

# ELECTRONICS

COMPLETING THE CIRCUIT



**Unite Your Audience**  
The Martin Audio Experience





Top quality loudspeakers require top quality amplification and control. Martin Audio offers just that with our Power Amplifiers and System Controllers.

With Martin Audio's enviable reputation for producing loudspeakers with excellent performance and high durability it is no surprise that our name appears on an equally prestigious range of high quality amplifiers and controllers, offering optimised performance for our loudspeakers.

With models suited to both touring and installed audio environments, our electronic audio components supply the uncompromising sonic performance and unquestionable reliability required by the most demanding of today's sound reinforcement applications.



# IKON

The iKON Series of 4 and 8-channel power amplifiers combine very high power density with superb audio performance, state-of-the-art DSP and network control. A dedicated controller amplifier for Wavefront Precision, TORUS, FlexPoint and XE Series, the iKON series can also provide multi-channel amplification across the Martin Audio loudspeaker range.



# iK41

## Four-Channel Class D Amplifier



The iK41 can deliver a full 1500 watts per channel into 4Ω and its high efficiency reduces the energy drawn from the mains supply and ensures the power reserves needed to deliver superb sound under arduous live conditions.

Ethernet is used for system remote control and monitoring via Martin Audio's VU-NET software application, while a user friendly front panel interface allows full local control of all features. Dante digital audio network inputs are also provided for digital audio distribution and control.

Powerful DSP is fully integrated into the iK41 to provide a multitude of features that ensure maximum performance of select loudspeaker systems. It also provides up to 1000 FIR filter taps @ 48kHz on each output channel, which is essential to implement DISPLAY's wide bandwidth optimisation process like WPM line array systems.

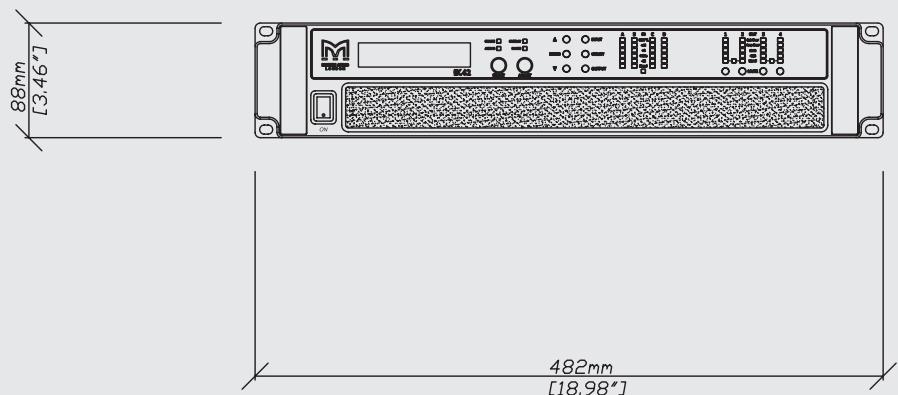
The iK41 employs comprehensive protection functions to maintain safe operating conditions of both the amplifier and the loudspeakers driven — including a sophisticated loudspeaker limiter suite which incorporates peak, RMS and excursion limiting, as well as multiband limiting for passive 2-way systems.

## FEATURES

- Four channels of efficient Class D amplification
- High power density in 2U rack height
- Up to 6,000 Watts total power output, depending on load impedance
- High performance 96kHz DSP on all inputs and outputs (48kHz on outputs when implementing FIR filters)
- Switch mode power supply
- Global mains operation, 85V to 240V auto-sensing
- Intuitive, user-friendly, front panel interface
- Analogue, AES3 and Dante™ digital audio network inputs
- Ethernet network for system operation, control and monitoring via Martin Audio VU-NET™ software
- Comprehensive protection and monitoring functions

## APPLICATIONS

- Dedicated controller amplifier for WPM, TORUS 8 and select other systems.
- Versatile multi-channel amplification for select Martin Audio loudspeakers



# iK42

## Four-Channel Class D Amplifier



The iK42 can deliver a full 5000 watts per channel into 2Ω with all channels driven while remaining highly efficient. Its high efficiency reduces the energy drawn from the mains supply and ensures the power reserves needed to deliver superb sound under arduous live conditions.

Ethernet is used for system remote control and monitoring via Martin Audio's VU-NET software application, while a user friendly front panel interface allows full local control of all features. Dante digital audio network inputs are also provided for digital audio distribution and control.

Powerful DSP is fully integrated into the iK42 to provide a multitude of features that ensure maximum performance of performance for XE monitors, TORUS and FlexPoint systems. It also provides up to 1000 FIR filter taps @ 48kHz on each output channel, which is essential to implement DISPLAY's wide bandwidth optimisation process in Wavefront Precision line array systems.

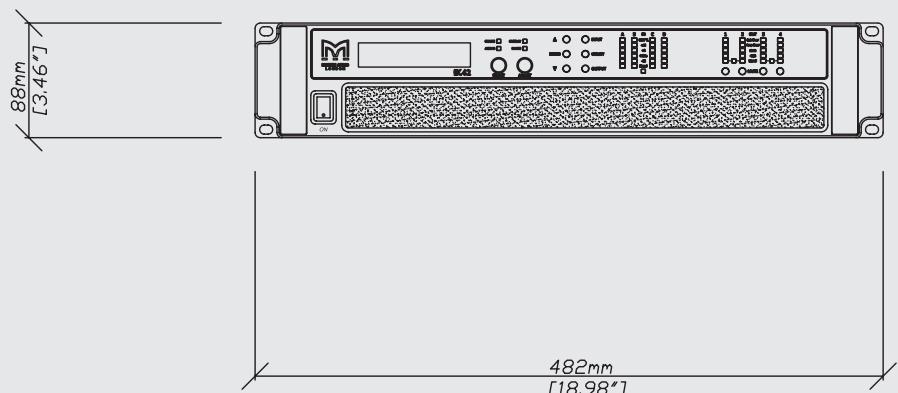
The iK42 employs comprehensive protection functions to maintain safe operating conditions of both the amplifier and the loudspeakers driven — including a sophisticated loudspeaker limiter suite which incorporates peak, RMS and excursion limiting, as well as multiband limiting for passive 2-way systems.

## FEATURES

- Four channels of efficient Class D amplification
- Very high power density in 2U rack height
- Up to 20,000 Watts total power output, depending on load impedance
- High performance 96kHz DSP on all inputs and outputs (48kHz on outputs when implementing FIR filters)
- Switch mode power supply
- Global mains operation, 85V to 240V auto-sensing
- Intuitive, user-friendly, front panel interface
- Analogue, AES3 and Dante™ digital audio network inputs
- Ethernet network for system operation, control and monitoring via Martin Audio VU-NET™ software
- Comprehensive protection and monitoring functions

## APPLICATIONS

- Dedicated controller amplifier for Wavefront Precision Series, XE Monitor Series, FlexPoint and TORUS systems
- Versatile multi-channel amplification for Martin Audio loudspeaker systems



# iK81

## Eight Channel Class D Amplifier



The iK81 can deliver a full 1250 watts per channel into 2, 4 or 8 ohms with all channels driven while remaining highly efficient. Its high efficiency reduces the energy drawn from the mains supply and ensures the power reserves needed to deliver superb sound under arduous live conditions.

Ethernet is used for system remote control and monitoring via Martin Audio's VU-NET software application, while a user friendly front panel interface allows full local control of all features. Dante digital audio network inputs are also provided for digital audio distribution and control.

Powerful DSP is fully integrated into the iK81 to provide a multitude of features that ensure maximum performance of performance of FlexPoint systems, TORUS 8 and XE300 stage monitors. It also provides up to 1000 FIR filter taps @ 48kHz on each output channel, which is essential to implement DISPLAY's wide bandwidth optimisation process in the WPM line array and O-Line.

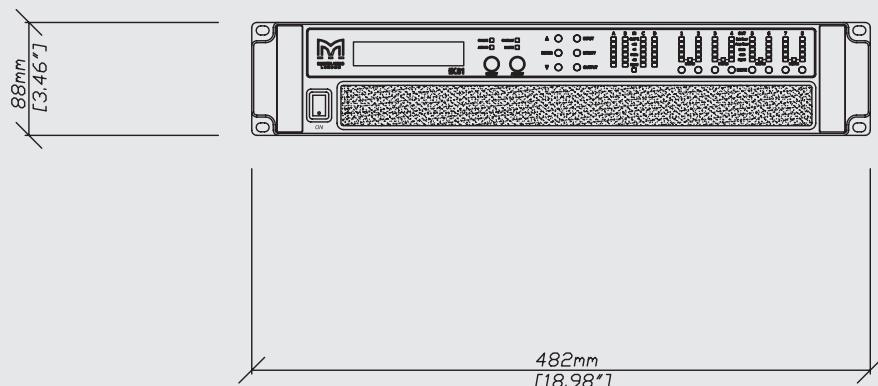
The iK81 employs comprehensive protection functions to maintain safe operating conditions of both the amplifier and the loudspeakers driven — including a sophisticated loudspeaker limiter suite which incorporates peak, RMS and excursion limiting, as well as multiband limiting for passive 2-way systems.

## FEATURES

- Eight channels of efficient Class D amplification
- Very high power density in 2U rack height
- 10,000 Watts total power output
- High performance 96kHz DSP on all inputs and outputs (48kHz on outputs when implementing FIR filters)
- Switch mode power supply
- Global mains operation, 85V to 240V auto-sensing
- Intuitive, user-friendly, front panel interface
- Analogue, AES3 and Dante™ digital audio network inputs
- Ethernet network for system control and monitoring via Martin Audio VU-NET™ software application
- Comprehensive protection and monitoring functions

## APPLICATIONS

- Dedicated controller amplifier for the WPM, O-Line, XE300, TORUS 8 and FlexPoint systems.
- Versatile multi-channel amplification for Martin Audio loudspeaker systems



# VIA<sup>o</sup>

VIA is a new range of four high performance, cost effective power amplifiers designed primarily for installation use, but also suited to portable applications.



## VIA2502

### Two-Channel Class D Amplifier



The VIA2502 is an advanced 2-channel power amplifier which combines high power density with superb audio performance in a lightweight, cost-effective package. Delivering 2 x 1250 watts into 2 ohms, or 1 x 2500 watts into 4 ohms bridged, it is ideal for powering Blackline X, CDD and V. Series systems in small to medium-scale installations and portable sound applications.

Its high efficiency design reduces the energy drawn from the mains supply and ensures the power reserves needed to deliver superb sound in demanding environments with reliability and ease.

Comprehensive protection functions continuously monitor its performance to maintain safe operating conditions and full output capability in ambient temperatures up to 40°C.

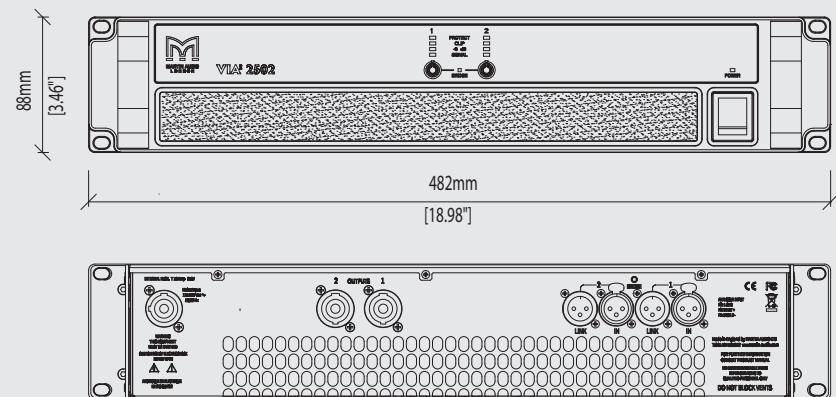
For a wide variety of installations and portable situations, the VIA2502 is ideally partnered with the Martin Audio DX0.5 system processor. Larger installations will benefit from use with the DX4.0 processor with its onboard network capability and proprietary VU-NET software control.

### FEATURES

- Two channels of efficient Class D amplification
- 2500 Watts total power output
- 2U rack height
- Exceptionally lightweight
- Switch mode power supply
- Variable speed cooling fans with front-to-back airflow
- Global mains operation, 100-240V auto-sensing
- Comprehensive protection systems
- Signal and clip limiter LEDs

### APPLICATIONS

- Small to medium-scale installations
- Portable sound and stage monitoring
- Hotels, restaurants and bars
- Houses of Worship and auditoriums
- Educational facilities
- Live music and dance clubs
- Mobile DJ's



## VIA5002

### Two-Channel Class D Amplifier



The VIA5002 is an advanced 2-channel power amplifier which combines high power density with superb audio performance in a lightweight, cost-effective package. Delivering 2 x 2500 watts into 4 ohms or 2 x 1500 watts into 8 ohms, it is ideal for powering subwoofers in installations and portable sound systems.

Its high efficiency design reduces the energy drawn from the mains supply and ensures the power reserves needed to deliver superb sound in demanding environments with reliability and ease.

Comprehensive protection functions continuously monitor its performance to maintain safe operating conditions and full output capability in ambient temperatures up to 40°C.

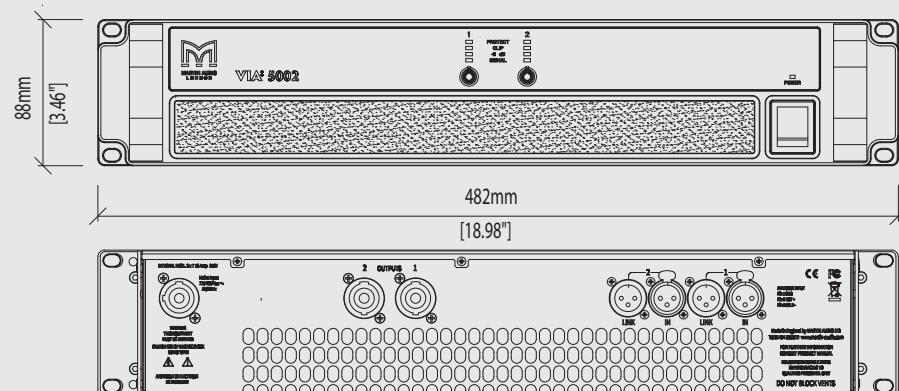
For a wide variety of applications, the VIA5002 is ideally partnered with the Martin Audio DX0.5 system processor. Larger installations will benefit from use with the DX4.0 with its onboard network capability and proprietary VU-NET software control.

## FEATURES

- Two channels of efficient Class D amplification
- 5000 Watts total power output
- 2U rack height
- Exceptionally lightweight
- Switch mode power supply
- Variable speed cooling fans with front-to-back airflow
- Global mains operation, 100-240V auto-sensing
- Comprehensive protection systems
- Signal and clip limiter LEDs

## APPLICATIONS

- Subwoofer amplification
- Installations, portable sound and stage monitoring
- Hotels, restaurants and bars
- Houses of Worship and auditoriums
- Educational facilities
- Live music and dance clubs
- Mobile DJ's



## VIA2004

### Four-Channel Class D Amplifier



The VIA2004 is an advanced 4-channel power amplifier which delivers superb audio performance in a lightweight, cost-effective package. Delivering 4 x 500 watts into 4 ohms, it is ideal for powering O-Line, ADORN and CDD Series installations in bars, auditoriums and HoW, as well as small-medium scale portable sound reinforcement and club use.

Its high efficiency design reduces the energy drawn from the mains supply and ensures the power reserves needed to deliver superb sound in demanding environments with reliability and ease.

Comprehensive protection functions continuously monitor its performance to maintain safe operating conditions and full output capability in ambient temperatures up to 40°C.

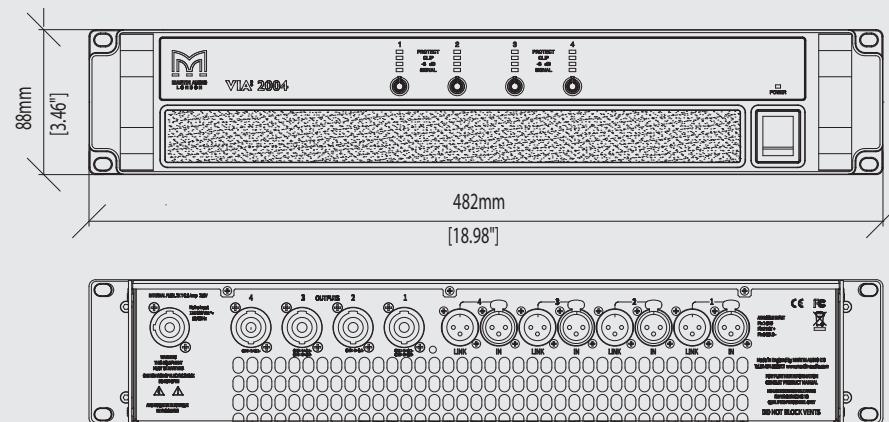
For a wide variety of installations and portable applications, the VIA2004 is ideally partnered with the Martin Audio DX0.5 system processor. Larger installations will benefit from use with the DX4.0 processor with its onboard network capability and proprietary VU-NET software control. The DX4.0 and VIA2004 combination is perfect for delivering cost-effective scalable resolution under VU-NET control to an installed O-Line array.

## FEATURES

- Four channels of efficient Class D amplification
- 2000 Watts total power output
- 2U rack height
- Exceptionally lightweight
- Switch mode power supply
- Variable speed cooling fans with front-to-back airflow
- Global mains operation, 100-240V auto-sensing
- Comprehensive protection systems
- Signal and clip limiter LEDs

## APPLICATIONS

- Small to medium-scale installations
- Portable sound and stage monitoring
- Hotels, restaurants and bars
- Houses of Worship and auditoriums
- Educational facilities
- Live music and dance clubs
- Mobile DJ's



**VIA5004**

## Four-Channel Class D Amplifier



The VIA5004 is an advanced 4-channel power amplifier which combines high power density with superb audio performance in a lightweight, cost-effective package. Delivering 4 x 1250 watts into 2 ohms, or 2 x 2500 watts into 4 ohms bridged, it is ideal for powering Blackline X, CDD and V. Series systems in small to medium-scale installations and portable sound applications. It can also be configured for 3-channel operation, for perfect compatibility with TH Series 3-way systems.

Its high efficiency design reduces the energy drawn from the mains supply and ensures the power reserves needed to deliver superb sound in demanding environments with reliability and ease.

Comprehensive protection functions continuously monitor its performance to maintain safe operating conditions and full output capability in ambient temperatures up to 40°C.

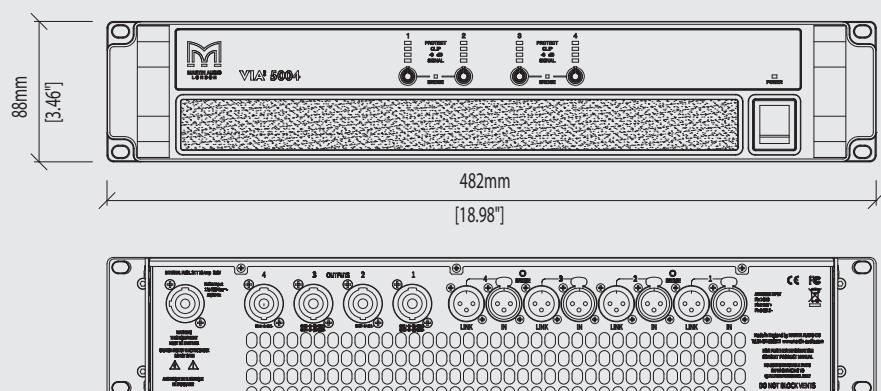
For a wide variety of installations and portable situations, the VIA5004 is ideally partnered with the Martin Audio DX0.5 system processor. Larger installations will benefit from use with the DX4.0 with its onboard network capability and proprietary VU-NFT software control.

## FEATURES

- Four channels of efficient Class D amplification
- 5000 Watts total power output
- 2U rack height
- Exceptionally lightweight
- Switch mode power supply
- Variable speed cooling fans with front-to-back airflow
- Global mains operation, 100-240V auto-sensing
- Comprehensive protection systems
- Signal and clip limiter LEDs

## APPLICATIONS

- Small to medium-scale installations
- Portable sound and stage monitoring
- Hotels, restaurants and bars
- Houses of Worship and auditoriums
- Educational facilities
- Live music and dance clubs



# CONTROLLERS



## DX0.4

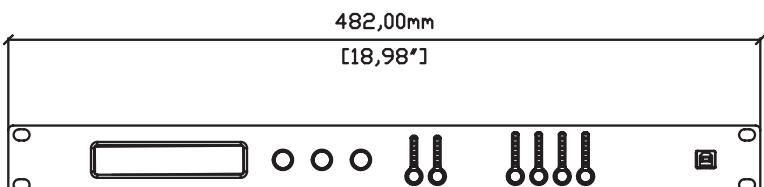
### Networked System Controller



The DX0.4 is the ideal processing tool to partner the ADORN, CDD and BlacklineX ranges or indeed any system where comprehensive system control and protection is required, perhaps where there may be budget constraints.

The DX0.4 offers a substantial array of processing options. Routing is freely assignable from the 2 inputs to the 4 outputs. Input and output equalisation is available with a choice of 14 filter options. An input noise gate will help deal with noisy signal sources. Input and output delay is available to time align components in a system. Crossover filters with slopes from -6dB/octave up to -48dB/octave are available in the three most popular filter types, and a two-stage limiter; program and peak, will protect your speakers from damage due to excessive power.

The processor feature 32 User Memory locations to store popular configurations and settings can be exported to a file via the dedicated PC application. PC connectivity is available via a front panel USB port for quick and easy connection of a single processor, but larger systems with several processors can use Ethernet or RS485 network connections.



### FEATURES

- Professional 2-input, 4 output system processor for a wide range of system applications.
- Comprehensive, sophisticated processing options including EQ, gate, delay and limiting to optimise and protect a system.
- Fully assignable matrix routing of both inputs to any output with attenuation option on each routing node.
- Two balanced XLR inputs with up to 12dB of gain, polarity invert, 600ms of delay, 10 band parametric EQ with a choice of 14 filter types individually selectable for each band.
- Four balanced XLR outputs with 12dB of gain, polarity invert, 200ms delay, high and low pass filters. 8 band parametric EQ with up a choice of 14 filter types, Independent Program and Peak Limiters
- Convenient front panel controls and LCD display.
- One press mute buttons for all inputs and outputs.
- Front panel USB port for quick and easy PC connection.
- Networking option using either Ethernet or RS485 for larger systems.
- Output channel preset import function to quickly and easily compile a system to suit any application utilising a library of Martin Audio product channel presets.
- 32 User Presets to store system configurations.
- Universal switch mode mains PSU accepts 90 to 240V, 50/60Hz.

### APPLICATIONS

- Live sound loudspeaker management
- Active monitor systems
- Fixed installations

## DX0.6

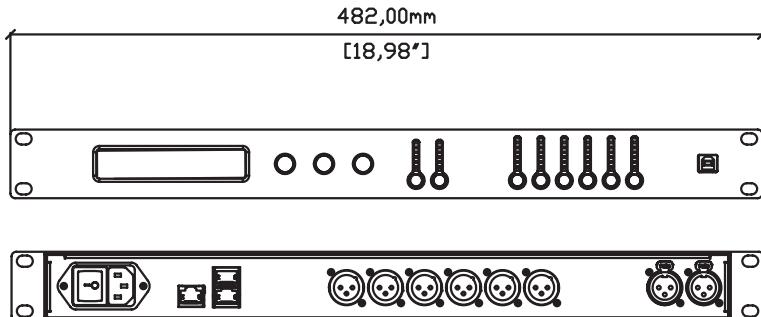
### Networked System Controller



The DX0.6 is the ideal processing tool to partner the ADORN, CDD and BlacklineX ranges or indeed any system where comprehensive system control and protection is required perhaps where there may be budget constraints.

Both processors offer a substantial array of processing options. Routing is freely assignable from the 2 inputs to the 6 outputs. Input and output equalisation is available with a choice of 14 filter options. An input noise gate will help deal with noisy signal sources. Input and output delay is available to time align components in a system. Crossover filters with slopes from -6dB/octave up to -48dB/octave are available in the three most popular filter types, and a two-stage limiter; program and peak, will protect your speakers from damage due to excessive power being applied.

The processor features 32 User Memory locations to store popular configurations and settings can be exported to a file via the dedicated PC application, either as a back-up or to store more favourite configurations if the 32 on-board presets are not sufficient. PC connectivity is available via a front panel USB port for quick and easy connection of a single processor, but larger systems with several processors can use Ethernet or RS485 network connections.



## FEATURES

- Professional 2-input, 6 output system processor for a wide range of system applications.
- Comprehensive, sophisticated processing options including EQ, gate, delay and limiting to optimise and protect a system.
- Fully assignable matrix routing of both inputs to any output with attenuation option on each routing node.
- Two balanced XLR inputs with up to 12dB of gain, polarity invert, 600ms of delay, 10 band parametric EQ with a choice of 14 filter types individually selectable for each band.
- Four balanced XLR outputs with 12dB of gain, polarity invert, 200ms delay, high and low pass filters. 8 band parametric EQ with up a choice of 14 filter types, Independent Program and Peak Limiters
- Convenient front panel controls and LCD display.
- One press mute buttons for all inputs and outputs.
- Front panel USB port for quick and easy PC connection.
- Networking option using either Ethernet or RS485 for larger systems.
- Output channel preset import function to quickly and easily compile a system to suit any application utilising a library of Martin Audio product channel presets.
- 32 User Presets to store system configurations.
- Universal switch mode mains PSU accepts 90 to 240V, 50/60Hz.

## APPLICATIONS

- Live sound loudspeaker management
- Active monitor systems
- Fixed installations

# DX4.0

## Networked System Controller



The Martin Audio DX4.0 is an advanced loudspeaker controller and system matrix with four input and eight output channels.

Class-leading sonic performance is achieved by state-of-the-art audio converters and DSP algorithms, with a 96kHz sampling frequency delivering a nominally flat response beyond 40kHz.

Connected via Ethernet, system remote control and monitoring is done via Martin Audio's VU-NET proprietary software application, while a front panel interface gives local control of features.

Four analogue/AES3 inputs and eight analogue/AES outputs are available, with AES3 inputs and outputs selected in pairs. Dante™ digital audio networking is also provided for digital audio distribution and control, with automatic fall back to analogue or AES3. By converting analogue or AES audio to Dante, the DX4.0 provides 'on-ramp' entry to digital audio networking.

The DX4.0 features a sophisticated loudspeaker limiter suite which incorporates peak, RMS and excursion limiting, as well as multiband limiting for passive two-way systems. High-pass filtering, three shelving filters and six parametric filters are provided for each input channel, with crossover filters, two shelving filters and eight parametric filters on each output channel.

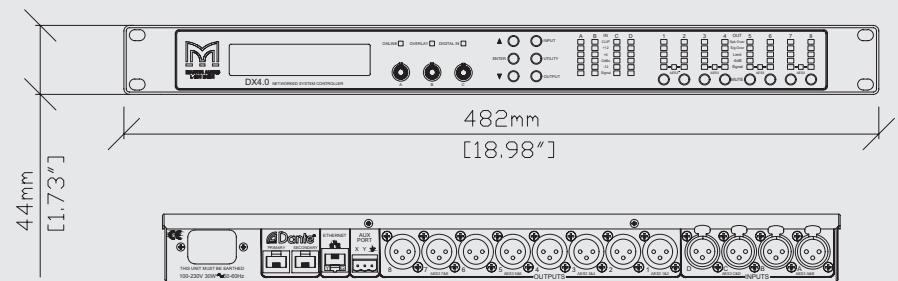
The DX4.0 supports FIR filters for use with optimisation of Martin Audio's O-Line and can also be used with Martin Audio's U-Hub to feed digital audio and network to an MLA Series array/subwoofer array via a single cable.

## FEATURES

- Four input channels and eight output channels loudspeaker processor and matrix
- Analogue, AES3 and Dante™ digital audio inputs
- High performance 96kHz DSP
- Remote control and monitoring over Ethernet via Martin Audio VU-NET software
- FIR optimisation for Martin Audio's O-Line
- VX limiting gives a passive enclosure the same protection as a fully active unit
- Comprehensive suite of EQ's, delays and all pass filters
- Global mains operation 100-240V, 50-60Hz

## APPLICATIONS

- Loudspeaker system digital controller
- Front-of-house matrix to feed Dante digital audio to iKON amplifiers powering Martin Audio loudspeaker systems
- Use with Martin Audio O-Line for FIR Optimisation
- Use with Martin Audio U-Hub to feed digital audio and network to an MLA Series array/subwoofer array via a single cable



## U-Hub

### Ethernet to U-NET™ Bridge



U-Hub is an Ethernet to U-NET bridge equipped with analogue and AES3 digital audio transport. It facilitates PC connection and VU-NET™ software control of MLA Series arrays and subwoofers via their inbuilt proprietary U-NET network.

Converting TCP/IP to U-NET protocol, U-Hub allows MLA Series enclosures to self-address and identify their position within an array, as well as supporting a simple-to-use redundant loop. With U-Hub, an MLA Series system with onboard U-NET can be seamlessly integrated into a TCP/IP network and controlled via VU-NET software.

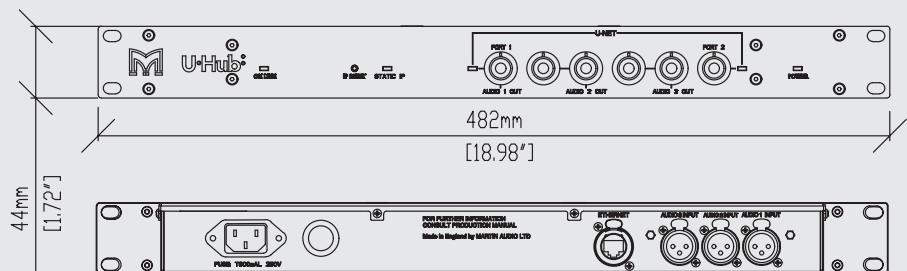
When used in conjunction with the Martin Audio DX4.0 networked system controller, U-Hub can connect audio and network to an MLA Series system with a single cable via a Dante™ digital audio network.

## FEATURES

- Ethernet to U-NET™ bridge
- IP addressable (static and dynamic)
- Analogue and digital audio transport
- Designed to work with DX4.0 loudspeaker processor for Dante™ digital audio distribution

## APPLICATIONS

- Network platform/converter for MLA Series systems



# TECHNICAL SPECIFICATIONS – AMPLIFIERS

## iK41

General	
TYPE	Four-channel Class D amplifier
POWER OUTPUT*	1500W into 2Ω 1500W into 4Ω 750W into 8Ω 325W into 16Ω 3000W bridged per channel pair, 4Ω 3000W bridged per channel pair, 8Ω
CV LINE OUTPUT*	685W, 25V line 1500W, 70V line 1163W, 100V line
DIGITAL SIGNAL PROCESSING	96kHz/48kHz DSP on all inputs and outputs
COOLING	Dual vari-speed fans, front-to-back airflow
MAXIMUM AMBIENT TEMPERATURE	40°C (105°F)
Audio Inputs/Outputs	
ANALOGUE IN/LINK (4 CHANNELS)	4 x female, 4 x male Neutrik™ XLR
ANALOGUE INPUT IMPEDANCE	20kΩ balanced to ground
MAXIMUM ANALOGUE INPUT LEVEL	+20dBu
AES3 IN/LINK (2 CHANNELS)	1 x female, 1 x male Neutrik™ XLR, balanced
DANTE™ (4 CHANNELS)	2 x shielded RJ45, primary and secondary
AMPLIFIER OUTPUTS	4 x Neutrik Speakon™ NL4
Audio Performance	
DYNAMIC RANGE	>113dBA, analogue input >114dBA AES/Dante™ input
FREQUENCY RESPONSE	7Hz-30kHz (-2.5dB points, 4 ohm load)
TOTAL HARMONIC DISTORTION	<0.05% typical @ 1kHz, 4 ohm load
SLEW RATE	>60V per microsecond
DAMPING FACTOR	>800 at amplifier output, ref 8 ohms
Control and Monitoring Network	
PROTOCOL	Ethernet
CONTROL APPLICATION	Martin Audio VU-NET™
Digital Signal Processing	
SAMPLE RATE	96kHz (48kHz for FIR filter implementation)
PHYSICAL INPUTS	4 x analogue, 1 x AES pair with link output, 4 x Dante™ inputs routable to four DSP drive modules
DRIVE MODULE INPUT DSP	Input signal routing, delay, gain, HPF, Phase, Mute EQ: 2 x low shelf, 6 x PEQ/bandpass and FIR shelving filters
DRIVE MODULE OUTPUT DSP	Source, delay, gain, Phase, Mute, crossover filters, limiters EQ: low shelf, 8 x PEQ / band pass and shelving filters
Power Supply	
TYPE	High performance Series Resonant
AC INPUT OPERATING RANGE	85 – 240V ~ AC, 47 - 63Hz
MAINS INRUSH CURRENT	6A at 115V, 12A at 230V (max for <10ms)
MAINS CONNECTOR	Neutrik 32A Powercon™
Physical	
DIMENSIONS	(W) 482 x (H) 2U/88mm x (D) 441mm (W) 18.98in x (H) 2U/3.46in x (D) 17.35in incl handles and optional rear support
WEIGHT	12.5kg (27.5lbs)

## iK42

General	
TYPE	Four-channel Class D amplifier
POWER OUTPUT*	5000W into 2 ohms 3000W into 4 ohms 1500W into 8 ohms 1000W bridged per channel pair, 4 ohms
CV LINE OUTPUT*	1250W, 25V line 3500W, 70V line 5000W, 100V line
DIGITAL SIGNAL PROCESSING	96kHz/48kHz DSP on all inputs and outputs
COOLING	Dual vari-speed fans, front-to-back airflow
MAXIMUM AMBIENT TEMPERATURE	40°C (105°F)
Audio Inputs/Outputs	
ANALOGUE IN/LINK (4 CHANNELS)	4 x female, 4 x male Neutrik™ XLR
ANALOGUE INPUT IMPEDANCE	20kΩ balanced to ground
MAXIMUM ANALOGUE INPUT LEVEL	+20dBu
AES3 IN/LINK (2 CHANNELS)	1 x female, 1 x male Neutrik™ XLR, balanced
DANTE™ (4 CHANNELS)	2 x shielded RJ45, primary and secondary
AMPLIFIER OUTPUTS	4 x Neutrik Speakon™ NL4
Audio Performance	
DYNAMIC RANGE	>113dBA, analogue input >114dBA AES/Dante™ input
FREQUENCY RESPONSE	7Hz-30kHz (-2.5dB points, 4 ohm load)
TOTAL HARMONIC DISTORTION	<0.05% typical @ 1kHz, 4 ohm load
SLEW RATE	>60V per microsecond
DAMPING FACTOR	>800 at amplifier output, ref 8 ohms
Control and Monitoring Network	
PROTOCOL	Ethernet
CONTROL APPLICATION	Martin Audio VU-NET™
Digital Signal Processing	
SAMPLE RATE	96kHz (48kHz for FIR filter implementation)
PHYSICAL INPUTS	4 x analogue, 1 x AES pair with link output, 4 x Dante™ inputs routable to four DSP drive modules
DRIVE MODULE INPUT DSP	Input signal routing, delay, gain, HPF, Phase, Mute EQ: 2 x low shelf, 6 x PEQ/bandpass and FIR shelving filters
DRIVE MODULE OUTPUT DSP	Source, delay, gain, Phase, Mute, crossover filters, limiters EQ: low shelf, 8 x PEQ / band pass and shelving filters
Power Supply	
TYPE	High performance Series Resonant
AC INPUT OPERATING RANGE	85 – 240V ~ AC, 47 - 63Hz
MAINS INRUSH CURRENT	6A at 115V, 12A at 230V (max for <10ms)
MAINS CONNECTOR	Neutrik 32A Powercon™
Physical	
DIMENSIONS	(W) 482 x (H) 2U/88mm x (D) 441mm (W) 18.98in x (H) 2U/3.46in x (D) 17.35in incl handles and optional rear support
WEIGHT	12.5kg (27.5lbs)

## iK81

General	
TYPE	Eight-channel Class D amplifier
POWER OUTPUT*	1250W into 2 ohms 1250W into 4 ohms 1250W into 8 ohms 2500W bridged per channel pair, 4 or 8 ohms
CV LINE OUTPUT*	625W, 25V line 1250W, 70V line 1250W, 100V line
DIGITAL SIGNAL PROCESSING	96kHz/48kHz DSP on all inputs and outputs
COOLING	Dual vari-speed fans, front-to-back airflow
MAXIMUM AMBIENT TEMPERATURE	40°C (105°F)
Audio Inputs/Outputs	
ANALOGUE IN/LINK (4 CHANNELS)	4 x female, 4 x male Neutrik™ XLR
ANALOGUE INPUT IMPEDANCE	20kΩ balanced to ground
MAXIMUM ANALOGUE INPUT LEVEL	+20dBu
AES3 IN/LINK (2 CHANNELS)	1 x female, 1 x male Neutrik™ XLR, balanced
DANTE™ (4 CHANNELS)	2 x shielded RJ45, primary and secondary
AMPLIFIER OUTPUTS	4 x Neutrik Speakon™ NL4
Audio Performance	
DYNAMIC RANGE	>113dBA, analogue input >114dBA AES/Dante™ input
FREQUENCY RESPONSE	7Hz-30kHz (-2.5dB points, 4 ohm load)
TOTAL HARMONIC DISTORTION	<0.05% typical @ 1kHz, 4 ohm load
SLEW RATE	>60V per microsecond
DAMPING FACTOR	>800 at amplifier output, ref 8 ohms
Control and Monitoring Network	
PROTOCOL	Ethernet
CONTROL APPLICATION	Martin Audio VU-NET™
Digital Signal Processing	
SAMPLE RATE	96kHz (48kHz for FIR filter implementation)
PHYSICAL INPUTS	4 x analogue, 1 x AES pair with link output, 4 x Dante™ inputs routable to four DSP drive modules
DRIVE MODULE INPUT DSP	Input signal routing, delay, gain, HPF, Phase, Mute EQ: 2 x low shelf, 6 x PEQ/bandpass and FIR shelving filters
DRIVE MODULE OUTPUT DSP	Source, delay, gain, Phase, Mute, crossover filters, limiters EQ: low shelf, 8 x PEQ / band pass and shelving filters
Power Supply	
TYPE	High performance Series Resonant
AC INPUT OPERATING RANGE	85 – 240V ~ AC, 47 - 63Hz
MAINS INRUSH CURRENT	6A at 115V, 12A at 230V (max for <10ms)
MAINS CONNECTOR	Neutrik 32A Powercon™
Physical	
DIMENSIONS	(W) 482 x (H) 2U/88mm x (D) 441mm (W) 18.98in x (H) 2U/3.46in x (D) 17.35in incl handles and optional rear support
WEIGHT	12.5kg (27.5lbs)

## VIA2502

General	
TYPE	Two-channel Class D amplifier
POWER OUTPUT*	2 x 1250W into 2 ohms
	2 x 800W into 4 ohms
	2 x 450W into 8 ohms
	1 x 2500W bridged into 4 ohms
COOLING	Vari-speed fans, front-to-back airflow
MAXIMUM AMBIENT TEMPERATURE	40°C (105°F)
Audio Inputs/Outputs	
ANALOGUE IN/LINK (4 CHANNELS)	2 x female, 2 x male Neutrik™ XLR
ANALOGUE INPUT IMPEDANCE	10kΩ balanced
MAXIMUM ANALOGUE INPUT LEVEL	+20dBu
AMPLIFIER OUTPUTS	2 x Neutrik Speakon™ NL4
Audio Performance	
OUTPUT NOISE	-113dBA, referenced to max output (22kHz bandwidth)
FREQUENCY RESPONSE	<10Hz - >20kHz +/- 0.25dB
TOTAL HARMONIC DISTORTION	<0.05% typical @ 1kHz, -3dB output (22kHz bandwidth)
SLEW RATE	>80V per microsecond
DAMPING FACTOR	120 ref 8 ohms
Power Supply	
TYPE	High current, high frequency switch-mode
AC INPUT OPERATING RANGE	100-240V +/-10% 45 - 65Hz
TOTAL SYSTEM EFFICIENCY	>90% typical
MAINS CONNECTOR	1 x Neutrik Powercon™
Physical	
DIMENSIONS	(W) 482 x (H) 2U/88mm x (D) 441mm (W) 19in x (H) 2U/3.5in x (D) 17.4in incl handles and optional rear support
WEIGHT	8kg (17.6lbs)

## VIA5002

General	
TYPE	Two-channel Class D amplifier
POWER OUTPUT*	2 x 2500W into 4 ohms
	2 x 1600W into 8 ohms
COOLING	Vari-speed fans, front-to-back airflow
MAXIMUM AMBIENT TEMPERATURE	40°C (105°F)
Audio Inputs/Outputs	
ANALOGUE IN/LINK (4 CHANNELS)	2 x female, 2 x male Neutrik™ XLR
ANALOGUE INPUT IMPEDANCE	10kΩ balanced
MAXIMUM ANALOGUE INPUT LEVEL	+20dBu
AMPLIFIER OUTPUTS	2 x Neutrik Speakon™ NL4
Audio Performance	
OUTPUT NOISE	-113dBA, referenced to max output (22kHz bandwidth)
FREQUENCY RESPONSE	<10Hz - >20kHz +/- 0.25dB
TOTAL HARMONIC DISTORTION	<0.05% typical @ 1kHz, -3dB output (22kHz bandwidth)
SLEW RATE	>80V per microsecond
DAMPING FACTOR	120 ref 8 ohms
Power Supplies	
TYPE	2 x high current, high frequency switch-mode
AC INPUT OPERATING RANGE	100-240V +/-10% 45 - 65Hz
TOTAL SYSTEM EFFICIENCY	>90% typical
MAINS CONNECTOR	1 x Neutrik Powercon™
Physical	
DIMENSIONS	(W) 482 x (H) 2U/88mm x (D) 441mm (W) 19in x (H) 2U/3.5in x (D) 17.4in incl handles and optional rear support
WEIGHT	10kg (22lbs)

## VIA2004

General	
TYPE	Four-channel Class D amplifier
POWER OUTPUT*	4 x 500W into 4 ohms
	4 x 250W into 8 ohms
COOLING	Vari-speed fans, front-to-back airflow
MAXIMUM AMBIENT TEMPERATURE	40°C (105°F)
Audio Inputs/Outputs	
ANALOGUE IN/LINK (4 CHANNELS)	4 x female, 4 x male Neutrik™ XLR
ANALOGUE INPUT IMPEDANCE	5 kΩ typical, balanced
MAXIMUM ANALOGUE INPUT LEVEL	+20dBu
AMPLIFIER OUTPUTS	4 x Neutrik Speakon™ NL4
Audio Performance	
FREQUENCY RESPONSE	20Hz - 20kHz +/- 0.45dB, 4 ohm load
TOTAL HARMONIC DISTORTION	0.003% typical, 1kHz @ 1W
Power Supplies	
TYPE	2 x high current, high frequency switch-mode
AC INPUT OPERATING RANGE	100-240V +/-10% 45 - 65Hz
MAINS CONNECTOR	1 x Neutrik Powercon™
TOTAL SYSTEM EFFICIENCY	89% (4 x 250W into 8 ohms)
Physical	
DIMENSIONS	(W) 482 x (H) 2U/88mm x (D) 441mm (W) 19in x (H) 2U/3.5in x (D) 17.4in incl handles and optional rear support
WEIGHT	8kg (17.6lbs)

## VIA5004

General	
TYPE	Four-channel Class D amplifier
POWER OUTPUT*	4 x 1250W into 2 ohms
	4 x 800W into 4 ohms
	4 x 450W into 8 ohms
COOLING	Vari-speed fans, front-to-back airflow
MAXIMUM AMBIENT TEMPERATURE	40°C (105°F)
Audio Inputs/Outputs	
ANALOGUE IN/LINK (4 CHANNELS)	4 x female, 4 x male Neutrik™ XLR
ANALOGUE INPUT IMPEDANCE	10kΩ balanced
MAXIMUM ANALOGUE INPUT LEVEL	+20dBu
AMPLIFIER OUTPUTS	4 x Neutrik Speakon™ NL4
Audio Performance	
FREQUENCY RESPONSE	<10Hz - >20kHz +/- 0.25dB
TOTAL HARMONIC DISTORTION	<0.05% typical @ 1kHz, -3dB output (22kHz bandwidth)
SLEW RATE	>80V per microsecond
DAMPING FACTOR	120 ref 8 ohms
Power Supplies	
TYPE	2 x high current, high frequency switch-mode
AC INPUT OPERATING RANGE	100-240V +/-10% 45 - 65Hz
TOTAL SYSTEM EFFICIENCY	>90% typical
MAINS CONNECTOR	1 x Neutrik Powercon™
Physical	
DIMENSIONS	(W) 482 x (H) 2U/88mm x (D) 441mm (W) 19in x (H) 2U/3.5in x (D) 17.4in incl handles and optional rear support
WEIGHT	10kg (22lbs)

\* RMS output power per channel, all channels driven with continuous program material and a nominal ambient temperature of 40°C /105°F

# TECHNICAL SPECIFICATIONS – CONTROLLERS

## DX0.4 & DX0.6

General	
INPUT IMPEDANCE:	20k Ohm balanced
OUTPUT IMP:	100R
MAX INPUT LEVEL:	+20dBu
MAX OUTPUT LEVEL:	+18dBu
CROSSTALK:	<-95dB
SAMPLE RATE:	96kHz
SIGNAL TO NOISE RATIO	>113dB (A weighted)
NOISE FLOOR:	<-94dB (A weighted)
COMMON MODE REJECTION RATIO	60dB
FREQUENCY RESPONSE:	20Hz - 40kHz +0.3dB
INPUT A/D DYNAMIC RANGE:	118dB
OUTPUT D/A DYNAMIC RANGE:	118dB
THD (+4dBu 1kHz):	<0.003%
MAINS VOLTAGE RANGE:	85-230VAC 50-60Hz
NOMINAL POWER CONSUMPTION:	30W
Connectors	
AUDIO INPUT:	2 x 3 pin female XLR
AUDIO OUTPUT:	4 x 3 pin male XLR (DX0.4) and 6 x 3 pin male XLR (DX0.6)
ETHERNET:	Shielded RJ45, Dynamic or Static IP
RS485:	2 x RJ45
USB:	1 x USB B (Front Panel)
MAINS:	3 pin IEC
Processing	
SIGNAL GENERATOR:	White/pink noise, -30dBu to +10dBu
GAIN:	-18dB to +12dB, step accuracy 0.1dB
INPUT EQUALISER:	10 band PEQ, gain range +15dB 14 x Filter types
INPUT GATE:	Threshold: -40 to -80dBu Attack: 1 to 1,000ms. Release: 1 to 1,000ms
ROUTING:	Freely assignable 2-in, 6 out Up to 30dB attenuation on each node
DELAY:	Input: 600ms. Output: 200ms Steps: 20us. Units: milliseconds, metres, feet
OUTPUT FILTERS:	High & Low Pass, -6dB/Octave to -48dB/Octave Slope types: Butterworth, Bessel, Linkwitz Riley
OUTPUT EQUALISATION:	8 band PEQ, gain +15dB 14 x filter types FIR Filter Import
PROGRAM LIMITER:	Threshold: -10 to +20dBu Attack: 1 to 1,000ms Release: 10 to 3,000ms
PEAK LIMITER:	Threshold: 0 to 12dB above Program Limiter Threshold Release: Fast (91ms), Medium (350ms), Slow (800ms)
Physical	
DIMENSIONS:	(W) 482mm x (H) 1U/44mm x (D) 230mm (W) 19in x (H) 1U/1.75in x (D) 9.1in
WEIGHT:	3.0kg (6.6lb)

## DX4.0

General	
TYPE	4 input/8 output digital loudspeaker processor
OPERATING TEMPERATURE	0 to 45°C
HUMIDITY RANGE	0 to 80% RH (non-condensing)
Audio Performance	
INPUT IMPEDANCE	>10kΩ balanced
OUTPUT IMPEDANCE	<100Ω balanced
MAX INPUT LEVEL	+20dBu
MAX OUTPUT LEVEL	+18dBu into 600Ω
FREQUENCY RESPONSE	10Hz - 40kHz
INPUT DYNAMIC RANGE	>120dBa typ.
OUTPUT DYNAMIC RANGE	>118dBa typ.
TOTAL HARMONIC DISTORTION	<0.008% typ. 20Hz-20kHz
Digital Signal Processing	
SAMPLE RATE	96kHz
AES3 INPUT SAMPLE RATE	28kHz - 108kHz
AES3 OUTPUT SAMPLE RATE	96kHz
Power Supply	
AC OPERATING RANGE	100-240V +/-10%
POWER CONSUMPTION	30W
Control and Monitoring	
PROTOCOL	Ethernet
CONTROL APPLICATION	Martin Audio VU-NET™
Connectors	
AUDIO INPUT	4 x 3 pin female XLR for analogue or AES3 pairs
AUDIO OUTPUT	8 x 3 pin male XLR for analogue or AES3 pairs
ETHERNET	1 x shielded RJ45
DANTE™ NETWORK	2 x shielded RJ45, primary and secondary
AUX PORT	Phoenix connector for contact closure
MAINS POWER	3 pin IEC
Physical	
DIMENSIONS	(W) 482mm x (H) 1U/44mm x (D) 184mm (W) 19in x (H) 1U/1.75in x (D) 7.2in
WEIGHT	2.7kg (6lbs)

## U-Hub

General	
TYPE	Ethernet to U-NET™ bridge
SUPPORTED PROTOCOLS	Ethernet and U-NET™
CONTROL APPLICATION	Martin Audio VU-NET™
AC OPERATING RANGE	100-240VAC Nominal, 50-60Hz
Rear Panel	
AUDIO INPUTS 1, 2 and 3	3 x 3 pin female XLR type
ETHERNET	1 x Neutrik® Ethercon
MAINS POWER	3 pin IEC with cable locking mechanism
FUSE	User-replaceable 1A T-type 20mm
Front Panel	
AUDIO OUT AND U-NET	6 x ODU 8-pin connector ports
UNET STATUS	Audio In 1, 2, 3, Out on ports 1, 3, 5
IP CONFIGURATION	Bi-colour Green/Red LED on port 1 and 6
IP RESET (TO DYNAMIC)	Yellow LED: On = Static IP, Off = Dynamic
ETHERNET CONNECTION	Recessed push button
MAINS POWER	Green LED = Online
	Red LED = Mains power present
Physical	
DIMENSIONS	(W) 482mm x (H) 1U/44mm x (D) 268mm (W) 19in x (H) 1U/1.75in x (D) 10.6in
WEIGHT	3.5Kg (7.7lbs)

# ELECTRONICS

## COMPLETING THE CIRCUIT

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