

DigiMod 500

High Efficiency Single-Channel Class-D Amplifier Module for Professional Applications



DigiMod 500 is a class-D amplifier module delivering up to 530 W on 4 Ω.

Perfect for applications where all the power is needed on a single output channel as for bass and guitar amplifiers, the capability of driving the additional “slave” amplifier DigiMod 1000NPS makes this module an effective solution to power also two or three-way configurations.

Specifically designed DSP boards with advanced processing, remote control and networking capabilities are available for DigiMod 500, to perfectly fit with the amplifier and providing a complete solution in a compact package.



FIXED
switching
frequency

AUTO
mains selection

DSP
add-on

Armonía
Pro Audio Suite™

- ▶ Small Power Single and Double Subwoofer
- ▶ Small Power Full-range Cabinet With Passive Crossover
- ▶ 2-way or 3-way Configuration*
- ▶ Amplifiers for Bass/Guitars

*when used with DigiMod 1000NPS

- ▶ Thermal protections (power limiting - thermal shutdown)
- ▶ Short-circuit/overload/high frequency output protections
- ▶ Clip limiter, permanent signal limiter
- ▶ Auxiliary output voltages
- ▶ Bypass line outputs for external active/passive filters
- ▶ Mute command
- ▶ Temperature controlled internal fans and output
- ▶ Optional DSP boards
- ▶ Fully integrated in Armonía Pro Audio Suite™ for Monitoring, Remote Control & Networking with optional DSP board

Single subwoofer		530 W @ 4 Ω
Double subwoofer	2x	260 W @ 8 Ω
2-way unbalanced load with DigiMod 1000NPS	LF:	1,000 W @ 8 Ω
	MF/HF:	400 W @ 4 Ω
Max output voltage per channel		72 V _{peak}

- ▶ Premium Performance
 - ✓ Powersoft class-D technology used in DigiMod modules is an industry standard in terms of quality, reliability, robustness and attention to detail. Accurate design of the Pulse Width Modulation block guarantees maximum performance, high predictability and immunity from intermodulation artifacts.
- ▶ Modularity
 - ✓ Same mechanical profile as all the DigiMod models, same input/output and DSP interface connectors allowing easy integration of different models to build a complete range of products.
- ▶ Scalability
 - ✓ Plug an additional 2-channel amplifier (DigiMod 1000NPS) to extend the range of possible applications using 4 output channels, (both pairs bridgeable) to drive 3-way systems or high power 2-ways systems even at higher load impedances.
- ▶ Powerful and flexible signal processing tools
 - ✓ Compatible with third party DSP and all Powersoft DSP solution: together with Armonía Pro Audio Suite™ you can tailor the module's behavior to fit your design: from standard Linkwitz-Riley crossovers to FIR filters, from limiters to delays and everything in between.
- ▶ Complete set of protections
 - ✓ Powersoft amp modules are equipped with extensive protection circuitry: power limiters, thermal shutdown, short circuit and overload, clip limiter.
- ▶ Certification process made easy
 - ✓ Powersoft provides EMI/safety certifications, reports and documentation that will effectively cut certification costs on the final product.
- ▶ Compact:
 - ✓ Power supply, output stage, DSP and connectors are all included in a single, compact, lightweight and protected chassis



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Specifications

General

Number of channels	1 in / 1 out
Output power	
Maximum output power per channel @ 4 Ω	530 W
Maximum output power per channel @ 8 Ω	280 W
Max output voltage	72 V _{peak}
Max output current	28 A _{peak}

Audio

Gain	32 dB (x40 voltage gain)
Frequency response	10 Hz - 20 kHz (± 3 dB) @ 1 W, 8 Ω
S/N ratio	112 dB (A weighted)
Input sensitivity @ 8 Ω	1.16 V / 3.51 dBu
Max input level	4.36 V / 15 dBu
Input impedance	10 k Ω balanced
THD+N	< 0.05% from 0.1 W to full power (typically <0.01%)
DIM100	< 0.02% from 0.1 W to full power (typically <0.005%)
Slew rate	50 V/ μ s @ 8 Ω , input filter bypassed
Damping factor @ 8 Ω	> 500 @ 100 Hz

AC Mains Power

Power supply	Universal, regulated switch mode
Nominal power requirement	AC 100 V - 240 V, 50/60 Hz
Operating voltage	AC 90 - 264 V
Power factor	$\cos\phi > 0.85$ @ 4 Ω full power
Consumption	
1/8 of max output power @ 8 Ω	96 VA

AUX supplies

Fan plug (+12 V), max supply current draw	150 mA
Max aux supply current draw @ ± 12 V	200 mA

Thermal


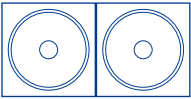
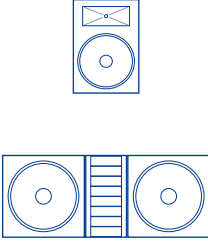
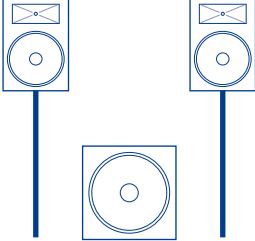
Environmental operating temperature	0° - 40° C / 32° - 104° F	
Thermal dissipation	Passive (optional temperature controlled fan) @ 230 V	
1/8 of max power @ 4 Ω	150 BTU/h	38 kcal/h
1/4 of max power @ 4 Ω	246 BTU/h	62 kcal/h

Construction

Dimensions (L x W x H)	216 mm x 122 mm x 51 mm 8.5" x 4.8" x 2"
Weight	1 kg (2.2 lb)

Application Examples

Please note that the following configuration examples do not cover all possible applications. Power ratings could vary depending on acoustic design and speaker specifications. Contact Powersoft for support in selecting the ideal solution for your specific needs.

single subwoofer	double subwoofer	2-way	sub + 2 full range sat
			
		with DigiMod 1000NPS	with DigiMod 1000NPS
		MF/HF: 530 W @ 4 Ω or 280 W @ 8 Ω	MF/HF: 350 W @ 4-8 Ω
		LF: 1000 W @ 8 Ω	LF: 800 W @ 8 Ω
530 W @ 4 Ω	2x 260 W @ 8 Ω		