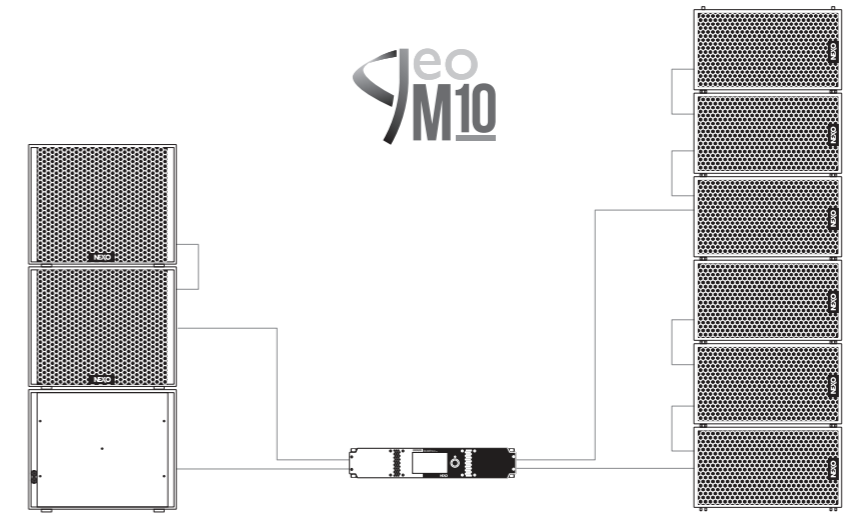
NXAMP4X1<sub>MK2</sub> powering 6 X GEOM6 per side

# Typical Systems

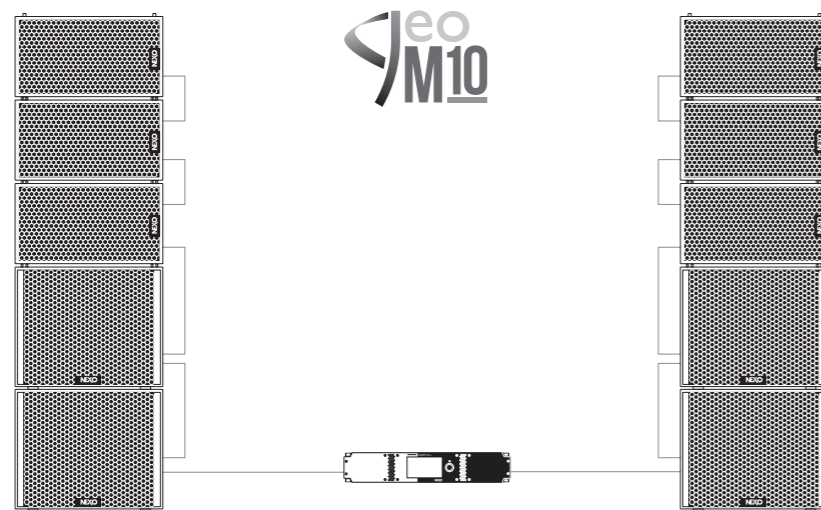
PS10R2 system and GEO M10 systems powered by a single NXAMP4X2<sub>Mk2</sub>



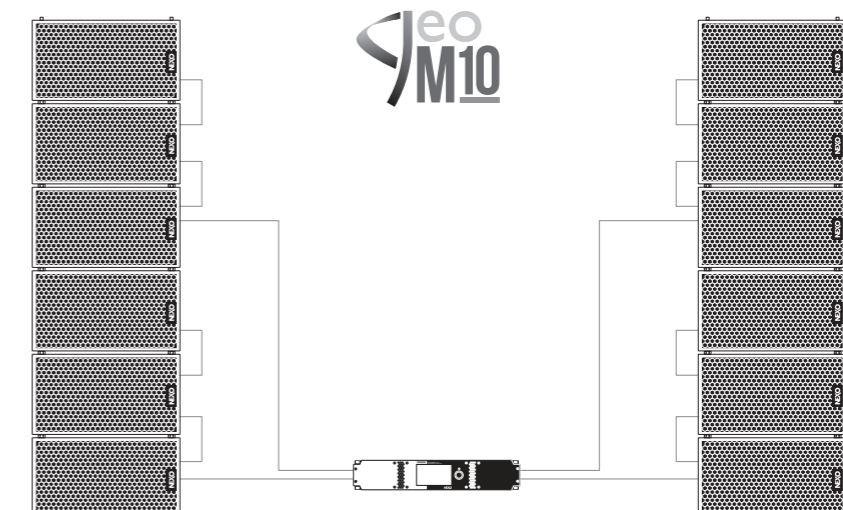
NXAMP4X2<sub>Mk2</sub> powering 1 X PS10R2 and 1 X LS600 Sub per side



NXAMP4X2<sub>Mk2</sub> powering 3 X MSUB15 (one in cardio mode) and 6 X GEO M10



NXAMP4X2<sub>Mk2</sub> powering 3 X GEO M10 and 2 X MSUB15 per side



NXAMP4X2<sub>Mk2</sub> powering 6 X GEO M10 per side

# Specifications

POWER SPECIFICATIONS	NXAMP4x1 <sub>Mk2</sub>	NXAMP4x2 <sub>Mk2</sub>
Number of amplifiers channels	4 x amplifiers channels, 2 by 2 bridgeable	
Max. output voltage (no load)	4 x 105 Volts	4 x 140 Volts
Max. output power (4 channels mode/8 Ohms load per channel)	4 x 600 Watts	4 x 1200 Watts
Max. output power (4 channels mode/4 Ohms load per channel)	4 x 900 Watts	4 x 1900 Watts
Max. output power (4 channels mode/2 Ohms load per channel)	4 x 1300 Watts	4 x 2500 Watts
Max. output power (2 channels mode/8 Ohms load per channel)	2 x 1800 Watts	2 x 3800 Watts
Max. output power (2 channels mode/4 Ohms load per channel)	2 x 2600 Watts	2 x 5000 Watts
Power consumption (Standby)	10 Watts	
Power consumption (Idle)	200 Watts	

INPUT TO POWER OUT SPECIFICATIONS		
Frequency response	+/-1 dB from 10 Hz to 20 KHz	
Impedance / Input Sensitivity	20 K Ω / 13 dBu	20 K Ω / 16 dBu
Dynamic Range / TDH + N	110 dB unweighted / Typical 0.1% on a flat set up	
Latency	550 us on a flat setup	
Audio AD and DA Converters	32 bits @ 96 KHz	
Processing	3 x multicore 64 bits processing DSPs	

BACK PANEL FEATURES		
Analogue audio inputs	4 x balanced analogue inputs on XLR3	
Power outputs	4 x Neutrik Speakon NL-4 outputs	
RS232 port	1 x DB-9 connector dedicated for DPU connection	
GPIO port	1 x DB-25 connector with 5 x inputs and 8 x outputs or for DMU connection	
Expansion slot	For networking and digital audio cards, 4 x digital audio inputs and remote control	
Mains sockets	1 x Neutrik Powercon NAC3 (1 x 20 A)	

USER INTERFACE AND CONTROLS		
Front panel buttons and knobs	Rotary Encoder with push and backlight, tactile screen	
Display	4.3 inches diagonal colour display, WQVGA, 480 x 272	

MAINS REQUIREMENTS		
Mains voltage	Universal Power Supply with Active PFC 100 - 240 Volts (50/60/Hz)	
Power consumption 1/4 max. 2 Ohms	1900 Watts	3500 Watts

DIMENSIONS AND CERTIFICATIONS		
Dimensions	2U 19" Rack	
Depth	502 mm (20")	
Weight	15.7 Kg (33.1 lbs)	16.1Kg (35.3 lbs)
Electrical safety certification	cULus, CB (CE), CCC, PSE, KC	
EMC certification	CE, FCC	
Green status	Compliant with ROHS directive	

EXTENSION CARDS CERTIFICATIONS	NXES104	NXDT104 <sub>Mk2</sub> (*)	NXAE104
Audio format	Ethersound™	Dante™	AES/EBU
Remote control	Ethersound™ based	IP based	IP based
Number of input channels	4	4	4
Resolution / Sample rate	24 bits / 48 KHz	24 bits / 48 KHz	24 bits / 44.1~96
Audio Connectors	2 x Ethercon™	2 x Ethercon™	3 x XLR
Additional port	1 x RJ45	1 x RJ45	2 x RJ45
Power supply	2 W from NXAMP	3W from NXAMP	2 W from NXAMP
Dimensions & weight	120 x 160 x 40 mm (NXAMP slot) - 200 g		
EMC certification	CE, FCC, ICES	CE, FCC	CE, FCC
Green Status	ROHS and REACH		

\*NXDT104 can be used as well, except that it is not possible to upgrade the NXAMP<sub>Mk2</sub> firmware. Default NXRM104 card should be put back for firmware update. As part of a policy of continual improvement, NEXO reserves the right to change specifications without notice.

# Accessories

## DMU

The DMU enables easy monitoring of all activity on the NXAMP<sub>Mk2</sub>'s audio inputs, with signal and power supply coming from the amplifier's GPIO port. Front panel features include four analogue XLR inputs plus links, three RJ45 ports for digital audio networking and LED VU meters.



## DPU

The DPU optimises the NXAMP<sub>Mk2</sub>'s channel by channel preset selection by automatically routing its outputs to any of six output connectors on the DPU front panel. Cabinet names and bridging status are displayed alongside each output, making it easy to wire the system.



## NAT-R4U

Fully assembled and ready to go, the NAT-R4U brings together in a 4U flightcase with an integrated sliding door:

- 1) x 1 NXAMP4X1<sub>Mk2</sub> or x 1 NXAMP4X2<sub>Mk2</sub> + DPU + DMU
- 2) x 2 NXAMP4X1<sub>Mk2</sub> or x 2 NXAMP4X2<sub>Mk2</sub>





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