Duecanali DSP+D Series

2-Channel Fixed Installation Amplifier Platform with DSP and Dante™

○ TOURING
✓ INSTALLATION

2 LO-Z HI-Z **CHANNELS** | **1U** | ROUTING CHANNEL | AUDIO NETWORK | **DSP** ON BOARD | SAFETY RELIABILITY | **SRM** | **PFC**

Armonía Plus System Manager

Excellent sound quality and ample output power result from Powersoft's unique approach to Class D amplification, making the Duecanali DSP+D Series ideal for the main system in any venue where performance is priority.

Providing access to all relevant amplifier parameter yet easily set up, the Duecanali DSP+D Series is versatile in use, providing status feedback via its front panel LED display or a connected PC running ArmoníaPlus™ software.

The Duecanali Series heralds Powersoft's renowned efficiency, saving valuable energy, therefore keeping both operational cost and carbon footprint at a minimum.

This state of the art amplifier platform shines with outstandingly low power consumption and heat dissipation, with direct positive effects on investment – not to mention the benefits for the environment and aiding to support a more eco-friendly planet.

A fully integrated state-of-the-art DSP yields extensive system management functionality. In addition to sound shaping and limiter functions in unique Powersoft style, the DSP hardware and Armonía Pro Audio Suite™ software enable compliance with IEC 60849 for the crucial requirements of sound systems for emergency purposes.

The Duecanali DSP+D 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 Duecanali DSP+D suitable for all application in installed sound reinforcement systems.
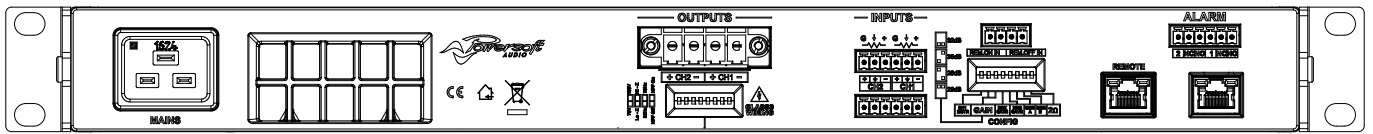
DSP+D versions of the Duecanali series extends system performance with the support of Dante™ digital audio networking architecture and the on board high-end signal processing.

▶ Small to Medium-scale venues
▶ Main systems, central or distributed, subwoofers, hi-Z/lo-Z
▶ Emergency systems (IEC 60849)
▶ Stadiums, arenas
▶ Theaters, concert halls
▶ Houses of worship
▶ Convention centers
▶ Amusement parks, themed entertainment
▶ Cruise ships

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Specifications

Channel Handling

Number of output channels	2 Hi-Z or Lo-Z (bridgeable per ch. pair)	Phoenix PC 5/4-STF1-7,62
Number of input channels		
Analog	2	Phoenix MC 1,5/6-ST-3,81
Dante™*	2	1 x RJ45

Audio

	Gain	804	1604	4804	
Input sensitivity @ 8 Ω	26 dB	2.84	4.08	5.03	Vrms
Input sensitivity @ 8 Ω	29 dB	2.01	2.89	3.56	Vrms
Input sensitivity @ 8 Ω	32 dB	1.42	2.04	2.52	Vrms
Input sensitivity @ 8 Ω	35 dB	1.01	1.45	1.79	Vrms
S/N (20 Hz - 20 kHz @ 8 Ω)		>106	>109	>111	dB(A)

Max input level	20 dBu
Frequency Response	20 Hz - 20 kHz ±0.5 dB, 1 W @ 8 Ω
Crosstalk (1 kHz)	typical -70 dB
Input impedance	20 kΩ balanced
THD+N (from 0.1 W to Full Power)	< 0.1% (typical < 0.05%)
DIM (from 0.1 W to Full Power)	< 0.05%
Slew Rate	> 50 V/µs @ 8 Ω, input filter bypassed
Damping Factor	> 1000 @ 8 Ω, 20 Hz - 100 Hz

DSP

AD converters	24 Bit Tandem™ @ 48 kHz 125 dB-A Dynamic Range - 0.005 % THD+N
DA converters	24 Bit Tandem™ @ 48 kHz 117 dB-A Dynamic Range - 0.003 % THD+N
Sample rate converter	24 Bit @ 44.1 kHz to 192 kHz 140 dB Dynamic Range - 0.0001 % THD+N
Internal precision	32 bit floating point
Latency	2.5 ms fixed latency architecture
Memory/Presets	128 MB (RAM) plus 512 MB flash for 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

Data subject to change without notice.

Output Stage

Output Stage	804	1604	4804
Maximum output power per channel @ 8 Ω	400 W	800 W	1250 W
Maximum output power per channel @ 4 Ω	400 W	800 W	2400 W
Maximum output power per channel @ 2 Ω	500 W	1000 W	3000 W
Maximum output power @ 4 Ω Bridged	1000 W	2000 W	6000 W
Maximum output power @ 8 Ω Bridged	800 W	1600 W	4800 W
Maximum output power @ Hi-Z distributed line 100 V	400 W	800 W	2400 W
Maximum output power @ Hi-Z distributed line 70 V	400 W	800 W	2400 W
Maximum unclipped output voltage @ 8 Ω	$80\,V_{peak}$	$115\,V_{peak}$	$142\,V_{peak}$
Maximum output current	$39\,A_{peak}$	$45\,A_{peak}$	$80\,A_{peak}$

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

Power & Thermal

Power & Thermal				804	1604	4804	
@ 115 V	Idle		Power	23.0	23.0	32.5	W
			Current Draw	0.34	0.34	0.31	A_{rms}
			Thermal Loss	78	78	111	BTU/h
	1/8 Power @ 4Ω		Power	148	267	780	W
			Current Draw	1.4	2.5	7.0	A_{rms}
			Thermal Loss	162	229	613	BTU/h
@ 230 V	Idle		Power	22.5	23.3	32.8	W
			Current Draw	0.21	0.21	0.30	A_{rms}
			Thermal Loss	77	79	112	BTU/h
	1/8 Power @ 4Ω		Power	147	274	755	W
			Current Draw	0.9	1.5	3.9	A_{rms}
			Thermal Loss	161	251	528	BTU/h
Power supply				Universal regulated switch mode with PFC, SRM			
Nominal voltage (±10%)				100-240 V @ 50-60Hz			
Operating Voltage				60-264 V (with reduced power below 90 V)			
AC Mains connector				IEC C20 inlet (20 A max) region-specific power cord provided			

Networking

Standards compliance	auto-sensing Fast Ethernet (IEEE 802.3u, 100 Mbit/s)
Supported topologies	Star
Remote interface	ArmoníaPlus™

Construction

Dimensions	483 x 44.5 x 358 mm 19.0 x 1.75 x 14.1 in
Weight	7 Kg (15 lb)