The 5DM amplifier



The 5DM is a Class D installation amplifier with flexible power distribution among its four output channels.
It uses Digital Signal Processing (DSP) to incorporate a selected range of d&b loudspeakers from E-Series, U-Series, xS, xA-, xC- and T-Series as well as providing comprehensive management and protection capabilities.

The user interface of the amplifier consists of LEDs for Power, Data and channel information about Signal, Gain reduction, Overload and Mute status.

Powerful signal processing extends the level of functionality of the onboard features. These include a range of loudspeaker-specific filter functions plus a user-definable 8-band EQ, which facilitate system tuning. The delay capability covers a range of up to 300 ms.
The DSP unit of the amplifier has a fixed latency of 1.1 ms.

The amplifier enables up to eight input channels and provides four analog inputs on Euroblock connectors which also acting as link output as well as four Milan™ channels.
Each input channel can be routed to any of the output channels.

The amplifier utilizes a wide range switch mode power supply with active Power Factor Correction (PFC) to produce a clean current draw and ensure stable and efficient performance under adverse mains conditions.

Four GPI pins are provided as additional digital control lines. This enables external control.
An additional FAULT contact is provided allowing a general device error to be remotely indicated.

Remote control and full system integration are realized using the d&b ArrayCalc Simulation software and R1 Remote control software.
The 5DM amplifier includes two Ethernet ports (1 Gbits/100 Mbits) on RJ 45 connectors with Milan™ audio streaming and OCA/AES70 protocol.

d&b audiotechnik

The 5DM amplifier

Operating conditions

Operating temperature (*continuous/**short-term) ..... –10 °C ... +40*/+50** °C (+14 °F ... +104*/+122** °F)
Storage temperature ..... –20 °C ... +70 °C (–4 °F ... +158 °F)
Humidity (rel.), non-condensing ..... < 70 %

Power supply

Wide range switched mode power supply with active Power Factor Correction (PFC).

Mains connector IEC-60320 C14
Rated mains voltage ..... 100 - 240 V, 50 - 60 Hz
Rated mains current ..... 5.7 A – 2.4 A
Mains fuse ..... internal

Protection circuits

Mains and power supply: Overvoltage, inrush current limiter, internal fuse.
Output: Overcurrent, DC offset, HF voltage limiter, pop-noise suppression.
Cooling: Temperature-dependent fan, self-resetting overtemperature protection.

Power consumption (typical values)

Standby ..... 5 W
Idling ..... 50 W
Peak output ..... 550 W

Audio power outputs

OUTPUTS A/B/C/D ..... 2 x 4-pin DINKLE Euroblock 5.08 mm female
Maximum output voltage/current ..... 120 V_{peak}/20 A_{peak}
Output power rating EIA-426B noise CF 12 dB ..... 4 x 600 W/8 Ω
..... 4 x 600 W/4 Ω
Sinus 1 kHz, long term, +40 °C (+104 °F) ..... 4 x 37.5 W/4 Ω
Frequency response (–1 dB, Linear mode) ..... 35 Hz – 20 kHz
Gain (Linear mode @ 0 dB) ..... 31 dB

Output noise/Dynamic range

Output noise (BW 20 kHz)/dynamic range (BW 20 kHz, reference 120 V_{pk}) .....
Analog input, unweighted ..... 330 μV_{RMS}/108 dB
Analog input, A-weighting ..... 240 μV_{RMS}/111 dB
Milan™ input, unweighted ..... 240 μV_{RMS}/111 dB
Milan™ input, A-weighting ..... 180 μV_{RMS}/113 dB

THD+N / Crosstalk

THD+N (unweighted, 20 – 20 kHz) .....
4x 75 W/8 ohms ..... < –60 dB/0.1 %
4x 75 W/4 ohms ..... < –60 dB/0.1 %
Crosstalk (20 – 20 kHz) ..... < –50 dBr
..... 4x 75 W into 4 Ω

Analog inputs/link

INPUT A1 - A4 ..... Two 6-pin DINKLE Euroblock 3.5 mm male
Pin assignment ..... (⏚) GND, neg., pos.
Input impedance ..... 15 kΩ, electronically balanced
CMRR @ 100 Hz/1 kHz / 10 kHz ..... > 54/> 54/> 50 dB
Maximum input level (balanced/unbalanced) ..... +18/+12 dBu
Input level @ 0 dBFS ..... +27.3 dBu

Milan™

Redundancy ..... No
Input streams ..... 2 streams with up to 8 channels
Sampling ..... 48 kHz/96 kHz
Routable Milan™ inputs ..... M1 - M4
PTO settings ..... 0.25 ms / 0.5 ms / 1 ms / 1.5 ms / 2 ms

Digital Signal Processing

Time to tone (Off) ..... < 6 sec.
Conversion ..... 48 kHz
Latency analog ..... 1.1 ms
Equalizer ..... user definable 8-band equalizer
..... Filter types: PEQ/Notch/HiShlv/LoShlv/Asym
Delay ..... 1.1 - 300 ms
Frequency generator ..... Pink noise or Sine wave 10 Hz – 20 kHz

Network

Connector type ..... 2 x RJ45
.... Two individual ports (no daisy chaining), Port modes: Single cable/ SPLIT MODE
ETH1 ..... Single cable mode: OCA, Milan™
ETH2 ..... Single cable mode: no functionality
..... SPLIT MODE: Milan™

GPI 4
High-level ..... 7 ... 30 V DC
Low-level ..... 0 ... 5 V DC
Input impedance ..... 100 kOhms
Connector type ..... 1 x 6-pin DINKLE Euroblock 3.5 mm male
Pin assignment ..... GND (⏚), GPI 1 – 4, DC
DC ..... 12 V DC, 50 mA

FAULT ..... NO - Normally Open | NC - Normally Closed
..... 1 x 3-pin DINKLE Euroblock 3.5 mm male

Copyright © 11/2026, d&b audiotechnik GmbH & Co. KG

d&b audiotechnik

The 5DM amplifier

Controls and indicators

Controls

POWER ..... Mains power switch (rear panel)
RESET ..... Recessed push-button (rear panel)

Indicators

POWER ..... Power indicator (green)
DATA ..... Data stream indicator (yellow)
MUTE A/B/C/D ..... Channel mute indicator (red)
..... Channel/Device error indication (red)
ISP A/B/C/D ..... Input Signal Present indicator (green)
GR A/B/C/D ..... Gain Reduction indicator (yellow)
OVL/Error A/B/C/D ..... Overload/Error indicator (red)

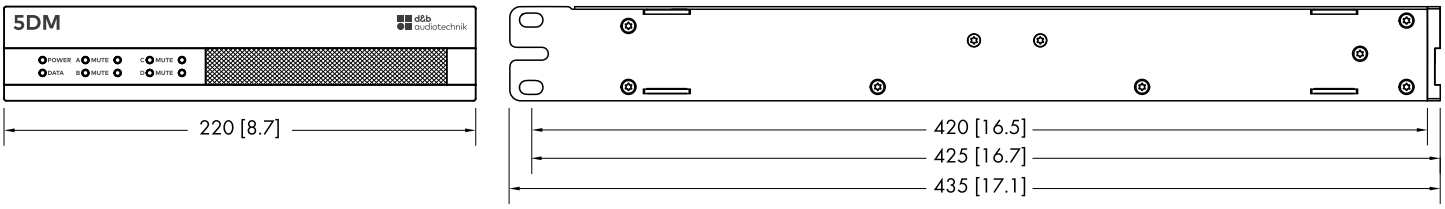
Fan noise emission

Rack mounted, measured on axis, 1 m (3.3 ft) to front panel, A-weighting.

Max. RPM ..... 42 dB(A)
..... Ambient temperature 23 °C/73.4 °F

Dimensions and weight

Height x Width* x Depth ..... 1 RU x 220 mm (8.7") x 435 mm (17.1")
..... *with rack ears 9.5"
Weight ..... 4.6 kg/10 lb



5DM dimension in mm [inch]

Features and benefits

- Flexible output sharing utilizing one to four channels with maximum output.
- Status LEDs, including device and signal status and fault indication.
- Four analog inputs.
- Four Network Audio inputs (Milan™ inputs).
- Dynamic range (SNR) Milan™ input 111 dB unweighted.
- Four GPI with VCA functionality plus a separate general FAULT connector.
- Flexible Fallback structure, ensuring the transmission of a secondary signal when required.
- Low power consumption for 24/7 applications.
- OCA/AES70 protocol for easy integration into third party environments using the R90 Touchscreen remote control.

Applications

- Conference facilities
- Restaurants & Bars
- Shops
- Performing arts
- House of worship
- Cruise ships
- Transportation

d&b audiotechnik

The 5DM amplifier

Architectural specifications

The amplifier shall be four channel incorporating a digital signal processor (DSP) to provide loudspeaker specific configurations and functions and dedicated protection circuits.

It shall be equipped with Milan™ network audio and analog signal inputs as well as remote control and monitoring capabilities via Ethernet (OCA/AES70).

User interface shall be front panel Led indicators and via remote control software.

Analog inputs shall be electronically balanced with an input impedance of 15 kOhm.

Connector type for the analog audio inputs shall be 3-pin Euroblock 3.5 mm male connectors.

Signal processing shall utilize 48 kHz sampling rate with 24 Bit ADC/DAC conversion while the latency shall not exceed 1.1 msec.

The output connectors shall be 2 x 4-pin Euroblock 5.08 mm female connectors.

Four GPI lines shall be provided on a 6-pin Euroblock 3.5 mm male connector as digital control lines. The GPIs shall allow either level (Hi/Lo active) or edge (rising/falling) triggering and shall also provide a VCA functionality. In addition a DC-Out with 12 V/50 mA shall be provided.

A FAULT contact shall be provided on a 3-pin Euroblock 3.5 mm male connector to allow a general device error to be remotely indicated.

The amplifier shall incorporate one user definable 8-band equalizer for independent application to each channel allowing parametric filters, notch, hi- and lo- shelve filters as well as asymmetric filters.

A signal delay capability of up to 300 msec (100 m / 328 ft) shall be incorporated for independent application to each channel.

It shall contain a signal generator offering pink noise or sine wave program.

Load monitoring and System check functions shall be included to ascertain the status of the loudspeaker impedance. Load monitoring shall allow impedance monitoring to determine the status of an LF or HF driver in systems with multiple elements, even if these are crossed over passively.

Input monitoring shall be included to allow detection of incoming pilot signals.

A Fallback function shall be available to enable the definition of primary (Regular) and secondary (Fallback) signal paths for analog and network audio input signals with two different modes (Manual or Auto). It shall ensure that any secondary or emergency signal fed to the Fallback inputs is transmitted when required.

An Override function shall be available to allow a dedicated input to be set as a major signal path with highest priority for general messages or emergency services.

An AutoStandby function shall automatically switch the amplifier to Standby mode after a predefined time when the incoming signal level at the individually specified inputs drops below a defined threshold. The function shall be independent of the mute status of the respective channels.

An AutoWakeup function shall automatically repower the amplifier, when an input signal is present and exceeds a defined threshold.

A universal range switched mode power supply shall be incorporated and allow mains range of 100 to 240 V AC, 50 - 60 Hz mains power supply voltages. Mains inrush current limiter, self-resetting overtemperature and overvoltage protection shall be incorporated. Power factor compensation (PFC) shall be incorporated to provide a clean and efficient sinusoidal current draw.

It shall have a temperature-controlled fan for cooling the internal assemblies.

The power amplifier channels shall have output pop-noise suppression, DC offset protection, output HF voltage limitation, output current limitation/protection and self-resetting overtemperature protection. The fan noise emission shall not exceed 42 dB(A).

The output voltage shall be 120 V_{peak}. The output power rating shall be 4 x 600 W into 8/4 ohms at a crest factor (CF) of 12 dB, all channels driven.

The S/N ratio (unweighted, RMS) shall be > 108 dBr (analog input) and > 111 dBr (digital input).

The dimensions (H x W x D) shall not exceed 1 RU x 8.7" x 435 mm (1 RU x 8.7" x 17.1") and shall weigh no more than 4.6 kg (10 lb).

The amplifier shall be the 5DM by:
d&b audiotechnik GmbH & Co. KG.

Copyright © 11/2026, d&b audiotechnik GmbH & Co. KG

d&b audiotechnik