

Quattrocanali DSP Series

4-Channel Fixed Installation Amplifier Platform with DSP



○ TOURING

✓ INSTALLATION



ArmoniaPlus
System Manager

The Quattrocanali DSP Series is specifically designed for installation applications. In just 1 RU, Quattrocanali offers smaller dimensions, lighter weight and the traditionally amazing sound quality and reliability of all Powersoft products.

Quattrocanali DSP amplifiers implement a high efficiency microprocessor controlled power supply with built in PFC (Power Factor Correction) that allows flawless worldwide operation with any AC mains voltage in the range 90-264 VAC tolerant to peak up to 400 VAC. The patented SRM (Smart Rails Management) technology allows

to maximize the efficiency of the system and drastically reduce power consumption at any load and usage condition.

A secondary high efficient power supply is present to keep the system responsive at any operating condition, so that system check and monitoring can be performed even in stand-by and deep-sleep modes.

Quattrocanali DSP Series is designed to work with lo-Z (from 2 Ω) and with 70V/100V distributed lines: any mixed configuration of low and high impedance output loads can be realized, making the Quattrocanali Series suitable to applications in

installed audio systems.

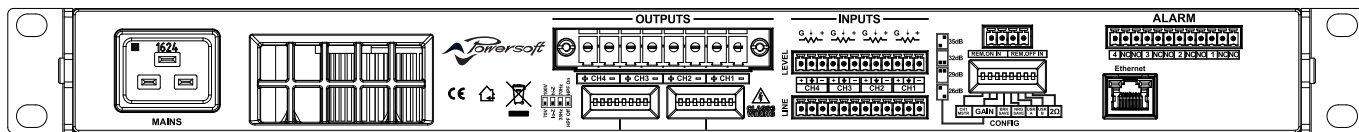
DSP versions of the Quattrocanali series extends system performance with on board high-end signal processing.

- ▶ Small to medium-scale venues
- ▶ Main systems, central or distributed, subwoofers, hi-Z/lo-Z
- ▶ Mission critical applications
- ▶ Shops, stores
- ▶ Theatres, restaurant, and bars
- ▶ Houses of worship
- ▶ Convention centres
- ▶ Business centres
- ▶ Cruise ships



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Specifications

Channel Handling		
Number of output channels	4 Hi-Z or Lo-Z (bridgeable per ch. pair)	Phoenix PC 5/8-STF1-7,62
Number of input channels		
Analog	4	Phoenix MC 1,5/12-ST-3,81

Audio	1204	2404	4804	8804	
Input sensitivity @ 8 Ω with 26 dB Gain	2.48	3.54	4.91	5.72	V _{rms}
Input sensitivity @ 8 Ω with 29 dB Gain	1.76	2.51	3.48	4.06	V _{rms}
Input sensitivity @ 8 Ω with 32 dB Gain	1.24	1.78	2.46	2.86	V _{rms}
Input sensitivity @ 8 Ω with 35 dB Gain	0.88	1.26	1.74	2.03	V _{rms}
SNR (20 Hz - 20 kHz @ 8 Ω - Typical)	104	108	110	112	dB(A)
Max input level	20 dBu				
Frequency Response	20 Hz - 20 kHz ±1.0 dB, 1 W @ 8 Ω				
Crosstalk (1 kHz)	typical -70 dB				
Input impedance	20 kΩ balanced				
THD+N (from 0.1 W to Half Power)	< 0.1% (typical < 0.05%)				
SMPTE IMD (from 0.1 W to Half Power)	< 0.1% (typical < 0.05%)				
Slew Rate	> 50 V/μs @ 8 Ω, input filter bypassed				
Output impedance at 100 Hz	26 mΩ				

DSP	
AD converters	24 Bit Tandem™ @ 48 kHz typical 125 dB-A Dynamic Range - 0.005 % THD+N
DA converters	24 Bit Tandem™ @ 48 kHz typical 117 dB-A Dynamic Range - 0.003 % THD+N
Sample rate converter	24 Bit @ 44.1 kHz to 96 kHz typical 140 dB Dynamic Range - 0.0001 % THD+N
Internal precision	32 bit floating point
Latency	2.5 ms fixed latency architecture
Memory/Presets	49 amplifier snapshots, virtually unlimited speaker presets
Delay	2 s (input) + 100 ms (output) 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), Butterworth, Linkwitz-Riley, Bessel: 6 dB/oct to 48 dB/oct (IIR)
Limiters	TruePower™, RMS voltage, RMS current, Peak limiter
Damping control	Active DampingControl™ and LiveImpedance™ measurement

Output Stage	1204	2404	4804	8804	
per channel @ 8 Ω (symmetrical)*	300	600	1200	1600	W
per channel @ 4 Ω (symmetrical)*	300	600	1200	2400	W
per channel @ 2 Ω (symmetrical)*	400	800	1500	1800	W
@ 4 Ω Bridged (symmetrical)*	800	1600	3000	3600	W
@ 8 Ω Bridged (symmetrical)*	600	1200	2400	4800	W
@ Hi-Z distributed line 100 V (symmetrical)*	300	600	1200	2000	W
@ Hi-Z distributed line 70 V (symmetrical)*	300	600	1200	2000	W
per channel @ 8 Ω (asymmetrical)**	1100	1300	1300	1800	W
per channel @ 4 Ω (asymmetrical)**	1100	1700	2600	3500	W
per channel @ 2 Ω (asymmetrical)**	1100	1600	1800	1800	W
@ Hi-Z distributed line 100 V (asymmetrical)**	1100	1500	2200	3000	W
@ Hi-Z distributed line 70 V (asymmetrical)**	1100	1700	2100	2100	W
Maximum unclipped output voltage @ 8 Ω	70 V _{peak}	100 V _{peak}	139 V _{peak}	175 V _{peak}	
Maximum output current	33 A _{peak}	45 A _{peak}	45 A _{peak}	55 A _{peak}	

*: All channels driven with the same burst power
 **: Maximum power-sharing capacity per channel

Power & Thermal		1204	2404	4804	8804		
@ 115 V	Power	31.1	31.1	31.3	34	W	
	Idle Current Draw	0.45	0.45	0.47	0.56	A _{rms}	
	Thermal Loss	106	106	107	116	BTU/h	
	1/8 Power @ 4Ω	Power	227	405	823	1702	W
	Current Draw	2.1	3.7	7.7	15.6	A _{rms}	
	Thermal Loss	261	360	760	1713	BTU/h	
@ 230 V	Power	31.5	31.5	31.6	34	W	
	Idle Current Draw	0.25	0.25	0.27	0.37	A _{rms}	
	Thermal Loss	107	107	108	117	BTU/h	
	1/8 Power @ 4Ω	Power	251	405	840	1676	W
	Current Draw	1.4	2.1	4.3	8.2	A _{rms}	
	Thermal Loss	344	360	818	1624	BTU/h	

Power supply	Universal regulated switch mode with PFC, SRM
Nominal voltage (±10%)	100-240 VAC @ 50-60Hz
Operating Voltage	90-264 VAC
AC Mains connector	IEC C20 inlet (20 A max) region-specific power cord provided

Typical use case power consumption is expected to be at least 20% lower (likely more than 50% lower)

Networking	
Standards compliance	auto-sensing Fast Ethernet (IEEE 802.3u, 100 Mbit/s)
Supported topologies	Star
Remote interface	ArmoniaPlus™
Construction	
Dimensions	483 x 44.5 x 358 mm 19.0 x 1.75 x 14.1 in
Weight	7 Kg (15 lb)

Data subject to change without notice

