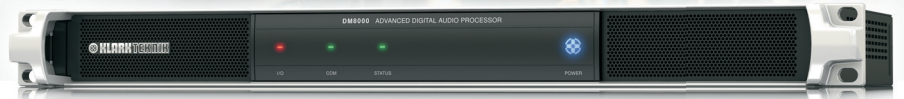## Digital Mixers

DM8000

Advanced Digital Audio Processor for Installation Applications with Configurable DSP, Audio Networking and Acoustic Echo Cancellation

- Advanced digital audio processor with open architecture software-configurable functionality

- Comprehensive library of DSP algorithms optimised for installation applications

- 8 Channels of wide band Acoustic Echo Cancellation (AEC) for telephone and video conferencing

- Auto mixer functionality for multiple microphone applications

- Multiple format IP-based audio networking for ease of integration

- PC-based software with intuitive graphical user environment and full networking support

- 10 high-headroom analogue universal mic/line inputs

- 6 electronically balanced low impedance line level outputs

- USB audio connection for integration with computer based conferencing systems

- Optional ULTRANET digital audio transport output for connection to compatible devices

- Ethernet port for software configuration and remote control up to 100 m via CAT5/5e cable

- RS232 connector for interfacing with 3rd party control systems

- Rugged 1U rackmount chassis for ease of installation

- Auto-ranging universal switch-mode power supply

- 3-Year Warranty Program*
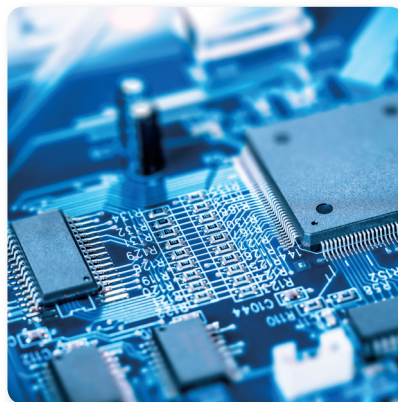
- Designed and engineered in the U.K.

Modern meetings and telephone/ video conferencing requires a flexible digital audio processor with user-friendly features, such as user-configurable DSP and routing options, multiple inputs and outputs – and auto mixing. Designed for installation in boardrooms, council chambers, courtrooms and more, the DM8000 also provides 8 channels of wide band Acoustic Echo Cancellation (AEC), effectively removing secondary room reflections from the signal path. The highly versatile DM8000 seamlessly integrates with computer based conferencing systems and audio networks via USB, and can be remotely controlled using the built-in Ethernet and RS232 ports.

Advanced Digital Audio Processor

At the heart of the DM8000 is an advanced digital audio processor, with the power and versatility to handle even the most challenging application. Designed around an open architecture format, system integrators can easily configure the DM8000 to meet the requirements of any customer – and create systems that are eminently expandable, and virtually future-proof.
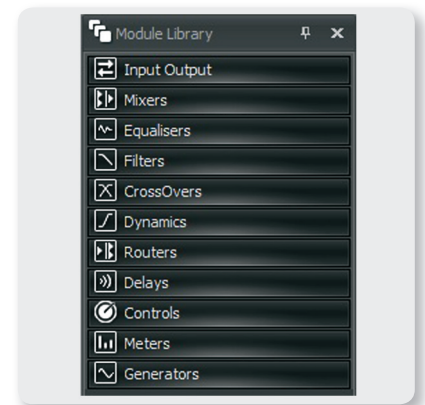
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Powerful DSP

The DM8000 DSP is equipped with a comprehensive library of processing modules that can be deployed and configured using the free DM8000 DSP Designer software. This easy-to-use software allows the entire signal and processing structure to be defined and compiled right on your PC – and then run within DM8000's robust onboard DSP. Processing modules include: Input; Output; ULTRANET I/O digital audio transport output for use with compatible devices; AEC for up to 8 channels; USB In and Out; Mixers; Auto Mixer; Equalisers; Feedback Suppression; a variety of audio filters, and much more. DM8000 provides a massive audio toolkit, empowering you to create the ideal custom configuration for any application.
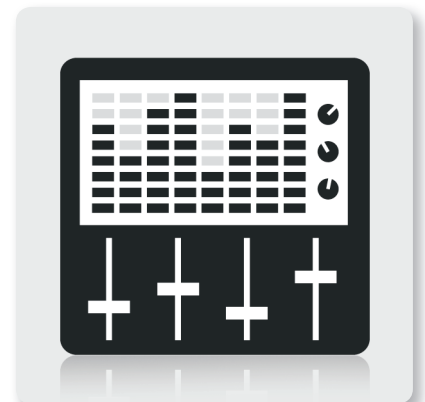

Acoustic Echo Cancellation

Office spaces, boardrooms and conference centers are often constructed with only a passing consideration regarding acoustics. Surfaces are typically hard, such as glass, painted/hardwood walls, and even steel and stone, all of which can trigger reverberation and echoes that can make a teleconference less than optimal. The DM8000's uses its wide band AEC module to detect and eliminate secondary room reflections from the signal path, so all participants enjoy the highest quality sound – whether the content is speech, music, or multimedia.
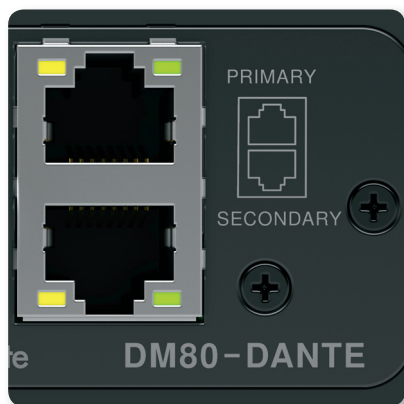
Auto Mixing

Applications such as city council meetings and courtrooms require the use of multiple open microphones, which means special attention must be given to input gain setting and feedback elimination. Or, you can let DM8000's Auto Mixer and Feedback Suppressor modules do the heavy lifting for you. Easy to set up and use, DM8000's Auto Mixer modules automatically adjust and balance levels for up to 8 inputs and combine them into a single output. And the onboard Feedback Suppressor behaves much like an highly-surgical parametric equaliser, detecting and removing feedback frequencies before they can become an issue. It's like having a sound engineer riding the controls, ensuring exceptional performance – from start to finish.

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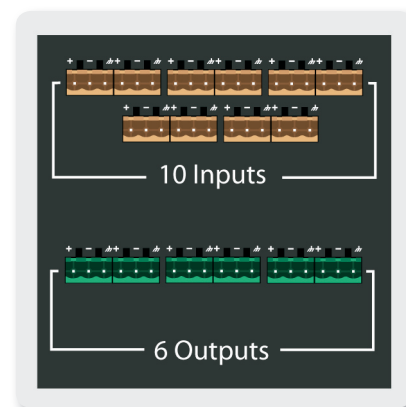
IP-Based Audio Networking

By using the built-in Ethernet connection, multiple DM8000 devices can be linked, creating a network for system-wide programming and control of a variety of Input sources. DM8000's PC-based software provides an intuitive graphical user environment for system configuration and remote control up to 100 m (328 feet) via CAT5/5e cable. This extremely versatile network can accommodate multiple mic inputs, a live band or stereo music source, as well as telephony – and send the resulting mixes to up to 6 destinations. The DM8000 is an audio networking command center that leaves the competition in the dust!

Massive Connectivity

DM8000 provides massive connectivity, allowing you to build mixes that simple audio systems cannot match – and it does it in a manner that is both intuitive and robust. Connections include: 10 high-headroom analogue universal mic/line inputs; 6 electronically balanced low impedance line level outputs; USB audio for integration with computer based conferencing systems; and an optional ULTRANET digital audio transport output for use with compatible devices. And if additional system control is desired, the DM8000's onboard RS232 connector lets you interface with a variety of 3rd part control systems – now that's versatility!

Exceptional Performance and Value

As you can see, the DM8000 provides a tremendous feature set, maximum flexibility and full networking support, transforming the common telephone/video conference call into an immersive experience. Easy to configure and run in virtually any application, the DM8000 is the modern communications solution – at an affordability level the competition simply cannot touch.

Check out the DM8000 at your KLARK TEKNIK dealer today, or get yours online. Communication. Clear. Simple.

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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

REAR

448 [17.64]

12 [0.47]

288 [11.34]

28 [1.11]

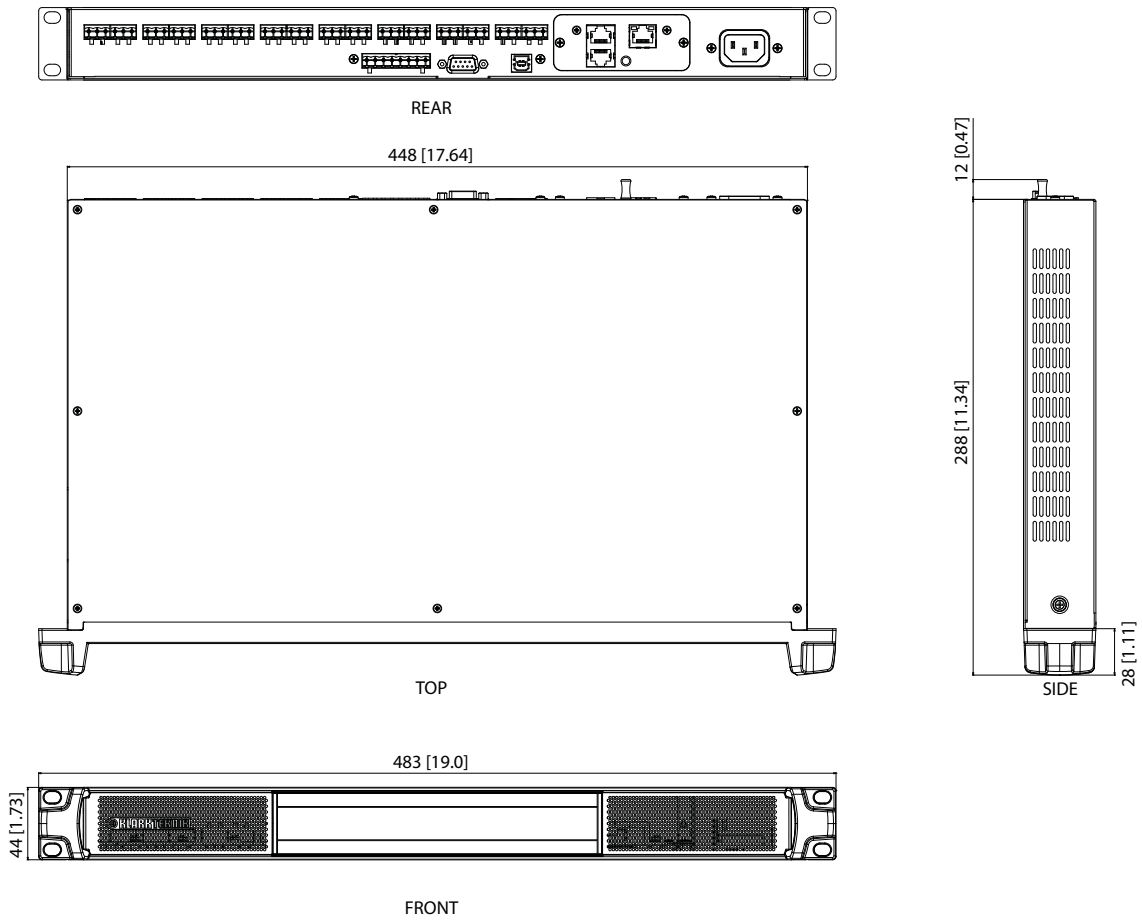TOP

SIDE

483 [19.0]

44 [1.73]

FRONT

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Technical Specifications

Analogue Inputs

Number of channels	10 (8 AEC enabled)
Type	Analogue, electronically balanced Euroblock connectors
Impedance	10 kΩ
Maximum input level	+24 dBu
Gain range	0 to +66 dB
Common mode rejection	Typically, -60 dB at 1 kHz
Crosstalk (inter-channel @ 1 kHZ)	< 75 dB
Phantom power	+48 VDC

Analogue Outputs

Number of channels	6
Type	Analogue, electronically balanced Euroblock connectors (Pin 2 hot)
Output impedance	100 Ω, balanced
Maximum output level	-31 dBu to +24 dBu (configurable in 6 steps)

ULTRANET Digital Network

Number of channels	16 in / 16 out
Sampling rate	48 kHz
Latency	< 0.9 ms
Connector	2 x RJ45
Cable	Shielded CAT-5
Cable length	up to 75 m / 250 ft

USB Audio

Number of channels	2 in / 2 out
Resolution	24-bit
Sampling rate	48 kHz
Type	Audio Class 1.0 compliant, asynchronous
Connector	USB, type B

GPIO

Number of channels	6
Input voltage	0 to 5 V
Input impedance	4.7 kΩ to +5 V (2-wire mode) > 1 MΩ (3-wire mode)
Output voltage	0 / 5 V (unloaded)
Output impedance	470 Ω (source) 10 Ω (sink)
Output current	10 mA (source) 60 mA (sink)
+5 V supply current	150 mA max

RS232

Format	8-N-1, 38, 400 baud
Connector	DB9 Female

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Technical Specifications

Performance

Frequency response	20 Hz to 20 kHz (±1 dB, input to output @ +4 dBu)
THD+N (20 Hz to 20 kHz @ 0 dB gain +4 dBu output)	< 0.005%
Equivalent input noise	-125 dBu (20 kHz BW @ 66 dB gain, R_s = 150 Ω)
Dynamic range	> 105 dB (20 kHz BW, input to output @ +24 dBu)
A/D - D/A conversion	multi-bit ΣΔ
AEC tail length	300 ms
AEC convergence	up to 100 dB/sec

Power Requirements

Type	Switch-mode power supply
Voltage	100-240 VAC, 50/60 Hz
Consumption	48 W
Mains connection	Standard IEC connector

Dimensions

Height	49 mm
Width	483 mm
Depth	300 mm

Weight

Net	3.9 kg
Shipping	4.7 kg

Temperature Range

Operation	+0° C to +45° C
Storage	-20° C to +60° C

Due to a policy of continual improvement, Klark Teknik reserves the right to alter the function or specification at any time without notice.

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Architecture & Engineering Specifications

The Digital Audio Processor shall provide an open software architecture platform in a standard 1U 19" rack mount chassis.

The Digital Audio Processor will come equipped with a comprehensive library of digital signal Processing algorithms optimised for installation applications.

In addition the Digital Audio Processor shall provide eight channels of wideband Acoustic cancellation for telephone and video conferencing, as well as an auto mix functionality for multiple Microphone applications.

The Digital Audio Processor will come equipped with Multi format IP-based audio networking functionality coupled with a PC based intuitive graphical user environment for simple set up and integration.

The Digital Audio Processor shall be fitted as standard with the following inputs and outputs:

- 10 High headroom analogue Mic/ line inputs
- 6 electronically balanced line level outputs
- An Optional Audio expansion module
- An Ethernet Port for software configuration
- An RS232 connection for 3rd Party control system interfacing
- GPIO Connections for External Remote control

The Digital Audio Processor shall be fitted with an internal switch mode power supply, capable of operation at AC voltages ranging from 100 to 240 VAC, at 50/60Hz. The mains connector shall be a standard IEC receptacle.
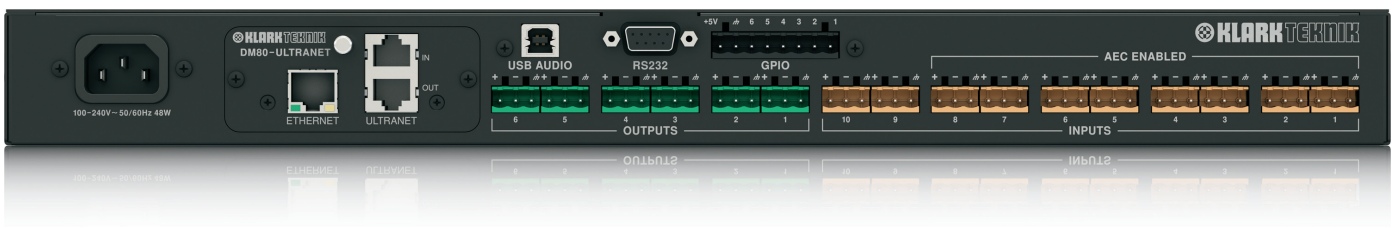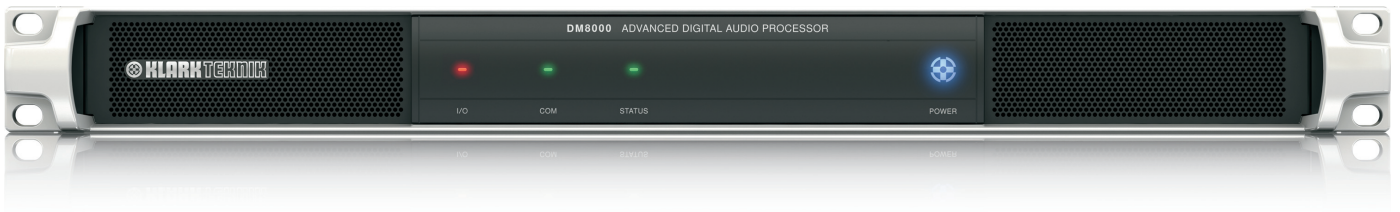
The Digital Audio Processor dimensions shall be 49 mm high x 483 mm wide x 300 mm deep (1.92 x 19.01 x 11.81"). The nominal weight shall be 3.9 kg (8.6 lbs).

The Digital Audio Processor shall be the KLARK TEKNIK model DM8000, and no other alternative shall be acceptable.

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For service, support or more information contact the KLARK TEKNIK location nearest you:

KLARK TEKNIK