

Voltera D M A&E Specifications

Voltera D M: The Voltera D M amplified loudspeaker controller seamlessly integrates amplification into a powerful loudspeaker controller, while also adding a fully programmable DSP onboard with enough headroom to handle even complex audio processing and distribution needs.

It shall be available in five models: 600W 4- channel, 1200W 2-channel, 1200W 4-channel, 2400W 2-channel, 2400W 4-channel, 4800W 2-channel, and 4800W 4-channel configurations.

Each Voltera D M model shall deliver maximum output voltage, maximum current, and per channel power as shown in the following table:

Model	Maximum Output Voltage	Maximum Output Current	Power Per Channel*
D 1200.2M	145 Vpk	35 Apk	600W
D 2400.2M	160 Vpk	40 Apk	1200W
D 4800.2M	237 Vpk	65 Apk	2400W
D 600.4M	145 Vpk	23 Apk	150W
D 1200.4M	145 Vpk	29 Apk	300W
D 2400.4M	160 Vpk	40 Apk	600W
D 4800.4M	237 Vpk	57 Apk	1200W

* All channels driven, across Hi-Z (70V/100V) and Lo-Z (16Ω/8Ω/4Ω/2.7Ω)

The D M Series shall have the ability to share up to 100% of total power between channels (75% for 4-channel models). The amplified loudspeaker controller shall operate in both Lo-Z (low impedance: 2.7Ω/4Ω/8Ω/16Ω) and Hi-Z (70V/100V high impedance) configurations, with the capability to support hybrid systems.

The amplified loudspeaker controller shall feature built-in fully-programmable DSP with comprehensive audio processing, including 2048-tap FIR filters, dynamic EQ, raised-cosine EQ, peak and thermal limiters with side-chain functionality. The DSP shall offer 2.65 ms latency from analog input to output. Each channel shall include 24 biquads, supporting loudspeaker profiles and control over EQ, delay (up to 2 seconds), gain, polarity, and mute. The amplified loudspeaker controller shall have a default gain of 29 dB for analog input to output, and it shall support failover to analog sources.

The amplified loudspeaker controller shall have a dynamic range of 117 dB and a frequency response of +/-0.5 dB (20 - 20000 Hz, 8 ohm, unweighted). Total Harmonic Distortion plus Noise (THD+N) shall be less than 0.05% at 1000 Hz, 1 dB below maximum output and less than 0.05% from 20 - 20000 Hz for 1 W output.

The amplified loudspeaker controller shall support networked audio through Dante, AES67, and AVB protocols via 1000Base-T Ethernet. The network mode shall support converged, split or redundant operation. The amplified loudspeaker controller shall be remotely configurable via Tesira or VenueTune software and provide a Tesira Text Protocol (TTP) interface for third-party control systems. The D Series shall support PoE+ (Power over Ethernet Plus) on network port 1, ensuring the controller remains powered during mains power loss when connected to a PoE+ switch powered with a UPS.

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The front panel shall include a tamper-proof design, indicators for system and channel status (mute, signal, limit, and temperature), and bi-directional locate functionality buttons for identifying the device in a larger system. The rear panel shall include control and monitoring I/O ports for mute, health, and sleep mode status, as well as 4 programmable GPIOs for logic/voltage control, and a detachable mains power connector using an IEC C14 inlet.

The amplified loudspeaker controller shall have a nominal operating voltage range of 100-240 VAC, 50/60 Hz, and shall feature a low idle power consumption mode for reduced energy use during periods of inactivity, with a high efficiency design. The amplified loudspeaker controller shall be equipped with variable-speed fans for cooling, providing front-to-back airflow with internal heat sinks.

The operating temperature range shall be 32°F to 104°F (0°C to 40°C), and the amplified loudspeaker controller shall operate in humidity conditions up to 95% non-condensing at altitudes up to 6562 ft (2000 m).

The device shall measure 1.7 x 17.5 x 16.9 inches H x W x D (44 x 444 x 430 mm) rack rail to rear panel and weigh between 16.8 lbs (7.6 kg) and 17.2 lbs (7.8 kg) depending on the model. It shall be designed for rack mounting, occupying 1 RU, and shall include a rear support kit for 19" rack mounting.

The amplified loudspeaker controller shall be the Voltera D M series as manufactured by Biamp Systems, LLC.