

# DigiMod 3004PFC4

High Efficiency 4-Channel Class-D Amplifier Module for Professional Applications



The DigiMod 3004PFC4 is an amplifier module featuring 4 output channels specifically designed for multi-way loudspeakers and asymmetric loads.

The highly compact design, integrating all 4 channels and the power supply in a single chassis, makes the DigiMod 3004PFC4 a unique product, capable of delivering up to 2000W on a single 4 Ω channel, granting the highest power available for driving all speakers on multi-way systems.

The 6-layers PCB and a new power supply design equipped with PFC and featuring Smart Rails Management grant reliability and low power consumption in any operating conditions.

The DigiMod 3004PFC4 is fully compatible with all existing Powersoft DSP solutions, and represents, in conjunction with the DSP-4, the most advanced platform for 3-way active systems.



|                                |   |
|--------------------------------|---|
| 3-way unbalanced load          | LF: 3000 W @ 8 Ω BTL<br>MF: 1000 W @ 8 Ω SE<br>HF: 500 W @ 8 Ω SE |
| 2-way unbalanced load          | LF: 3000 W @ 8 Ω BTL<br>MF/HF: 1500 W @ 8 Ω BTL                   |
| Double subwoofer               | 2x 2000 W @ 8 Ω BTL   |
| Max output voltage per channel | 150 V <sub>peak</sub>   |

- ▶ High Power 2-way and 3-way PA Systems / Line Arrays
  - ▶ High Power Single or Double Subwoofer
  - ▶ Multi-Channel High Power Applications
  - ▶ High Power Sub+Satellite Systems
- 
- ▶ 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

- ▶ Efficiency and robustness, always and everywhere
  - ✓ Latest generation single-stage patented Power Factor Correction design allows to achieve optimal and consistent performance in all operating conditions worldwide.
- ▶ Maximize performances, minimize consumption
  - ✓ Patented SRM (Smart Rails Management) technology allows to maximize the efficiency of the system and drastically reducing power consumption at any load condition.
- ▶ Premium Performances
  - ✓ Powersoft Class-D technology 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.
- ▶ Powerful and flexible signal processing tools
  - ✓ Compatible with all Powersoft DSP solutions and third party DSP: 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                      | 4 in / 4 out          |
| Output power                            |                       |
| Maximum output power per channel @ 4 Ω  | 2000 W                |
| Maximum output power per channel @ 8 Ω  | 1000 W                |
| Maximum output power per channel @ 16 Ω | 600 W                 |
| Maximum output power @ 8 Ω Bridged      | 3000 W                |
| Maximum output power @ 16 Ω Bridged     | 2000 W                |
| Max output voltage                      | 150 V <sub>peak</sub> |
| Max output current                      | 54 A <sub>peak</sub>  |

### Audio

|                        |  |
|------------------------|--|
| Gain                   | selectable: 32 dB, 38 dB<br>(x40, x80 voltage gain respectively) |
| Frequency response     | 20 Hz - 20 kHz (+0/-1 dB) @ 1 W, 8 Ω                             |
| S/N ratio              | 115 dB (A weighted)  |
| Crosstalk separation   | -70 dB @ 1 kHz (4 Ω)   |
| Input sensitivity @ 8Ω | 1.6 V / +6 dBu   |
| Max input level        | 2.7 V / +10.8 dBu @ 32 dB gain                                   |
| Input impedance        | 10 kΩ balanced   |
| THD+N                  | < 0.09% from 0.1 W to full power<br>(typically <0.05%)           |
| DIM100                 | < 0.05% from 0.1 W to full power<br>(typically <0.002%)          |
| Slew rate              | 50 V/μs @ 8 Ω, input filter bypassed                             |
| Damping factor         | > 500 @ 100 Hz   |

### AC Mains Power

|                           |   |        |
|---------------------------|---|--------|
| Power supply              | Universal, regulated switch mode with PFC (power factor correction) |        |
| Nominal power requirement | AC 100 V - 240 V, 50/60 Hz  |        |
| Operating voltage         | AC 90 - 264 V   |        |
| Power factor              | cosφ > 0.90 @ 4 Ω full power  |        |
| Consumption               | 1/8 of max output power @ 8 Ω                                       | 600 VA |

### AUX supplies

|                                     |        |
|-------------------------------------|--------|
| Max aux supply current draw @ ±12 V | 500 mA |
|-------------------------------------|--------|

### Thermal

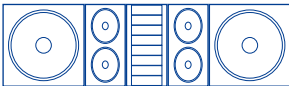
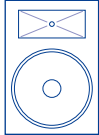
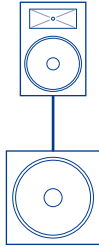
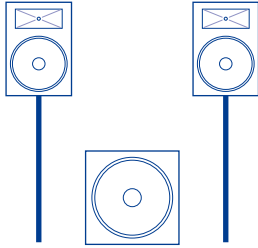
|                                     |   |            |
|-------------------------------------|---|------------|
| Environmental operating temperature | 0° - 40° C / 32° - 104° F                           |            |
| Thermal dissipation                 | Fan, variable speed, temperature controlled @ 230 V |            |
| 1/8 of max power @ 4 Ω              | 508 BTU/h   | 128 kcal/h |
| 1/4 of max power @ 4 Ω              | 956 BTU/h   | 241 kcal/h |
|                                     | @ 115 V   |            |
| 1/8 of max power @ 4 Ω              | 621 BTU/h   | 156 kcal/h |
| 1/4 of max power @ 4 Ω              | 1154 BTU/h  | 290 kcal/h |

### Construction

|                        |  |
|------------------------|--|
| Dimensions (L x W x H) | 309 mm x 122 mm x 79 mm<br>12" x 4.8" x 3.1" |
| Weight                 | 2.4 kg (5.3 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.

| 3-way line array  | 2-way   | sub + 2-way sat  | sub + 2 full range sat  |
|---|---|--|---|
|  |  |  |  |
| HF: 500 W @ 16 Ω  |   | HF: 500 W @ 16 Ω   |   |
| MF: 1000 W @ 8 Ω  | MF/HF: 1500 W @ 8 Ω   | MF: 1000 W @ 4 Ω   | MF/HF: 1000 W @ 8 Ω   |
| LF: 2 x 1500 W @ 4 Ω  | LF: 3000 W @ 8 Ω  | LF: 3000 W @ 8 Ω   | LF: 3000 W @ 8 Ω  |