X4

4-Channel High Performance Amplifier Platform

☑ Touring
☑ Installation

4 lo-Z hi-Z channels

THREE PHASE LOAD BALANCING

SRM

PFC

routing channel

Armonía Pro Audio Suite™

Dante™

- Full-range loudspeakers
- Subwoofers
- Medium to large-scale touring systems
- Arenas & concert halls
- Stadiums & open-air events
- Multi-zone venues & live clubs

Powersoft X4 has been designed to be versatile and easy to use in any operation condition. Equally useful for most subwoofers as well as high-power fullrange systems, Powersoft X4 suites any configuration and purpose.

Ultimately flexible and safe, Powersoft's legendary power supply is now suitable to Single Phase, Bi-Phase or Three Phase operation from 85 V_{AC} up to 460 V_{AC} without need of selection. True Three Phase load balancing is directly achievable by the unit without any complex load assignment in the power distribution system.

Powersoft X4 provides four fully processable channels and selectable inputs from analog sources as well as digital AES3 and two redundant Dante™* streams. Channel mixing and routing can be easily performed thanks to the integrated revolutionary low latency DSP, providing the highest degree of freedom in sound shaping and speaker management.

Full support to 100 Mbps and Gigabit Ethernet makes it easy to integrate Powersoft X4 into any existing infrastructure.

Completely integrated into Armonía Pro Audio Suite™, the new Powersoft X4 interface is also available for smartphone and tablet, providing a new experience in power management.

- Innovative power supply design
  - ✓ Suitable for Single-Phase, Bi-Phase or Three-Phase operation from 85 V_{AC} up to 460 V_{AC}, the X4 power supply provides maximum flexibility and versatility in any power distribution design.
  - ✓ Power Load Balancing with Power Factor Correction enhances efficiency in power distribution.
  - ✓ Smart Rails Management increases efficiency by means of the dynamic rails modulation.
  - ✓ The legendary Powersoft Green Audio Power® technologies improves efficiency and minimizes the 'carbon footprint' and the operational costs.
- New standard of quality and usability
  - ✓ Flexible routing/mixing provided by the internal 4x4 input/output matrix, allows the user to mix and route analog and digital I/O.
  - ✓ Easy plug-and-play Dante™* networking allows easy routing of the signal from any node within the network to Powersoft X4.
  - ✓ 4 input channels with physical analog and digital AES3 connectors and 2 redundant Dante™* connection provide maximum flexibility.
  - ✓ Improved reliability thanks to the customizable input backup policy that allows to automatically switch input source in case of signal failure.
  - ✓ Complete user interface integrated into Armonía Pro Audio Suite™.
  - ✓ WiFi remote monitoring through mobile device.
- Highly integrated
  - ✓ Top-grade DSP with high dynamic range and extensive feature set.
  - ✓ Multi-stage signal processing: innovative solutions for modeling speakers behaviour and power handling.
  - ✓ Input and output IIR, FIR, IIR+FIR equalizers and raised-cosine filters.
  - ✓ Complete sets of limiters: peak, RMS voltage, RMS current, and TruePower™.
  - ✓ Compensation of the speaker cable losses with Active DampingControl™.
- Even more reliabile
  - ✓ Full protection circuitry: over/under AC voltage; troublesome signals (clipping, VHF, long-term RMS); DC; thermal; short circuit; mute at power on/off.

* DANTE version only

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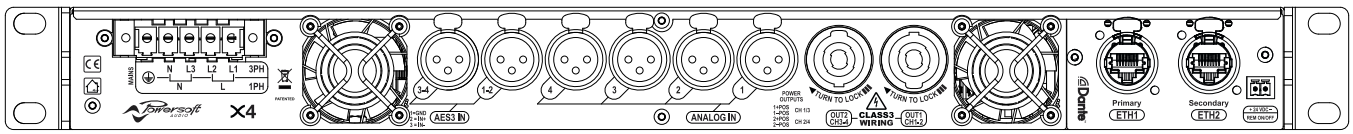

Specifications

Channel Handling	
Number of output channels	4 mono, bridgeable per ch. pair
Number of input channels:	
Analog	4 (4x XLR)
AES3	4 (2x XLR)
Dante™*	16 (2x RJ45)

* DANTE version only

Audio	
Gain	17 dB - 47 dB (0.1 dB increments)
Default Gain	32 dB
Output Noise A-Weighted @ 8 Ω - Analog to Analog / Digital to Analog	< -70.0 dBV
Dynamic Range A-Weighted @ 8 Ω - Analog to Analog / Digital to Analog	114,3 dB
Damping Factor @ 8 Ω, 20Hz - 500Hz	> 5000
Slew Rate (input filter bypassed)	> 50 V/µs
Frequency Response (-3 dB , 1 W @ 8 Ω)	5 Hz - 30 kHz
Crosstalk (1 kHz)	-70 dB
THD+N (from 0.1 W to Full Power)	< 0.5% (typical < 0.01%)
DIM (from 0.1 W to Full Power)	< 0.5% (typical < 0.01%)
Input Impedance	20 kΩ Balanced
Input Acceptance	+27 dBu

DSP	
AD converters	24 Bit Tandem™ @ 96 kHz 129 dB Dynamic Range - 0.00056 % THD+N
DA converters	24 Bit Tandem™ @ 192 kHz 121 dB Dynamic Range - 0.00084 % THD+N
Sample rate converter	24 Bit @ 44.1 kHz to 192 kHz 140 dB Dynamic Range - 0.0001 % THD+N
Internal precision	40 bit floating point
Delay	2 s + 100 ms for time alignment
Equalizer	Raised-cosine, custom FIR, parametric IIR: peaking, hi/lo-shelving, all-pass, band-pass, band-stop, hi/lo-pass
Crossover	linear phase (FIR), hybrid (FIR-IIR), Butterworth, Linkwitz-Riley, Bessel: 6 dB/oct to 48 dB/oct (IIR)
Limiters	TruePower™, RMS voltage, RMS current, Peak limiter
Damping control	Active DampingControl™

Construction	
Dimensions	483 mm x 44.5 mm x 495 mm (19.0 in x 1.75 in x 19.5 in)
Weight	15 kg (33.0 lb)

Output Stage	
Maximum output power per channel @ 8 Ω	1600 W
Maximum output power per channel @ 4 Ω	3000 W
Maximum output power per channel @ 2.7 Ω	4000 W
Maximum output power per channel @ 2 Ω	5200 W
Maximum output power @ 8 Ω Bridged	6000 W
Maximum output power @ 4 Ω Bridged	10400 W
Peak total output, all channels driven	20000 W
Maximum unclipped output voltage	175 V_{peak}
Maximum output current	130 A_{peak}

The power figure is calculated by driving and loading symmetrically all the channels: uneven loads allow to achieve highest performance.

AC Mains Power		
Single Phase		
Nominal Voltage	100 - 240 V @ 50/60Hz	
Operating Range	90 - 264 V from DC to 200Hz	
Power Factor 1/8 Maximum Output Power @ 4 Ω	> 0.9	
Current Draw 1/8 Maximum Output Power @ 4 Ω	18 A_{rms} @ 100V	9 A_{rms} @ 240V
Suggested circuit breaker	C16	
Three Phase		
Nominal Voltage	173Y/100 - 416Y/240 V	
	3~, 3W+N+PE / 3W+PE	
Power Factor 1/8 Maximum Output Power @ 4 Ω	> 0.9	
Current Drawn from Each Single Phase 1/8 Maximum Output Power @ 4 Ω	6 A_{rms} @ 173Y	3 A_{rms} @ 416Y
Suggested circuit breaker (per phase)	C10	
Idle Consumption (all AC MAINS cases)	< 100 W	
Max consumption (all AC MAINS cases)	< 3000 W	

Note: 173Y/100 V = 173 V phase-to-phase, 100 V phase-to-neutral

Thermal		
Operating temperature	0° - 35°C / 32° - 95°F	
Cooling	Fan, continuously variable speed, teperature controlled	
Fan Noise - 1/8 Maximum Output Power @ 8 Ω (1m)	35 dBA SPL	
Thermal dissipation		
Single phase	115V	230V
1/8 Maximum Output Power @ 8 Ω	1127 BTU/h	1058 BTU/h
1/4 Maximum Output Power @ 8 Ω	2124 BTU/h	1639 BTU/h

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