

I/O Interfaces

PRO SERIES

DL251

48 Input, 16 Output Stage Box with
48 MIDAS Microphone Preamplifiers



- ⊗ 48 award-winning MIDAS microphone preamplifiers with switchable +48 V phantom power
- ⊗ 16 actively balanced low impedance line level outputs
- ⊗ Selectable 96 kHz or 48 kHz sample rate operation
- ⊗ Remote operation up to 100 m via CAT5/5e cable
- ⊗ All settings programmable from front panel controls or console
- ⊗ PSU status indicator LEDs and configuration switches on front panel
- ⊗ 3 AES50 network ports for redundant connections
- ⊗ MIDI In, Out and Thru connectors
- ⊗ Features Neutrik etherCON* AES50 network ports
- ⊗ Rugged 5U rackmount chassis for durability in portable applications
- ⊗ Dual redundant auto-ranging universal switch-mode power supplies
- ⊗ 3-Year Warranty Program*
- ⊗ Designed and engineered in England

DL251 is a 5U 19" fixed-configuration rack I/O unit with 48 mic/line level inputs and 16 line level outputs and delivers legendary MIDAS sound quality utilising our time-tested and road-proven technologies. Featuring award-winning MIDAS microphone preamplifiers with 2.5 dB analogue gain steps and three AES50 network ports providing N+1 redundancy, plus an Ethernet control port and a MIDI Interface (In, Out, Thru), the DL251 is the ideal partner to the MIDAS M Series and PRO Series digital consoles, enabling a digital snake connection from Front of House to stage.



*All third-party trademarks are the property of their respective owners. Their use neither constitutes a claim of the trademark nor affiliation of the trademark owners with MUSIC Group. Product names are mentioned solely as a reference for compatibility, effects and/or components. Warranty details can be found at music-group.com.

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Award-Winning MIDAS Microphone Preamplifier

The **MIDAS** microphone preamplifier is considered by leading live sound and recording engineers to be the very essence of the famous **MIDAS** sound. More than 40 years of design experience paired with the finest choice of premium-grade components lead to the acclaimed warmth and depth - bringing out subtle ambience, maintaining spatial positioning and more effectively capturing a precise sound image. The acclaimed sound of the award-winning **MIDAS** microphone preamplifier has inspired generations of live sound engineers to their best work, creating sonic panoramas that have captivated audiences worldwide.

Since pristine sound always begins with the microphone preamplifier, the first point where the signal enters the console, DL251 features the latest generation of **MIDAS** microphone preamplifiers, which faithfully reproduce every sonic detail so no part of a performance will ever be missed. Transparent and pristine sound, low noise and high common-mode rejection are all hallmarks of this classic design.

Over the years many mix engineers have found this robust and overload-tolerant design takes on a whole new dimension of sound when driven hard, the crystal-clear audiophile reproduction giving way to just the right combination of harmonics, a warm and organic sound heard by millions of concert goers and recorded for posterity on countless live albums over the years.

Digital Audio Networking

SuperMAC (AES50-Compliant) digital audio networking technology from **KLARK TEKNIK** simultaneously provides high channel counts, ultra low and deterministic latencies, sample-synchronous and phase-aligned networked clock distribution, error detection and correction, network redundancy, and ease of deployment and use – to meet the demanding requirements of live concert touring.

DL251 is compatible with all **MIDAS** digital consoles and audio system engines, as well as with any other AES50-equipped devices.



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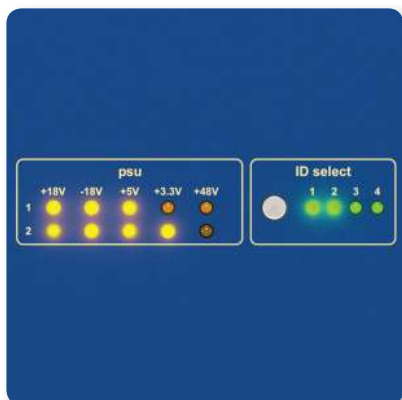
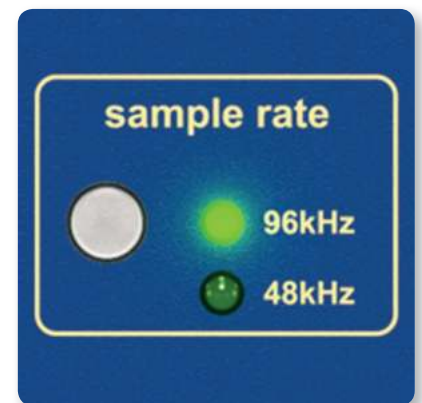
High Output Drive Line Outputs with Mute

DL251 features 16 active servo-balanced low impedance line level outputs with high output current capability for driving long cable runs.

A recessed 'Mute All Outputs' switch on the rear panel allows quiet and safe re-patching of cables, even during a show.

96 kHz or 48 kHz Operation

DL251 supports multiple sample rates for the AES50 connections - 96 kHz for use with MIDAS PRO Series, and 48 kHz for use with MIDAS M32 Series.



Remote Console or Front Panel Control

All configuration settings for DL251 can be set either remotely from the mixing console, or directly via the intuitive and easy to understand front panel. DL251 features front panel switches for all configuration options with LED status indicators, which provide highly visible feedback of operational status over wide viewing angles and distances.

Clear indication is provided of power supply output rail condition, AES50 and Ethernet network connection status and activity, choice of internal or external clock synchronisation, unit identification and communication mode setting.

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Built for the Road

Featuring a rugged steel 5U rackmount enclosure, the DL251 is designed for the rigours of live concert touring. Premium Neutrik connectors are used to ensure reliable audio and network connections, night after night.



Dual Redundant Universal Switch-Mode Power Supplies

DL251 features dual-redundant power supplies, which are auto-voltage sensing for use on a worldwide basis and provide seamless switchover in the unlikely event of a loss of one power supply.

You Are Covered

We always strive to provide the best possible Customer Experience. Our products are made in our own [MUSIC Group](#) factory using state-of-the-art automation, enhanced production workflows and quality assurance labs with the most sophisticated test equipment available in the world. As a result, we have one of the lowest product failure rates in the industry, and we confidently back it up with a generous [3-Year Warranty program](#).

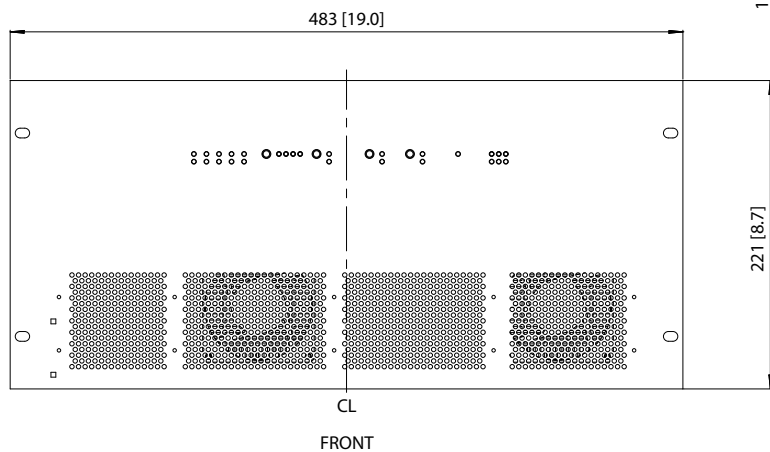
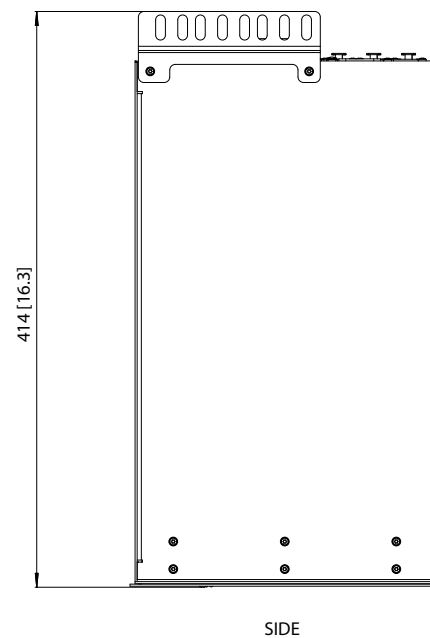
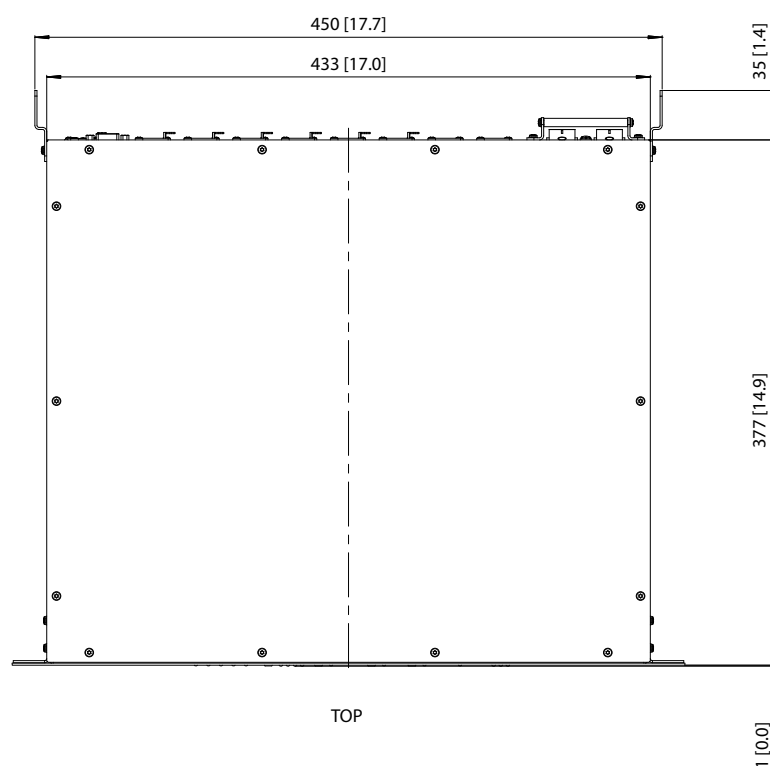


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Dimensions



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Technical Specifications

General Statistics

XLR connections	
1 x 5U rack I/O box houses:	48 x (XLR) mic/line inputs 16 x (XLR) line outputs
Resilience	N + 1 cable redundancy and dual redundant PSUs

General Specifications

Sampling rate	48 kHz, 96 kHz
Dynamic range	107 dB, 22 Hz to 22 kHz (no pre-emphasis)
Maximum gain	45 dB
Crosstalk @ 1 kHz	-100 dB physically adjacent input channels
Crosstalk @ 10 kHz	-90 dB physically adjacent input channels
Dimensions	5U x 414 mm deep
Net weight	10 kg
Shipping weight	18 kg
Power requirements	100 to 240 VAC, 50 to 60 Hz
Power consumption at 115 V	1 PSU: 85 W, 85 VA 2 PSU: 110 W, 110 VA
Power consumption at 230 V	1 PSU: 90 W, 100 VA 2 PSU: 110 W, 135 VA
Operating temperature range	+5°C to +40°C
Storage temperature range	-20°C to +60°C

System Inputs and Outputs

I/O box inputs	
Connector	3-pin XLR balanced
A/D converter	24-bit, 96 kHz and 128 times oversampling
Box analogue outputs	
Connector	3-pin XLR balanced
D/A converter	24-bit, 96 kHz and 128 times oversampling
MIDI	
MIDI connector	In, Out and Thru on 5-pin DIN (for use with Midas consoles only)
48 kHz I/O digital system inputs and outputs	
System connector (1)	1 x AES50 (48 channels of bidirectional digital audio) on etherCON XLR
Redundant connector (2)	1 x AES50 (48 channels of bidirectional digital audio) on etherCON XLR providing redundant back-up
Additional connector (3)	Not used
96 kHz I/O digital system inputs and outputs	
System connector (1 and 2)	2 x AES50 (24 channels of bidirectional digital audio per connection) on etherCON XLR
N+1 connector (3)	1 x AES50 (24 channels of bidirectional digital audio on etherCON XLR providing redundant back-up

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Input and Output Characteristics

Analogue input characteristics

Input	Load Z	Gain	Max. level	Connector
I/O Box	10k	-2.5 dB to +45 dB	+24 dBu	XLR

Analogue output characteristics

Output	Source Z	Gain	Max. level	Connector
I/O Box	50 ohms	0 dB	+21 dBu	XLR

48 kHz digital I/O characteristics

Type	AES50
Channels	48
Data length	24-bit
I/O	Bidirectional
Description notes	Conforms to AES50-2011
Connector	etherCON XLR

96 kHz digital I/O characteristics

Type	AES50
Channels	24
Data length	24-bit
I/O	Bidirectional
Description notes	Conforms to AES50-2011
Connector	etherCON XLR

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DL251 Architecture and Engineering Specifications

The interface unit shall be designed for digital audio mixing applications and be optimised for use in live performance. It shall feature 48 integrated microphone preamplifier inputs with 2.5 dB analogue gain steps and 16 servo-balanced electronic outputs on industry-standard XLR connectors and shall be capable of operating at 48 kHz and 96 kHz sampling rates.

The interface unit shall include a recessed switch on the rear panel to mute all outputs.

The interface unit shall support a 100 Megabit Ethernet frame-based digital audio network that shall offer N+1 cable redundancy and be compliant with the Audio Engineering Society AES50-2011 standard. Three digital audio network ports and one Ethernet control port shall be provided. An industry-standard MIDI Interface (In, Out, Thru) shall also be provided.

The interface unit shall provide both front panel and remote network configuration of operational settings and provide LED status of power supply output rail condition, digital audio and control network connection status and activity, clock synchronisation source, unit identification and communication mode setting.

The interface unit shall include two auto-ranging universal switch-mode power supplies with dual redundancy for use on a worldwide basis.

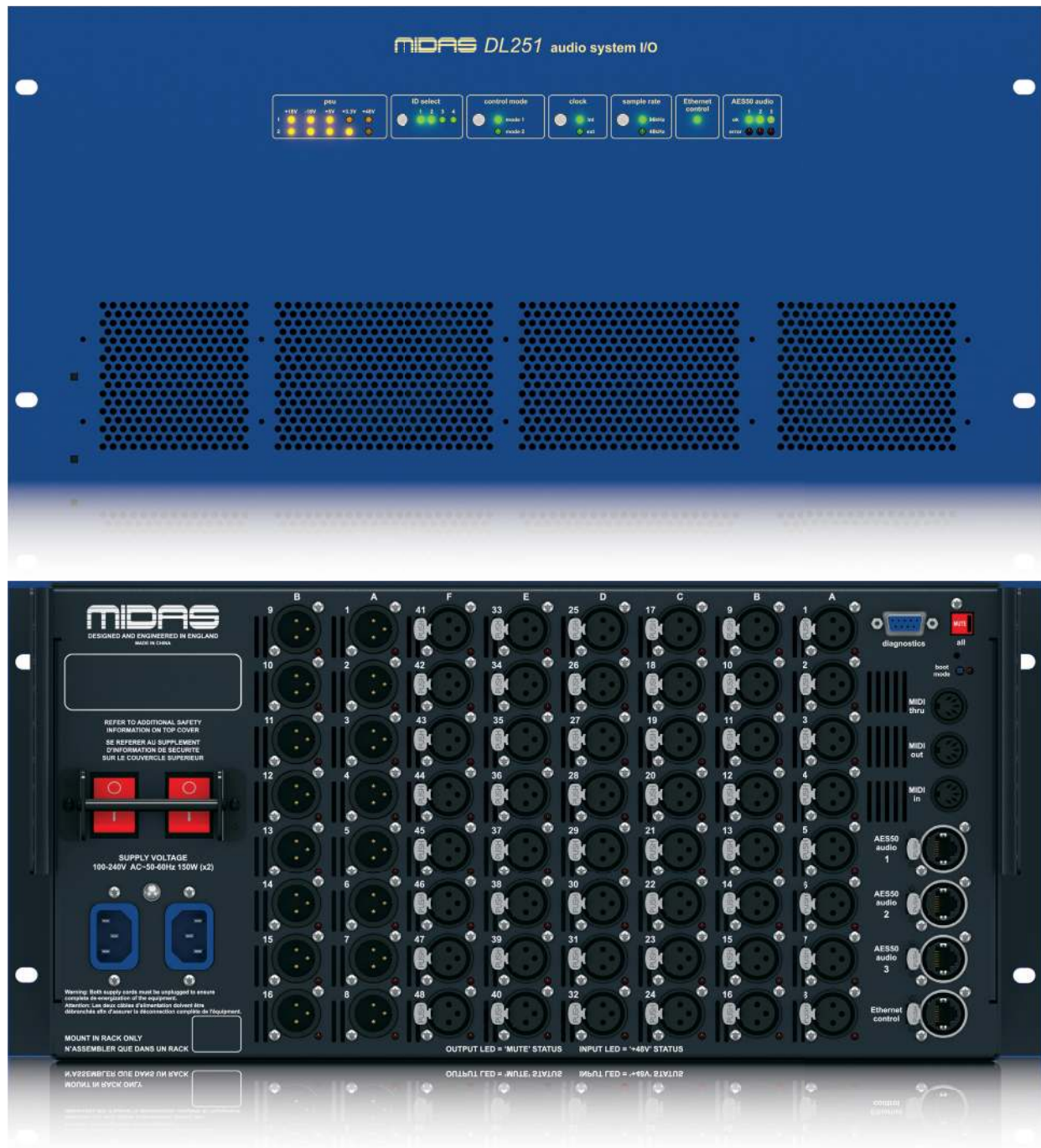
The interface unit shall be housed in a standard 5U 19" rackmount chassis, and shall be 483 mm wide x 414 mm deep x 221 mm high (19.0" x 16.3" x 8.7"), with nominal weight 10 kg (22.1 lbs). The interface unit shall be installed in a rack frame or road case capable of safely supporting its weight. Input, output, and power connections shall be made at the rear panel of the interface unit. Installers shall allow adequate space at the rear for connection and disconnection of input, output, and power connections. The power requirements shall be 100 to 240 VAC, 50 to 60 Hz.

The interface unit shall be the [MIDAS DL251](#) and no other alternative shall be acceptable.

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